सत्यमेव जयते

Economic Survey 2018-19

Volume 1

Government of India
Ministry of Finance
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July, 2019

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Acknowledgements

The Economic Survey is a result of teamwork and collaboration. The Survey has benefitted from the comments and insights of the Hon'ble Finance Minister Smt. Nirmala Sitharaman and Hon'ble Minister of State for Finance Shri. Anurag Singh Thakur. The Survey has also benefited from the comments and inputs of various officials, specifically, Subhash Chandra Garg, Ajay Bhushan Pandey, K. Rajaraman, Amarjeet Sinha and Arunish Chawla.

Contributions to the Survey from the Economic Division include: Sanjeev Sanyal, Sushmita Dasgupta, Arun Kumar Jha, Arun Kumar, Rajiv Mishra, Rajasree Ray, A Srija, Surbhi Jain, A. Prathibha, S. Arputhaswamy, Nikhila Menon, Ashwini Lal, Abhishek Acharya, Rajani Ranjan, Sindhumannickal Thankappan, Prerna Joshi, Dharmendra Kumar, Aakanksha Arora, M. Rahul, Rabi Ranjan, Tulsipriya Rajkumari, Shamim Ara, J.D. Vaishampayan, Arya B.K., Abhishek Anand, Sonal Ramesh, Sanjana Kadyan, Amit Sheoran, Shreya Bajaj, Subhash Chand, Riyaz Ahmad Khan, Md. Aftab Alam, Pradyut Kumar Pyne, Narendra Jena, Sribatsa Kumar Parida, Mritunjay Kumar, Rajesh Sharma and Amit Kumar Kesarwani, Arpitha Bykere, Naveen Bali, Mahima, Ankur Gupta, Lipi Budhraja, Sonum Gayatri Malhotra and Lavisha Arora.

The Survey benefited from the comments and inputs from officials, specifically Pranab Kumar Mukhopadhyay, DG, DGCI&S, Kolkata; Shri Ajay Srivastava, Economic Adviser, Department of Commerce; Ms. Shruti Shukla, Joint Director, DGCI&S, Kolkata; Dr. M. D. Patra, Executive Director, Reserve Bank of India (RBI); Shri Rajan Goyal, Adviser, Reserve Bank of India (RBI); Prof. K. S. James and Prof. Chander Shekhar, International Institute for Population Sciences; Prof. Suresh Sharma and Vandana Sharma, Institute of Economic Growth; Shri Rajiv Jain, Director, RBI; Shri Dhirendra Gajbhiye, Assistant Adviser, Reserve Bank of India (RBI); Mr. Surya Prakash B. S., Fellow and Programme Director (Daksh); Siddharth Mandrekar Rao, Research Associate (Daksh); Ms. Soumasree Tewari, Research Officer, RBI; Shri Sukhbir Singh, CAAA, Department of Economic Affairs, Ministry of Finance; Shri Abhay Bakre, Director General, Bureau of Energy Efficiency; Dr. Ashok Kumar, Director, Bureau of Energy Efficiency; Dr. Surya P Sethi and Shri Sameer Kumar- Joint Secretary, Ministry of Drinking Water and Sanitation.

The Economic Survey team is thankful for inputs from National Judicial Data Grid, eCourts portal, and the International Labor Organisation, New Delhi. We are also grateful for comments and inputs from numerous academics and practitioners, including Tanuj Bhojwani, Sajjid Chinoy, Mohandas Pai, Harshini Shanker, Sharad Sharma, Prasanna Tantri and K. Vaidyanathan.

Apart from the above, various ministries, departments and organisations of the Government of India made contributions in their respective sectors. Several ministries directly interacted with the CEA via presentations to provide their inputs. The Economic Survey is grateful for their valuable time, engagement and contributions. Able administrative support was given by K. Rajaraman, Rajkumar Tiwari, Jasbir Singh, Suresh Kumar, Anupam Shukla, Sadhna Sharma, Arun Gulati, Sushil Sharma, Manish Panwar, Muna Sah, Suresh Kumar, Jodh Singh, Ombir Singh, R R Meena, Subash Chand, Raj Kumar, Ram Niwas, Kesar Singh, Bal Kishan, Satish Kumar, Gajender Singh and other staff and members of the Economic Division and the Office of CEA. The cover page for the Survey was designed by India Brand Equity Foundation. Viba Press Pvt. Ltd. undertook the printing of the English and Hindi version of the Survey.

Finally, the Economic Survey owes deep gratitude to the families of all those involved in its preparation for being ever so patient, understanding and encouraging and for extending their unflinching emotional and physical support and encouragement throughout the preparation. The families, indeed, are the unconditional pillars of support for the dedicated contributors to the Economic Survey.

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Preface

At the outset, we would like to express our sincere gratitude to the leadership provided by previous Chief Economic Advisors, which has elevated the Economic Survey to a much anticipated event in India's economic calendar. The contribution they have made through their erudition, rigour and, most importantly, their ideas can only be expressed through Sir Isaac Newton's immortal quote: *"If I have seen further than others, it is by standing upon the shoulders of giants."* This Survey makes a humble effort to carry forward this glorious tradition.

This Survey is the first for the new Government, which came to power with an overwhelming mandate. With the aspirations that have been kindled among our predominantly young population, India stands at a historic moment when sustained high economic growth has become a national imperative. Aptly, the Honourable Prime Minister laid down the vision of India becoming a $5 trillion economy by 2025 (*#Economy@5trillion*) and has inspired every citizen to contribute his or her bit to this worthy cause. In his words, *"If every one of the 130 crore Indians takes one step forward, the country too will go that many steps ahead."* By laying out the strategic blueprint for fructifying this vision, the Survey extends its absolute commitment to a collective endeavour: 130 crore Indians creating an inclusive India by 2022 when we, as a nation, complete 75 years of Independence (*#India@75*).

Imbued by the power of the opportunity that beckons, the team for Economic Survey 2018-19 has been guided by "blue sky thinking." The Survey adopts an unfettered approach in thinking about the appropriate economic model for India. This endeavour is reflected in the *sky blue cover* of the Survey. To achieve the vision of *#Economy@5trillion*, India needs to shift its gears to accelerate and sustain a real GDP growth rate of 8%. The Survey departs from traditional thinking by viewing the economy as being either in a virtuous or a vicious cycle, and thus never in equilibrium. Rather than viewing the national priorities of fostering economic growth, demand, exports and job creation as separate problems, the Survey views these macroeconomic phenomena as complementary to each other. The cover design captures the idea of complementary inter-linkages between these macroeconomic variables using the pictorial description of several inter-linked gears.

Drawing upon the trajectories followed by East Asian economies that experienced long periods of high growth, the Survey postulates the centrality of investment as the "key driver" that catalyses the economy into a self-sustaining virtuous cycle when supported by a favourable demographic phase. After laying out the strategic blueprint for fulfilling the vision of *#Economy@5trillion*, the Survey describes some of the tactical devices required to navigate an uncertain world in constant dis-equilibrium. *Inter alia,* the Survey focuses on nourishing MSMEs to create jobs and become more productive so that they can become internationally competitive, enhancing legal reform, ensuring consistency of policy with the vision and the strategic blueprint, reducing the cost of capital, and rationalizing the risk-return trade-off for investments.

In its attempt at unfettered thinking, the Survey utilises the significant advances made in Behavioural Economics in the last few decades, which culminated in the 2017 Nobel Prize in Economic Sciences being awarded to Prof. Richard Thaler. The impact created by Government's flagship initiatives such as *Swacch Bharat Mission, Jan Dhan Yojana* and the *Beti Bachao Beti Padhao* provide testimony to the potential for behavioural change in India. Given our rich cultural and spiritual heritage, social norms play a very important role in shaping the behaviour of each one of us. Behavioural economics provides the necessary tools and principles to not only understand how norms affect behaviour but also to utilise these norms to effect behavioural change. The Survey, therefore, lays out an ambitious agenda for behavioural change by applying the principles of behavioural economics to several issues including gender equality, a healthy and beautiful India, savings, tax compliance and credit quality.

Heading into a century where data has become the new oil and analytics from data the new tool for decision making, the Survey foresees countless opportunities in creating data as a public good "of the people, for the people and by the people".

In preparing this Survey, time and talent have been devoted to make our analysis understandable to all readers while maintaining the necessary level of rigor. To illuminate the key insights and demystify the concept for readers across all disciplines, an *Abstract* and a *Chapter at a Glance* have been included for each Chapter of the Survey.

We chose to continue with the popular tradition of presenting the Survey in two volumes. Volume I, which attempts to capture our "blue sky thinking", provides evidence based economic analyses of recent economic developments to enable informed policymaking. Volume II reviews recent developments in the major sectors of the economy and is supported by relevant statistical tables and data. This would serve as the ready reckoner for the existing status and policies in a sector.

The Economic Survey attributes its existence and popularity to the collaborative effort of all Ministries and Departments of Government of India, the prodigious resource base of the Indian Economic Service officers, valuable inputs of researchers, consultants and think tanks both within and outside the government and the consistent support of all officials of the Economic Division, Department of Economic Affairs. The Survey has made a sincere effort to live up to the expectation of being an indispensable guide for following, understanding and thinking about the Indian economy. While our immensely enriching journey represents our ultimate reward, we hope readers share the sense of excitement with which we present the Survey.

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ABBREVIATIONS

AgDSM	Agriculture Demand Side Management
ANBC	Adjusted Net Bank Credit
API	Application Programming Interface
APL	Above Poverty Line
APL	Aadhaar Linked Payments
ASI	Annual Survey of Industries
BAU	Business as Usual
BBBP	Beti Bachao, Beti Padhao
BCE	Before Christian Era
BEE	Bureau of Energy Efficiency
BEVs	Battery Electric Vehicles
BHIM	Bharat Interface for Money
BPL	Below Poverty Line
BRICS	Brazil, Russia, India, China, South Africa
CAFE	Corporate Average Fuel Efficiency
CAGR	Compound Annual Growth Rates
CBSE	Central Board of Secondary Education
CCR	Case Clearance Rate
CEPEJ	Commission for the Efficiency of Justice
CO2	Carbon Dioxide
CPI	Consumer Price Index
CSC	Common Service Centre
CV	Coefficient of Variation
D&S courts	District and Subordinate courts
DBT	Direct Benefit Transfer
DBTL	Direct Benefit Transfer for LPG
DC	Designated Consumers
DDU GKY	Deen Dayal Upadhyaya Grameen Kaushalya Yojana
DISCOMs	Distribution Companies
DSM	Demand Side Management
E- NAM	National Agriculture Market
ECBC	Energy Conservation Building Code
ECC	Employment Conditions Commission
EESL	Energy Efficiency Services Limited
EODB	Ease of Doing Business
EPU	Economic Policy Uncertainty
ESCerts	Energy Saving Certificates
EUS	Employment & Unemployment Survey
EVs	Electric Vehicles
FAME	Faster Adoption and Manufacturing of Electric vehicles
FCEVs	Fuel Cell Electric Vehicle
FII	Foreign Institutional Investment
GHG	Greenhouse Gas
GIS	Geographic Information System
GST	Goods and Services Tax
GVA	Gross Value Added
HDI	Human Development Index
HRD	Human Resource Development
ICAR	Indian Council of Agricultural Research
ICDS	Integrated Child Development Services
ICT	Information and Communications Technology
IDA	Industrial Disputes Act
IHHL	Individual Household Latrine
IIPS	International Institute for Population Sciences
ILC	International Labour Conference
ILO	International Labour Organization
IMD	India Meteorological Department
ISRO	Indian Space Research Organisation
IVA	Independent Verification Agency
JAM	Jan Dhan, Aadhaar and Mobile
KUSUM	Kisan Urja Suraksha Evam Utthaan Mahabhiyan
LCR/R and P	Lower Courts Records - Records and Proceedings
LED	Light-Emitting Diode
LFPR	Labour Force Participation Rate
LPG	Liquefied Petroleum Gas
MAA	Mothers' Absolute Affection
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MIS	Management Information System
MoDWS	Ministry of Drinking Water and Sanitation
MoEF&CC	Ministry of Environment, Forest and Climate Change
MoU	Memorandum of Understanding
MPCE	Monthly Per Capita Expenditure
MSME	Micro, Small & Medium Enterprises
MtCO2	Metric Tons of Carbon Dioxide Equivalent
MTOE	Million Tonne of Oil Equivalent
NARSS	National Annual Rural Sanitation Survey
NBFC AA	Non Banking Financial Company Axxount Aggregators
NDC	Nationally Determined Contribution
NEFMS	National Electronic Fund Management System
NEMMP	National Electric Mobility Mission Plan
NEV	New Energy Vehicle
NFLMW	National Floor Level Minimum Wage
NJDG	National Judicial Data Grid
NRM	Natural Resource Management
NSSO	National Sample Survey Organisation
NVA	Net Value Added
ODF	Open Defecation Free
OECD	Organisation for Economic Cooperation and Development
OLS	Ordinary Least Squares
ORS	Oral Rehydration Solutions
OSH	Occupational Safety and Health
PAN	Permanent Account Number
PAT	Perform Achieve and Trade
PDS	Public Distribution System
PHEVs	Plug-in Hybrid Electric Vehicles
PMAY-G	Pradhan Mantri Awas Yojana- Gramin

PMJDY	Pradhan Mantri Jan Dhan Yojana
PMO	Prime Minister's Office
PSL	Priority Sector Lending
RE	Renewable Energy
SBM	Swachh Bharat Mission
SBM(G)	Swachh Bharat Mission (Gramin)
SDGs	Sustainable Development Goals
SLWM	Solid and Liquid Waste Management
SRB	Sex Ratio at Birth
SSI	Small Scale Industries
TFR	Total Fertility Rate
TOE	Tonnes of Oil Equivalent
TWh	Terawatt-hour
UAE	United Arab Emirates
UIDAI	Unique Identification Authority of India
UJALA	Unnati Jyoti by Affordable LEDs
UK	United Kingdom
ULBs	Urban Local Bodies
UNICEF	United Nations International Children's Emergency Fund
UPI	Unified Payments Interface
USA	United States of America
UTs	Union Territories
VDA	Variable Dearness Allowance
WHO	World Health Organization
ZEVs	Zero Emission Vehicles

Shifting Gears: Private Investment as the Key Driver of Growth, Jobs, Exports and Demand

01
CHAPTER

During the last five years, India's economy has performed well. By opening up several pathways for trickle-down, the government has ensured that the benefits of growth and macroeconomic stability reach the bottom of the pyramid. To achieve the objective of becoming a USD 5 trillion economy by 2024-25, as laid down by the Prime Minister, India needs to sustain a real GDP growth rate of 8%. International experience, especially from high-growth East Asian economies, suggests that such growth can only be sustained by a "virtuous cycle" of savings, investment and exports catalysed and supported by a favourable demographic phase. Investment, especially private investment, is the "key driver" that drives demand, creates capacity, increases labour productivity, introduces new technology, allows creative destruction, and generates jobs. Exports must form an integral part of the growth model because higher savings preclude domestic consumption as the driver of final demand. Similarly, job creation is driven by this virtuous cycle. While the claim is often made that investment displaces jobs, this remains true only when viewed within the silo of a specific activity. When examined across the entire value chain, capital investment fosters job creation as the production of capital goods, research & development and supply chains generate jobs.

The Survey departs from traditional Anglo-Saxon thinking by advocating a growth model for India that views the economy as being either in a virtuous or a vicious cycle, and thus never in equilibrium. This model, in turn, stems from two key departures from the traditional view. First, the Survey departs from the concept of equilibrium as a key tenet, which is being challenged increasingly following the Global Financial Crisis. Second, the traditional view often attempts to solve job creation, demand, exports, and economic growth as separate problems. As these macro-economic phenomena exhibit significant complementarities, the Survey postulates the centrality of the triggering macro-economic variable that catalyses the economy into a virtuous cycle. The Survey makes the case for investment as that key driver. By presenting data as a public good, emphasizing legal reform, ensuring policy consistency, and encouraging behaviour change using principles of behavioural economics, the Survey aims to enable a self-sustaining virtuous cycle. Key ingredients include a focus on policies that nourish MSMEs to create

more jobs and become more productive, reduce the cost of capital, and rationalise the risk-return trade-off for investments.

LAST FIVE YEARS: THE ACCOMPLISHMENTS

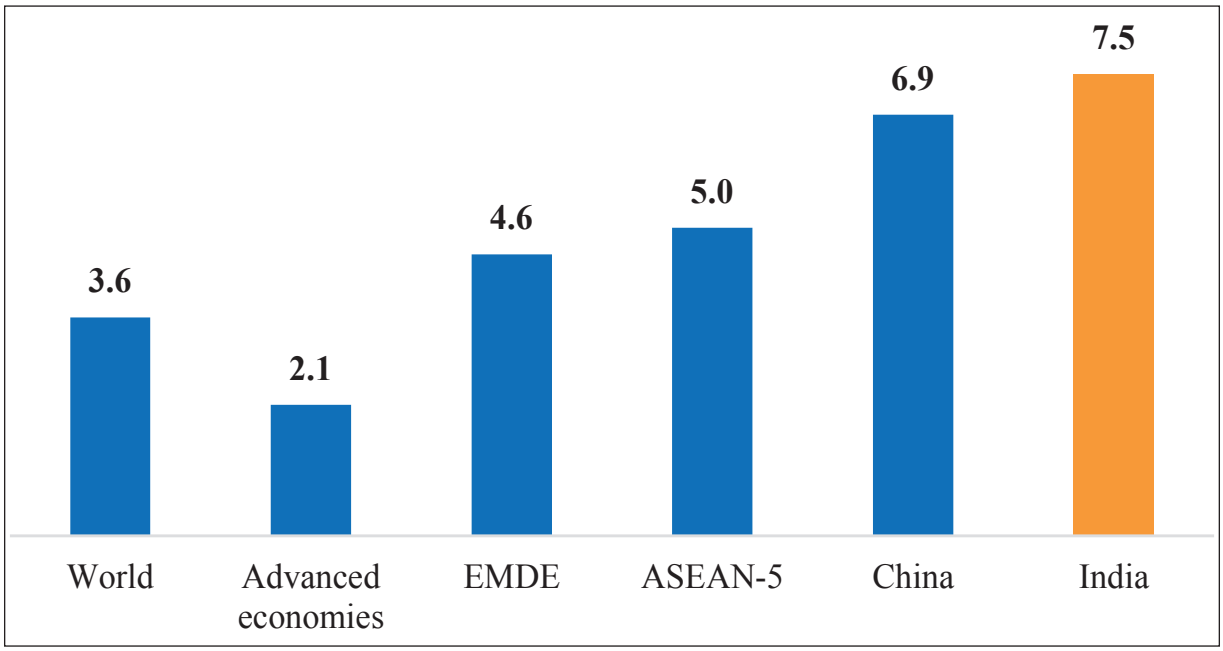
Macroeconomic Stability

1.1 World output grew at 3.6 per cent in 2014 and again in 2018. In the intervening period, when the world did not appear to have changed much, India took a few giant strides forward. India became the sixth largest economy by sustaining growth rates higher than China, thereby earning the epaulette of being the fastest growing major economy in the world (Figure 1). Importantly, this pace of growth was sustained while re-establishing macro-economic stability.

1.2 Average inflation in these five years was less than half the inflation level of the preceding five years, matching the lowest levels attained in the country's post-independence history. The current account deficit (CAD) remained within manageable levels and foreign exchange reserves rose to all-time highs.

1.3 The performance was not just a one-time adjustment but stemmed from a new institutional framework. Following an agreement between Government of India (GOI) and Reserve Bank of India (RBI), a Monetary Policy Committee (MPC) was constituted in February, 2015 with the mandate to target a headline inflation of 4 per cent, with a band of two percentage points on either side. The framework has been successful in containing inflation. Since April 2015, when the MPC was first convened, the monthly headline inflation has always remained within the band except for one month.

Figure 1: Growth of GDP in India and the world



Source: World Economic Outlook, April 2019, IMF

Note: (1). EMDE – Emerging Market and Developing Economies; (2). ASEAN-5 composed of 5 countries: Indonesia, Malaysia, Philippines, Thailand, and Vietnam.

1.4 Discipline was also imposed on the Gross Fiscal Deficit (GFD). The Fiscal Responsibility and Budget Management (FRBM) Act of 2003, which got a new lease of life since 2016, determines the glide path for the ratio of GFD to GDP to reach an eventual target of 3 per cent. The ratio declined from 4.5 per cent in 2013-14 to 3.4 per cent in 2018-19. Other macro-stability indicators have similarly improved.

Beneficiary focus and targeted delivery

1.5 In addition to re-establising macroeconomic stability, the government also focused on last-mile delivery of basic services to the poor, on basic safety-nets, and on creating pathways for the benefits of growth to reach the bottom of the socio-economic ladder. The promulgation of the Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits, and Services) Act, 2016 was one such initiative that opened a major pathway to this trickle-down. By assigning a unique identification number to every individual, the government now has the ability to provide targeted support. Presently, Aadhaar coverage stands at more than 90 per cent of the country's population.

1.6 Another pathway for the trickle-down is the Pradhan Mantri Jan Dhan Yojana (PMJDY), a financial inclusion initiative. The linking of mobile numbers with bank account numbers and subsequently Aadhaar, created a JAM (Jan Dhan, Aadhaar, Mobile) trinity that further secured Direct Benefit Transfers (DBT) to the intended beneficiaries. Presently close to ₹1 lakh crore is deposited in more than 35 crore bank accounts opened under PMJDY. The JAM trinity has enabled cumulative transfers thus far of around ₹7.3 lakh crore. Presently 55 central ministries through 370 cash-based schemes are transferring benefits under the DBT mechanism. Chapter 10 in Volume I of the Survey, in fact, provides careful evidence of this targeting.

1.7 Major schemes implemented under DBT include MGNREGS (Mahatma Gandhi National Rural Employment Guarantee Scheme), NSAP (National Social Assistance Program), PMAY-G (Pradhan Mantri Awas Yojna- Gramin), besides various scholarships and fertilizer subsidy schemes. A key initiative for last-mile delivery was the Pradhan Mantri Ujjwala Yojana (PMUY) that was launched in 2016. The PMUY had originally targeted to provide 5 crore LPG connections over a span of three years to BPL (Below Poverty Line) families with a support of ₹1,600 per connection. Till date more than 70 million PMUY-LPG connections have been released to women residing in more than 700 districts. In 2018, another effort to provide a basic safety net was launched through the Ayushman Bharat Yojana (ABY), which provides an insurance cover of ₹5,00,000 for cashless treatment to each of the 100 million BPL families at a nominal premium of ₹100 per month. Till date, the scheme has empaneled more than 15,000 hospitals, which have admitted about 2.6 million persons from the 346 million enlisted beneficiaries.

Infrastructure

1.8 The creation of physical infrastructure accelerated significantly during 2014-19. In April 2018, electricity finally reached every village in India with the effort to electrify every home still ongoing. The construction of national highways (NH) proceeded at a rapid pace with more than 20 per cent of the existing highway length of 132,000 km being constructed in the last four years alone. The UDAAN scheme was launched in 2017 to foster regional connectivity by extending flight connectivity to Tier-3 and Tier-4 towns in the country. Over 30 unserved and underserved airports have been mainstreamed under UDAAN with flights creating additional 40 lakh seating capacity. The scheme has also sparked significant increase in helicopter services in hilly areas and islands that engage

31 heliports. The infrastructure of the North-Eastern states was a special focus and there has been a significant improvement in connectivity with the building of key bridges, and the expansion of railways/highways. The 4.94 km long Bogibeel bridge in Assam was inaugurated in December 2018; it is the second longest rail-cum-road bridge in Asia.

Federalism

1.9 Fiscal federalism strengthened significantly when the Fourteenth Finance Commission increased the share of states in the divisible pool of central taxes from 32 per cent to 42 per cent. Although central grants to states saw compensatory cuts, the shift empowers states to manage their revenues and expenditures independently.

1.10 The launch of the GST (Goods and Services Tax) in July, 2017 added a new dimension to centre-state and inter-state financial relations. The GST Council experience provides key learning for implementing cooperative federalism in several other areas such as labour and land regulation. Niti Aayog has helped institutionalize cooperative federalism by setting up teams from both the states and the central government to jointly evolve strategies for addressing development challenges. States have also been involved in a friendly competition to improve their Key Performance Indicators (KPIs).

Corporate Exits

1.11 When the Insolvency and Bankruptcy Code (IBC) was introduced in 2016, it consolidated the insolvency resolution process into a single law by repealing/ amending multiple rules and processes earlier in operation. IBC set a time limit for closing of insolvency and bankruptcy cases within which assets of a defaulting borrower are auctioned to pay off the debt owed to lending institutions. Following the operationalization of IBC since 2017, a significant number of non-performing assets have been brought under its ambit. In addition to the large sums recovered by creditors from resolution or liquidation, the introduction of a framework for exit has improved the overall business culture of the country. Chapter 3 in Volume II of the Survey explores this topic in detail.

THE NEXT FIVE YEARS: A BLUEPRINT FOR GROWTH AND JOBS

1.12 With the micro-economic and macro-economic foundations laid over the last five years, the Indian economy is ready to shift gears so that economic growth, jobs and exports can be pushed up to the next level. For this purpose, the Survey presents a blueprint.

Emphasising Growth

1.13 As articulated by the Prime Minister, Shri. Narendra Modi, India aims to grow into a USD 5 trillion economy by 2024-25, which will make India the third-largest economy in the world. Given 4% inflation, as the Monetary Policy Framework specified by the Government for the Reserve Bank of India, this requires real annual growth rate in GDP of 8 per cent.[1] What are the ingredients of a model that can generate such growth?

1.14 To understand this key question, we examine the drivers of economic growth followed by countries across the globe. In

[1] Among the different modelling possibilities, assume a 0.7% increase in total factor productivity in India when compared to the U.S. and a constant real effective exchange rate. This then translates into an exchange rate of INR 75 per USD in March 2025, which implies that the Indian economy must have a nominal GDP of 375 lakh crores in March 2025. An 8% real growth rate for GDP combined with 4% inflation would deliver this nominal GDP. While the export growth required to deliver the 8% real GDP growth rate may require a depreciation of the real effective exchange rate, we emphasize export growth stemming from increases in productivity rather than currency depreciation.

recent times, Chinese economic growth stands out for its explosive growth over a long period of four decades. Post war economic expansion in Western Europe led to high growth rates of its economies. During 1950-73, Japan's GDP growth rate frequently exceeded 10 per cent. Post World War II, Hong Kong, Singapore, South Korea, and Taiwan successfully maintained a rapid growth rate of more than 7 per cent until 1980s.

A virtuous cycle of savings, investment, exports and growth with investment as the "central driver"

1.15 The overwhelming evidence across the globe, especially from China and East Asia in recent times, is that high growth rates have only been sustained by a growth model driven by a virtuous cycle of savings, investment and exports catalysed and supported by a favourable demographic phase. As we explain in detail below, investment, especially private investment, is the "key driver" that drives demand, creates capacity, increases labour productivity, introduces new technology, allows creative destruction, and generates jobs.

1.16 We depart from traditional thinking by outlining a growth model that views the economy as being in *constant disequilibrium- a virtuous cycle or a vicious cycle*. When the economy is in a virtuous cycle, investment, productivity growth, job creation, demand and exports feed into each other and enable animal spirits in the economy to thrive. In contrast, when the economy is in a vicious cycle, moderation in these variables dampen each other and thereby dampen the animal spirits in the economy.

1.17 As we describe in the next section, our view of the economy in either a virtuous or a vicious cycle—with investment as the key driver of this cycle—stems from two key departures from the traditional Anglo-Saxon view of the economy.

1.18 First, the traditional view, which has come under significant challenge following the Global Financial Crisis, considers the concept of equilibrium as a key tenet. In contrast, by imbibing some of the new learning from the economics literature following the Global Financial Crisis, we view the economy as being in a constant state of disequilibrium as captured by a virtuous or a vicious cycle.

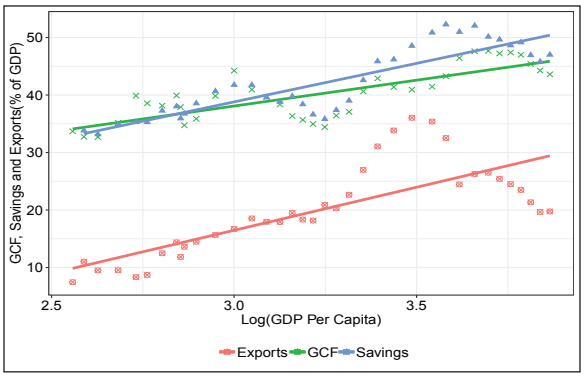
1.19 Second, the traditional view often attempts to solve job creation, demand, exports, and economic growth as separate problems. In contrast, as we show below, these macro-economic phenomena exhibit significant complementarities. Therefore, understanding the "key driver" and enhancing the same enables simultaneous growth in each of the other macro phenomena.

1.20 When viewed in this manner, the triggering macro-economic "key driver" that catalyses the economy into a virtuous cycle becomes critical. This Survey makes the case for investment as the "key driver" that can create a self-sustaining virtuous cycle in India. This investment can be both government investments in infrastructure, as such investment crowds in private investment (Chakrabarti, Subramanian and Sesha, 2017), and private investment in itself.

Evidence supporting the "virtuous cycle" view

1.21 Figure 2 shows how the share of GCF, savings and exports in GDP evolved for China as a function of the log of GDP per capita from 1980 to 2017. Crucially, we note that all the three macro-variables increased as the country became richer. Thus, as the economy started doing better, as measured by

Figure 2: Share of GCF, Savings and Exports in GDP vs. log GDP Per Capita in constant 2010 US$: China (1980-2017)[2]



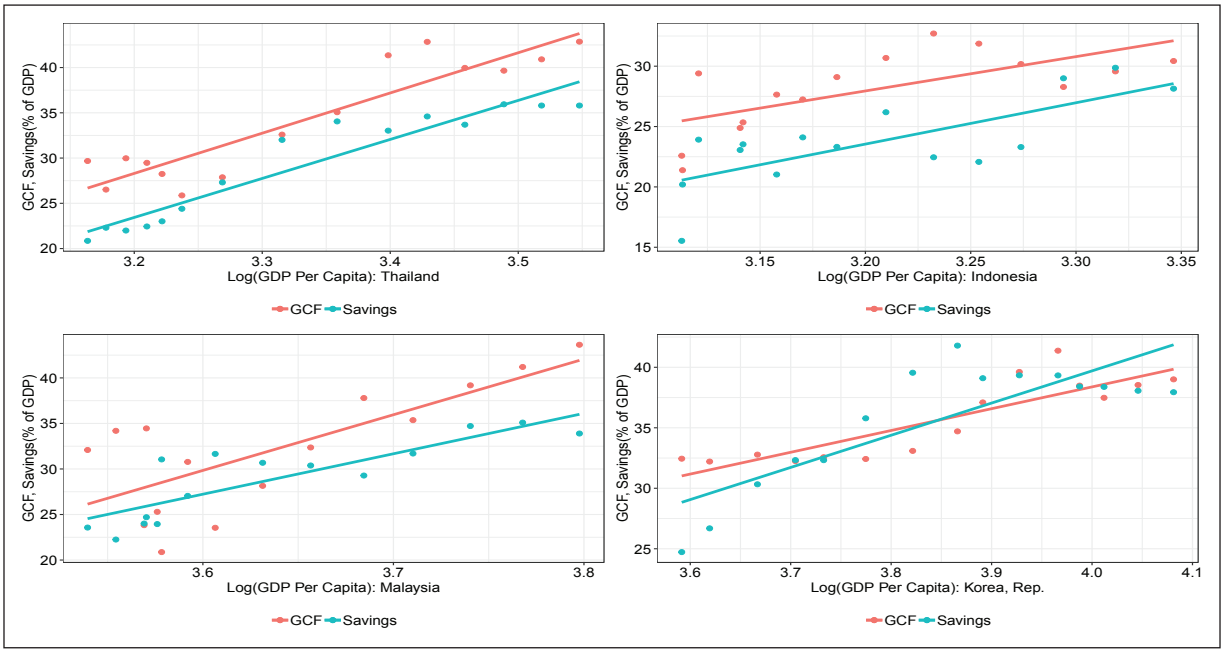
Source: World Bank

Note: GDP per capita is in constant 2010 US$ and the time period used is 1980-2017. The logarithmic scale taken for the x-axis is with base 10 to enable ease of reading.

the rising GDP per capita, China's savings, investment and exports increased further.[3] Figures 3 and 4 show the same relationships for saving and investment for four countries in East Asia (Thailand, Indonesia, Malaysia and South Korea), which witnessed high growth before the Asian Financial Crisis. The time period employed in these charts is 1980-1995, i.e. before the Asian Financial Crisis. While Figure 3 shows the relationship of investment and savings, Figure 4 shows the same for exports except for South Korea. The inference that we made using China, thus, remains unchanged by examining Figure 3 and 4.

1.22 Sandri (2014) provides a different way of looking at the same phenomenon.

Figure 3: Share of GCF and Savings in GDP vs. log GDP Per Capita in constant 2010 US$: High Growth East Asian Economies ex-China (1980-1995)



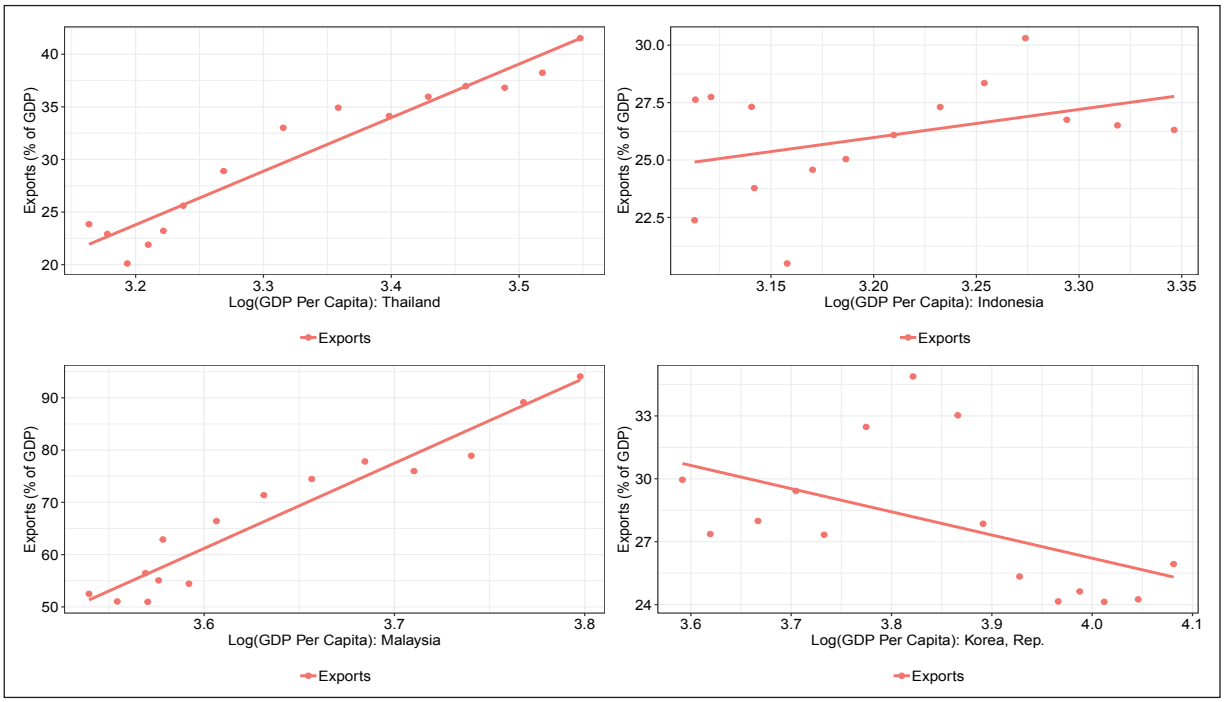
Source: World Bank

Notes: GDP per capita is in constant 2010 US$ and the time period used is 1980-1995. The logarithmic scale taken for the x-axis is with base 10 to enable ease of reading. High Growth East Asian Economies correspond to Indonesia, Malaysia, South Korea and Thailand.

[2] Instead of examining the relationship between log of investment and log of GDP per capita, which would not capture the non-linearities embedded in a virtuous cycle, we examine the relationship between the share of investment in GDP to log of GDP per capita so that the change in this share with a change in GDP per capita can be examined. A similar rationale applies for the use of shares of exports and savings to GDP on the y-axis.

[3] Though there is an exponential increase and then a dip post the year 2000 in the export to GDP ratio for China, the overall linear trend is still increasing.

Figure 4: Share of Exports in GDP (%) vs. log GDP Per Capita in constant 2010 US$: High Growth East Asian Economies ex China (1980-1995)



Source: World Bank

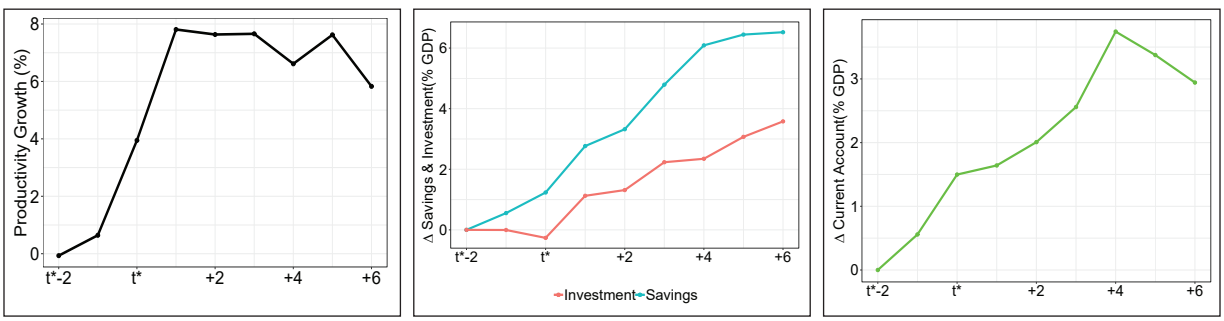
Notes: GDP per capita is in constant 2010 US$ and the time period used is 1980-1995. The logarithmic scale taken for the x-axis is with base 10 to enable ease of reading. High Growth East Asian Economies Correspond to Indonesia, Malaysia, South Korea and Thailand.

By averaging across 62 episodes of growth spurts from 1960 to 2011 among non-OECD countries, Sandri (2014) demonstrates that productivity growth across these episodes is combined with a rapidly rising investment rate and an even more steeply increasing savings rate.

1.23 China has relied primarily on savings and investment with consumption decreasing significantly as a share of GDP (Figure 6). China remains an investment-driven economy even today with its investment and savings rates reaching about 45% of GDP even in 2017.

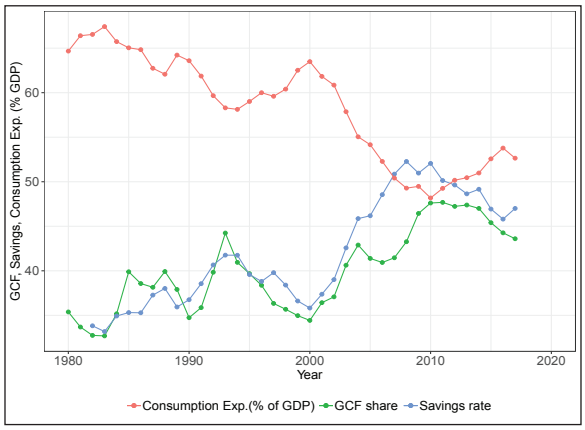
1.24 For China and other East Asian Economies, Figure 7 shows the strong

Figure 5: Changes in productivity, investment, savings and current account across 62 episodes of growth accelerations in non-OECD countries (1960-2011)



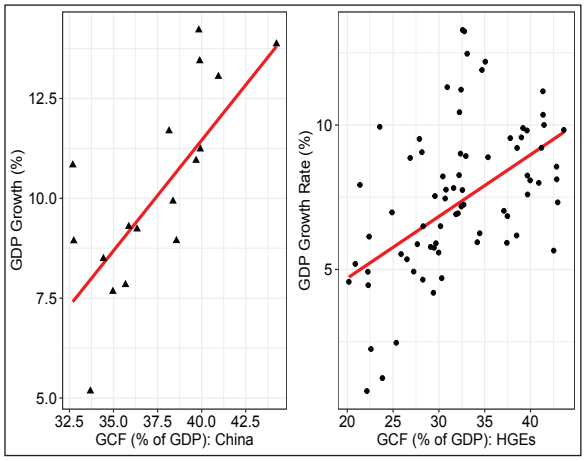
Source: Sandri (2014)

Figure 6: Consumption, Gross Capital Formation and Savings to GDP for China (1980-2017)



Source: World Bank

Figure 7: GDP Growth vs. Gross Capital Formation to GDP for China and High Growth East Asian Economies ex-China (1980-2000)



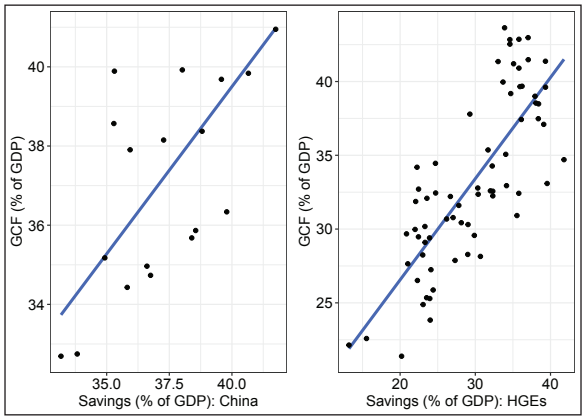
Source: World Bank

Notes: The left panel shows the relationship for China while the right panel shows the same for the four high growth East Asian economies of Thailand, Indonesia, Malaysia and South Korea. Time period used is 1980-2000. HGEs correspond to the four High Growth East Asian economies of Thailand, Indonesia, Malaysia and South Korea.

correlation between investment as measured by the Gross Capital Formation and GDP growth while Figure 8 shows an equally stronger correlation between investment and savings.

1.25 Thus, the evidence in this section

Figure 8: Gross Capital Formation to GDP vs. Savings rate for China and High Growth East Asian Economies ex-China (1980-2000)



Source: World Bank

Notes: The left panel shows the relationship for China while the right panel shows the same for the four high growth East Asian economies of Thailand, Indonesia, Malaysia and South Korea. Time period taken is 1980-2000.

suggests that savings, investment and GDP growth have grown in a virtuous cycle in the high growth economies, be it China or other East Asian economies.

Importance of savings

1.26 As Feldstein and Horioka (1980) demonstrated in what has since been labelled the "Feldstein-Horioka puzzle", a high investment effort must be backed by domestic savings. Further research (Carroll and Weil, 1994; Attanasio, Picci and Scorcu, 2000; Rodrik, 2000) has since shown that savings and growth are not only positively correlated but their positive correlation is even stronger than that between growth and investment (Gourinchas and Jeanne, 2013). In fact, Sandri (2014) argues that as investment is risky, entrepreneurs are exposed to the risk of idiosyncratic business failure that leads to the loss of the invested capital. Therefore, savings have to increase more than investment to allow for the accumulation of precautionary savings. The evidence from Sandri (2014) for the 62 episodes of growth acceleration

(Figure 5) and China (Figure 6) shows the same as well.

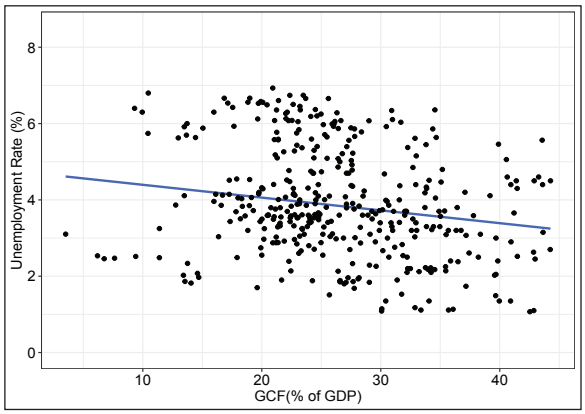
Jobs

1.27 A general apprehension is that high investment rate will substitute labour. This thinking has led to much debate about labour-intensive versus capital-intensive modes of production. However, the Chinese experience illustrates how a country with the highest investment rates also created the most jobs. What matters most is whether or not investment enhances productivity and thereby international competitiveness. The misconception arises from a view buried in the silo of a specific activity. When examined in the full value chain, capital investment fosters job creation as capital goods production, research and development, and supply chains also generate jobs. International evidence also suggests that capital and labour are complementary when high investment rate drives growth. For instance, Lin (2011) shows that the coming of software and computers, while having replaced some white collar tasks, have also generated new labour centric tasks related to software and application development, computer security, and specialised tasks for loan application analysts and medical equipment technicians.[4] Figure 9 shows how unemployment rates decreases with greater gross capital formation in East Asia and Pacific, thereby providing additional evidence that labour and investment complement each other. Therefore, job creation can indeed be fostered by encouraging investment.

Exports

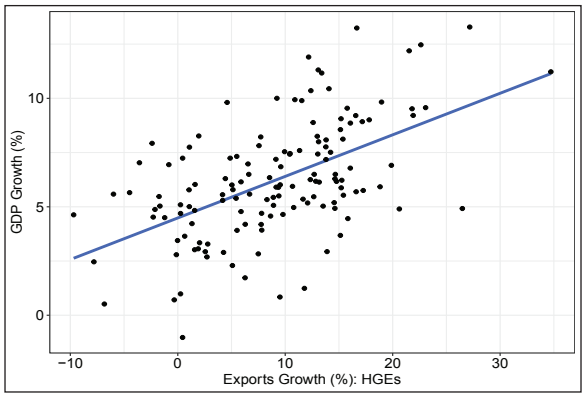
1.28 With the share of consumption in GDP constrained by the high level of savings, domestic consumption can be, at best, act as a force-multiplier when high income growth feeds consumption. So, where would the final demand for the large capacities created by high investment come from? The answer is exports. This is why an aggressive export strategy must be a part of any investment-driven growth model. Figure 10 shows the

Figure 9: Unemployment Rate vs. Gross Capital Formation (GCF) to GDP for East Asia and Pacific (1960-2017)



Source: World Bank

Figure 10: GDP Growth vs. Growth in Exports for High Growth East Asian Economies (1980-2017)



Source: World Bank

Note: Time period taken is 1980-2017 and High Growth East Asian Economies correspond to Indonesia, Malaysia, South Korea and Thailand.

[4] The success story of Town and Village Enterprises (TVEs) in China becoming the engines of its spectacular growth shows how labour-intensive manufacturing investment can simultaneously boost productivity, job creation and exports (Wei and Balasubramanyam, 2015). While in 1980, there were about 1.4 million TVEs with 30 million employees, by 1996, there were 23.4 million TVEs with 135 million workers contributing nearly 30% of China's GDP and 50% of the industrial output (Perotti et al., 1999). By 1999, TVE exports accounted for 48% of China's total exports and much of these were labour-intensive products involving simple production techniques (Fu and Balasubramanyam, 2005).

strong correlation between growth in exports and GDP growth for the high growth East Asian economies.

1.29 The global market is extremely competitive with the firms that are able to produce at the lowest costs having the ability to gain market share in exports. So, average productivity of firms in the economy becomes crucial to export competitiveness. As seen in Figure 11, capital investment enhances total factor productivity, which in turn enhances export performance. Therefore, investment becomes crucial to enhancing export performance.

1.30 While it is true that world trade is currently facing some disruptions, India's share in global exports is so low that it should focus on market share. One could even argue that the current disruptions provide an opportunity for India to insert itself into global supply chains. The High Level Advisory Group, chaired by Dr Surjit Bhalla, submitted its report in June 2019 on how India can enhance its exports. Its recommendations need to be studied and implemented where possible.

GOING BEYOND THE ECONOMICS OF 'EQUILIBRIUM' IN THE BLUEPRINT

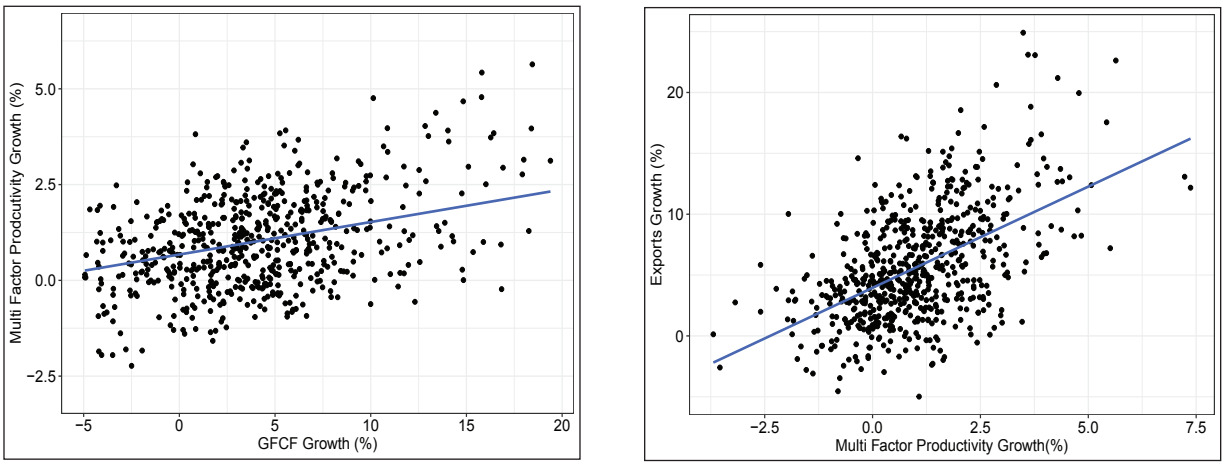
"If man is not to do more harm than good in his efforts to improve the social order, he will learn that in this, as in all other fields where essential complexity of an organized kind prevails, he cannot acquire the full knowledge which will make mastery of the events possible. He will therefore have to use what knowledge he can achieve, not to shape the results as the craftsman shapes his handiwork, but rather to cultivate a growth by providing the appropriate environment, in the manner in which the gardener does this for his plants."

Friederich Von Hayek, Nobel prize speech, 1974.

1.31 As the above quote from Hayek (1974) illustrates, the blueprint starts from the philosophy that economies are intricately interwoven systems. Therefore, they can neither be meaningfully viewed in silos nor can they be analysed without accounting for dynamic effects over time. Moreover, economies may rarely be in a state of equilibrium. While writing about economic theories following the Global Financial Crisis, Rodrik (2018) laments:

"Why do we focus so much on the perfectly rational individual even though real people do not seem to behave quite that way? Shouldn't we be paying a wee bit more attention to

Figure 11: Effect of GCFC Growth on Productivity and in turn on exports for OECD countries (1985-2017)



Source: OECD Database.

disequilibrium, in addition to equilibrium? Why do our models exclude social and institutional features without which markets could not work? Why do we emphasize math so much and disregard things that cannot be easily quantified?"

1.32 To highlight the inadequacies in economic models following the Global Financial Crisis, the OECD created the group New Approaches to Economic Challenges (NAEC). In a blog post on NEAC, Ramos (2017) highlights:

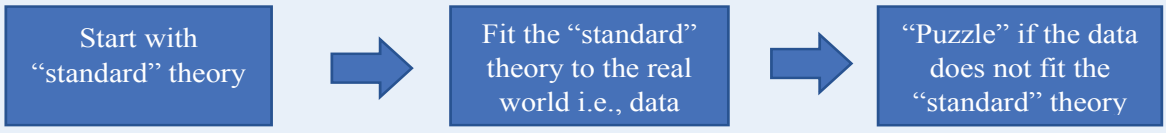
"The very name of (traditional economic) models, general equilibrium, shows that they assume that the economy is basically in balance until an outside shock upsets it. They assume that you can understand the economy by studying a representative agent whose expectations and decisions are rational. This view is essentially linear, and the policy advice it generates is tailored to a linear system, where an action produces a fairly predictable reaction… Real life is not like that… We need a new approach to economics that isn't just about quantitative economics. An approach that integrates behavioural economics and complex systems theory, as well as economic history."

1.33 As Box 1 illustrates, the meltdown of economic activity following the Global Financial Crisis highlighted that economies may be in a vicious cycle, where moderation in demand, jobs and investment feed into each other and thereby dampen the animal spirits in the economy. Therefore, as highlighted by Romer (2015), Ramos (2017) and Rodrik (2018), economic thinkers now recognise the need for economics to embrace the learning from other fields. They acknowledge that the concept of treating an economy as always being in equilibrium may "force fit" the "standard" framework to an ever-changing world. Instead, thinking about economies as being in the constant disequilibrium of virtuous or vicious cycles provides a more apt framework for the current times. Therefore, when the economy is viewed, proper sequencing of policy levers assumes importance, especially because of the presence of complementarities between different elements of an economy.

Box 1: The need for economic theory to be contextualised to India

The Global Financial Crisis exposed the problems embedded in conventional macroeconomic theories. Yet, to use this failure as an excuse to disband economic thinking would be to throw the "proverbial baby with the bath water" for theories are required in our field to discipline our thinking and thereby enable careful policymaking. Therefore, economic theories, in general and macroeconomics, in particular, may need to adapt to a world that is in constant disequilibrium. In this context, it is useful to understand the process of theory building in economics and contrast the same with other disciplines to enable us to develop the appropriate model for economic development in India.

The process of building theories in economics proceeds as follows:

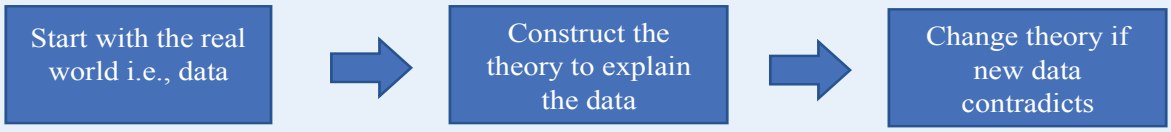


Consider the classic paper by Lucas (1990) to understand this flaw in the theory building process in economics. The paper attempts to explain why capital does not flow, as standard theory predicts, from capital-rich to capital-poor countries, because the latter would have higher returns. The theory starts

with some assumptions in "standard" theory such as individuals always making "rational" decisions, the preferences of a collection of individuals captured by the preference of a "representative agent", the law of diminishing returns, etc.

Having constructed the "standard" theory, the paper finds that the theory does not fit the real world, where capital flows from the poor to rich countries rather than vice versa. Capital flows from China to the United States provides a salient example though the phenomenon is more pervasive. As the "standard" theory does not fit the real world, the study labels the real world phenomenon "a puzzle".

In contrast, in other disciplines, especially the natural sciences and engineering, the process of building theories proceeds in the following direction:



If we adopt this discipline, the phenomenon studied in Lucas (1990) may not be a puzzle. Consider a business that becomes extremely productive and is able to produce goods at very low prices, thereby capturing large market share and generating huge profits. The profits are usually ploughed back into the business to fund further investment. But suppose the profits are so large that even after reinvesting the entire amount required for funding new projects, the business is still left with a surplus. What would the business do? Invest this excess surplus in "other assets." For instance, the business may invest in other firms. This is what China is doing. Why is it a puzzle then?

Another prominent example of "standard" theory is the use of the dynamic stochastic general equilibrium (DSGE) model in macroeconomics. Despite the large literature in this area, which posited DSGE models of enormous varieties, the pre-crisis models assumed the financial sector as a side-show. Therefore, any problems arising from potential misallocations within the financial sector were absent from the DGSE models. This is especially relevant in the Indian context given the recent experience of distress in the banking sector and the overhang that it created on the economy.

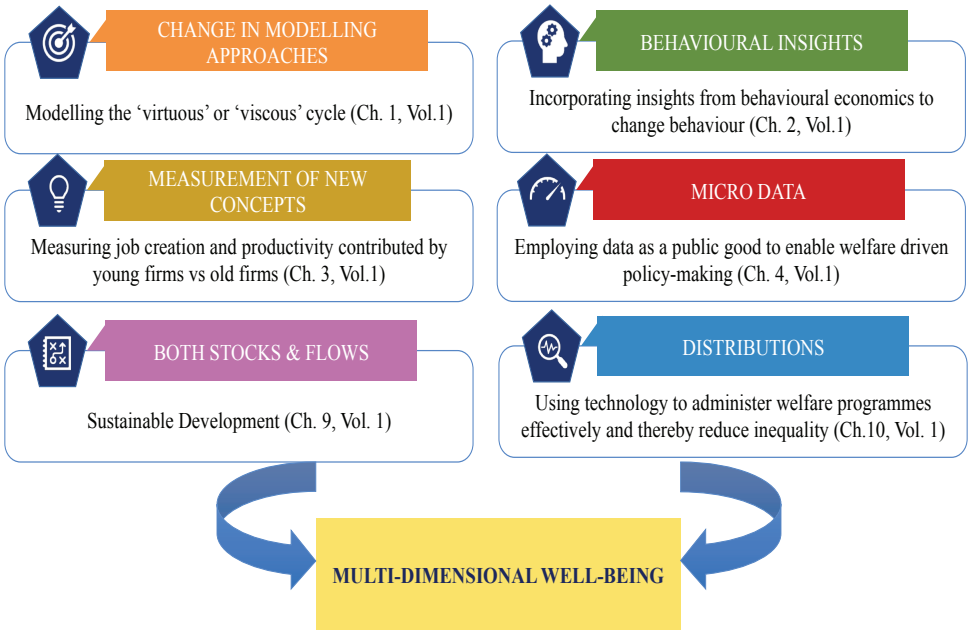
While a growing literature has since fixed the problem in DGSE models, such *ex post facto* fixing may not be adequate as some other critical element omitted from the current models will have to wait for next crisis to uncover. This ex post fixing stems from the insistence on using the "standard" theory to understand real world phenomeona. The adapting of DGSE models to the Indian reality is critical because the financial sector in India differs significantly from those in the Anglo-Saxon countries.

The case of Lucas (1990) and the over-reliance on DGSE models are but two examples that highlight the need for evolving macroeconomic thinking that fits the institutional differences in a country like India vis-à-vis the Anglo-Saxon economies.

NAVIGATING A WORLD OF CONSTANT DIS-EQUILIBRIUM

1.34 An economy that is in a constant state of dis-equilibrium needs a new approach to navigate. The earlier attempt to create five-year plans, largely using the equilibrium framework, failed because it was too prescriptive for an inherently unpredictable world. Therefore, navigating this uncertain world of dis-equilibrium requires three elements : (i) a clear vision; (ii) a general strategy to achieve the vision; and (iii) the flexibility and willingness to continously recalibrate tactics in response to unanticipated situations. In earlier sections, we have described a broad strategy to achieve the vision of a US$5 trillion economy. We now turn to some of the tactics. Figure

Figure 12: Tools for navigating the economy in a constant state of disequilibrium



Source: Adapted from NEAC, OECD

12 below shows the approach advocated by NEAC, OECD to navigate this world. Apart from the need to model the different elements of the economy simultaneously in an integrated manner, this approach critically requires assimilation of several other tools. Several chapters in Volume 1 of The Survey lay out the policy details for navigating this world. This chapter lays out the framework for integrated modelling of the various economic phenomena. Chapter 2 in Volume 1 delves deep into utilising the insights from behavioural economics for behaviour change that can thereby foster productivity and economic growth. Chapter 3 in Volume 1 pursues the measurement of new concepts by examining the impact of young versus old firms in fostering job creation and enhancing productivity. Chapter 10 in Volume 1 studies how the benefits of technology can be applied to enhance the efficacy of welfare programmes and thereby generate better distributional outcomes in the Indian society. Chapter 4 in Volume 1 describes the use of data as a public good for enhancing welfare. Chapter 9 focuses on the use of energy for sustainable development of the Indian economy.

Behavioural economics

1.35 As policymaking must keep real people as its focus, rather than the optimization-focused robots that conventional economics assumes, the insights from behavioural economics need to be integrated into policymaking to foster productivity and economic growth. Chapter 2 of the Survey, therefore, delves deep into this subject. By analysing the successful behavioural change effected by the Swachh Bharat Mission and the Beti Bachao, Beti Padhao campaigns, the chapter incorporates their learning and lays out frameworks for integrating behavioural economics into policymaking in various contexts:

(i) The Beti Bachao, Beti Padhao campaign has helped in improving child sex ratios, particularly in large states where the child sex ratio was poor. Therefore, the campaign has had the maximum impact in states that plausibly also needed the

greatest pivot in their social norms. Taking the learning from this campaign, the chapter attempts to further the cause of Gender equality by coining the slogan of BADLAV (Beti Aapki Dhan Lakshmi Aur Vijay-lakshmi) to *inter alia* enhance contribution of women in the workforce and the economy;

(ii) The Swachh Bharat Mission has helped increase the percentage of villages that are Open Defecation Free and has enhanced access and usage of toilets. This improvement in sanitation has helped improve health outcomes as is seen in the number of malaria and diarrhoea cases and the number of still births and children with low birth weight. Incorporating the learning from this successful behavioural change, the chapter develops the framework to use behavioural insights for a healthy India. The framework embeds the idea of taking off from the Swachh Bharat Mission into "Swasth + Ayushman = Sundar" Bharat. This would enhance labour productivity and enhance savings, and thereby investment;

(iii) The creation of the Insolvency and Bankruptcy (IBC) process has helped bring a large number of non-performing assets into the IBC process. Further, the threat created of losing control under IBC is helping change the credit culture in the country. Insights from behavioural economics can be utilised to enhance the credit culture, especially with respect to frauds and wilful defaults, by drawing on the social and cultural norm of the "doctrine of pious obligation." This, in turn, will foster credit growth and investment.

(iv) Several changes brought through the use of technology in tax administration have decreased manual intervention in tax administration, and have thereby improved the experience of a large majority of taxpayers. Behavioural insights can be leveraged to transform the tax culture from one of tax evasion to tax compliance. This would then provide the necessary revenues for investments in both the hard infrastructure of roads, ports, railways, etc. and the soft infrastructure of skills and education;

(v) The introduction of the GST represented a salient instance where policymakers exhibited the appetite to introduce bold reform by eschewing loss aversion, whereby a policy that creates some short-term losses while creating large long-term benefits may lack enough support (Milkman et al. 2012). Behavioural insights can build on the positive outcome of enacting such a path-breaking policy change to reduce loss aversion and thereby improve policy and legislative outcomes.

1.36 Figure 13 below summarises the seven principles of behavioural economics that can be applied to achieve the above outcomes. Chapter 2 of the Survey explicitly lays out applications in each of these areas.

Data as a public good

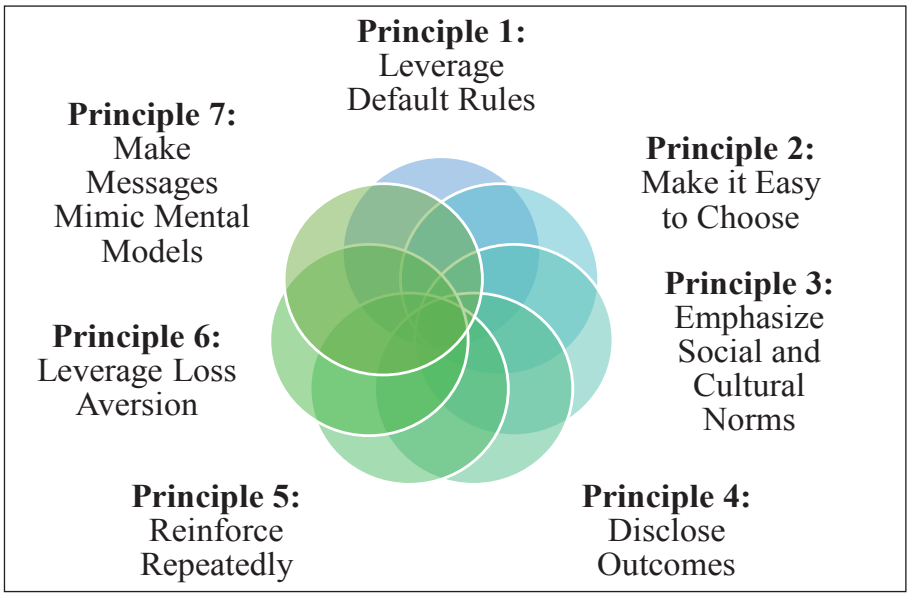
"Cross the river by feeling the stones."

- Deng Xiaoping

1.37 Having set out the broad strategy for achieving the goal of a US$5 trillion economy, continuous re-calibration of policies to achieve this goal is necessary. Data-driven evidence enables this re-calibration. Deng Xiaoping's exhortation to "cross the river by feeling the stones" is relevant in this context. If the economy in constant disequilibrium represents the flowing river, then data-driven policymaking represents the process of feeling the stones for necessary re-calibration.

1.38 Chapter 4 in Volume 1 of the Survey

Figure 13: Principles of behavioural economics to foster behavioural change



lays out the framework for creating data "of the people, by the people, for the people." The chapter surmises that society's optimal consumption of data is higher than ever before because of the exponential decline in the marginal cost of data combined with the manifold increase in its marginal benefits to society. While private sector does a good job of harnessing data where it is profitable, government intervention is needed in social sectors of the country where private investment in data remains inadequate. Governments already hold a rich repository of administrative, survey, institutional and transactions data about citizens. However, these data are scattered across numerous government bodies. Utilising the information embedded in these distinct datasets would *inter alia* enable government to enhance ease of living for citizens, enable truly evidence-based policy, improve targeting in welfare schemes, uncover unmet needs, integrate fragmented markets, bring greater accountability in public services, generate greater citizen participation in governance, etc. Given that sophisticated technologies already exist to protect privacy and share confidential information, governments can create data as a public good within the legal framework of data privacy.

Legal Systems and Contract Enforcement

1.39 The economic model described in the blueprint is explicitly about creating virtuous cycles in an evolving, complex landscape. It is about investment, risk-taking and innovation in an environment that is inherently uncertain and unpredictable due to a range of factors from changing technology and consumer preferences to geopolitics and economic cycles. This is a world of "butterfly effects" and unintended consequences, where uncertainty is inevitable. As uncertainty exacerbates the temptation to renege on contracts when the ex post outcome is different from the one expected ex ante, the ability to enforce contracts and the rule of law become critical to navigating an uncertain world (Acharya and Subramanian, 2009; Acharya, Baghai and Subramanian, 2013, 2014; Chava et al., 2013; Sapra, Subramanian and Subramanian, 2013; Subramanian and Tung, 2016; Subramanian and Megginson, 2018). While a well-functioning legal system is important to economies in all situations, it

is absolutely central to one that aims to drive economic growth through high investment rates in an unpredictable world.

1.40 The importance of the legal system and contract enforcement are repeatedly emphasized by ancient Indian economic thinkers such as Kautilya and Kamandak. They saw the Rule of Law as key to averting Matsya-nyaya or Law of the Fish (i.e., law of the jungle). Nobel prize-winning Austrian economist Friedrich von Hayek echoed the same sentiment in his famous book 'The Road to Serfdom':

"Nothing distinguished more clearly conditions in a free country from those in a country under arbitrary government than the observance in the former of the great principles known as the Rule of Law".

1.41 Unfortunately, India's legal system, burdened by 3.5 crore pending cases, is arguably now the single biggest constraint to doing business in India and thereby fostering investment. The World Bank's latest Ease of Doing Business Report ranked India at 163 for contract enforcement. Experience shows that every other field of economic reform, be it property rights, taxes and insolvency, eventually flounders because it gets entangled in the legal system. This is why the legal sector reforms must be a top priority.

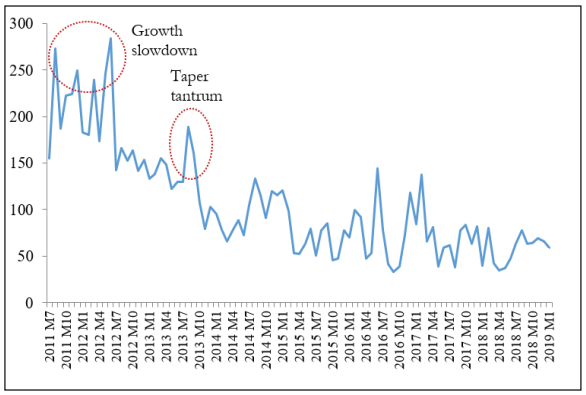
1.42 The good news is that the problem is not insurmountable. A scenario analysis of the effort needed to clear the backlog in five years suggests that significant efficiency gains are also necessary. At sanctioned strength, productivity will need to increase by 24.5 per cent, 4.3 per cent and 18 per cent for lower courts, High Court and Supreme Court respectively. The use of technology, increase in working days and administrative/ process reforms can enable these ambitious yet achievable efficiency gains. Given the potential economic and social multipliers of a well-functioning legal system, strengthening the legal system may be the best investment Indian reformers can make.

Consistency in Economic Policymaking

1.43 In the world of constant uncertainty, economic policymaking can either alleviate the uncertainty faced by investors or exacerbate it. The earlier attempt to create five-year plans, largely using the equilibrium framework, aimed to solve this problem. However, as we discovered to our dismay, the best-laid plans can get unravelled in an uncertain world that is in perpetual dis-equilibrium. Therefore, navigating this uncertain world of dis-equilibrium requires three elements: (i) a clear vision; (ii) a general strategy to achieve the vision; and (iii) the flexibility and willingness to continuously recalibrate tactics in response to unanticipated situations. Having taken the Prime Minister's vision of a US$5 trillion economy, this Economic Survey lays out a general blueprint as the strategy to achieve this vision. However, as discussed above, policies must respond continually to the flow of real-time data.

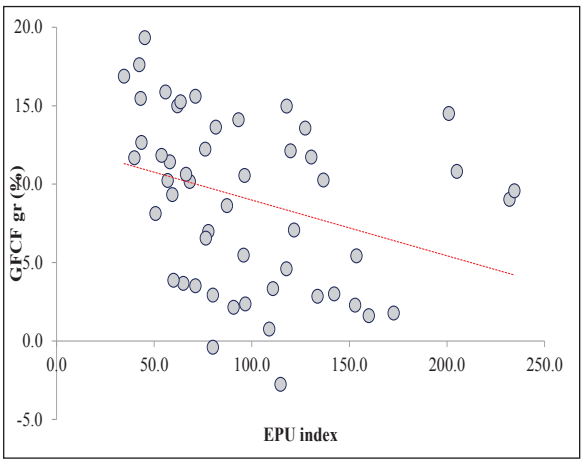
1.44 The obvious problem from having such tactical flexibility is that it creates its own uncertainty. This is particularly the case when major reforms are being carried out. In this context, in Chapter 6 of Volume 1 of the Survey, we examine how economic policy uncertainty has evolved in India over the last few years. More importantly, given our emphasis on investment as the key driver of the virtuous cycle, we examine the relationship of economic policy uncertainty with investment. To capture economic policy uncertainty, we use the Baker et al. (2016) index, which has been used widely across the world. We find that while this uncertainty was higher during episodes of greater uncertainty such as the taper tantrum in 2013, overall economic policy uncertainty has significantly decreased over the last decade (Figure 14). A noteworthy feature of this Figure is that

Figure 14: Economic policy uncertainty in India (2011-2019)



Source: http://www.policyuncertainty.com/

Figure 15: Investment growth and economic policy uncertainty index



Source: http://www.policyuncertainty.com/, CSO

the introduction of GST barely increased the economic policy uncertainty despite the enormous change that it entailed. This illustrates that path-breaking reforms that are consistent with a well-articulated vision do not create as much disruption as some people may fear. The continued decrease in economic policy uncertainty in India post 2015 is as exceptional because it contrasts sharply with the increase in economic policy uncertainty in major countries during this period, including the U.S.

1.45 Surges in economic policy uncertainty increase the systematic risk, and thereby the cost of capital in the economy. As a result, higher economic policy uncertainty lowers investment, especially because of the irreversibility of investment. Consistent with this thesis, we find that an increase in economic policy uncertainty dampens investment growth in India (Figure 15). The impulse-response function suggests that an increase in economic policy uncertainty affects growth in investment for about five quarters.

1.46 This effect of economic policy uncertainty, therefore, provides important policy implications for managing an economy in constant disequilibrium. First, the predictability of policy stems from being consistent with the overall vision and strategy rather than from tactical inflexibility. Second, "what gets measured gets acted upon". So, economic policy uncertainty index must be tracked at the highest level on a quarterly basis. Finally, quality assurance of processes in policymaking must be implemented in government via international quality certifications.

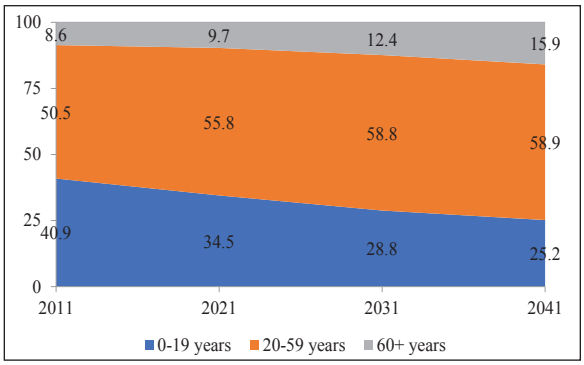
MAJOR FACTORS, REFORMS AND RISKS

Role of demographics in the "virtuous cycle"

1.47 As we shall discuss in Chapter 7 in Volume 1 of the Survey, India has already entered this demographic phase of a high share of working age population, and will remain in this "demographic dividend" zone for over two decades. Figure 16, in fact, highlights that the working age population (20-59 years), which comprised 50.5 per cent of the overall population in 2011, will increase to about 60 per cent in 2041.

1.48 Change in demographics, especially in the age structure of the population, has been shown to have had a significant effect on economic growth throughout Asia between 1960 and 1990 (Bloom and Williamson, 1998). A rise in the share of the working-age

Figure 16: Demographic composition in India (2011-2041)

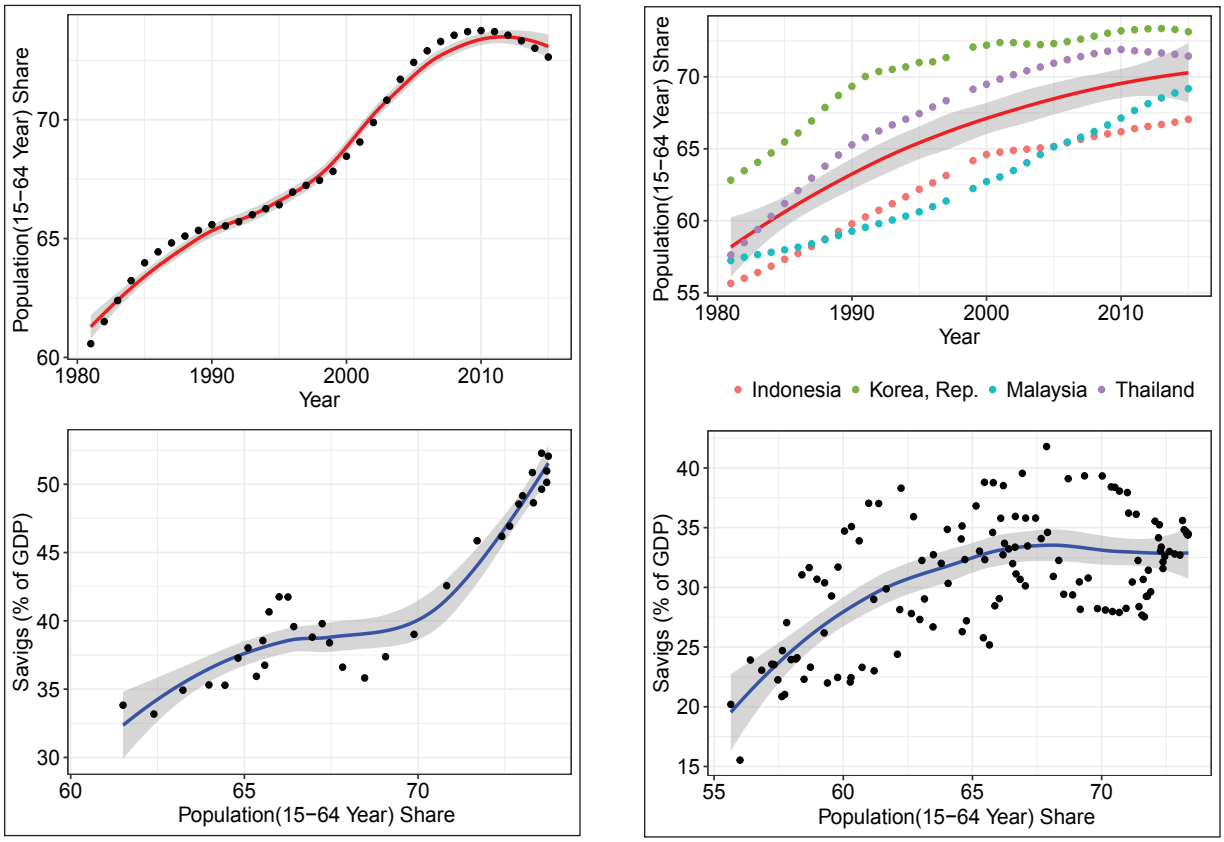


Source: Survey Calculations

population, brought about by a decline in the fertility rate, increases income per capita as output per worker remains unchanged but the number of youth dependents declines. The rise in the working-age share in Asia created this accounting effect, but it also brought with it behavioural changes. Savings increased as life expectancy increased (Lee, Mason and Miller 2000; Bloom, Canning, Mansfield and Moore 2007), and consequently investment increased. In fact, changes in growth of labour force per capita, changes in the savings rate, and changes in the investment rate are three plausible mechanisms by which demographics affects the economic growth (Higgins and Williamson, 1997; Bloom and Williamson, 1998).

1.49 Figure 17 shows how savings rate in China and other high-growth East Asian economies was driven significantly by change in its demographics from a predominantly young to an older population. While the top panels show the change in the demographics,

Figure 17: Impact of demographics on savings for China and other High-growth East Asian Economies



Source: World Bank

Note: Time period taken is 1980-2015 and High Growth Economies pertain to Indonesia, Malaysia, South Korea and Thailand.

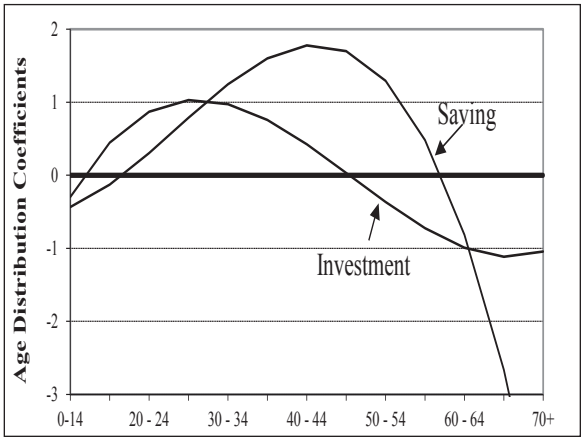
the bottom panels illustrate how closely the household saving rate and the working age proportion of the population move together in China and other high-growth East Asian economies. This makes sense because only people who are earning income can save, and the majority of income for the majority of people will be labour income. But, in addition to this effect of demographic composition, having fewer "mouths to feed" raises the availability of resources that can be saved for the future. Second, due to the importance of children as a source of retirement income in the Asian/Indian context, the decline in the number of children by the working generation promotes saving as they must rely more on savings for retirement in comparison to previous generations. Finally, saving also increases as a result of a composition effect: a large portion of saving tends to occur between the ages of 40 to 65 as people start to save for retirement.

1.50 As Bosworth and Chowdorow-Reich (2007) show for Asia, both savings and investment rise with the proportion of the working population (Figure 18). Notice that this figure shows the coefficient of the effect of proportion of each age group in the population on investment and savings. A positive coefficient indicates that the effect of the age group is to increase savings/investment while a negative coefficient indicates that this effect decreases savings/investment. Investment rises significantly with an increase in each of the age cohorts till age 50 while savings rises significantly with an increase in each of the age cohorts till age 60.

1.51 Figure 19 shows how wages affected China's savings rate. This relationship is crucial to note because without an increase in the earnings of the working population, neither consumption nor savings can increase. Therefore, jobs that pay meaningful wages become crucial in driving savings rate in the economy. The "virtuous cycle" that we describe fosters job creation by exploiting the complementarity between capital and labour, on the one hand, and by increase overall productivity and labour productivity, on the other hand. Policy changes to enhance productivity and job creation in the economy, which we describe in Section 5.2, become crucial in this context.

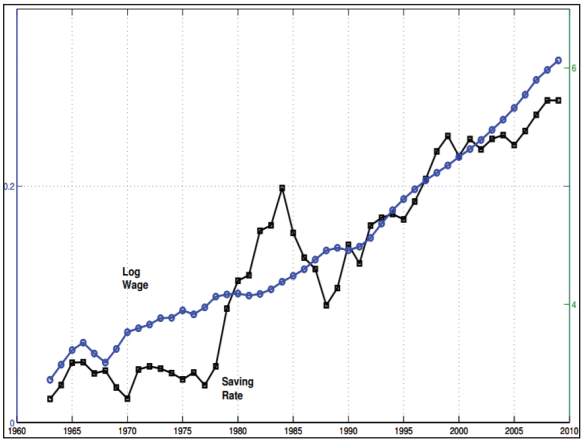
1.52 Our analysis, thus, shows that savings is driven primarily by demographics and income growth. Therefore, keeping domestic interest rates high may not encourage savings behaviour; a mildly positive real rate is good

Figure 18: Impact of composition of demographics on savings in Asia



Source: Bosworth and Chowdorow-Reich (2007)

Figure 19: Impact of wages on savings in China (1963-2009)



Source: Curtis, Lugauer and Mark (2011)

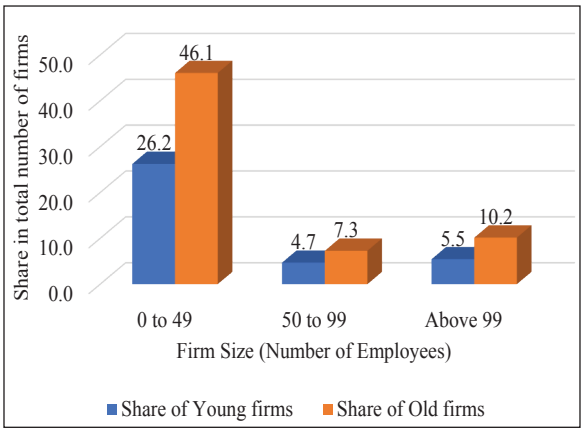
enough. As demographics and wages are the major factors that drive savings, policymakers obtain a key degree of freedom. Specifically, the two parts of the financial system, the savers and the borrowers, can be disentangled. As investment depends crucially on a low cost of capital, reducing real interest rates need not necessarily lower savings when the demographics are favourable. At the same time, the reduction in real interest rates can foster investment and thereby set in motion the virtuous cycle of investment, growth, exports and jobs.

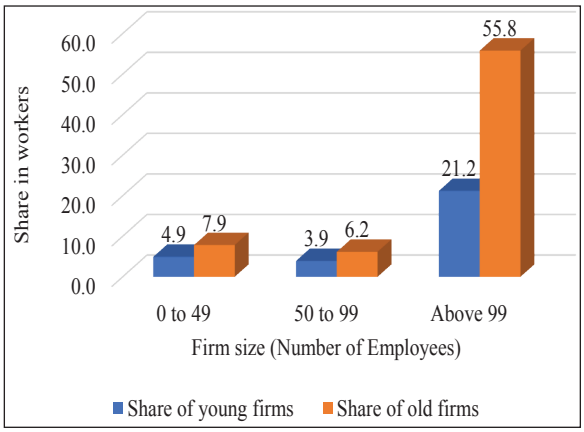
Role of job creation and earnings

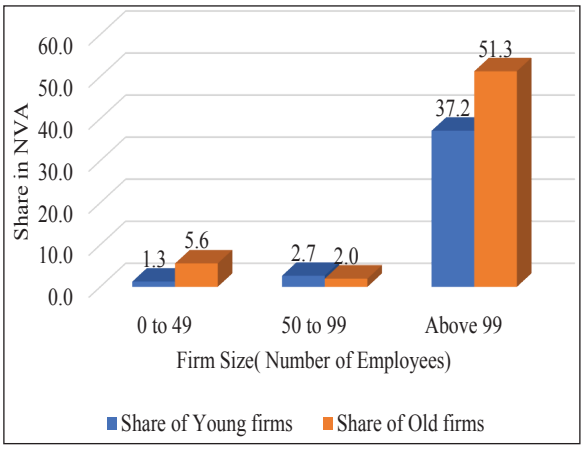
1.53 Chapter 3 in Volume 1 of the Survey recognises a startling fact. Dwarfs, which we define as small firms that never grow beyond their small size, dominates the Indian economy and holds back job creation and productivity. Firms employing less than 100 workers are categorized as small and firms employing 100 or more workers as relatively large. Though a firm employing 100 workers is definitely not large in the global context, they are relatively large in the Indian context. Firms that are both small and older than ten years are categorized as dwarfs as these firms have continued to be stunted in their growth despite surviving for more than 10 years.[5]

1.54 Figure 20 shows the share of dwarfs in the number of firms, the share in employment

Figure 20: Share of dwarfs versus other firms in number, employment and productivity







Source: Annual Survey of Industries, 2016-17 and Survey Calculations

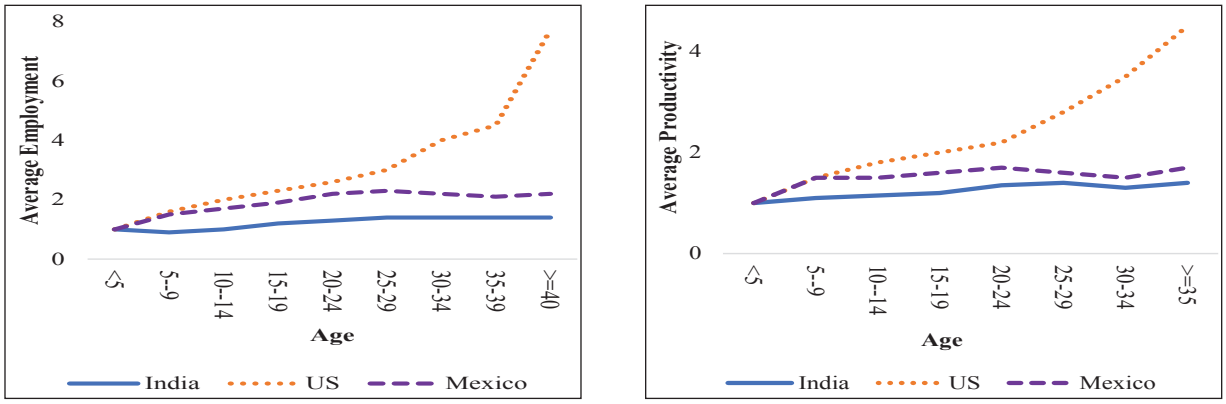
[5] Disclaimer: The Survey uses the term "dwarfs" for firms that remain small despite being old is contrasted to "infants" for firms that are small because they are young. **This usage is purely for firms and has no correlation with such usage for individuals and is therefore not intended to harm any sensibilities, whatsoever.**

and their share in Net Value Added (NVA). This analysis has been conducted using *firm-level* data from the Annual Survey of Industries for the year 2016-17, which is the latest available. While dwarfs account for half of all the firms in organized manufacturing by number, their share in employment is only 13.3%. In fact, their share in NVA is a miniscule 4.7% despite them dominating half the economic landscape. In contrast, young, large firms (firms that have more than 100 employees and are not more than 10 years old) account for only 6.2% of firms by number but contribute a quarter of the employment and 38% of the NVA. Large, but old firms (firms that have more than 100 employees and are more than 10 years old) account for only 9.5% of firms by number but contribute half of the employment as well as the NVA. Thus, firms that are able to grow over time to become large are the biggest contributors to employment and productivity in the economy. In contrast, dwarfs that remain small despite becoming older remain the lowest contributors to employment and productivity in the economy.

1.55 As a cross-country comparison, the Chapter shows that an average firm in the U.S. employs more than seven times as many workers when it is 40 years of age when compared to the average workers it employed when it was less than five years of age. An average firm in Mexico doubles its employment when it is forty years of age when compared to the workers it employed when it was less than five years of age. In contrast, an average firm in India only employs 40% more workers when it is forty years of age when compared to the workers it employed when it was less than five years of age. Thus, firms in India do not grow enough to create the necessary jobs and productivity in the economy (Figure 21).

1.56 Chapter 3 of the Survey then highlights that restrictive labour regulations, which exempt small firms from such regulations, and other size based incentives, which provide benefits to MSMEs irrespective of their age, have played a crucial role in providing perverse incentives for firms to remain significantly smaller in the Indian economic landscape. The Chapter, therefore, recommends focusing incentives on infant firms, i.e. firms less than ten years of age, with the appropriate grandfathering of the existing pattern of incentives to MSMEs. Further, the Chapter highlights using the labour law changes in Rajasthan that reforms of restrictive labour regulation can foster job creation and capital accumulation in the

Figure 21: Growth of jobs and productivity with age for firms in India, Mexico and U.S.



Source: Hsieh and Klenow (2014)

Note: Y-axis shows the average employment/gross value added at each age cohort as a multiple of the average employment/gross value added when the firm was less than five years old.

states. The labour law changes are crucial also because they can enhance investment (Subramanian and Tung, 2016; Subramanian and Megginson, 2018).

The role of the financial sector

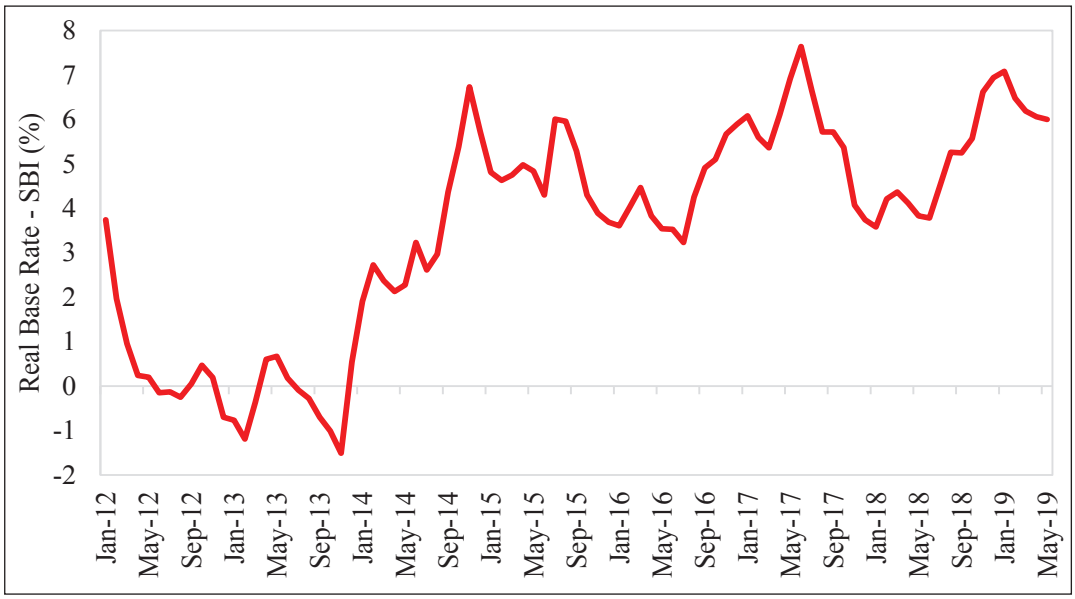
1.57 The investment-led growth model implies a rapid expansion in the financial system by a factor of magnitude – both banks and capital markets. In turn, this runs up the risk that such a rapid expansion could be disrupted by a major financial crisis that derails the savings-investment dynamic. This is no idle concern as illustrated by the Asian Crisis of 1997-98. Some South-East Asian countries appeared to be recreating the East Asian miracle in the nineties, but were unable to sustain the virtuous cycle because of large scale misallocation of capital. Our own experience of rapid credit expansion from 2006 to 2012 illustrates the same risk, where the quality of credit sharply deteriorated when the quantity was expanded. In this context, recent efforts to clean up the banks and establish a bankruptcy process should be seen as valuable investment that must be completed. If India had attempted to press the accelerator five years ago, it would have almost certainly been hit by a major financial crisis in a few years. Painful as it may have seemed, the banking sector clean up and the IBC framework are important foundations that will now reap benefits when the investment-driven growth model is put into motion as the incentives get aligned towards better quality lending (Sarkar, Subramanian and Tantri, 2019).

1.58 Now that the foundations for expansion have been laid, it is now time to significantly lower the cost of capital. Figure 22 shows how the real rate of interest has increased significantly in India over the years. In fact, a cross-country comparison shows that the cost of capital remains quite high in India (see Figure 23), which affects investment prospects in the country.

The risk-return trade-off in the economy

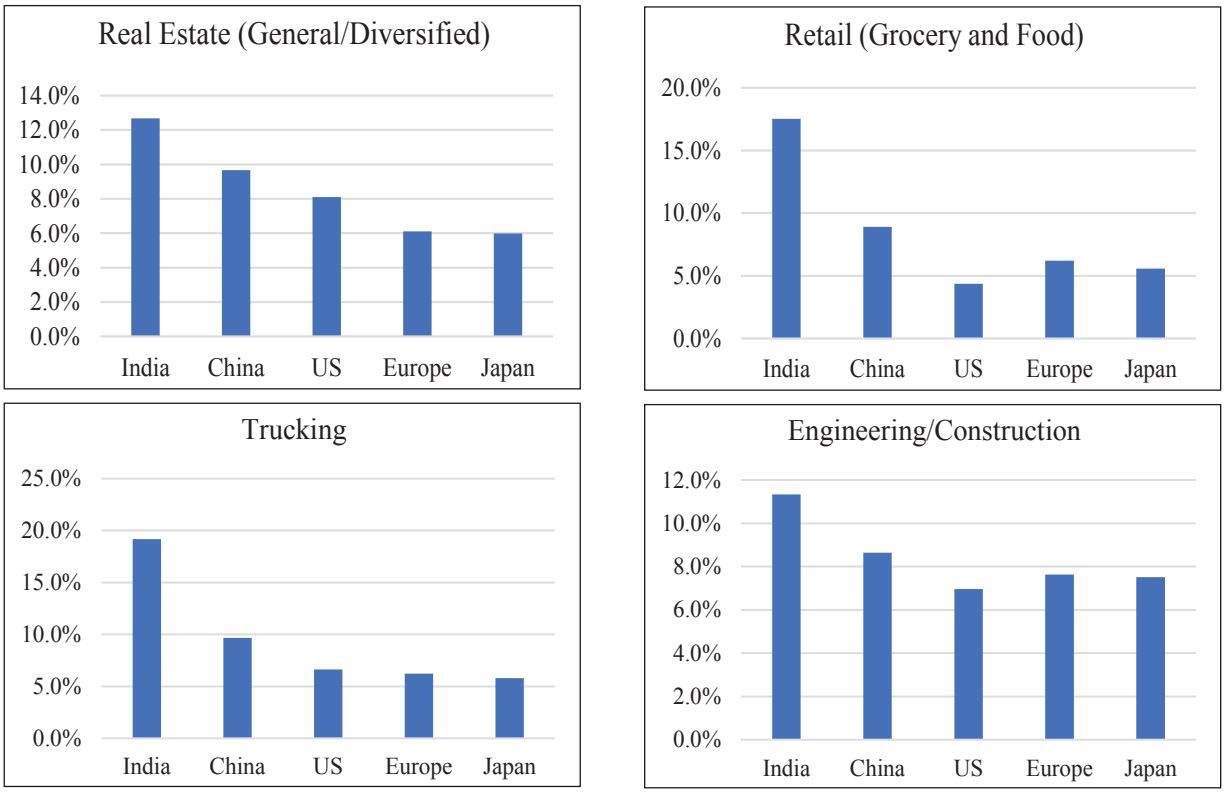
1.59 Another aspect that constrains the savings-investment driven model for growth, jobs and exports pertains to the incentive structure prevailing for risk-taking in the

Figure 22: Real rates of interest (Jan 2012 – May 2019)



Source: State Bank of India and Survey Calculations

Figure 23: Cross-country comparison of Cost of Capital across some sectors



Source: Damodaran(2019)

economy. The following aspects of the risk-return trade-off need attention.

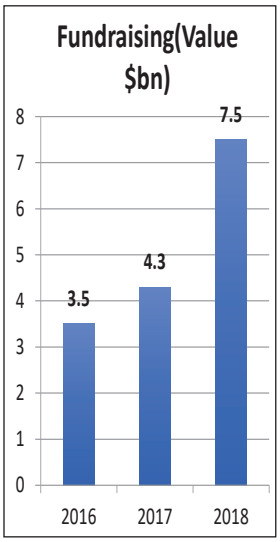
1.60 As investment represents a forward-looking activity, investors eventually make their decisions to invest based on the risk-adjusted return they expect. In other words, if two projects offer the same return but one of them is riskier, then investors choose the less risky project to invest. Therefore, systematically lowering the risks faced by investors in India is critical for the success of the investment-driven model for economic growth. Risk pertains to the possibilities of upside, when a project performs well, and downside, when the project fails. So, the implementation of the IBC is crucial in this regard as it puts into process a framework for reconfiguration of assets following business failure. However, the after-tax return for successful projects crucially affects the risk-return trade-off and thereby becomes critical to foster investment.

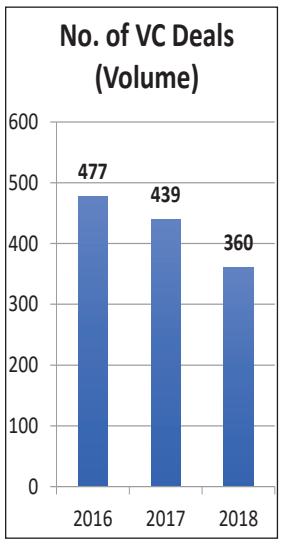
1.61 Optimal tax policy plays a crucial role in this regard. Countries across the world recognise the need to evolve tax system that can foster innovation. Therefore, tax policy and its implementation for start-ups must be rationalised to foster innovative investments in the Indian economy. Several studies have also suggested that capital gains tax can have significant economic consequences for individual investors in terms of its lock-in effects and associated deterring incentives to use capital gains into riskier investments (Meade, 1990). Design of optimal tax policy also aims to raise revenue efficiently and fairly, while encouraging the bonafide taxpayers and punishing the malafide ones. However, achieving this optimality is not an easy task. Therefore, to foster investment, getting this balance right is extremely critical in the Indian context.

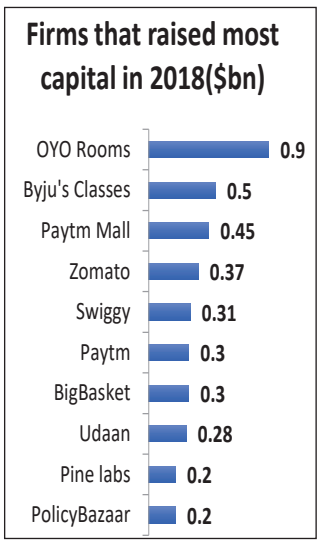
1.62 Growth in the new economy cannot be fostered without an ecosystem that rewards innovation and entrepreneurship (Acharya and Subramanian, 2009; Acharya, Baghai and Subramanian, 2013, 2014; Chava et al., 2013; Sapra, Subramanian and Subramanian, 2013). Startups and innovative ventures face significantly greater uncertainty than traditional "brick-and-mortar" firms. Yet, policy ambiguities that create collateral damage for genuine risk-takers can affect investments by dampening the animal spirits in the economy.

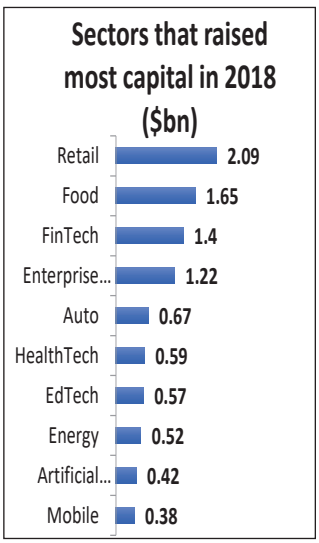
1.63 Ranked third in the world in the start-up ecosystem, a growing number of domestic Indian enterprises are developing solutions aimed at managing and solving urban challenges. While a majority of these are tech-start-ups concerned with e-commerce and consumer products and services, 2018 was touted as the year of food start-ups. Figure 24 shows statistics that depict the vibrant start-up ecosystem that has developed in India. B2C start-ups concerned with easing public service delivery and driving efficiencies, whether in waste, water or energy, are slowly

Figure 24: Trends in India's start-ups (2018)









Unicorn Club

	Total Funding($bn)	Post-money valuation($ bn)	Time taken to become an unicorn(yrs) (RHS)
Flipkart	6.1	15.51	3
OYO Rooms	1.35	4.18	5
Ola	2.8	4	2
Byju's Classes	0.74	3.02	4
Snapdeal	1.8	2.47	3
Paytm Mall	0.653	2.01	Less than 1
Zomato	0.58	2	5
Swiggy	0.46	1.21	3
Quikr	0.37	0.88	7
PolicyBazaar	0.37	0.44	10

Unicorn Aspirers

	Total Funding($bn)	Post-money valuation($ bn)
Rivigo	0.17	0.92
Billdesk	0.16	0.83
BookMyShow	0.23	0.78
BigBasket	0.56	0.72
Delhivery	0.26	0.60
Sharechat	0.12	0.50
UrbanClap	0.11	0.47
CarDekho	0.28	0.45
CarTrade	0.25	0.40
CapitalFloat	0.11	0.35

Mergers and Acquisitions

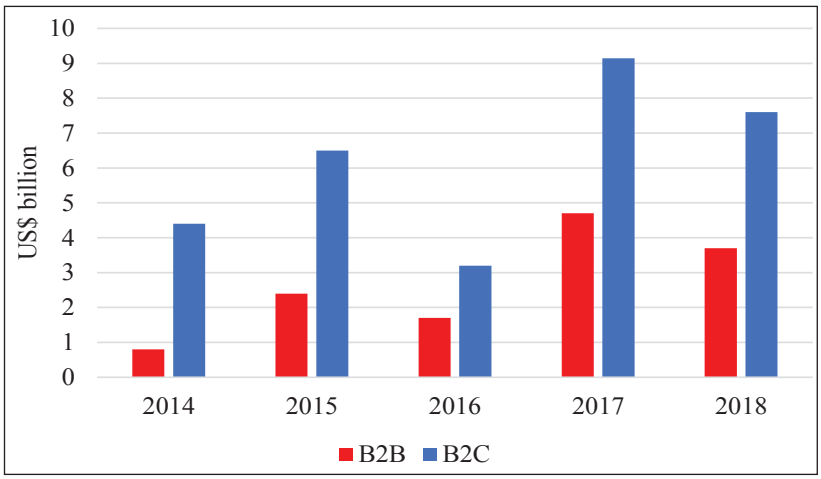
Target	Acquired by	Value ($ bn)
Flipkart	Walmart	16
Embibe	RIL	0.18
Saavn	RIL	0.10
Ridlr	Ola Cabs	0.05
Minjar	Nutanix	0.05
Mettl	Mercer	0.40
TicketNew	PayTm	0.40
Liv.ai	Flipkart	0.40
Tapzo	Amazon	0.40
Walnut	CapitalFloat	0.30

Source: Sarkar (2018)

but surely emerging. Figure 25 highlights this fact as private investment into B2C start-ups is much higher than that into B2B start-ups.

1.64 Continuing the creation of an ecosystem for private investment, especially in the new economy, is therefore critical to enable the virtuous cycle of investment, demand, exports, growth and jobs.

Figure 25: Funding in B2C startups higher than in B2B startups



Source: Goyal (2019)

CHAPTER AT A GLANCE

- During the last five years, India's economy has performed well. By opening up several pathways for trickle-down, the government has ensured that the benefits of growth and macroeconomic stability reach the bottom of the pyramid.
- To achieve the objective of becoming a US$5 trillion economy by 2024-25, India needs to sustain a real GDP growth rate of 8%. International experience, especially from high-growth East Asian economies, suggests that such growth can only be sustained by a "virtuous cycle" of savings, investment and exports catalysed and supported by a favourable demographic phase. Investment, especially private investment, is the "key driver" that drives demand, creates capacity, increases labour productivity, introduces new technology, allows creative destruction and generates jobs.
- Exports must form an integral part of the growth model because higher savings preclude domestic consumption as the driver of final demand. Similarly, job creation is driven by this virtuous cycle. While the claim is often made that investment displaces jobs, this remains true only when viewed within the silo of a specific activity. When examined across the entire value chain, capital investment fosters job creation as production of capital goods, research & development and supply chains generate jobs.
- In postulating the above growth model, the Survey departs from traditional Anglo-Saxon thinking by viewing the economy as being either in a virtuous or a vicious cycle, and thus never in equilibrium.
- By presenting data as a public good, emphasizing legal reform, ensuring policy consistency, and encouraging behaviour change using principles of behavioural economics, the Survey aims to enable a self-sustaining virtuous cycle. Key ingredients include a focus on policies that nourish MSMEs to create more jobs and become more productive, reduce the cost of capital, and rationalise the risk-return trade-off for investments.

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Policy for *Homo Sapiens*, Not *Homo Economicus*: Leveraging the Behavioural Economics of "Nudge"

02
CHAPTER

तर्कोऽप्रतिष्ठः श्रुतयोविभिन्नानैको ऋषिर्यस्य मतं प्रमाणम्।
We cannot rely totally on rational thinking to gain information, as it is not without its bias.

Decisions made by real people often deviate from the impractical robots theorized in classical economics. Drawing on the psychology of human behaviour, behavioural economics provides insights to 'nudge' people towards desirable behaviour. This chapter illustrates how the Swachh Bharat Mission (SBM) and the Beti Bachao Beti Padhao (BBBP) have successfully employed behavioural insights. Using such learning, the chapter lays out an ambitious agenda for social change: (i) from BBBP to BADLAV (Beti Aapki Dhan Lakshmi Aur Vijay Lakshmi); (ii) from Swachh Bharat to Sundar Bharat; (iii) from "Give it up" for the LPG subsidy to "Think about the Subsidy"; and (iv) from tax evasion to tax compliance. First, a key principle of behavioural economics is that while people's behaviour is influenced significantly by social norms, understanding the drivers of these social norms can enable change. In India, where social and religious norms play such a dominant role in influencing behaviour, behavioural economics can therefore provide a valuable instrument for change. So, beneficial social norms can be furthered by drawing attention to positive influencers, especially friends/ neighbours that represent role models with which people can identify. Second, as people are given to tremendous inertia when making a choice, they prefer sticking to the default option. By the nearly costless act of changing the default to overcome this inertia, desired behaviour can be encouraged without affecting people's choices. Third, as people find it difficult to sustain good habits, repeated reinforcements and reminders of successful past actions can help sustain changed behaviour.

THE INFLUENCE SPECTRUM OF PUBLIC POLICY

2.1 Public policy affects all aspects of our lives. Public policy influences people to act in a socially desirable way, be it driving safely, conserving natural resources, educating children, respecting the human rights of fellow citizens or saving for retirement. Some policies subtly influence by fostering the right incentives while others mandate desired behaviour or ban undesirable ones.

2.2 Public policies can, therefore, be graded on a spectrum capturing how strongly

they influence (or coerce) behaviour (see Figure 1). On one extreme is *laissez faire,* i.e. doing nothing and leaving individuals/ firms to chart their own course. *Laissez faire* works well when markets achieve socially desirable outcomes on their own. Where markets fail, *laissez faire* fails. For instance, individuals/firms in a free market would not restrain pollution. Public policy – in the form of regulation – mandates people to act in a socially desirable manner. Sandwiched between these extremes are policies that incentivize good behaviour or dis-incentivize bad behaviour, such as subsidies for renewable energy and taxes on tobacco.

2.3 Recently, behavioural economists have discovered the efficacy of a new class of "nudge" policies that lie between *laissez faire* and incentives. Such policies leverage insights from human psychology to influence the choice architecture of people. Nudge policies gently steer people towards desirable behaviour even while preserving their liberty to choose.

Figure 1: From Minimal Influence to Coercion

2.4 Adam Smith, in his book the 'Theory of Moral Sentiment', noted that a wide range of human choices are driven and limited by our mental resources i.e., cognitive ability, attention and motivation. Behavioural economics relies on this essential insight from human psychology that real people do not always behave like robots, rational and unbiased individuals that form the basis of classical economic theory called "*homo economicus*" (Thaler, 2000). To a *homo economicus*, the choice architecture is irrelevant, as she will make the optimal choice irrespective of the way the choices are presented to her. However, real people respond to the choice architecture. For example, a large fraction of individuals opt for the default choice, irrespective of their intrinsic preferences. This is because individuals suffer from a cognitive bias called "*anchoring bias",* viz., once a default option is presented to them, they anchor on to it (Tversky and Kahneman, 1974). Anchoring bias, along with several others that we describe in this chapter, drives a wedge between people's intrinsic preferences and the choices they eventually make.

2.5 As individuals suffer from tremendous inertia when they have to make a choice, they tend to stick to the default option (Thaler and Sunstein 2008; Samson 2014). The nearly costless act of changing the default on an enrolment form harvests this inertia for people's own good. At the same time, this form of paternalism preserves people's right to choose as the choice architecture makes it easy for an individual to opt out of the scheme. For example, studies have shown that enrolment rates in a healthcare or retirement savings plan improve dramatically if the plan is designed as an opt-in by default embedded with the option to opt-out, as opposed to voluntary enrolment by opting in.

2.6 Understanding these principles of behavioural economics, therefore, can bridge the gap between people's preferences and the choices they make, and thereby enable informed policymaking. Many governments, including the U.S., the U.K. and Australia, have set up dedicated units to use behavioural insights for effective policymaking. Innovative interventions across the world that utilize the principles of behavioural economics are tabulated in Table 1.

Table 1: Innovative Global Behaviour Change Interventions

Sector	Problem	Intervention	Observations
Pension Policy (USA)	People tend to go with defaults. When the default in a saving plan is non-enrolment, most people do not enrol even when they want to.	Instead of employees checking a box to enrol in savings plans, employees check a box to *not* enrol; i.e. the default option is to be enrolled.	Automatic enrolment increased savings by up to 40 per cent (Beshears et. al, 2005)
Tax Compliance (UK)	People need reminders and positive reinforcement to sustain socially desirable behaviour.	People were sent variations of text messages on how their taxes make a difference to public services.	People who owed most tax were also most responsive to messages asking them to pay. Compliance increased without increase in tax surveillance costs (UK Cabinet Office, Behavioural Insights Team, 2012).
Agriculture (Africa)	Inertia makes people procrastinate important, time-sensitive decisions even when they are aware of the consequences of delay.	To tackle farmers' procrastination in buying fertilizer (possibly because of the hassle of traveling to town), home delivery of fertilizer early in the season was attempted.	Fertilizer use increased by 70 per cent (Duflo et al., 2011). Early home delivery increased fertilizer use by 70 per cent. The effect was as much as a 50 per cent price subsidy would have accomplished.
Savings (Philippines)	People save much less than they want to because of lack of adequate self-control in spending.	People were offered specially designed savings accounts that locked up funds until a self-specified target was met.	Nearly 30 per cent of those who were offered the account adopted it. Saving balance increased by 81 per cent in a year (Ashraf et al., 2006).
Savings (Bolivia, Peru, Philippines)	People save much less than they want to because of inertia and lack of positive reinforcement.	People were sent periodic and timely reminders about their self-determined saving goals.	Reminders increased the amount saved by six per cent (Karlan et al., 2010).
Education (Madagascar)	Many parents underestimate the returns to spending another year at school. They think schooling is worthless unless the child is able to go all the way through high school. Many allow their children to drop out with even fewer years of schooling than they can afford.	Parents were informed about the average income gains from spending one more year in school for children from backgrounds like their own.	Information dissemination increased children's test scores by 0.37 standard deviations, particularly for those parents who had underestimated the return to education (Nguyen, 2008).

2.7 Behavioural economics is, however, not a panacea to policymaking; its potential needs to be understood and put in perspective. Nudge policies cannot and should not supplant every incentive-based and mandate-based policy. For example, a policy that merely nudges people to refrain from assaulting others will fail as such situations warrant strict decree or, at least, a stronger push than a mere nudge. However, the majority of public policy issues are amenable to incorporating nudges. In fact, many incentive and mandate-based policies may be clubbed with a nudge effect to increase their efficacy.

SUCCESSFUL APPLICATIONS OF BEHAVIOURAL INSIGHTS IN INDIA

2.8 In India, policies to alter behaviour have spanned the influence spectrum, as is shown in Figure 2.

Figure 2: Policies spanning the influence spectrum in India

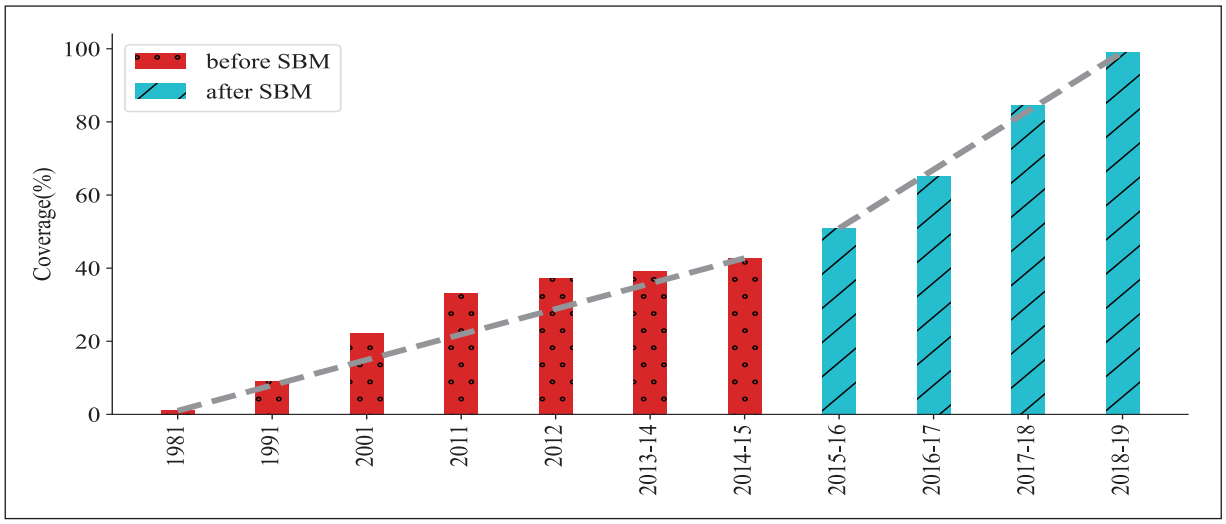
Policy	Level of influence			
	Laissez faire	Nudge	Incentivize	Mandate
Give It Up				
Aadhaar				
Jan DhanYojana				
Beti Bachao, Beti Padhao				
Swachh Bharat Mission				
Taxes on tobacco				
Compulsory voting in panchayat elections in some states				
Ban on alcohol in some states				

2.9 Many Indian schemes that employ insights from behavioural economics have met with success. The Swachh Bharat Mission (SBM) and the Beti Bachao, Beti Padhao (BBBP) scheme are cases in point. Behavioural economists have long touted the power of the "*social norm*" as most people want to behave or be seen to behave in congruity with these norms (Dolan et al., 2010). People are more likely to stop defecating in the open if their neighbours stop or are more likely to value their girl children if that is touted as the social norm.

Swachh Bharat Mission (SBM)

2.10 SBM was launched on 2nd October, 2014 to achieve universal sanitation coverage. It is not the first programme to address sanitation concerns. However, there were no dramatic shifts in the access rates until SBM as is shown in Figure 3. SBM is the first one to emphasize behaviour change as much as, if not more than, construction of toilets. Within five years of the launch of SBM, household access to toilets has increased to nearly 100 per cent in all states.

Figure 3: National Sanitation Coverage before and after SBM

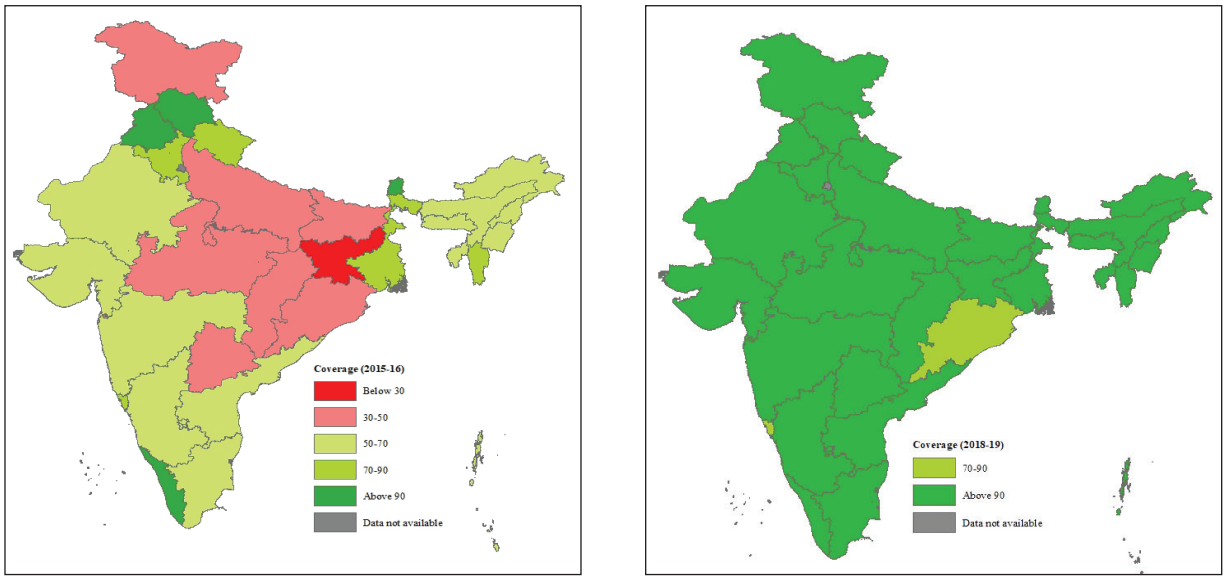


Source: Ministry of Drinking Water and Sanitation (MoDWS)
Note: Data for 1981-2011 is as per Census.

2.11 SBM has achieved success in not only providing toilets but also in ensuring that these toilets are *used*. An independent verification of SBM through the National Annual Rural Sanitation Survey (NARSS) 2018-19 has found that 93.1 per cent of rural households had access to toilets, 96.5 per cent of the households in rural India who have access to a toilet use it. This re-confirmed the Open Defecation Free (ODF) status of 90.7 per cent of villages that were previously declared and verified as ODF by various districts/states. This is also evident in the maps/charts below depicting the state-wise increase in coverage of individual household latrines (IHHL) from 2015-16 to 2018-19 (Figure 4) and the percentage of villages in each state that have been declared and verified ODF (Figure 5).

Figure 4: Coverage of Individual Household Latrine (IHHL)

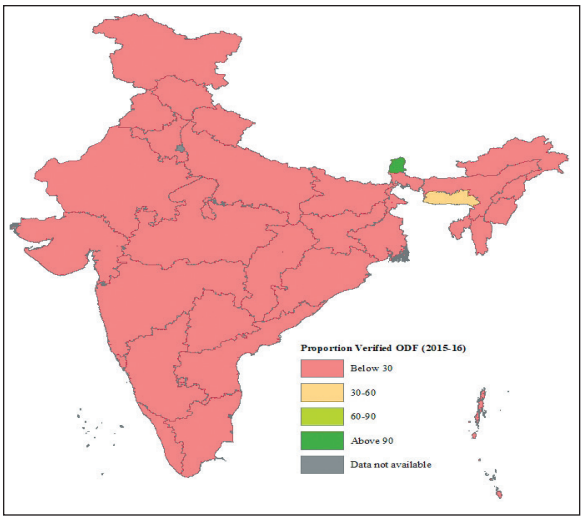
2015-16 **2018-19**



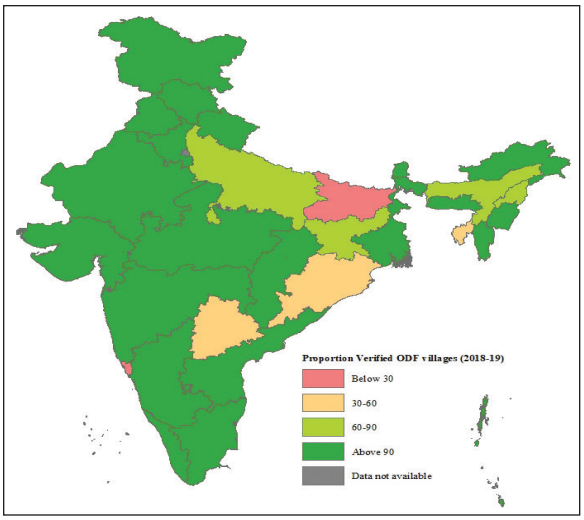
Source: MoDWS

Figure 5: Verified ODF Villages

2015-16



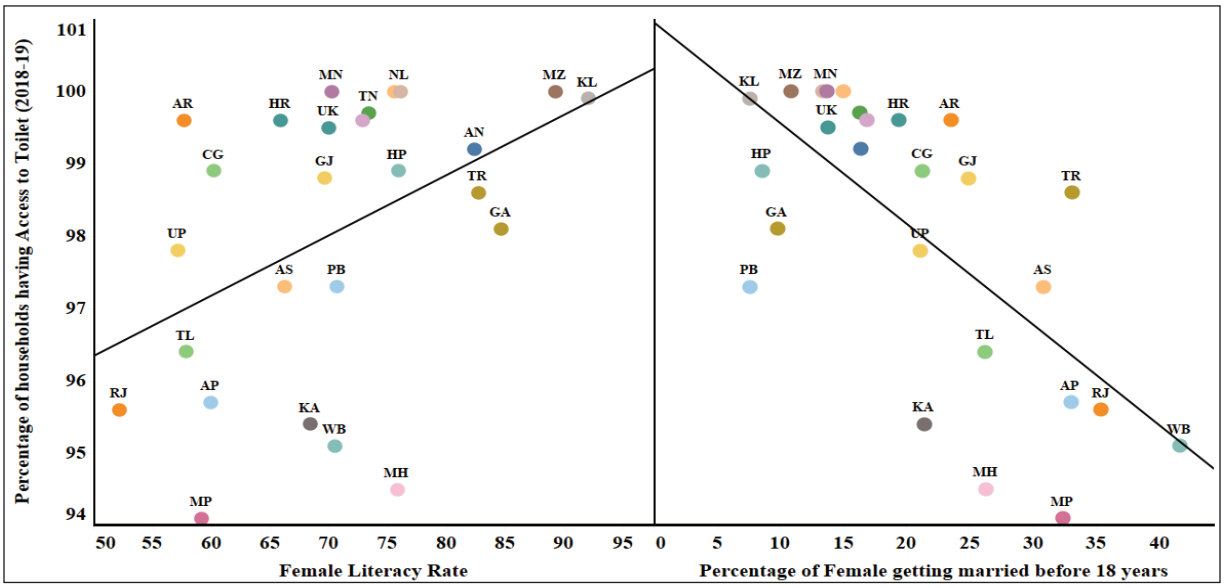
2018-19



Source: MoDWS

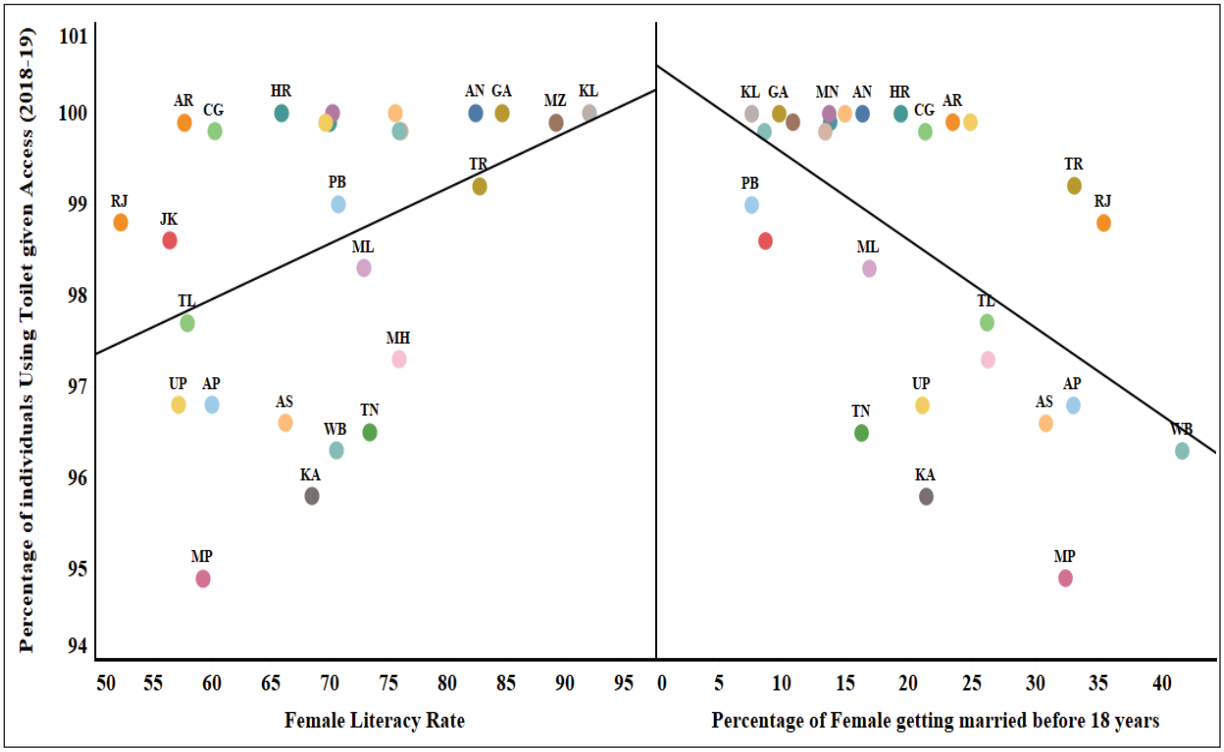
2.12 The above figures highlight the tremendous success of SBM. As is highlighted in Figure 2, the principles of behavioural economics were applied in SBM. Figures 6 to 8 examine the role of these principles in the success of SBM. Measures of female literacy and early marriages of girls, which associate strongly with rigid social norms, correlate powerfully with access and usage of toilets across states. This shows that toilet access and usage can be suitably increased with behavioural nudges that push female literacy rates up and discourage early marriages of girls. In this respect, the BBBP scheme, which we describe next as a scheme aimed at empowering the girl child, complements SBM strongly as factors related to gender empowerment are seen to be significantly correlated with toilet access and usage. This interplay can be effectively used to improve the efficacy of both the schemes.

Figure 6: Correlation between Access to Toilets with Female Literacy and Female Age at Marriage



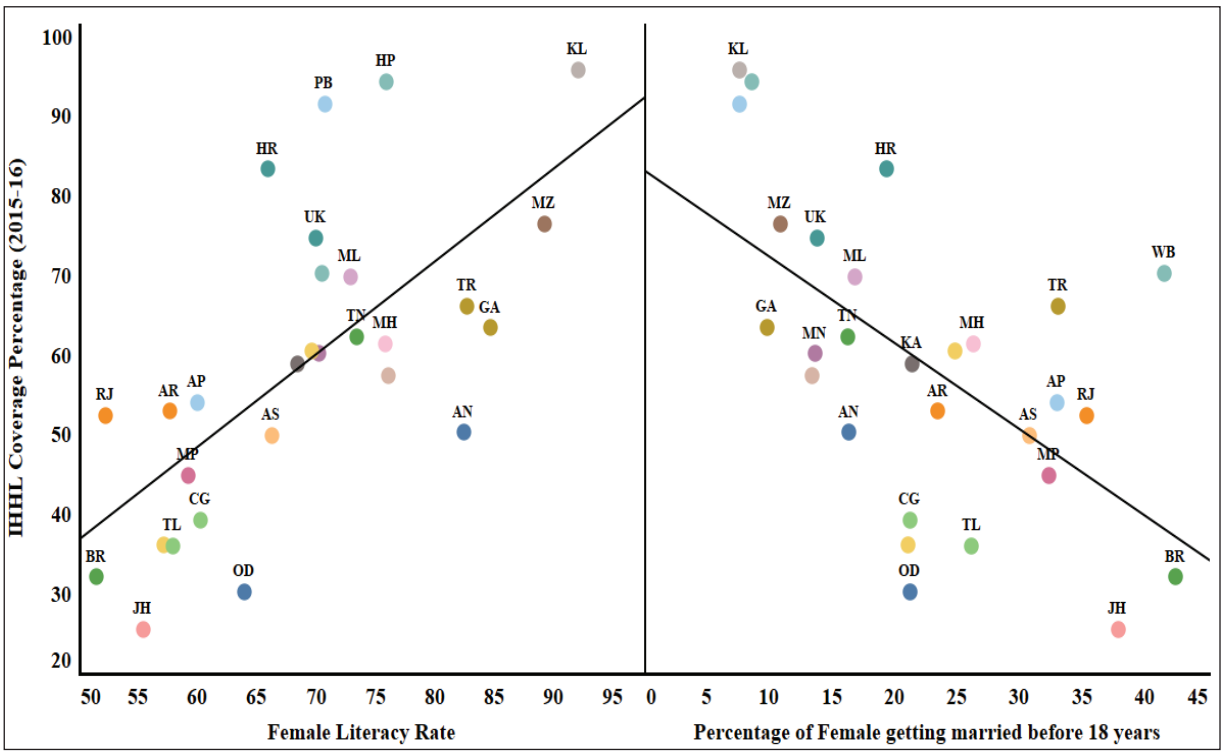
Source: MoDWS, Census 2011, NFHS 2015-16

Figure 7: Correlation between Use of Toilets (given access) with Female Literacy and Female Age at Marriage



Source:MoDWS, Census 2011, NFHS 2015-16

Figure 8: Correlation between IHHL Coverage with Female Literacy and Female Age at Marriage



Source: MoDWS, Census 2011, NFHS 2015-16

Box 1: Use of Behavioural insights in the SBM

SBM, as a nation-wide cleanliness drive, was launched on 2nd October, 2014, the birthday of India's most revered 'role model' Mahatma Gandhi. The day was chosen to leverage the values propagated by him and thereby create a mass movement on the lines of 'satyagraha' for a cleaner India. The symbol used for SBM invokes Gandhiji's ideas. Behavioural economics emphasises the role of context in influencing choices and decisions, which has been effectively adopted by the SBM campaign.

To initiate behavioural change in usage of toilets, more than five lakh *swachhagrahis*, foot soldiers of the SBM, were recruited; *the similarity with satyagrahis is intentional to reinforce the message*. As each village has at least one *swachhagrahi*, who is a local, these *swachhagrahis* were able to leverage their social ties within their villages to effect change. People are more likely to listen to and emulate someone they know, which is why local ambassadors of change are more effective in getting through to people than mass media campaigns.

Further, SBM relies on community-based approaches to sanitation. Behaviour change techniques such as Participatory Rural Appraisal and Community-led Total Sanitation induce people to come together, appraise their community's open defecation situation and plan the next course of action. This makes sanitation a community-level concern rather than an obscure campaign of a distant government. Non-conformers, therefore, find their act more visible to their community. The fear of community scorn, or a desire to fit in, or both, have led many to renounce open defecation.

SBM used yet another behavioural insight – that people internalize messages better when these messages make them *feel* a certain way. Arcane concerns about hygiene and disease appeal to few; it is natural that those who have defecated in the open all their lives without consequence would fail to absorb the message that open defecation can have deleterious effects. On the other hand, appealing to people's emotions, for example by attaching a sense of disgust to open defecation, has a better chance of moving people to change.

Many *swachhagrahis* delivered the message that open defecation is tantamount to eating one's own excreta, as flies sit on excreta left in open spaces and then sit on food. The act of provoking disgust or shaming people for open defecation has been controversial; some have considered it disrespectful. That may well be the case, but it does not take away from the fact that campaigns that elicit emotional reactions are more effective than those that deliver plain, recondite messages.

Beti Bachao, Beti Padhao (BBBP)

2.13 As is well known, India's child sex ratio had been consistently falling for decades. Between the 2001 and 2011 censuses, 21 out of 29 states registered a decline in child sex ratio. India's sex ratio at birth[1] (SRB) was on a steady decline until the first decade of the twenty-first century, when a number of initiatives, including BBBP, were launched in quick succession to arrest this trend.

2.14 BBBP Scheme was launched on 22nd January, 2015 to address the issue of decline in Child Sex Ratio and related issues of empowerment of girls and women. The campaign was flagged from Panipat, Haryana, which had the worst child sex ratio at 834 among Indian states as compared with the national average of 919 (as per Census, 2011).

1 Sex Ratio at Birth = (Total Number of Live Female Births/Total Number of Live Male Births)*1000

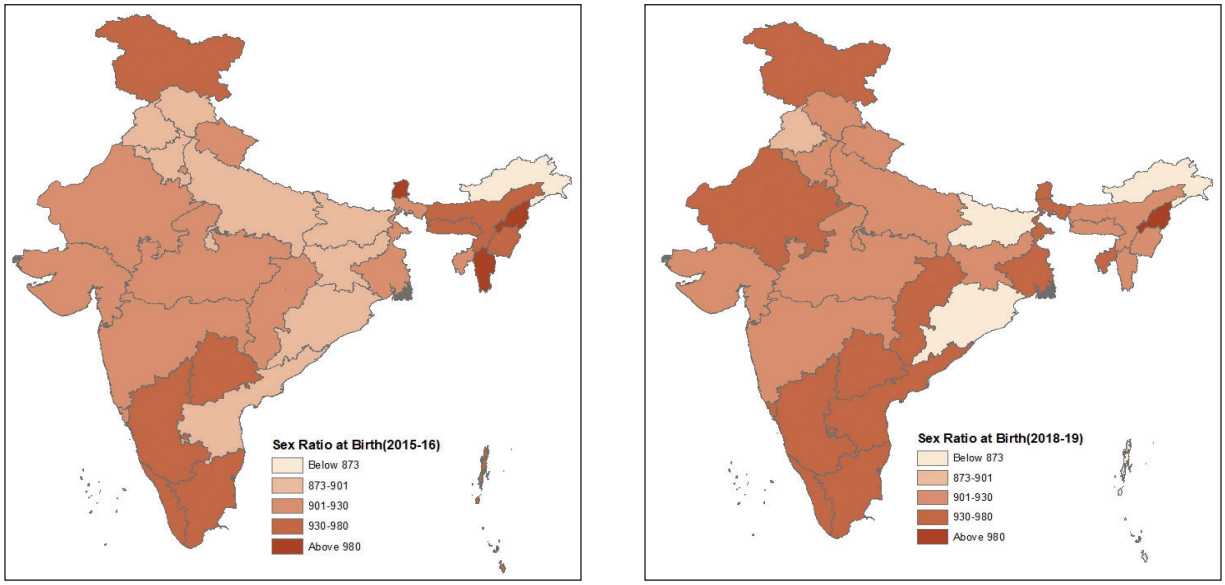
The choice of Panipat in the battle against the socially ingrained bias against the girl child was also symbolic through the association with the famous battles fought at Panipat in 1526, 1556 and 1761. As we highlight later, one of the principles of behavioural economics is to adapt the message to match "mental models" of people. The symbolism captured by the choice of Panipat in Haryana helped significantly in matching the message to the relevant mental model.

2.15 The scheme was initially launched in 100 districts in 2014-15, and was expanded to 61 additional districts in 2015-16. The initiative was expanded to all districts of the Country on March 8, 2018 from Jhunjunu, Rajasthan. The date and location was again selected carefully to ensure that the symbolism behind the message matched the relevant mental model. Rajasthan was chosen as the State improved by 34 points from 888 girls per 1000 boys in 2011 to 922 per 1000 boys in 2017-18 to indicate that good performance receives a reward. Also, International Women's Day was chosen to launch to reinforce the stress on gender empowerment and establish the social norm of 'girls are valuable'.

2.16 It is, of course, difficult to attribute the improving child sex ratio to a single scheme, especially because awareness programmes do not create results overnight. However, the timing of the launch of these schemes and the inter-state variation in existing social norms may be used to assess the impact of BBBP. Consider the large states of Uttar Pradesh, Madhya Pradesh, Rajasthan, Chhattisgarh, Andhra Pradesh and Jharkhand, all of which had registered declining child sex ratios between the 2001 and 2011 censuses. Around the launch of the BBBP in 2015-16, they had among the poorest sex ratios at birth, as evident in Figure 9. But by 2018-19, all these states showed a reversal of the trend, registering an increase in SRB between 2015-16 and 2018-19 (Figure 10). BBBP has had an impact particularly on large states with very poor child sex ratios – states that plausibly also needed the greatest pivot in their social norms.

Figure 9: Sex Ratio at Birth

2015-16 **2018-19**



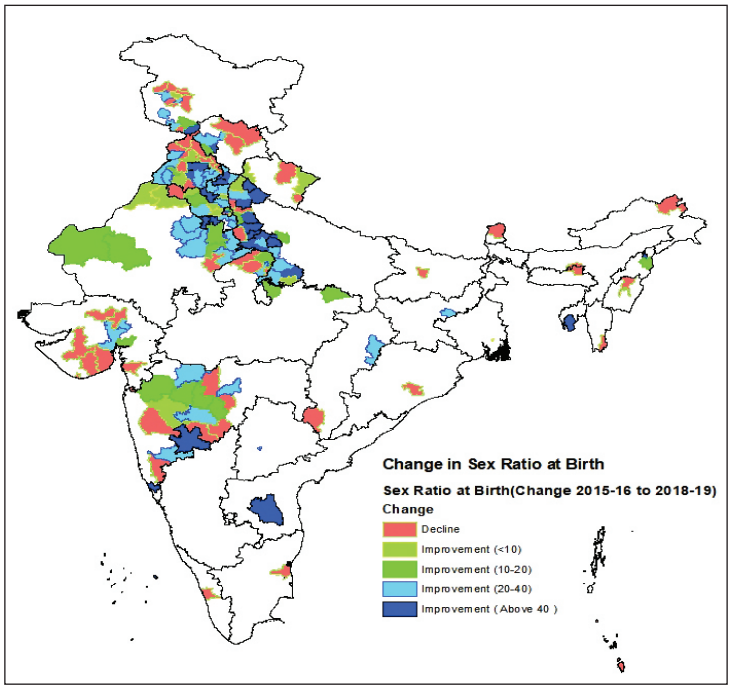
Source: Derived from Health Management Information System (HMIS), Ministry of Health and Family Welfare
Note: SRB figures are calculated using average of BBBP districts.

Figure 10: States with an improvement in Sex Ratio at Birth from 2015-16 to 2018-19

Source: Derived from Health Management Information System(HMIS), Ministry of Health and Family Welfare

2.17 The impact of BBBP in the 161 districts where it was initially implemented is shown in Figure 11. The SRB has improved in 107 districts within a period of 4 years viz., from 2015-16 to 2018-19. On an average, the sex ratio for 161 districts has improved from 909 in 2015-16 to 919 in 2018-19.

Figure 11: Change in Sex Ratio at Birth from 2015-16 to 2018-19 in 161 BBBP Districts



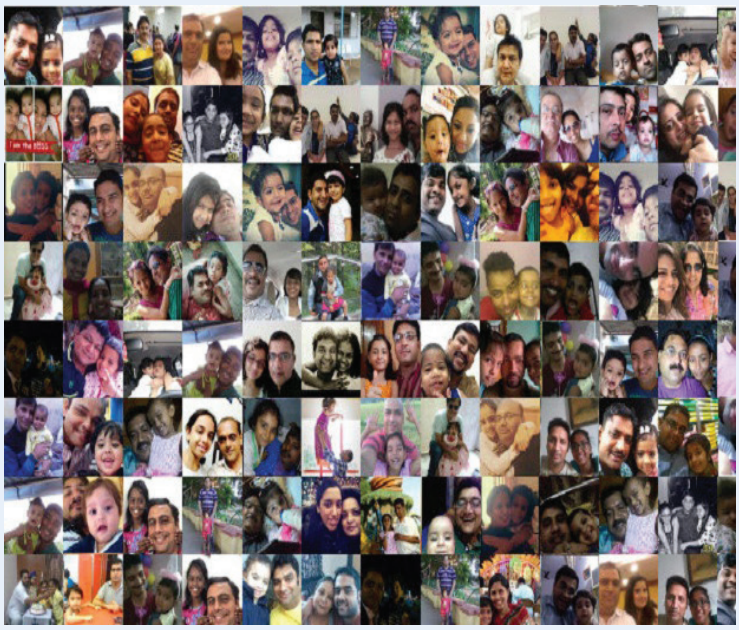
Source: Derived from Health Management Information System (HMIS), Ministry of Health and Family Welfare

Box 2: Effective Use of "Social norm" in BBBP

The success of the BBBP Scheme demonstrates a powerful use of the insight on 'social norm' in its 'Selfie with Daughter' initiative. This scheme was launched to address a highly imbalanced child sex ratio in India. People's attitude towards the girl child needed to change – people needed to stop viewing girls as burdens and start celebrating them instead. The selfie campaign showcased examples of parents around the country who were doing exactly that. The celebration of the girl child quickly became the norm. Most people wanted to conform, and more and more parents posted selfies with their girls. Started by one proud father in a village in Haryana, the campaign went viral and #SelfieWithDaughter became a worldwide hit.

Two elements enabled the campaign's success: first, telling people what the norm is, and second, showcasing the thousands of other people who were acting in line with that norm.

The strategy addresses a cognitive bias called '*failure bias'* (Baumeister and Bratslavsky, 2001). The failure bias is the tendency to focus on failures rather than successes, mostly because failures have greater visibility. Because failures get the spotlight, people tend to think that failing is the norm, or at least that failing is more prevalent than it really is. Therefore, in the context of BBBP, focus must be on people who treat their girls fairly; this corrects the failure bias and makes the social norm of fair treatment of girls unequivocally clear.



BBBP's work is far from over, of course, as posting a selfie is not tantamount to subverting entrenched orthodox mind-sets overnight, but its leverage of social norms is certainly a step in the right direction.

The Power of Clear Messaging

2.18 Apart from the SBM and BBBP programmes that have successfully employed the power of messaging, several other programmes have utilised this power. The success of any programme depends upon the level of involvement of all the relevant stakeholders. Use of socially and culturally identifiable names gives a clear message of the objectives of the programme – one of the principles of behavioural economics is that the messaging needs to be clear and simple and aligned to a mental model. This is evident from the names used for various recent schemes, some of which are tabulated in table 2 below.

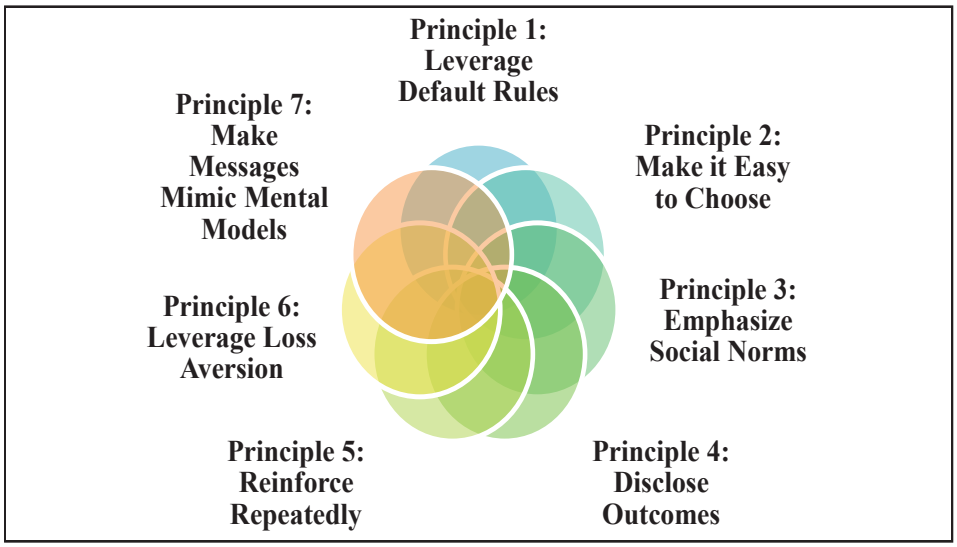
Table 2: Use of clear messaging for Schemes

Name of the Scheme	Literal Meaning of the Name	Objective of the Scheme Cultural/Societal aspect used
Namami Gange	Namami Gange means 'I pray to Ganga' as the river Ganga is revered in our culture.	To arrest the pollution of Ganga River and revive the river.
POSHAN Abhiyan	Poshan means holistic nutrition	Multi-ministerial convergence mission to ensure a malnutrition free India by 2022.
Ujjwala	Means 'bright, clear'	To safeguard the health of women by providing them with clean cooking fuel – LPG.
PM Mudra Yojana	Mudra means "currency, coins"	Provides loans upto 10 lakh to the non-corporate, non-farm small/ micro enterprises.
Jan DhanYojana	Jan Dhan implies "money of the people"	Financial inclusion program to expand access to financial services.
Ayushman Bharat	Ayushman means "Being Blessed with long life"	Universal and affordable access to good quality health care services.

PRINCIPLES FOR APPLYING BEHAVIOURAL INSIGHTS TO PUBLIC POLICY

2.19 While several Indian programmes have applied the principles of behavioural economics, there is still ample scope for leveraging these insights to enhance the efficacy of programmes in India. To outline such applications, Figure 12 describes the seven key principles of behavioural economics that public policy must employ.

Figure 12: Principles of Behavioural Economics



2.20 The cognitive biases, the principle that can be applied to alleviate the cognitive bias, and the relevant applications are summarized below in Table 3.

Table 3: Using Behavioural Principles to Overcome Cognitive Biases

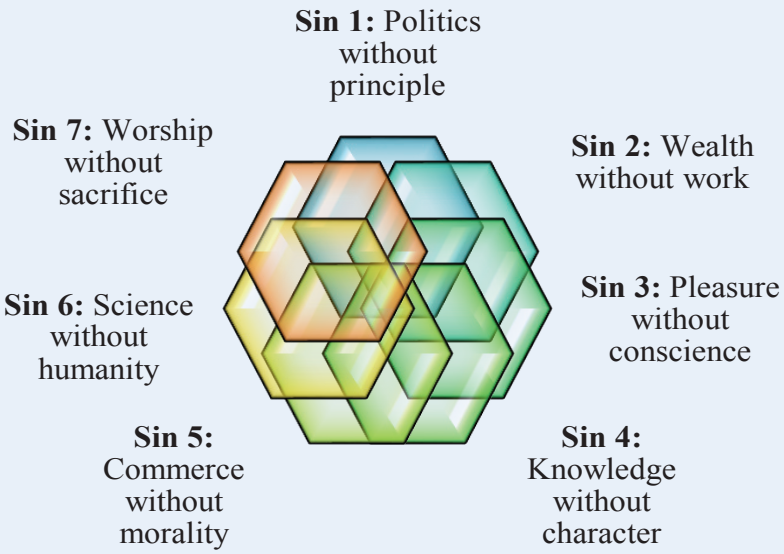
Cognitive bias	Behavioural principle	General application across all programs
Anchoring bias	Principle 1: Leverage default rules	• Choose the right default; default choice should maximise welfare. • Make the default 'opt-in' for welfare programs like insurance, retirement savings, organ donation, etc. • Make the default 'opt-out' for purchasing add-on services, enrolling for a subsidy, etc.
	Principle 2: Make it easy to choose	• Keep options few in number and easy to comprehend. • Reduce logistical and administrative impediments to choosing. • Offer micro-incentives.
Failure bias	Principle 3: Emphasize social norm	• Emphasize the number of people who vote, save regularly, file taxes on time, etc. – the enhancers of good behaviour. • Wherever possible, clarify the insignificant role of detractors/ negative influencers to avoid "failure bias". • Focus on influencers that people can relate to, for example those in the same geography or age group.
	Principle 4: Disclose outcomes	• Disclose the realized benefits of good behaviour.
Sunk cost bias	Principle 5: Reinforce repeatedly	• Remind people of past good behaviour, for example, that they saved regularly for the last three months, to invoke the sunk cost fallacy; people tend to continue their past behaviour, especially when reminded about the same. • Elicit a pre-commitment for desired behaviour, and if possible, enable immediate action as per the commitment.
Loss aversion bias	Principle 6: Leverage loss aversion	• Design incentives to reward good behaviour *ex ante* with threat to revoke reward later if behaviour fails to match expectations.
Flawed mental models and confirmation bias	Principle 7: Make messages match mental models	• Train people to shift to new rules of thumb, for example, "fluids out – so fluids in" to increase fluid intake during diarrhoea. • Make the rules of thumb catchy, easy to remember and intuitive.

AN ASPIRATIONAL AGENDA FOR PATH-BREAKING CHANGE

2.21 The successful application of behavioural insights, both in India and elsewhere, illustrates how their power can be tapped in several other programs to enhance policy impact. To this purpose, the current section draws on the principles outlined above to create an aspirational agenda for path-breaking change. The section combines (i) suggestions for transforming some of the existing programmes into revolutionary ones aimed at removing social ills; and (ii) ways to radically improve existing programmes.

Box 3: Citizen@75-Using Behavioral Economics to Avoid the Seven Social Sins

The destiny of a nation is shaped by its citizens. India @75 is envisaged as a 'New India' where every individual realizes his or her full potential and looks for opportunities to contribute rather than claim entitlements. A new spirit of independence needs to be imbibed from all extrinsic and intrinsic fetters to shape the future of India. Mahatma Gandhi's *Seven Social Sins,* published in *Young India* on October 22, 1925, provide deep insights into the role of social and political conditions shaping human behavior. Each of these is a statement of principle that can be interpreted and utilized for nudging people towards desirable behaviour.



Social Sins of Gandhiji	Related Principles of Behavioral Economics	Applications
Politics without principle	Leverage loss aversion	Growing perceptions of criminalization of politics, misuse of public office and lack of effective governance has led to increased apathy towards participation in political processes. Studies from behavioral economics and public administration show that policy makers and legislators exhibit loss-aversion in decision-making and seemingly harsh policy decisions do not garner enough support. Behavioral insights to address the loss aversion of policymakers can improve policy and legislative outcomes and uphold 'Politics with principle'. This would also enhance broader participation in politics and contribute to a vibrant democracy.

Wealth without work	Disclose outcomes	"Work is worship" – Indian ethos has always worshipped the fruits of one's own efforts. Work also leads to dignity and self-reliance. The perception of getting things for 'free' as an entitlement has to be reoriented towards discharging our obligations towards society by rendering productive work and contributing to national growth. The Principles of behavioral economics, viz. disclose the realized benefits of good behavior and the adverse outcomes of bad behaviour, on the one hand, and emphasizing social norms, on the other hand, offer insights towards enhancing productivity and tax compliance.
Pleasure without conscience	Leverage default rules	When less deserving people claim benefits of a development programme, it is an act of pleasure without conscience or a sense of responsibility. Such claiming of benefits neglects welfare concerns of their relatively unfortunate fellow counterparts. To learn to give and take, to live selflessly, to be sensitive, to be considerate, is our challenge. The behavioural principle of leveraging default rules like making the default 'opt-out' for availing subsidy, etc. can be employed to nudge people towards confident displays and conduct of altruism. The "Give it up" campaign can use this principle more effectively to broaden its adoption to surrendering all types of subsidies.
Knowledge without character	Match messages to mental models	With globalizing societies witnessing an information explosion today, a lack of moral element underlying this information bears the risk of desensitizing societies to ethics of harmony and brotherhood. Gender based violence, internet trolling, and rise of drug abuse amongst teenagers show how people, while mindlessly becoming more aware about the world around them, are ironically becoming less self-aware of their actions and outcomes of the same. People can be nudged with messages matching their mental models to make them realize that such biases exist and that soft skills like self-control, altruism, patience, and trust are as important as cognitive skills.
Commerce without morality	Emphasizing social norms	Ethics are moral principles that govern a person's actions and reflect beliefs about right and wrong, just and unjust in terms of human behaviour. These morals are shaped by social and cultural norms and religious practices.

		Emphasizing social norms is a powerful way of shaping choices and navigating human actions towards desired behaviour. Highlighting information regarding people who exhibit good behaviour and clarifying insignificant role of negative influencers can help enhance conformity and deter unethical social behaviours. The National Corporate Social Responsibility Awards of Ministry of Corporate Affairs is an initiative in this direction. These awards emphasize ethical behaviour and acknowledge companies that have positively impacted both business and society.
Science without humanity	Making it easy to choose	Science and Technology has a huge potential to simplify and benefit human lives. Chapter 10 in this volume dwells on an application of technology to improve the effectiveness of welfare programmes. Chapter 4 shows how data can be created as a public good within the legal framework of data privacy using technology. Using the behavioral principle of "Making it easy to choose", technology can make things simple to understand, cut through layers of processes and target the benefit to the actual beneficiary.
Worship without sacrifice	Reinforce repeatedly	Practicing religion without developing an embedded sense of sacrifice, empathy and humility to serve the needs of other people is self-defeating. Across all religions, positive mythological insights about gender and caste equality as well as universal brotherhood have been available and deeply understood in Indian society since the ages. So, repeatedly reinforcing examples of people following these positive sentiments as truly spiritual people can help establish the correct social norm that "serving man is serving God." This may also be seen in the MARD (Men Against Rape and Discrimination) campaign underlying which is the sacrifice of the male ego in a patriarchal society for the larger good of gender equality. The Good Samaritan guidelines of the Central Government and the policy adopted by several State governments, where people who help road accident victims receive a monetary incentive and an appreciation certificate, leverage behavioral insights to reinforce the correct social norm of selfless service of mankind.

Transforming Gender Equations: From BBBP to BADLAV (Beti Aapki Dhan Lakshmi Aur Vijay Lakshmi)

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2.22 While the BBBP campaign has helped, gender inequality needs a revolutionary campaign that utilises the benefits of behavioural economics. Our scriptures worship women as the embodiment of Shakti and exhort, as captured in the shloka above, that societies where women are respected prosper. Given the importance of messaging as highlighted before, the campaign must draw on cultural and social norms because they affect behaviour so crucially in India. Therefore, this campaign can be labelled BADLAV (Beti Aapki Dhan Lakshmi Aur Vijay Lakshmi) to represent the 'change' towards gender equality. By drawing on the imagery of the forms of Goddess Lakshmi that symbolises wealth (Dhan Lakshmi) and victory (Vijay Lakshmi), the message of treating women as the forms of Lakshmi needs to be emphasized. Box 3 outlines ideas for utilising the power of role models from Indian mythology to create the social norm that "women are equal to men." Table 4 details the explicit use of the seven behavioural principles outlined above to empower BADLAV and thereby create the new norm.

Box 4: Drawing on Mythological role models to reinforce the message of BADLAV (Beti Aapki Dhan Lakshmi Aur Vijay Lakshmi)

Indian women have enjoyed a position of respect and reverence in ancient Indian society. *Ardhanareshwar* – a half male-half female representation of Lord Shiva – captures the equality between men and women. The Rigveda identified many women sages as treasures of knowledge and foresight: the prophetess *Gargi*, who questioned the origin of all existence in her Vedic hymns and the great *Maitreyi*, who rejected half her husband's wealth in favour of spiritual knowledge. The long philosophical conversations between sage Agasthya and his highly educated wife Lopamudra are legendary. Men in ancient Indian society were identified with their mothers, *Yashoda-Nandan*, *Kaushalya-Nandan*, *Gandhari-Putra,* as well as their wives/consorts*, Janaki-Raman, Radha-Krishna*.

Since such positive mythological insights about gender equality are readily available and deeply understood in Indian society, these can be used as part of a revolutionary BADLAV programme for the following:

a) to explicity state the new norm of gender equality,

b) to focus attention on all those who adopt the new norm, and

c) to continuously reinforce the norm over time.

The last step is crucial because people's memories are short-lived. They need to be reminded of what is socially acceptable behaviour and repeatedly shown examples of their conforming neighbours, until the norm becomes entrenched in society. Seeing is believing, i.e. only when people can see counter-stereotypical role models of gender equality often, will their beliefs start to change. A marketing campaign by the U.S. government leveraged this idea perfectly when they sought to recruit women for "men's jobs" in factories. They supported their marketing effort by caricaturing a cultural icon –*Rosie the Riveter* – a female taking a "man's job" without losing her femininity.

Telling people what the others are doing is most effective when people can relate to the 'others'. People are more likely to alter their behaviours if the 'others' belong to their community. Information campaigns promoting gender equality should emphasize, for each group of people, what the others from their own geography or ethnic identity are doing in this direction. This would help the "What is" to become the "What should be" because of people's innate desire to follow the herd, compete with them and/or gain social approval.

Table 4: Using Behavioural Principles for BADLAV

Principle	Applying the principle to BADLAV
1. Make it easy to choose	• Simplify procedures to make it easier for women to, *inter alia,* report incidences of harassment and discrimination, to open bank accounts, to get government documents such as passports, visas etc.
2. Emphasize social norms	• Prominent women, including many female and male Hollywood and Bollywood stars, played an important role in raising the profile of the recent "Me too" movement, thereby contributing to changing the norm and illustrating that change in social norm is possible. • Instead of highlighting the number of top companies that have few women on their boards, it is more effective to highlight how many do. Similarly, showing how prevalent and pervasive gender based violence is, runs the risk of normalising it; instead emphasising on how many people are not perpetrators or reinforcing injunctive norms against it can be more helpful in shaping correct norms towards gender equality. • Research shows that girls and women who observed female village chiefs exhibit behaviour that highlights them as equal to men. Villagers who had exposure to at least two female chiefs rated male and female leaders equally. Therefore, women village leaders must be advertised as role models as people can relate to proximate "others". Mass media must be utilised for regular efforts to change the social norm via BADLAV.
3. Disclose outcomes	• Publishing gender rankings or audits in public domain, whether for numbers of women in legislatures, in political parties, in bureaucracy or on company boards, can prompt organisations to take action to avoid bad publicity or looking worse than their competitors. Mandating organisations to report the "Gender pay gap" can reinforce this trend.
4. Reinforce repeatedly	• Having multiple visually descriptive posters in every corridor of workplaces and public places regarding what constitutes sexual harassment at workplace can reinforce the norm of it not being acceptable. Similarly, regular TV advertisements that reinforce the positive norm of gender equality can help to reinforce repeatedly.
5. Leverage loss aversion	• Evidence from field studies and experiments shows that among men and women of equal abilities, men often choose to compete twice as often as women. Reward structures can be modified to ameliorate the higher aversion of women to competition. For instance, application fees for women applicants in jobs can be waived. Removing demographic information from job applications can also help.

6. Make messages match mental models	• Women consistently tend to place more value on flexibility at workplace. Companies that offer flexibility as the default norm have many more women applicants and employees. • Women are less likely to apply for jobs perceived as "male-labelled." Skill training and apprenticeship programmes can be redesigned with appropriately gendered wording to attract female applicants in male dominated professions. • Stereotypes regarding innate ability linked to gender and/or race can impact standardized test performance. Gender stereotype threats (filling demographic information before tests) can influence test scores of girls and boys differentially. These insights are crucial for building gender and race sensitive curriculum and evaluation procedures in schools.

From Swachh and Ayushman Bharat to Sundar Bharath

2.23 A strong way to reinforce behaviour is by getting people to pre-commit to a certain course of action. Studies find that if people pre-commit to doing something, they are much more likely to do it. For instance, a simple act of asking people if they will vote, enrol in a smoking cessation programme or save money, increases the likelihood that people will act in accordance with their goals. SBM *swachhagrahis* may use this strategy to make people pre-commit to sanitation goals. Further, the *swachhagrahis* may also assist people in assessing themselves periodically, say once a month. An assisted reflection session in the community or on a one-on-one basis with the local *swachhagrahi* can prompt people to think about whether they acted as planned and how many times they detracted. These reflection sessions should culminate in a commitment about how people plan to act in the near-term future – whether they will refrain from open defecation next month or not.

2.24 Further, people often respond to disclosure of outcomes; they are more likely to sustain their new behaviour if told about tangible benefits that they can internalize; not aggregate statistics that they may not care about. For example, a *swachhagrahi* may disseminate information about the incidence of sanitation-related illness *in her village* and how this rate has improved after the adoption of sanitation practices. When people realize the tangible outcomes of their actions, they are more likely to sustain their behaviour. This is of tremendous importance for SBM because it relies on a *sustained* change in behaviour, not a one-time change. To drive the point home, *swachhagrahis* may also help individual households reflect on the incidence of illness in their own families in, say, the last six months or since the time they quit open defecation. If people find that their health outcomes are better after adopting the new practice, they are likely to persist in that practice.

2.25 Taking our learning from the power of behavioural economics in the Swachh Bharat scheme, the way forward is to develop an all-encompassing behavioural economics architecture for the entire health sector as health signifies inner beauty. Given the unique characteristics of the health sector i.e. information asymmetry between the doctor and the patient, hyperbolic tendencies of health consumers, and high variability of health care expenditures, people often make decisions in health care that are not in their best interest. This ranges from failing to enrol in health insurance to which they are entitled, to engaging in harmful behaviour like smoking and drug abuse. A potentially richer set of behavioural tools than provided by traditional economic theory is necessary to understand and influence health care behaviour.

Table 5: Using Behavioural Principles for Sundar Bharat

Principle	Applying the principle
1. Leverage default rules	• Giving individuals default flu shot appointment time can increase influenza vaccination rates. • Providing smart insurance plan defaults can significantly simplify health insurance choice.
2. Make it easy to choose	• Asking consumers the factors that are most important to them while choosing a health plan and restricting the plan to these factors can make choice easier and thereby enhance take-up of health insurance. • Minor behavioural alterations in school and college canteen menus (giving interesting names to healthy options, putting them near the cash counter, making the process of buying unhealthy options more time taking) can increase uptake of nutritious food.
3. Emphasize social norms	• Adolescents often overestimate how much alcohol or drugs their peers take making heavier consumption to be perceived as a socially desirable behaviour. Campaigns focusing on number of people who don't drink or take drugs may be more effective. • Youth may be more responsive to a drug prevention program after the death of a celebrity from drug overdose. • Giving out messages in information campaigns such as "90 per cent of doctors agree that vaccines are safe" can significantly reduce public concern about childhood vaccine, establish the social norm that vaccinations are safe and enhance vaccination. • Presenting information on how many people in the neighbourhood have chosen to take up the health insurance plan and the benefits it has offered to families with similar disease in that area can increase enrolment rates.
4. Disclose outcomes	• Disclosing to people about the realized benefits of hand-washing and, or family planning practices experienced by other people in their community, can enable them to take up these health practices.
5. Reinforce repeatedly	• Sending messages to patients that asked the patient to write down the day and time they planned to get their next vaccination can boost uptake of vaccines. • Doctors asking patients coming to hospitals for a signed pledge or a verbal commitment, preferably in the presence of someone the signee respects, called "accountability partner" to take up Yoga and walks can encourage such healthy lifestyle practices. A monthly appreciation (joint coupon rewards) for following the pledge, after being certified by the "accountability partner", can sustain such behaviour. • Many people suffering from critical diseases do not take their medicines regularly. Use of simple text messages & pill bottles that light up if not opened at the right time can increase drug adherence. Delivering an appreciation certificate at the end of the month for following their prescription schedule can sustain adherence.
6. Leverage loss aversion	• People often find it difficult to achieve goals like weight loss or ceasing to smoke. People voluntarily made to post bonds (deposit contracts) or lottery tickets on a website that will be returned to them if they achieve their goals, but are forfeited otherwise, can help them achieve these difficult goals.

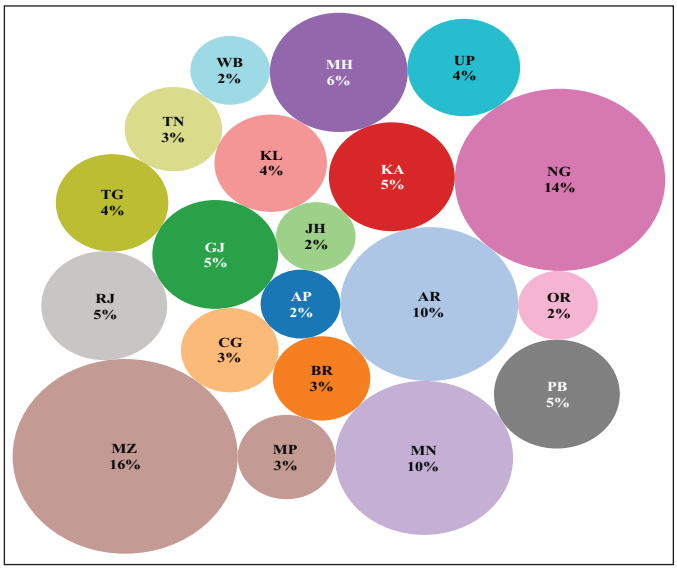
7. Make messages match mental models	• Control of diarrhoea suffers from a flawed mental model: the perception that the solution is to decrease the child's fluid intake and to keep the child 'dry', implying less use of Oral Rehydration Solution. Information campaigns on adoption of ORS can overturn this flawed mental model. • Message boards in public hospitals and medical advertisements on media must emphasize *gains* from smoke cessation and breastfeeding to foster preventive action. Similarly, messages for sexually transmitted diseases and breast cancer must focus on the *loss* to deter and encourage early diagnosis respectively. • The Mother's Absolute Affection (MAA) Programme campaign leverages role of influencers (the relationship between mother-in-law and the daughter-in-law) and the idea of commitment devices ("Vaada" i.e., promise) to reinforce the idea of breastfeeding the child within one hour of birth. Cultural tailoring of health messages in this area can nudge them to adopt breastfeeding.

Think about the Subsidy

2.26 "Give It Up" encouraged Above-poverty line (APL) households to voluntarily surrender their LPG subsidies – for every household that "gave it up," a BPL household would receive a gas connection. The lack of economic incentives in this programme means the campaign relies entirely on the better judgment of people to voluntarily give up their subsidies.

2.27 As Figure 13 shows, while the "Give It Up" campaign heralded a significant change in the form of voluntary giving up of subsidies, the overall response to the campaign could be improved from the one crore who have given it up. While this represents a good beginning, the potential to expand this number remains large. It can be further observed that north eastern states like Arunachal Pradesh, Nagaland, Manipur and Mizoram have higher rate of subsidy surrender as compared to larger states availing much more subsidy. Like BBBP and SBM, "Give It Up" also relies on a change in behaviour. In fact, Give It Up's task is less arduous than BBBP and SBM – while the latter programmes require continuous effort to dislodge mind-sets that have prevailed for decades, "Give It Up" requires only a one-time action that is inconsequential to most affluent households.

Figure 13: State-wise percentage of APL Consumers who surrendered LPG Subsidy



Source: Data from Ministry of Petroleum & Natural Gas

2.28 Behavioural economics tells us that even if people are truly interested in giving up their subsidies; their actions may differ from their intent as they need to be moved to action with a gentle nudge. A good choice architecture can aid in closing this gap between intention and action. For campaigns like Give It Up, the default choice matters immensely. People have a strong tendency to go with the status quo. Many governments have leveraged this insight to change the default option and thereby increase efficacy of their programmes. "Give It Up" needs to employ this insight. Given their inertia, of the nineteen crore people who did not give up their subsidy, many may have intended to give up their subsidy but have simply not been nudged to action.

2.29 Give It Up, however, incorporates other behavioural insights. It is easy and nearly effortless to give up one's subsidy – an intuitive online interface ensures the process takes only a few minutes. This is essential because every additional minute that it takes to give up the subsidy increases the chances that one will drop out in the middle of the process.

2.30 The campaign also attempts to leverage the power of social norms, but with limited success. People act when they see others act. Information campaigns do not, however, adequately emphasize what the (metaphorical) neighbours are doing. The Give It Up website has a "scroll of honour" to felicitate participants, but this feature relies on people to go looking for the social norm, instead of actively advertising the social norm. A click on the "scroll of honour" makes the user choose between three gas companies, as the lists are maintained on these companies' websites. To find a name on these long lists, one needs to enter one's consumer number. Since no one is likely to know anyone else's consumer number, people cannot find their friends, relatives or neighbours.

2.31 People act positively when they see others act positively, and particularly when they can relate to such individuals. In fact, people can relate to others through even seemingly innocuous traits such as a shared geographical locality. The "scroll of honour" does not leverage this crucial insight, as people simply cannot find others they may know or can relate to. Maintaining a centralized list of names (independent of the gas company) and displaying the photographs of other participants in the same locality may increase the efficacy of the "scroll of honour." Table 6 describes the applications of the behavioural principles to implement the "Think about the Subsidy."

Table 6: Using Behavioural Principles for "Think about the Subsidy"

Principle	Applying the principle
1. Leverage default rules	For campaigns like Give It Up, the default choice matters immensely. People have a strong tendency to go with the status quo. The default option can be modified so that households above a certain income threshold have to opt in to continue their subsidies with the default option being "opt out" of the subsidy. It is critical to ensure that people find it extremely easy – through only a text message, a phone-call or a few clicks – to opt in to continue their subsidy.
2. Make it easy to choose	For people who donate impulsively, reducing the friction between the moment when their intention to give up the subsidy appears and when they feel they can take action can make them more likely to give up the subsidy. Prepopulating fields of subsidy giving up forms can make it more likely that people will submit applications. Mobile phones and apps can also make impulsive giving up easier.

3. Emphasize social norms	Making people feel good about giving up subsidies can help establish the correct social norm. To discourage the middle-class and the comparatively rich people from enrolling for subsidies like kerosene, cooking gas etc., the government could, in its advertisements of the particular schemes, state that the scheme is intended to help the poor who make X per cent of the population and who earn less than Y per month. Advertisements could suggest that by not enrolling, the rich are becoming contributors to eradication of extreme poverty from the country. Social networks could support live "Give it Up" events where participation is acknowledged with visual changes to people's online profiles. Creating quick outlets such as a simple phone app or physical kiosks for exercising our general intentions of donating small amounts can build the overall social norm of being charitable. Increasing visibility of donors can encourage giving up of subsidies, especially for people who think and donate based on their alignment with the causes they choose to support. Highlighting the noble act of giving in general using respected leaders in the world, and not just giving up a subsidy could increase the visibility of a more deliberate approach to giving.
4. Disclose outcomes	Displaying the names and photographs of people who give up subsidy on the website and while filling the form can bolster the act of giving it up.
5. Reinforce repeatedly	Immediately and vividly showing givers the effect of them giving up the subsidy can make giving feel really good. Givers could view personal photos of the people benefitting from the subsidy or a video with a beneficiary saying thank you. During tax filing time, people could fill an extra field in the form about whether they would like to give up their subsidy (a form of tax payment) for the cause of the nation. Givers could sign up for personalized reminders to bring attention to their giving up objectives throughout the year.
6. Leverage loss aversion	Loss aversion can be used to explain why majority of LPG users have not given up their subsidy. This reinforces the policy of setting the subsidy schemes default to opt-out with a fairly easy process to opt in. Asking individuals to pledge a certain amount of subsidy when they feel most inspired, possibly when watching a social movie in the theatre, with the payment coming later can encourage giving. They can be prompted to set a giving goal in advance to track their progress.
7. Match messages to mental models	Behavioural techniques can help achieve desirable outcomes from subsidy programmes and in turn reduce the effective costs of subsidy. Sometimes individuals do not take up vaccinations because they either forget the location of the clinic or the time of appointment. Fiscal subsidies to make people take up vaccinations can be made more cost effective if such set of individuals are reminded more frequently about the time and locationor encouraged to make a concrete plan about when and where they will get their vaccination.

Jan Dhan Yojana

2.32 While the Jan Dhan Yojana opened a large number of bank accounts in a short span of time, its success relies on people *using* these accounts regularly. The programme's mandate is not only to open accounts but to enable access to credit, insurance, pension schemes and other facilities offered by the formal banking sector. Going forward, the programme offers tremendous scope to employ behavioural insights.

Table 7: Using Behavioural Principles to enhance impact of Jan DhanYojana

Principle	Applying the principle
1. Leverage default rules	• Make auto enrolment into a savings plan the default while offering people the option to opt out.

2. Make it easy to choose	• Regulator must ensure that products for the poor do not confound with too many options. The Government's *Jeevan Jyoti Bima Yojana* is an example of a straight forward product that implements this option.
3. Emphasize social norms	• Information campaigns should highlight the number of people who use their bank accounts in the local village. Every person can be sent an SMS at the end of the month about his/her transactions, those of others in his village, and his relative standing in the village on this metric. This simple strategy can further the social norm for use of Jan Dhan account.
4. Disclose outcomes	• Holders of dormant accounts may be periodically reminded of the number of people in their neighbourhood who actively use their accounts. To regular users, even a simple SMS such as "You made three withdrawals this month – congratulations" in the vernacular language, followed by a happy emoticon, may remind people of the norm and sustain their usage of bank accounts.
5. Reinforce repeatedly	• Reminding people about the savings that they have done can in the past can help reinforce good behaviour. By simply asking people whether they plan to save next month, the intention to save can be reinforced. Committing people to how much they plan to save can also help reinforce the intention to save.
6. Leverage loss aversion	• A propitious time to get people to save more is when salary increases. At such times, people are less likely to consider increased savings as a loss than at other times of year. This feature can be combined with default rules to automatically increase enrolment into the savings while offering people the option to opt out of such automatic increases.
7. Make messages match mental models	• Money set aside for, say, education will unlikely be used for another purpose, whereas 'general' money not earmarked for any purpose is spent much faster. People may be asked to choose their own names such as "home savings plan" or "education savings plan." All outgoing communications from banks should stress the chosen name to reinforce savings.

Improving Tax Compliance

2.33 The great philosopher, Plato, convincingly argued centuries ago: "What is honoured in a country is cultivated there." Consider military service in India, which employs one of the largest group of armed personnel in the world (over 14 lakhs). While the economic incentives offered to army personnel are attractive, a large section joins the armed forces because serving in the armed forces is considered *honourable*. Similarly, in order to enhance tax compliance, behavioural insights need to be employed to modify the social norm from "evading taxes is acceptable" to "paying taxes honestly is honourable." A start has been made through the budget speech of February 2019, which publicly and explicitly thanked tax payers, perhaps for the first time, thereby seeking to honour honest tax payers.

2.34 Across countries, research has highlighted that tax evasion is driven significantly by *tax morale*, viz., the intrinsic motivation of taxpayers in a country to pay taxes. Tax morale itself is driven primarily by two perceptive factors: (i) vertical fairness, i.e. what I pay in taxes is commensurate to the benefits I receive as services from the Government; and (ii) horizontal fairness, i.e., differences in the taxes paid by various

sections of society. For instance, citizens perceive vertical fairness to be low if they find their tax payments being squandered in wasteful public expenditure or by corruption. Similarly, perceptions of horizontal fairness suffer when the employee class is forced to contribute disproportionately to income taxes while the class of self-employed gets away paying minimal taxes. Both perceptions contribute to high tax evasion in a country.

2.35 To correct vertical unfairness that can lead to tax evasion, the Government should utilise the behavioural insight that people identify with their neighbourhood. Signboards showing "tax money at work" in constructions projects in a panchayat/ district explicitly convey to citizens that their tax money is used in valuable public goods, thereby lowering perceptions of vertical unfairness. Similarly, highlighting the tax paid by other taxpayers, especially self-employed individuals, in the panchayat/ district through SMS, billboards etc., can correct perceptions of horizontal unfairness. Such information can propagate the social norm that "paying taxes honestly is honourable."

2.36 As people often indulge in conspicuous consumption to convey their social status, top 10 highest tax payers within a district can be highlighted and accorded due recognition. This may take the form of expedited boarding privileges at airports, fast-lane privileges on roads and toll booths, special "diplomatic" type lanes at immigration counters, etc. Further, the highest taxpayers over a decade could be recognised by naming important buildings, monuments, roads, trains, initiatives, schools and universities, hospitals and airports in their name. The idea is to create exclusive membership of "clubs" that exude not only social status but also honour. Such steps can also help propagate the social norm that "paying taxes honestly is honourable." Table 8 describes the applications of the behavioural principles to enhance tax compliance.

Table 8: Using Behavioural Principles to enhance tax compliance

Principle	Applying the principle
1. Leverage default rules	Automatic deduction of tax and directing all or portion of refunds into savings accounts can be used to encourage savings, including retirement savings. Sending messages to individuals suggesting that not declaring taxes is a deliberate and intentional choice on their part can help them overcome status quo bias and improve compliance.
2. Make it easy to choose	Filing of tax forms even for zero payment of tax. Removing barriers to filing taxes- procrastination, hassle of filling forms, or failing to understand the terms- can improve compliance. Automated tax collection can make individuals pay less attention to tax collected (Salience effects).
3. Emphasize social norms	Providing information about peer behaviour can make taxpayers adjust their reported income. Messages in the form of moral appeals to taxpayers regarding payment of taxes may have limited effects. Tax amnesties might reduce tax compliance if taxpayers perceive amnesties as unfair. Amnesties can decrease the government's credibility and the taxpayers' intrinsic motivation to comply by setting the incorrect social norm.

4. Disclose outcomes	Public shaming of individuals who don't pay taxes can reduce non-compliance if they are reintegrated immediately. However, persistent public shaming can be detrimental for compliance because of stigmatisation effects. If cheaters feel that the probability of their detection has increased, voluntary disclosure programs for tax payments can increase tax evasion incidence as these programs may offer the possibility to avoid strict punishments.
5. Reinforce repeatedly	Repeatedly sending fairness driven and normative messages added to standard reminder letters that referred to the facts that (a) most people in your local community pay their taxes on time and (b) the person concerned was in the very small minority who had not yet done so can help reduce late tax payments.
6. Leverage loss aversion	Tax withholding followed by refunds at the time of tax filing may increase tax compliance and total taxes paid. Taxpayers are more concerned about tax deduction claims when they owe additional tax (loss) at the time of filing than when they expect a refund (gain). Framing tax cuts: tax cuts presented as a bonus (gain) are more likely to be spent than tax cuts presented as a rebate (loss).
7. Match messages to mental models	Reminding tax payers that public goods can only be provided in return for tax compliance (reciprocity appeal) can boost tax morale.

Box 5:Tax evasion, wilful default, and the Doctrine of Pious Obligation

In Hinduism, non-payment of debts is a sin and also a crime. The scriptures ordain that if a person's debts are not paid and he dies in a state of indebtedness, his soul may have to face evil consequences. Therefore, it is the duty of his children to save him from such evil consequences. This duty or obligation of a child to repay the debts of the deceased parent is rested upon a special doctrine, known as "The Doctrine of Pious Obligation".

Under Islam, Prophet Muhammad advocated – "*Allaahummainnia'oodhibika min al-ma'thamwa'l-maghram (O Allaah, I seek refuge with You from sin and heavy debt)*." A person cannot enter Paradise until his debt was paid off. All of his wealth could be used to pay the debt and if it is insufficient then one or more heirs of the deceased could voluntarily pay for him.

The Bible says, "*Let no debt remain outstanding except the continuing debt to love one another* -Romans 13:8" and "*The wicked borrows and does not repay, but the righteous shows mercy and gives* -Psalm 37:21."

Thus, the repayment of debt in one's own life is prescribed as necessary by scriptures across religions. Given the importance of religion in the Indian culture,the principles of behavioural economics need to be combined with this "spiritual/religious norm" to reduce tax evasion and wilful default in the country.

IMPLEMENTING THE ASPIRATIONAL AGENDA FOR BEHAVIOURAL CHANGE

2.37 The previous section outlines an ambitious agenda for behavioural change, from BBBP to BADLAV, from Swachh Bharat to Swasth Bharat, from "Give It Up" for the LPG subsidy to "Think about the Subsidy", and from tax evasion to tax compliance. The possibilities, however, to employ the principles of behavioural economics to policymaking, especially in India where social norms so crucially influence behaviour are enormous. To avail these benefits, the following measures are suggested for implementation.

2.38 First, the proposal to set up a behavioural economics unit in the *Niti Aayog* must be immediately activated. Care, however, must be taken in setting up the unit as applying the principles of behavioural economics seems innocuously and misleadingly simple; after all, everyone can claim to be an expert in understanding human behaviour. However, as research in behavioural economics itself clearly highlights, there is a world of difference between *anecdotes* and *averages*. While insights gathered from careful research rely on averages, everyday experience is often driven by anecdotes. As anecdotes are more likely to represent outliers than averages, behavioural policymaking driven by anecdotal evidence can create more damage than good. Therefore, the temptation to appoint those who are not experts in this area must be avoided.

2.39 Second, every program must go through a "behavioural economics" audit before its implementation. This audit may adhere to the principles of behavioural economics outlined above to conduct its audit. Such an audit and the modifications undertaken, therein, can significantly enhance the efficacy of the program. A simple application of this approach is in the Government communication that goes to citizens. For example, recent experience of the Department of Revenue showed that perceptions of "tax terrorism" often had more to do with the language employed in the communication than any Government action in reality. Therefore, by the mere act of altering the language, it may be possible to change the relationship between the Department and the taxpayer from adversarial to collaborative.

2.40 Third, as several programs are administered by state governments, the behavioural economics team can work with various state governments not only to inform them about the potential benefits but also help them to improve the efficacy of the programs.

2.41 While social norms impact behaviour significantly in India, the power to employ behavioural change to alter these norms has not been adequately tapped. Implementing the agenda in this chapter would be a valuable step in this direction.

CHAPTER AT A GLANCE

- Decisions made by real people often deviate from the impractical robots theorized in classical economics
- Drawing on the psychology of human behaviour, behavioural economics provides insights to 'nudge' people towards desirable behaviour.
- The key principles of behavioural economics are 'emphasising the beneficial social norm', 'changing the default option' and 'repeated reinforcements'.
- Swachh Bharat Mission (SBM) and the Beti Bachao Beti Padhao (BBBP) have successfully employed behavioural insights.
- Insights from behavioural economics can be strategically utilised to create an aspirational agenda for social change: (i) from BBBP to BADLAV (Beti Aapki Dhan Lakshmi Aur Vijay Lakshmi); (ii) from Swachh Bharat to Sundar Bharat; (iii) from "Give It Up" for the LPG subsidy to "Think about the Subsidy"; and (iv) from tax evasion to tax compliance.

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Nourishing Dwarfs to become Giants: Reorienting policies for MSME Growth[1]

03
CHAPTER

ॐ पूर्णमदः पूर्णमिदम्-पूर्णात् पूर्णमुदच्-यते।
From the complete, the complete is born.
From a seed, a mature tree is born.

MSMEs that grow not only create greater profits for their promoters but also contribute to job creation and productivity in the economy. Our policies must, therefore, focus on enabling MSMEs to grow by unshackling them. Job creation in India, however, suffers from policies that foster dwarfs, i.e. small firms that never grow, instead of infant firms that have the potential to grow and become giants rapidly. While dwarfs, i.e., firms with less than 100 workers despite being more than ten years old, account for more than half of all organized firms in manufacturing by number, their contribution to employment is only 14 per cent and to productivity is a mere 8 per cent. In contrast, large firms (more than 100 employees) account for three-quarters of such employment and close to 90 per cent of productivity despite accounting for about 15 per cent by number. The perception of small firms being significant job creators pervades because job destruction by small firms is ignored in this calculus: small firms find it difficult to sustain the jobs they create. In contrast, large firms create permanent jobs in larger numbers. Also, young firms create more jobs at an increasing rate than older firms. Size-based incentives that are provided irrespective of firm age and inflexible labour regulation, which contain size-based limitations, contribute to this predicament. To unshackle MSMEs and thereby enable them to grow, all size-based incentives must have a sunset clause of less than ten years with necessary grand-fathering. Deregulating labour law restrictions can create significantly more jobs, as seen by the recent changes in Rajasthan when compared to the rest of the states.

INTRODUCTION

3.1 Job creation in large numbers remains an urgent imperative to provide financial and social inclusion for our young population. After all, a well-paying job provides the best form of financial and social inclusion to not only the individual but also his/her entire family. Chapter 7 in this volume of the Survey predicts that the working-age population will grow by roughly 97 lakh per year during the coming decade and 42 lakh per year in the

[1] Disclaimer: In this chapter, the term "dwarfs" for firms that remain small despite being old is contrasted to "infants" for firms that are small because they are young. This usage is purely for firms and has no correlation with such usage for individuals and is therefore not intended to harm any sensibilities, whatsoever.

2030s. If we assume that the labour force participation rate (LFPR) would remain at about 60 per cent in the next two decades, about 55-60 lakh jobs will have to be created annually over the next decade. In this context, this chapter examines how policies followed over the last seven decades stifle the growth of Micro, Small & Medium Enterprises (MSMEs) in the economy. MSMEs that grow not only create greater profits for their promoters but also contribute to job creation and productivity in the economy. Our policies must, therefore, focus on enabling MSMEs to grow by unshackling them. The chapter then lays out the policy map for re-orienting the policy stance to foster the growth of MSMEs and thereby greater job creation and productivity in the economy.

THE BANE OF DWARFISM AND ITS IMPACT ON JOBS AND PRODUCTIVITY

Domination of 'Dwarfs' in number

3.2 A startling fact is how the bane of dwarfs, which are defined as small firms that never grow beyond their small size, dominates the Indian economy and holds back job creation and productivity. For the purposes of the analysis in this section, firms employing less than 100 workers are categorized as small and firms employing 100 or more workers as relatively large. Though a firm employing 100 workers is definitely not large in the global context, as we show below, firms employing 100 workers are relatively large in the Indian context. Firms that are both small and older than ten years are categorized as dwarfs as these firms have continued to be stunted in their growth despite surviving for more than 10 years.[2]

3.3 Figures 1(a) to (c) show the share of dwarfs in the number of firms, the share in employment and their share in Net Value Added (NVA). This analysis has been conducted using *firm-level* data from the Annual Survey of Industries (ASI) for the year 2016-17, which is the latest available. While dwarfs account for half of all the firms in organized manufacturing by number, their share in employment is only 14.1 per cent. In fact, their share in NVA is a miniscule 7.6 per cent despite them dominating half the economic landscape. In contrast, young, large firms (firms that have more than 100 employees and are not more than 10 years old) account for only 5.5 per cent of firms by number but contribute 21.2 per cent of the employment and 37.2 per cent of the NVA. Large, but old, firms (firms that have more than 100 employees and are more than 10 years old) account for only 10.2 per cent of firms by number but contribute half of the employment as well as the NVA. Thus, firms that are able to grow over time to become large are the biggest contributors to employment and productivity in the economy. In contrast, dwarfs that remain small despite becoming older remain the lowest contributors to employment and productivity in the economy.

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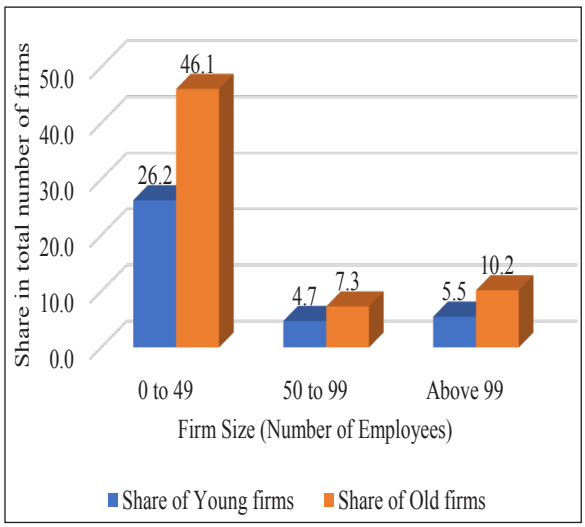
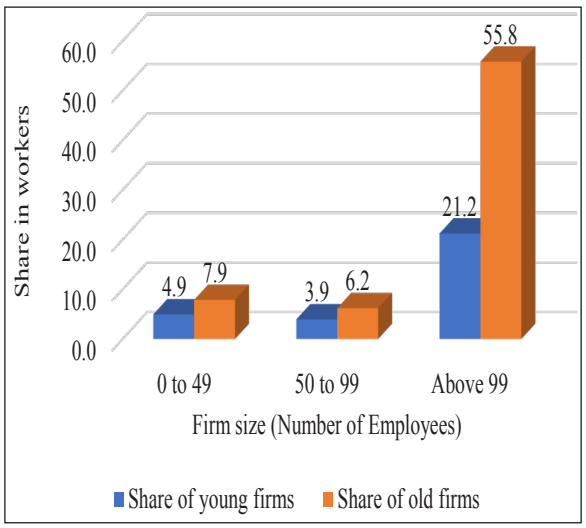
[2] Disclaimer: In this chapter, the term "dwarfs" for firms that remain small despite being old is contrasted to "infants" for firms that are small because they are young. This usage is purely for firms and has no correlation with such usage for individuals and is therefore not intended to harm any sensibilities, whatsoever.

Figure 1(a). Share of dwarfs versus others in number of firms (as of 2016-17)



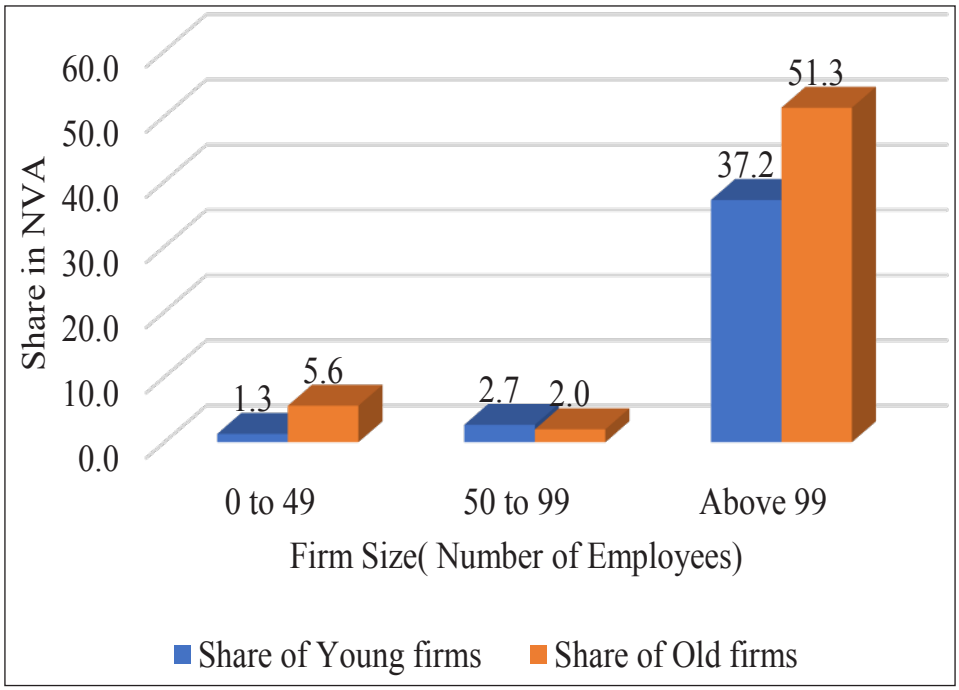
Source: ASI Firm level data

Figure 1 (b). Share of dwarfs versus others in employment (as of 2016-17)



Source: ASI Firm level data

Figure 1(c). Share of dwarfs versus others in Net Value Added (as of 2016-17)

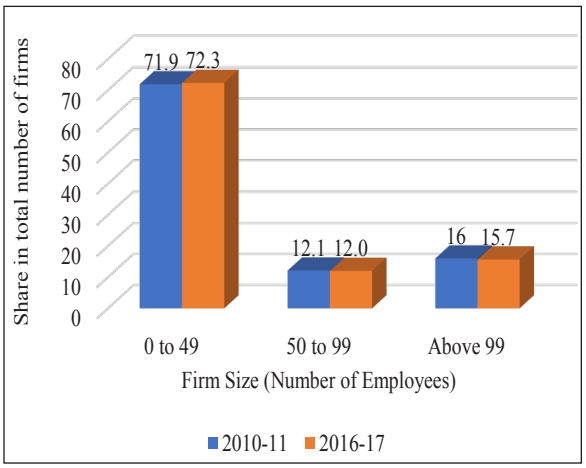


Source: ASI Firm level data

3.4 When examined purely according to size, we note that the proportion of small firms in organized manufacturing is around 85 per cent. In contrast, large firms account for only around 15 per cent of all the firms in organized manufacturing. These proportions have not changed much over time as seen in 2010-11 (Figure 2 (a)). Thus, small firms definitely dominate the economic landscape in India. Crucially, however, small firms accounted for only 23 per cent of the total employment in organized manufacturing in 2016-17 while the large firms accounted for over 77 per cent of the total employment. These proportions remain similar to those in 2010-11 (Figure 2(b)). Even more tellingly,

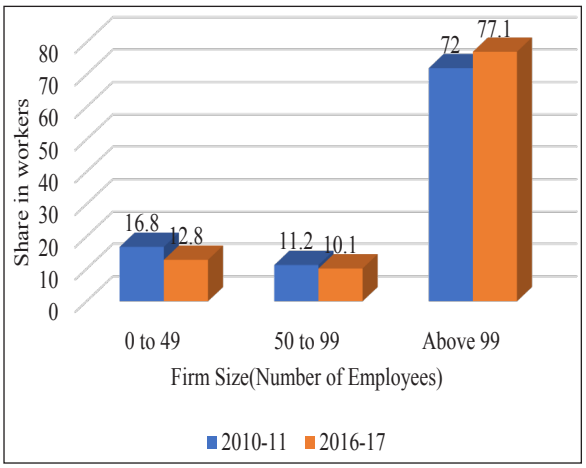
the share of small firms in Net Value Added (NVA) from organized manufacturing was only 11.5 per cent whereas the share of large firms in NVA was 88.5 per cent in 2016-17; these proportions are not different in 2010-11 either (Figure 2(c)). Even among the small firms, firms with less than 50 employees dominate the most numerically but create the least jobs and remain the most unproductive. Thus, the contribution of small firms to output and employment in the manufacturing sector is insignificant though they account for close to 85 per cent of all firms.

Figure 2(a). Distribution of number of factories by firm size



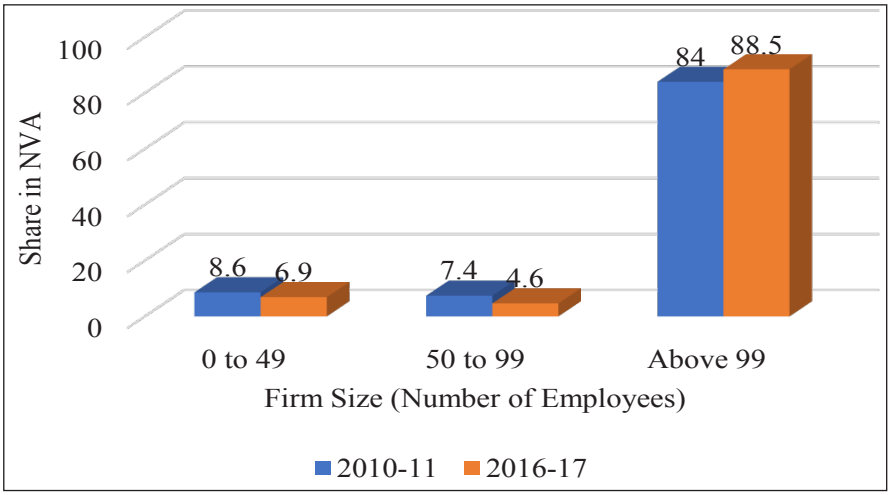
Source: ASI Firm level data

Figure 2(b). Distribution of employment across firms by firm size



Source: ASI Firm level data

Figure 2(c). Distribution of NVA Share by firm size



Source: ASI Firm level data

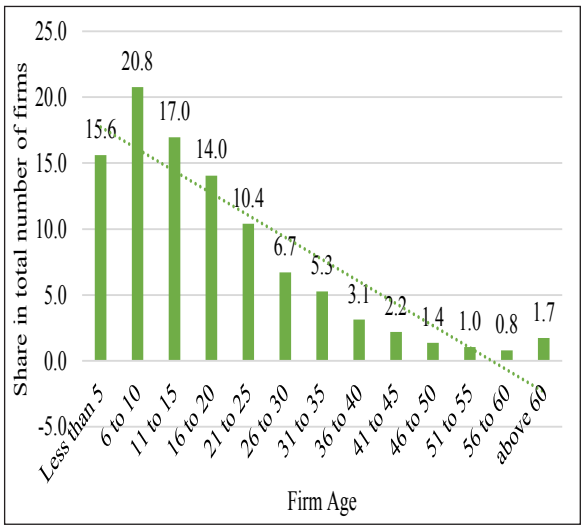
3.5 The above findings dispel the common notion that small firms generate the most employment. Small firms may generate a higher number of new jobs. However, they destroy as many jobs as well. Thus, higher levels of job creation in small firms co-exist with job destruction, thereby leading to lower levels of net job creation (Li and Rama, 2015). This common perception also stems from the fact that the effect of size confounds the effect of age. Specifically, most young firms are small (though most small firms are not young, at least in the Indian context). Absent careful distinction between the effect of age

versus that of size, the notion that small firms create jobs has prevailed because it is the young firms, who also happen to be small, create the most jobs. To establish this fact, the proportion of firms, share of employment and share of NVA by age has been examined.

Effect of Size compared to Effect of age

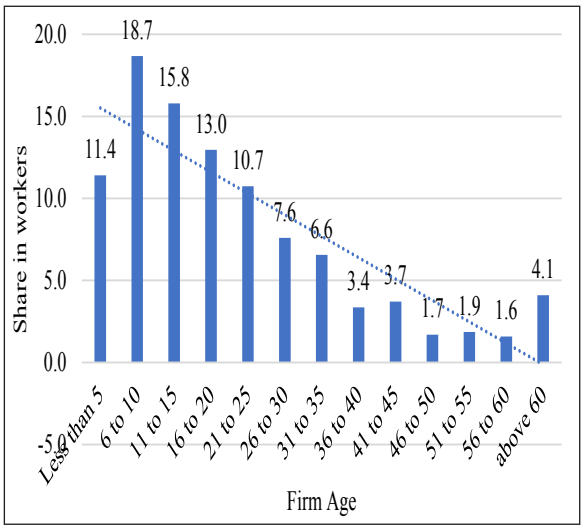
3.6 As compared to the small firms, it is the young firms that contribute significantly to employment and value added. Firms less than 10 years of age account for about 30 per cent of employment and about half the NVA. In fact, we crucially note that the share in employment as well the share in NVA trend downwards with an increase in firm age. This is despite the fact that young firms are on average smaller than older firms. Thus, young firms account for a disproportionate share of employment and productivity (Figure 3).

Figure 3(a). Proportion of firms by firm age



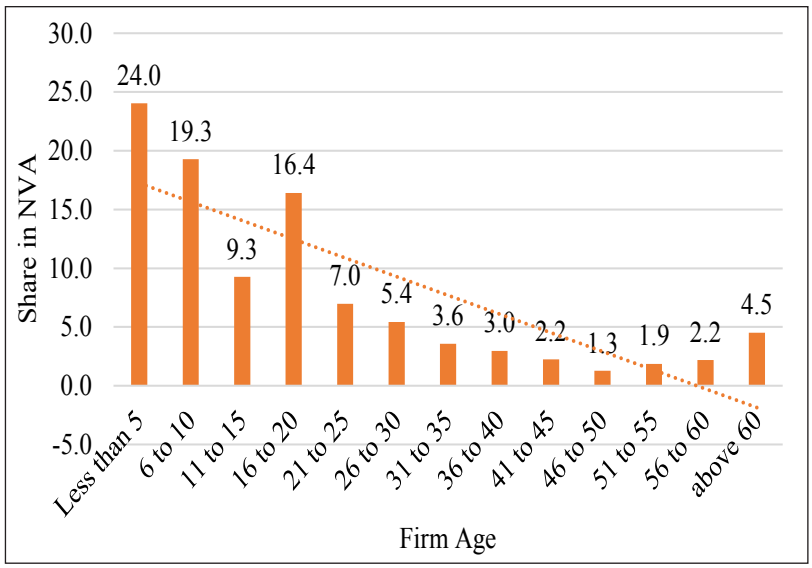
Source: ASI Firm level data

Figure 3(b). Employment share by firm age



Source: ASI Firm level data

Figure 3(c). NVA share by firm age



Source: ASI Firm level data

Cross-Sectional Comparison

3.7 What is the impact of the above size distribution of firms on jobs and productivity? Figure 4 compares growth of employment and productivity with firm age in three countries: U.S., Mexico and India (Hseih and Klenow, 2014). The comparison is done using both organized and unorganized manufacturing firms. For India, the data include both from the ASI and the surveys of unorganized manufacturing organized by the National Sample Survey Organization (NSSO). The left and the right panels use the size and productivity as of age five or younger as the base for comparison. The average employment level for 40-year old enterprises in the U.S. was more than seven times that of the employment when the enterprise is newly set up. In contrast, the average employment level for 40-year old firms in India was only 40 per cent greater than the employment when the enterprise is newly set up. Thus, once they survive for forty years, the average 40-year old firm in the U.S. generates five times (=7/1.4) as much more employment than the average 40-year old Indian firm. Even Mexico does far better on this dimension than India. The average employment level for 40-year old firms in Mexico is double that of the employment when the enterprise is newly set up. Thus, once they survive for forty years, the average 40-year old firm in Mexico generates 40 per cent more (=2/1.4) employment than the average 40-year old Indian firm.

Figure 4(a). Change in employment with firm age

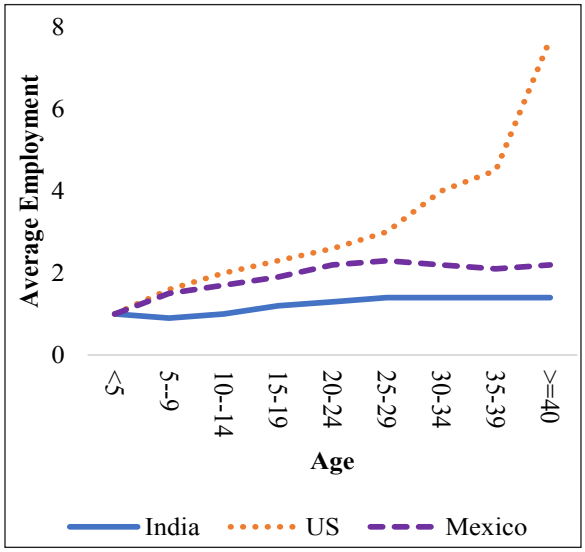
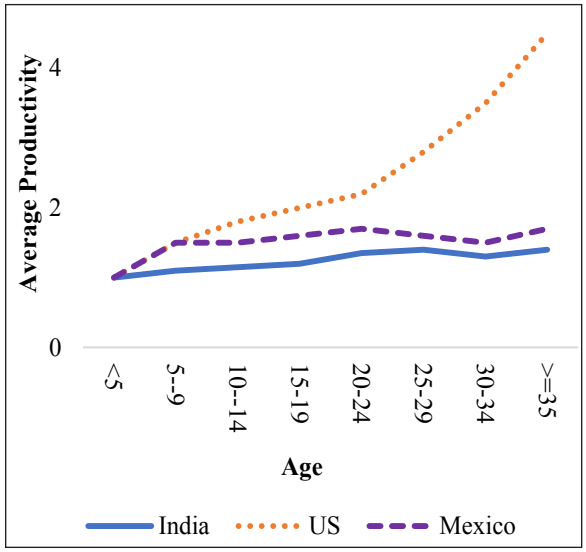


Figure 4(b). Change in productivity with firm age



Source: Hseih and Klenow (2014)

3.8 A similar tale unfolds with productivity as well when we compare these three countries for the effect of aging of firms on productivity. The average productivity level for 40-year old enterprises in the U.S. was more than four times that of the productivity of an enterprise that is newly set up. In contrast, the average productivity level for 40-year old firms in India was only 60 per cent greater than the productivity of an enterprise that is newly set up. Thus, once they survive for forty years, the average 40-year old firm in the U.S. is 2.5 times (=4/1.6) more productive than the average 40-year old Indian firm. Mexico does far better than India on this dimension as well. The average productivity level for 40-year old firms in Mexico is 1.7 times that of the productivity of an enterprise that is newly set up.

3.9 Thus, the comparison with other countries highlights that both employment creation and productivity do not grow adequately as firms age in India.

THE ROLE OF POLICY IN FOSTERING DWARFISM

3.10 In this section, we highlight that our policies – across the board – protect and foster *dwarfs* rather than *infants*. The key distinction here is that while infant firms are small and young, dwarfs are small but old. Thus, while infant firms can grow to become large firms that are not only more productive and generate significant employment, dwarfs remain small and contribute neither to productivity nor to jobs.

3.11 As we show below, these policies create a "perverse" incentive for firms to remain small. If the firms grow beyond the thresholds that these policies employ, then they will be unable to obtain the said benefits. Therefore, rather than grow the firm beyond the said threshold, entrepreneurs find it optimal to start a new firm to continue availing these benefits. As economies of scale stem primarily from firm size, these firms are unable to enjoy such benefits and therefore remain unproductive. The lack of productivity and growth inhibits the ability of the dwarfs to create jobs.

Impact of Labour Regulation

3.12 India has a plethora of labour laws, regulations and rules, both at the centre and the state levels that govern the employer-employee relationship. Each of these legislations exempts smaller firms from complying with these legislations. Table 1 shows the size thresholds applicable to each piece of labour regulation. For instance, the Industrial Disputes Act (IDA), 1947 (Chapter VB) mandates companies to get permission from the Government before retrenchment of employees. This restriction is, however, applicable only to firms with more than 100 employees. Thus, firms with less than 100 employees are exempt from the need to get permission from the Government before retrenching their employees. Given the transaction costs inherent in complying with such regulations, naturally a large majority of firms would prefer to be below the threshold of 100 employees. Thus, such labour legislation creates perverse incentives for firms to remain small. In this sense, labour legislation complements other benefits provided to small firms in providing such perverse incentives.

Table 1. Size based Limitations posed by Key Labour Legislations

S.No.	Labour Acts	Applicability to Establishments
1	Industrial Disputes Act,1947, Chapter V relating to strikes, lockouts, retrenchment, layoff	Employing 100 or more workers
2	Trade Union Act, 2001-Registration of trade unions	Membership of 10 per cent or 100 workmen whichever is less
3	Industrial Employment (Standing Orders) Act, 1946	100 or more workmen
4	Factories Act,1948	10 or more workers with power and 20 or more workers without power
5	Contract Labour (Regulation & Abolition) Act, 1970	20 or more workers engaged as contract labour
6	The Minimum Wages Act, 1948	Employment in the schedule having more than 1000 workers in the State
7	Employees' State Insurance Act,1948 - ESI Scheme	10 or more workers and employees monthly wage does not exceed ₹21000
8	Employees' Provident Fund & Miscellaneous Provisions Act, 1952	20 or more workers

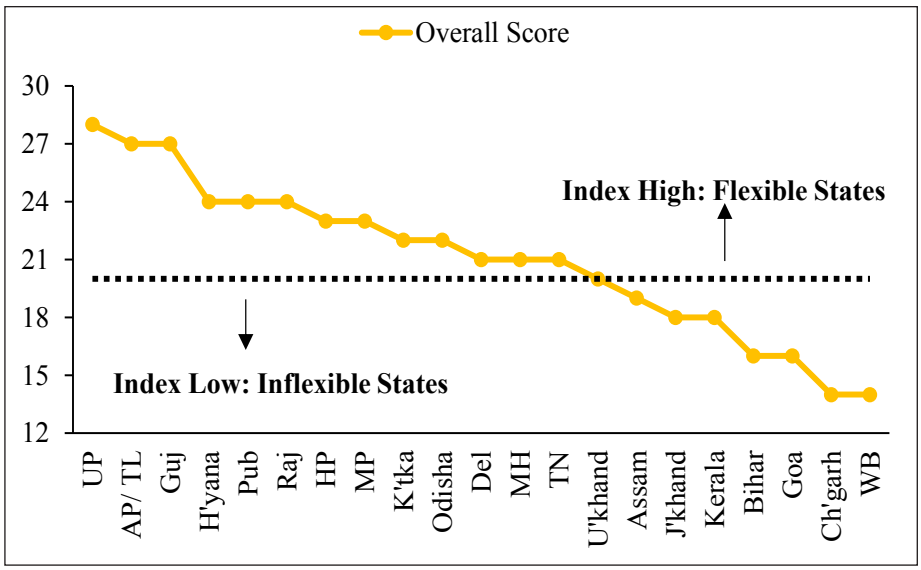
Source: Compiled from Ministry of Labour and Employment

Comparing productivity indicators in "inflexible" versus "flexible" states

3.13 To examine the impact of labour regulations, states are classified as flexible and inflexible based on the restrictiveness of their labour regulations. For this purpose, we build on the state-level survey that was conducted by OECD in 2007.[3] This survey covered eight major labour related legislations and indicators: IDA, 1947, Factories Act, 1948, State Shops and Commercial Establishments Acts (State Act), Contract Labour (Regulation & Abolition) Act, 1970, the role of inspectors, the maintenance of registers, the filing of returns and union representation. 21 States were surveyed and the responses were compiled by the OECD into an index that reflects the extent to which procedural changes have reduced transaction costs by limiting the scope of regulations, providing greater clarity in the application of regulations, or simplifying compliance procedures. Answers were then scored as "1" if they reduced transaction costs, "0" if they did not, and (for two questions) "2" for a further reduction, with a maximum score of 50. This index has been updated by covering the labour reforms initiated by the States till 2013-14.

3.14 No major labour reforms were initiated by the states from 2007 to 2014. In 2014, Rajasthan was the first State that introduced labour reforms in the major Acts. Thereafter many States followed on the path of Rajasthan. The year 2014 is, therefore, fixed as the cut off year to classify and rank States as *Flexible* and *Inflexible*. *Flexible* states include those states that score 20 or more out of a maximum score of 50, i.e., states that have reduced transaction costs by at least 40 per cent. Other states are denoted as *Inflexible*. Figure 5 shows that Assam, Jharkhand, Kerala, Bihar, Goa, Chhattisgarh and West Bengal are classified as inflexible states while the other 14 states are classified as flexible.

Figure 5. Classification of States as Flexible & Inflexible based on labour restrictions



Source: OECD Economic Survey, 2007 updated with Survey calculations.

3.15 A comparison between the indicators for labour, capital and productivity of manufacturing firms in the Inflexible and Flexible States makes it amply clear that flexibility in labour laws creates a more conducive environment for growth of industry

[3] OECD Economic Surveys: India. Volume 2007, Issue no. 14.

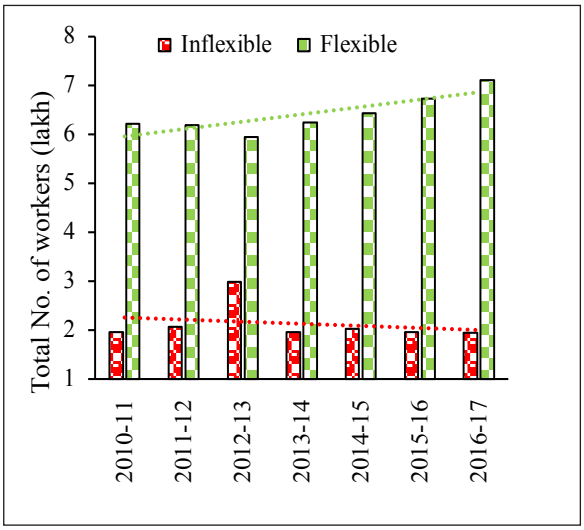
and employment generation. The comparison of various indicators between Inflexible and Flexible States using ASI data is displayed in Figure 6.

3.16 The *Flexible States* contribute disproportionately more, on average, to labour, capital and productivity when compared to the Inflexible States. The aggregate number of workers, capital and NVA are significantly higher on average in the *Flexible States* than in the *Inflexible States*. The average number of workers per factory, capital per factory and wages per factory are also higher in the Flexible states than in the Inflexible states. Moreover, the linear trend lines in each case indicate that the number of workers, capital and NVA are increasing at a faster pace in *Flexible* States than in the *Inflexible* states.

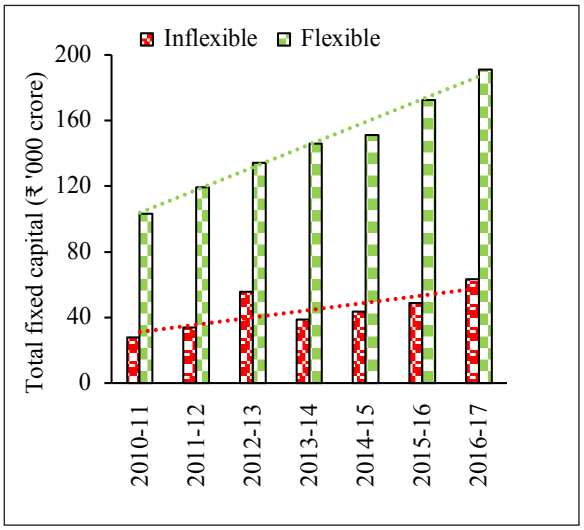
3.17 Moreover, due to rigidity in the labour laws, employers in *Inflexible* States prefer substituting labour with capital. This can be seen from (a) negative rate of growth in total number of workers in the state and average number of workers per factory, and (b) positive rate of growth in total fixed capital in the state and average fixed capital per factory.

Figure 6. Comparison between Inflexible vs. Flexible States

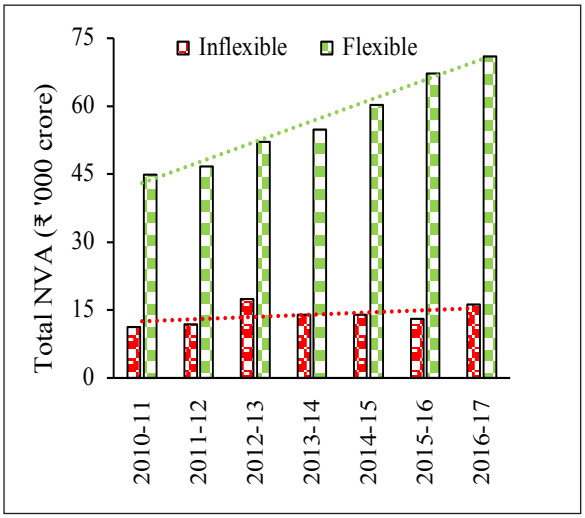
(a) Total Number of Workers in the State*



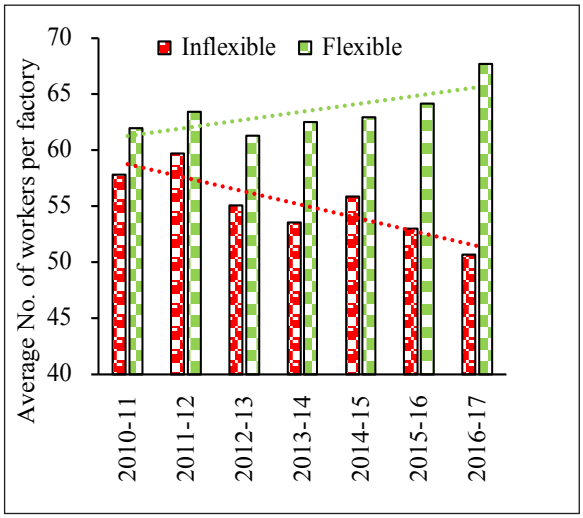
(b) Total Fixed Capital in the State*



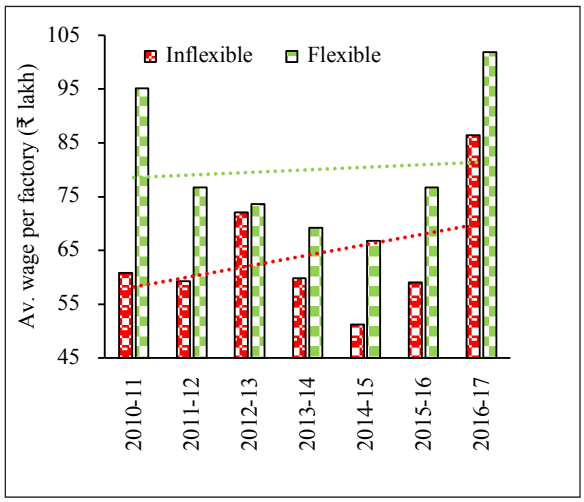
(c) Total NVA in the State*



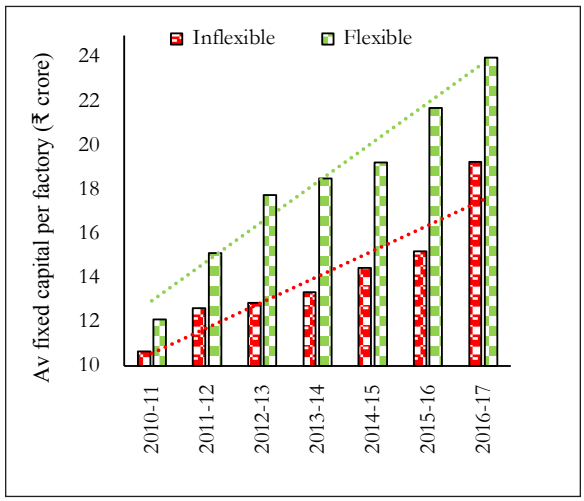
(d) Average Number of Workers per Factory



(e) Average Wages per Factory



(f) Average Fixed Capital per Factory



Source: ASI data (2011-17).
* shows mean values per state per year

3.18 Thus, the evidence comparing the Flexible states to the Inflexible states with respect to the rigidity of their labour laws clearly shows that the inflexible states are suffering in all dimensions. They are unable to create enough employment, cannot attract adequate capital into their states and their wages are lower as their productivity is lower. Furthermore, these parameters are either deteriorating or growing at a slower pace in the Inflexible states when compared to the Flexible states.

Impact of the labour law change in Rajasthan

3.19 Studies have found that on average, plants in labour-intensive industries and in states that have transited towards more flexible labour markets, such as Uttar Pradesh or Gujarat, are 25.4 per cent more productive than their counterparts in states like West Bengal or Chhattisgarh that continue to have labour rigidities (Dougherty, Frisancho and Krishna, 2014). In this context, the case study of Rajasthan is examined, which implemented labour reforms in 2014-15. The factory level data from ASI from 2011 to 2017 is analyzed to see the effect of the said labour law amendments.

3.20 As described in Table 2, the major reforms undertaken by the State of Rajasthan included the amendments in IDA, 1947, Factories Act, 1948, The Contract Labour (Regulation & Abolition) Act, 1970 and the Apprentices Act, 1961. The summary of the major amendments made in these legislations to make the labour market more flexible are stated in Table 2.

Table 2. Summary of labour reforms in Rajasthan

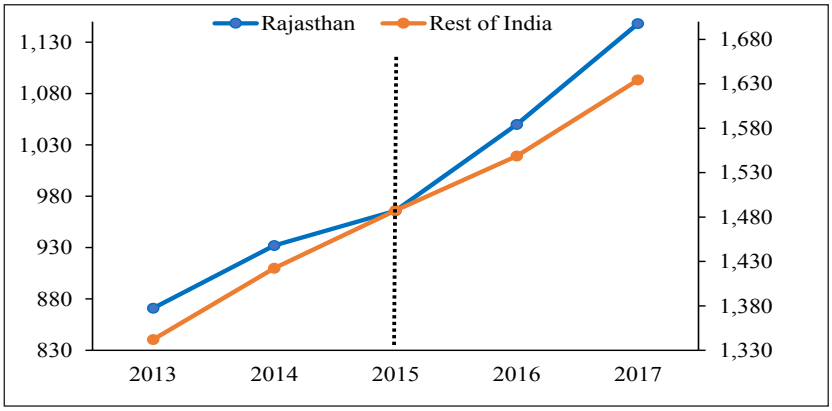
Labour Acts	Amendments introduced in Rajasthan as part of Labour Reforms
Industrial Disputes Act, 1947	• To form any union, requirement of membership as a proportion of total workmen increased from 15 per cent to 30 per cent. • No government nod required for companies employing up to 300 workers for retrenching, laying off or shutting down units. Earlier limit was 100 workers. • A worker should raise an objection within three years. There was no timeline set in the earlier version with regard to discharge or termination.

Factories Act, 1948	• Threshold limit increased from 10 or more workers with power to 20 or more workers with power. • 20 or more workers without power to 40 or more workers without power. • Complaints against the employer about violation of this Act would not receive cognizance by a court without prior written permission from the State government.
The Contract Labour (Regulation and Abolition) Act, 1970	• Applicable to establishments that employ 50 or more workers on contract against the earlier 20 or more workers.
Apprentices Act, 1961	• Fix the number of apprentice-training related seats in industry and establishments. • The stipend for apprentices will be no less than the minimum wage. • To encourage skilling, government to bear part of costs of apprentice training.

Source: Ministry of Labour & Employment and Survey compilation

3.21 The effect of the amendments in labour laws in Rajasthan on various outcomes are evaluated in Figures 7 and 8 using data from ASI. Figure 7 shows the time-series of the average number of factories having more than 100 employees for Rajasthan and the Rest of India[1]. The measure for the Rest of India[4] is averaged over all the states. As the law changes occurred in 2014-15, we examine this variable from two years before to two years after the law change. In 2014-15, the average number of firms with 100 employees or more are similar for Rajasthan and the Rest of India. However, following the law change, the number of firms with 100 employees or more have increased at a significantly higher rate in Rajasthan than in the Rest of India. This figure illustrates in essence the difference-in-difference that is estimated: the before-after difference for Rajasthan vis-à-vis the same estimate for the Rest of India. As the law change that Rajasthan effected did not occur for the Rest of India, Figure 7 clearly shows that the law change increased the number of larger firms.

Figure 7. Average number of factories employing at least 100 workers in Rajasthan and Rest of India



Source: Survey Computations using ASI, 2013-2017.

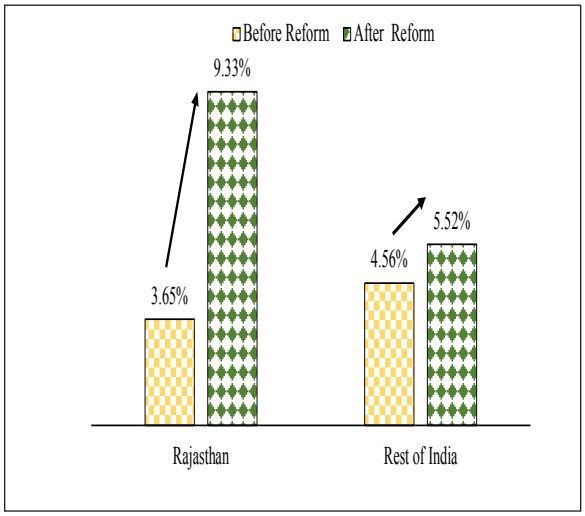
Note: Averages are computed for Rajasthan and for the Rest of India (RoI) separately.

[4] Rest of India includes 20 biggest states of India namely, Assam, Bihar, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Andhra Pradesh &Telangana, Tamil Nadu, Uttarakhand, Uttar Pradesh, and West Bengal. These states cumulatively constitute over 95 per cent to Net Value Added.

3.22 Figure 8 shows explicitly the change in Compound Annual Growth Rates (CAGR) two years before and two years after the law change. We compare the number of operating factories employing more than 100 employees in the state, average number of workers per factory in a state, total output in the state and total output per factory in the state. It can be clearly seen that, for all variables, CAGR post labour reforms in Rajasthan has increased significantly vis-à-vis the Rest of India. Table 3 shows the results of estimating this difference-in-difference in a panel data setup including tighter controls for various confounding factors. The results remain unchanged from those seen in Figure 8. Thus, overall the evidence clearly demonstrates that each of these outcomes was positively impacted by the labour law change in Rajasthan.

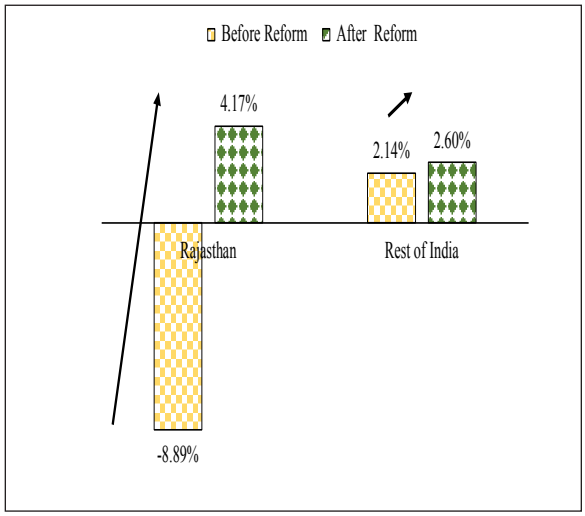
Figure 8. Impact of Deregulation of Labour market in Rajasthan (as reflected in CAGR of the variables)

a) Number of factories with >100 employees

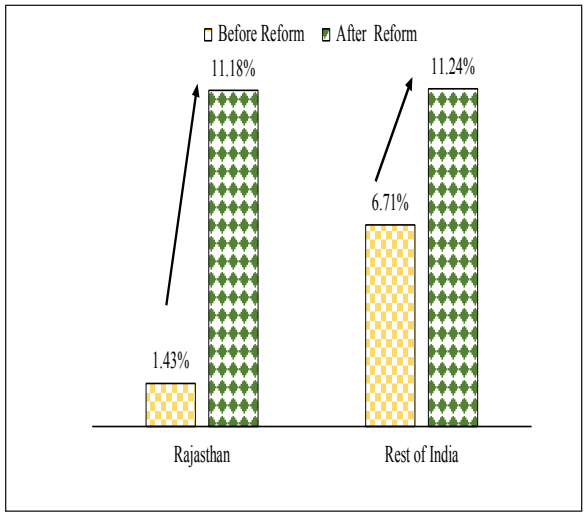


(b) Total output

(c) Number of workers per factory



(d) Total output per factory



Source: Survey Computations using ASI, 2011-2017.
Note: Averages are computed for Rajasthan and for the Rest of India separately.

Table 3. Difference-in-Difference estimates of Labour Law Amendments in Rajasthan

Variables	Log (No of Factories with >100 employees)	Log (No. of Workers)	Log (No of Workers per Factory)	Log (Total Output)	Log (Total Output per Factory)	Log (Total Wages)	Log (Wages per Factory)
Difference-in-difference estimate	**0.04*** **	**0.02** **	**0.05*** **	**0.04*** **	**0.05*** **	**0.04*** **	**0.05*** **
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Observations	146	146	146	146	146	146	146
R-squared	0.9924	0.9957	0.9605	0.9933	0.9735	0.9921	0.9655
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: Computations based on ASI data.
Robust standard errors in parentheses
Note: *** and ** denote statistically significant at 99 and 95 per cent level of significance.

Impact of Small Scale Reservation

3.23 The policies targeted at the small firms referred to as the MSMEs include priority sector lending, incentives/exemptions till they reach an investment upper limit quantified in terms of investment in plant & machinery. As Table 4 shows, all these policies promote small firms irrespective of their age.

Table 4. Incentives Available to Small Scale Firms (irrespective of their age)

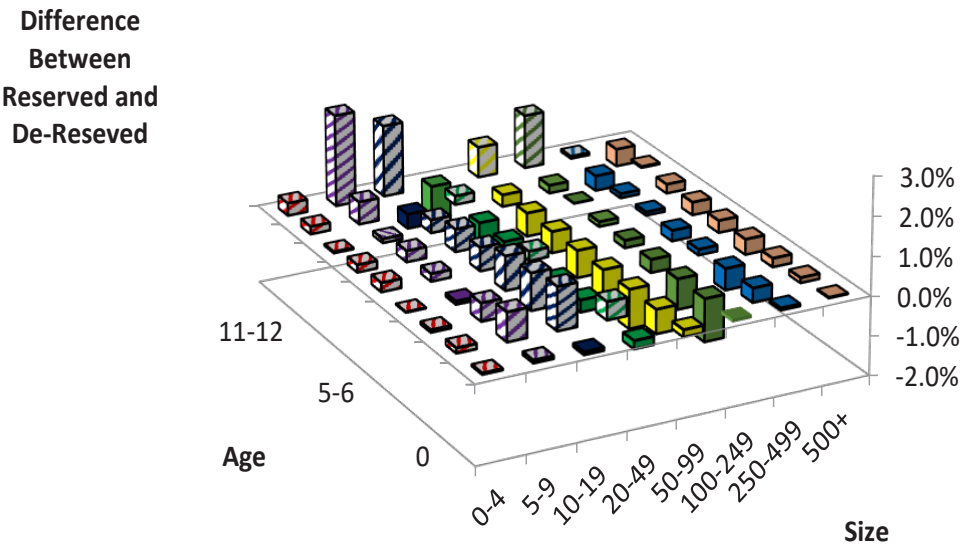
Scheme	Objective
Priority Sector Lending	Direct and indirect finance at subsidized interest rates shall include all loans given to micro and small enterprises, irrespective of their age.
Credit Guarantee Fund Scheme	This scheme makes available collateral-free credit to the micro and small enterprises, irrespective of their age.
Purchase Preference Policy	A group of items (Group IV) are reserved for exclusive purchase from small scale units, irrespective of their age. Group V items are to be purchased from MSMEs, irrespective of their age, up to 75 per cent of the requirement.
Price Preference Policy	For selected items that are produced by both small scale and large scale units, price preference is provided to small firms, irrespective of their age. This price preference amounts to a 15 per cent premium over the lowest quotation of the large-scale units.
Benefits in tendering	MSMEs, irrespective of their age, can avail benefits such as availability of tender sets free of cost, exemption from payment of earnest money deposit, exemption from payment of security deposit.
Raw Material Assistance Scheme of National Small Industries Corporation (NSIC)	This scheme aims to help MSMEs, irrespective of their age, with financing the purchase of raw material (both indigenous and imported).

Marketing Assistance Scheme	Provides assistance to MSMEs, irrespective of their age, for the following activities: organization of exhibitions abroad, co-sponsoring of exhibitions organized by other organizations, organizing buyer-seller meets, intensive campaigns and marketing promotion activities.
GST Composition scheme	Scheme allows MSME firms, irrespective of their age, to pay GST at a flat rate. The turnover limit for businesses availing of the GST composition scheme is set at ₹1.5 crore.
Exemption under Central Excise law	Small scale units below a turnover of ₹4 crore, irrespective of their age, manufacturing good specified in SSI are eligible for exemption.

3.24 The Small Scale Industries (SSI) reservation policy was introduced in 1967 to promote employment growth and income re-distribution. Given the predominance of dwarfs in the Indian economy and the low productivity and employment generation, as shown above, it is crucial to examine the role of the SSI reservation policy.

3.25 Figure 9 below plots the share of establishments manufacturing de-reserved products minus the share of establishments manufacturing reserved products within a (size, age) cohort in the year 2007. A positive value indicates that a firm in the (size, age) cohort is likely to manufacture the de-reserved product while a negative value indicates that a firm in the (size, age) cohort is likely to manufacture the reserved product. The figure clearly shows that dwarfs, i.e., firms that are small and old, are significantly more likely to manufacture reserved products than any other category of firm. Also, larger firms (above 50 employees) and younger firms are significantly more likely to manufacture de-reserved products than smaller firms.

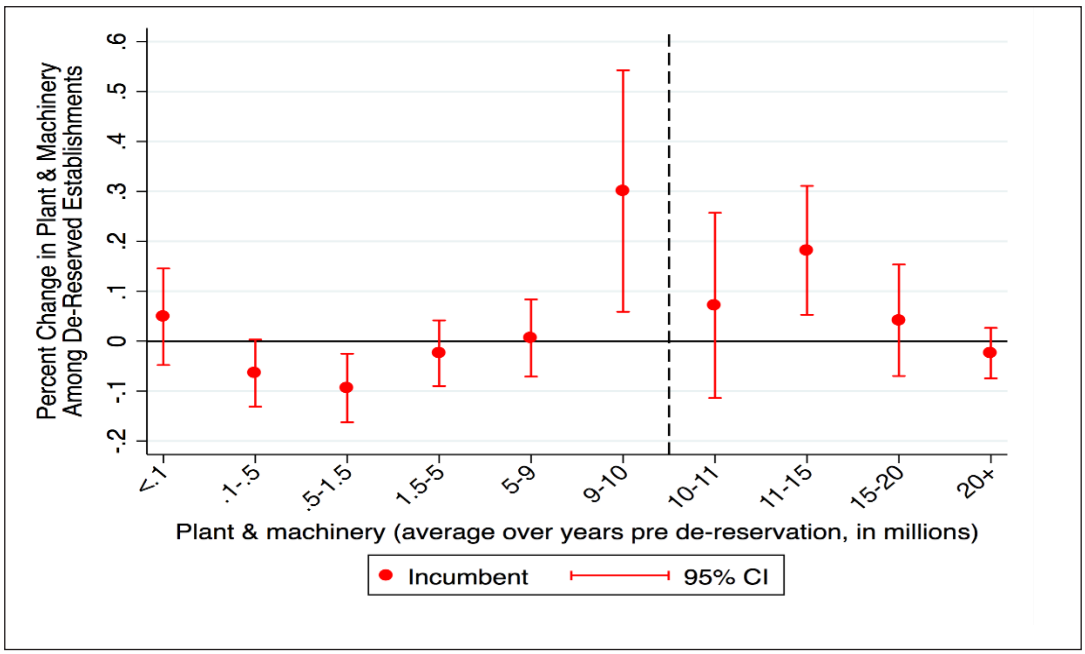
Figure 9. Use of Small Scale Reservation by Firms of Different Size and Age



Source: Martin, Nataraj & Harrison, 2014.
Notes: The chart plots the share of establishments manufacturing de-reserved products minus the share of establishments manufacturing reserved products within a (size, age) cohort as of 2007. A positive value indicates that a firm in the (size, age) cohort is likely to manufacture the de-reserved product while a negative value indicates that a firm in the (size, age) cohort is likely to manufacture the reserved product.

3.26 From 1997 to 2007, several product categories reserved for small-scale firms were eliminated in a phased manner. Martin, Nataraj & Harrison (2014) analyse the impact of this phased de-reservation on job creation and destruction among incumbents and entrants by their size and age. Figure 10 examines whether the size based reservation was limiting in the first place or not. As MSMEs were defined based on the size of their plant and machinery, this figure examines the change in the plant, property and equipment among the incumbent firms; the vertical line in the figure shows the threshold averaged across various product categories. It is clear from the figure 6 that plant and machinery increased the most among incumbent firms just below the threshold in the 9-10 million category. In contrast, plant and machinery decreased among incumbent firms below the thresholds in the 0.1-0.5 million and 0.5-1.5 million categories. Thus, this analysis at the threshold clearly suggests that small-scale reservation limited the incumbent firms that intended to grow before de-reservation but could not do so without losing out the benefits provided by the reservation.

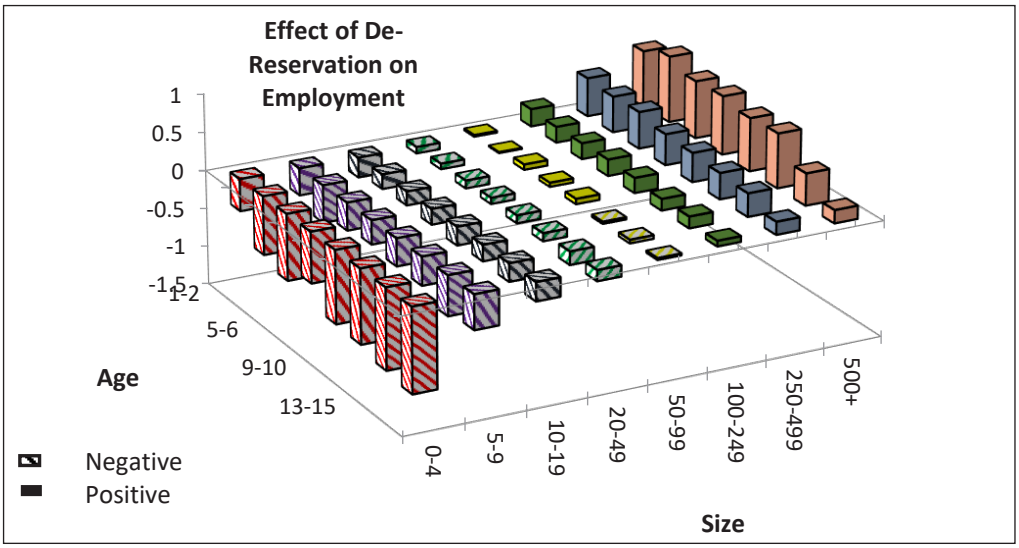
Figure 10. The Impact of Small Scale Reservation at the Threshold



Source: Martin, Nataraj & Harrison, 2014.

3.27 Figure 11 shows the impact of the phased elimination of small scale reservations on employment (from Martin, Nataraj & Harrison, 2014). This figure clearly shows that while small firms lost jobs following de-reservation, large firms created jobs. In fact, across all age categories, the effect of de-reservation on net job creation (negative in the case of job destruction and positive in the case of job creation) monotonically increased with firm size. Specifically, within each age cohort, job destruction was the maximum among the smallest firms (1-4 employees) and least among the firms with 50-99 employees. In contrast, within each age cohort, job creation was the maximum among the largest firms (500+ employees) and least among the firms with 50-99 employees. This figure also shows that across the various size categories, the effect of de-reservation on net job creation decreased with firm age.

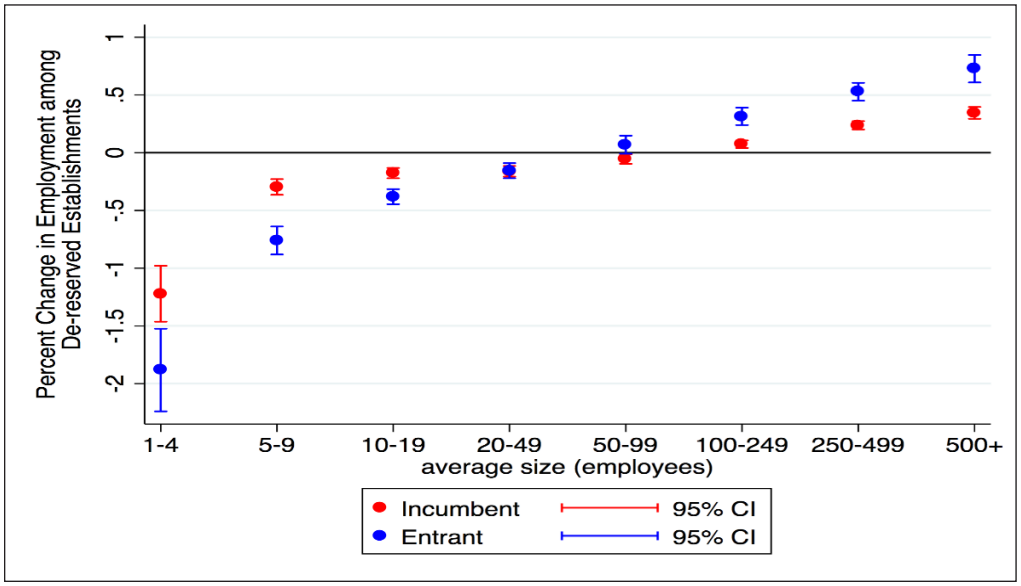
Figure 11. Impact of Removal of Small Scale Reservations on Employment by Size and Age



Source: Martin, Nataraj & Harrison, 2014.

3.28 Figures 12 and 13 display the impact of the phased elimination of small scale reservations on employment for both incumbents and entrants by their size and age category respectively (from Martin, Nataraj & Harrison, 2014). Figure 12 shows the impact by size categories while Figure 13 shows the impact by age categories.

Figure 12. Use of Small Scale Reservation by Firms of Different Sizes

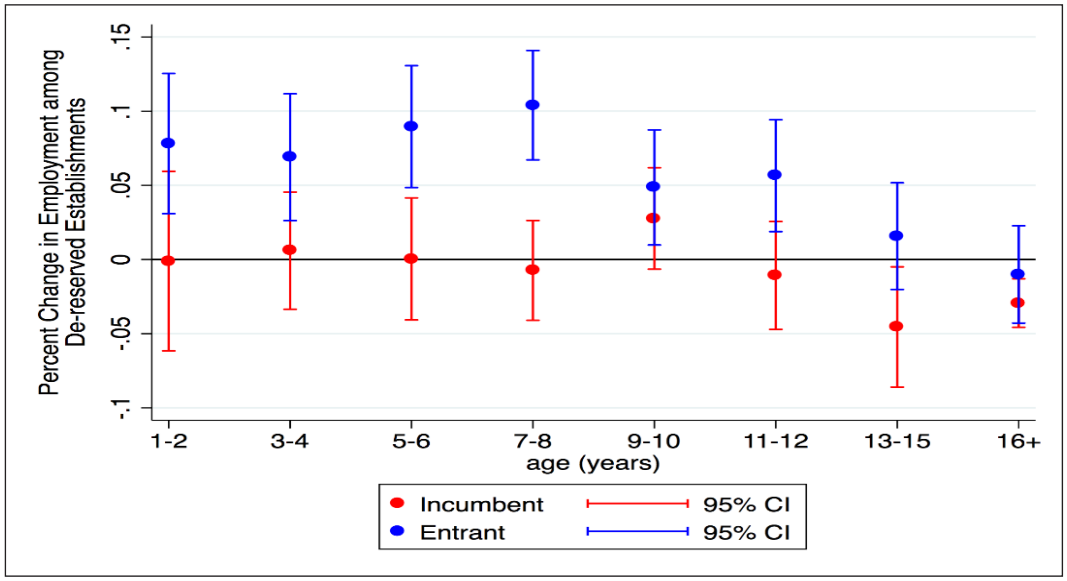


Source: Martin, Nataraj & Harrison, 2014.
Notes: The chart plots the point estimate and the 95% confidence interval for the effect of the de-reservation of products on employment. The chart shows the effect for both new entrants and incumbents by different size categories.

3.29 Figure 12 provides several key takeaways. First, on average, after the elimination of reservations, large firms – be it new entrants or incumbents – have created more employment than small firms. Across both new entrants and incumbents, the small firms destroyed jobs while the large firms created jobs. Second, net job creation

(negative in the case of job destruction and positive in the case of job creation) increased with firm size for both new entrants and incumbents. Specifically, job destruction was the maximum among the smallest incumbent firms (1-4 employees) and least among the incumbent firms with 50-99 employees.[5] In contrast, job creation was the maximum among the largest entrant firms (500+ employees) and least among the entrant firms with 50-99 employees. Third, large entrants created the maximum employment as seen in the effect of entrants with more than 500 employees. Finally, the growth in employment was both by the entrants that started producing the de-reserved products, especially the large incumbents that were constrained by the ceilings on production owing to the SSI reservation policy. Among firms with at least 50 employees, job creation by entrants was greater than job creation by incumbents.

Figure 13. Use of Small Scale Reservation by Firms of Different Ages



Source: Martin, Nataraj & Harrison, 2014.
Notes: The chart plots the point estimate and the 95% confidence interval for the effect of the de-reservation of products on employment. The chart shows the effect for both new entrants and incumbents by different age categories.

3.30 Figure 13 provides the following takeaways. First, when the effects of de-reservation on incumbent firms are examined by their age, i.e., when one averages across all size categories among firms of a particular age, a very different picture emerges from that observed in Figure 12. Specifically, across all age categories, incumbent firms either lost jobs or did not create jobs. The oldest incumbents (firms that are 13 years or older) lost jobs; however, the effect was insignificant for the younger incumbents. In contrast, younger entrants (firms that are 12 years or younger) created jobs; however, the effect was insignificant for the older entrants.

3.31 Overall, when benefits reserved for small firms are eliminated, younger and larger entrants create the most jobs while older and smaller incumbents destroy the

[5] As the coefficient is the log of labour, the economic magnitude has to be calculated as exp(coefficient) – 1. For instance for the 1-4 category, the economic magnitude is calculated as exp(-1.1)-1 = -67%.

maximum jobs. Together with the fact that older and smaller firms utilize the reservation policies the most, this evidence highlights further that benefits provided to small scale firms irrespective of their age create perverse incentives for firms to remain dwarfs and thereby limit their contribution to jobs. In contrast, infant firms, especially new entrants, create the most jobs. These findings are consistent with the evidence provided by Li and Rama (2015), who show that in developing countries young firms experience rapid gains in productivity and employment making them one of the most important sources of economic growth.

3.32 Santana and Pijoan-Mas (2010) find that the distortions brought forth by size dependent policies like SSI reservation have resulted in substantial misallocation of resources and productivity losses to the Indian economy. They provide empirical evidence that the lifting of the SSI reservation policy would increase output per worker by 3.2 per cent, capital per worker by 7.1 per cent and aggregate Total Factor Productivity (TFP) by 0.8 per cent in India. When focused only within the manufacturing sector, lifting of the SSI reservation policy would increase output per worker would increase by 9.8 per cent, capital per worker by 12.5 per cent and TFP by 3.6 per cent.

3.33 The misallocation of resources due to SSI reservation policy originates from four sources (Santana and Pijoan-Mas, 2010). First, SSI policies substantially lower the average capital to labour ratio when compared to the efficient level. Second, because of the lower capital accumulation, the overall demand for labour and the market wage rate are much lower due to SSI policies than the efficient level. Third, SSI policies result in inefficient allocation of managerial talent, which in turn affects productivity. Fourth, the inefficient allocation of resources results in price of manufactured products in restricted economy being too high, which then renders these products uncompetitive in a global economy.

3.34 Overall, the evidence clearly shows that infants, not dwarfs, contribute significantly to job creation and productivity in the economy. As young firms are usually small though all small firms are not young, there is a strong correlation between firm size and firm age. Earlier data on firm age was not so easily available. So, the effect on employment of firm age could not be distinguished from the effect of firm size. But, with availability of such data that distinguishes firm size and age, the evidence for both U.S. and India clearly shows that young firms, not smaller firms, produce more jobs (Haltiwanger, Jarmin and Miranda, 2012 for the U.S. and Martin, Nataraj & Harrison, 2014 and Li and Rama, 2013 for India).

WAY FORWARD

3.35 MSMEs that grow not only create greater profits for their promoters but also contribute to job creation and productivity in the economy. Our policies must, therefore, focus on enabling MSMEs to grow by unshackling them.

3.36 The evidence provided above highlights that dwarfs, i.e., small firms that have continued to remain small despite aging, have low productivity and low value added in manufacturing. In contrast, infants, i.e., small firms that are small when they are young but can grow to become large firms as they age, have high productivity and higher value added in manufacturing. Therefore, while dwarfs consume vital resources that could possibly be given to infant firms, they contribute less to creation of jobs and economic growth as compared to infant firms. This necessitates

re-calibration of policy towards supporting infant firms as detailed below:

3.37 **Incentivizing 'infant' firms rather than 'small' firms:** With the appropriate grandfathering of existing incentives, they need to be shifted away from dwarfs to infants. When such incentives are provided to firms irrespective of their age, the incentives create "perverse" incentives for firms to stay small. Such perverse incentives would not be there if age is the criterion. Misuse of the age based criterion can be easily avoided using Aadhaar. For instance, if a promoter starts a new firm, utilizes the benefits for ten years when the age-based policy is available and then closes the firm to start a new one to avail the age-based benefits through this new firm, then the Aadhaar of the promoter can alert authorities about this misuse. Therefore, given the benefits of Aadhaar, the age-based policies can be implemented to ensure removal of the perverse incentives. Once small firms know that they would receive no benefit from continuing to remain small despite aging, their natural incentives to grow would get activated. This will generate economic growth and employment.

3.38 **Re-orienting Priority Sector Lending (PSL):** As per extant policy, certain targets have been prescribed for banks for lending to the Micro, Small and Medium (MSME) sector that exacerbates perverse incentives to firms to remain small. As per PSL guidelines, 7.5 per cent of Adjusted Net Bank Credit (ANBC) or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher is applicable to Micro enterprises.[6] Under MSME's PSL targets, it is necessary to prioritize 'start ups' and 'infants' in high employment elastic sectors. This would enhance direct credit flow to sectors that can create the most jobs in the economy. The table below shows the high employment elastic sub-sectors and their employment elasticity.

Table 5. Employment Elasticity of Various Subsectors in Manufacturing

Subsector	Employment Elasticity
Rubber and Plastic Products	0.85
Electrical and Optical Equipment	0.48
Transport Equipment	0.27
Electricity, Gas and Water Supply	0.22
Machinery	0.15
Basic Metals and Fabricated Metal Products	0.10
Chemicals and Chemical Products	0.07
Textiles, Textile Products, Leather and Footwear	0.02
Other Non-Metallic Mineral Products	0.02
Wood and Products of wood	0.01

Source: Derived from KLEMS data from 2005-06 to 2015-16

3.39 **Sunset Clause for Incentives:** With appropriate grandfathering, every incentive for fostering growth should have a 'sunset' clause, say, for a period of five to seven years after which the firm should be able to sustain itself. The policy focus would thereby remain on infant firms.

[6] As on 28th December 2018,for classification under priority sector, no limits are prescribed for bank loans sanctioned to Micro, Small and Medium Enterprises engaged in the manufacture or production of goods under any industry specified in the first schedule to the Industries (Development and Regulation) Act, 1951 and as notified by the Government from time to time. The manufacturing enterprises are defined in terms of investment in plant and machinery under MSMED Act 2006. Bank loans to Micro, Small and Medium Enterprises engaged in providing or rendering of services and defined in terms of investment in equipment under MSMED Act, 2006, irrespective of loan limits, are eligible for classification under priority sector, w.e.f. March 1, 2018.

3.40 **Focus on High Employment Elastic Sectors:** The manufacture of rubber and plastic products, electronic and optical products, transport equipment, machinery, basic metals and fabricated metal products, chemicals and chemical products, textiles and leather & leather products, are the sub-sectors with highest employment elasticities. To step up the impact of economy growth on employment, the focus has to be on such high employment elastic sectors.

3.41 **Focus on Service Sectors with high Spillover Effects such as Tourism:** Developing key tourist centres will have ripple effects on job creation in areas such as tour and safari guides, hotels, catering and housekeeping staff, shops at tourist spots etc. It is possible to identify 10 tourism spots in each of the larger 20 states and 5 spots in the 9 smaller states and build road and air connectivity in these tourist attractions, which would boost economic activity along the entire route and would also reduce the migration of the rural labour force who form a major proportion of the total labour force.

CHAPTER AT A GLANCE

- MSMEs that grow not only create greater profits for their promoters but also contribute to job creation and productivity in the economy. Our policies must, therefore, focus on enabling MSMEs to grow by unshackling them.
- Job creation in India, however, suffers from policies that foster dwarfs, i.e., small firms that never grow, instead of infant firms that have the potential to grow and become giants rapidly.
- While dwarfs, i.e., firms with less than 100 workers despite being more than ten years old, account for more than half of all organized firms in manufacturing by number, their contribution to employment is only 14 per cent and to productivity is a mere 8 per cent. In contrast, large firms (more than 100 employees) account for three-quarters of such employment and close to 90 per cent of productivity despite accounting for about 15 per cent by number.
- The perception of small firms being significant job creators pervades because job destruction by small firms is ignored in this calculus: small firms destroy jobs as much as they create. In contrast, large firms create permanent jobs in larger numbers. Also, young firms create more jobs at an increasing rate than older firms.
- Size-based incentives that are provided irrespective of firm age and inflexible labour regulation, which contain size-based limitations, contribute to this predicament.
- To unshackle MSMEs and thereby enable them to grow, all size-based incentives must have a sunset clause of less than ten years with necessary grand-fathering.
- Deregulating labour law restrictions can create significantly more jobs, as seen by the recent changes in Rajasthan when compared to the rest of the States.
- Direct credit flow to young firms in high employment elastic sectors to accelerate employment generation by re-calibrating Priority Sector Lending (PSL) guidelines.
- Focus must be on service sectors such as tourism, which has high spillover effects on other sectors such as hotel & catering, transport, real estate, entertainment etc. Identifying and promoting tourist spots for development will help create jobs.

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Data "Of the People, By the People, For the People"

04
CHAPTER

"Cross the river by feeling the stones."
- Deng Xiaoping

Navigating in an uncertain, wobbly world requires constant monitoring of the path followed by the economy using real-time indicators. Thus, data can serve as the stones that enable one to cross the river. Concurrent with the data explosion of recent years, the marginal cost of data has declined exponentially while its marginal benefit to society has increased manifold. Therefore, society's optimal consumption of data is higher than ever. While private sector does a good job of harnessing data where it is profitable, government intervention is needed in social sectors of the country where private investment in data remains inadequate. Governments already hold a rich repository of administrative, survey, institutional and transactions data about citizens, but these data are scattered across numerous government bodies. Utilising the information embedded in these distinct datasets would inter alia enable government to enhance ease of living for citizens, enable truly evidence-based policy, improve targeting in welfare schemes, uncover unmet needs, integrate fragmented markets, bring greater accountability in public services, generate greater citizen participation in governance, etc. Given that sophisticated technologies already exist to protect privacy and share confidential information, governments can create data as a public good within the legal framework of data privacy. In the spirit of the Constitution of India, data should be "of the people, by the people, for the people."

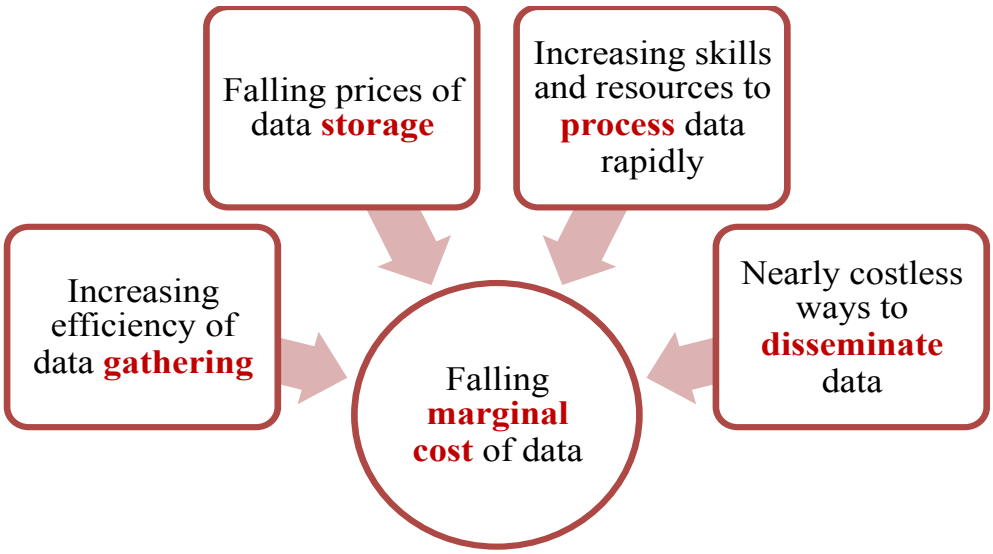
THE ECONOMICS OF DATA AND SOCIAL WELFARE

4.1 In recent years, the world has witnessed an information explosion – exponential increases in the amount of published data. As people increasingly use digital services to talk to each other, look up information, purchase goods and services, pay bills, transact in financial markets, file taxes, avail welfare services and engage with local leaders, data is being generated at an unprecedented scale. The global data infrastructure has largely proved reliable, fast and secure enough to handle this deluge of data (Mckinsey, 2011).

4.2 Concurrent with this data explosion, the marginal cost of data has declined exponentially and the marginal benefit to society of using this data is higher than ever.

4.3 As people shift their day-to-day activities online, they leave digital footprints

Figure 1: Falling Marginal Cost of Data



of these activities. Put differently, people produce data about themselves and store this data on public and private servers, every day, of their own accord. Data that would have involved a laborious survey to gather a few decades ago is today accumulating online at a near-zero cost, although it is scattered across sources.

4.4 Not everyone participates in the digital economy, of course. A majority of the poor still have no digital footprint. Among those who do, the range of activities undertaken online is quite limited. However, the cost of gathering data is still much lower than it was a few decades ago. Even if a door-to-door survey is the only way to gather a certain kind of data, we possess cheap technologies to log data online in real time, circumventing an otherwise laborious paper-based survey followed by a tedious data entry process.

4.5 Alongside the decreasing cost of gathering data, storage costs have decreased precipitously. The cost per gigabyte of storage has fallen from ₹61,050 in 1981 to less than ₹3.48 today. However, the surfeit of data and a limitless capacity to store it is of no use unless one can make sense of these colossal quantities of data in a reasonable time. Fortunately, human and technical capital to process data has evolved in parallel to the data inundation. Data science has evolved as a distinct, well-funded field of study that is constantly innovating ways to put data to efficient use. Courses in analytics have become ubiquitous. An increasing number of people are equipped with skills to handle large datasets. Data is still relatively expensive to process because it tends to be noisy, heterogeneous and inconsistent across sources, but technology is incessantly developing solutions to these problems.

4.6 Once processed, the cost of disseminating insights is negligible – it is nearly costless to transfer information through the internet. However, dissemination of data entails another cost – that of ensuring data privacy and security. Before data is disseminated, it needs to be stripped of personal identifiers and aggregated. While this is a direct cost, an indirect cost also exists – the cost of misuse of data. Accidental data leaks may bring forth legal consequences and substantial financial implications. However, technology has largely kept pace to mitigate

these risks.

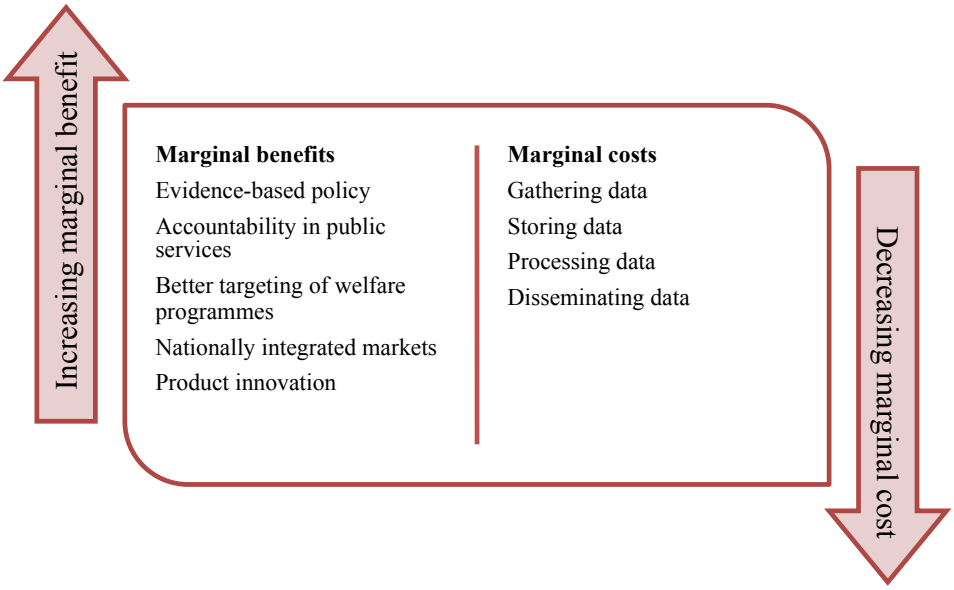
4.7 Together, the advancements in gathering, storing, processing and dissemination have lowered the marginal cost of data to unprecedented levels. Figure 1 summarises this phenomenon. Concurrently, the marginal benefit of data is higher than ever. A district education officer can make better decisions if he knows, for each school in his district, attendance rates of students and teachers, average test scores and status of school toilets. Similarly, parents can make better decisions about which school to send their children to if they know the average absenteeism rate of teachers in their village and can compare the rate to that in the neighbouring village. A multitude of scenarios exist in which harnessing the marginal unit of data can lead to sharp increases in public welfare.

4.8 Consider data that the Government maintains about its citizens. Currently, much of the data is dispersed across different registries maintained by different ministries. This is why every time a citizen has to access a new service, they are asked to collect all the documents to prove their identity and prove their claim on the process. For example, to get subsidies or benefits due to a farmer, such as free electricity, an incomplete list of documents include the Ownership Certificate issued by Village Administrative Officer, Chitta Adangal (extract from land registry), a Patta (Record of Rights) or Sale Deed, No Objection Certificate from any Government Project nearby and other documents to prove that one is a farmer on that land. The effort involved in this application mostly doesn't involve any new audits or inspections from any government department. The citizen faces the inconvenience of having to retrieve data trapped in paper files within the government system to unlock a benefit she is entitled to. The government can thereby deliver a better experience to the citizen by bringing disparate datasets scattered across various ministries together.

4.9 If the information embedded in these datasets is utilised together, data offers potential to reduce targeting error in welfare schemes. For example, consider a hypothetical individual who is affluent enough to own a car but is able to avail BPL welfare schemes, though unwarranted. When datasets are unconnected, the vehicle registry does not speak to, say, the public distribution system registry. Consequently, the public distribution system continues to subsidise this individual erroneously. However, if the two datasets are integrated, such inclusion error can be minimised, saving valuable Government resources. In the same way, exclusion errors can be rectified.

4.10 In fact, the declining cost of data has spawned new benefits that did not exist a few years ago. Consider, for example, an app that informs farmers of the prices of produce across the country. There was a time when, even if the app existed, it would have been useless – knowing that prices are higher in the next district would not have mattered to a farmer as he would have had no way to access those prices without substantial costs in transport, storage and distribution (including the cost of a dozen middlemen). Today, with platforms such as e-NAM (the electronic National Agriculture Market, we possess the technology to allow farmers to make the sale online, locking in the higher price with delivery to follow seamlessly. In this way, data has the potential to integrate markets nationally, reduce the need for middlemen, reduce prices for end consumers and increase prices for farmers. Figure 2 summarises these costs and benefits.

Figure 2: Increasing Marginal Benefits and Decreasing Marginal Cost of Data



WHY MUST DATA BE TREATED AS A PUBLIC GOOD?

4.11 The decline in marginal cost of data clubbed with an increase in marginal benefit means that the optimal quantum of data that society should consume is much higher than before. If so, economic theory predicts that the economy should have, by now, seen a surge in efforts to harness and use data. This has indeed happened, but only partially.

4.12 Private sector investment in data-related endeavours is higher than ever before. A 2017 Forbes survey found that 53 per cent of companies actively use big data to make decisions (Dresner, 2017). The trend holds across industries as disparate as healthcare and financial services, and across geographies and company sizes. In fact, in the last two decades, the world has witnessed the emergence of companies, such as Facebook, Amazon, Instagram, etc., who earn revenue exclusively from people's data.

4.13 But, there are several areas where data is not as ubiquitously harnessed and used. Consider, for example, the agriculture market. If the marginal benefit to a farmer of acquiring price information is higher than the marginal cost of that information, he would pay for that information. Consequently, the private sector would cater to his need by gathering and selling him the information he wants. This would eventually lead to a nationally integrated agriculture market with one price. However, India does not yet have such a nationally integrated agriculture market, which should have happened if the marginal benefit of data today is indeed higher than the cost. Why has the corporate sector's data wave not found a parallel in the agriculture sector?

4.14 The economics of data we considered so far is as it pertains to society, not to an individual agent, be it a farmer or a firm. The economics facing a private company that contemplates providing data to farmers is different from that facing a social planner. To the private firm, the prospect of a nationally integrated agriculture market, and the resulting social welfare, is a positive externality. It is not a benefit that accrues to the firm as the firm cannot, in practice, charge the numerous agents in the economy who

would experience welfare gains. Therefore, the private firm's marginal benefit is not as high as society's marginal benefit. Because the firm does not internalize the benefit of social welfare, the optimal amount of data that the firm would gather and disseminate falls short of the social optimum.

4.15 Second, data comes in many forms with each form offering a different benefit. Data linked to an individual can range from extremely intimate – such as their biometric details, to the extremely public – such as their name. It includes data that is generated by human actions, and data that is derived through analysis, typically involving an algorithm. For example, whether an individual has paid his taxes is a generated data point. But, using the tax records and other data points, a credit bureau may assign the individual a credit score, which is a derived data point. Data that is not linked to a specific individual but is still available at an individual level of granularity, is called Anonymized data. Anonymized data is critical in some areas such as medical research. Data neither linked to an individual, nor at an individual level of granularity is known as public data, such as the census.

4.16 While the private sector has done an impressive job of harnessing some kinds of data – the kind that can be converted into a private profit – government intervention is required in other areas where private investment in data remains inadequate. The social sectors of the economy, such as education and healthcare, have lagged the commercial sectors in exploiting data. Because the private sector cannot internalize the social benefits of data in these sectors, the market for data in these sectors has so far not developed.

4.17 To ensure that the socially optimum amount of data is harvested and used, the government needs to step in, either by providing the data itself or correcting the incentive structure faced by the private sector, depending on the nature and sensitivity of data. Indeed, in the agriculture sector, the Government has done exactly this by creating the e-NAM, as it is unlikely that the private sector would come up with a solution like this on its own.

Ensuring data privacy while creating data as a public good

4.18 In the endeavour to create data as a public good, it is very important to consider the privacy implications and inherent fairness of data being used. Needless to say, the processes required for ensuring privacy of intimate data is very different from that required for anonymized or public data. The key difference in dealing with these different types of data is the knowledge and consent of the data principal. Even if not explicitly mentioned every time data is talked about in this chapter, it is assumed that *the processing of data will be in compliance with accepted privacy norms and the upcoming privacy law, currently tabled in Parliament.*

Economies of scale and scope in the data generation process

4.19 Apart from the obvious necessity that data must be accurate, the need for a Government-driven data revolution is motivated by three key characteristics that data must possess for the synergistic benefits to accrue. Specifically, the data generation process exhibits significant economies of scale and scope.

4.20 First, when it comes to data, the whole is larger than the sum of its parts, i.e., it is more useful when it is married with other data. Consider, for example, the merging of disparate datasets maintained by different government agencies, such as transactions data extracted from the Jan Dhan accounts of the Department of Financial Services, Ministry of Finance, married to demand

for MGNREGA work from the Ministry of Rural Development. As MGNREGA can be a real-time indicator of rural distress (as discussed in Chapter 10 in this volume), the credit scoring done using the transactions data of Jan Dhan accounts can be used to provide credit in districts/panchayats that are experiencing distress. Such combining of disparate datasets can be extremely useful in obtaining the necessary richness required to design and implement welfare policies.

4.21 Second, data needs to cover a critical mass of individuals/firms so that comparisons and correlations can be assessed among individuals/firms to generate useful policy insights. Thus, to gather price data on trades across various product markets and across the country, a very large number of producers and buyers need to log their transactions on a platform in real time. To induce numerous agents to report transaction information regularly is a task that requires significant initial investment, which may prove prohibitive for the private sector.

4.22 Finally, data must have a long enough time-series so that dynamic effects can be studied and employed for policymaking. For instance, to undertake before-after evaluations to assess the effectiveness of policies, data that spans a long-enough time series is critical.

4.23 Data that contains all these three features is much more valuable than three different and disparate datasets that possess each of these criteria separately. Thus, the data generation process exhibits significant economies of scope. Also, the scale of effort required to create such data that exhibits all three features implies that the data generation process exhibits significant economies of scale as well because the (upfront) fixed costs involved in generating such data are significant. Private sector may not have the risk appetite or the capital to make the necessary investments required for generating data that possesses all three characteristics, viz., marries disparate datasets, covers a critical mass of individuals/firms, and spans a large time-series. Even if private sector were to put such rich data together, this would result in a monopoly that would reduce citizen welfare, on the one hand, and violate the principle of data by citizens, and, therefore, for citizens.

4.24 Most importantly, data carries some of the characteristics of public goods. It is non-rivalrous, i.e., consumption by one individual does not reduce the quantum available for others. In principle, data can be made excludable, i.e., it is possible to exclude people from accessing data, as many database firms do by erecting pay walls. However, there are some kinds of data – particularly data gathered by governments on issues of social interest – that should be democratised in the interest of social welfare. Such data should be made public goods. As the private sector would fail to provide an optimal amount of any non-rivalrous, non-excludable good, government intervention is required.

4.25 Data are generated by the people, of the people and should be used for the people. As a public good, data can be democratised and put to the best possible use. Box 1 describes the Open Government Data initiative taken by the Government, which is an illustration of the spirit of data as a public good. While this is an excellent start, the enormous benefits that can be reaped from treating data as a public good imply that Government must redouble its efforts in this direction.

BUILDING THE SYSTEM

4.26 The data system envisioned here involves predominantly data that people share with Government bodies with fully informed consent or is data that is legally sanctioned to be collected by the state for

Box 1: Open Government Data and citizen engagement

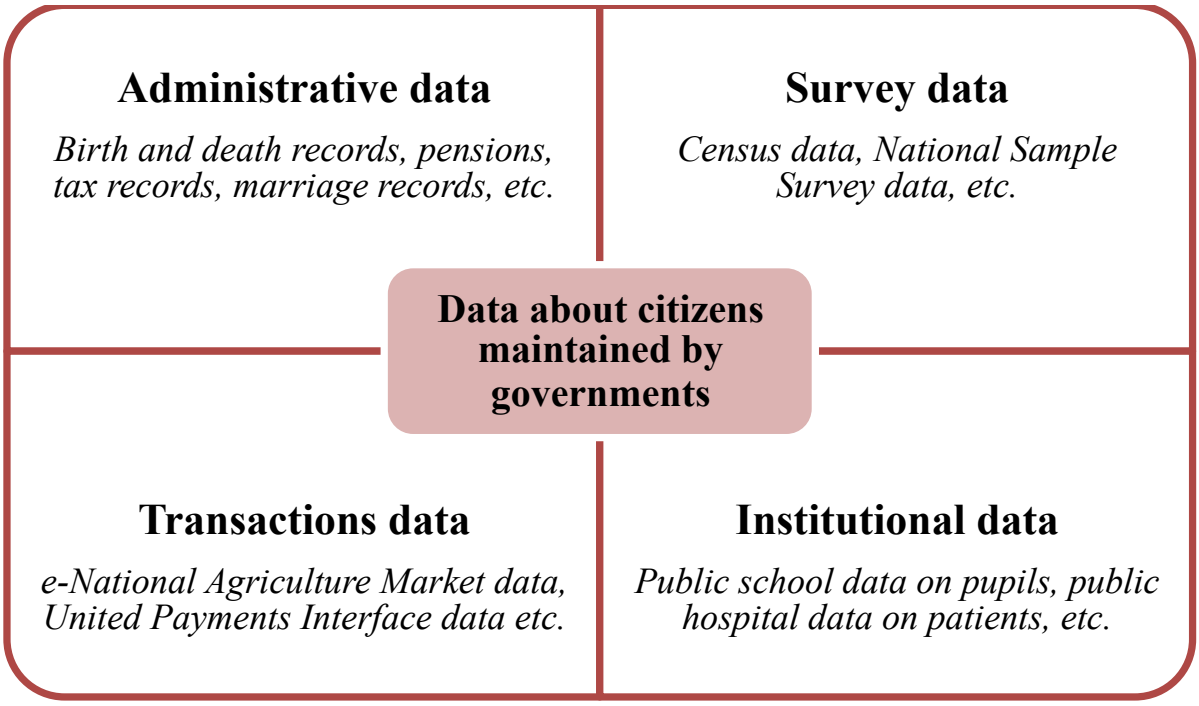
The Union government's Open Government Data platform allows citizens to access a range of government data in machine-readable form in one place. The portal allows union ministries and departments to publish datasets, documents, services, tools and applications collected by them for public use. Excluding datasets which contain confidential information, all other datasets are made available to the public, ranging from data on welfare schemes to surveys to macroeconomic indicators. The platform also includes citizen engagement tools like feedback forms, data visualisations, Application Programming Interface (APIs) etc.

Open data not only helps government officials make better decisions but also gets people involved in solving problems. Throwing open government data to the public multiplies the number of people analysing and deriving insights from data. Consequently, the usability of data itself increases.

To engage people meaningfully in solving problems, the Ministry of Human Resource Development recently initiated the Smart India Hackathon – an open innovation model to discover new, disruptive technologies that could solve India's most pressing problems. Smart India Hackathons are product development competitions in which participants get a problem statement and relevant data, using which they develop a prototype software or hardware. These competitions crowd-source solutions to improve governance and increase the efficacy of welfare schemes. None of this would be possible, of course, without reliable data.

an explicit purpose such as tax collection, or delivering welfare. The Government of India collects four distinct sets of data about people – administrative, survey, institutional and transactions data (see Figure 3 for summary and Box 2 for details). While the latter two databases are in a fledgling state, the first two are comprehensive and robustly maintained.

Figure 3: Data collected by the Government of India



Box 2: Rich data on citizens that Government can harness for the welfare of its citizens

Governments hold *administrative data* for mainly non-statistical purposes. Administrative datasets include birth and death records, crime reports, land and property registrations, vehicle registrations, movement of people across national borders, tax records etc. Governments also gather data to evaluate welfare schemes; for example, the Ministry of Drinking Water and Sanitation gathers data on toilet usage to assess the efficacy of the Swachh Bharat Mission.

Survey data, on the other hand, is data gathered predominantly for statistical purposes through systematic, periodic surveys. For example, the National Sample Survey Office conducts large-scale sample surveys across India on indicators of employment, education, nutrition, literacy etc. Because these data are gathered for statistical analyses, the identity of participants is irrelevant and unreported, although these identities may be securely stored at the back-end without violating any legal guidelines on privacy.

Institutional data refers to data held by public institutions about people. For example, a government-run district hospital maintains medical records of all its patients. A government-run school maintains personal information about all its pupils. State-run universities maintain records of students' educational attainment and degrees awarded to them. Most such data are held locally, predominantly in paper-based form. This data can be digitized to enable aggregation at the regional or national level.

Transactions data are data on an individual's transactions such as those executed on the United Payment Interface (UPI) or BHIM Aadhaar Pay. This is a nascent category of data but is likely to grow as more people transition to cashless payment services.

4.27 Data collection in India is highly decentralised. For each indicator of social welfare, responsibility to gather data lies with the corresponding union ministry and its state counterparts. Consequently, data gathered by one ministry is maintained separately from that gathered by another. Data on an individual's vehicle registrations, for example, is maintained by one ministry, whereas the same individual's property ownership records lie with another ministry. These datasets are further distinct from the individual's educational attainment records maintained by the state-run university he/she attended and from other demographic information gathered in the decennial Census survey. Because these datasets are unconnected (see below), each ministry only has a small piece of the jigsaw puzzle that is the individual/firm. However, if these different pieces could be put together, we would find that the whole is greater than the sum of parts. As learning from global best practices, boxes 3 and 4 highlight the case studies of Transport for London's data initiative and the data initiatives of the U.S. Government. Box 5 illustrates similar learning from closer home: the Samagra Vedika initiative by the Government of Telangana.

Box 3: Benefits of opening up Transport for London's data

Transport for London (TfL) releases a significant amount of data – such as timetables, service status and disruption information – in an open format for anyone to use, free of charge. Open travel data can support travel apps and real-time alerts to save time, reduce uncertainty and lower information costs, supporting growth in the tech economy and increasing the use of public transport. At last count, more than 600 apps were being powered specifically using the TfL open data feeds, used by 42 per cent of Londoners.

TfL has demonstrated that releasing data to the public can save users time to the economic value of between £15m and £58m per year. An analysis by Deloitte found that the provision of transport information through travel apps and real-time alerts is saving £70m-£95m per year in time, reduced uncertainty and lower information costs. Further, release of open data by TfL has supported the growth of London's tech economy to the value of £14m annually in gross value added (GVA) and over 700 jobs. It has also unlocked new revenue and savings opportunities and new ways of working at TfL, including a £20m increase in bus usage as customers are more aware of service opportunities. This data has been used by a range of apps, from early stage start-ups to global leading technology platforms, saving time and reducing stress. There are currently 13,700 registered users of TfL's open data.

The London Infrastructure Mapping Application is a new platform that allows utilities, boroughs, the Mayor of London and TfL to share information relevant to infrastructure investment and planning. By bringing together a range of data, the application facilitates improved collaboration between actors, joined-up approaches to construction and design, and better identification of future demand and capacity constraints. Information is visualised spatially through a bespoke mapping application that has been developed in consultation with users. Early evidence has found that the tool supports better alignment of investment – unlocking housing growth and reducing disruption throughout London – by allowing projects such as road works to be timed better, and saving costs through joined-up approaches to construction (e.g. joint ducting of utility cables and pipes).

TfL is currently developing a new tool that will analyse data feeds from Tube trains to provide maintenance staff with live information about the condition of a train. Using the tool, staff can analyse the data and identify where faults exist or might be developing and remedy them before they cause service issues. The tool has strong potential to make maintenance planning more efficient and prevent costly faults leading to service delays from occurring. The in-house capability will also help TfL save money by reducing third-party spend – currently around £46m over five years on an external maintenance support contract.

Source: National Infrastructure Commission Report on Data as a Public Good available at https://www.nic.org.uk/wp-content/uploads/Data-for-the-Public-Good-NIC-Report.pdf

Box 4: Data Initiatives taken by U.S. Government

On January 29, 2009, U.S. President Barack H. Obama issued a memorandum on open and transparent government and asked his administration to establish "a system of transparency, public participation, and collaboration". The open-government initiative mandates federal government and public agencies to publish their data online for public use in machine-readable format. In a bid to democratise its data, U.S. government made more than 138,000 data sets available to the public. In February 2015, the U.S. government appointed DJ Patil as its first ever Chief Data Scientist in the Office of Science and Technology Policy to unleash the power of data for the benefit of the American public.

Data.gov, the preeminent platform of U.S. Government shares data and meta-data from various public agencies and has 'value added' features like:

(i) Ability to filter by location, data-set type, tag, format, community etc.;

(ii) A tool to integrate data-sets and create visualizations;

(iii) Engagement with public to provide feedback and participation in various forums, blogs and communities to improve the quality of data-sets;

(iv) Resources that provide links to all federal agency API's;

(v) Developer hub with software development kits, open-source resources and repositories of code;

(vi) Enabling of data-driven decisions through education apps (search for college, search for public school districts), energy and environment apps (alternate fuel locator) and food and nutrition apps (fooducate, goodguide);

(vi) A platform of cities.data.gov to publish datasets from different cities across U.S.;

(vii) disaster.data.gov web portal for collaborative efforts in disaster management, healthcare, policing, and climate change;

(viii) Precision Medicine Initiative (PMI), a leading open data project that aims to create individualized treatments, expand genetically based clinical cancer trials and establish a national "Cancer Knowledge Network" to help with treatment decisions.

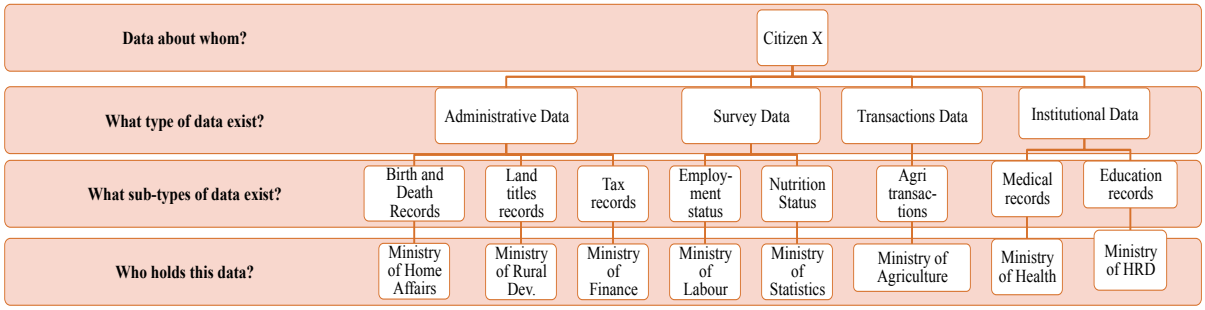
United States Department of Agriculture (USDA) releases regular forecasts for prices of various agricultural commodities that are used worldwide. The projections identify major forces and uncertainties affecting future agricultural markets; prospects for long-term global economic growth, agricultural production, consumption, and trade; and U.S. exports of major farm commodities and future price movements. The projections can also be used to analyse impacts of alternative policy scenarios. This easy availability of data projections, in effect, drives agricultural markets across the U.S.

Box 5: Federalism in learning among governments: Telangana Government's Samagra Vedika initiative

The Telangana Government's Samagra Vedika initiative gives a flavour of the potential benefits of integrating data sets. The initiative links around twenty-five existing government datasets using a common identifier – the name and address of an individual. Seven categories of information about each individual were linked in this aggregation exercise – crimes, assets, utilities, subsidies, education, taxes and identity information. Each individual was then further linked to relatives such as spouse, siblings, parents and other known associates. The initiative also puts in place all the necessary safeguards to preclude any tampering of data or violation of privacy. The right to add or edit data in the database varies by ministry or department. A given department can only write data for select fields – the motor vehicles department cannot, for instance, manipulate data relating to education, even though it can view the data.

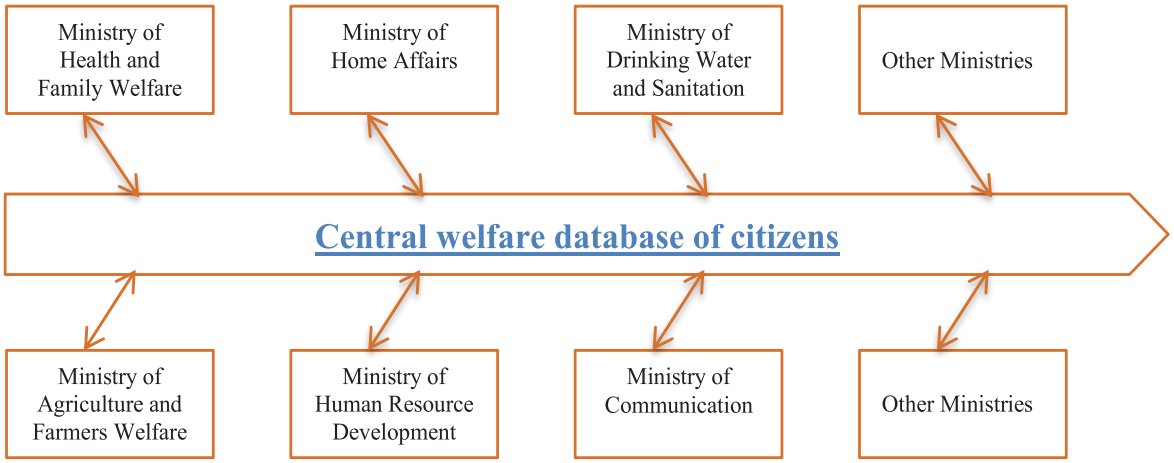
4.28 Of late, there have been some discussions around the "linking" of datasets – primarily through the seeding of an Aadhaar number across databases such as PAN database, bank accounts, mobile numbers, etc. A point of clarification is in order here. When one adds an Aadhaar number to an existing database such as a database of bank accounts, it is only one more column that is added to the table. The linking is so to speak "one-way". Banks can now use the tokenized Aadhaar Number (i.e., a proxy 64-digit number that is based on, but not equal to the individual's 12-digit Aadhaar Number) to combine duplicate records and weed out benaami accounts. But, this does not mean that the UIDAI or government can now read the bank account information or other data related to the individual.

Figure 4: Illustration: Data about a hypothetical citizen X is dispersed across multiple, unconnected datasets



Note: Names of some ministries abbreviated. Data types and sub-types are illustrative examples only and not exhaustive.

Figure 5: An enterprise architecture for Governance



4.29 Figure 4 illustrates the current system. Data about a hypothetical citizen X is spread across ministries. In fact, the illustration is an oversimplification. For example, data about X's medical records would lie with the Government-run district hospital where she was most recently treated. In all likelihood, these medical records are in paper-based form and do not get aggregated for analysis at the state level, let alone the central level. Nevertheless, the illustration depicts the union ministries ultimately responsible for each kind of data.

4.30 Figure 5 illustrates the Data Access Fiduciary Architecture. Each department of the government is responsible for making available the data they hold as a data provider. These departments must take care to appropriately treat private data and public data with the standards they require. This data is then made available through a Data Access Fiduciary to the Data Requestors. Data Requestors may be public or private institutions but can only access the data if they have appropriate user consent. The Data Access Fiduciary themselves have no visibility on the data due to end-to-end encryption. *Such a model puts user consent in the centre of the government's initiative to make Data a Public Good.*

4.31 A citizen is, of course, not the only possible unit of analysis. One may want to analyse schools, villages or hospitals. Different databases of villages, for example, may be utilised together if a unique identifier for every village exists. Unfortunately, in many cases, ministries and departments have their own codes for a given geographical area; for example each village is characterised by a pin code assigned by the Department of Post, a village code assigned by the Department of Rural Development and a health block assigned by the Ministry of Health and Family Welfare. The lack of a common identifier makes it difficult to consolidate information.

4.32 An initiative to address this issue is the Local Government Directory, an application developed by the Ministry of Panchayati Raj. A comprehensive directory of all local administrative units, the platform maps each land region entity to a local Government body (like villages with their respective gram panchayats) and assigns location codes compliant with Census 2011. The Local Government Directory is a great example of Data as a Public Good. The Ministry of Panchayati Raj has made important headway in solving a difficult problem, common to every government and private institution trying to serve rural India – the lack of formal addresses – by assigning a code to every place. Instead of simply sitting on that data, the Ministry has also published it for all to use. If all government databases requiring location codes are aligned with the codes in this directory, then all databases will share a common location field that can help in merging data, and reduce accuracy errors in the distribution of welfare.

Utilizing technological advances to eliminate all privacy concerns

4.33 The integrated system's efficacy relies on three critical features. First, while any ministry should be able to view the complete database, a given ministry can manipulate only those data fields for which it is responsible. Second, updating of data should happen in real time and in such a way that one ministry's engagement with the database does not affect other ministries' access. Third and most importantly, the database should be secure with absolutely no room for tampering.

4.34 The prospect of empowering the government with such comprehensive, exhaustive information about every citizen may sound alarming at first. However, this is far from the truth. First, large quantities of data already exist in government records, and the objective is only to use this data in a more efficient way. The proposal envisioned here does not gather any new information; rather, it seeks to make available all data within the government for citizens, government, private and public institutions to utilize the data subject to user consent and appropriate privacy and fairness related constraints.

4.35 Second, people can always opt out of divulging data to the government, where possible. For example, one can choose not to participate in a survey or use government-run payments services. There are exceptions, of course. People cannot buy and drive vehicles without a license and registration certificate; but not requiring these data would threaten the enforcement of property rights, road safety and national security, which cannot be compromised. But for the remaining categories of data – institutional, survey and transactions – people have the choice.

4.36 Third, even if there is no viable private market choice of certain public services, the choice to share the individually linked data from such services will always be with the citizen under the Data Access Fiduciary Architecture. Further, immutable access logs

for all data would be available so that citizens know who has seen their data and why.

4.37 The principle is that most data are generated by the people, of the people and should be used for the people. Enabling the sharing of information across datasets would improve the delivery of social welfare, empower people to make better decisions, and democratize an important public good.

TRANSFORMING INDIA'S DATA INFRASTRUCTURE

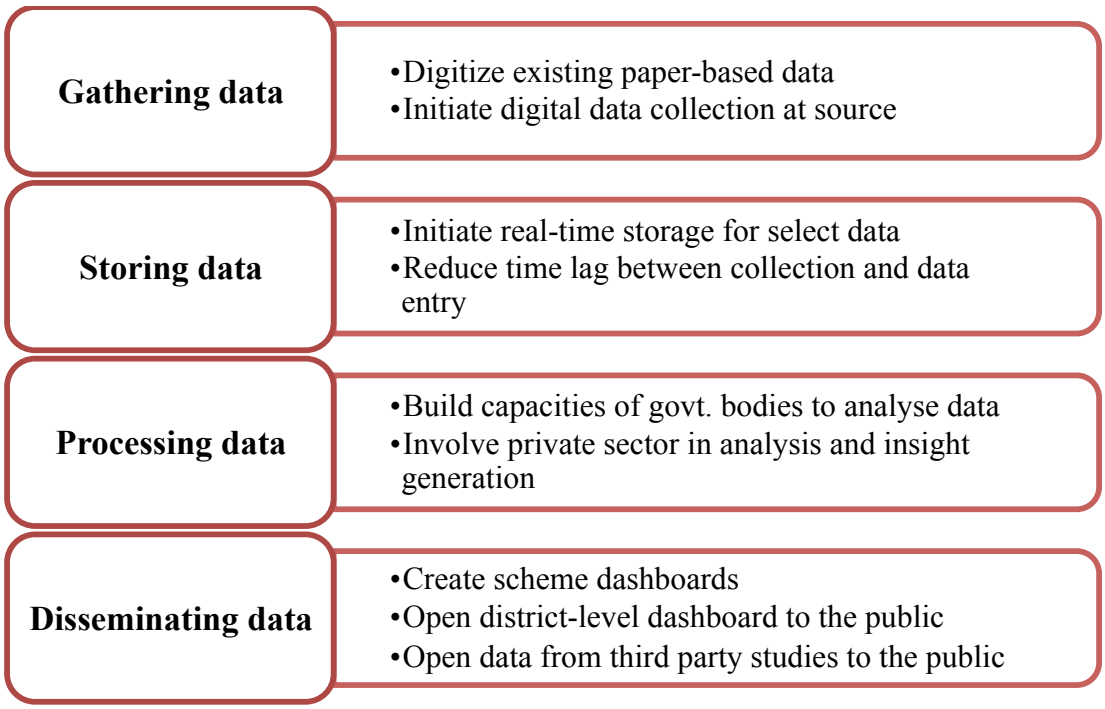
4.38 Undoubtedly, the system outlined above requires a robust data infrastructure. While combining datasets will itself reap rewards, the benefit is limited if data is of an uncertain quality, not amenable to easy processing etc. Harnessing data consists of four steps – gathering, storing, processing and disseminating data, each of which offers room for improvement in India (see Figure 6).

Gathering data: Directly digital rather than paper to digital

4.39 Unless data is in a digital, machine readable format, its utility is limited. Paper records of data cannot be accessed by all stakeholders. Even if paper records of schemes are scanned and stored in a digital repository, they do not lend themselves to easy analysis. For data to serve its purpose, it needs to be transmuted into a digital, machine readable form that can be downloaded and analysed. While most state and national level data is already in this form, digital records are not yet ubiquitous at the more granular administrative levels. For example, a citizen cannot view his village's sanitation status on a digital database. At best, he can look up his district. For many schemes, data is available only at the state level.

4.40 The recently launched Digitize India initiative is an ingenious solution to the

Figure 6: Transforming data gathering, storage, processing and dissemination



tedious task of converting paper-based data into digital form. The initiative crowd-sources the data entry effort by presenting volunteering citizens with snippets of scanned documents, which they type into a data entry portal. Correct entries earn cash rewards for the contributor (see Box 6 for details).

4.41 While the scheme goes a long way to digitize existing paper records, a parallel initiative is needed to convert the very process of data collection into a digital one, as opposed to collecting on paper first and converting to a digital format later. Undoubtedly, the exercise of supplying every hospital, gram panchayat, school or block office with an electronic data-entry device is quite ambitious, but achievable. Digital data collection at the source ensures that data is logged exactly as observed, obviates the redundancy of data entry, and eliminates data entry errors. A truly digital ecosystem is achievable only when all layers of information that constitute the ecosystem are digitized.

Storing data

4.42 Public service delivery can benefit from real-time storage of data. The city of St. Petersburg, Florida, recently created a citizen dashboard called St. Pete Stat, where citizens can view dynamically updated information about the performance of city departments, status of development projects. The dashboard includes various interactive tools such as an interactive map of all police calls in the city.

4.43 Not all types of data are amenable to real-time storage, of course. Further, the incremental cost of a real-time database may not always justify its marginal benefit. However, there are a few sectors where, if not real-time, at least a high frequency of logging data on the server can yield substantial benefits.

4.44 Education is one such example. Even a seemingly short period of six months is a long time in the life of a child – it amounts to half an academic year. Say a school does not have a functional toilet for girls, leading girls to remain absent from school. The problem needs to be rectified as soon as possible; otherwise these girls would lose out on valuable schooldays. The block or district education officer should receive a daily, or at least weekly, report of the status of toilets so that in case a problem is not rectified within a week or two, they can take the required action.

Box 6: How Digitize India works

Government departments upload scanned copies of paper records on the Digitize India platform. These scanned documents are shredded into snippets with meaningful data. These snippets are randomly served to digital contributors. Digital contributors are citizens who volunteer their time on the portal. Upon receiving snippets, the contributor reads the information and types it into a data entry portal. All converted data are verified against the corresponding snippet. Correct entries earn their contributors reward points, which can either be redeemed for cash or donated to the Digital India initiative. Once all snippets corresponding to a particular document are converted into digital data, the platform reassembles the document in digital form and supplies it back to the government department. Any Indian citizen with an Aadhaar number can participate as a digital contributor. Citizens are incentivised through reward points and recognition as 'digital contributors' and may even earn certificates as 'Data Entry Operators'. Ingeniously, the program also features a mobile app so that even citizens without a laptop or desktop computer can participate.

If the problem takes months to come to the notice of the block or district officer, the girl children in the school will have lost months' worth of learning! Digital dashboards updated in real time or at least weekly would avert such harsh consequences. Similarly, consider agriculture, where farmers need data about weather conditions, expected rainfall, input and output prices in real time to make daily decisions. Facilitating real-time access to such data is essential to improve agricultural productivity and farmer incomes.

4.45 With the widespread adoption of ICT approaches in public service delivery, real time data collection and storage is no longer an ambitious and distant dream but very much realisable, at least in select sectors and contexts.

Processing data

4.46 A deluge of data will be created when data is collected digitally, stored in real-time, and utilised with existing data. While this deluge has tremendous potential to transform governance, unleashing this potential requires skill. A district government official, for example, should have the analytical skills to make use of the data in that district. In the absence of such skill, investing in the data infrastructure is of limited use.

4.47 Governments at all administrative levels should invest in building their internal capacities to exploit data in real time, perform analyses and translate data into meaningful information. While every government department may have a dedicated analytics or data insights division, Ministry of Statistics and Program Implementation and Ministry of Electronics & Information Technology can act as nodal departments to steer such efforts at the national level.

4.48 The government may also consider opening certain kinds of data to private players with all the necessary security safeguards. Data shared with the public on the Open Government Data portal is completely anonymised and aggregated over a large number of individuals. Such data precludes careful statistical analyses, where individual-level observations are required. However, after obfuscating all personally identifiable information, if this data is shared with the private sector, government can harness the skills and enthusiasm of data analytics professionals to gain the maximum possible insights from the data.

Disseminating data

4.49 The Open Government Data portal is an effective tool to disseminate data to the public. But, as most citizens do not have the time or skills to employ analytical tools to dissect databases, easy visualisation tools are critical. The portal has enabled several visualisation tools already, and these may be augmented with the following.

4.50 First, the Government may initiate scheme dashboards for every major Government scheme with granular data, all the way to the village level. Dashboards should be ready recipients of data from the concerned government body and ready displayers of the same data in real-time to the public. The Swachh Bharat Mission is an exemplar dashboard that may be replicated for other schemes to allow citizens to track the physical and financial performance of welfare schemes. Currently, these dashboards exist only for a small number of schemes. For example, ICDS Anganwadi Services scheme, the largest scheme for women and child development in India, does not have a publicly available dashboard.

4.51 In existing dashboards, the metrics showcased may be augmented, especially to show progress at the more granular levels of administration. For example, the Swachh Bharat dashboard can include information on the number of swachhta doots (sanitation helpers) deployed at the district level or the number of information, education and communication (IEC) campaigns in that district. In all likelihood, the data on these metrics is available with the government but is not open to the public, perhaps because the data is not in digital form.

4.52 Second, many state governments have instituted district-level dashboards based on Management Information Systems (MIS) for various programmes. These states include Andhra Pradesh, West Bengal, Madhya Pradesh and Chhattisgarh. Except for the Andhra Pradesh and West Bengal ones, these dashboards are not easily accessible to citizens. They require a password, which is only available to the local administration. Some dashboards are not operational anymore (broken links), others display outdated data. While the investment to initiate such a dashboard is commendable, the benefits will be greater if the state governments continually maintain these dashboards to disseminate information.

4.53 Finally, many central ministries and state departments commission data collection initiatives to conduct needs assessments or impact evaluations of schemes. Although most of these studies are made public, the underlying data are not. As these studies are carried out in partnership with government bodies, they should be made available to the public so that independent analyses may be carried out to validate the findings of these studies.

APPLICATIONS

4.54 Once the infrastructure is in place, the applications are innumerable. A robust data backbone can empower every stakeholder in society, from the Central Government to a local government body, from citizens to

Box 7: NREGAsoft and e-governance in MGNREGA

NREGAsoft is a comprehensive e-governance system for the MGNREGA scheme. Accessible by a range of stakeholders, it captures the complete flow of all MGNREGA work at every level – from the centre all the way to the panchayat. In the spirit of citizens' right to information, the system makes available documents like muster rolls, registration application register, job card/employment register/ muster roll issue register and muster roll receipt register, which are otherwise inaccessible to the public.

The system has no language barriers to usage; it is accessible in a number of local languages. In fact, even the illiterate can use the interface as it leverages sounds and icons in a touch-screen kiosk model. It is designed to be used by a range of stakeholders, from workers who are beneficiaries of the scheme to gram panchayats to district programme coordinators to banks and post offices. Even citizens who are not beneficiaries of the scheme may view information on the portal.

The software consists of several modules, which together comprehensively span all activities and all stakeholders. For example, while the worker management module forms the backbone of all worker-related services, a fund management module tracks the movement of funds from the central ministry all the way to the workers' pockets, a grievance redressal module helps stakeholders including the illiterate to lodge complaints and track responses, and a bank/post office module allows financial institutions to get wage information and enter details of money credited in accounts. Other modules assist with cost estimation, social audit, knowledge network etc.

the private sector. A few (inexhaustive and illustrative) potential benefits are described below.

Governments themselves as beneficiaries

4.55 Being able to retrieve authentic data and documents instantly, governments can improve targeting in welfare schemes and subsidies by reducing both inclusion and exclusion errors. Datasets that utilise information across various datasets can also improve public service delivery. For example, cross-verification of the income-tax return with the GST return can highlight possible tax evasion.

Private sector firms as beneficiaries

4.56 The private sector may be granted access to select databases for commercial use. Consistent with the notion of data as a public good, there is no reason to preclude commercial use of this data for profit. Undoubtedly, the data revolution envisioned here is going to cost funds. Although the social benefits would far exceed the cost to the government, at least a part of the generated data should be monetised to ease the pressure on government finances. Given that the private sector has the potential to reap massive dividends from this data, it is only fair to charge them for its use.

4.57 Consider, for example, allowing the private sector access to data about students' test scores across districts (with all personal information completely obfuscated). Using test scores of students, demographic characteristics of each district and publicly available data on the efficacy of public education schemes, a private firm may be able to uncover unmet needs in education and cater to these needs by developing innovative tutoring products tailored to the specific needs of specific districts. These products would not only create profits for the private sector, but also monetize data and generate revenues for the government, in addition to improving education levels and social welfare.

4.58 Alternatively, datasets may be sold to analytics agencies that process the data, generate insights, and sell the insights further to the corporate sector, which may in turn use these insights to predict demand, discover untapped markets or innovate new products. Either way, there is tremendous scope for the private sector to benefit from the data and they should be allowed to do so, at a charge. Fortunately, stringent technological mechanisms exist to safeguard data privacy and confidentiality even while allowing the private sector to benefit from the data.

Citizens as beneficiaries

4.59 Citizens are the largest group of beneficiaries of the proposed data revolution. Consider the case of Digital Locker. It is in many ways similar to the plan we have outlined above. But it is restricted to certain

Box 8: The National Scholarship Portal

The Government of India has already made headway in integrating data on scholarships. The National Scholarship Portal was initiated to harmonize all scholarship schemes implemented by various ministries at the central and state levels. The portal serves as an umbrella platform for all scholarship related services ranging from student application, application receipt, processing and sanction to disbursal of funds. In addition to creating a transparent database of all beneficiaries of all government scholarship schemes at various levels, the portal reduces hassles in discovering scholarships and facilitates direct benefit transfer (DBT).

documents that the state issues. Citizens no longer need to run from pillar to post to get "original" documents from the state such as their driving licence, Aadhaar card, PAN card, CBSE results, etc. These documents are critical in the life of every resident of India. These documents are most needed by those who depend on the state for welfare. They are also often the hardest to secure for the same vulnerable group.

4.60 DigiLocker makes all their documents available, in a verified format, in one place on the cloud. Citizens only need an internet connected device, smartphone or computer to access the locker. It helps digitize downstream processes such as college admissions. For anyone who has had to retrieve a lost or missing document from the government or have to get photocopies "attested", the DigiLocker experience is immensely more time-saving and user-friendly. They do not have to live in the fear of their precious documents being lost to the elements or other misfortune.

4.61 In a similar vein, the Reserve Bank of India has announced the Non-Banking Financial Company-Account Aggregator (NBFC-AA). Even in the finance industry, an individual leads a complex financial life with their data spread across multiple providers. One may hold a bank account with State Bank of India, but take a loan from HDFC. Their mutual fund investments may be through Axis Bank, but their insurance is through LIC. They also have a credit card from Standard Chartered and use Motilal Oswal to invest in some stocks directly. In such a case, the data needed by the individual to piece together their own financial life is distributed across many data providers. The NBFC-AA allows users to pull that data together, for any purpose the citizen requires. This may be for personal finance management, or maybe to apply digitally for a new housing loan. The NBFC-AA neither reads data nor creates an invasive 360-degree dataset. It simply enables citizens to demand their data from these institutions in a machine-readable format, so that it can be used by them meaningfully.

WAY FORWARD

Through Aadhaar, India has been at the forefront of the data and technology revolution that is unfolding. As data for social welfare may not be generated by the private sector in optimal quantity, government needs to view data as a public good and make the necessary investments. The benefits of creating data as a public good can be generated within the legal framework of data privacy. Going forward, the data and information highway must be

Box 9: Idea of a National Health Registry

For Swachh Bharat to transform into Swasth Bharat and eventually Sundar Bharat, citizens' health is paramount. Prevention is far more important in this endeavour than cure. A national health register, that maintains health records of citizens with all the necessary privacy safeguards can go a long way in enabling health analytics for predictive and prescriptive purposes. Such a national health register would be identified using a citizen's Aadhar. As a doctor can access the medical history of a patient from this national health register, this facility would be especially useful in emergency/trauma cases and can potentially save several lives. The various components of this register can include databases for (i) hospitals and public health centres, (ii) surveillance of syndromes, (iii) immunization information systems, (iv) electronic laboratory reporting, and (v) sub-registries for key diseases requiring intervention such as diabetes, hypertension, cancer, AIDS, etc. Anonymized data from the register can be sold to private parties for analytics, which would then enhance prevention by offering predictive and prescriptive knowledge.

viewed as equally important infrastructure as the physical highways. Such a stance can help India leapfrog to utilise the benefits of technological advances for the welfare of its people. In the spirit of the Constitution of India, data "of the people, by the people, for the people" must therefore become the mantra for the government.

CHAPTER AT A GLANCE

- Given technological advances in gathering and storage of data, society's optimal consumption of data is higher than ever.
- As private sector may not invest in harnessing data where it is profitable, government must intervene is creating data as a public good, especially of the poor and in social sectors of the country.
- Governments already hold a rich repository of administrative, survey, institutional and transactions data about citizens, but these data are scattered across numerous government bodies. Merging these distinct datasets would generate multiple benefits with the applications being limitless.
- Given that sophisticated technologies already exist to protect and share confidential information, data can be created as a public good within the legal framework of data privacy. In thinking about data as a public good, care must also be taken to not impose the elite's preference of privacy on the poor, who care for a better quality of living the most.
- As data of societal interest is generated by the people, it should be "of the people, by the people, for the people."

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Ending Matsyanyaya: How To Ramp Up Capacity In The Lower Judiciary

05
CHAPTER

"The Rule of Law and maintenance of order is the science of governance"
- Kautilya's Arthashastra, 4th century B.C.

"No branch of knowledge and policy is of any avail if the Rule of Law is neglected"
- Kamandak's Nitisara, 4th century A.D.

Arguably the single biggest constraint to ease of doing business in India is now the ability to enforce contracts and resolve disputes. This is not surprising given the 3.5 crore cases pending in the judicial system. Much of the problem is concentrated in the district and subordinate courts. Contrary to conventional belief, however, the problem is not insurmountable. A case clearance rate of 100 per cent (i.e. zero accumulation) can be achieved with the addition of merely 2,279 judges in the lower courts and 93 in High Courts even without efficiency gains. This is already within sanctioned strength and only needs filling vacancies. Scenario analysis of efficiency gains needed to clear the backlog in five years suggest that the required productivity gains are ambitions, but achievable. Given the potential economic and social multipliers of a well-functioning legal system, this may well be the best investment India can make.

INTRODUCTION

5.1 The relationship between economic governance and the Rule of Law *(Dandaniti)* has been emphasized by Indian thinkers since ancient times. It is seen as the key to prosperity, and a bulwark against *Matsyanyaya* (i.e. law of the fish/jungle). It should be no surprise, therefore, that the Preamble to the Constitution of India defines that the first role of the State is *'to secure for all its citizens: Justice, social, economic, and political'*. In other words, it is well accepted that economic success and prosperity are closely linked to the ability to enforce contracts and resolve disputes.

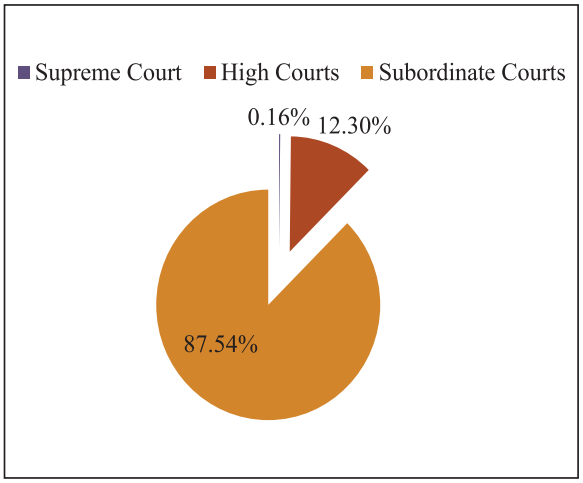
5.2 Last year's Economic Survey (2017-18) presented evidence of the backlog of cases that weighs down the Indian judiciary, economic tribunals and the tax department, thereby constraining economic growth. It also highlighted how the government's efforts to improve the present regime, by introducing the Insolvency and Bankruptcy Code and the adoption of the Goods and Services Tax, have had a profound impact on improving Ease of Doing Business (EODB) in India[1].

[1] India was one of the biggest 'improvers' in the World Bank's Ease of Doing Business Report (EODB), 2019 with its rank jumping to 77 from 142 in the last four years.

5.3 This progress notwithstanding, India continues to lag on the indicator for enforcing contracts, climbing only one rank from 164 to 163 in the latest report of EODB, 2018. In spite of a number of actions to expedite and improve the contract enforcement regime, economic activity is being affected by the long shadow of delays and pendency across the legal landscape[2]. Contract enforcement remains the single biggest constraint to improve our EODB ranking. This is ironical for a country that has long idealized contract enforcement. As Tulsi Ramayana puts it, *"praan jayi par vachan na jayi"* i.e., "one's promise is worth more than one's life".

5.4 The Indian judicial system has over 3.53 crore pending cases[3] (see Figure 1). At first glance, this number looks very large and insurmountable, but this Chapter will argue it is a potentially solvable problem. Indeed, given the potential benefits, this may be the best investment that the Indian economy can make.

Figure 1: Distribution of Pending Cases among different levels of Courts in India



Source: Supreme Court of India and NJDG, 2019.

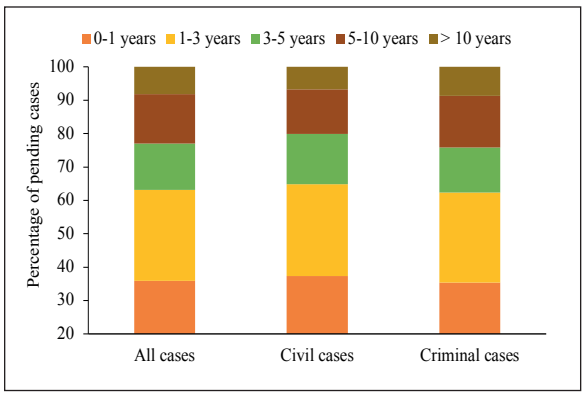
5.5 Given that District and Subordinate courts (D&S courts) account for 87.54 per cent of pending cases, this chapter will focus on this segment and evaluate its performance on parameters such as disposal time, pendency time, case types and case clearance rate. The Chapter further analyses the requirement of additional judges and efficiency gains across the various levels of courts to achieve 100 per cent clearance rate as well as to eliminate the stock of pendency in the next five years.

5.6 The following sections provide an overview of the performance of D&S courts, using metrics that quantify different aspects of the litigant's experience. These include average age of cases, (both pending and disposed), the number of days between hearings, and the average amount of time spent on the life cycle of cases.

PENDENCY

5.7 The pendency of a case on a given date is the time since the date of filing. The distribution of ages of pending cases as on May 31, 2019 is shown in Figure 2. It reveals that the distribution of pendency of both civil

Figure 2: Distribution of Pending Cases (age-wise) in D&S courts

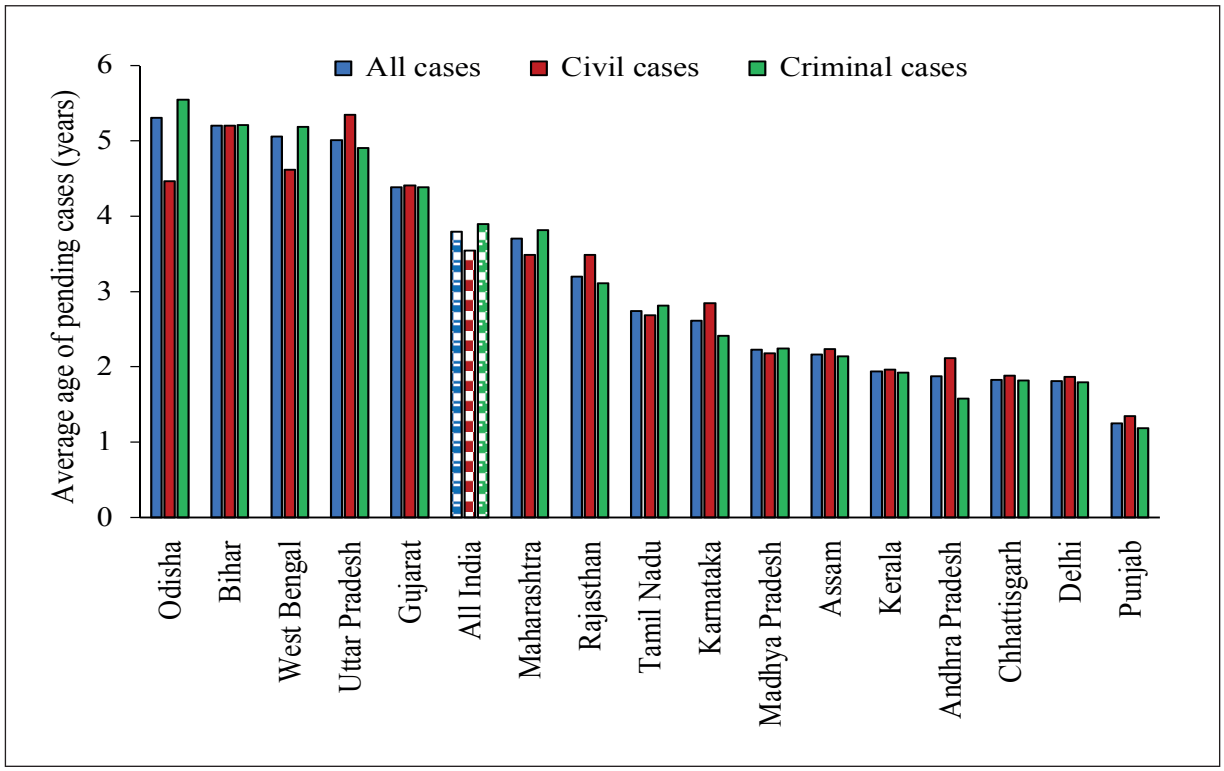


Source: NJDG, As on May 31, 2019.

[2] See Economic Survey 2018 Chapter 9, Volume I.

[3] Source: Data for High Courts and Subordinate Courts is from the National Judicial Data Grid (NJDG) as on May 31, 2019 and data for the Supreme Court of India is from its website, as on May 1, 2019.

Figure 3: State-wise Average Pendency in D&S courts



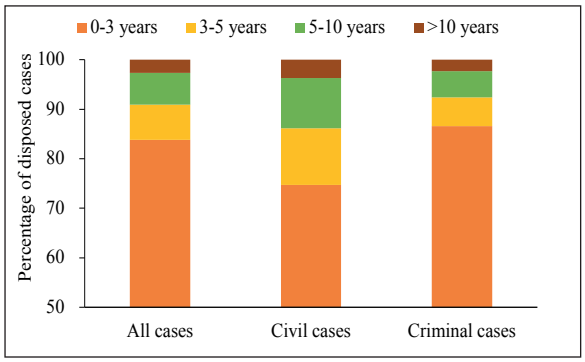
Source: NJDG, As on May 31, 2019.

and criminal cases is more or less the same. More than 64 per cent of all cases are pending for more than one year. Figure 3 shows the inter-state variation in average pendency of cases in D&S courts. It reveals that Odisha, Bihar, West Bengal, Uttar Pradesh and Gujarat have higher average pendency for both civil and criminal cases as compared to the national averages whereas Punjab and Delhi have the least average pendency of cases. It may not be a coincidence that the worst performing states are usually (albeit not always) also the poorest.

DISPOSAL

5.8 Disposal time is measured as the time span between the date of filing and the date when the decision is passed. The age-wise distribution of the disposal time for D&S courts in 2018 is presented in Figure 4. It

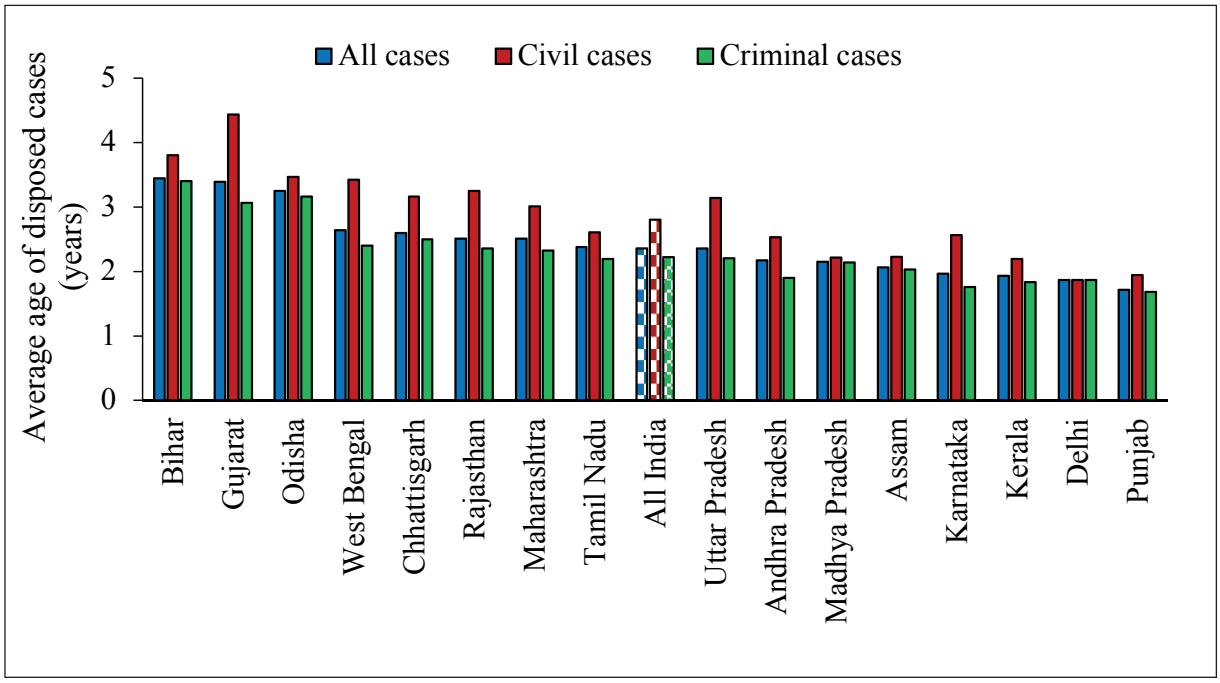
Figure 4: Distribution of Disposed Cases in D&S courts - 2018



Source: NJDG, 2019.

reveals that 74.7 per cent of the civil cases and 86.5 per cent of the criminal cases are disposed within three years. Further, the distribution of state-wise disposal rate is presented in Figure 5. It shows that Bihar, Odisha and West Bengal have higher average disposal time than the national average for

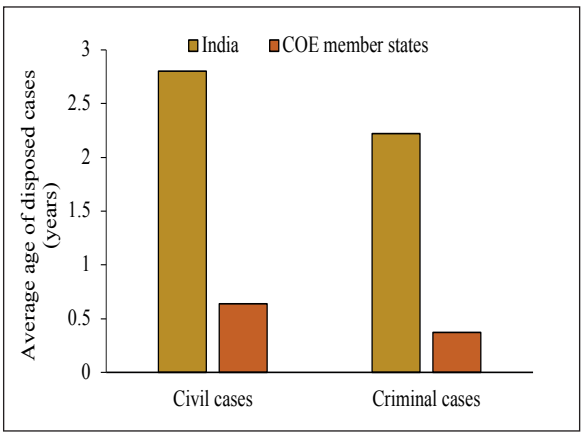
Figure 5: State-wise Average Disposal Time in D&S courts (2018)



Source: NJDG, 2019.

both civil and criminal cases. Further, Punjab and Delhi have the lowest average disposal time. These trends are consistent with the distribution of average pendency age across states. Again, the states in eastern India perform poorly although Gujarat too has higher disposal time.

Figure 6: Average Disposal Time - India and Council of Europe



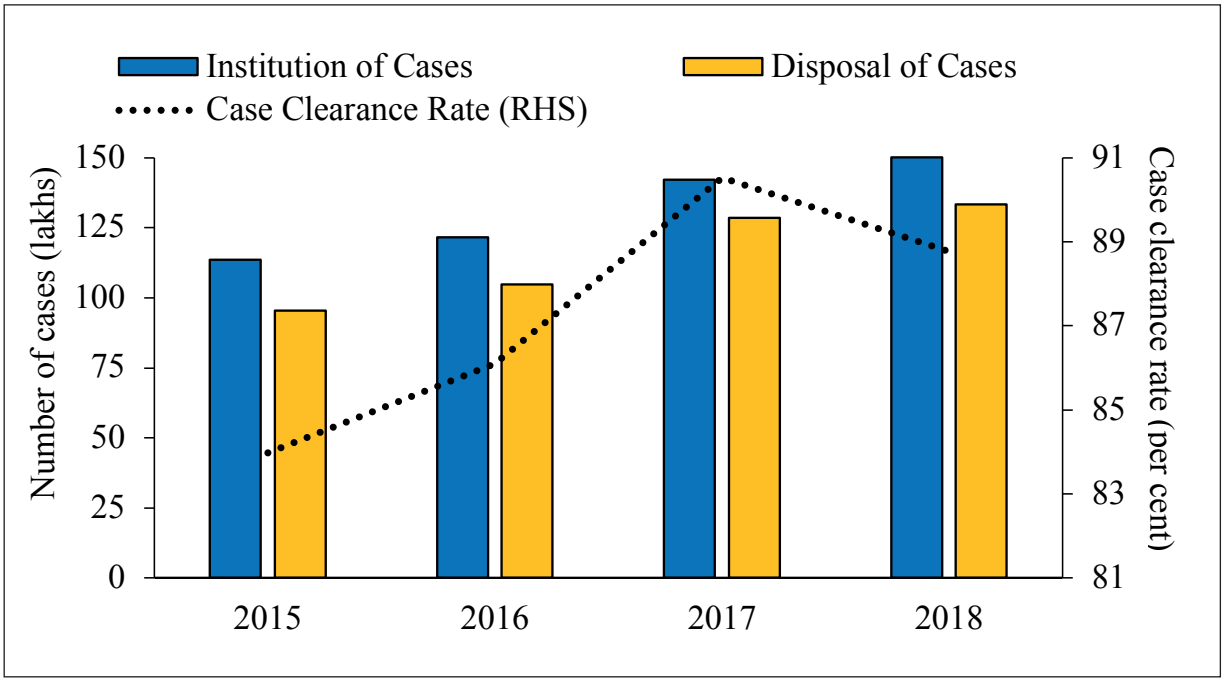
Source: NJDG, 2019 Council of Europe, European Commission for the Efficiency of Justice (CEPEJ, 2016).

5.9 International comparison of disposal rate is presented in Figure 6. The data reveals that the average disposal time for civil and criminal cases in Indian D&S courts in 2018 was 4.4 fold and 6 fold higher respectively when compared with the average of Council of Europe members (2016). This indicates that there is huge scope for improvement in the disposal time for Indian D&S courts. The following section provides a detailed analysis of the effectiveness and efficiency of courts using the framework of Case Clearance Rate.

CASE CLEARANCE RATE

5.10 The Case Clearance Rate (CCR) is the ratio of the number of cases disposed of in a given year to the number of cases instituted in that year, expressed as a percentage. It may be noted that the cases disposed of need not have been filed in the same year, as some proportion of them will typically be backlog from previous years – clearance rate

Figure 7: Institutions, Disposals, and Case Clearance Rate in D&S courts



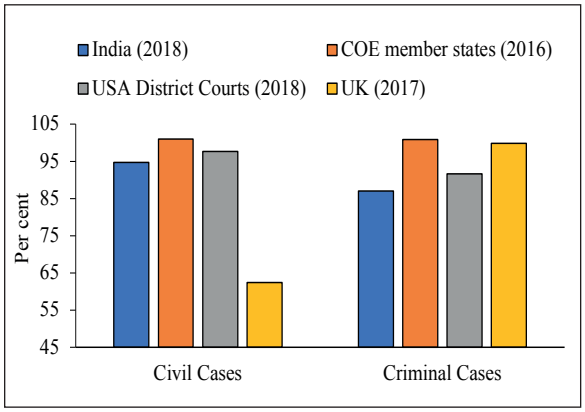
Source: NJDG, 2019.

is mainly used to understand the efficiency of the system in proportion to the inflow of cases.

5.11 Figure 7 shows the relationship between the institution, disposal of cases, and CCR at all India level. While the number of cases instituted each year in D&S courts has gone up, so has the number of disposals. However, the gap between institution and disposals allows cases to accumulate and results in an increase in pendency. This is because the CCR remains structurally below 100 per cent. An encouraging sign was that the CCR had increased from 86.1 per cent in 2015 to 90.5 per cent in 2017, but then declined to 88.7 per cent in 2018.

5.12 The international comparison of CCR is presented in Figure 8. It shows that the CCR for civil and criminal cases in India was 94.76 per cent and 87.41 per cent respectively in 2018 while the COE member has already achieved the CCR above 100 per cent in 2016 for both civil and criminal cases. With a CCR below 100 per cent and a heavy backlog of pre-existing cases, Indian courts suffer from increasing delays. USA's district courts have better CCR of 98 per cent and 92 per cent for civil cases and criminal cases respectively. While criminal courts in

Figure 8: International Comparison of Case Clearance Rate



Source: NJDG, CEPEJ, US Courts, UK Parliament research briefing, 2019.

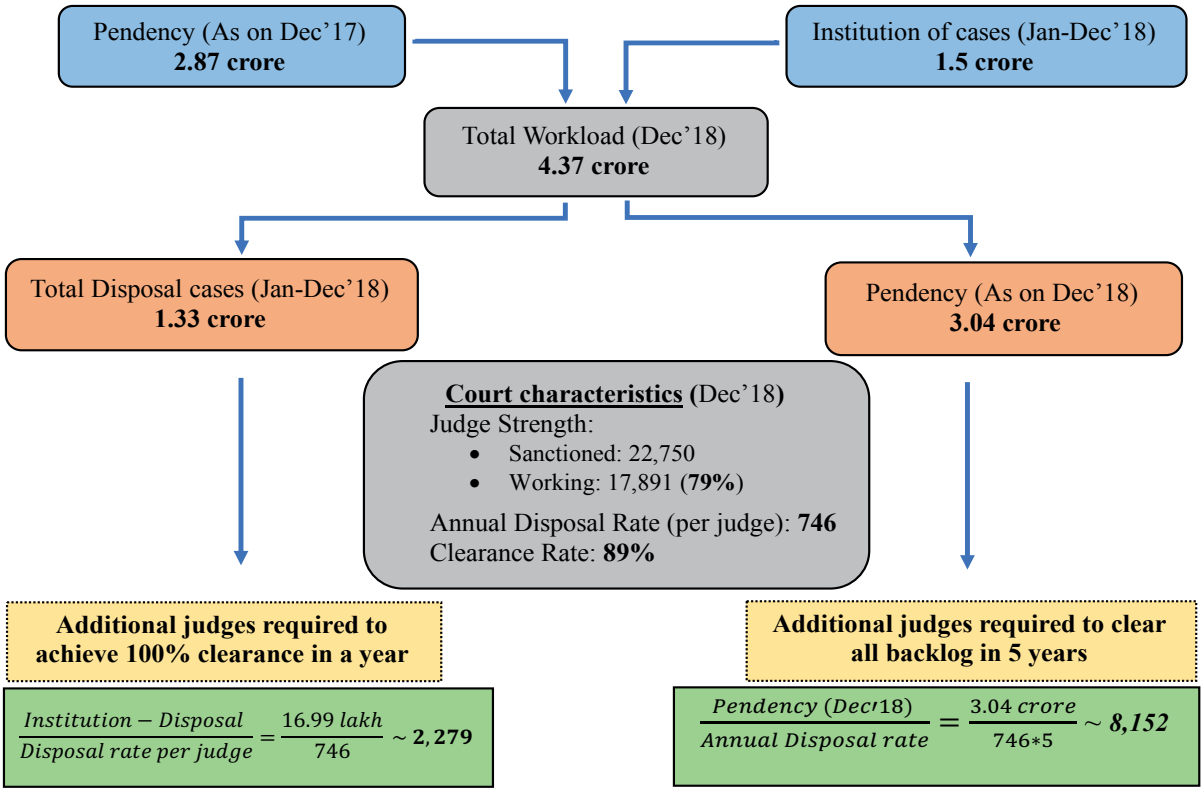
the UK's England and Wales court system perform relatively well, with a clearance rate of roughly 100 per cent, their civil courts fare poorly in comparison to India, the USA, and the COE average, with a clearance rate of just 62 per cent.

CAN THE LEGAL LOGJAM BE CLEARED?

5.13 There are two key issues at hand that need to be dealt with in order to make the judiciary more efficient. Firstly, to achieve a 100 per cent clearance rate must be achieved so that there is zero accumulation to the existing pendency. Secondly, the backlog of cases already present in the system must be removed. The following analysis is done to solve the above mentioned issues by using the concept of an input–output matrix of cases at different court levels. It is recognized that the disposal rate can be increased. However, productivity is assumed to be constant for the purpose of this analysis.

5.14 Using a simple input-output model, the survey estimates the number of additional lower court judges that would be needed to stop further accretion of pendency and clear the backlog. The D&S courts received 1.5 crore additional cases in 2018 and had a backlog of 2.87 crore (as on January 1, 2018). The number of cases disposed of in 2018 was 1.33 crore. Thus, the closing balance in end-2018 was 3.04 crore. There are currently 17,891 judges compared to the sanctioned strength of 22,750. On average, a judge disposes 746 cases. Chart 1 shows the

Chart 1: Additional Judges required in D&S courts (At Current Efficiency)



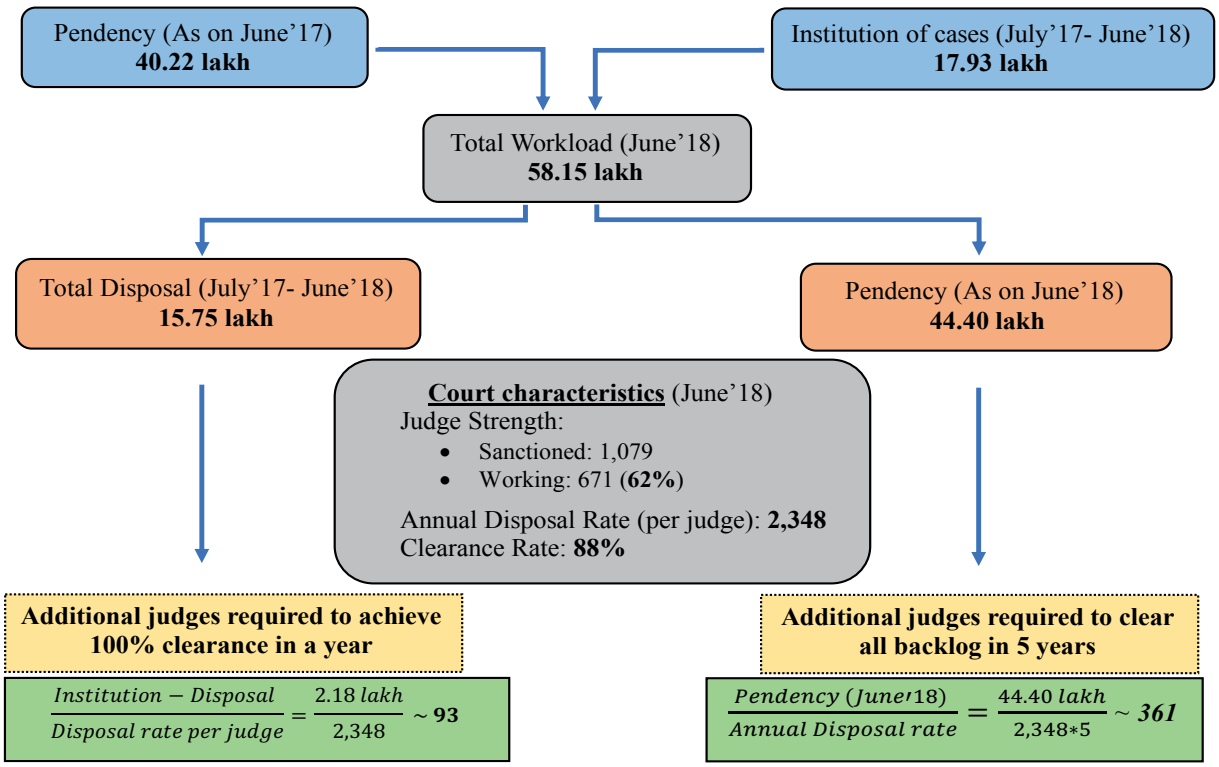
Source: Court News-Supreme Court, NJDG, 2019 and Survey calculations.

calculation for the requirement of additional judges in D&S courts. In order to reach 100 per cent CCR in 2018, the D&S courts needed 2,279 additional judges. This is within the sanctioned strength! However, in order to clear all the backlog in the next five years, further 8,152 judges are needed. This is no more than a rough calculation, but it shows that efficiency gains are also required.

5.15 Applying the same framework to higher courts, we found that the numbers are even smaller (note that the data sets here are from July-June). As of June 2017, High Court judges were working at 62 per cent of their sanctioned strength. With a case clearance rate of 88 per cent, each judge achieved an average disposal rate of 2,348 cases per year. The backlog of cases as on June, 2018 was 44.40 lakh. In order to reach 100 per cent CCR, they needed just 93 additional judges. This is already within the present sanctioned strength for High Courts. To clear all backlogs in the next five years, the High Courts need a further 361 additional judges.

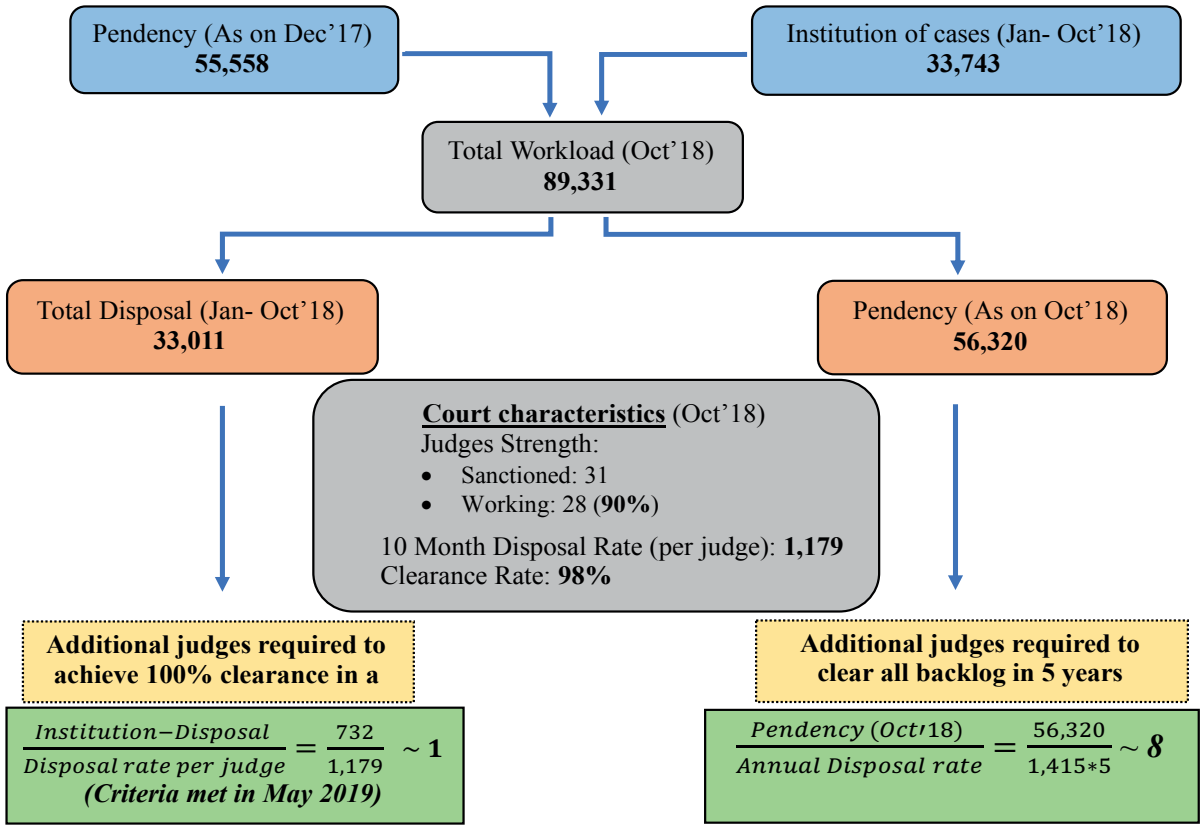
5.16 As of October 2018, Supreme Court judges were working at 90 per cent of their sanctioned strength. With a high case clearance rate of 98 per cent, each judge disposes 1,415 cases per year on average. The backlog of cases as on October 2018 was 56,320. In order to reach 100 per cent CCR, the Supreme Court would have needed only one extra judge in 2018. To clear all backlog in the next five years, an additional eight judges are required. In May 2019, three additional judges were appointed to the Supreme Court raising their number to the full sanctioned strength of 31. To clear backlog, the Supreme Court needs to increase its sanctioned strength by six.

Chart 2: Additional Judges required in High Courts (At Current Efficiency)



Source: Supreme Court Annual Report, 2018 and Survey calculations.

Chart 3: Additional Judges required in the Supreme Court (At Current Efficiency)



Source: Supreme Court Annual Report, 2018 and Survey calculations.

Note: For calculation of additional judges to clear all backlog in five years, disposal rate is adjusted for full year.

5.17 The main point of this analysis is that a major hurdle to economic growth and social well-being can be stabilized through a relatively small investment in the legal system. The numbers above are illustrative, but it shows that the much debated judicial logjam is solvable.

HOWSHOULDTHEADDITIONAL JUDGES BE ALLOCATED?

5.18 In order to optimally allocate these additional D&S judges, the following section has analysed common case types in both civil and criminal pendency. This will help understand which case types require additional judges.

Case Types

5.19 The types of civil and criminal cases, based on their subject matter and the legislation under which they have been filed, can result in significant variation along with the metrics used in this chapter. The complexity and gravity of a case type can determine the stages and process that it must go through. A snapshot of the distribution of common pending case type for both civil and criminal cases at the national level in D&S courts is presented in Table 1 below:

5.20 Table 1 reveals that as on May 31, 2019, the civil cases contribute a mere 28.38 per cent of total pendency while criminal cases contribute about 71.62 per cent in D&S

Table 1: Common Cases Types Weight in Total Pendency (As on May 31, 2019)

Common Case Types		in Per cent
A. Civil cases		
Civil Original Suits	Civil Suit	14.00
	Motor Vehicle	2.84
	Marriage Petition	1.22
	Land Reference	0.49
	Other Civil	2.06
Total Civil Original Suits		20.60
Civil Application		1.96
Civil Execution		4.21
Civil Appeal		1.61
Total Civil Suits		**28.38**
B. Criminal cases		
Criminal Original Suits	Warrant/ Summons	56.63
	Sessions Cases	5.60
	Other Criminal	2.03
Total Criminal Original Suits		64.26
Criminal Applications	Pre-Trail	1.57
	Bail Application	1.57
	Others Application	2.66
Total Criminal Applications		5.80
Criminal Appeal		1.56
Total Criminal Suits		**71.62**

Source: NJDG, 2019.

courts. Further, civil suit, civil execution, warrant/ summons and criminal application are common case types stuck in the backlog. These contribute 14 per cent, 4.21 per cent, 55.63 per cent and 2.8 per cent share in total backlog, respectively. We calculate case type clearance rate in D&S courts for 2018, so as to understand which of these cases have a tendency to have backlogs. This is presented in Table 2 below:

5.21 Table 2 reveals that average CCR for all civil and criminal cases in D&S courts for 2018 was 94.76 per cent and 87.41 per cent

Table 2: Case Type Institution, Disposal and CCR for D&S courts in 2018

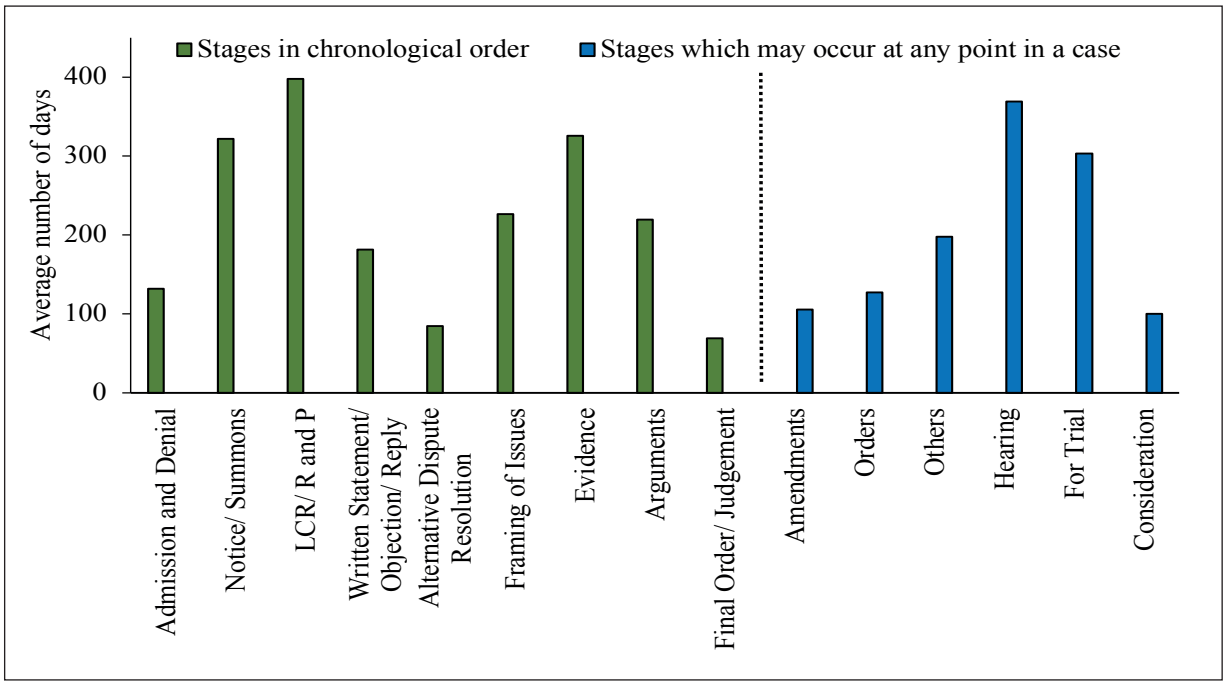
Common Case Types		Institution	Disposal	CCR (%)
A. Civil cases (Overall)		32,96,242	31,23,642	**94.76**
Civil Original Suits		21,77,722	21,09,102	96.85
	Civil Suit	11,66,259	10,81,236	92.71
	Motor Vehicle	3,71,686	3,99,873	107.58
	Marriage Petition	3,06,932	2,66,649	86.88
	Land Reference	30,409	58,586	192.66
Civil Application		4,02,449	3,76,400	93.53
Civil Execution		5,11,118	4,46,677	87.39
Civil Appeal		1,74,283	1,71,790	98.57
B. Criminal cases (Overall)		1,16,23,439	1,01,60,317	**87.41**
Criminal Original Suit		86,10,411	73,44,581	85.30
	Warrant/ Summons	76,28,227	64,52,314	84.58
	Sessions Cases	5,29,694	4,79,828	90.59
Criminal Applications		27,20,351	25,44,683	93.54
	Pre Trail	3,76,786	3,45,299	96.71
	Bail Application	11,50,573	11,12,717	93.68
Criminal Appeal		2,63,407	2,46,756	93.68

Source: NJDG, 2019.

respectively. This means that not only the backlog of criminal cases is about 2.5 fold higher than civil cases, criminal case type also has lower CCR (even lower than the national CCR of 88.7 per cent). This means that the situation for criminal cases is distinctly worsening. The problem is especially acute for criminal original suits such as summons, warrants etc. These contribute 64 per cent of the total pendency as of May 31, 2019 with a clearance rate of 85.3 per cent. This implies that the additional judges need to specialize in these case types so as to speed up the disposal of such cases. Note that this is a case not merely for additional judges and legal reforms, but also for police reforms (a matter we will take up in a future Economic Survey). Lastly, it may be noted that 'Motor Vehicle' and 'Land Reference' case types have done quite well, maintaining a CCR of 107.58 and 192.66 per cent respectively in 2018. These areas need to maintain the current pace.

5.22 Some economists may take the view that the relatively poor performance of the criminal justice system is of no direct consequence to the economy. However, a behavioural approach would make no distinction since human beings are seen to respond to the overall context. A culture of Rule of Law must pervade as all of the governance and cannot be improved in silos.

Figure 9: Average Number of Days Spent at a given Stage - Civil Cases



Source: eCourts and Daksh, 2019.

Life-cycle Analysis

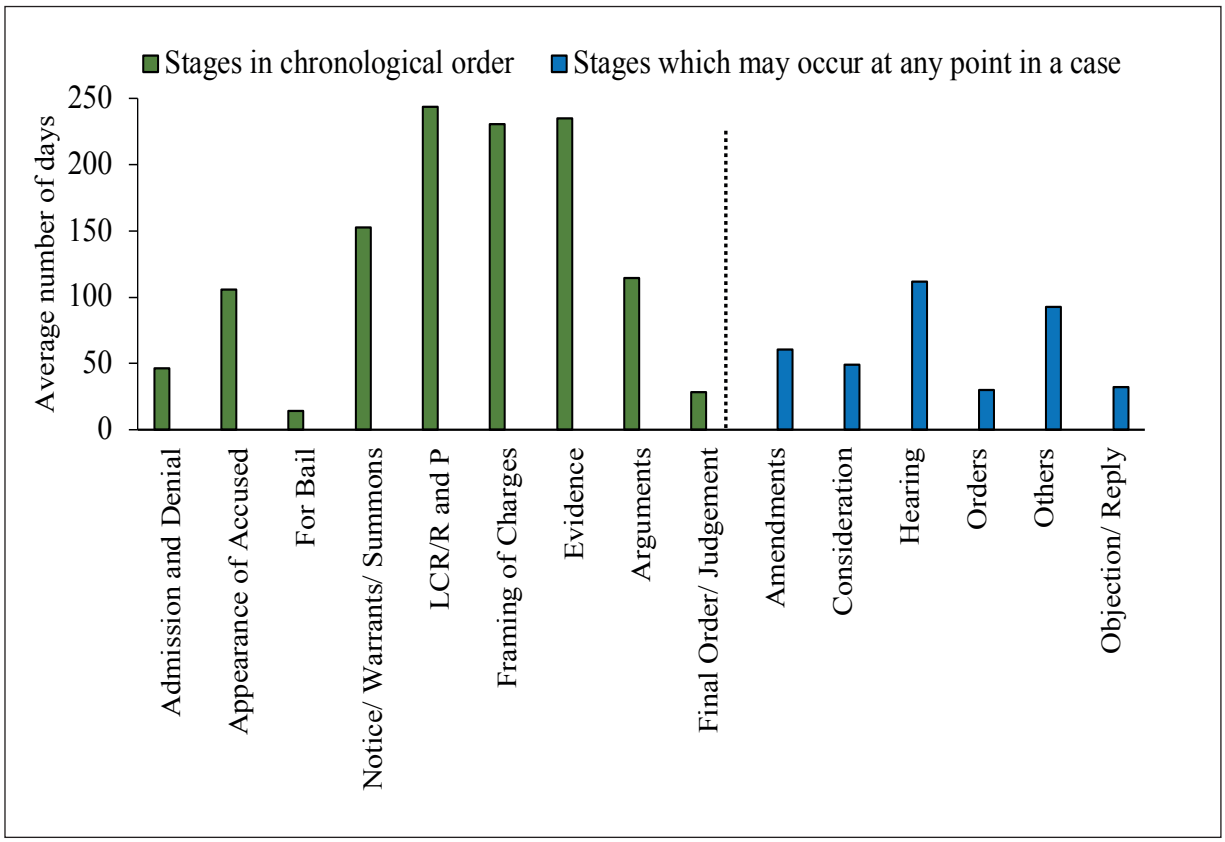
5.23 The progress of a case through various stages reveals to a large extent where judicial delays occur and can aid policy formulation to reduce delays and backlog. Analysis of life-cycle can be used to precisely identify causes of delay, whether they are procedural inefficiencies or shortages of human and physical resources. The average per cent of case life-cycle spent in a civil case is presented below. For the purpose of this section, we have used data from eCourts services portal covering District and Sessions Courts across 15 States, extracted between September 18, 2018 and January 29, 2019.

5.24 Figure 9 shows the stages in chronological order, from left to right. However, not all occur at specific points of a stage, as some can occur at any point, such as orders. In addition, not all cases go through all stages, but those that go through a particular stage may spend a significant part of its life in that stage.

5.25 The data from eCourts shows that most of the time is spent in the 'LCR/R and P' (Lower Courts Records – Records and Proceedings) stage. Here, cases cannot proceed as the court must first receive the case's records from the lower court. Civil cases spend an average of 398 days in this stage and 369 days in the 'Hearing' stage. This inefficiency consumes a significant proportion of a case's life, and is a major factor contributing to delays and backlog. The 'Notice/Summons' and 'Evidence' stages are also time consuming at 322 and 325 days on average, respectively.

5.26 Figure 10 reveals that, as with civil cases, awaiting lower court records causes delays for criminal cases, being the stage in which they spend the largest amount of time of 243 days, on average. The 'Evidence' stage and 'Framing of Charges' stages consume 235 and 231, respectively, while all other

Figure 10: Average Number of Days Spent at a given Stage - Criminal Cases



Source: eCourts and Daksh, 2019.

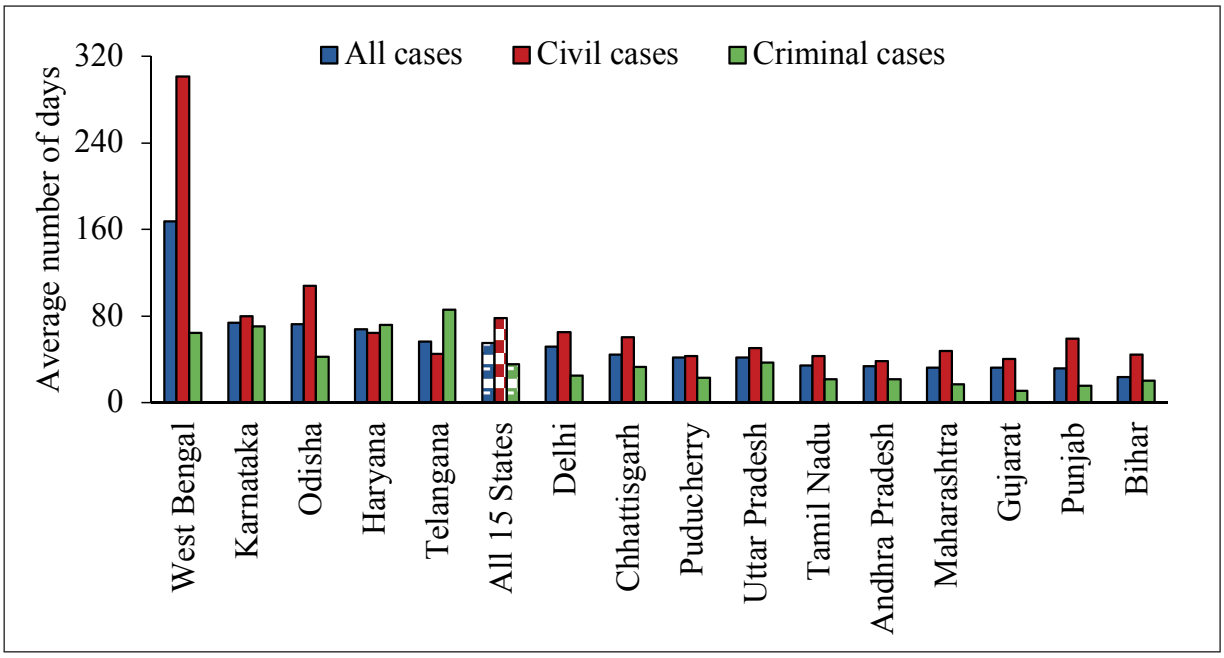
stages of criminal cases take much less time. The process for both civil and criminal cases can be significantly sped up by targeting the delay in these specific stages.

5.27 Further, Figure 11 shows that state-wise average number of the days between hearings for civil and criminal cases. Its shows that West Bengal, particularly for civil matters, spends much more time between hearings than any other state – approximately 301.4 days, as compared to the average (across 15 states) of 78.1 days for civil cases. The average for all cases is also the highest in West Bengal - 167.7 days between hearings, compared to the 15-state average of 55.1 days.

State-wise CCR

5.28 Figure 12 shows that Gujarat and Chhattisgarh have clearance rates of above 100 per cent in 2018. These states have achieved a level of efficiency where they are not only able to cope with fresh filings but can also address backlog from previous years. Madhya Pradesh, Assam and Tamil Nadu have impressively high clearance rates of close to 100 per cent. Again, eastern Indian states perform poorly. Bihar, Odisha, and West Bengal have low clearance rates of 55.58 per cent, 62.18 per cent, and 78.63 per cent respectively. Hence, we suggest that these states should be given priority in the appointment of additional judges.

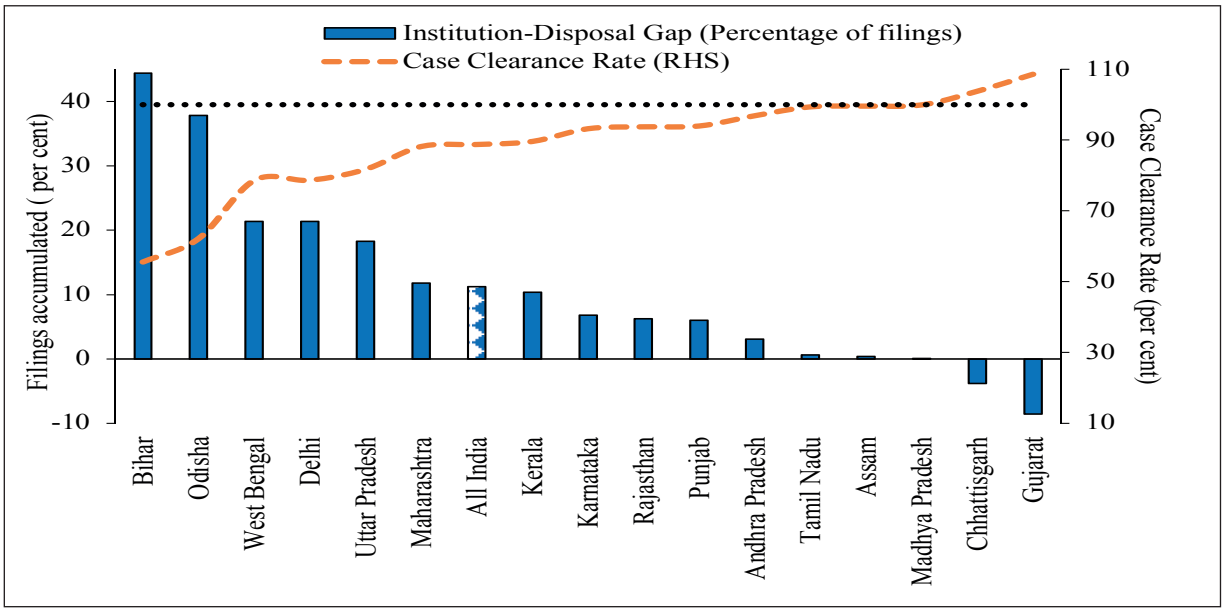
Figure 11: State-wise Average Number of Days between Hearings - Civil and Criminal Cases



Source: eCourts and Daksh, 2019.

5.29 There is a great amount of variation in the extent to which the subordinate judiciary in each state is capable of dealing with the inflow of new cases. There are, therefore huge gaps between the demand for courts and the current capacity of the subordinate courts in many states – possibly a key factor in the development inequalities between states.

Figure 12: State-wise Institution - Disposal Gap and CCR in D&S courts - 2018

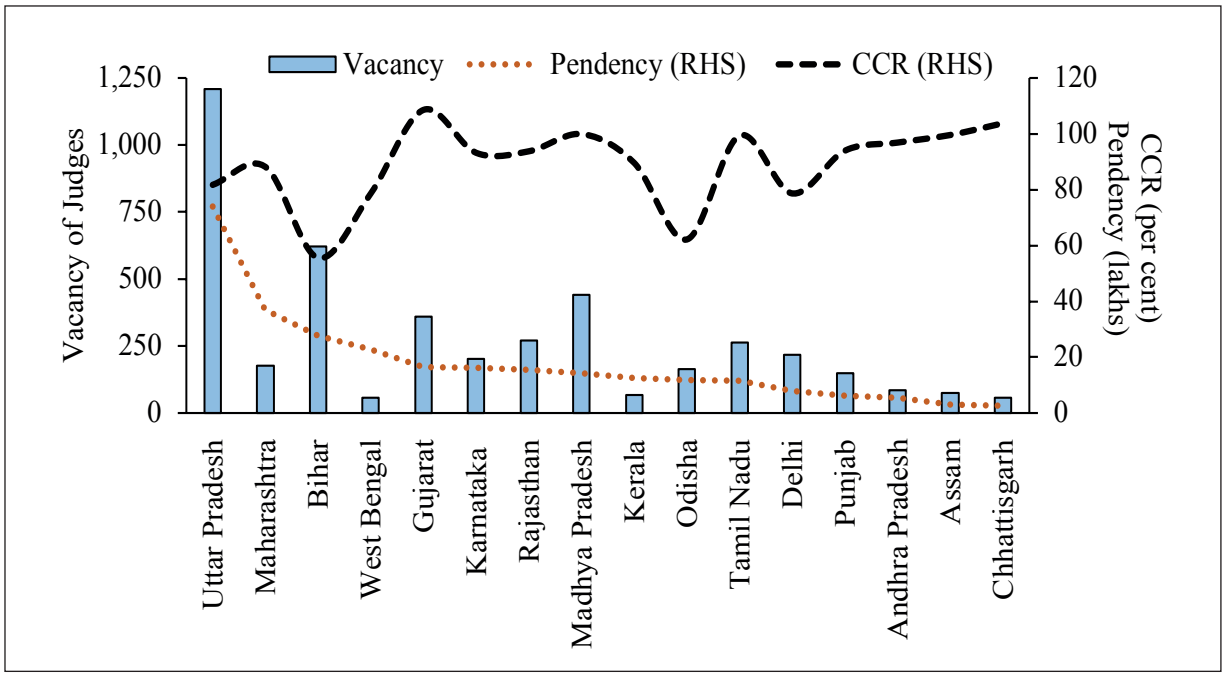


Source: NJDG, 2019.

5.30 Figure 13 reveals that there is some correlation between vacancy and pendency. This is especially true for Uttar Pradesh and Bihar. In these states, the focus should be on filling vacancies. However, note that West Bengal and Maharashtra have few vacancies but high pendency. This means that the national allocation of judges also has to be revisited.

5.31 It may be further noted that although Gujarat and Madhya Pradesh have high pendency, they have also achieved CCR of 108.59 per cent and 99.94 per cent respectively. NJDG data suggests that this is due to relatively recent improvements. Perhaps the efficiency gains of these states should be studied and replicated.

Figure 13: State-wise Pendency of Cases, Vacancy of Judges CCR in D&S courts



Source: NJDG and Lok Sabha Unstarred Question No. 675, 2019.
Note: Pendancy as on June 2, 2019.

MAKING INDIAN COURTS MORE PRODUCTIVE

5.32 The analysis thus far has provided a gauge of how many judges would be needed in order to increase the clearance rate at the existing efficiency rate and the nature of the delays. However, there is a large scope for improving the efficiency of the process. As shown in Table 3, the backlog in lower courts can be cleared in five years at full sanctioned strength with an efficiency gain of 24.5 per cent. At current working strength, it would take an efficiency gain of 58 per cent. With full sanctioned strength, High Courts would need only 4.3 per cent increase in efficiency to clear the backlog although, given high vacancy rates, the required rate at current working strength is 68 per cent. The equivalent numbers for the Supreme Court are 18 per cent and 31 per cent respectively.

5.33 Over the years, many suggestions have been put forward by researchers and official committees for enhancing productivity in the judiciary. Some of the suggestions are discussed below:

Table 3: Scenario Analysis of Required Efficiency Gains

Particulars	D&S courts	High Courts	Supreme Court
Institution of cases in 2018	1,50,40,971	17,93,546	33,743
Disposal of cases in 2018	1,33,41,478	15,75,435	33,011
Backlog of cases	3,03,95,534	42,39,966	56,320
Sanctioned Strength of Judges	22,750	1,079	31
Working Strength of Judges	17,891	671	28
Current **Disposal Rate** per Judge	746	2,348	1,415*
Case Clearance Rate	89%	88%	98%
Scenario I: Constant Productivity			
Total judges required to reach 100% CCR	20,170	764	29
Additional Judges required to reach 100% CCR (above existing working strength)	2,279	93	1
Additional Judges required to clear backlog in five years	10,431	454	9
Additional Judges required to clear backlog in five years (above existing sanctioned strength)	5,572	46	6
Scenario II: Required Productivity Gains			
Required Productivity Gains to clear backlog in five years at full sanctioned strength	24.5%	4.3%	18%
Required Productivity Gains to clear backlog in five years at current working strength	58%	68%	31%#
Average number of working days	244	232	190

Source: Supreme Court Annual Report 2018, Various Court Calenders 2019, NJDG 2019 and Survey calculations.

Note: Data for backlog of cases, sanctioned and working strength of judges for D&S courts, HCs and SC is as on December 2018, June 2018 and October 2018 respectively.

*Adjusted for full year using January-October 2018 data.

As of May 2019, SC is working at its full sanctioned strength.

a) **Increase number of working days:** It has often been pointed out that Indian courts close down for significant periods due to vacations. The length of these vacations varies a great deal from court-to-court, but appears to have a palpable impact on the number of working days. For instance, the Supreme Court's official calendar for 2019 suggests that it would close for 49 days for summer vacations, 14 days for winter break, and a further 18 days for Holi, Diwali and Dussehra. After accounting for weekends and public holidays, it leaves 190 working days for the Supreme Court. In contrast, the average is 232 working days for High Courts and 244 days for Subordinate courts. There is a great deal of variation

between states, and many courts make up for vacations by working on Saturdays. For comparison, central government offices will be open for 244 working days in 2019 (note that the above calculations exclude personal leaves).

The main finding is that increasing the number of working days may improve productivity of the Supreme Court and in some High Courts, but is unlikely to significantly impact lower courts. Subordinate courts, which account for the bulk of pendency, seem to work almost as many days as government offices.

b) **Establishment of Indian Courts and Tribunal Services:** Most judicial reforms tend to focus only on the quality and quantity of judges, but a major problem lies with the quality of the administration of the courts system, particularly backend functions and processes. This is critical to reducing the process delays identified earlier in this Chapter. As a recent report by the National Institute of Public Finance and Policy put it, "For effective functioning, courts require competent administration to ensure that processes are followed, documents are submitted and stored, facilities are maintained and human resources are managed. Court administration must support the judges in performing their core judicial function efficiently."[4]

In the current system, the main responsibility for administration in Indian courts is assigned to the chief judicial officer. In addition to significant demands on his/her time, this approach is not conducive to systemic reforms and gradual accumulation of institutional knowledge on administrative matters. In this context, it has been proposed to create a specialized service called Indian Courts and Tribunal Services (ICTS) that focuses on the administrative aspects of the legal system. The major roles to be played by ICTS would be (i) provide administrative support functions needed by the judiciary (ii) identify process inefficiencies and advise the judiciary on legal reforms (iii) implement the process re-engineering.

The ICTS is not a unique model. Similar, court management services exist in other countries: Her Majesty's Court and Tribunals Services (UK), Administrative Office of US Courts (US), Court Administration Service (Canada).

c) **Deployment of Technology:** Technology can significantly improve the efficiency of courts. One major effort in this direction is the eCourts Mission Mode Project that is being rolled out in phases by the Ministry of Law and Justice. This has allowed the creation of the National Judicial Data Grid (NJDG). The system is already able to capture most cases, their status and progress. Most of the analysis in this chapter has been made possible by real time data made publicly available on the NJDG and eCourts portals. The digitalization of cases is now allowing stake-holders to keep track of individual cases and their evolving status. It is not possible yet to statistically measure the efficiency gains from this effort, but it is certainly a big step forward.

[4] Pratik Dutta *et al.*, "How to Modernize the Working of Courts and Tribunals in India", NIPFP Working Paper, 258, March 2019.

5.34 There are significant productivity gains to be derived from better administration, increase in working days, and technology deployment (including likely future applications of Artificial Intelligence). It is difficult to predict the exact improvement, but the purpose of this analysis is to show that the required efficiency gains for clearing the backlog are ambitious but achievable if combined with speeding up appointments. Given the social and economic importance of this issue, it should be given top priority by policy-makers.

CHAPTER AT A GLANCE	
➢	Delays in contract enforcement and disposal resolution are arguably now the single biggest hurdle to the ease of doing business in India and higher GDP growth.
➢	Around 87.5 per cent of pending cases are in the District and Subordinate courts. Therefore, this segment must be the focus of reform.
➢	The study found that 100 per cent clearance rate can be achieved by merely filling out the vacancies in the lower courts and in the High Courts (even without the productivity gains)
➢	Simulations of efficiency gains and additional judges needed to clear the backlog in five years suggest that the numbers are large but achievable.
➢	The states of Uttar Pradesh, Bihar, Odisha and West Bengal need special attention.

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How does Policy Uncertainty affect Investment?

06
CHAPTER

Economic Policy Uncertainty in India has reduced significantly over the last decade. Coinciding with the years of policy paralysis, economic policy uncertainty was the highest in 2011-12. Since then, economic policy uncertainty has declined secularly. The continued decrease in economic policy uncertainty in India post 2015 is exceptional because it contrasts sharply with the increase in economic policy uncertainty in major countries during this period, including the US. As is expected, episodes of greater uncertainty, such as the taper tantrum in 2013 exhibit elevated economic policy uncertainty. Economic policy uncertainty also correlates strongly with the macroeconomic environment, business conditions and other economic variables that affect investment. Surges in economic policy uncertainty increase the systematic risk, and thereby the cost of capital in the economy. As a result, higher economic policy uncertainty lowers investment, especially because of the irreversibility of investment. Consistent with this thesis, an increase in economic policy uncertainty dampens investment growth in India for about five quarters. Unlike generic economic uncertainty, which cannot be controlled, policymakers can reduce economic policy uncertainty to foster a salutary investment climate in the country. The following policy changes are recommended. First, policymakers' must make their actions predictable, provide forward guidance on the stance of policy, and reduce ambiguity/arbitrariness in policy implementation. Second, "what gets measured gets acted upon". So, economic policy uncertainty index must be tracked at the highest level on a quarterly basis. Finally, quality assurance of processes in policy making must be implemented in Government via international quality certifications.

INTRODUCTION

6.1 What is the effect of uncertainty/ ambiguity in policy making on the investment climate in the economy? Consider, for instance, a poorly drafted law that is riddled with ambiguities, amendments, clarifications and exemptions that inevitably lead to conflicting interpretations and spawn endless litigation. Needless to say, such uncertainty can spook investors and spoil the investment climate in the economy. Such uncertainty in economic policy can be avoided. In contrast, a nation state that ensures predictability of policy action, provides forward guidance on policy action, maintains broad consistency in actual policy with the forward guidance, reduces ambiguity and arbitrariness in policy implementation creates economic policy certainty. Investors may enjoy the certainty provided by such an environment and flock to invest in this environment.

6.2 To examine this critical question and frame appropriate policy responses, it is critical to understand the differences between risk and uncertainty. Both fundamentally affect economic activity. However, while risk

can be quantified, uncertainty is inherently hard to measure[1]. As policy making relies on judgment – within the framework set by constitutional rules and other legal constraints – it often involves discretion. Such discretion can generate uncertainty, which can impact economic activity. Among different sources of economic uncertainty, *economic policy uncertainty* matters significantly because this uncertainty refers to one that policymakers can control and thereby influence economic activity. For instance, while the monsoon impacts economic activity, policymakers have absolutely no control over it. However, economic policy uncertainty captures uncertainty that policymakers *can control*.

6.3 As uncertainty itself inherently cannot be quantified, economic policy uncertainty is difficult to quantify. However, advances in data analytics, in general, and text analytics, in particular, have made it possible to quantify uncertainty, in general, and economic policy uncertainty, in particular. A globally recognized attempt at quantifying economic policy uncertainty is the one by Baker et al. (2016), who develop an Economic Policy Uncertainty (EPU) index for various countries including India. To measure economic policy uncertainty, the index is created by quantifying newspaper coverage of policy-related economic uncertainty. The index reflects frequency of articles in leading newspapers that contain the following triple: 'economic' or 'economy'; 'uncertain' or 'uncertainty'; and one or more of policy related words 'fiscal policy', 'monetary policy', 'PMO', 'parliament'. Other terms for 'policy' include 'regulation', 'deficit', 'legislation', 'reform', 'central bank', 'RBI', 'Reserve Bank', 'finance ministry', 'policymakers, 'finance minister', 'lawmakers, 'planning commission', 'economic advisor', 'Prime Minister's Office', 'PM Office', 'Prime Minister Economic Advisory Council.' Only those articles that have words from *all three categories* are counted for measuring economic policy uncertainty. Articles are taken from various newspapers, including, Economic Times, Times of India, Hindustan Times, The Hindu, Financial Express, Indian Express and the Statesman using access world news.

6.4 As shown later in this chapter, EPU index picks up the period of economic policy uncertainty, such as the taper tantrum of 2013, and correlates very well with other vulnerability indices like inflation volatility, stock market volatility, business sentiment index, and other macroeconomic vulnerability indices.

6.5 We then examine the impact of economic policy uncertainty on investment as it forms the core of the process of economic growth. Two key features of the decision to invest highlight the key role of uncertainty. First, investment represents a forward-looking activity. Second, it is irreversible (Pindyck and Salimano, 1993; Caballero and Pindyck, 1993; Chen and Funke, 2003; Bloom, Floetotto and Jaimovich, 2009). As investment is forward-looking, future expectations play a critical role in the decision to invest. Specifically, an investor invests in a project if the upfront costs are less than the present value of the expected rewards from the investment. As uncertainty influences these expectations, irrespective of its source, it affects the decision to invest. Conceptually, the Capital Asset Pricing model postulates

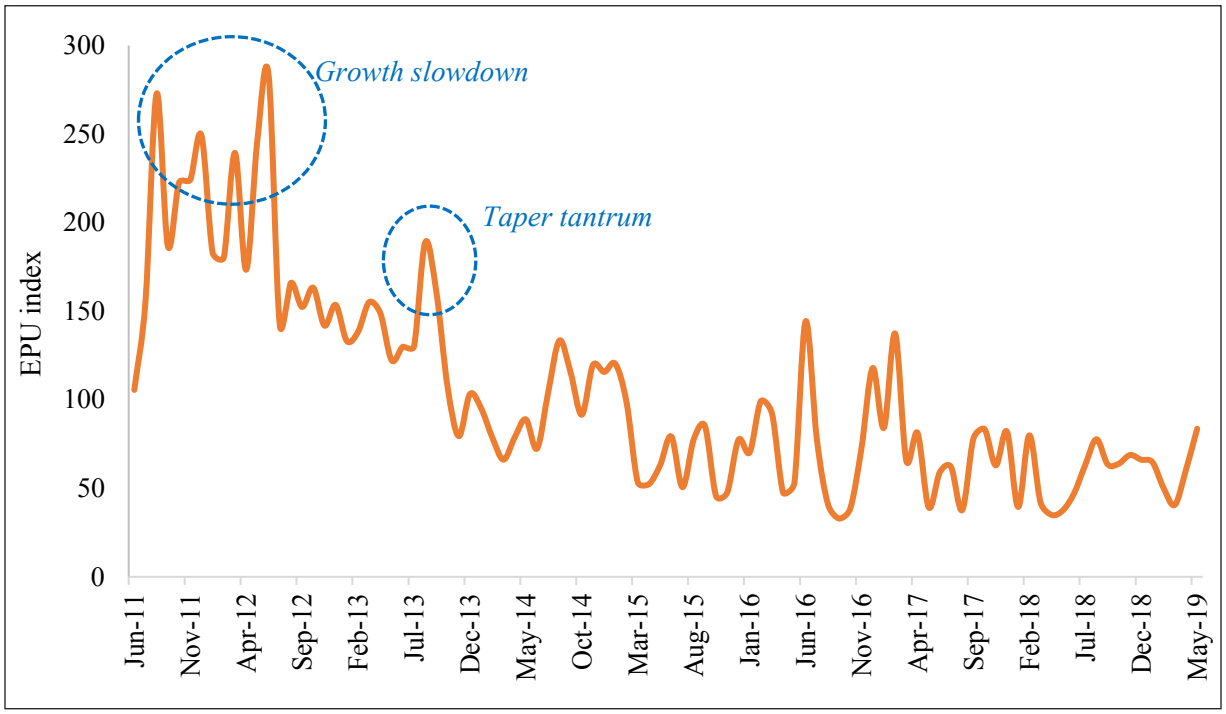
1 The Webster's dictionary defines risk as the "possibility of loss or injury; peril" and uncertainty as "indefinite, indeterminate" and "not known beyond a doubt." Knight (1921), who did seminal work in distinguishing risk from uncertainty, distinguishes risk and uncertainty as follows: "risk is present when future events occur with measurable probability while uncertainty is present when the likelihood of future events is indefinite or incalculable."

that the required return on investment correlates positively with the systematic risk underlying the investment. An increase in uncertainty in the economy increases this systematic risk and thereby increases the rate of return required to justify the investment. As a result, projects that generate a return lower than this required return become unviable when uncertainty increases in the economy. Also, as fixed investment is irreversible, uncertainty exacerbates risk-aversion, increases the premium demanded for assuming risk, and eventually dampens investment. Consistent with this thesis, the analysis indicated that an increase in economic policy uncertainty dampens investment growth in India for about five quarters. One standard deviation increase in uncertainty leads to about one percentage point decline in investment growth rate. Thus, economic policy uncertainty materially impacts the investment climate in the country.

ECONOMIC POLICY UNCERTAINTY IN INDIA

6.6 Economic Policy Uncertainty when measured using EPU index was the highest in 2011-12 coinciding with the years of policy paralysis. Economic policy uncertainty has reduced significantly over the last decade in India. Figure 1 shows that economic policy uncertainty has secularly declined from July 2012 onwards, though with intermittent episodes of elevated uncertainty in between. As is expected, episodes of greater uncertainty, such as the taper tantrum in 2013, exhibit elevated levels of the economic policy uncertainty index. Following the announcement by the Federal Reserve of tapering of their policy of monetary easing, investors in emerging markets faced uncertainty about the policies that would be adopted in these countries to control the impact of this Fed policy change. Thus, the EPU index captures this economic policy uncertainty as expected.

Figure 1: Economic Policy Uncertainty in India



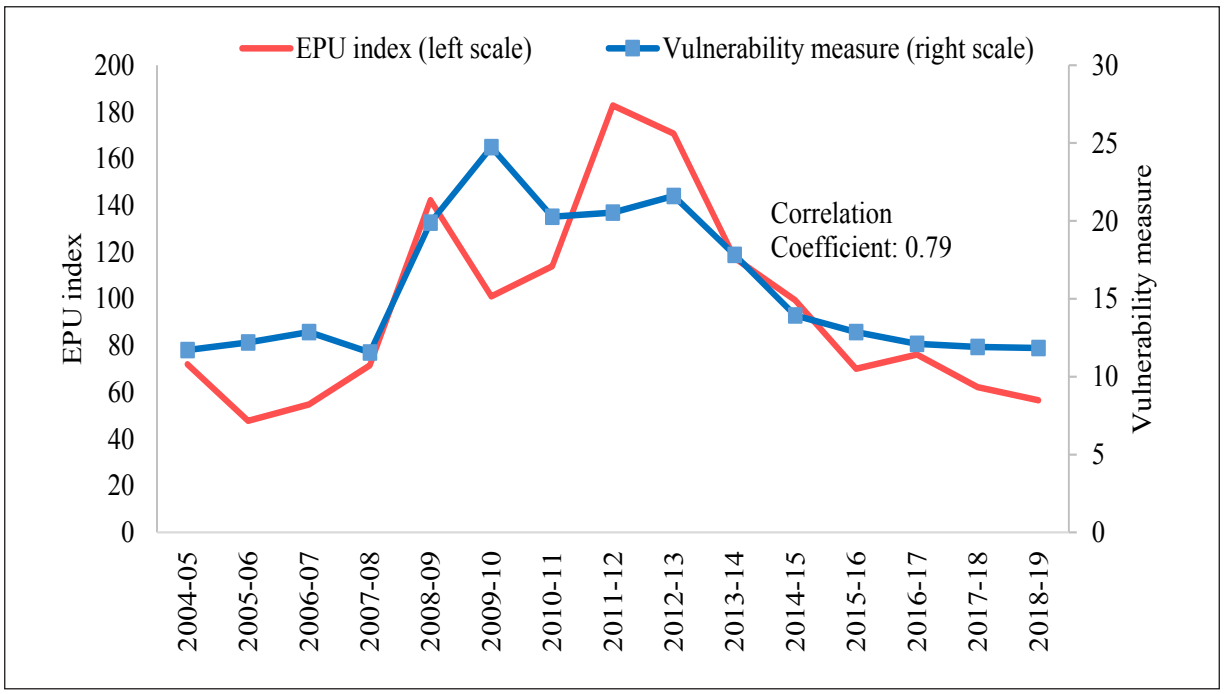
Source: http://www.policyuncertainty.com/

6.7 The index of economic policy uncertainty for India shows peaks in few months of 2011 and 2012, reflecting the policy paralysis during that period, which witnessed the problems of the high twin deficits and high inflation, thereby exacerbating macroeconomic vulnerability. The index is also high in the second half of 2013 when the economy faced the episode of "taper tantrum" leading to volatile capital flows, depreciation of rupee vis-à-vis US dollar (Figure 2). The peak during GST is not as sharp, maybe due to the fact that the discussions around GST policy were happening much before it was actually implemented in July 2017. This shows that the index is picking up time periods characterized by increasing economic policy uncertainty.

6.8 The EPU index correlates very strongly to macroeconomic stability. To examine this correlation, we use the vulnerability measure created and employed in the Economic Survey 2014-15. This measure is a sum of twin deficits i.e., fiscal deficit and current account deficit, and inflation. Figure 2 shows a strong correlation of 0.8 of this vulnerability measure with EPU index. Both the indices show almost same movements over time. This also points towards aptness of economic policy uncertainty index to be used as a yardstick for measuring impact of uncertainty with investment.

6.9 Apart from this, EPU index is very strongly correlated to volatility in exchange rate, stock market & inflation and various other macroeconomic variables. There is a correlation of around 0.7 between volatility in exchange rate and EPU index. The EPU index closely tracks both the deterioration of the future expectation index and India VIX index which monitors the volatility in stock market. It is strongly correlated to inflation rate and repo rate as well (Figures 3 to 8).

Figure 2: Correlation of EPU index with macroeconomic vulnerability



Source: RBI, CSO and Central Government Budget Documents

Note: Vulnerability index is measured as sum of Fiscal Deficit to GDP, CAD to GDP and Inflation rate.

Figure 3: Exchange rate volatility and EPU index

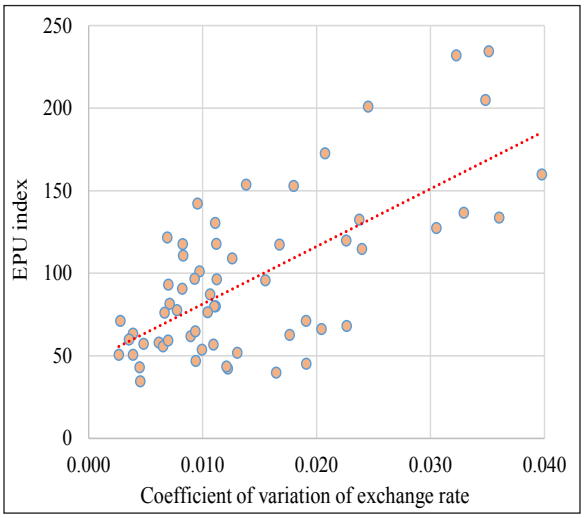


Figure 4: Future expection index and EPU index

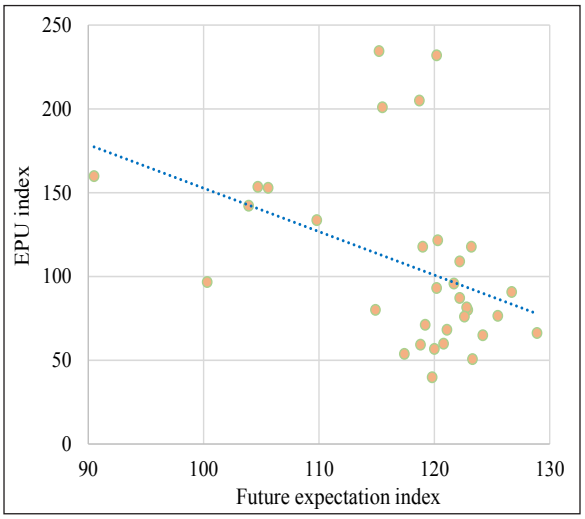


Figure 5: EPU index and India VIX

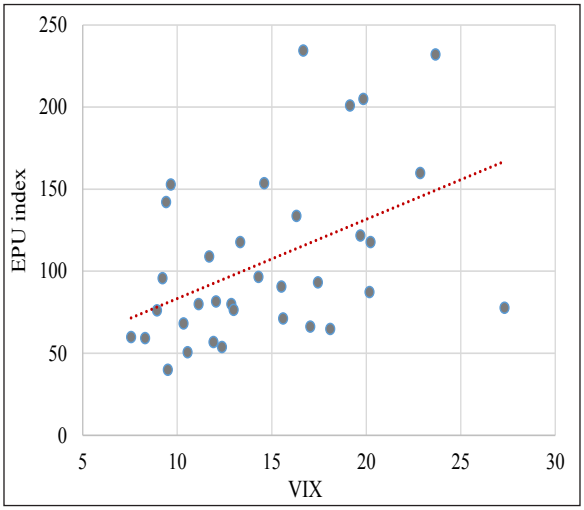


Figure 6: EPU index and Inflation volatility

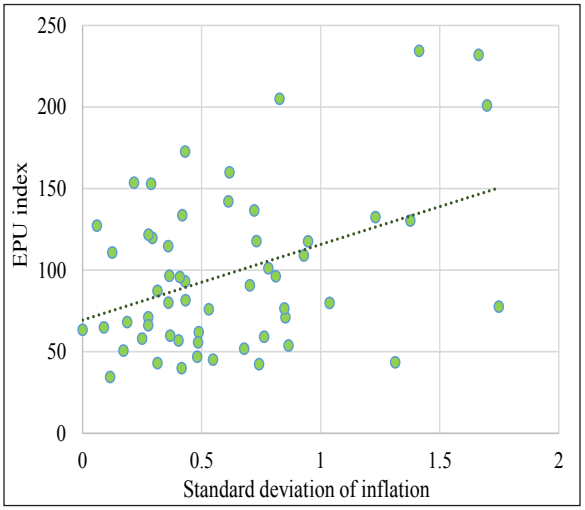


Figure 7: EPU index and Repo rate

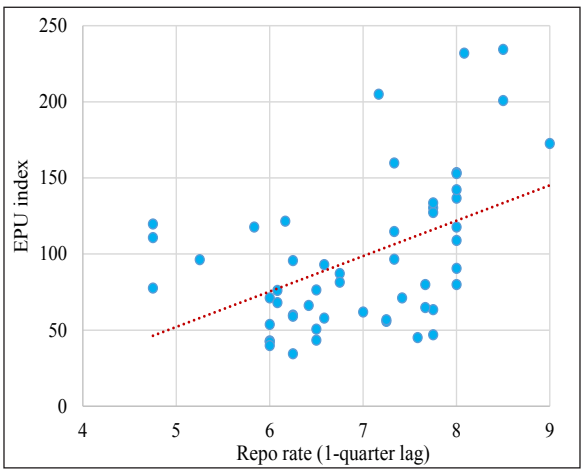
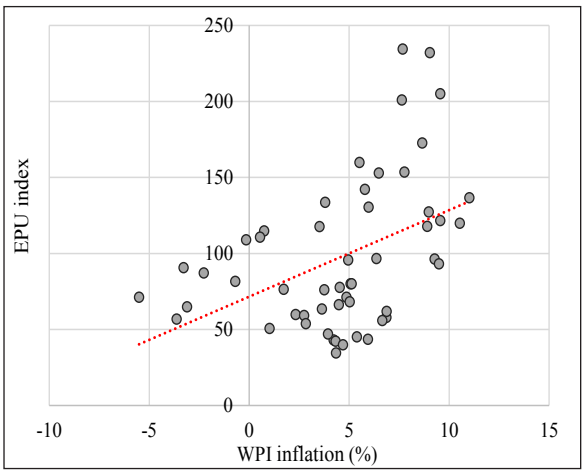


Figure 8: EPU index and WPI inflation



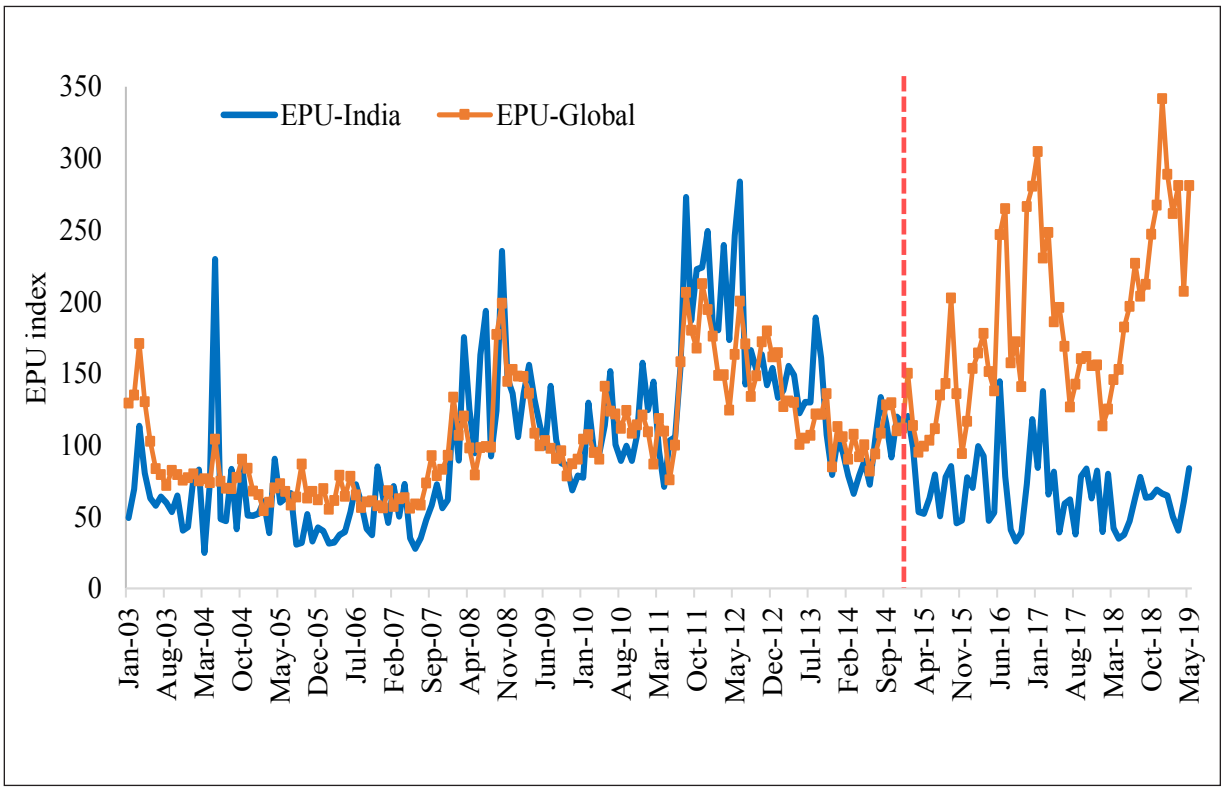
Source: RBI, NIFTY, CSO and http://www.policyuncertainty.com/ (from Figure 3 to 8)

DECOUPLING OF ECONOMIC POLICY UNCERTAINTY IN INDIA SINCE 2015

6.10 Economic policy uncertainty peaked in India during the late 2011 and early 2012 and has since been declining with intermittent increases in between. Economic policy uncertainty in India moved closely in tandem with global uncertainty until 2014. However, it started diverging since early 2015 and seems to have completely decoupled in 2018. In recent times, while the economic policy uncertainty has been increasing across the world, including US, UK and China; India's economic policy uncertainty has been falling. Uncertainty seems to have stabilized at lower levels in case of India since last few years, which is noteworthy given the recent surge in global uncertainty, partly due to rising trade tensions between US and China, uncertainty about outcome of Brexit, slower world growth. Year 2018 saw sharp divergence of India's economic policy uncertainty index with that of global uncertainty index, which increased sharply (Figure 9). Global uncertainty index increased from 112 to 341 in the same year, whereas that of India remained below 100.

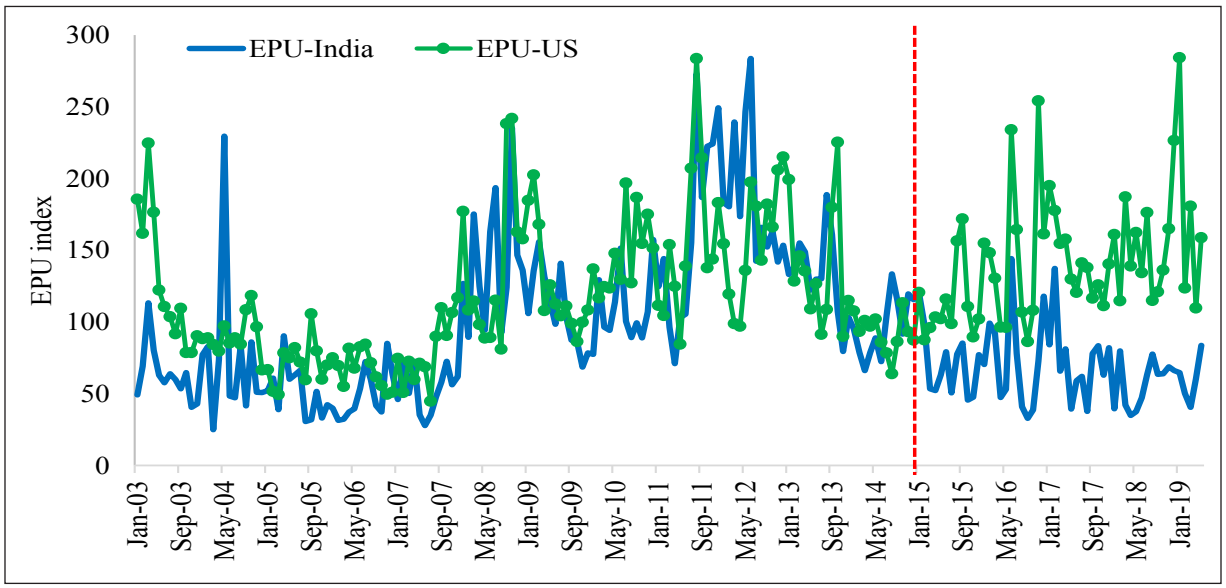
6.11 Specifically, EPU index shows that the movements in India were almost similar to that of the US until 2015; however, the two series have diverged since then. Economic policy uncertainty in India has consistently been lower than that of US since then (Figure 10). The divergence has increased sharply since mid-2018, probably due to the rising trade tensions of US with China. The low economic policy uncertainty index for India in last one year points towards resilience of the economy even in times of global trade uncertainty.

Figure 9: Comparison of India's and global EPU index



Source: http://www.policyuncertainty.com/

Figure 10: Comparison of EPU index of India with United States

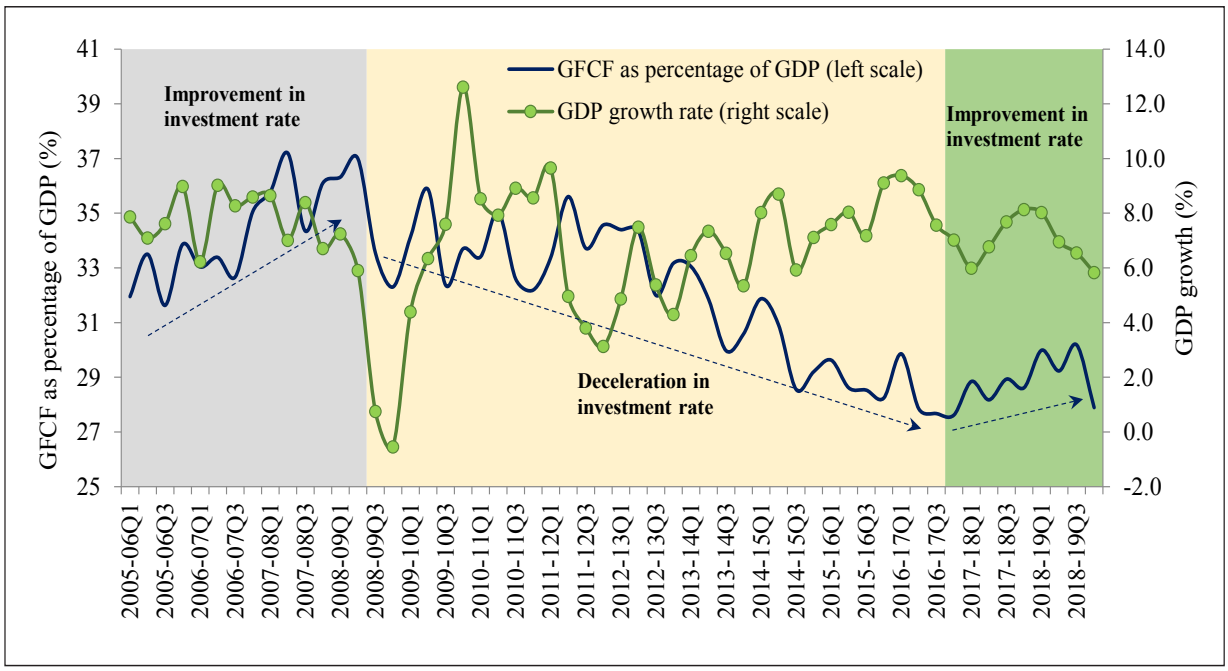


Source: http://www.policyuncertainty.com/

GREEN SHOOTS OF TURNAROUND IN INVESTMENT ACTIVITY

6.12 Figure 11 shows that after falling for close to a decade since 2008, investment activity has turned the corner since Q1 of 2017-18. In fact, gross fixed capital formation as a proportion of GDP, commonly referred to as the fixed investment rate, fell from 37 per cent in 2007-08 to 27 per cent in the following ten years but has since recovered

Figure 11: Investment rate and GDP growth



Source: Central Statistics Office.

Note: Quarterly GFCF rate from 2005-06 Q1 to 2010-11 Q4 has been calculated using the quarterly to annual ratio from 2004-05 series.

to approximately 28 per cent recently. While several factors led to the investment slowdown till 2017-18, *inter-alia*, including the twin balance sheet problem discussed in detail in Economic Survey 2016-17, we show that a secular trend of reducing economic policy uncertainty may have helped to foster the turnaround in investment activity.

6.13 The continued resolution of the twin balance sheet problem following implementation of Insolvency and Bankruptcy Code 2016 and recapitalization of banks helped to promote investment. Focus on improvement in the business climate via measures to improve ease of doing business, clarity in the policy for FDI liberalization may have also helped in this regard by reducing economic policy uncertainty.

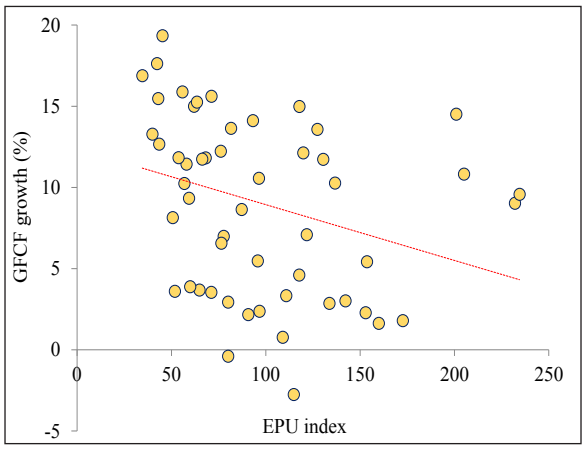
RELATIONSHIP OF ECONOMIC POLICY UNCERTAINTY WITH INVESTMENT IN INDIA

6.14 Internationally, there are many studies showing a significant dynamic relationship between economic policy uncertainty and real macroeconomic variables. Economic policy uncertainty as measured by EPU index foreshadows a decline in economic growth, banking crisis (Baker et al. 2016). Anand et al. (2014) found that high uncertainty and deteriorating business confidence played a role in the investment slowdown in India. Bloom et al. (2018) found that uncertainty shocks can generate drop in GDP of around 2.5 per cent with heterogeneous firms. Gluen and Ion (2013) using EPU index find that policy related uncertainty is negatively related to firm and industry level investment, and the economic magnitude of the effect is substantial. Their estimates indicate that approximately two thirds of the 32 per cent drop in corporate investments in US observed during the 2007-2009 crisis period can be attributed to policy related uncertainty. Hardouvelis et al (2018) find that shocks to economic policy uncertainty are associated with a subsequent decline in investment, industrial production, GDP, economic sentiment and the stock market. These shocks go a long way to explain not only the direction but also the magnitude of the changes in macro and financial variables during the Greek economic crisis.

6.15 The relationship of uncertainty in economic policy with investment may be through two channels. First is the direct relationship of economic policy uncertainty with investment growth and second is the relationship of EPU with other variables which in turn affect investment.

6.16 Figure 12 shows that there is a strong negative relationship between EPU index and investment growth. There is a correlation of (-)0.30 between these two variables (from Q1 of 2005-06 to Q4 of 2018-19). However, the relationship was weaker for some time period i.e., Q3 of 2009-10 to Q4 of 2013-14, when the uncertainty in the economy was declining and even the investment growth rate was declining.

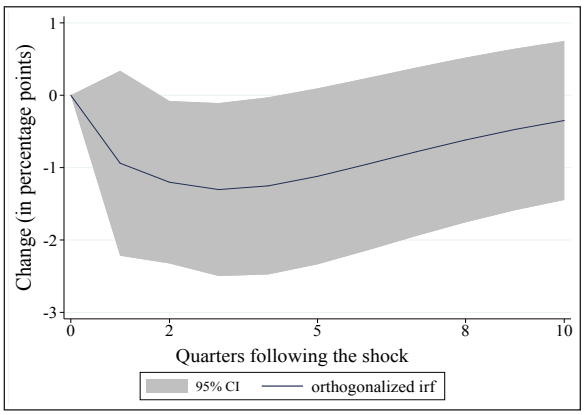
Figure 12: Investment growth and EPU index



Source: http://www.policyuncertainty.com/, CSO

6.17 Impulse response functions from the Vector Autoregressive Regression (VAR) model show after a shock i.e., higher uncertainty, the investment rate falls and then the impact withers away with time (Figure 14). The impact of a one standard deviation shock to EPU index is about 1 percentage point and it remains for many quarters (Figure 13). In fact, it can be said with sufficient confidence that the impact remains for at least five quarters (the 95 per cent confidence band remains below zero till five quarters).

Figure 13: Impulse Response of GFCF growth to EPU index



Source: Survey calculations.

6.18 Foreign investments are also expected to be negatively related to the economic policy certainty in the economy and the data shows so as well (Figure 14 and Figure 15). Both Foreign Direct Investment (FDI) flows and Foreign Institutional Investment (FII) flows are negatively correlated to EPU index, implying that not only the short term inflows, but also long term capital inflows are affected by higher uncertainty in economic policy. Impulse Response Function of VAR also shows a significant negative impact of the shock, which lingers on about three to four quarters. However, another point to note is that the initial impact is sharper for FDI flows (Figure 16 and 17).

6.19 There are various other factors affecting investment. First important factor that affects investment decision is cost of borrowing. Borrowing costs, with a lag, are expected to be negatively associated with investment as they reflect higher input costs. As expected, fixed investment is negatively correlated with repo rate[2], weighted average lending rate and marginal cost of lending rates of SBI. Second important factor for

Figure 14: FDI growth and EPU index

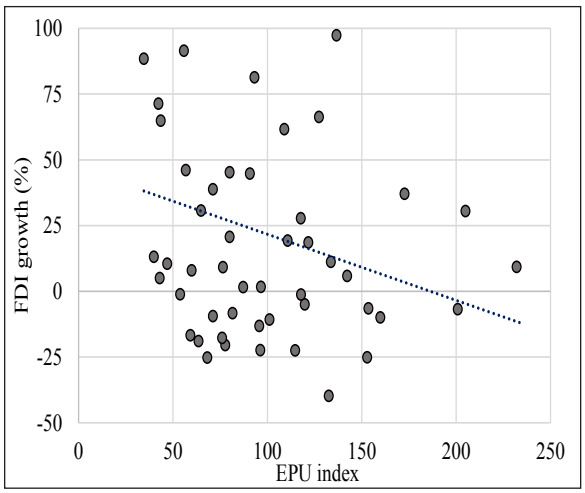
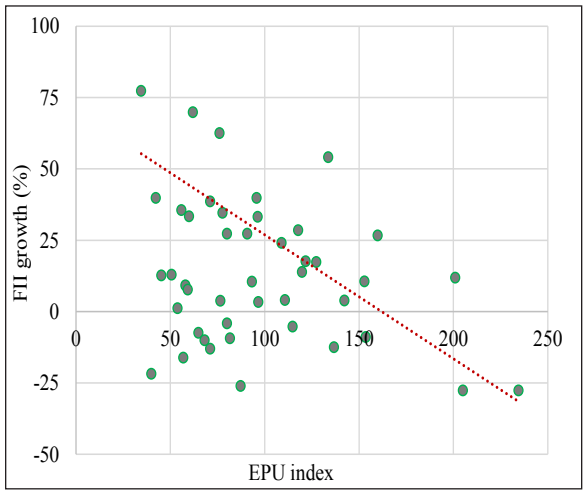


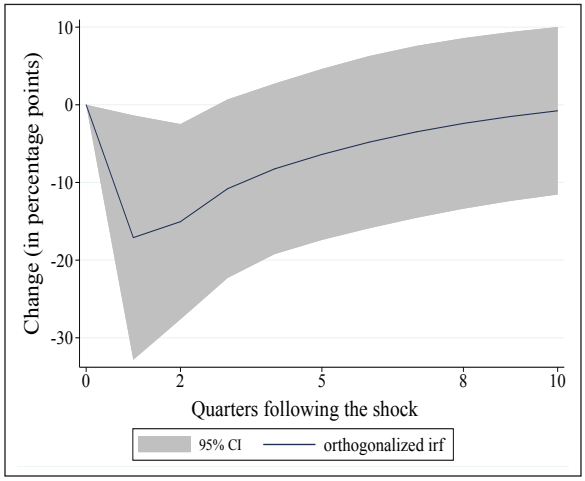
Figure 15: FII growth and EPU index



Source: http://www.policyuncertainty.com/, RBI

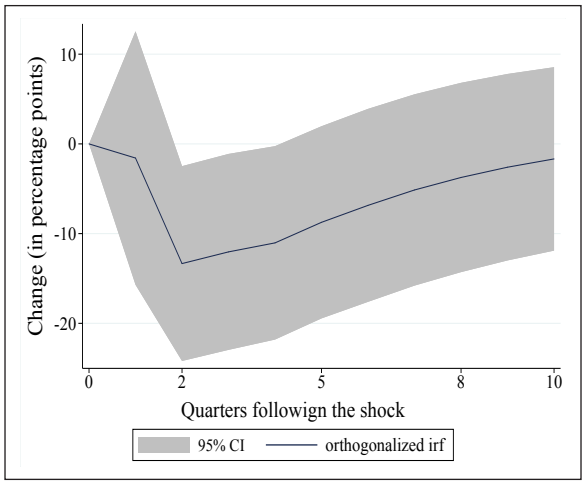
[2] Borrowing costs here are represented by repo rate, which is the rate of interest charged by RBI to banks for their borrowings from RBI. Although the actual borrowing cost of firms' will be different and significantly higher than repo rate, it is expected to move in the same direction.

Figure 16 : Impulse-response of FDI growth to EPU index



Source: Survey calculations.

Figure 17 : Impulse-response of FII growth to EPU index



Source: Survey calculations.

investment is the prices that producers get for their products. Rise in prices are expected to trigger greater investments as businesses find it profitable to do so as long as consumption demand is sufficiently strong to overcome the impact of inflation. This is seen, as the investment growth is positively correlated to wholesale price inflation, but negatively to consumer price inflation. This may be due to the fact the producers would realize producer prices which are closer to wholesale prices upon selling any product, whereas consumers have to pay consumer prices and higher prices may dampen the demand. Third important factor affecting investment is capacity utilization. The utilization of capacity in any quarter is expected to have a positive relationship with investment growth in the following quarter, as excess unutilized capacity in the previous quarter may lower the need for new investment in the current quarter. Data shows a positive correlation between investment growth and capacity utilization in previous quarter (details in annex of the Chapter).

6.20 The foreign component of fixed investment, FDI and FII flows are expected to be negatively related to the volatility of exchange rate, measured by its coefficient of variation. This is because the returns that the foreign investors actually realize are in foreign currency terms, which depend on the exchange rate. If the volatility of the exchange rate is higher, it may decrease the growth of foreign inflows. It is seen that the relationship between growth in FDI and volatility of exchange rate is weak suggesting that foreign investors in projects have other considerations as well. On the other hand, a negative relationship, is seen between FII inflows and volatility of exchange rate. The negative relationship suggests that the portfolio investments which are generally short term investments are more affected by the volatility in exchange rate, as compared to FDI flows, which are generally for longer duration (details in annex of the Chapter).

6.21 Can EPU index proxy for all variables examined for impacting fixed investment in the economy? It can, if it is strongly correlated with these variables and results in previous section indicate that it is indeed correct. EPU is positively correlated to all the factors discussed above- repo rate, WPI inflation, volatility of exchange rate, and Capacity Utilization (as shown in Figure 3 to 8).

CONCLUSION AND POLICY RECOMMENDATIONS

6.22 While economic uncertainty stemming from uncontrollable factors remains beyond the control of policymakers, they can control economic policy uncertainty. Reducing economic policy uncertainty is critical because both domestic investment and foreign investment are strongly deterred by increases in domestic economic policy uncertainty.

6.23 India has secularly decreased domestic economic policy uncertainty since 2012 and has been exceptional in reducing this uncertainty since 2015 amidst a global environment of increases in the same. However, policymakers need to double down on reducing domestic economic policy uncertainty.

6.24 We outline a few steps in this regard:

1. First, top-level policymakers must ensure that their policy actions are predictable, provide forward guidance on the stance of policy, maintain broad consistency in actual policy with the forward guidance, and reduce ambiguity/arbitrariness in policy implementation. To ensure predictability, the horizon over which policies will not be changed must be mandatorily specified so that investor can be provided the assurance about future policy certainty. While this will generate some constraints in policy making, such voluntary tying of policymakers' hands is undertaken in several cases including the Fiscal Responsibility and Budget Management Act, the Monetary Policy Framework of the Reserve Bank of India. A similar constraint placed on ensuring no changes in policy for a specified horizon would go a long way to ensuring policy certainty. The Government could also use labels such as "Standstill" versus "Ratchet up" to categorize various categories of policies according to the level of commitment about future certainty that it can provide.

2. Second, following the adage that "what gets measured gets acted upon", economic policy uncertainty index must become an important index that policymakers at the highest level monitor on a quarterly basis. Relatedly, following the evolved academic literature in this area, government must encourage construction of economic policy uncertainty sub-indices to capture economic policy uncertainty stemming from fiscal policy, tax policy, monetary policy, trade policy, and banking policy. Tracking these sub-indices would enable monitoring and control over economic policy uncertainty.

3. Quality assurance of processes in policy making, which reflect the adage of "Document what you do, but more critically do what you document!" must be implemented in the government. The actual implementation of policy occurs at the lower levels, where ambiguity gets created and exacerbates economic policy uncertainty. As organizations in the private sector compete and seek the highest level of quality certifications, Government departments must be mandated to similarly seek quality certifications. This process of certification will require training of personnel in following quality assurance processes and will significantly reduce economic policy uncertainty.

CHAPTER AT A GLANCE
➢ Economic Policy Uncertainty has reduced significantly in India over the last decade.
➢ Continued decline in economic policy uncertainty in India post 2015 is exceptional because it contrasts sharply with the increase during this period in economic policy uncertainty in major countries, especially the U.S.
➢ An increase in economic policy uncertainty dampens investment growth in India for about five quarters.
➢ Unlike generic economic uncertainty, which cannot be controlled, policymakers can reduce economic policy uncertainty to foster a salutary investment climate in the country.
➢ Forward guidance, consistency of actual policy with forward guidance, and quality assurance certification of processes in Government departments can help to reduce economic policy uncertainty.

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ANNEX

Figure A1: Investment growth and repo rate

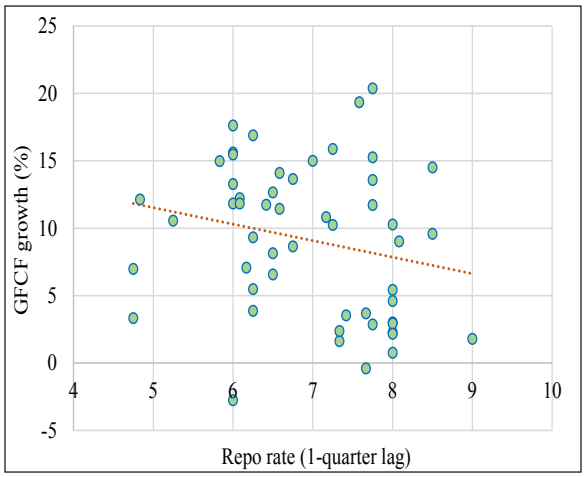


Figure A2: Investment growth and WPI inflation

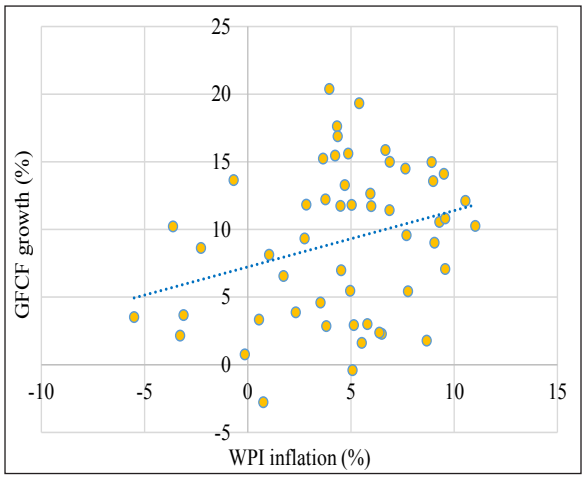


Figure A3: Investment growth and capacity utilization

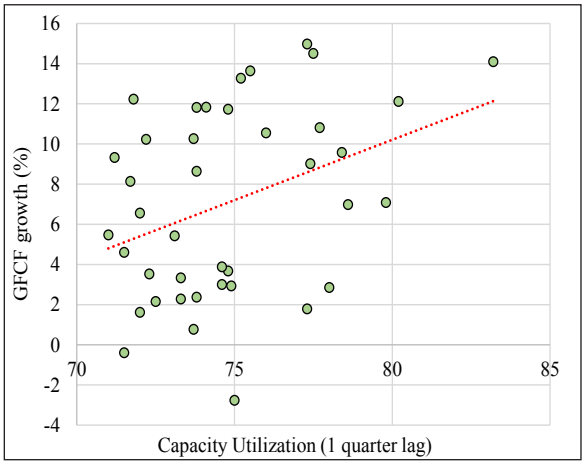


Figure A4 : FDI growth and exchange rate volatility

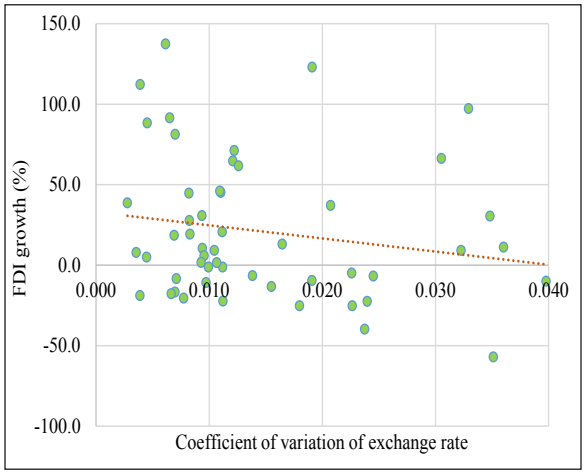
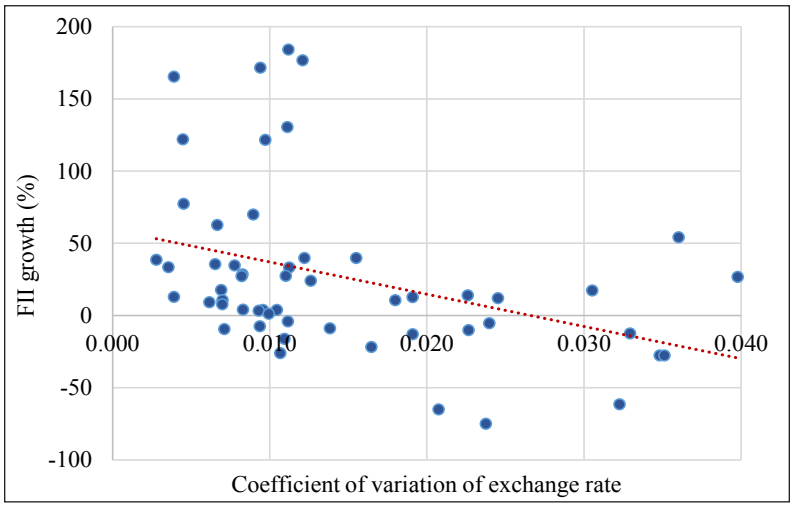


Figure A5: FII growth and exchange rate volatility



Source: RBI, CSO, Note: Capacity Utilization data is available only from 2008-09 onwards

India's Demography at 2040: Planning Public Good Provision for the 21st Century

07
CHAPTER

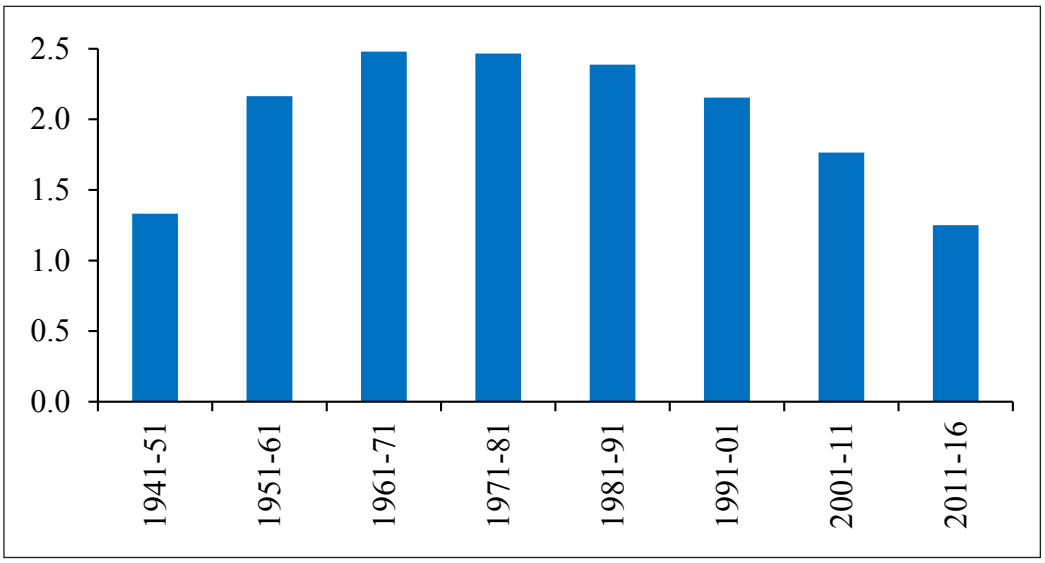
India is set to witness a sharp slowdown in population growth in the next two decades. Although the country as a whole will enjoy the "demographic dividend" phase, some states will start transitioning to an ageing society by the 2030s. It will surprise many readers to learn that population in the 0-19 age bracket has already peaked due to sharp declines in total fertility rates (TFR) across the country. The southern states, Himachal Pradesh, Punjab, West Bengal and Maharashtra now have fertility rates well below the replacement rate. TFR in Bihar, Uttar Pradesh, Jharkhand, Chhattisgarh, Rajasthan and Madhya Pradesh are above the replacement rate but are also experiencing significant declines. As a result, the national TFR is expected to be below replacement level by 2021 (adjusted for the skewed gender ratio, it may already be there). The age distribution, however, implies that India's working-age population will grow by roughly 9.7mn per year during 2021-31 and 4.2mn per year in 2031-41. Meanwhile, the proportion of elementary school-going children, i.e. 5-14 age group, will witness significant declines. Contrary to popular perception, many states need to pay greater attention to consolidating/merging schools to make them viable rather than building new ones. At the other end of the age scale, policy makers need to prepare for ageing. This will need investments in health care as well as a plan for increasing the retirement age in a phased manner.

I. RECENT DEMOGRAPHIC TRENDS

7.1 Population growth in India has been slowing in recent decades from an annual growth rate of 2.5 per cent during 1971-81 to an estimated 1.3 per cent as of 2011-16 (Figure 1). All major states have witnessed a marked deceleration in population growth during this period; the slowdown in states with historically high population growth such as Bihar, Uttar Pradesh, Rajasthan and Haryana is particularly noteworthy. Population is now growing below 1 per cent in the southern states as well as West Bengal, Punjab, Maharashtra, Odisha, Assam and Himachal Pradesh[1] (Figure 2).

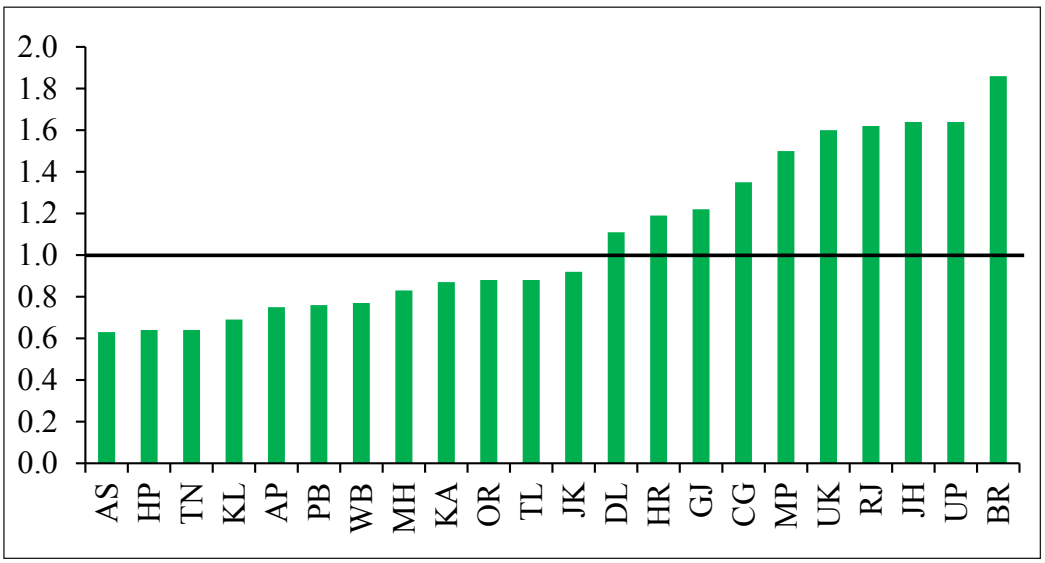
[1] In the figures, abbreviations used for states are as follows. AP: Andhra Pradesh, AS: Assam, BR: Bihar, CG: Chhattisgarh, DL: Delhi, GJ: Gujarat, HP: Himachal Pradesh, HR: Haryana, JH: Jharkhand, JK: Jammu & Kashmir, KA: Karnataka, KL: Kerala, MH: Maharashtra, MP: Madhya Pradesh, OR: Odisha, PB: Punjab, RJ: Rajasthan, TL: Telangana, TN: Tamil Nadu, UK: Uttarakhand, UP: Uttar Pradesh, WB: West Bengal.

Figure 1: Annual Population Growth Rate in India (per cent)



Source: Census 2011, International Institute for Population Sciences (IIPS) estimates.

Figure 2: Annual Population Growth Rate by State during 2011-16 (per cent)



Source: Census 2011, IIPS estimates.

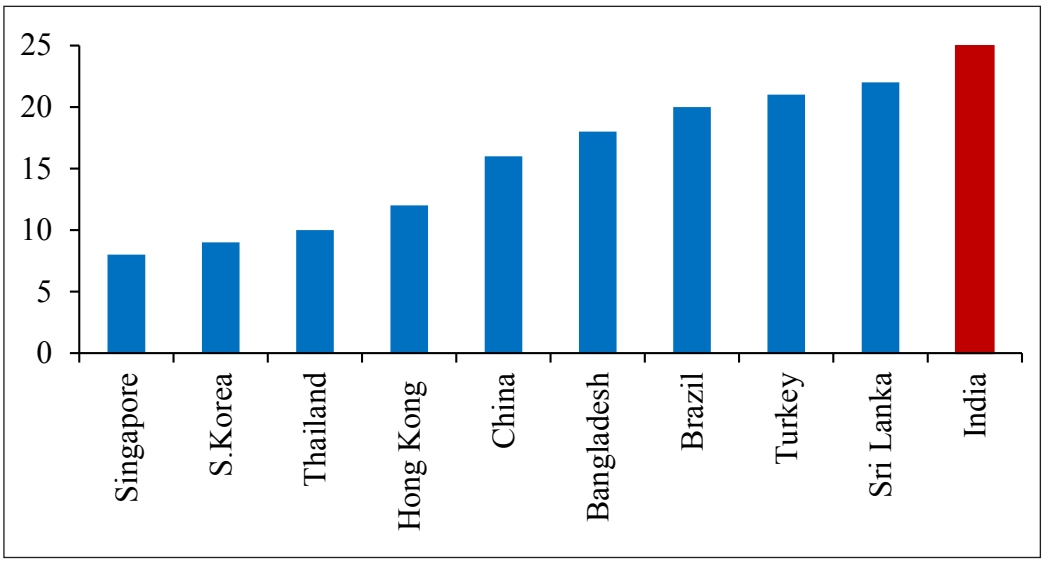
7.2 A key driver of this trend has been the steady decline in India's total fertility rate[2] (TFR) since the mid-1980s. Though the decline in India's TFR has been more gradual when compared to the experience of other emerging economies, it has nonetheless halved from 4.5 in 1984 to 2.3 as of 2016 (Figure 3 and Figure 4).

7.3 The replacement level fertility[3] is usually marked at 2.1 but, as discussed in the next section, India's TFR may already

[2] Total fertility rate refers to the total number of children born or likely to be born to a woman of child-bearing age in her lifetime.

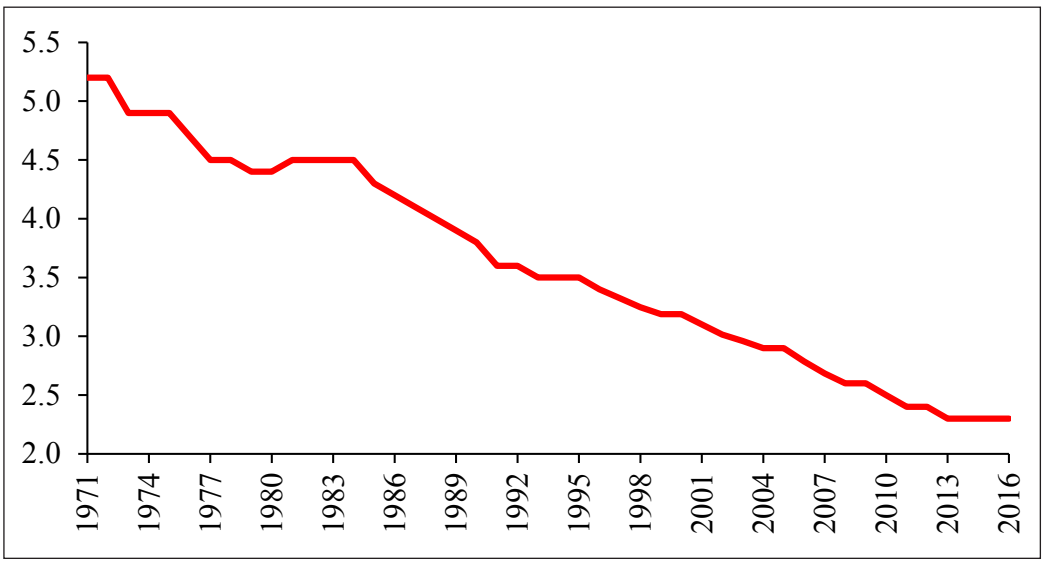
[3] TFR of 2.1 children per woman is called the replacement level fertility, which is the average number of children a woman would need to have in order for the population to replace itself

Figure 3: Number of Years Taken for TFR to Decline from over 4.0 to India's TFR of 2.3



Source: World Bank, Sample Registration System.

Figure 4: TFR in India

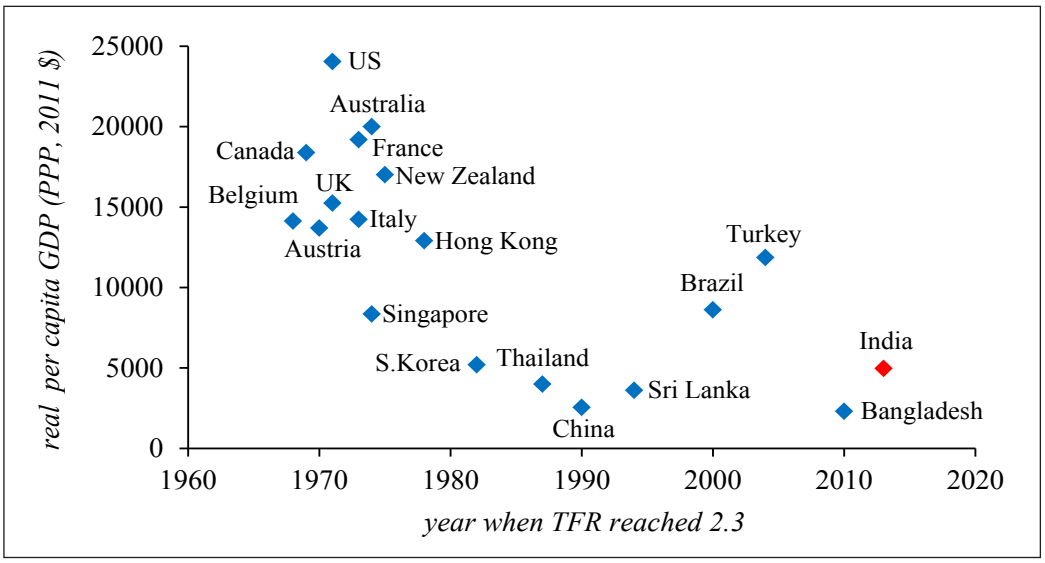


Source: Sample Registration System.

be close to the *effective* replacement level fertility after accounting for its skewed sex ratio. Interestingly, India has reached the current TFR of 2.3 at a relatively low per capita income when compared to the experience of major developed economies but similar to that of other Asian countries (Figure 5).

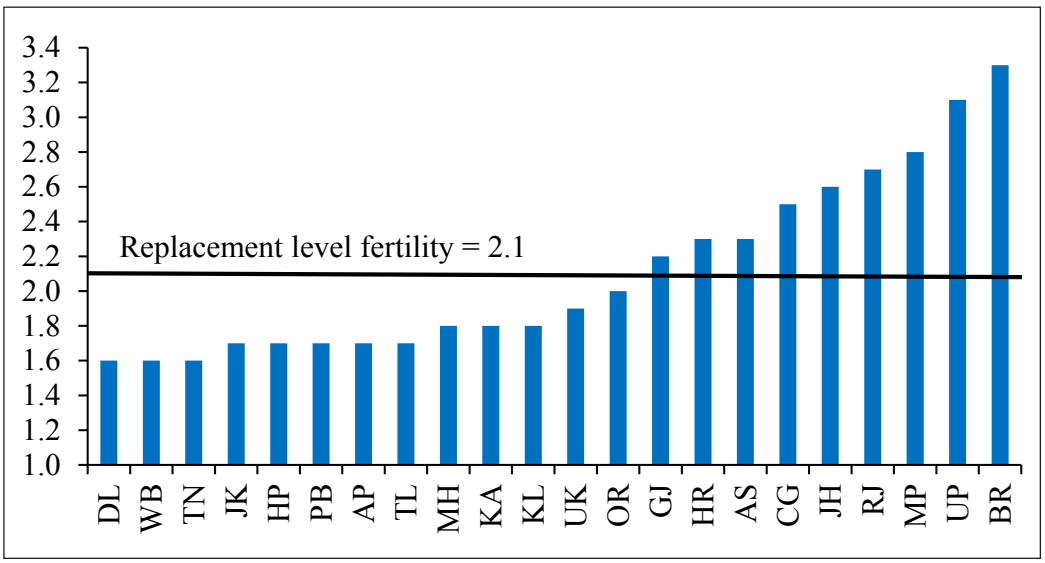
7.4 Note that there is a wide variation in the experience of different Indian states. TFR is now below replacement level fertility in 13 out of the 22 major states (Figure 6). In fact, TFR has reached as low as 1.6-1.7 in states such as Delhi, West Bengal, Tamil Nadu, Andhra Pradesh, Telangana, Punjab and Himachal Pradesh. Even high fertility states such as Bihar, Jharkhand, Rajasthan, Madhya Pradesh, Chhattisgarh, Uttar Pradesh and Uttarakhand have seen a sharp decline in TFR over the years.

Figure 5: Real Per Capita GDP when TFR Reached 2.3



Source: World Bank, Penn World Table.

Figure 6: TFR by State in 2016



Source: Sample Registration System.

7.5 These developments suggest that India has entered the next stage of demographic transition with population growth set to slow markedly in the next two decades along with a significant increase in the share of working-age population (the so-called "demographic dividend" phase).

7.6 However, national-level population trends mask the significant heterogeneity across states in terms of fertility, mortality, age-structure, and the ageing phenomenon already underway in some states. The southern states, Himachal Pradesh, Punjab, West Bengal and Maharashtra are already quite advanced in the demographic transition, with (i) TFR already well below replacement level fertility; (ii) population growth mainly due to momentum; (iii) more than 10 per cent of the population over the age of 59; and (iv) at most one-third of the population below the

age of 20. In contrast, states such as Bihar, Uttar Pradesh, Jharkhand, Chhattisgarh, Rajasthan and Madhya Pradesh are still in the early stages of demographic transition.

7.7 In light of continued urbanization, improvements in health care, increase in female education, and other socio-economic drivers of demographic change, Section II forecasts demographic metrics at the national and state level up to 2041. Such an exercise would enable us to understand the pace of demographic transition at the national and state level and assess which states are likely to experience significant ageing. The projected population and age-structure over the next two decades has several implications for policy, *inter-alia* for the (i) provision of health care, (ii) provision of old-age care, (iii) provision of school facilities, (iv) access to retirement-related financial services, (v) public pension funding, (vi) income tax revenues, (vii) labour force and labour participation rates, and (viii) retirement age. Detailed analysis of these issues is beyond the scope of this chapter. However, as an illustrative exercise, Section III looks at some policy implications for health care provision, elementary school facilities and retirement age.

II. PROJECTING NATIONAL AND STATE LEVEL POPULATION

7.8 Population and its age structure are projected at the national and state level up to 2041 following the methodology outlined in Box 1. For the purpose of analysis, Section II and III focus on 22 major states, which account for 98.4 per cent of India's population as per Census 2011.

(i) Declining Fertility Rates

7.9 Projected values for 2021-41 suggest that TFR at the national level will continue to decline rapidly and will lie below replacement level fertility at 1.8 as early as 2021 (Table 1). In line with the fertility patterns witnessed in other countries, TFR is expected to stabilize thereafter for some time around 1.7. Such fertility levels would be close to the TFR

Table 1: TFR for India and Major States, 2001-2041

States	2001	2011	2016	2021	2031	2041
INDIA	3.1	2.4	2.3	1.8	1.7	1.7
Andhra Pradesh	2.3	1.8	1.7	1.5	1.5	1.5
Assam	3.0	2.4	2.3	1.8	1.8	1.8
Bihar	4.4	3.6	3.3	2.5	2.0	1.8
Chhattisgarh	3.9	2.7	2.5	1.8	1.8	1.8
Delhi	2.1	1.9	1.6	1.5	1.5	1.5
Gujarat	2.9	2.4	2.2	1.9	1.8	1.8
Haryana	3.1	2.3	2.3	1.8	1.8	1.8
Himachal Pradesh	2.2	1.8	1.7	1.6	1.6	1.6
Jammu & Kashmir	2.5	1.9	1.7	1.5	1.5	1.5
Jharkhand	4.4	2.9	2.6	1.8	1.8	1.8
Karnataka	2.4	1.9	1.8	1.5	1.5	1.5

Kerala	1.8	1.8	1.8	1.8	1.8	1.8
Madhya Pradesh	3.9	3.1	2.8	2.0	1.8	1.8
Maharashtra	2.4	1.8	1.8	1.5	1.5	1.5
Odisha	2.6	2.2	2.0	1.8	1.8	1.8
Punjab	2.4	1.8	1.7	1.6	1.6	1.6
Rajasthan	4.0	3.0	2.7	1.9	1.8	1.8
Tamil Nadu	2.0	1.7	1.6	1.5	1.5	1.5
Telangana	2.3	1.8	1.7	1.6	1.6	1.6
Uttar Pradesh	4.5	3.4	3.1	2.0	1.8	1.8
Uttarakhand	4.5	3.4	1.9	1.6	1.6	1.6
West Bengal	2.4	1.7	1.6	1.5	1.5	1.5

Source: Census, Sample Registration System, IIPS projections.

Note: Projected values for 2021-41 are based on fitted model values from 20-year trends of TFR based on estimates from Sample Registration System. Before 2016, the values of Andhra Pradesh are assigned to Telangana.

Box 1: Methodology for Population Projections

Using the 2011 Census data as baseline, population is projected by age-structure up to 2041. These projections are undertaken both at the national level and for 36 states and Union Territories (UTs). The *cohort-component* methodology (Cannan, 1895 and George et al, 2004) is followed for population projections at the national level and for 22 major states that account for 98.4 per cent of India's population using assumptions for fertility, mortality, life expectancy and sex ratio at birth. These assumptions at the national level are derived using the assumptions for states weighted by their share in national population. No inter-state migration is assumed since the Census 2011 data on net inter-state migration by age-structure has not been published. International migration is not taken into consideration. The age-sex population is smoothened and adjusted for the population category of "age not stated" using a point formula similar to the methodology used in government's official projections (Office of Registrar General of India, 2006).

Population Projections for Smaller States and UTs:

The eight smaller states (Arunachal Pradesh, Goa, Manipur, Meghalaya, Mizoram, Sikkim, Nagaland and Tripura) and six UTs (Chandigarh, Puducherry, Daman & Diu, Dadra & Nagar Haveli, Lakshadweep and Andaman & Nicobar) account only 1.6 per cent of India's population. Due to constraints in obtaining reliable estimates for long-term trends in mortality and fertility, the *ratio method* (Pittenger, 1976 and U.S. Census Bureau, 1952) is used for population projection. The ratio of the small area (say a small state) to the larger area (say India) is calculated and assumed to remain constant up to 2041. For each year, this ratio is multiplied by the projected population of the larger area, as derived using the *cohort-component* methodology, to obtain the population projections for these states and UTs.

Mortality Rate:

A *log-linear model* is used to project mortality using life expectancy at birth (e_0^0) for 1970-2016 from the Sample Registration System's Life Tables, fitted separately for male and female[4]:

$$\ln\left(80 - e_0^0\right) = a + bt \text{ , for females}$$

$$\ln\left(76 - e_0^0\right) = a + bt \text{, for males}$$

Life expectancy is projected to continue to rise during the projection period from 67.2 years in 2016 to 71.4 years in 2041 for males, and more significantly, from 70.3 years in 2016 to 75.3 years in 2041 for females[5].

Fertility Rate:

TFR is projected up to 2041 using the *Gompertz method* (Gompertz, 1825) based on the lower (L) and upper (U) limits of TFR and the base period TFR, where the latest available TFR is inserted:

$$\frac{(TFR - L)}{(U - L)} = (a)^{b^t} \quad i.e.,$$

$$ln\left(-\left(\frac{ln(TFR - L)}{(U - L)}\right)\right) = ln(-ln.a) + t.ln.b$$

The lower limit (L) of TFR is taken between 1.2-1.8 for different states, and the upper limit (U) of TFR is taken to be the value of TFR in the base period, given that TFR across states is on a downward trend currently. TFR for time period *t* is projected using the estimated parameters *a* and *b* using the Ordinary Least Squares (OLS) regression.

Sex Ratio:

Both sex ratio at birth and sex differentials in survival probability are taken into consideration to determine the sex ratio of the population. Sex ratio at birth is assumed to remain constant at the 2014-16 levels since it already stands below 1.10 in 12 out of the 22 major states and is not expected to decline significantly in the next two decades in the remaining 10 states.

currently seen in countries such as China, Belgium, Netherlands and Brazil.

7.10 At the state level, those already below replacement level fertility, including the southern states, West Bengal, Punjab, Maharashtra and Himachal Pradesh, are expected to see TFR decline further by 2021, reaching as low as 1.5-1.6 and stabilizing thereafter. Even states lagging behind in the fertility transition are expected to see TFR fall significantly below replacement level

[4] Since Life Tables for Delhi and Himachal Pradesh are not available for longer periods, appropriate increment in life expectancy at birth for male and female are applied to the UN (2017) forecasts to project life expectancy at birth up to 2041.

[5] Since Kerala already has high life expectancy at birth, the maximum life expectancy at birth is assumed to be equal to the current life expectancy at birth of Japan.

to 1.8. This would be as early as 2021 in Jharkhand, Haryana and Chhattisgarh, and by 2031 in Uttar Pradesh, Rajasthan and Madhya Pradesh. In fact, by 2031, all states would see below replacement level fertility.

7.11 This is in line with expectations of further decline in fertility for females in the 20-30 age-group, driven by rising female education, postponement of marriage, access to family planning methods, and continued decline in infant mortality. While family planning programs have played a major role in reducing fertility in India in the past decades, these socio-economic changes have manifested over the last 10-15 years.

7.12 The projections for TFR in Table 1 are based on the assumption that sex ratio at birth will remain at current levels over the next two decades. As of 2014-16, sex ratio at birth remains higher than the normal range of 1.02-1.07[6] at the national level and in 17 out of 22 major states. Thus, there are more men than women in the population when compared to the natural level. This implies that the required replacement level fertility at the national and state level is higher than the usual benchmark of 2.1, i.e., due to the skewed sex ratio, a woman would have to give birth to more than 2.1 children in order for the population to replace itself. Our estimates suggest that the *effective* replacement level fertility after taking into account the skewed sex ratio could be around 2.15-2.2 for India with a sex ratio of 1.11; around 2.2-2.25 for states such as Haryana, Uttarakhand and Gujarat with the sex ratio as high as 1.15-1.20; and between 2.1-2.2 for the remaining states with the sex ratio around 1.07-1.14. Interestingly, the current TFR in 14 out of the 22 major states is already below the *effective* replacement level fertility.

(ii) Population Growth Trajectory

7.13 Demographic projections show that India's population growth will continue to slow rapidly over the next two decades, growing less than 1 percent during 2021-31 and under 0.5 per cent during 2031-41 (Table 2). Such population growth rates would be close to the trend currently seen in countries such as Germany and France. In fact, with TFR projected to fall well below replacement level fertility by 2021, positive population growth in the next two decades will be due to population momentum and the continued rise in life expectancy.

7.14 Given state-level differences in initial fertility levels, mortality and age composition, both the trajectory of population and population growth will continue to vary across states. States ahead in the demographic transition will see a continued deceleration in population growth and reach near-zero growth rates by 2031-41. With population peaking by 2031, Tamil Nadu's population growth will start declining during 2031-41 unless offset by inward migration. Population growth will be close to zero in Andhra Pradesh and as low as 0.1-0.2 per cent in Karnataka, Kerala, Telangana, Himachal Pradesh, West Bengal, Punjab and Maharashtra.

7.15 States lagging behind in the demographic transition will also witness a marked slowdown in population growth during 2021-41. Population growth will halve over the next two decades in Chhattisgarh, Uttar Pradesh, Rajasthan and Madhya Pradesh. Bihar alone will have a population growth rate of 1 per cent. Nonetheless, together with Jharkhand, these states will account for nearly two-thirds of the increase in India's population during 2021-41, with

[6] The average value of sex ratio at birth is around 1.05, i.e. 105 boys born per every 100 girls.

Table 2: Annual Population Growth Rate (in per cent) for India and Major States

States	2001-11	2011-21	2021-31	2031-41
INDIA	1.77	1.12	0.72	0.46
Andhra Pradesh	1.10	0.65	0.31	0.02
Assam	1.71	0.74	0.77	0.48
Bihar	2.54	1.82	1.34	1.00
Chhattisgarh	2.26	1.17	0.76	0.57
Delhi	2.12	1.00	0.62	0.30
Gujarat	1.93	1.12	0.71	0.44
Haryana	1.99	1.08	0.70	0.44
Himachal Pradesh	1.29	0.64	0.57	0.24
Jammu & Kashmir	2.36	0.88	0.82	0.49
Jharkhand	2.24	1.39	0.97	0.82
Karnataka	1.56	0.75	0.36	0.10
Kerala	0.49	0.66	0.45	0.18
Madhya Pradesh	2.03	1.36	0.81	0.64
Maharashtra	1.60	0.73	0.42	0.15
Odisha	1.40	0.82	0.63	0.38
Punjab	1.39	0.71	0.42	0.11
Rajasthan	2.13	1.47	0.96	0.75
Tamil Nadu	1.56	0.56	0.25	-0.05
Telangana	N/A	0.80	0.53	0.21
Uttar Pradesh	2.02	1.48	0.93	0.73
Uttarakhand	1.88	1.30	0.70	0.50
West Bengal	1.38	0.71	0.50	0.14

Source: Census, IIPS projections.

just Uttar Pradesh and Bihar accounting for over 40 per cent of the increase (Table 3).

(iii) Changing Age Composition

7.16 With TFR reaching low levels and longevity continuing to increase, India's population at the national level and in several states will begin ageing significantly in just a decade from now. The share of India's young, i.e. 0-19 years, population has already started to decline and is projected to drop from as high as 41 per cent in 2011 to 25 per cent by 2041 (Table 4). On the other hand, the share of elderly, 60 years and above, population will continue to rise steadily, nearly doubling from 8.6 per cent in 2011 to 16 per cent by 2041. India's demographic dividend will peak around 2041, when the share of working-age, i.e. 20-59 years, population is expected to hit 59 per cent. With changing demographic

Table 3: Population (in millions) for India and Major States, 2011- 2041

States	2011	2016	2021	2031	2041	Projected growth during 2021-41 (%)
INDIA	1210.6	1286.1	1346.9	1443.2	1510.2	12.1
Andhra Pradesh	49.4	51.2	52.6	54.2	54.3	3.4
Assam	31.2	32.2	33.5	36.1	37.9	12.9
Bihar	104.1	113.8	123.0	139.5	153.4	24.7
Chhattisgarh	25.5	27.3	28.5	30.7	32.4	13.8
Delhi	16.8	17.7	18.5	19.6	20.2	9.4
Gujarat	60.4	64.1	67.2	72.0	75.2	11.8
Haryana	25.4	26.9	28.1	30.0	31.4	11.7
Himachal Pradesh	6.9	7.1	7.3	7.7	7.9	8.2
Jammu & Kashmir	12.5	13.1	13.6	14.8	15.5	13.4
Jharkhand	33.0	35.7	37.6	41.2	44.6	18.8
Karnataka	61.1	63.7	65.7	68.1	68.7	4.7
Kerala	33.4	34.6	35.6	37.2	37.9	6.4
Madhya Pradesh	72.6	78.1	82.5	89.2	94.9	15.0
Maharashtra	112.4	117.0	120.6	125.7	127.6	5.8
Odisha	42.0	43.8	45.4	48.2	50.1	10.3
Punjab	27.7	28.8	29.7	31.0	31.3	5.3
Rajasthan	68.5	74.1	78.6	86.1	92.6	17.8
Tamil Nadu	72.1	74.5	76.2	78.1	77.7	2.0
Telangana	35.2	36.7	38.0	40.0	40.9	7.4
Uttar Pradesh	199.8	216.2	229.3	250.7	269.0	17.3
Uttarakhand	10.1	10.9	11.4	12.2	12.8	12.3
West Bengal	91.3	94.8	97.8	102.7	104.2	6.5

Source: Census, Sample Registration System, IIPS projections.

composition, India's age-structure by 2041 will resemble that of China and Thailand as seen during the current decade.

7.17 All major states are projected to witness a decline in the share of young population and an increase in the share of elderly population over the next two decades. States ahead in the demographic transition, such as Himachal Pradesh, West Bengal, Maharashtra, Punjab and most of the southern states, would have less than one-fourth of the population under the age of 20 but about one-fifth or more population over the age of 59 by 2041.

7.18 Even states in earlier stages of demographic transition, such as Bihar, Uttar Pradesh, Jharkhand, Chhattisgarh, Madhya Pradesh and Rajasthan, will see a significant decline in the share of young population, though these shares will remain relatively

Table 4: Population by Age Structure (per cent share of population) for India and Major States, 2011-2041

	0-19 years				20-59 years				60 years and above			
States	**2011**	**2021**	**2031**	**2041**	**2011**	**2021**	**2031**	**2041**	**2011**	**2021**	**2031**	**2041**
INDIA	40.9	34.5	28.8	25.2	50.5	55.8	58.8	58.9	8.6	9.7	12.4	15.9
Andhra Pradesh	34.8	28.4	24.4	21.4	55.1	59.6	60.2	58.6	10.1	12.0	15.4	20.0
Assam	42.7	35.4	29.1	26.8	50.6	56.7	60.1	58.8	6.7	7.9	10.9	14.4
Bihar	49.4	43.5	35.1	30.1	43.2	48.9	55.9	58.3	7.4	7.7	9.1	11.6
Chhattisgarh	42.3	36.0	30.5	27.2	49.9	55.0	58.0	58.5	7.9	8.9	11.6	14.4
Delhi	37.2	29.2	23.5	20.2	56.0	61.1	61.9	58.5	6.8	9.7	14.6	21.2
Gujarat	38.7	33.2	28.6	25.1	53.3	56.8	58.2	57.9	8.0	9.9	13.2	17.0
Haryana	40.3	33.5	28.4	24.9	51.0	57.1	59.5	59.3	8.7	9.5	12.1	15.8
Himachal Pradesh	35.3	29.0	24.5	22.0	54.5	58.8	59.3	56.9	10.3	12.2	16.1	21.1
Jammu & Kashmir	43.7	33.8	24.5	23.0	48.9	57.1	62.9	59.8	7.4	9.1	12.6	17.2
Jharkhand	45.9	38.8	31.0	28.0	46.9	52.8	58.5	58.7	7.2	8.4	10.6	13.4
Karnataka	35.8	29.8	25.0	21.7	54.7	59.0	60.5	59.3	9.5	11.1	14.5	19.0
Kerala	31.3	27.6	24.9	23.3	56.2	56.2	54.7	52.8	12.6	16.2	20.5	23.9
Madhya Pradesh	43.8	38.0	31.8	27.3	48.4	53.7	57.6	59.3	7.9	8.3	10.6	13.4
Maharashtra	36.2	29.5	24.1	21.2	53.9	59.0	60.9	59.0	9.9	11.5	14.9	19.7
Odisha	38.2	32.6	28.3	26.1	52.3	56.7	58.2	57.3	9.5	10.8	13.4	16.6
Punjab	35.8	28.2	23.8	21.0	53.9	59.5	60.2	58.4	10.4	12.3	16.0	20.6
Rajasthan	45.5	38.3	31.5	27.3	47.1	53.4	58.0	59.5	7.5	8.2	10.4	13.3
Tamil Nadu	32.3	27.0	23.2	20.6	57.3	59.7	59.2	56.9	10.4	13.3	17.6	22.6
Telangana	37.0	30.0	26.0	23.0	53.8	59.4	60.5	58.8	9.2	10.6	13.5	18.2
Uttar Pradesh	47.6	39.4	32.6	27.7	44.6	52.7	57.9	60.3	7.8	7.9	9.5	12.0
Uttarakhand	42.2	35.2	29.4	24.1	48.8	55.1	58.6	60.6	9.0	9.7	12.1	15.3
West Bengal	37.1	29.1	24.2	21.9	54.4	59.8	60.6	58.4	8.5	11.1	15.2	19.7

Source: Census, IIPS projections.

high and as large as 30 per cent in Bihar by 2041. Meanwhile, the share of elderly population in these states will still be below 15 per cent through 2041.

(iv) Implications for Working-Age Population

7.19 While most of the discussion on demographic dividend revolves around the *share* of working-age population, changes in the *size* of working-age population plays a key role in determining the size of labour force and direction of inter-state labour migration.

7.20 Given changing age composition, India's working-age population will continue to increase through 2041, rising by 96.5 million during 2021-31 and by 41.5 million during 2031-41 (Table 5). This will have implications for the required rate of job creation in the economy. As per the NSSO Periodic Labour Force Survey 2017-18, India's labour force participation rate for the age-group 15-59 years is around 53 per cent (80 per cent for males, 25 per cent for females). Depending on the trajectory of labour force participation during 2021-41, additional jobs will need to be created to keep pace with the projected annual increase in working-age population of 9.7 million during 2021-31 and 4.2 million during 2031-41. Projecting labour force participation is beyond the scope of this study, but this will be impacted by changes in schooling years, age distribution and female labour force participation.

7.21 The evolution of working-age population, moreover, will vary across states. The size of working-age population will start to decline in 11 out of the 22 major states during 2031-41, including in the southern states, Punjab, Maharashtra, West Bengal and Himachal Pradesh. On the other hand, working-age population will continue to rise through 2041 in states lagging behind in the demographic transition, particularly Bihar, Uttar Pradesh, Madhya Pradesh and Rajasthan. In principle, the latter states with rising working-age population could meet the labour deficit in many of the former ageing states. Current migration trends broadly follow this pattern, and a study of this phenomenon will be the subject of a future Economic Survey.

III. POLICY IMPLICATIONS OF AGEING

(i) Elementary Schools

7.22 As of 2016, population in the 5-14 age-group, which roughly corresponds to the number of elementary school-going children, has already begun declining in India and across all major states except Jammu & Kashmir. Population projections suggest that this trend will continue through 2041 (Table 6). The size of the 5-14 years population will drop sharply in Himachal Pradesh, Uttarakhand, Tamil Nadu, Maharashtra, Punjab, Andhra Pradesh and Karnataka by 2041. Note that it will decline even in the laggard states such as Bihar, Uttar Pradesh, Rajasthan and Madhya Pradesh. Overall, the number of school-going children in India will decline by 18.4 per cent between 2021 and 2041. This will have very important social and economic consequences.

7.23 To understand the implications for the provision of elementary schools, we examine the number of government and private schools per capita of 5-14 years population and school enrolment at the national and state level. In light of the projected decline in elementary school-going children, the number of schools per capita will rise significantly in India across all major states even if no more schools are added (Figure 7 and Figure 8).

Table 5: Population by Age Structure (in millions) for India and Major States, 2011-2041

	0-19 years				20-59 years				60 years and above			
States	**2011**	**2021**	**2031**	**2041**	**2011**	**2021**	**2031**	**2041**	**2011**	**2021**	**2031**	**2041**
INDIA	494.7	464.2	415.8	381.0	611.7	751.6	848.2	889.7	104.2	131.1	179.3	239.4
Andhra Pradesh	17.2	14.9	13.3	11.6	27.2	31.3	32.6	31.9	5.0	6.3	8.3	10.9
Assam	13.3	11.9	10.5	10.2	15.8	19.0	21.7	22.2	2.1	2.6	3.9	5.5
Bihar	51.4	53.5	48.9	46.2	45.0	60.1	77.9	89.4	7.7	9.4	12.7	17.8
Chhattisgarh	10.8	10.3	9.4	8.8	12.7	15.7	17.8	19.0	2.0	2.6	3.5	4.7
Delhi	6.2	5.4	4.6	4.1	9.4	11.3	12.1	11.8	1.1	1.8	2.9	4.3
Gujarat	23.4	22.3	20.6	18.9	32.2	38.2	41.9	43.5	4.8	6.7	9.5	12.8
Haryana	10.2	9.4	8.5	7.8	12.9	16.0	17.9	18.6	2.2	2.7	3.6	5.0
Himachal Pradesh	2.4	2.1	1.9	1.7	3.7	4.3	4.6	4.5	0.7	0.9	1.2	1.7
Jammu & Kashmir	5.5	4.6	3.6	3.6	6.1	7.8	9.3	9.3	0.9	1.2	1.9	2.7
Jharkhand	15.2	14.6	12.8	12.5	15.5	19.8	24.1	26.2	2.4	3.2	4.4	6.0
Karnataka	21.9	19.6	17.0	14.9	33.4	38.8	41.2	40.8	5.8	7.3	9.9	13.0
Kerala	10.5	9.8	9.3	8.8	18.8	20.0	20.3	20.0	4.2	5.8	7.6	9.0
Madhya Pradesh	31.8	31.3	28.4	25.9	35.1	44.3	51.4	56.2	5.7	6.9	9.4	12.7
Maharashtra	40.7	35.6	30.4	27.1	60.5	71.2	76.6	75.4	11.1	13.9	18.8	25.2
Odisha	16.0	14.8	13.7	13.1	21.9	25.7	28.1	28.7	4.0	4.9	6.5	8.3
Punjab	9.9	8.4	7.4	6.6	15.0	17.7	18.6	18.3	2.9	3.7	4.9	6.4
Rajasthan	31.2	30.1	27.2	25.3	32.3	42.0	50.0	55.1	5.1	6.5	9.0	12.3
Tamil Nadu	23.3	20.6	18.1	16.0	41.3	45.5	46.3	44.2	7.5	10.1	13.7	17.5
Telangana	13.0	11.4	10.4	9.4	18.9	22.6	24.2	24.0	3.2	4.0	5.4	7.4
Uttar Pradesh	95.1	90.3	81.8	74.5	89.1	120.9	145.0	162.2	15.6	18.1	23.8	32.3
Uttarakhand	4.3	4.0	3.6	3.1	4.9	6.3	7.1	7.7	0.9	1.1	1.5	2.0
West Bengal	33.8	28.5	24.9	22.8	49.7	58.5	62.2	60.9	7.8	10.8	15.6	20.5

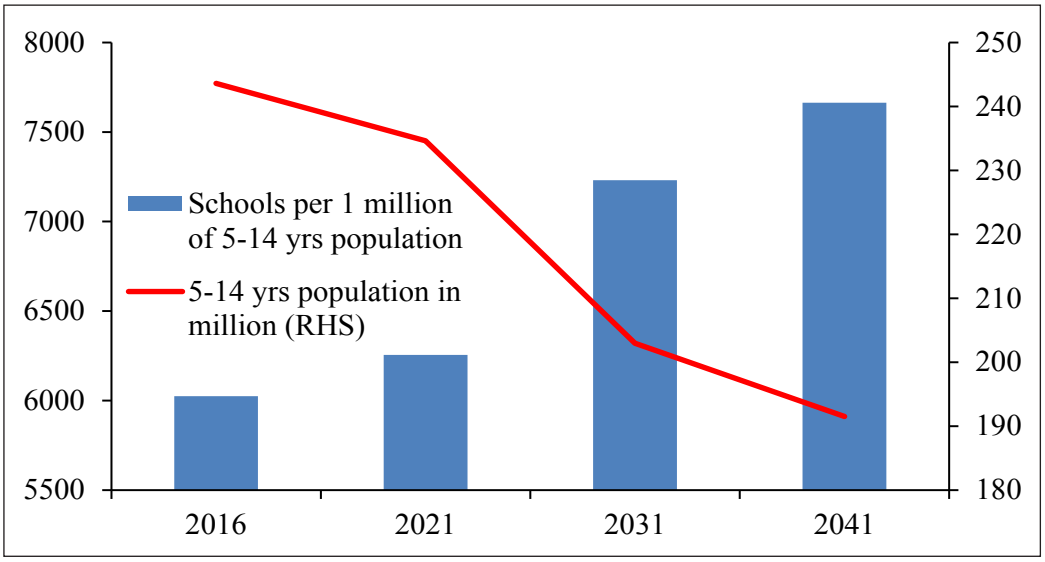
Source: Census, IIPS projections.

Table 6: Population for 5-14 years (in millions) for India and Major States, 2011-41

States	2011	2016	2021	2031	2041	Projected change during 2021-41 (%)
INDIA	260.54	243.60	234.64	202.96	191.51	-18.38
Andhra Pradesh	8.72	7.88	7.44	6.52	5.82	-21.78
Assam	7.04	6.60	5.90	5.14	5.22	-11.47
Bihar	29.07	28.25	26.95	24.46	23.10	-14.28
Chhattisgarh	5.65	5.33	5.28	4.45	4.46	-15.60
Delhi	3.19	2.94	2.71	2.26	2.06	-24.07
Gujarat	12.03	11.41	11.29	10.11	9.42	-16.57
Haryana	5.17	4.88	4.76	4.16	3.91	-17.87
Himachal Pradesh	1.23	1.14	1.05	0.95	0.88	-16.59
Jammu & Kashmir	2.83	2.86	2.35	1.77	1.86	-20.65
Jharkhand	8.27	7.92	7.63	5.90	6.44	-15.60
Karnataka	10.99	10.34	9.95	8.32	7.46	-25.00
Kerala	5.38	5.12	4.89	4.64	4.42	-9.56
Madhya Pradesh	16.85	15.87	15.99	13.74	12.90	-19.34
Maharashtra	20.63	19.43	17.99	14.85	13.67	-24.02
Odisha	8.45	7.83	7.37	6.75	6.60	-10.43
Punjab	4.96	4.49	4.11	3.69	3.27	-20.35
Rajasthan	16.49	15.59	15.41	13.09	12.70	-17.57
Tamil Nadu	11.74	10.94	10.31	8.98	8.00	-22.40
Telangana	6.64	6.01	5.64	5.17	4.70	-16.57
Uttar Pradesh	51.35	46.06	45.62	39.36	37.45	-17.91
Uttarakhand	2.21	2.00	2.11	1.65	1.54	-26.98
West Bengal	17.43	15.78	14.05	12.38	11.55	-17.79

Source: Census, Sample Registration System, IIPS projections.

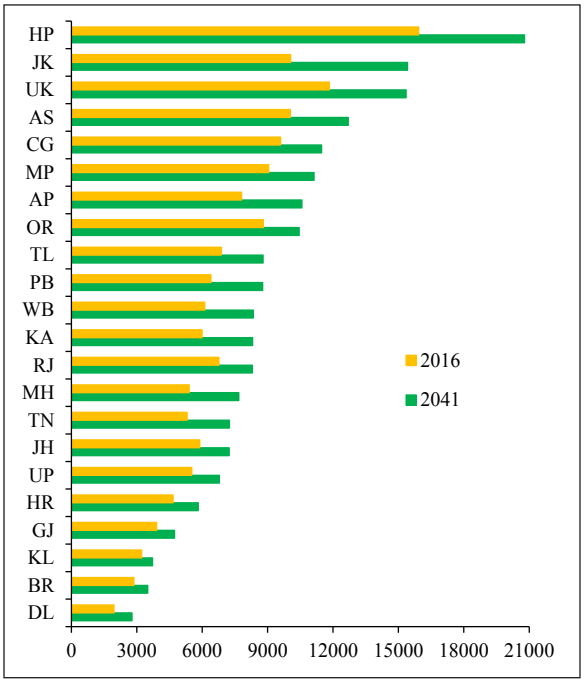
Figure 7: Number of Elementary Schools in India per 1 million of 5-14 Years Population under Status Quo



Source: Unified District Information on School Education, Sample Registration System, IIPS.

Note: Calculations are based on projected 5-14 years population for 2021-41 from IIPS and number of elementary schools at 2016 levels.

Figure 8: Number of Elementary Schools per 1 million of 5-14 Years Population under Status Quo

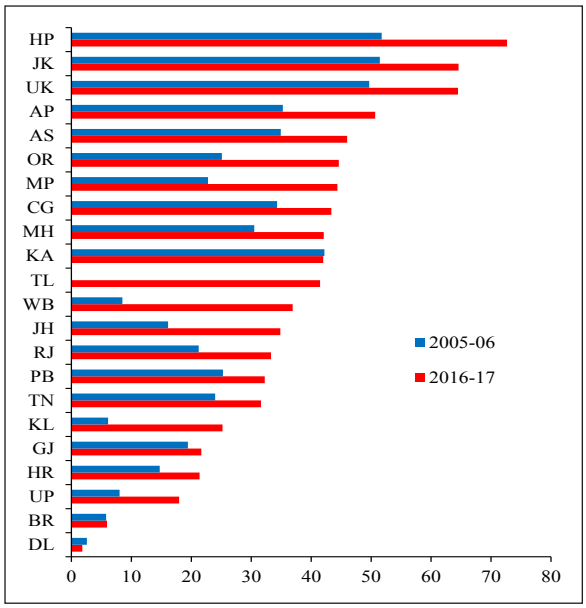


Source: Unified District Information on School Education, Sample Registration System, IIPS.

Note: Calculations are based on projected 5-14 years population for 2041 from IIPS and number of elementary schools at 2016 levels.

7.24 States such as Himachal Pradesh, Uttarakhand, Andhra Pradesh and Madhya Pradesh have more than 40 per cent of elementary schools with fewer than 50 students enrolled (Figure 9). Similar trends

Figure 9: Per cent of Elementary Schools with Less Than 50 Students Enrolled



Source: Unified District Information on School Education.

exist in Chhattisgarh, Assam and Odisha with large number of schools per capita and small school size. In fact, the number of elementary schools with less than 50 students has increased over the past decade across all major states except Delhi.

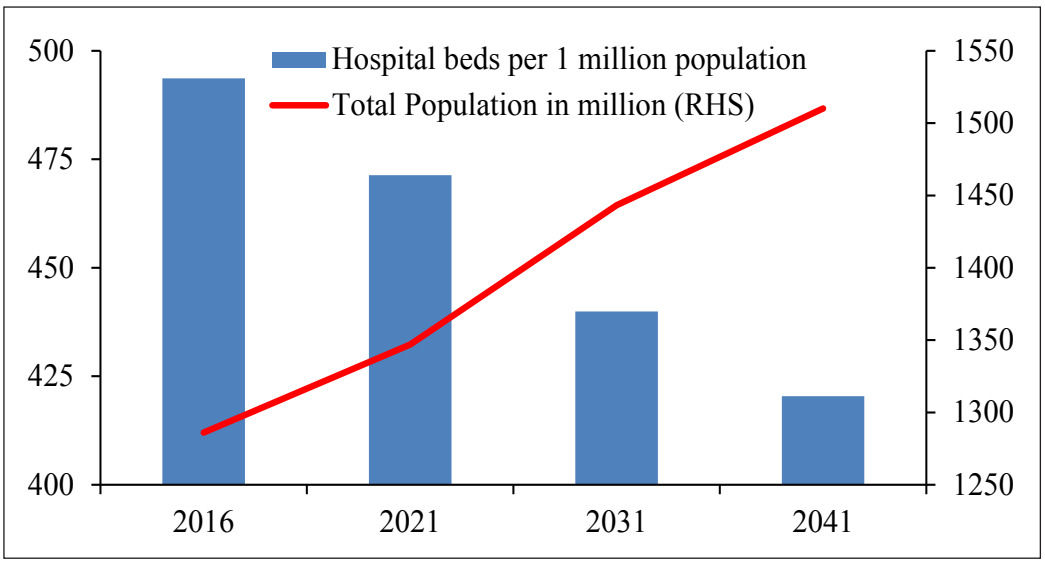
7.25 The "optimal" school size varies widely according to terrain and urban clustering, but this sharp increase in number of elementary schools per capita needs to be carefully studied. The time may soon come in many states to consolidate/merge elementary schools in order to keep them viable. Schools located within 1-3 kms radius of each other can be chosen for this purpose to ensure no significant change in access. This would also be in line with the experience of other major economies witnessing a decline in elementary school-going population, such as Japan, China, South Korea, Singapore and Canada, which have implemented policies to merge or close down schools. Note that this is not about reducing investment in elementary education, but an argument for shifting policy emphasis from quantity towards quality and efficiency of education.

(ii) Health Care Facilities

7.26 Access to health care is still a major challenge in India. If India's hospital facilities remain at current levels, rising population over the next two decades (even with slowing population growth rates) will sharply reduce the per capita availability of hospital beds in India across all major states (Figure 10). India already fares poorly relative to other emerging and developed economies in terms of per capita availability of hospital beds (Figure 11).

7.27 States with high population growth (Table 2) are also the ones with the lowest per capita availability of hospital beds (Figure 12). Hence, there is a straightforward case for expanding medical facilities in these states. For states in the advanced stage of demographic transition, however, the rapidly changing age structure (Table 5) will mean that the type of health care services will have

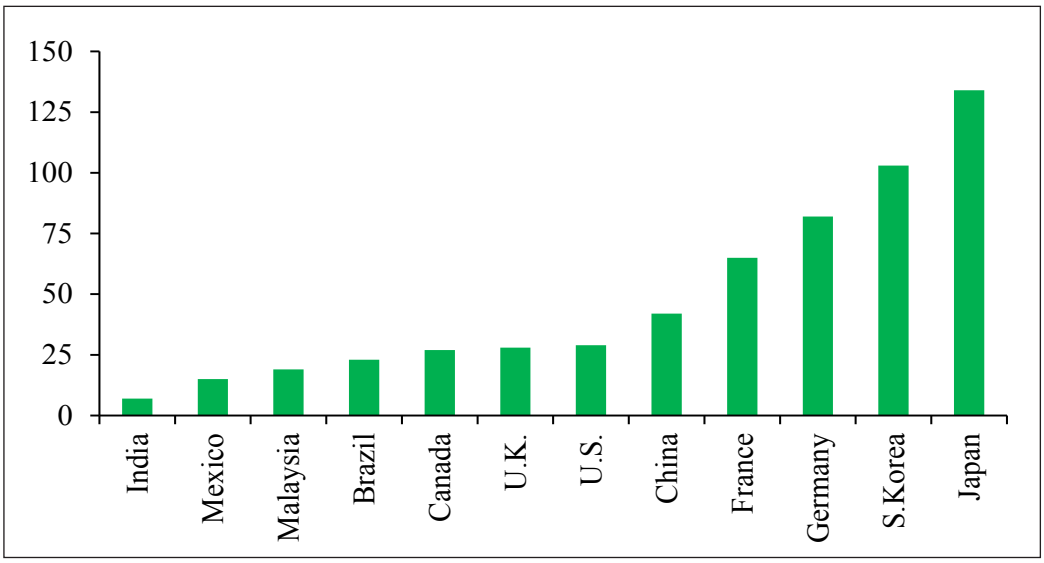
Figure 10: Number of Government Hospital Beds in India per 1 million Population under Status Quo



Source: Central Bureau of Health Intelligence, Sample Registration System, IIPS.

Note: Calculations are based on projected population for 2021-41 from IIPS and number of government hospital beds at 2016 levels.

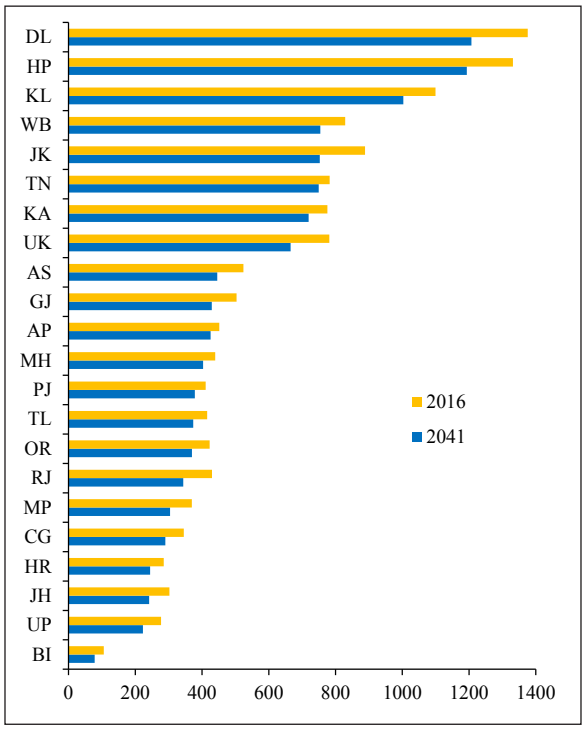
Figure 11: Number of Hospital Beds per 10,000 Population



Source: WHO.

Note: Data is as of 2011 for India, 2012 for other countries.

Figure 12: Number of Government Hospital Beds per 1 million Population under Status Quo



Source: Central Bureau of Health Intelligence, Sample Registration System, IIPS.

Note: Calculations are based on projected population for 2041 from IIPS and number of government hospital beds at 2016 levels.

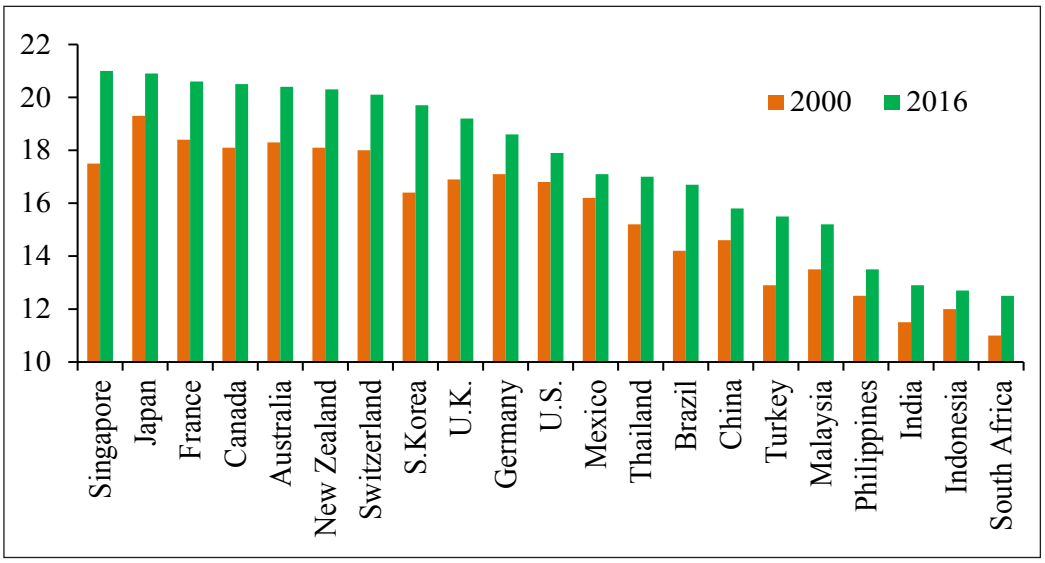
to adapt towards greater provision of geriatric care. A major problem with planning for the provision of medical facilities is the paucity of specific data, especially on private hospitals. Available data on government hospitals have been used here but it is clear even from basic research that it does not provide a true picture of the quality or quantity of health care in the country.

(iii) Retirement Age

7.28 India's *healthy* life expectancy at the age of 60, which is the average number of years a 60-year old person is expected to live in full health taking into account the impact of diseases and injuries, has continually increased over the years for both men and women. Healthy life expectancy at the age of 60 now stands at 12.9 years (12.5 years for males; 13.3 years for females), though it is still much lower than that for other major developed and emerging economies (Figure 13).

7.29 Due to ageing population and increasing pressure on pension funding, many countries have begun raising the pensionable retirement

Figure 13: Healthy Life Expectancy at Age of 60 (years)



Source: WHO.

age. Countries such as Germany, France and U.S. have increased the retirement age. Some countries such as Australia and U.K. used to allow women to retire earlier than men but have changed the rules to bring them at par. Many countries such as Germany, U.K. and U.S. have signalled that they will keep increasing the retirement age according to a pre-set timeline (Table 7). In the U.K., for example, the state pension age will increase for both men and women to 66 by October 2020. The U.K. government is planning further increases in the retirement age to 67 spanning the years 2026-28 and to 68 during 2044-46.

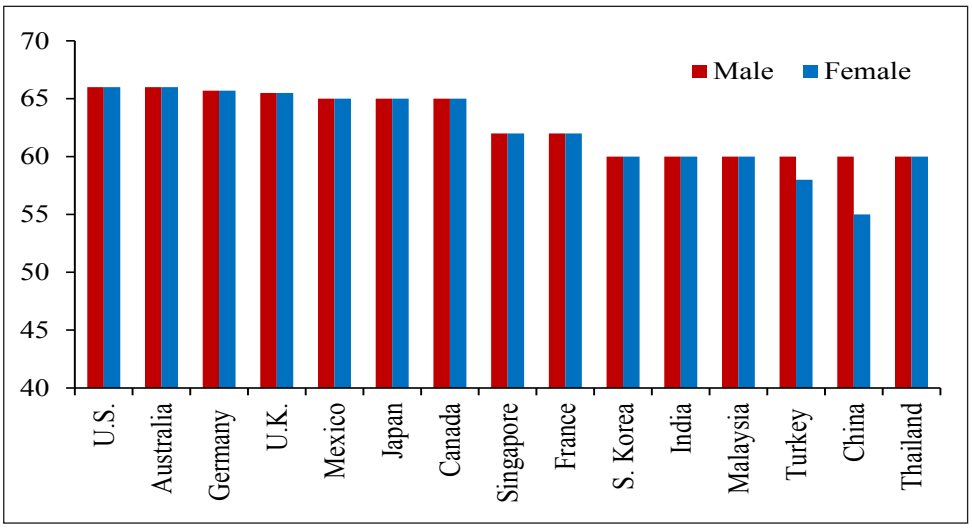
7.30 Given that life expectancy for both males and females in India is likely to continue rising, increasing the retirement age for both men and women going forward could be considered in line with the experience of other countries (Figure 14). This will be key to the viability of pension systems and would also help increase female labour force participation in the older age-groups. Since an increase in the retirement age is perhaps inevitable, it may be worthwhile signalling this change well in advance – perhaps a

Table 7: Retirement Age Reforms Being Implemented or Under Consideration in Major Economies

Country	Retirement Age Reforms
Germany	Retirement age to increase gradually to 66 by 2023 and to 67 by 2029
U.S.	Pension benefit age to rise gradually to reach 67 for those born in 1960 or later
U.K.	State pension age to increase for both men and women to 66 by October 2020, and further to 67 between 2026-28 and to 68 between 2044-46
Australia	Pensionable age scheduled to increase gradually to 67 by 2023
China	Under consideration to raise the retirement age for women by 1 year every three years and for men by 1 year every six years so that by 2045, the retirement age for both men and women would be 65
Japan	Under consideration to raise the retirement age to 70

Source: Country-specific pension documents and government press releases.

Figure 14: Retirement Age (years)



Source: Country-specific pension documents, OECD.

decade before the anticipated shift – so that the workforce can be prepared for it. This will also help plan in advance for pensions and other retirement provisions.

IV. CONCLUSION

7.31 This chapter is not merely an attempt to look at the changing population dynamics of the country but is meant as an illustration of how several of the common working assumptions of economists and policy-makers need to be revisited from time to time. This is even true for a commonly discussed topic such as the demographic dividend. It is important, therefore, that working assumptions and projections are constantly revised in light of new evidence (especially in the age of big data) for areas such as urbanization, energy requirements, forest cover, water availability, climate change and other long-term factors that have a large impact on the socio-economic context in which government policy interventions play out.

CHAPTER AT A GLANCE

- India is set to witness a sharp slowdown in population growth in the next two decades. Although the country as a whole will enjoy the "demographic dividend" phase, some states will start transitioning to an ageing society by the 2030s.
- A surprizing fact is that population in the 0-19 age bracket has already peaked due to sharp declines in total fertility rates (TFR) across the country. The national TFR is expected to be below replacement rate by 2021.
- Working-age population will grow by roughly 9.7mn per year during 2021-31 and 4.2mn per year in 2031-41.
- The proportion of elementary school-going children, i.e. 5-14 age group, will witness significant declines. Contrary to popular perception, many states need to pay greater attention to consolidating/merging schools to make them viable rather than building new ones.
- At the other end of the age scale, policy makers need to prepare for ageing. This will need investments in health care as well as a plan for increasing the retirement age in a phased manner.

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From *Swachh* Bharat to *Sundar* Bharat via *Swasth* Bharat : An Analysis of the Swachh Bharat Mission

08 CHAPTER

वसुधाकीटसर्पाखुमलसंदूषितोदकाः।
क्रिमिलं क्लिन्नं पर्णशैवालकदमैं। विवर्णं विरसं सान्द्रं दुर्गन्धं न हितं जलम्।। च.सू.

"The river having water polluted with soil and faeces, insects, snakes and rats and carrying rainwater will aggravate all doshas. Slimy, having insects, impure, full of leaves, moss and mud, having abnormal color and taste, viscous and foul smelling water is not wholesome."
— Charaka Samhita

Aligning with the ideals of Mahatma Gandhi, the Swachh Bharat Mission (SBM) was initiated in 2014 to achieve universal sanitation coverage by 2 October 2019. This flagship programme is, perhaps, the largest cleanliness drive as well as an attempt to effect behavioural change in the world ever. Even 67 years after India's independence, in 2014, around 100 million rural and about 10 million urban households in India were without a sanitary toilet; over 564 million, i.e. close to half the population, still practiced open defecation. Through SBM, 99.2 per cent of rural India has been covered in the last four years. Since October 2014, over 9.5 crore toilets have been built all over the country and 564,658 villages have been declared Open Defecation Free (ODF). As on 14 June 2019, 30 States/UTs are 100 per cent covered with Individual Household Latrine (IHHL). SBM has significantly improved health outcomes. To highlight the impact of SBM on health, new evidence is provided that SBM has helped reduce diarrhoea and malaria among children below five years, still birth and low birth weight (new born with weight less than 2.5 kgs). This effect is particularly, pronounced in districts where IHHL coverage was lower is 2015. Financial savings from a household toilet exceed the financial costs to the household by 1.7 times, on average and 2.4 times for poorest households. As sanitation gained over the last four years contributes to Sustainable Development Goals (SDGs), especially the SDG 6.2, the momentum must be sustained to make cleanliness an integral part of India's consciousness.

INTRODUCTION

8.1 Mahatma Gandhi once said, "Sanitation is more important than independence." Proper sanitation and hygiene are essential inputs not only for healthy and disease free living but also for a dignified life as a human being. The ancient Indus valley civilisation accorded prime importance to sanitation by meticulously integrating sanitation systems into town planning. Although sanitation and hygiene are considered to be virtues in all cultures and religions of the world, prevalence of unsanitary conditions have been a problem faced by most of the countries at some point of time in the process of their economic development. Many have alluded to the unhygienic conditions that prevailed in the industrial towns of 19th century Europe.

8.2 Lack of access to basic sanitation services continues to be a major problem in many parts of the world. In 2015, 2.3 billion people, globally, lacked basic sanitation services (JMP, 2017). Lack of sanitation has been recognised as a major problem in India. Even after 67 years of India's independence, in 2014, around 10 crore rural and about one crore urban households in India were without a sanitary toilet and over 55 crore – about half the country's population – still practiced open defecation. In fact, an unflattering national fact was that open defecation in India represented 60 per cent of open defecation globally. Poor sanitation costs India around 5.2 per cent of its GDP (LIXIL, Water Aid and Oxford Economics, 2016).

8.3 The Government's emphasis on working towards a clean India in mission mode was reflected in the speech of the Prime Minister, Narendra Modi from Rajghat at the Swachh Bharat Mission launch on 2 October, 2014, when he declared: "If people of India can reach Mars with minimal expenditure, why can they not keep their streets and colonies clean." The Swachh Bharat Mission (SBM) was launched as a multi-pronged approach to enhance the level of sanitation in the country. The focus under this mission has not just been on construction of toilets but also on effecting a behavioural change in the communities. The result has been substantial gains in health parameters as shown by various studies. The gains from a cleaner India are important inputs, directly as well as indirectly, for achieving broader economic development objectives.

SWACHH BHARAT MISSION-GRAMIN (SBM)

8.4 Recognising the need for urgent action on the sanitation front, on 2 October, 2014, the birth anniversary of Mahatma Gandhi, Prime Minister, Narendra Modi announced India's Swachh Bharat (Clean India) Mission to enhance the quality of life by promoting cleanliness, hygiene and eliminating open defecation. The targets of the mission are to be met by 2 October, 2019, coinciding with the 150th birth anniversary of the Father of the Nation.

8.5 SBM adopts a multi-faceted approach including:

- *Community participation*: Ensuring appropriate participation of the beneficiary/communities, financially or otherwise, in the setting up of the toilets to promote ownership and sustained use.
- *Flexibility in Choice*: SBM offers flexibility by building in a menu of options so that the poor/disadvantaged families can subsequently upgrade their toilets depending upon their requirements and their financial position. This is done to ensure that sanitary toilets are constructed, which ensures safe confinement and disposal of faeces. An illustrative list of technology options, with cost implications is provided to meet the user preferences and location-specific needs.
- *Capacity Building*: SBM augments the institutional capacity of districts to change behaviour at the grassroots level and strengthen the capacities of implementing agencies so that the programme could be rolled in a time-bound manner and collective outcomes could be measured.
- *Instil Behaviour change*: Incentivizing the performance of State-level institutions to implement activities for behavioural change among communities. Emphasising on awareness generation, triggering mind-set changes, leading to community behaviour change and demand generation for sanitary facilities in houses, schools, anganwadis, places of community congregation and for solid and liquid waste management activities.

- *Broad-based Engagement*: SBM set up the Swachh Bharat Kosh to encourage Corporate Social Responsibility and accept contributions from private organizations, individuals and philanthropists.
- *Use of Technology:* Information technology and social media is imperative to this program as it allows citizens to keep a check on the availability of toilets for every rural household in India. Nearly 90 per cent of all SBM toilets have already been geo-tagged. Many mobile applications have been launched by not only the government but also by few citizens, which direct the municipal corporations' attention towards unclean areas.

8.6 Under SBM, an incentive of ₹12,000 is provided for construction of Individual Household Latrines (IHHL) to eligible beneficiaries in rural areas and covers for provision of water storage. The central share for the incentive provided for IHHLs is 60 per cent and the State share is 40 per cent. For North Eastern States, Jammu and Kashmir and Special Category States, the central share is 90 per cent and the State share is 10 per cent. Additional contributions from other sources are also permitted. A total of ₹51,314.3 crore has been allocated since 2014-15 for SBM, out of which, ₹48,909.2 crore has been released (95.3 per cent). Additionally, a provision was made for Extra Budgetary Resources of ₹15,000 crore of which ₹8,698.20 crore has already been drawn. Details of the funds allocated for SBM and the funds released to the States/UTs since 2014-15 are given in Table 1.

Table 1: Details of funds allocated and the funds released for SBM (2015-19)

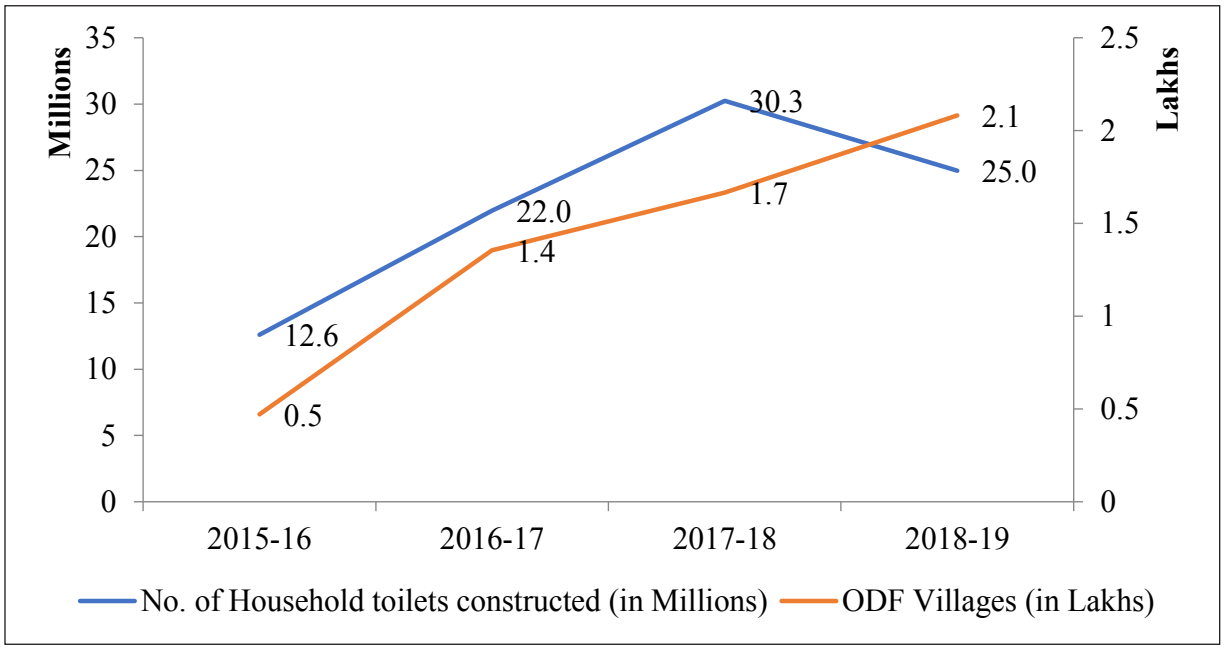
Years	₹ (in Crore)		
	Funds Allocated	Funds Released	Fund Utilization (per cent)
2014-15	2850.0	2730.3	95.8
2015-16	6525.0	6363.0	97.51
2016-17	10513.0	10272.0	97.70
2017-18	16948.27	16610.9	98.0
2018-19 (RE) *	14478.1	12932.96	89.3

* (up to 31.03.2019)

Source: Ministry of Drinking Water and Sanitation

8.7 As a result of the efforts of the Government, as on date, 98.9 per cent of India has been covered under SBM. Since October 2014, over 9.5 crore toilets have been built all over the country (till 14.06.2019). The total number of household toilets constructed from 2014 till 2018 shows a rapid progress over the last few years starting from less than 50 lakh household toilets per year and reaching up to over 3 crore toilets per year. A major focus of SBM has been on making villages Open Defecation Free (ODF). ODF would mean the termination of faecal-oral transmission, defined by a) no visible faeces found in the environment/village and b) every household as well as public/community institution(s) using safe technology option for disposal of faeces. The number of ODF villages have significantly increased since 2015 (Figure 1). As on 29.05.2019, 5,61,014 villages (93.41 per cent), 2,48,847 gram panchayats (96.20 per cent)- 6,091 blocks (88.60 per cent) and 618 districts (88.41 per cent) have been declared ODF.

Figure 1: Number of household toilets constructed and ODF villages (2015-19)

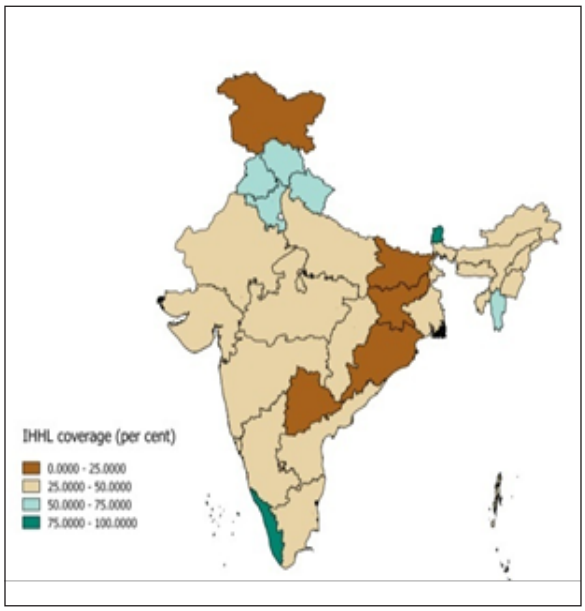


Source: Ministry of Drinking Water and Sanitation

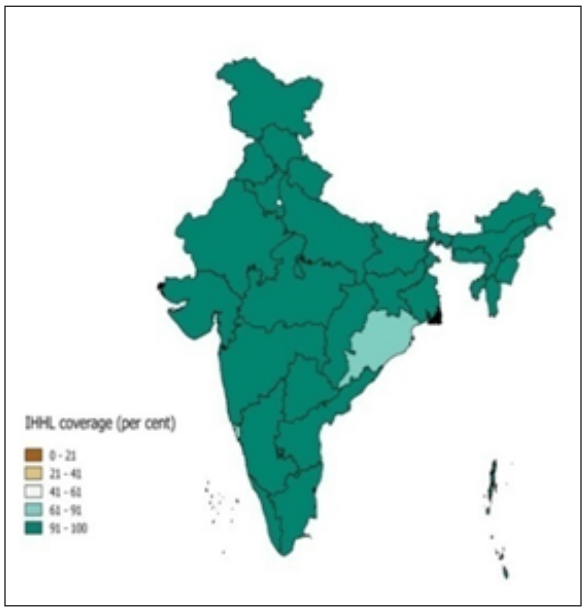
8.8 Most of the states showed significantly greater access to IHHL in 2018-19 as compared to 2014-15 (Figure 2). Most of the states have achieved the status of 100 per cent IHHL coverage and only few states are yet to achieve their targets (Figure 2). Goa has the lowest IHHL coverage followed by Odisha and Telangana. Karnataka and Arunachal Pradesh are very close to achieving 100 per cent IHHL coverage.

Figure 2: Individual Household Latrines in 2014-15 and 2018-19 (in per cent)

Individual Household Latrines (IHHL) 2014-15 (in per cent)



Individual Household Latrines (IHHL) 2018-19 (in per cent)

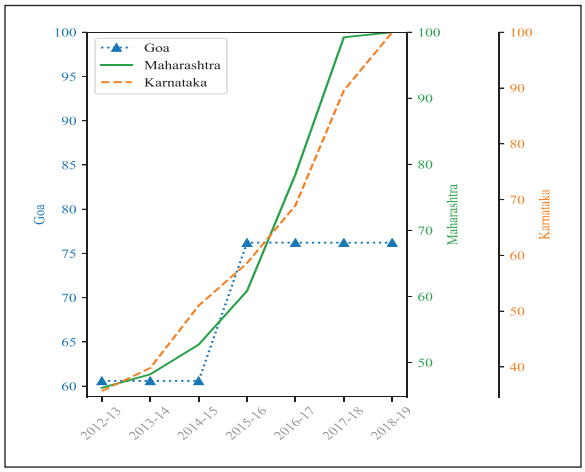


Source: Ministry of Drinking Water and Sanitation

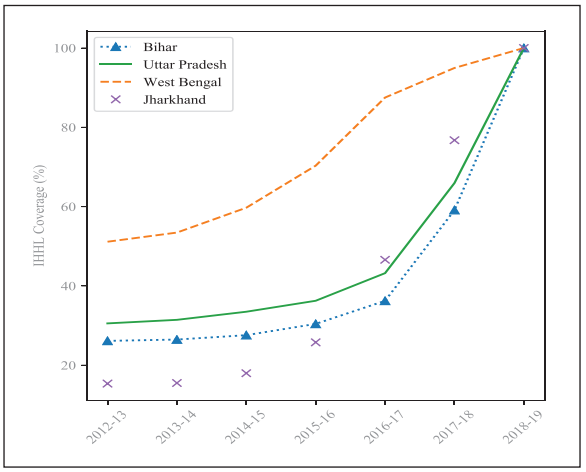
8.9 A comparison of some of the states in IHHL coverage and their neighbouring states has been depicted in Figure 3. Goa, in spite of starting from a very high baseline has shown a saturation of IHHL coverage to around 70 per cent only, whereas the neighbouring states of Maharashtra and Karnataka have shown significant improvements. In Odisha, coverage is yet to achieve 90 per cent level, whereas the neighbouring states of Andhra Pradesh, Jharkhand and Chhattisgarh have shown significant improvements. West Bengal continues to increase the coverage from its high base in 2012-13, whereas the neighbouring States of Bihar and UP have also shown momentum since 2015-16.

Figure 3: IHHL Coverage of some States in comparison to its neighbouring States

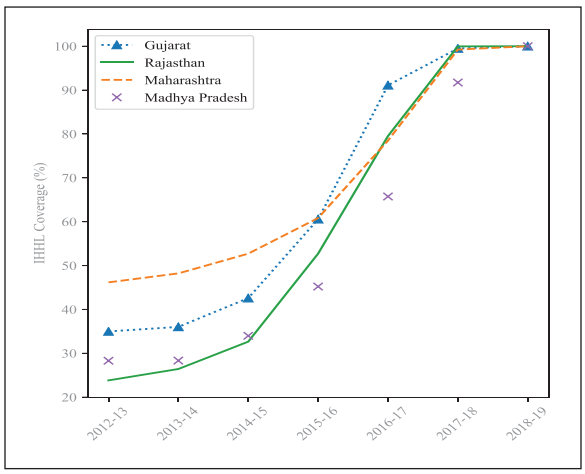
IHHL Coverage (%) in Goa & nearby States



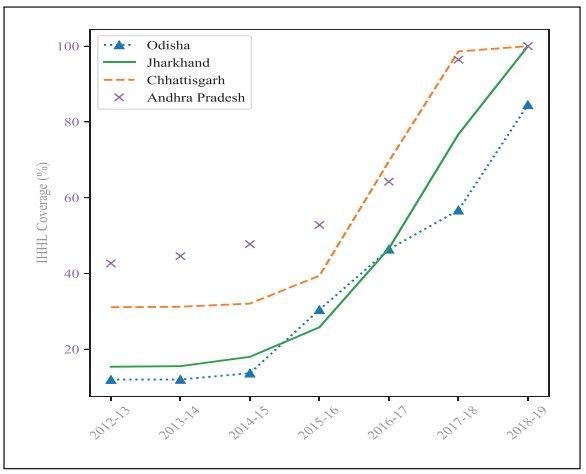
IHHL Coverage (%) in Bihar & nearby States



IHHL Coverage (%) in Gujarat & nearby States



IHHL Coverage (%) in Odisha & nearby States

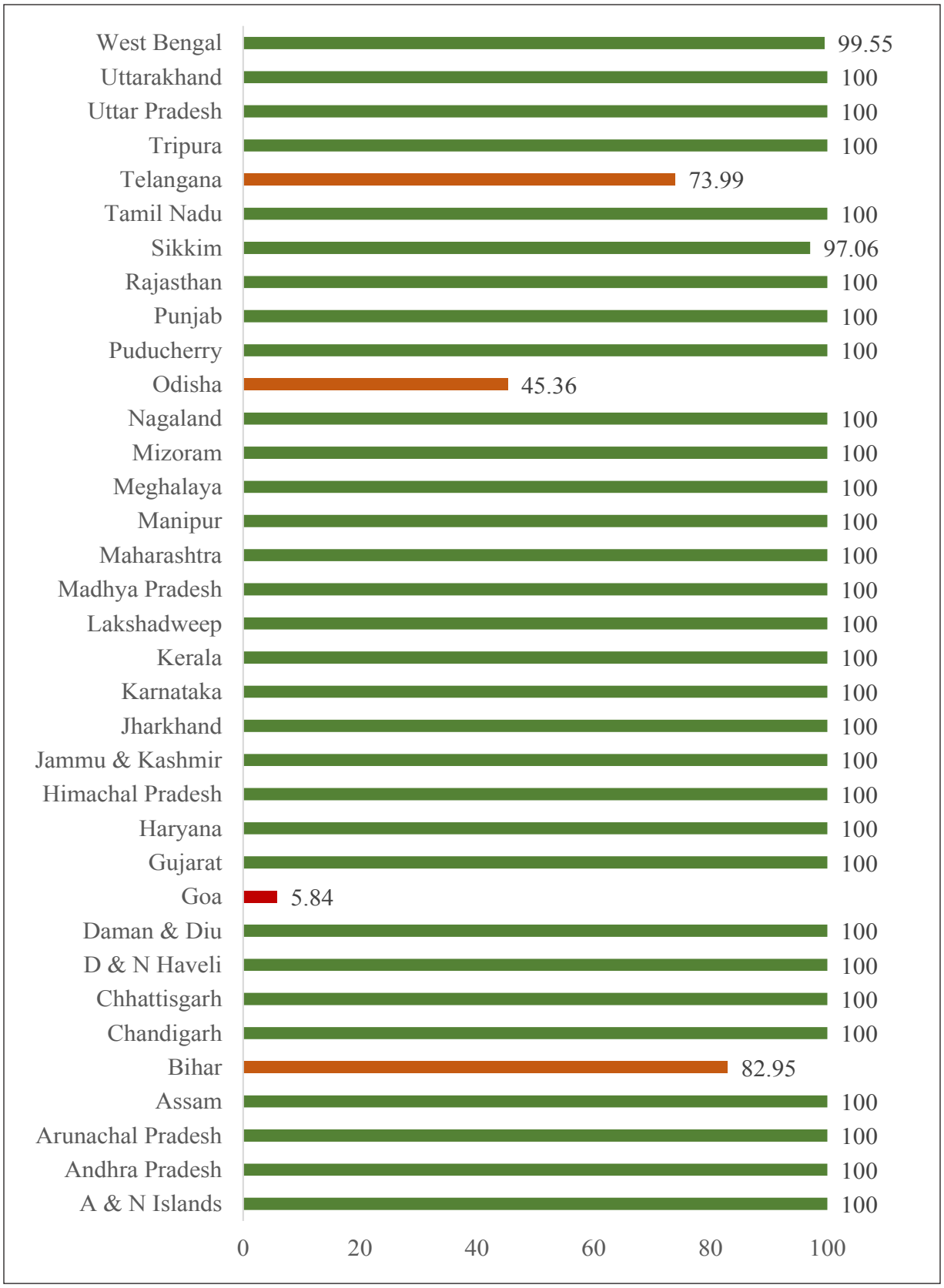


Source: Ministry of Drinking Water and Sanitation

COMPARISON ACROSS STATES FOR ODF STATUS (IN PER CENT)

8.10 Most of the states have achieved the status of 100 per cent ODF coverage and only few states are yet to achieve their targets (Figure 4). Goa has the lowest ODF coverage declared followed by Odisha, Telangana and Bihar. West Bengal and Sikkim are very close to achieving 100 per cent ODF coverage.

Figure 4: ODF status across States (in per cent)



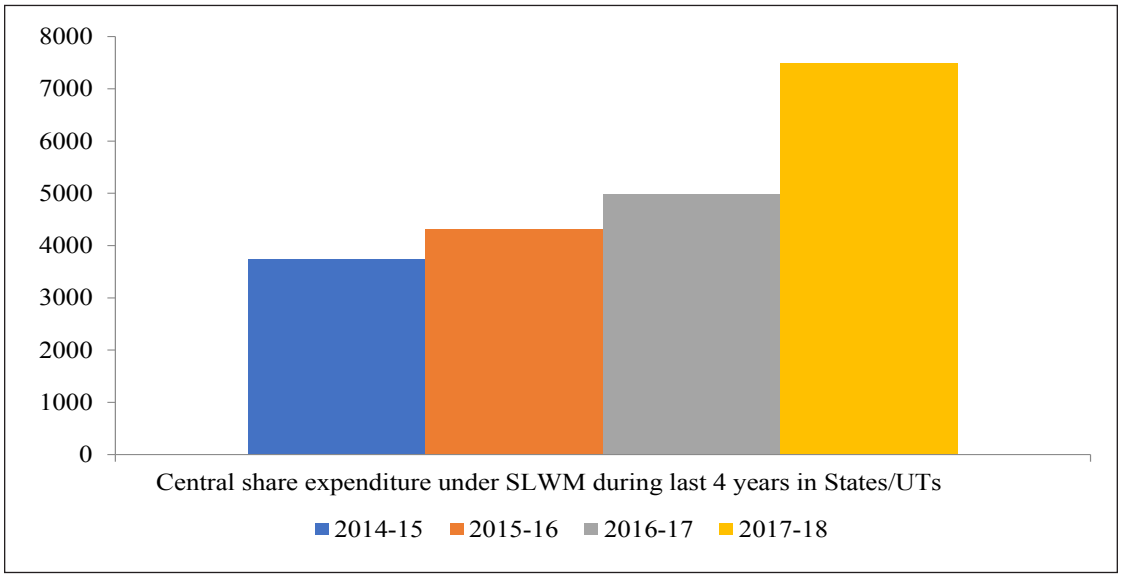
Source: SBM Dashboard as on 14th June 2019

8.11 The success of a scheme like the SBM depends not only on the infrastructure created but also on the resultant behavioural change and the associated changes in the patterns of toilet usage by individuals. The National Annual Rural Sanitation Survey (NARSS) 2018-19, conducted by an Independent Verification Agency (IVA) has found that 93.1 per cent of households had access to toilets during the survey period. Further, 96.5 per cent of the households in rural India that had access to a toilet, used them. The NARSS also re-confirmed the ODF status of 90.7 per cent of villages, which were previously declared and verified as ODF by various districts/ States. It is also interesting to note that 95.4 per cent of the villages surveyed were found to have minimal litter and minimal stagnant water.

SOLID AND LIQUID WASTE MANAGEMENT

8.12 Solid and Liquid Waste Management (SLWM) is another major component of SBM Mission. As scientific disposal of waste has a noticeable impact on social development, there is an urgent need for setting up the system for the efficient disposal of waste in various states, especially rural villages. In light of this, many states have undertaken various activities such as construction of waste collection centres, menstrual hygiene management activities, installation of bio-gas plants, construction of compost pits, installation of dustbins, system for collection, segregation and disposal of garbage, construction of drainage facility and leach pits and construction of soak pits and stabilization ponds. These activities require huge disbursement of funds from Central and State governments. Figure 5 highlights the Central share expenditure under SLWM during last four years in States/ UTs.

Figure 5: Central share expenditure under SLWM during last 4 years in States/UTs (₹ Lakh)



Source: Ministry of Drinking Water and Sanitation

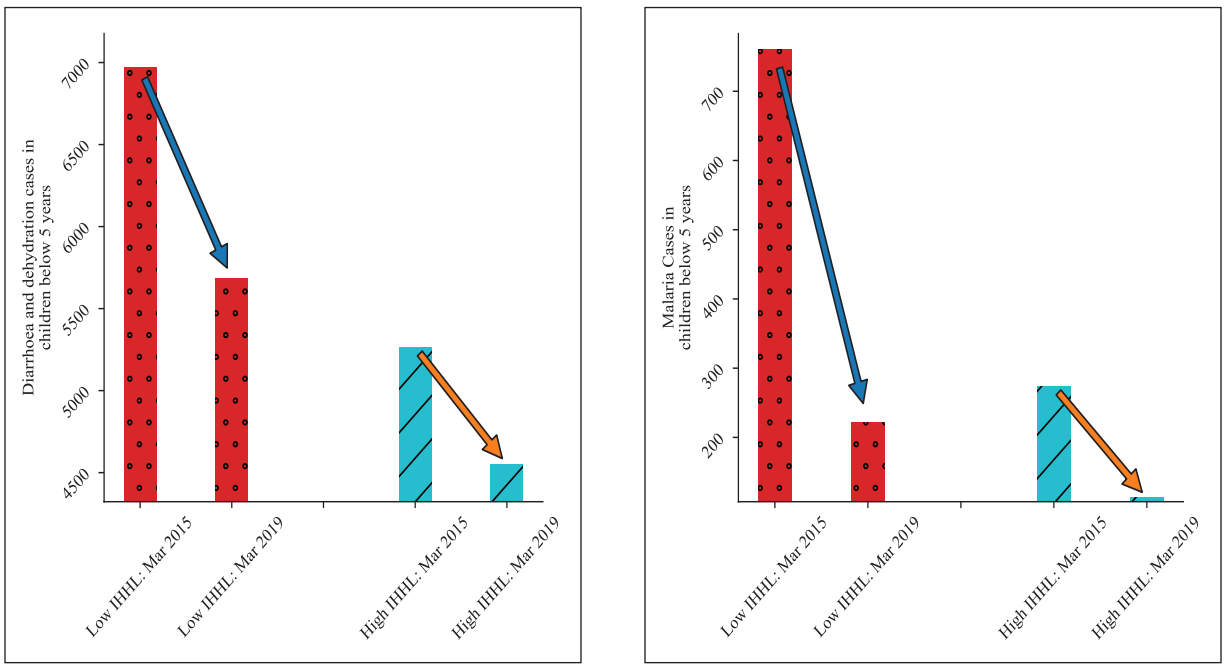
ANALYSIS OF SBM ON HEALTH ISSUES

8.13 The success of SBM can be assessed from the gains that the actions under the scheme had on the various socio-economic outcomes of the rural populace. A direct impact of improved sanitation should manifest on the health indicators. Diarrhoea,

a leading cause of death among the under-five children in India, accounted for around 11 per cent of deaths in 2013. Diarrhoea cases among children below 5 years in India have reduced significantly over the past 4 years.

8.14 As of March 2014, 50 per cent of the districts in India had IHHL Coverage less than 33.5 per cent (median value). In order to gauge the impact of SBM on health indicators, we estimated a Difference-in-Difference. For this purpose, we separate districts into two groups- the first group where IHHL coverage was low (below medium) and the second group where IHHL coverage was high (above medium) as of 2015. Because IHHL coverage become almost universal as of 2019 (Figure 2), the increase in IHHL coverage was significantly more in the first group of districts than in second group. Therefore, it is expected the impact on health to be larger for the first group than for the second group. To examine this thesis, we tracked the number of diarrhoea and malaria cases in children below 5 years, still birth and low birth weight cases in these two groups between March 2015, when SBM begin its implementation and March 2019, when most districts in India had IHHL coverage of 100 per cent. The first group i.e. districts with low IHHL coverage suffered more from diarrhoea, malaria, still births and low birth weight than the second group i.e. districts with high IHHL coverage–indicating that sanitation and hygiene is the primary reason for these health problems in the country. This finding points to the fact that adequate sanitation plays a key role in reducing diarrhoea, malaria, still births and low birth weight cases (Figures 6 & 7). The major finding of this analysis was that all these health indicators including diarrhoea and malaria cases improved significantly in both groups after the implementation of SBM.

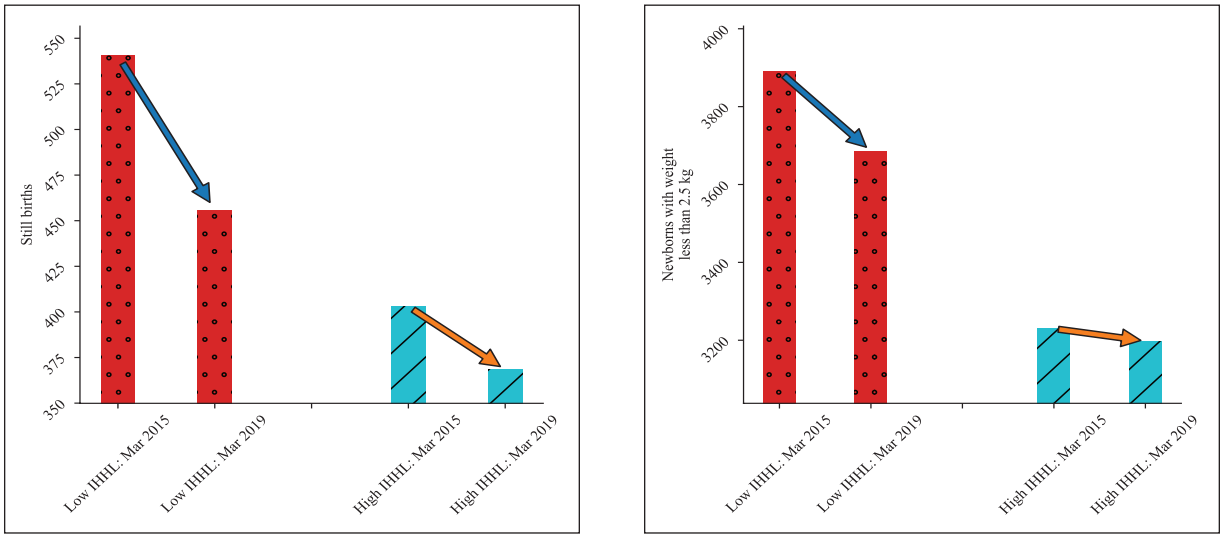
Figure 6: Impact of IHHL Coverage on Diarrhoea and Malaria cases in children below 5 years



Source: Health Management Information System, Ministry of Health & Family Welfare; IHHL data from SBM Dashboard-Swachh Bharat Mission – Gramin, Ministry of Drinking Water and Sanitation

Note: Total of 500 districts of India are divided into two parts: first that had IHHL coverage below 33.5 per cent in March 2014 and second that had IHHL coverage above 33.5 per cent in March 2014.

Figure 7: Impact of IHHL Coverage on Still Births and New-borns with weight less than 2.5 kg



Source: Health Management Information System, Ministry of Health & Family Welfare; IHHL data from SBM Dashboard-Swachh Bharat Mission – Gramin, Ministry of Drinking Water and Sanitation

8.15 Diarrhoea cases reduced from around 6,968 and 5,262 in 2015 to 5,683 and 4,550 in 2019 in the first and second group respectively. Malaria cases also dropped from around 761 and 273 in 2015 to 222 and 113 in 2019 in the first and second group respectively. Still births came down from 540 and 403 in 2015 to 456 and 368 in 2019 in the first and second group respectively. Low birth-weight cases declined from 3,890 and 3,230 in 2015 to 3,686 and 3,198 in 2019 in the first and second group respectively. While this study shows that sanitation has an important role to play in reducing diarrhoea and malaria, there may be other factors like distribution of mosquito nets, fogging machines and construction of Gambusia fish hatcheries under the National Vector Borne Disease

Figure 8: Diarrhoea in Indian States

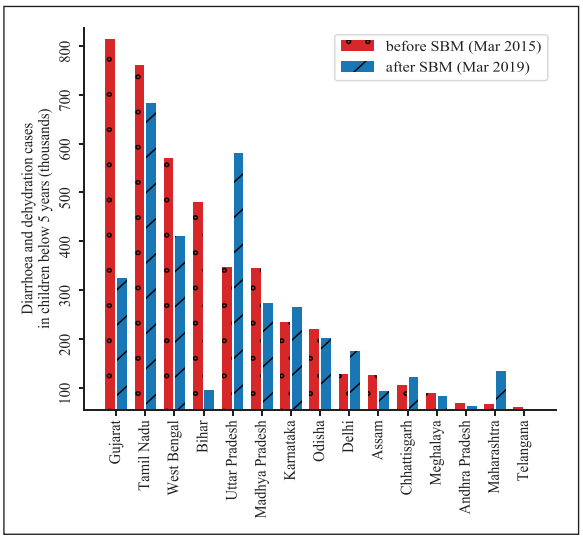
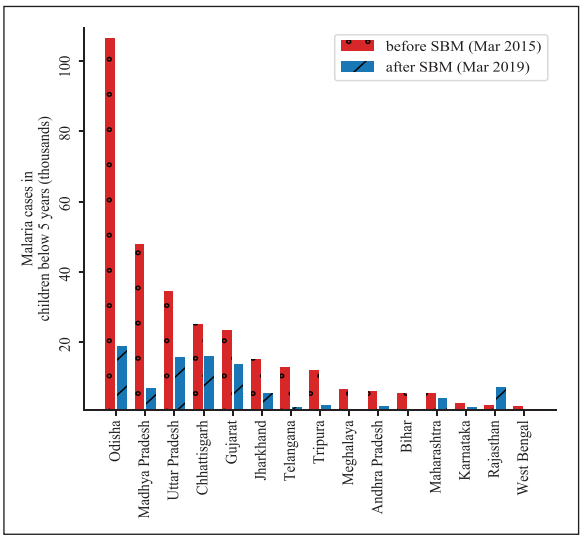


Figure 9: Malaria in Indian States



Source: Health Management Information System, Ministry of Health & Family Welfare

Figure 10: Still Births in Indian States

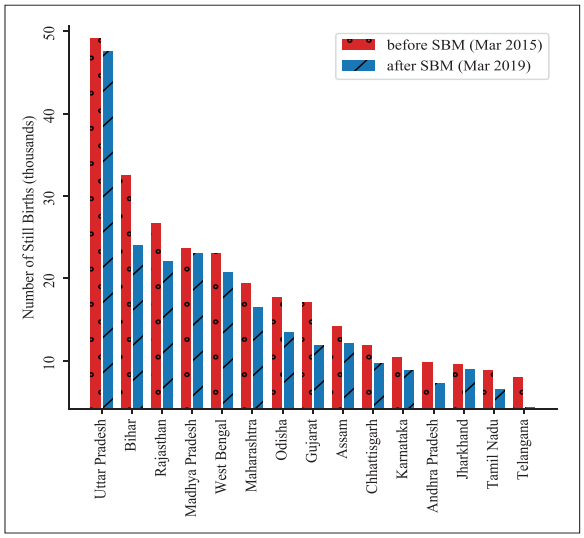
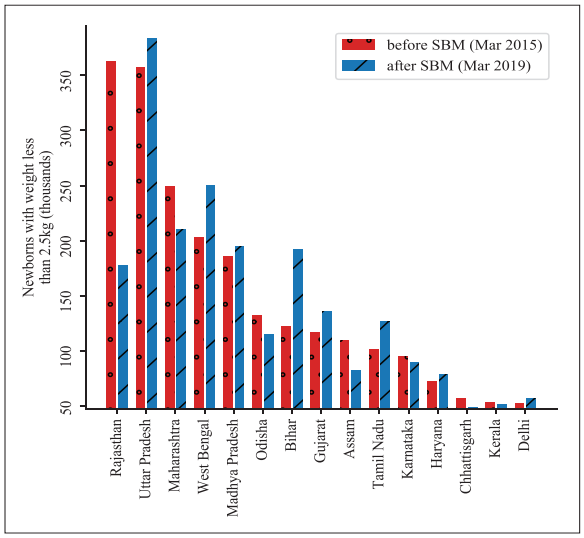


Figure 11: Low Birth Weight Cases in Indian States



Source: Health Management Information System, Ministry of Health & Family Welfare

Note: Low birth weight cases indicate new borns with weight less than 2.5 kgs.

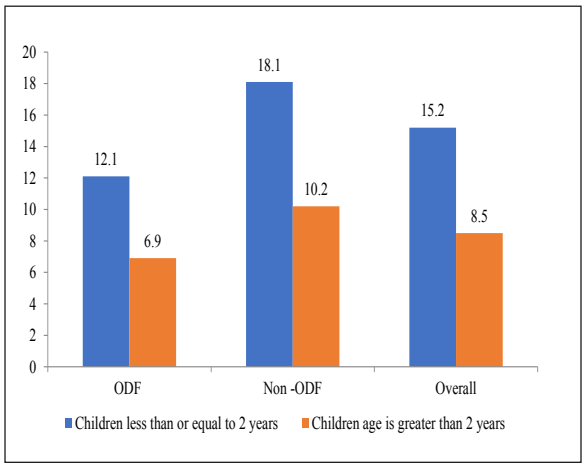
Control Programme and provision of safe drinking water, Oral rehydration solutions (ORS) and zinc, hand washing and personal hygiene under Integrated Action Plan for Prevention and Control of Pneumonia and Diarrhoea that have also played an important role in reduction of malaria and diarrhoea, but are not in the scope of this study.

8.16 With improved sanitation and 100 per cent ODF, diarrhoea cases reduced significantly in many states like Gujarat, Tamil Nadu, West Bengal & Bihar (Figure 8). Similarly, improvements are evident in malaria, still births and low birth weight cases (Figures 9, 10 & 11).

IMPACT OF SBM: FEW INDEPENDENT STUDIES

8.17 The Sanitation Health Impact Assessment study was conducted by Ministry of Drinking Water and Sanitation (MoDWS), to understand the impact of ODF status on the key child health and nutritional indicators in five states- Karnataka, Madhya Pradesh, Rajasthan, Uttar Pradesh and West Bengal. Non-ODF districts were selected to ensure socio-cultural and regional similarity across geographies within the state. Becoming ODF had a positive impact on the child health and nutrition, evident from the fact that the health and nutritional indicators of the children and mothers belonging to the ODF areas were comparatively better than their non-ODF counterparts (Figure 12).

Figure 12: Prevalence of diarrhoea in ODF and Non –ODF areas in 2017 (in per cent)

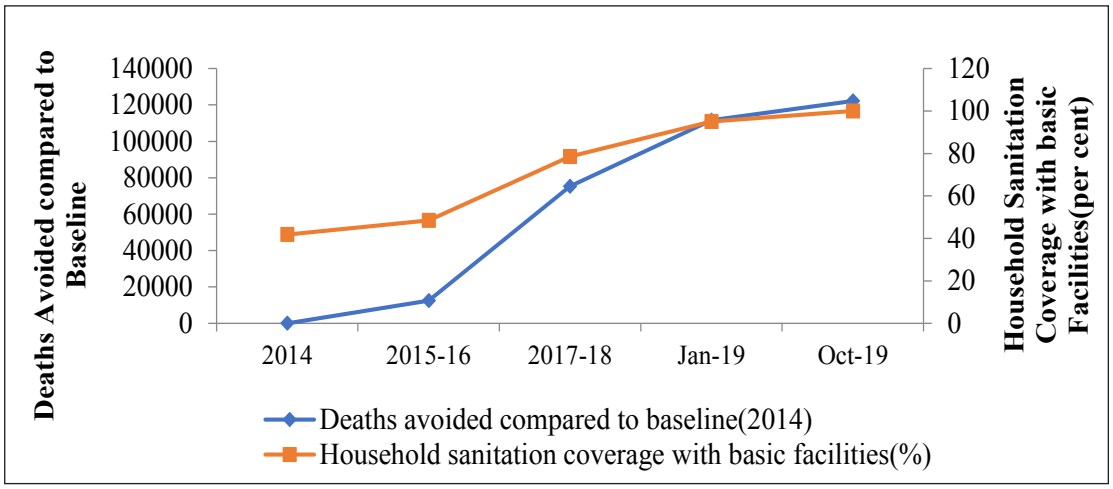


Base (All children): 4985

Source: Ministry of Drinking Water and Sanitation

8.18 Another study, "Swachh Bharat Mission – Preliminary estimations of potential health impacts from increased sanitation coverage" conducted by World Health Organization (WHO) to estimate health gains based on the latest available evidence linking sanitation and mortality from diarrhoeal disease, showcased initial estimates of expected health gains from reduced diarrhoeal disease due to increased sanitation coverage with the SBM initiative. The study results show that in 2014, i.e. before the start of the SBM, there were an estimated 140,000 deaths from diarrhoeal disease attributable to unsafe sanitation; about 39,000 of those attributable deaths occurred in children younger than five years. Since the start of the SBM, mortality from unsafe sanitation is estimated to have declined to about 50,000 deaths in 2017-2018. The study shows that there is a clear relation between progress on sanitation coverage and health gains (Figure 13).

Figure 13: The Assessed and Projected Progress on Sanitation Coverage and Health Gains



Source: World Health Organization (WHO)

8.19 Prior studies have shown how important sanitation and hygiene are in economic terms in India, as well as what it would cost India to implement. For example, the World Bank estimated the economic impacts of inadequate sanitation in India in the year 2006 – showing an annual economic impact of ₹2.4 trillion (US$ 53 billion), implying a per capita annual loss of ₹2,180 (US$ 48) or 6.4 per cent of the GDP in the same year (World Bank 2011). Hence, the costs of inadequate sanitation and the expected gains from improved sanitation, are considerable. The majority of SBM interventions and their associated costs occur at community and household level. Approximately 8 per cent of the national government's overall contribution is allocated to social and behaviour change communication costs associated with programme delivery, while the remaining 92 per cent is required to be spent on incentivising household toilets and hand washing stations.

8.20 A recent study conducted by UNICEF on behalf of MoDWS assessed the economic impacts (benefits) of SBM. The study focused on the household and community financial and economic benefits as well as costs of improved sanitation and hygiene.The study found that on an average, every household in an open defecation free village saved about ₹50,000 per year on account of financial savings due to lower likelihood of disease from using a toilet and practicing hand washing and the value of time saved due to a closer toilet. Cost-

benefit ratios were presented under different perspectives, thus allowing conclusions to be drawn about the impact of the intervention on households, each with different policy conclusions. On the other hand, costs included investment and operational costs for toilet and hand washing station, including subsidies or resources provided by government or non-state actors, as well as financial and non-financial costs to households.

8.21 The findings of the study suggest that when costs and benefits are compared over a 10-year time period and when 100 per cent of households in a community use a toilet, the financial savings exceed the financial costs to the household by 1.7 times, on average. For the poorest households, the value is higher at 2.4 times. When household time savings (from closer toilet access and less sickness) and the time for cleaning and maintaining the toilet are valued, the benefits exceed costs by 3.0 times. When benefits of lives saved are included, the benefits exceed costs by 4.7 times. If the government contribution to the toilet cost is included, reflecting a broader societal perspective, the benefits exceed costs by 4.3 times (Table 2).

Table 2: Benefit-cost ratios from different perspectives at rate of toilet use of 100 per cent

	Household Financial Perspective	Household financial perspective + time impacts	Household financial perspective + time impacts+ lives saved	Social perspective(includes government subsidy)
All	1.7	3	4.7	4.3
Poorest	2.4	4	7	5.8
Q2	1.4	3.3	5.4	4.7
Q3	1.6	2.9	4.5	4
Q4	1.7	2.9	4.3	3.9
Richest	2.1	2.8	4	3.7

Source: Financial and Economic Impacts of Swachh Bharat Mission in India- UNICEF

8.22 In terms of the impact of SBM on the physical environment, a very recent study by UNICEF, in association with MoDWS indicates considerable impact on combating contamination of water, soil and food. The study was conducted on the basis of a list of ten ODF and ten non-ODF villages each in the states of Odisha, Bihar and West Bengal (total of 20*3=60 villages). Four villages of each classification (ODF versus non-ODF) were randomly selected from the shortlisted villages in each of these states (total of 8*3=24 villages). Overall, in terms of faecal contamination, ODF villages were, on average:

- 11.25 times less likely to have their groundwater sources contaminated (12.7 times less from contaminants traceable to humans alone).
- 1.13 times less likely to have their soil contaminated, 1.48 times less likely to have food contaminated and 2.68 times less likely to have household drinking water contaminated.

8.23 The findings from the study indicate that these substantial reductions may potentially be attributed to the improvement in sanitation and hygiene practices, as well as supportive systems such as regular monitoring.

WAY FORWARD

8.24 SBM has brought in a remarkable transformation and traceable benefits to the society as a whole. It is one of the largest cleanliness drives in the world. Many States have achieved the status of 100 per cent ODF and IHHL coverage, thereby has led to a sea change in the dignity of people, especially women. This mission acts as a driver for eliminating the gender disparity through the construction of gender-specific latrines in public areas such as schools, roads and parks. This public movement will have indirect positive impact on society by increasing the enrolment ratio of girls in schools and improving health standards.

8.25 Through SBM, 99.2 per cent of the rural India has been covered. Since October 2, 2014 over 9.5 crore toilets have been built all over the country and 564,658 villages have been declared ODF. India's phenomenal journey towards sanitation for all has ensured the social, environmental and economic gains by ensuring that the behavioural change gets rooted in people's consciousness. The Mission has brought one of the largest behavioural changes in its citizenry. The mission mirrors the National Developmental priorities by focusing on the gender equality and women empowerment. Importantly, it is also aligned with the 2030 global sustainable development agenda and SDGs especially the SDG 6.2 – "By 2030, achieve access to adequate and equitable sanitation and hygiene for all, and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations".

8.26 Yet, India's challenge is an enormous one. Construction of toilets is one part of the solution for a clean India. There are various facets for a clean India. The dream of clean India can only be realized by addressing these multiple facets – maintaining a culture of *swachhata* at public places beyond individual houses, cleaning water bodies, scientific waste management, dealing with plastic menace, controlling air pollution, etc.

8.27 To sustain the momentum created and behavioural change, a number of actions would have to be taken on a continuous basis such as motivation of "agents of change" at the ground level, impart training to field agents, appointment of sanitation Ambassadors to campaign and create awareness especially on health benefits, obtain systematic feedback from users. Attention must also be accorded to the sewer construction and water availability.

8.28 Going forward, SBM should focus on achieving 100 per cent disposal of solid and liquid waste. Currently, many states are not concentrating enough on this aspect which could pull us back to where we were a few years back. Scientific techniques for the safe and effective disposal of waste should be the next on the agenda for this mission. As Indian economy grows, people are also on the move for various activities- for better education, for accessing better health, transport, hospitals, and tourism purposes- imparting strongly the culture of *swachhata* at public places and maintaining it should be an important part of clean India.

8.29 The cleaning of rivers should be an integral part of clean India, along with coordinated activities between Centre and States such as treatment of industrial effluence, drain bio-remediation, river surface cleaning, rural sanitation, river front development, afforestation and biodiversity conservation etc.

8.30 To continue the momentum created by SBM, the availability of financial resources intermixed with changing mind-sets have to be ensured. Annual monitoring of the various rural villages of different states has to be guaranteed for the effective formulation of different policies and their implementation. As the resource requirements are large, there

is a need to facilitate and sustain innovative financing mechanisms by exploring the suitability of various financial instruments in specific contexts and interventions. For example, micro-financing, concessional loans, corporate social responsibility and crowd funding align with local government financing. Private Partnership and Corporate Social Responsibility can ensure, in specific contexts, a smooth flow of funds for the procurement of various scientific technologies for waste disposal and awakening masses. However, Governments must assign significant weight to the allocation of adequate resources as improvement in sanitation is one of the key determinants for the wider economic development of the economy.

8.31 A clean India should also lead to environment friendly green India. Keeping the surroundings clean and maintaining hygiene would have tremendous environmental benefits. SBM needs to incorporate environmental and water management issues for long term sustainability and improvements. The issues relating to water availability are expected to be exacerbated by the effects of climate change and incidence of extreme weather events. Investment in the toilet and sanitation infrastructure in future, therefore, demands incorporation of principles of sustainability, circular economy, and adoption of eco-friendly sanitation technologies. Finally, all these efforts together endeavour into culminating a *Swachh* (Clean), *Swasth* (Healthy) and *Sundar* (Beautiful) Bharat that we dreamt for us and future generations to inherit which will be a real tribute to the 'Father of the Nation'.

CHAPTER AT A GLANCE

- SBM, one of the largest cleanliness drives in the world, has brought in a remarkable transformation and traceable health benefits.
- Even 67 years after India's independence, in 2014, around 10 crore rural and about 1 crore urban households in India were without a sanitary toilet; over 56.4 crore, i.e. close to half the population, still practiced open defecation. Through SBM, 99.2 per cent of the rural India has been covered. Since October 2, 2014 over 9.5 crore toilets have been built all over the country and 564,658 villages have been declared ODF.
- Becoming ODF has reduced deaths due to diarrhoea, malaria especially in under-five children, still births and new-borns with weight less than 2.5 kg and thereby improved child health and nutrition. This effect is particularly pronounced in districts where IHHL coverage was lower.
- Financial savings from a household toilet exceed the financial costs to the household by 1.7 times, on average and 2.4 times for poorest households.
- Going forward, SBM needs to incorporate environmental and water management issues for sustainable improvements in the long-term.

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Enabling Inclusive Growth through Affordable, Reliable and Sustainable Energy

09 CHAPTER

"सूर्यआत्माजगतस्तस्थुषश्च"
Sun is the soul of all animate and inanimate
-Rig Veda

Energy is vital for development and prosperity of any economy. India, however, lags behind significantly in energy usage: despite accounting for 18 per cent of world's population, India uses only around 6 per cent of the world's primary energy. Energy poverty has been more pervasive in India than income poverty: 53 per cent of our population could not access clean cooking in 2017 when compared to 30 per cent for China, four per cent for Brazil and less than one per cent for Malaysia. With an increase of per capita energy consumption by 2.5 times, India will be able to increase its real per capita GDP by US$ 5000 (in 2010 prices). Additionally, if India has to reach the HDI level of 0.8, it has to increase its per capita energy consumption by four times. India's emphasis on energy efficiency over the decades has helped significantly in serving the country's energy needs. Energy efficiency programmes have generated cost savings worth more than ₹50,000 crores and a reduction of about 110 million tons of CO_2 emission in 2017-18. While the share of renewables in total generation has increased from 6 per cent in 2014-15 to 10 per cent in 2018-19, India still needs investment in renewable energy of more than US$ 250 billion over the next decade. As electric vehicles represent the next generation in sustainable mobility, India must emphasize on them. Currently, the market share of electric cars is only 0.06 per cent when compared to 2 per cent in China and 39 per cent in Norway. Access to fast charging facilities must be fostered to increase the market share of electric vehicles.

INTRODUCTION

9.1 As witnessed over the past two centuries, energy has been the driving force behind the process of economic development: greater access to energy has fostered economic growth as well as other indicators of human development. India has a per-capita energy consumption of only about one-third of the global average. Within this consumption, access to clean fuel is unevenly distributed spatially in rural vis-à-vis urban areas and socio-economically when seen across income groups. India, therefore, needs to quadruple its per-capita energy consumption to meet the rising aspirations of its citizens. This will also enable India to achieve the human development status of an upper-middle-income country.

9.2 India's energy needs have been complemented by efforts to use energy

efficiently in the last three decades. The overall electricity savings due to adoption of these energy efficiency measures is estimated at 7.21 per cent of the net electricity consumption in 2017-18. Total thermal energy saved is 2.7 per cent of the net thermal energy consumption and 2.0 per cent of the net energy supply during the same period.

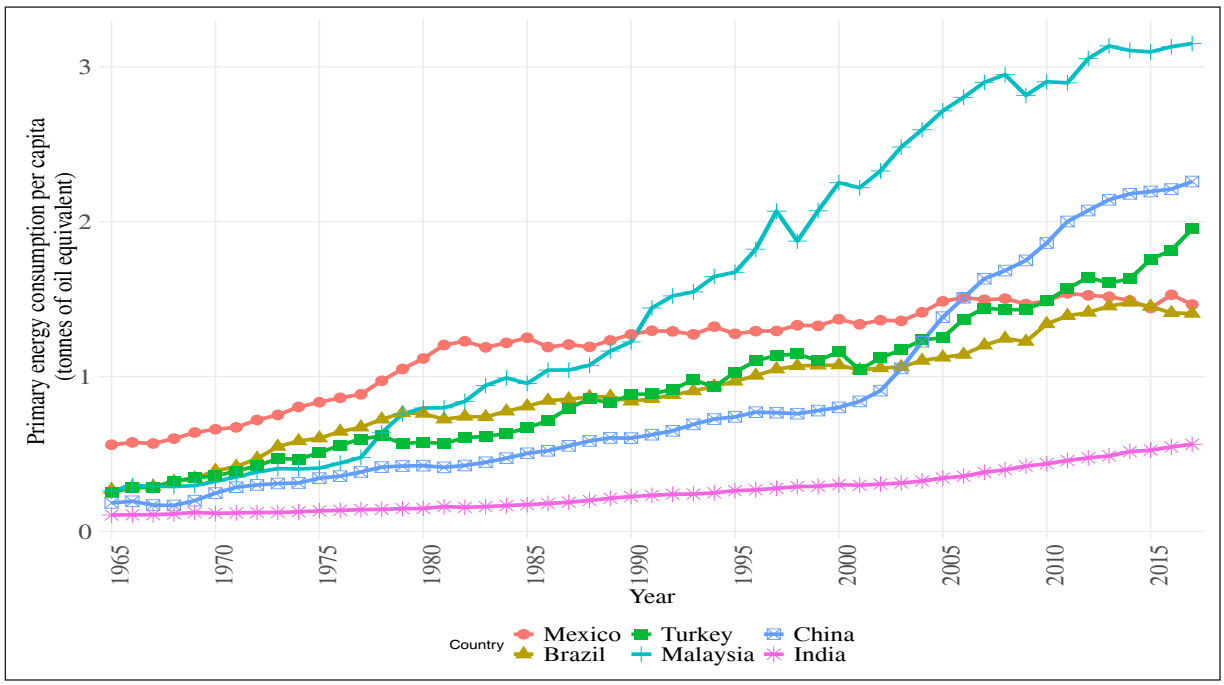
9.3 Further, India has also strived to increase the share of energy from sustainable sources. The share of renewables in total generation has increased from 6 per cent in 2014-15 to 10 per cent in 2018-19. Electric vehicles (EVs) represent the next generation in sustainable mobility and need to be encouraged. The adoption rate of electric vehicles has been slow, largely due to the lack of charging infrastructure in the country and the time taken for completely charging the EVs. A policy push is therefore required to devise universal charging standards for the country as a whole and to provide adequate charging infrastructure.

ENERGY FOR PROSPERITY

9.4 Energy is an integral component of the growth process for any economy. The present day developed countries pursued a path of energy-intensive industrial growth to reach the standards of living witnessed by them today. The upper-middle-income countries have also seen per capita energy consumption rise with their rise in per capita incomes. Though India accounts for around 18 per cent of world's population, it uses only around 6 per cent of the world's primary energy. India's per capita energy consumption equals 0.6 tonnes of oil equivalent (toe) as compared to the global per capita average of 1.8 toe. India's per capita primary energy consumption lags that of the upper-middle-income countries by a considerable margin (Figure 1).

9.5 Historical experience across countries

Figure 1: Per Capita Primary Energy Consumption (1965-2017)

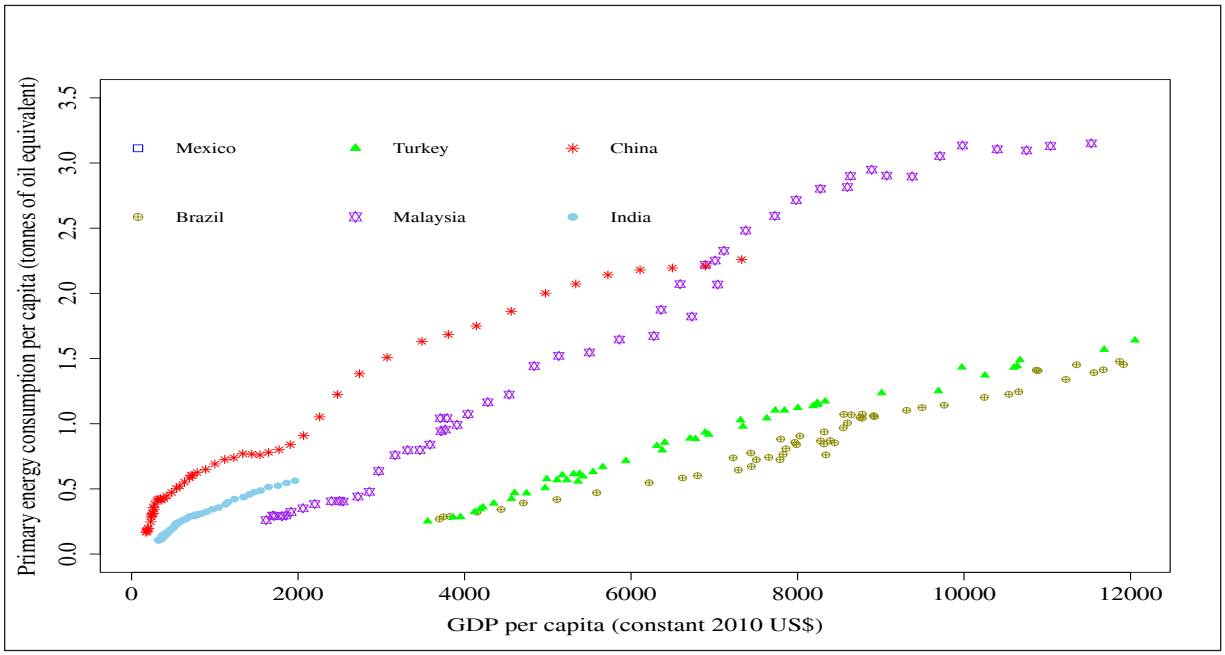


Source: Data on primary energy consumption from BP Energy Statistics, Population and Per-capita real GDP from World Bank Data

shows that in the initial years of economic development, increase in per capita GDP requires a large increase in primary energy per capita. A comparison can be made between India and China, both of which started from low levels of per capita primary energy consumption as well as per capita GDP. However, we can see that China was able to quickly increase its energy consumption and grew rapidly (Figure 2). In the medium-term, for India to achieve per capita GDP comparable to that of the upper-middle-income countries, we require greater energy resources and that too at a rapidly increasing rate. Energy intensity of India's GDP has been declining in the recent past, which is reflective of increases in the efficiency of energy use. However, India cannot become an upper-middle-income country without (i) rapidly raising its share of the global energy consumption commensurate with its share of the global population, and (ii) ensuring universal access to adequate modern commercial energy at affordable prices. It is also important to note that India's energy intensity of GDP started declining at a much lower level of per capita GDP as compared to the developed world. India's primary energy intensity of GDP started declining since 1991 at per capita GDP of around US$ 578 whereas US primary energy intensity of GDP started declining since 1970 at per capita GDP of around US$ 23,309 (at constant 2010 US$).

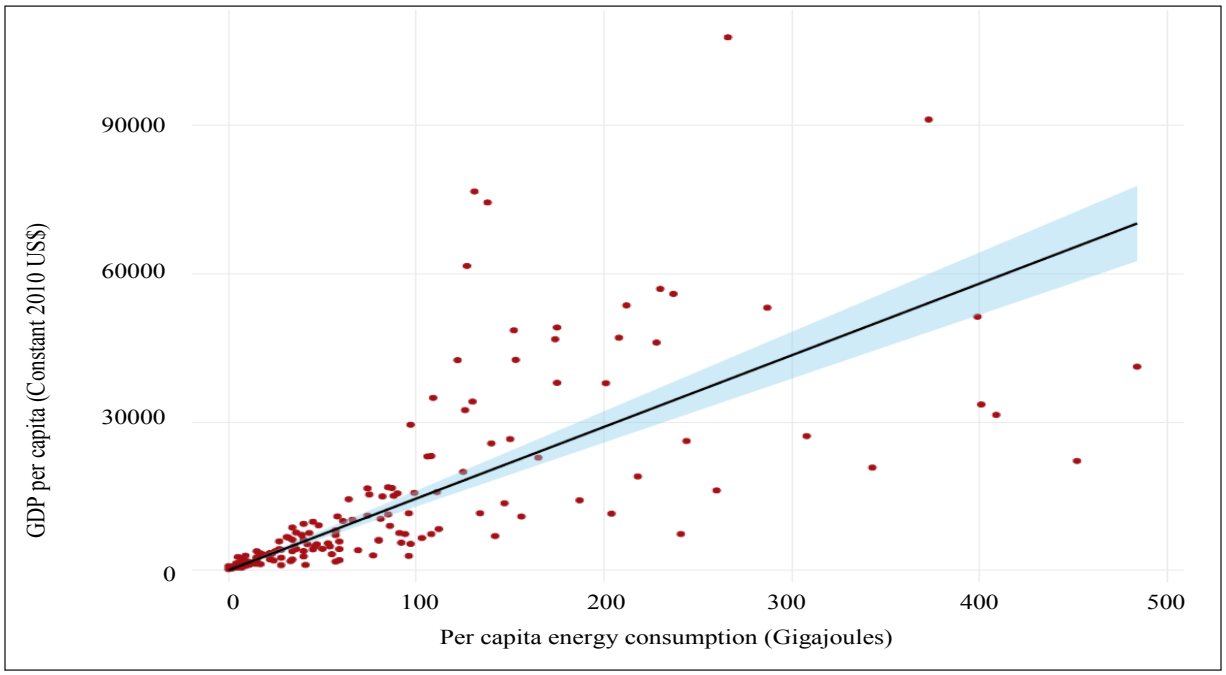
9.6 Figure 3 shows the relationship between per capita energy consumption and corresponding real per capita GDP for around 170 countries for the year 2017. A simple linear regression between the two variables indicates that one Gigajoule increase in energy consumption per capita corresponds to an increase of US$ 145 per capita in 2010 prices. Thus, India will have to increase its per capita consumption from the current 24 Gigajoules by 2.5 times to increase its real per capita GDP by US$ 5000 in 2010 prices, which will also enable it to enter the upper-middle income group. This will require huge energy resources that would also need to increase with time.

Figure 2: Per Capita Primary Energy Consumption and Per Capita GDP (1965-2017)



Source: Data on primary energy consumption from BP Energy Statistics, Population and Per-capita real GDP from World Bank Data

Figure 3: Per capita energy consumption and per capita GDP for various countries (2017)



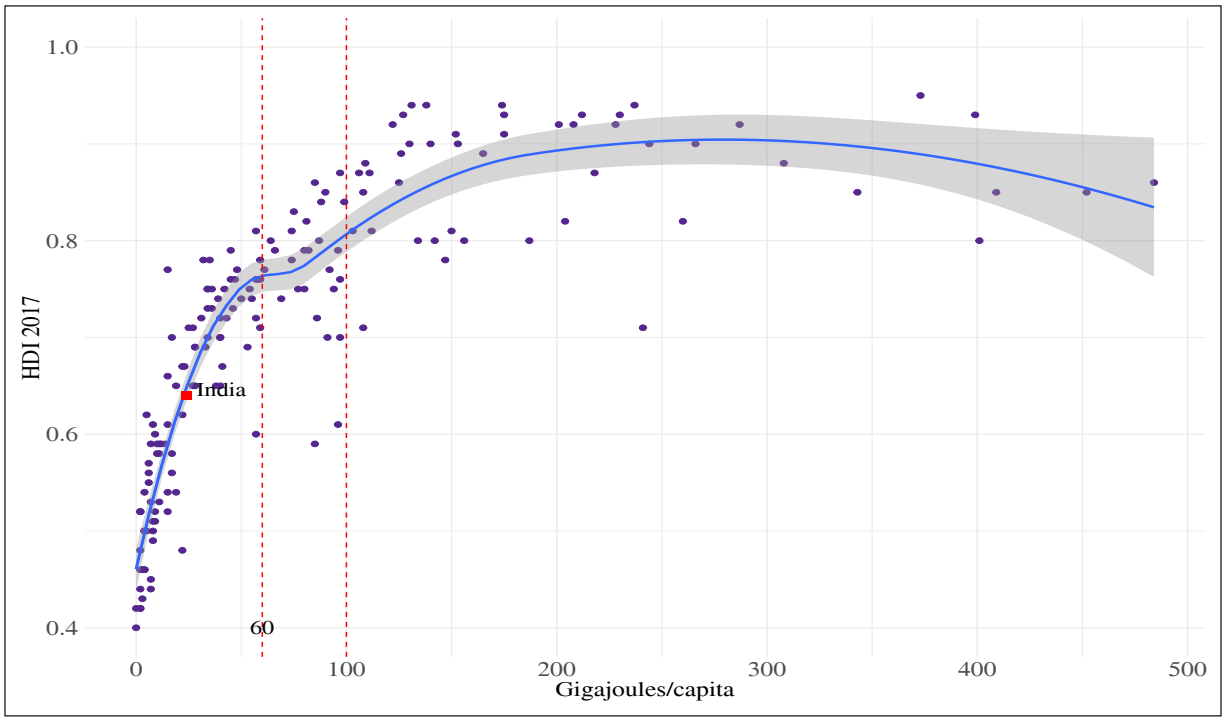
Source: Data on Per capita energy consumption from BP Energy Outlook 2019 and per capita GDP at constant 2010 US$ from World Bank Data.

9.7 Access to energy is important not just in its own right but also due to its linkages with other social indicators. The Sustainable Development Goal (SDG) No.7 on Affordable and Clean Energy is closely related to all other SDGs. This is highlighted by the strong relationship between Human Development Index (HDI) and Per capita energy consumption (Figure 4). At low levels of energy consumption, increases in per capita energy consumption leads to considerable increases in human development. The curve fitted to the data indicates that for countries in the sub 100 Gigajoules per capita energy consumption region, small increases in energy consumption correspond to large increases in HDI. A country with 100 Gigajoules of per capita energy consumption has, on an average, HDI of around 0.8 which is considered to be very high human development (http://hdr.undp.org/en/composite/HDI). India had a per capita energy consumption of 24 Gigajoules and a HDI of 0.64 in 2017 i.e., medium human development. India would have to quadruple its per capita energy consumption to reach a HDI of 0.8 and enter the group of countries with high human development.

ACCESS TO ENERGY – ENERGY POVERTY

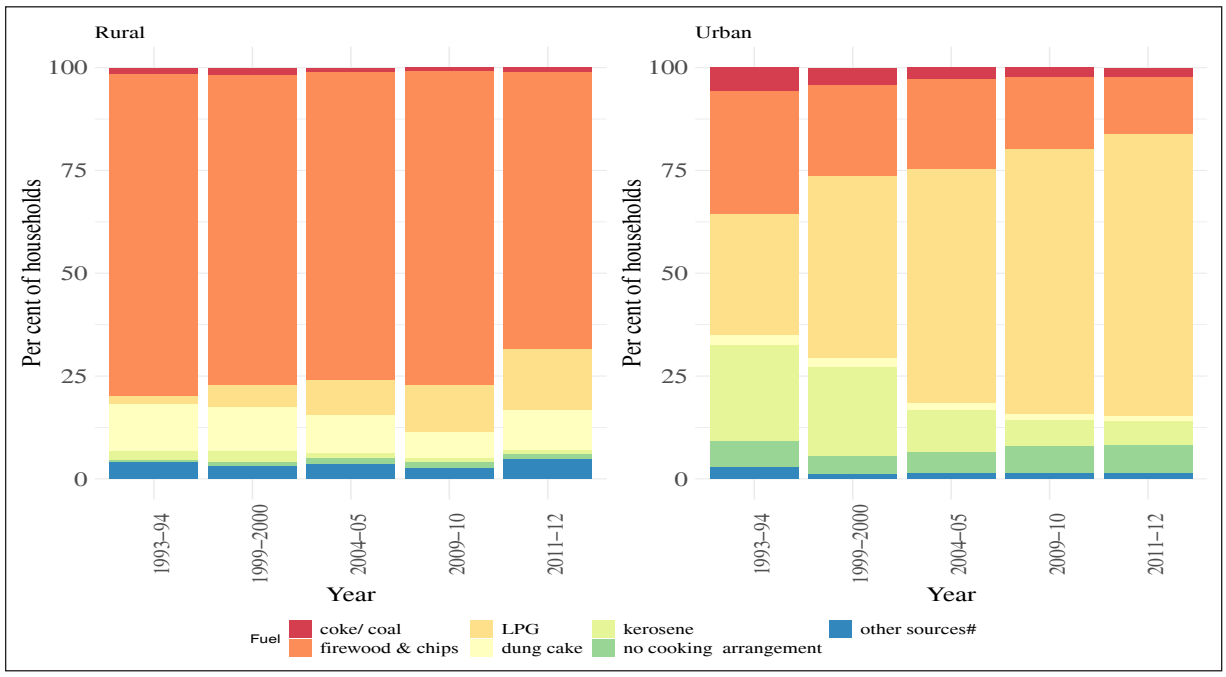
9.8 There is wide disparity between urban and rural areas in access to energy. A large proportion of the population especially in rural areas relies on non-commercial biomass such as firewood and dung cakes for their cooking/heating needs, thereby exacerbating health concerns due to poor indoor air quality. While the share of Liquefied Petroleum Gas (LPG) as a cooking fuel has increased over the years, the share of households reporting it to be as the primary source of energy for cooking has been low in the rural areas when compared with the urban areas (Figure 5). It is heartening to see a wide acceptance of LPG as the cooking fuel in urban areas.

Figure 4: Human Development and Per Capita Energy Consumption for a cross-section of countries (2017)



Source: Data from BP Energy Outlook 2019

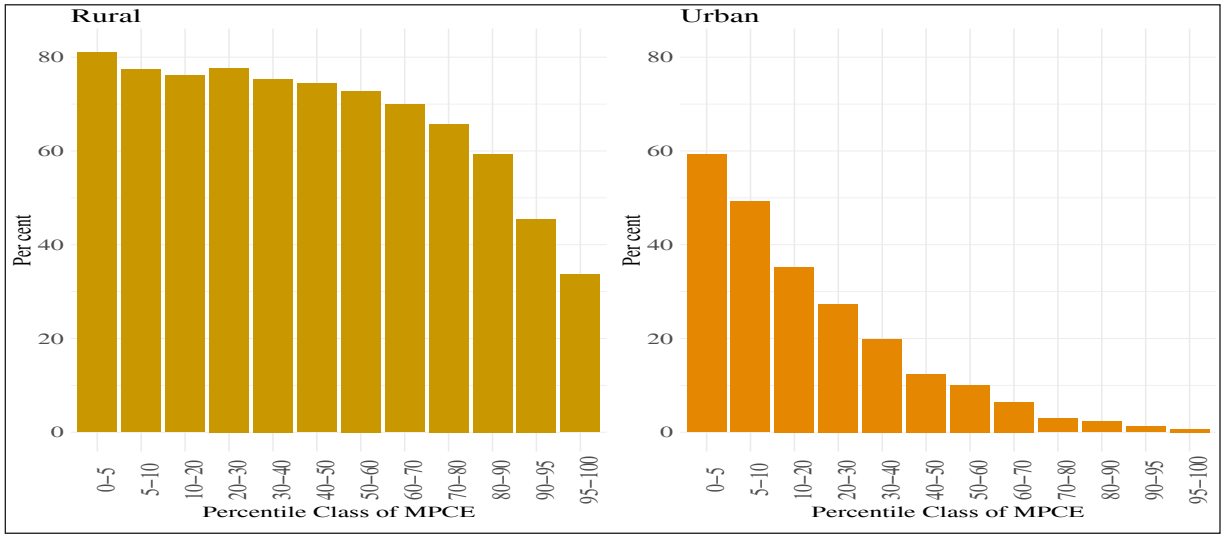
Figure 5: Distribution of households by primary source of energy used for cooking: all-India, 1993-94 to 2011-12



Source: Data from NSSO Report No.567: Energy Sources of Indian Households for Cooking and Lighting, 2011-12

Note: # includes gobar gas, charcoal, electricity, others

Figure 6: Percentage of households reporting 'firewood and chips' as primary source of energy for cooking (2011-12)

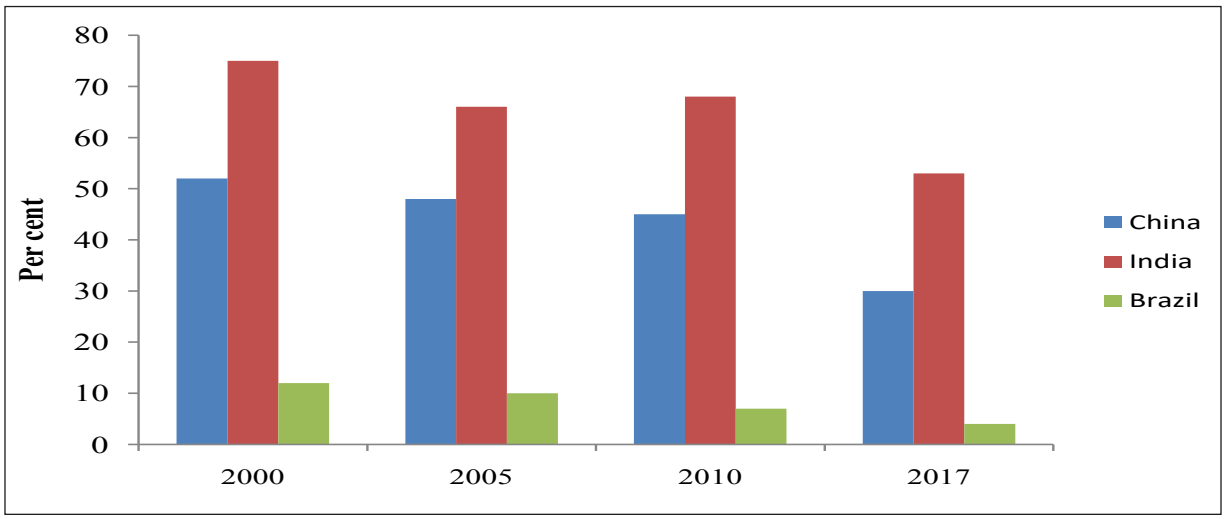


Source: Data from NSSO Report No.567: Energy Sources of Indian Households for Cooking and Lighting, 2011-12
Note: # includes gobar gas, charcoal, electricity, others MPCE=Monthly Per Capita Expenditure

9.9 While there is a large gap in energy access between the rural and urban areas, there remains a wide variation in the energy access between the households at various economic strata. Using the data from latest available consumer expenditure round of National Sample Survey, i.e. 2011-12, we find that around 81 per cent of rural households and 59 per cent of urban households in lowest five percentile classes of expenditure reported firewood & chips as their primary source of energy for cooking (Figure 6). As we move up the expenditure classes, we find that the reliance on firewood and dung cakes keeps falling and the use of LPG gains importance. However, even at the top five percentile classes in the rural areas, around 34 per cent of households in 2011-12, which is the latest year for which this data is available, reported firewood and chips to be the primary source of energy for cooking while only around 50 per cent of these households reported LPG as their primary energy source for cooking. This indicated that the problem of energy poverty has been more pervasive than income poverty. The access to clean cooking fuel has increased considerably in the recent years, especially through the efforts of the Government of India such as the Ujjwala scheme (Figure 7). As per IEA-1(2018), in 2017, 53 per cent of the population in India did not have access to clean cooking when compared with 68 per cent in 2010. However, this remains low when compared with other upper-middle-income countries such as 30 per cent for China, 4 per cent for Brazil and less than 1 per cent for Malaysia.

9.10 Government has been taking conscious efforts to make clean cooking fuel available to households. Pradhan Mantri Ujjwala Yojna was launched in 2016, with the aim to safeguard the health of women and children by providing them with clean cooking fuel. Around 7 crore LPG connections have been provided till April 2019 under the Scheme. Direct Benefit Transfer for LPG consumer (DBTL) scheme namely, 'PAHAL', in 54 districts of the country on 15 November, 2014 has also been launched to rationalize subsidies based on approach to cut subsidy leakages. As on 5 March, 2019, 24.39 crore LPG consumers have joined the scheme. LPG consumers, who join the PAHAL scheme, will get the LPG cylinders at non-

Figure 7: Percentage of population without access to clean cooking



Source: Data from IEA World Energy Outlook 2018

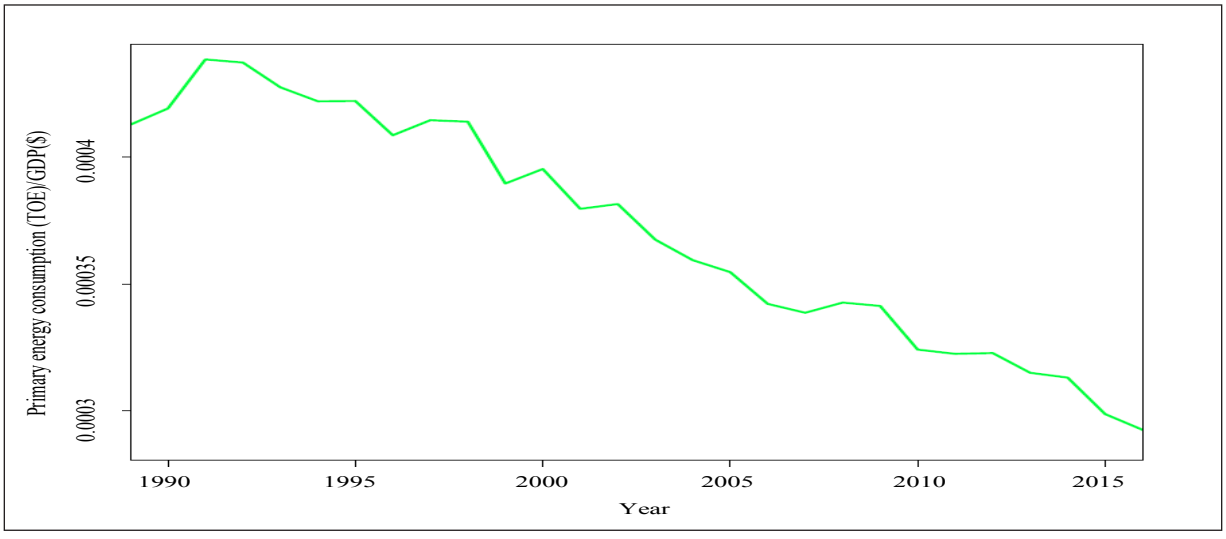
subsidized price and receive LPG subsidy (as per their entitlement) directly into their bank accounts. PAHAL has been recognized by the "Guinness Book of World Record" as the World's Largest Direct Benefit Scheme.

ENERGY EFFICIENCY

9.11 While India focuses in increasing its energy production and consumption, ensuring access to electricity for all and improving living standards, it also strives to ensure that it follows a growth path that delivers sustainable development and protect the environment. A large part of India's energy story also comes from the various energy efficiency measures that the country has implemented over the years.

9.12 The primary energy intensity of India's GDP has followed a falling trend over the years (Figure 8). India's primary energy intensity of GDP has fallen from 0.0004 toe in 1990 to 0.0002 toe in 2017. India understood the importance of energy efficiency measures

Figure 8: India's Primary Energy Intensity of GDP (1990-2017)



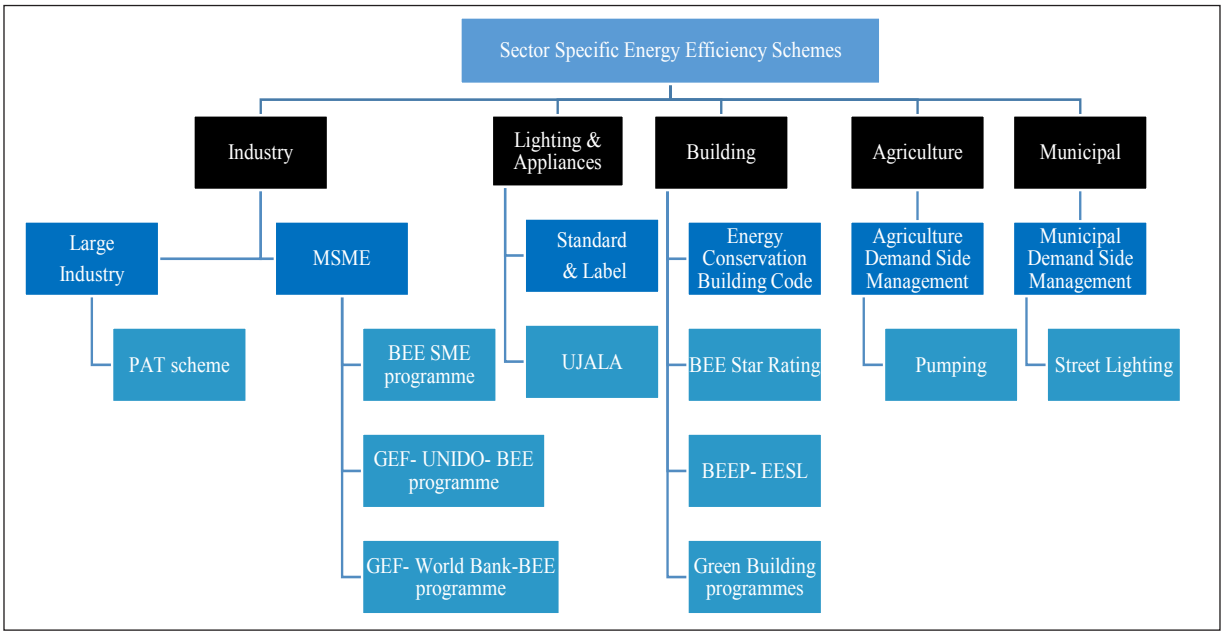
Source: Data on primary energy consumption from BP Energy Statistics, real GDP from World Bank Data

reasonably early in its economic development path and has embraced a number of energy efficiency measures in the last three decades. The aim of this section is to provide the reader an analysis of the impact of energy efficiency measures in terms of energy saved, emissions avoided, cost savings realized.

9.13 The term energy efficiency broadly means using lesser amount of energy to produce a given amount of output. For example, a light-emitting diode (LED) light bulb requires less energy than an incandescent light bulb to produce the same amount of light i.e., it is more energy efficient.

9.14 The institutional and legal framework in the country for energy efficiency has been strengthened through the Energy Conservation Act in 2001, which created the Bureau of Energy Efficiency (BEE). The overall size of the energy efficiency market in India is estimated to be US$ 22.81 billion (Energy Efficiency Services Limited (EESL's Business Plan, 2016-2021). Realizing the potential, Government of India with BEE in the lead undertook a number of schemes for promoting energy efficiency in various sectors across India (Figure 9 and Box 1).

Figure 9: Sector Specific Energy Efficiency Schemes



Box 1: Energy Efficiency Programmes: A Brief

Standards & Labelling Programme was launched in May, 2006 with an objective of providing the consumer an informed choice about the energy and cost saving potential of the labelled appliances/ equipment being sold commercially. This scheme entails laying down minimum energy performance norms for appliances/equipment, rating the energy performance on a scale of 1 to 5 with 5 being the most energy efficient one. The programme covers 23 appliances out of which 10 appliances are under the mandatory regime while the remaining 13 appliances are under the voluntary regime.

Buildings: The Energy Conservation Building Code (ECBC), which sets minimum energy standards for new commercial buildings having a connected load of 100 KW or contract demand of 120 KVA or more, has been updated by BEE in 2017. BEE has also launched the Eco-Niwas Samhita (Part 1: Building Envelope) for residential buildings in December, 2018. Hotels have also been assigned mandatory targets for reducing their energy consumption.

Small & Medium Scale Industries: BEE has implemented various energy efficiency demonstration projects in Textile, Bricks and Food Clusters. Post implementation energy audits have also been conducted in these clusters to measure the savings achieved by implementation of Energy Efficient Technologies.

Transport: Corporate Average Fuel Efficiency (CAFE) norms for passenger cars have been notified in April, 2015 and the fuel efficiency norms for Heavy Duty Vehicles for Gross Vehicle Weight greater than 12 tonnes were notified in August, 2017. Further, the fuel efficiency norms for light and medium commercial vehicles are under finalization and are being developed for tractors. BEE is also working towards faster adoption of electric vehicles and labelling program for vehicles.

Demand Side Management (DSM) Programmes: BEE had launched its demand side management schemes covering the areas on Agriculture, Municipal, and Distribution Companies (DISCOMs). Under the Agriculture DSM (AgDSM), MoU has been signed between Indian Council of Agricultural Research (ICAR) and BEE to create awareness for energy efficient pump sets and its operational practices. In order to tap the energy savings potential of municipalities, BEE undertook nation-wide awareness programmes to address energy efficiency in water pumping, sewage pumping, street lighting and public buildings across Urban Local Bodies (ULBs) in the country. BEE is carrying out preparation of DSM Action Plan, load research study of DISCOMs and capacity building of DISCOM officials across the country.

Industries: Perform Achieve and Trade (PAT) scheme has been launched for industries, in which mandatory targets are assigned to energy intensive industries for reducing the energy consumption. This is followed by conversion of excess energy savings into tradable instruments called Energy Saving Certificates (ESCerts). PAT cycle-I was completed in 2015 with a saving of 8.67 Million Tonne of Oil Equivalent (MTOE) and mitigation of about 30 million tonne of CO_2 emission. Platform for trading of ESCerts was launched in September, 2017. In total, about 12.98 lakh ESCerts were traded at a cost of about ₹100 crore. PAT Cycle II commenced from April, 2016 in which 621 Designated Consumers (DC) were notified. PAT scheme is being implemented on a rolling cycle basis i.e. inclusion of new sectors/DCs every year. PAT cycle-III was notified with effect from April, 2017 and PAT cycle — IV was notified with effect from 1 April 2018 and PAT cycle -V has commenced from April 2019. Presently under PAT scheme, there are over 800 units participating and by 2020 it is expected that they will be able to achieve energy savings of about 20 MTOE and mitigation of about 70 million tonnes of CO_2 emission.

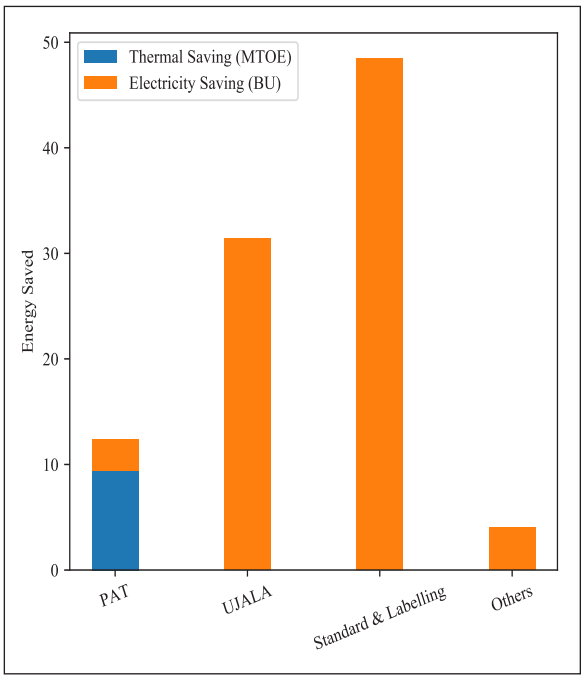
Lighting: With a view to tap the immense potential of LED lamps in reducing the energy requirement the Unnati Jyoti by Affordable LEDs for All (UJALA) programme was launched on 5th January, 2015 with a target to replace 770 million incandescent bulbs with LED bulbs. It was estimated that this would lead to annual energy savings of 100 billion kWh by March, 2019. Energy Efficiency Services Limited (EESL) has been designated as the implementing agency for this programme. LED bulbs under UJALA are distributed at subsidized rates through special counters set up at designated places in different cities across the country. For domestic lights, EESL service model enables domestic households to procure LED lights at an affordable price, with the option of paying the cost of procurement through easy instalments from their electricity bill.

Outreach: The partnership and involvement of consumers is equally important, through behavioural change, in sustaining efficient use of energy and avoidance of wastage. A campaign has been initiated to educate people for conserving energy in air-conditioning application by maintaining optimum temperature settings. BEE has already issued guidelines to large commercial establishment recommending temperature setting between 24° C-26° C without compromising comfort levels. These simple actions have the potential to save energy up to 20 per cent apart from rendering associated health and environment benefits.

Impact of Energy Efficiency Programmes

9.15 The implementation of various energy efficiency programmes has witnessed exceptional performance in terms of reducing energy consumption thereby leading to lower greenhouse gas (GHG) emissions and cost savings. According to a BEE study, overall, this saving has resulted in total cost savings worth ₹53,000 crore (approximately) in 2017-18 and contributed in reducing 108.28 Million Tonnes of CO_2 emission. The contribution is largely from three major programmes – PAT, UJALA and Standard & Labelling (Figures 10 and 11). The overall electricity savings due to energy efficiency measures is 7.21 per cent of the net electricity consumption in 2017-18, total thermal energy saved is 2.7 per cent of the net thermal energy consumption and 2.0 per cent of the net energy supply.

Figure 10: Energy Saved in 2017-18

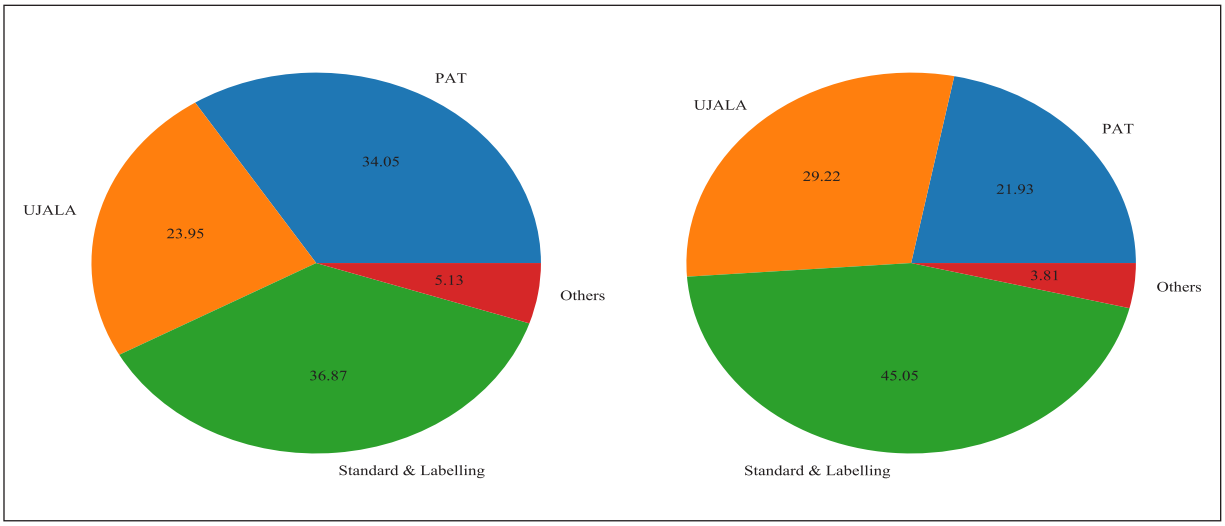


Source: Bureau of Energy Efficiency

Note: BU-Billion Units

Figure 11: Impact of Energy Savings in 2017-18

Reduction in CO_2 emission ($MtCO_2$) | **Monetary Savings (₹Crore)**



Source: Bureau of Energy Efficiency

Energy Saving Potential of Various Sectors

9.16 Going forward, the sectors with possible energy savings need to be identified and estimated for effective policy and programme interventions to realize the potential savings. The energy saving potential in various demand sectors has been estimated by BEE using three scenarios (Table 1).

Table 1: Three Scenarios for estimating energy saving potential

Assumptions by 2031	Technological Improvement & penetration	Policy/program/ scheme initiatives	Change in Fuel mix
Scenario 1: Least effort	No technological change and no new technology penetration	No further implementation of Programs	Current fuel mix
Scenario 2: Moderate effort	Moderate/Business as Usual (BAU) technological improvements and technology penetration as per govt./other agencies target	Successful achievement of program targets	Moderate/BAU fuel mix shift from fossil fuel to Renewable Energy(RE)/electricity based consumption
Scenario 3: Aggressive effort	Aggressive technological improvements and penetration over govt./ other agencies target	Over achievement of program targets	Aggressive fuel mix shift towards RE based consumption in sector (if applicable)

9.17 In light of the above scenarios, the table below shows India's energy saving potential in various demand sectors in 2031. Industrial sector stands out with maximum energy saving potential (Table 2).

Table 2: India's energy saving potential in various demand sectors in 2031.

Sector	Energy Consumption – 2031 (Least Effort)	Moderate Savings-2031		Aspirational Savings - 2031	
	Mtoe	Mtoe	per cent	Mtoe	per cent
Agriculture	64.4	5.7	9	9.9	15
Transport	232.9	15.8	7	23.8	10
Domestic	98.6	12.1	12	15.1	15
Commercial	29.5	4.9	17	6.4	22
Municipal	8.0	0.9	12	1.5	19
Industries	443.4	47.5	11	72.3	16
Total (mtoe)	**876.8**	**86.9**	**10**	**129.0**	**15**
Total (TWh)	**10198**	**1010**	**10**	**1500**	**15**

Source: Bureau of Energy Efficiency

Note: TWh=Terawatt-hour

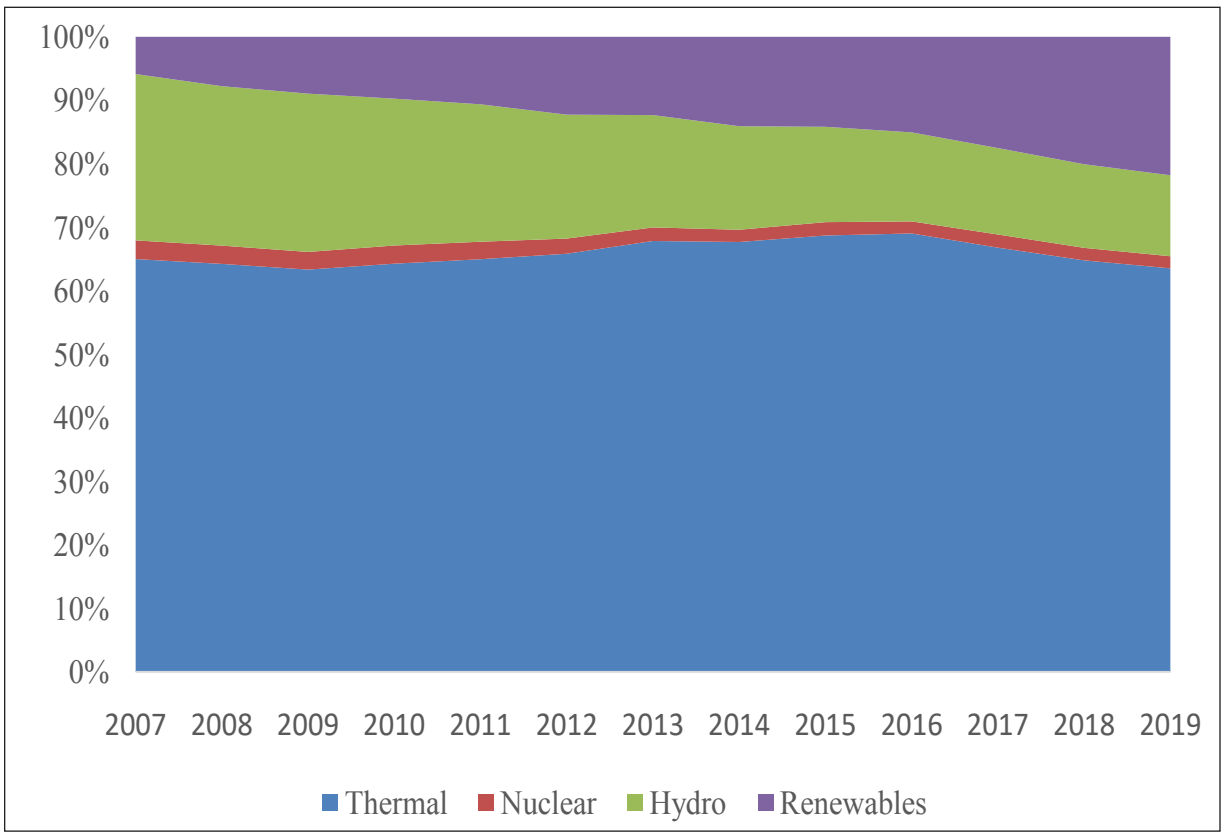
It is vividly clear that there is still great potential to be realized in terms of energy efficiency in various demand sectors. As a country committed to implement the Paris Agreement on Climate Change and SDGs, it is necessary to prepare and plan strategies to unlock the potential to achieve the energy efficiency potential, which should include favourable regulatory structures, strengthened institutional framework, innovative financial structures for affordable financing, use of technology, and increased stakeholder engagement. The existing approaches must be reviewed and a new portfolio of strategies planned to strengthen energy efficiency across all sectors in the country.

SUSTAINABILITY OF ENERGY GENERATION

9.18 Globally, focus has been gradually shifting to non-fossil fuel sources for electricity generation. Despite this, coal remains the largest source of electricity generation mix globally, with 38 per cent market share in 2018 (IEA, 2019). In terms of generation capacity, at the end of 2018, global renewable generation capacity amounted to 2351 GW that constituted around a third of total installed electricity capacity (IRENA, 2019). A look at India's installed capacity for the last decade can tell us the importance that thermal energy has played in meeting India's electricity needs (Figure 12).

9.19 Almost 60 per cent of India's installed capacity is in thermal power out of which the main component is the coal based thermal power plants. India's Nationally Determined Contribution (NDC) under the Paris Agreement states that India will

Figure 12: Share of various energy sources in total Installed capacity in India



Source: Central Electricity Authority

achieve 40 per cent installed capacity of power from non-fossil fuels by 2030. While there has been tremendous increase in the renewable energy capacity, fossil fuels, especially coal, would continue to remain an important source of energy. Further, it may not be advisable to effect a sudden abandonment of coal based power plants without complete utilisation of their useful lifetimes as it would lead to stranding of assets that can have further adverse impact on the banking sector. Further, considering the intermittency of renewable power supply, unless sufficient technological breakthrough in energy storage happens in the near future, it is unlikely that thermal power can be easily replaced as the main source of energy for a growing economy such as India. As such, base load power would have to be continued to be provided by the thermal power plants. Given the sustainable energy objectives of the country and the importance that coal based power plants entail, there is a need for building capacity for cleaner and more efficient coal technologies. Also important is the economy's ability to generate greater output from available energy resources and its resource endowments.

9.20 A comprehensive energy policy should take into consideration the economies of both coal and renewables as they are interdependent. They are substitutes for each other as a source of energy but are complementary in keeping the flow to the grid stable as coal generation represents a stable source of power while renewable energy may be variable.

POTENTIAL OF RENEWABLE ENERGY

9.21 While increasing access to energy is important, it is also imperative that this comes at much lower costs to the environment than it has happened historically in advanced economies. As observed above, there has been arguably a transformation in the energy mix in India. Renewable energy sources are a strategic national resource. Harnessing these resources is a part of India's vision to achieve social equity and energy transition with energy security, a stronger economy, and climate change mitigation. Union Budget 2018-19 announced zero import duty on components used in making solar panels to give a boost to domestic solar panel manufacturers. Government has also offered various financial incentives for off-grid and decentralized renewable energy systems and devices for meeting energy needs for cooking, lighting and productive purposes. Thus, progressively declining costs, improved efficiency and reliability have made renewable energy an attractive option for meeting the energy needs in a sustainable manner and helping India pursue its low carbon development pathway.

9.22 In this regard, India has been undertaking one of the world's largest renewable energy expansion programmes in the world. The share of renewable energy is progressively increasing in the Indian electricity mix. The share of renewables (excluding hydro above 25 MW) in total generation was around 10 per cent in the year 2018-19 compared to around 6 per cent in 2014-15. Now globally India stands 4th in wind power, 5th in solar power and 5th in renewable power installed capacity. The cumulative renewable power installed capacity (excluding hydro above 25 MW) has more than doubled from 35 GW on 31 March 2014 to 78 GW on 31 March 2019. In addition, around 27 GW renewable power capacity is under installation and over 38 GW under bidding. The target is to achieve an installed capacity of renewable based power of 175 GW by the year 2022.

9.23 Government has been taking a slew of measures for the renewable energy sector. Traditionally, renewable energy has been

supported through various fiscal and financial incentives. As the viability of renewable energy has improved drastically in the recent times, tariff discovery is made through reverse auctioning process. The solar tariff has come down from around ₹18/kWh in 2010 to ₹2.44/kWh in bids conducted in 2018. Similarly for wind power, the tariff has declined from an average of ₹4.2/kWh in 2013-14 to ₹2.43/kWh in December 2017. Therefore, the wind power cumulative capacity has exceeded 35.6 GW.

9.24 Recent years have seen rapid growth in installed solar generating capacity along with significant improvements in technology, price, and performance. Moreover, creative business models have spurred investment in this sector. The initial target of the National Solar Mission upto the year 2022, was to install 20 GW solar power, which was further enhanced to 100 GW in early 2015. The solar power installed capacity has increased around 1000 times from 25 MW as on 31 March, 2011 to 28.18 GW as on 31 March, 2019.

9.25 Priority has been accorded to seamless integration of renewables into the grid and better grid stability. In order to facilitate smooth integration of increasing share of renewables into the national grid, Green Energy Corridor project continues to be in operation. Eleven Renewable Energy Management Centres are already at different stages of installation.

9.26 Kisan Urja Suraksha Evam Utthaan Mahabhiyan (KUSUM) scheme has been launched for providing financial and water security to farmers and for de-dieselization of the farm sector. The scheme envisages around 2.75 million solar pumps and, on a pilot basis, 1 GW decentralized solar power plants in uncultivable lands of farmers to enhance income of farmers.

9.27 Broad estimates suggest that additional investment in renewable plants for upto the year 2022 (without transmission lines) would be about US$ 80 billion at today's prices and an investment of around US$ 250 billion would be required for the period 2023-2030. Thus, on an annualized basis, investment opportunity for over US$ 30 billion per year is expected to come up for the next decade and beyond.

9.28 India has great potential for hydro power generation. However, the utilisation of hydro power for meeting the power generation needs have been limited. India has a hydro potential of around 145320 MW, out of which 45400 MW have been utilised. As we move towards greater energy requirements in future, this source of energy, which is climate friendly compared to traditional sources of power, can play a major role. However, high tariffs have been a major obstacle. To encourage the hydro sector, a new Hydro Policy has been approved which includes recognising large hydropower projects as a renewable energy source. Further, tariff rationalization measures have been undertaken, including providing flexibility to the developers to determine tariff by back loading of tariff after increasing project life to 40 years, increasing debt repayment period to 18 years and introducing escalating tariff of 2 per cent, budgetary support for funding flood moderation component of hydropower projects on a case-to-case basis, and budgetary support for funding cost of enabling infrastructure i.e. roads and bridges on a case-to-case basis.

9.29 While access to greater and cleaner energy resources and increasing the efficiency of energy resources are important, another area that has tremendous potential is electric mobility.

ELECTRIC VEHICLES (EVs) IN INDIA

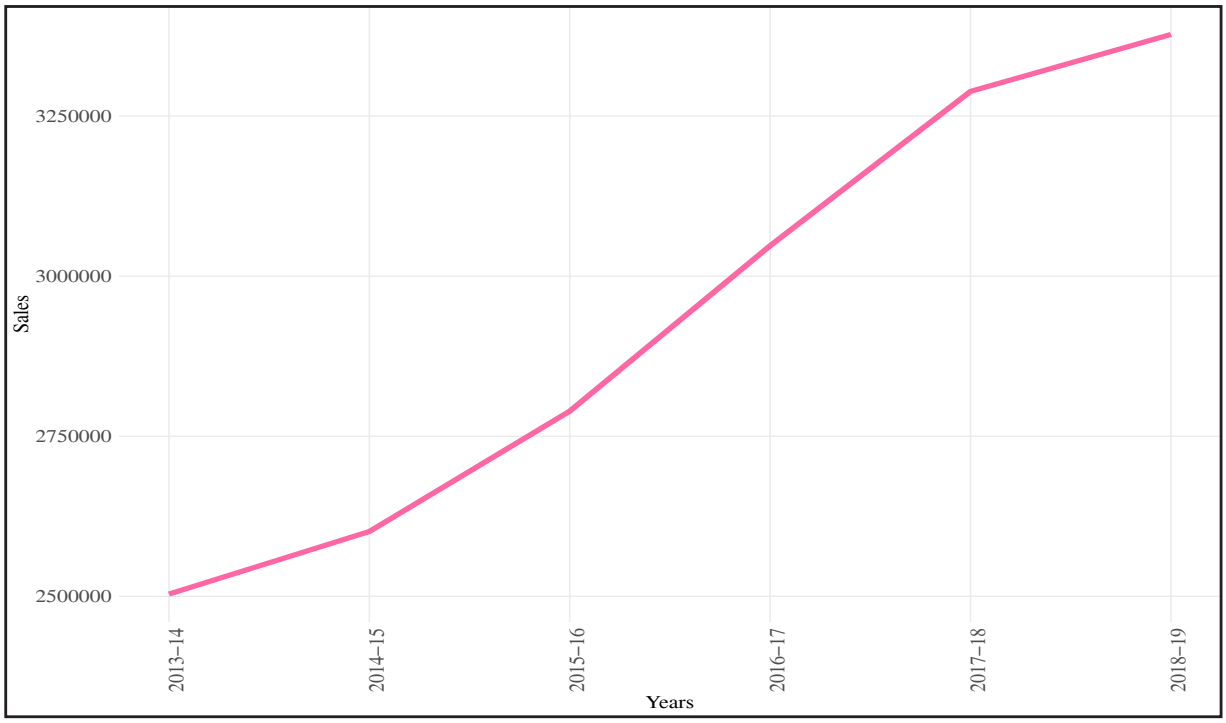
9.30 With the world's second largest

population and an area of 3.3 million square kilometers, it is not difficult to understand how important the transport sector is for the Indian economy. In India, transport sector is the second largest contributor to CO_2 emissions after the industrial sector. Road transport accounts for around 90 per cent of the total emissions in the transport sector in India (MOEF&CC, 2018). Increasing vehicle ownership, as is evident from Figure 13, has also meant that the demand for the fossil fuels for these vehicles has also increased. Given the large import dependence of the country for petroleum products, it is imperative that there be a shift of focus to alternative fuels to support our mobility in a sustainable manner.

9.31 While the government has given an impetus to the promotion of quality public transport, especially through the introduction of metro projects in various major cities, a shift to electric mobility in road transport can lead to beneficial results. India could also emerge as a hub for manufacturing of such vehicles. With this view, a "National Electric Mobility Mission Plan 2020 (NEMMP)" was conceived with an objective to achieve sales of 60-70 lakh units of total EVs by 2020. In 2015, the Faster Adoption and Manufacturing of Electric vehicles (FAME) scheme was launched to fast-track the goals of NEMMP with an outlay of ₹795 crore. The initial outlay was for a period of 2 years, commencing from 1 April 2015, which was extended up to 31 March, 2019. FAME India Phase II has been launched, with effect from 1 April 2019, with a total outlay of ₹10,000 Crore over the period of three years. Emphasis in this phase is on electrification of public transportation.

9.32 In addition to the initiatives of the Government of India, several states, including Karnataka, Kerala, Telangana, Maharashtra and Andhra Pradesh, Uttar Pradesh, Uttarakhand, have drafted EV policies to complement the national policy

Figure 13: Domestic passenger vehicle sales in India



Source: Data from SIAM

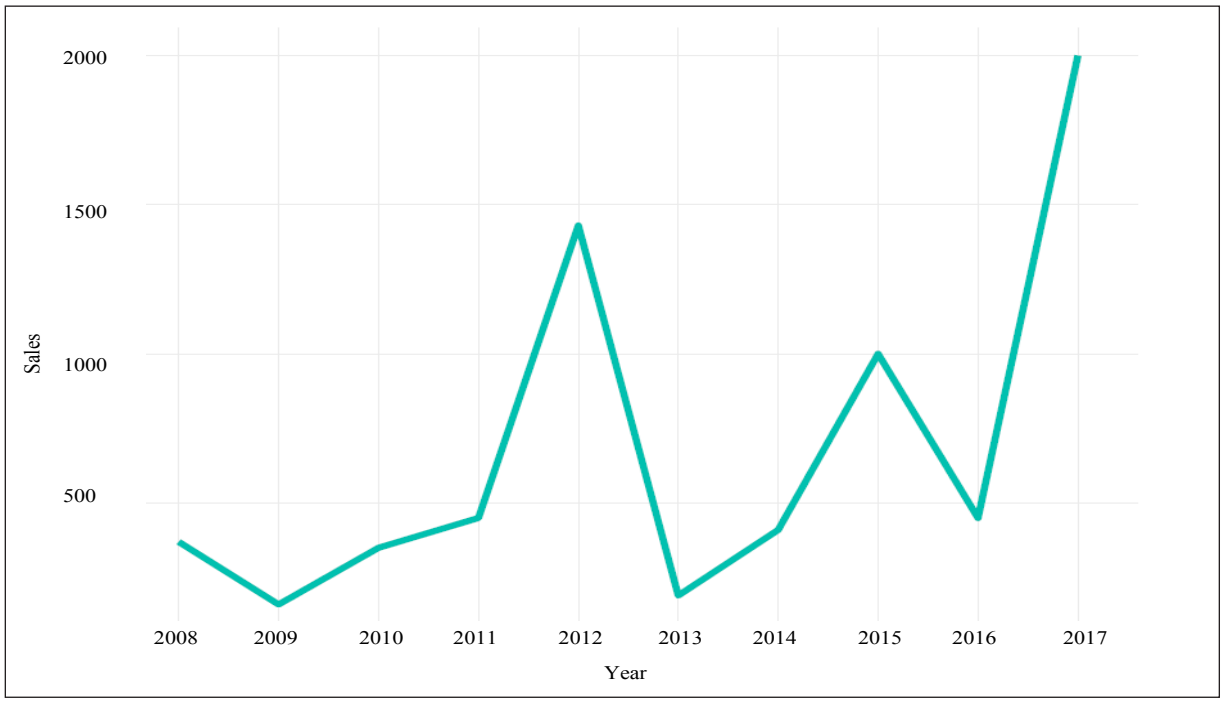
Note: Only Aug 2018 -March 2019 data is available for 2018-19

and address state-specific needs. Andhra Pradesh has set a target of 10 lakh EVs by 2024 while Kerala has set a target of 10 lakh EVs by 2022. Maharashtra has announced its draft EV Policy, 2018 to increase the number of registered EVs in the state to 5 lakh. Telangana has targeted 100 per cent electric buses for intracity, intercity and interstate transport for its state transport corporation. Uttarakhand's EV policy has focused on the manufacturing of EVs in the state with incentives for manufacturers of EVs in the MSME sector (NITI Aayog, 2019).

9.33 Globally, the sales of electric cars have been rising at a fast pace from just over 2000 units being sold in 2008 to over 10 lakh in 2017. More than half of the sales were in China (IEA-2, 2018). The market share of electric cars is around 2 per cent in China while it is around 39 per cent in Norway. Electrification of two-wheelers and buses has also picked up pace in the recent years. In 2017, global sales of electric buses were about 1 lakh and sales of two-wheelers are estimated at 3 crore. China accounted for a major part of these sales. Charging infrastructure has also kept pace with almost 30 lakh chargers at homes and workplaces and about 430,151 publicly accessible chargers worldwide in 2017. However, only around 25 per cent of these were fast chargers (IEA-2, 2018).

9.34 In India, electric two wheelers have been the major part of EV sales with sales of around 54,800 in 2018 (NITI Aayog, 2019). Compared to this, sales of electric cars have been only around 2000 in 2017 (IEA-2, 2018). Indian market share of electric cars is a meagre 0.06 per cent. According to the Society of Manufacturers of Electric Vehicles (SMEV), Uttar Pradesh topped the list of the states with highest EV sales of around 6878 units in 2017-18, followed by Haryana at 6,307 units and Gujarat at 6,010 electric vehicles. Maharashtra reported sales of around 4,865 EV units, while West Bengal came in fifth with sales of 4,706 units. Figure 14 showcases the sales of electric cars which includes Battery Electric Vehicles (BEVs) and

Figure 14: Electric Car (BEV and PHEV) sales in India



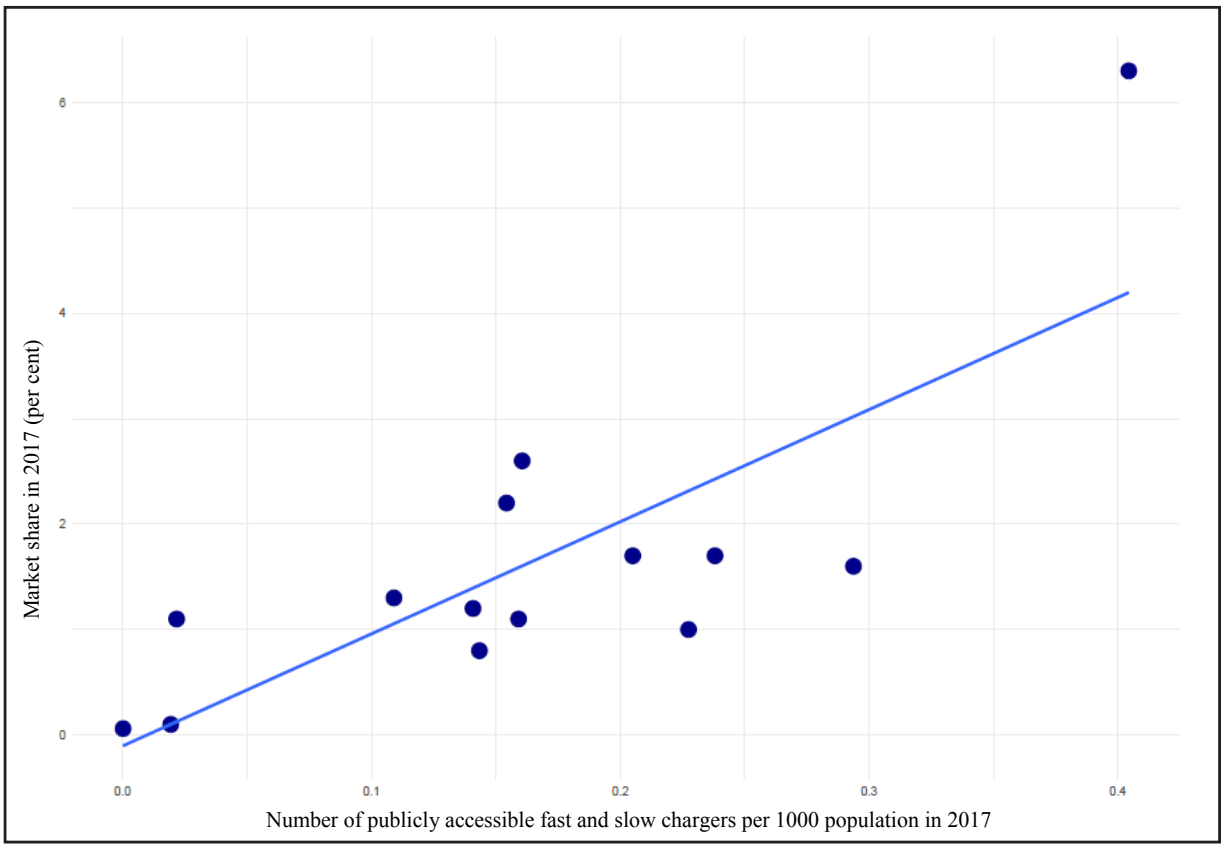
Source: Data from Global EV Outlook 2018

Plug-in Hybrid Electric Vehicles (PHEVs) in India.

9.35 Various incentives have been provided to the buyers and users of electric vehicles in different countries to encourage their uptake. Norway, which has the highest share of electric cars has provided generous incentives to EV buyers and disincentives to the use of conventional vehicles. These include exemption from VAT, tax incentives on import and purchase of EVs, waiver of toll and ferry fees, free parking, etc. Closer home, Chinese government has issued a new energy vehicle (NEV) credit mandate that sets a minimum requirement regarding the production of new energy vehicles (PHEVs, BEVs and FCEVs), with some flexibility offered through a credit trading mechanism in the car industry. Every manufacturer is required to earn minimum NEV credits either through producing or importing NEVs or through the purchase of NEV credits from other manufacturers who have excess credits. Additionally, the subsidy program- with a consistent focus on the investment intensity of the charging and battery infrastructure - seems to have driven the increasing Chinese market share in EVs.

9.36 Given the various incentives given in the different countries, it is only natural to ask whether these incentives have had any impact on the uptake of electric vehicles. While a number of studies seem to indicate that incentives have been effective, some studies have indicated their ineffectiveness and have shown that charging infrastructure is a more important determinant of EV uptake (Hardman et al., 2017). Figure 15 presents the density of publicly accessible chargers and the corresponding market shares of electric

Figure 15: Market share of electric cars and charger density in selected countries in 2017



Source: Data from Global EV Outlook 2018

cars for some countries for which the data was available. Fitting a line through the scatter, we find that the market share of EVs is positively related to the availability of chargers and a larger availability of chargers corresponds to a greater adoption of EVs. The market share of EVs increases with increasing availability of charging infrastructure. This is primarily due to the limited driving range of batteries in the EVs. It, therefore, becomes important that adequate charging stations are made available throughout the road networks. In India, the limited availability of charging infrastructure seems to be a major impediment to increased adoption of EVs.

9.37 Another major impediment is that of time taken for completely charging EVs, compared to conventional vehicles. Even fast chargers can take around half an hour to charge an electric car while slow chargers could take even 8 hours. It is, therefore, an important policy issue to come up with universal charging standards for the country as a whole to enable increased investment in creation of such infrastructure. It is equally important to provide information on public chargers to the users of EVs through online maps and other means such as physical signage. This will encourage increased ease of adoption of EVs. Also, since the battery is the heart of any EV, development of appropriate battery technologies that can function efficiently in the high temperature conditions in India need to be given utmost importance (NITI Aayog, 2018).

9.38 The country's economy is growing and would continue to grow at a rapid pace in the coming years. This presents a great opportunity for the automobile industry as the demand for automobiles would only increase. Given the commitments that India has made on the climate front as a nation and the increasing awareness of the consumers on environmental aspects, it is likely that larger and larger share of automobile sector would be in the form of electric vehicles. According to NITI Aayog (2019), if India reaches an EV sales penetration of 30 per cent for private cars, 70 per cent for commercial cars, 40 per cent for buses, and 80 per cent for 2 and 3 wheelers by 2030, a saving of 846 million tons of net CO_2 emissions and oil savings of 474 MTOE can be achieved. It also provides us an opportunity to grow as a manufacturing hub for EVs, provided policies are supportive. While various incentives have been provided by the government and new policies are being implemented, it is important that these policies not only focus on reducing the upfront costs of owning an EV but also reduce the overall lifetime costs of ownership.

WAY FORWARD

9.39 Energy is the mainstay of the development process of any economy. The priority for the government is ensuring access to sustainable and clean energy sources. Given the close link between energy consumption and various social indicators, this attains even greater importance. Compared to the income dimension of poverty, its energy dimension is even more severe. Government of India initiated a big step in the form of the Pradhan Mantri Ujjwala Yojana, providing access to around 7 crore households under the scheme. The task now is to ensure that households with LPG continue to use the clean fuel for cooking purposes through continued refilling. In terms of household electrification, India has achieved almost 100 per cent with electrification of 21.44 crore households. Not only does India have to meet the energy needs of the future, it has to do so in a more sustainable manner. While renewable energy capacity has been expanded manifold, fossil fuel based energy is likely to continue to be an important source of power.

9.40 Overall, energy efficiency is a strategy that can lead to a win-win situation through better utilisation of energy resources. Future policy direction should orient itself to

enhanced energy efficiency programmes in different sectors of the economy as well as technological solutions to better utilise the natural resource endowments of the country for greater prosperity. EVs hold enormous potential for India not only because it is environment friendly but also because India can emerge as a hub of manufacturing of EVs generating employment and growth opportunities. It may not be unrealistic to visualise one of the Indian cities emerging as the Detroit of EVs in the future. Appropriate policy measures are needed to lower the overall lifetime ownership costs of EVs and make them an attractive alternative to conventional vehicles for all consumers.

9.41 To conclude, India's economic future and prosperity is dependent on her ability to provide affordable, reliable and sustainable energy to all her citizens.

CHAPTER AT A GLANCE

- India with a per-capita energy consumption of about one-third of the global average will have to increase its per capita energy consumption at least 2.5 times to increase its real per capita GDP by $5000 per capita, in 2010 prices, to enter the upper-middle income group.
- Additionally, if India has to reach the HDI level of 0.8, which corresponds to high human development, it has to quadruple its per capita energy consumption.
- India has set ambitious targets for renewable energy and has been undertaking one of the world's largest renewable energy expansion programmes in the world. Now, globally India stands 4th in wind power, 5th in solar power and 5th in renewable power installed capacity.
- Energy efficiency programmes in India have generated cost savings worth more than ₹50,000 crore and a reduction in about 11 crore tonnes of CO_2 emission.
- The share of renewables in total electricity generation has increased from 6 per cent in 2014-15 to 10 per cent in 2018-19 but thermal power still plays a dominant role at 60 per cent share.
- The market share of electric vehicles is only 0.06 per cent in India when compared to 2 per cent in China and 39 per cent in Norway. Access to fast charging facilities must be fostered to increase the market share of electric vehicles.

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Effective Use of Technology for Welfare Schemes – Case of MGNREGS

10
CHAPTER

उद्यमेन हि सिध्यन्ति कार्याणि न मनोरथैः।
Work gets accomplished by putting in effort,
and certainly not by mere wishful thinking

While MGNREGS was made effective from 2006, the streamlining of the programme occurred in 2015 when the government harnessed the benefits of technology. This, inter alia, included the implementation of Direct Benefit Transfer (DBT) and linking it Aadhar linked Payments (ALP). It leveraged the Jan Dhan, Aadhaar and Mobile (JAM) trinity to credit wages directly into MGNREGS workers' bank accounts, thereby reducing scope for delays in payment. This chapter highlights the benefits of careful and effective targeting of government programmes by demonstrating that DBT-enabled MGNREGS has indeed helped to alleviate distress of workers. Post DBT payment delays in the payment of wages, under MGNREGS, has reduced significantly thereby providing livelihood security to people in distress. Both demand and supply of work under MGNREGS increased, especially in districts suffering from distress. The increase in the number of filled muster rolls also implies that distressed workers indeed turn up more frequently for work. The importance of ALP-enabled MGNREGS in alleviating distress is particularly pronounced for the vulnerable sections of society, including women, persons with disability, Scheduled Castes and Scheduled Tribes. As data on demand for work under MGNREGS is available almost real-time, it can be developed into a real-time measure to track distress at the level of a district/panchayat. This evidence highlights that skilful use of technology when combined with an unwavering commitment to monitoring effectiveness of government schemes can make a substantial difference on the ground.

INTRODUCTION

10.1 Today's workforce programs, which are popularly used across the world to alleviate distress and poverty, owe their intellectual origins to "food for work" programs during the rule of Chandragupta Maurya (320 BC to 298 BC). In fact, as acknowledged by Drekmeier (1962), "food for work" is first referred in Kautilya's *Arthashastra*. Much later in 1784, but more than a century before Keynes (1909), Nawab Asaf-ud-Daula started a "food for work" programme to help the famine-stricken people of Lucknow. Some workers were employed during daytime to construct the *Imambara*. Others were hired at night to demolish part of what was constructed during the day time. The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), which was enacted through an Act of Parliament in 2005, represents the modern version of such "food for work" programmes in India.

10.2 The programme was operationalized through the Mahatma Gandhi National Rural Employment Guarantee Scheme

(MGNREGS) with effect from February 2, 2006. The programme was initiated to ameliorate rural distress by providing at least 100 days of manual labour at minimum wages to anyone who seeks employment under the program. Creation of productive assets for prescribed quality and durability, social inclusion, gender parity, social security and equitable growth form the founding pillars of the programme.

10.3 The Act states that "the objective of the legislation is to enhance the livelihood security of poor households in rural areas". For the rural poor, even slightest economic distress can be a threat to their livelihood. The programme was, therefore, designed such that rural poor could turn to it in times of need and that it could mitigate distress by providing adequate work in times of distress. This chapter shows that the effective use of technology enhanced the effectiveness, design and targeting of the programme.

10.4 In the first decade of its existence, MGNREGS had been saddled with several inefficiencies, including widespread corruption, political interference, leakage, and significant delay in wage payments (Niehaus and Sukhtankar, 2013a,b; Ravallion, 2012; Agarwal et al., 2016). The programme was reviewed in 2015 and the government initiated major reforms using technology and emphasised on bringing in more transparency and accountability, robust planning and creation of durable productive assets. The scheme was also integrated with the Aadhaar Linked Payments (ALP) system. The ALP leveraged the Jan Dhan, Aadhaar and Mobile (JAM) trinity to provide Direct Benefit Transfers (DBT) to the beneficiary accounts. As a result, the wage payment system underlying MGNREGS was streamlined, thereby reducing the scope for delays in payment (Agarwal et al., 2019).

10.5 For a workforce programme to effectively alleviate distress, timely payment of wages is critical. To conceptually understand the importance of the same, consider two farmers, *A* and *B*. Suppose for the purpose of the illustration, MGNREGS wages are fixed at ₹100 per day of work. Due to bad monsoon, *A*'s crop failed and in order to survive, he seeks work for 100 days under MGNREGS and receives ₹10,000 but after a delay of several months. Thus, *A*'s cash inflow, during his time of economic adversity, is actually zero. Anticipating such delay, farmer *A* would prefer to work in a place where the wages might be lower than MGNREGS but are disbursed on time. This choice enables him to generate the liquidity that he desperately needs in distress. But it is evident that the programme did not meet his needs as the wage payments were not timely. In contrast to farmer *A*, say farmer *B* had a normal harvest. To earn extra money, *B* also enrols for 100 days of work under MGNREGS. He also receives ₹10,000 MGNREGS wages after a delay of several months. However, as farmer *B* is not under duress, he would choose to avail the higher wages under the programme.

10.6 In contrast, in a regime where the MGNREGS payments are made on time, the distressed farmer *A* will definitely choose to enrol for work under MGNREGS instead of seeking alternative avenues to alleviate his distress. If farmers *A* and *B* work under MGNREGS, both receive their wages in a timely and systematic manner. Working for MGNREGS becomes beneficial for farmer *A* as it provides him with the necessary liquidity for survival when he needs it most. Thus, under efficient targeting, incremental demand for MGNREGS work would be greater from distressed workers than from non-distressed workers.

10.7 The simple example above illustrates how: (i) delays in payments can materially drive genuinely distressed farmers away from MGNREGS; and (ii) improvements

in the targeting of MGNREGS to genuine beneficiaries can increase the demand for work from distressed workers, thereby effectively realising the objective of the programme. A person undergoing economic distress needs immediate and certain liquidity. Working for uncertain promised wages, which are likely to be realised with a substantial lag, presents an unattractive proposition for a person in distress as delayed payments effectively imply zero wages in adverse times. Consistent with this thesis, this chapter highlights the benefits of careful targeting of Government programmes by use of technology.

USE OF TECHNOLOGY IN IMPLEMENTATION OF MGNREGS

10.8 Before the implementation of DBT, MGNREGS wages were transferred to the panchayat bank accounts and a significant number of workers had to collect wages in cash from the gram panchayat office. Though attempts were made to implement a system of DBT, two structural constraints limited these attempts. As per a World Bank report[1], until 2015, close to 50 per cent of the country's population did not have bank accounts. The proportion of unbanked population was significantly higher for rural people who are the target group for MGNREGS. In rural India, banking penetration was extremely low. According to the Reserve Bank of India (RBI)[2] ,total banking outlets in villages as of March, 2014 was 1,15,350. This has increased by around five times since then with total banking outlets in villages at 5,69,547 as of March, 2018. Second, verifying the identity of genuine beneficiaries and transferring wages directly into their bank accounts posed problems.

10.9 Various government initiatives have facilitated overcoming these structural constraints. By December, 2015, the total number of Aadhaar enrolments in the country exceeded 100 crore, thereby covering a major portion of the adult population. Linking the Aadhaar Number to an active bank account was the key to implementing income transfers. In 2015, the Pradhan Mantri Jan DhanYojana (PMJDY) was launched to ensure universal access to banking facilities with at least one basic banking account for every household. PMJDY addressed the issue of banking the unbanked population in the country and Aadhaar provided a credible identity source to whoever wanted to open a bank account. The bank accounts of people, including those opened under PMJDY, were linked to their unique Aadhaar numbers, which facilitated cross verification of identities. By expanding the mobile payment options, the Government was able to ease the connectivity issue as people could get access to banking facilities using their mobile phones. So, the JAM trinity enabled the roll-out of DBT by streamlining the validation/verification of beneficiaries as well as the process for release of funds. This ensured timely transfer of funds to the right beneficiary and enabled effective targeting under welfare schemes.

National electronic Fund Management System (NeFMS)

10.10 In order to streamline the system of fund flow and to ensure timely payment of wages, NeFMS was implemented in the year 2016 (Figure 1). Under the system, the Central Government directly credits the wages of the MGNREGS workers, on a real time basis, to a specific bank account opened by the State Governments. All the Programme Officers debit this state-level single account for authorization of wage payment. Currently,

[1] http://datatopics.worldbank.org/financialinclusion/country/india

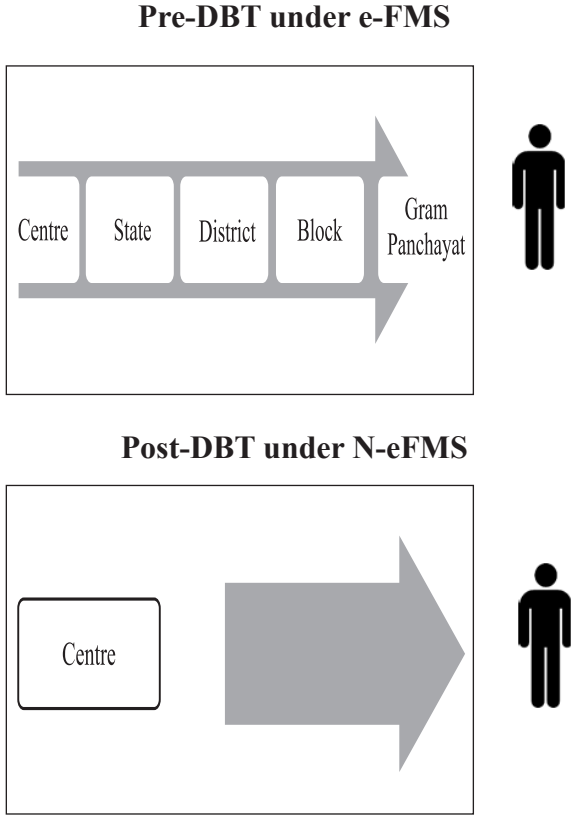
[2] RBI annual reports for years 2014 and 2018

NeFMS is implemented in 24 States and 1 Union Territory wherein payment of wages is being credited directly to the bank/post office accounts of MGNREGS workers by the Central Government. This initiated the implementation of DBT in the Scheme. As a result of this initiative, the e-payment under MGNREGS has increased from 77.34 per cent in FY 2014-15 to 99 per cent in FY 2018-19.

Aadhar Linked Payments (ALP)

10.11 In 2015, the Government introduced ALP in MGNREGS in 300 districts that had a high banking penetration. Remaining districts were covered under ALP in 2016. Conceptually, ALP could speed up the wage payment cycle in the following two ways. First, due to stringent biometric requirements, an Aadhaar linked account is unlikely to belong to a 'ghost' beneficiary. Hence, Government officials require less time to verify and audit claims from such accounts. Second, the Central Government, which ultimately foots the bill for the program, can transfer wages directly to the bank accounts of the beneficiaries, thereby cutting the bureaucratic red tape. Out of the 11.61 crore active workers under MGNREGS, Aadhaar numbers of 10.16 crore workers (87.51 per cent) have been collected and seeded. Almost 55.05 per cent of all the payments under MGNREGS are through Aadhaar Based Payment Systems (ABPS). As shown

Figure 1: Fund flow Pre-DBT and Post DBT

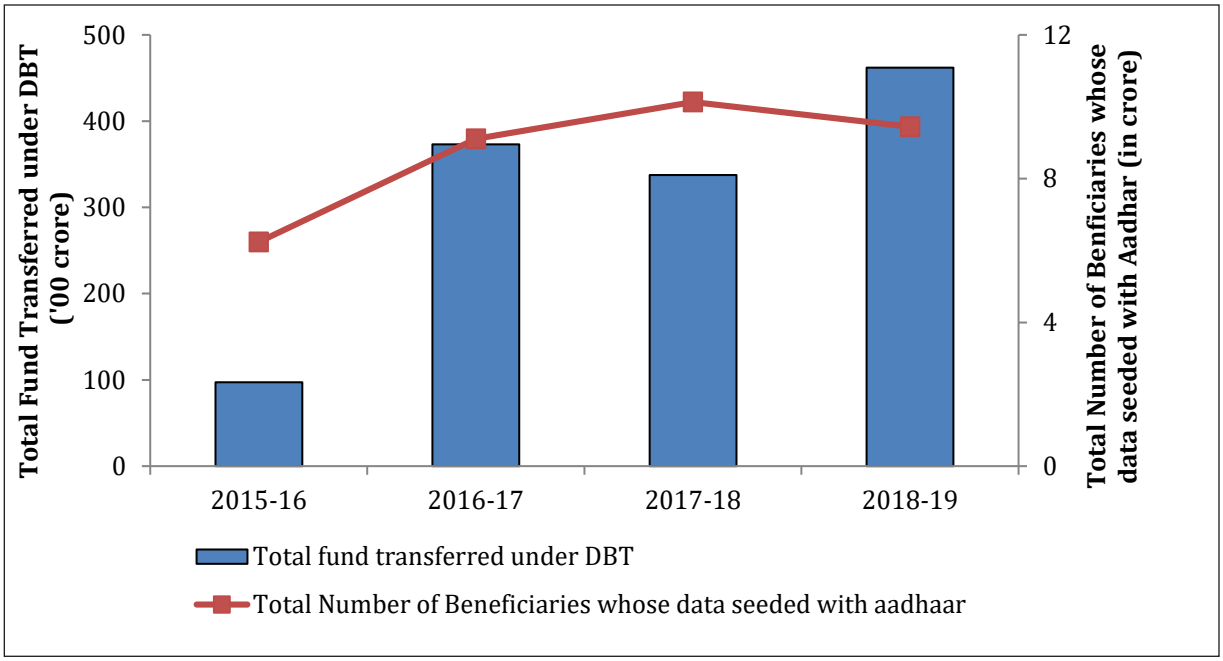


Source: Ministry of Rural Development

Box 1: Perceived Benefits of DBT

- Providing timely release of payments.
- Ensuring correct funds are transferred to correct beneficiaries, reducing corruption & leakages in system.
- Reduction in delays in system for funds transfer (improving programme performance and instilling trust and confidence in system by beneficiaries).
- Strong focus on security, tracking and monitoring of funds (through use of digital sign/signatures and convergence/interoperability),
- Reconciliation process during payments between intermediate agencies involved in funds transfer (near real time tracking, accountability and transparency).
- Streamline the verification process and end to end funds release process in all the beneficiary oriented schemes

Figure 2: Coverage of MGNREGS by DBT



Source: DBT Bharat portal

Box 2: Some Initiatives to streamline MGNREGS

NREGAsoft is a local language enabled work flow based e-Governance system to capture all the activities under MGNREGS at Center/State/District/Block and Panchayat level. It makes available all the documents like Muster Rolls, registration application register, job card/employment register/ muster roll issue register, muster roll receipt register that are inaccessible to the public otherwise.

GeoMGNREGA uses space technology to develop a database of assets created under MGNREGS using technological interventions like mobile based photo geo-tagging and a GIS based information system for online recording and monitoring. As on 10th June 2019, it has been implemented in 31 States and UTs. A total of 3.58 crore projects out of 4.44 crore completed projects are already geo-tagged. The entire data is in public domain and ensures transparency and public disclosure.

Annual Master Circular: A master circular was issued in 2016, which consolidated 1039 advisories that had been issued since the inception of the programme. This Master Circular is amended and issued every year subsequently. This has helped to streamline the implementation of the programme and bringing in clarity.

***Tweaking the wage & material ratio*:** Durable and productive assets are essential for the sustainable livelihood of the poor people in rural areas. The 60:40 wage and material ratio was mandated at Gram Panchayat (GP) level. This often leads to non-productive assets being created simply because 60 per cent has to be spent on unskilled wage in a GP. To address this without diluting 60:40 principles, the wage and material ratio of 60:40 was allowed at the district level rather the GP level.

Emphasis on Individual Beneficiary Schemes: A very large number of Individual Beneficiary Schemes (IBS) like goat sheds, dairy sheds, 90-95 days' work in Pradhan Mantri Awaas Yojana-Gramin (PMAY-G), wells, farm ponds, vermi-compost pits, water soak pits etc have been taken up over the last five years. The emphasis on IBS has resulted in enhanced incomes of the beneficiaries

and also improved the quality of assets as the beneficiaries often put in their savings to supplement the contribution of MGNREGS. The share of IBS has increased from 21.4 per cent in 2014-15 to 66.1 per cent in 2018-19.

Natural Resource Management (NRM) – Mission Water Conservation (MWC): Planned and systematic development of land to improve its productivity and harnessing of water through development of watersheds have become the central focus of MGNREGS work across the country. Guidelines were drawn up in partnership with the Ministry of Water Resources, River Development & Ganga Rejuvenation and Department of Land Resources to focus on the dark and grey regions where the ground water was falling rapidly. It was made mandatory to spend 65 per cent of total MGNREGS expenditure on NRM works identified in 2129 water stressed blocks. Technological support from National Remote Sensing Centre, ISRO using GIS Technology (BHUVAN Portal)has enabled systematic planning, monitoring and execution of structures impacting surface and ground water resources. The major works taken up under NRM include check dams, trenches, ponds, renovation of traditional water bodies/tanks, dug wells etc. During the last five years, 150 lakh hectares of land has benefitted through these interventions.

Support for Drought Proofing: In 2015-16, provision of additional employment of 50 days in drought affected areas over and above 100 days per household under MGNREGS was approved. The major drought proofing works undertaken under MGNREGS are plantations, afforestation, land development, check dams, wells, trenches, bunds and ponds, percolation tanks. During the last five years, expenditure on such projects has more than doubled from ₹1753 crore to ₹4089 crore.

Increased accountability: Various citizen centric mobile Apps like Gram Samvaad Mobile App and JanMnREGA (an asset tracking and feedback app for MGNREGS assets) have been developed, which aim to empower the rural citizens by providing direct access to information and improve accountability to the people.

in Figure 2, the number of beneficiaries and the funds transferred under DBT under the Scheme has jumped manifold from 2015-16 to 2018-19.

IMPACT OF DBT ON EFFECTIVENESS OF MGNREGS

Coverage

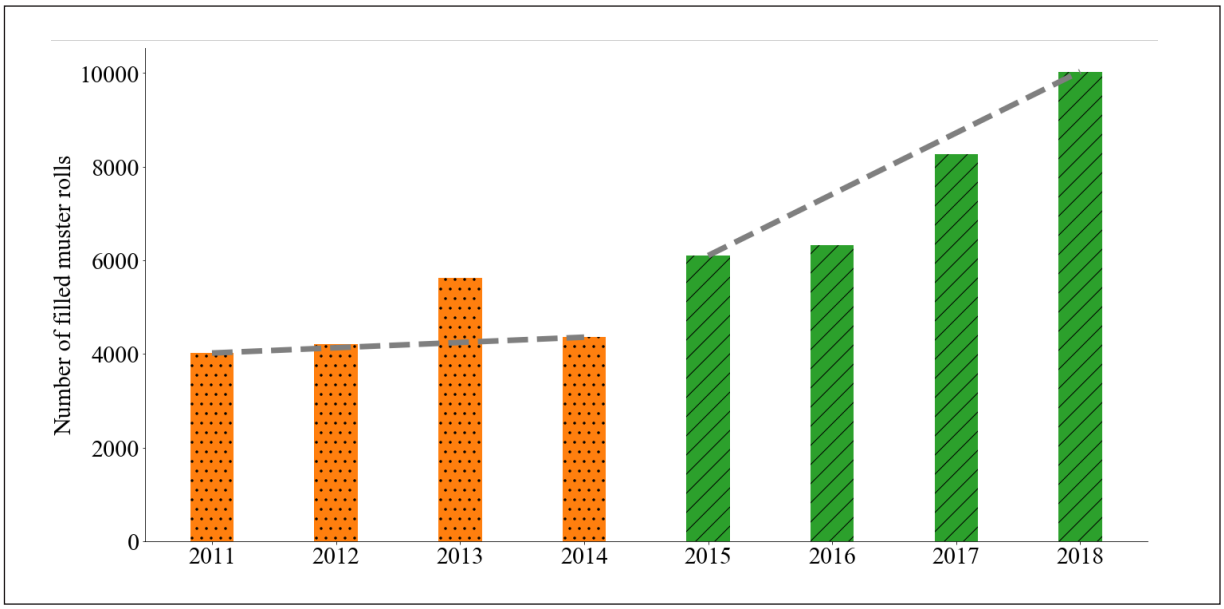
10.12. Muster rolls are a form of an attendance register. Higher number of filled muster rolls represent higher worker turnout on site. Figure 3 shows that the filled muster rolls have shown a significant increase after implementation of DBT indicating that more people are reporting for work. Figure 4 shows that total person days and total person days of vulnerable sections (women, SCs and STs)[3] is also higher in the post DBT years as compared to pre-DBT years indicating that employment generated is higher post implementation of DBT. It is also heartening to note that more than 90 per cent of the person days benefit the vulnerable sections.

Timely Payment of Wages

10.13 DBT focused on directly transferring funds into the beneficiary bank account. The NREGASoft monitors generation of payment of wages within 15 days. Sustained efforts and intensive engagement with all stakeholders has enabled vast improvements in the timely payment of wages. In 2014-15, 26.9 per cent of the payments were generated within 15 days, which has now risen to 90.4 per cent in 2018-19 (Figure 5).

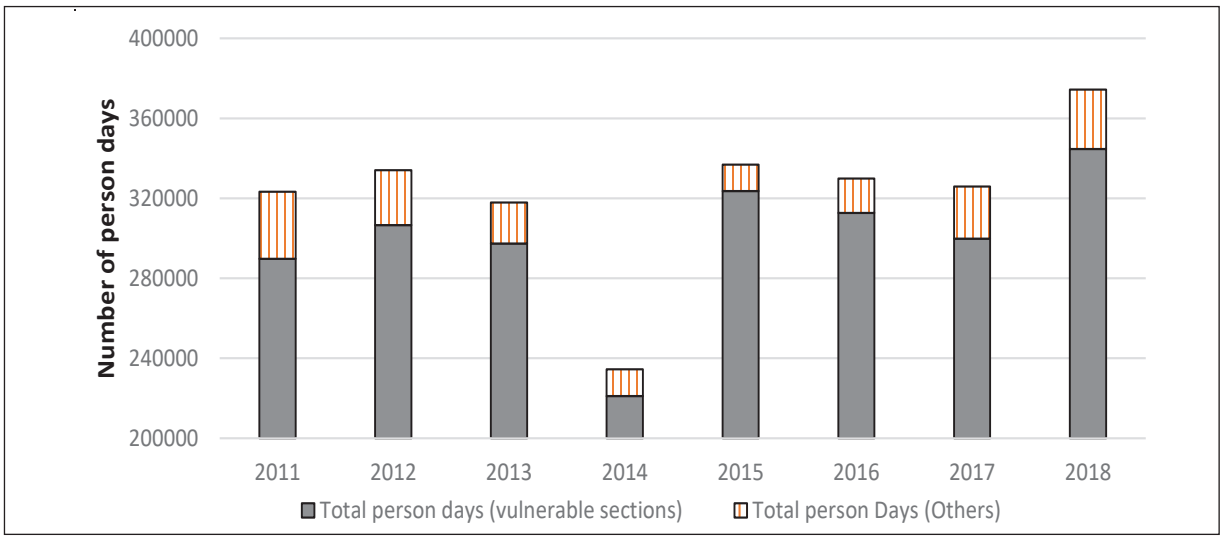
[3] These groups are not mutually exclusive and therefore, double counting is possible.

Figure 3: Filled muster rolls under MGNREGS



Source: Adapted from data from MGNREGA portal

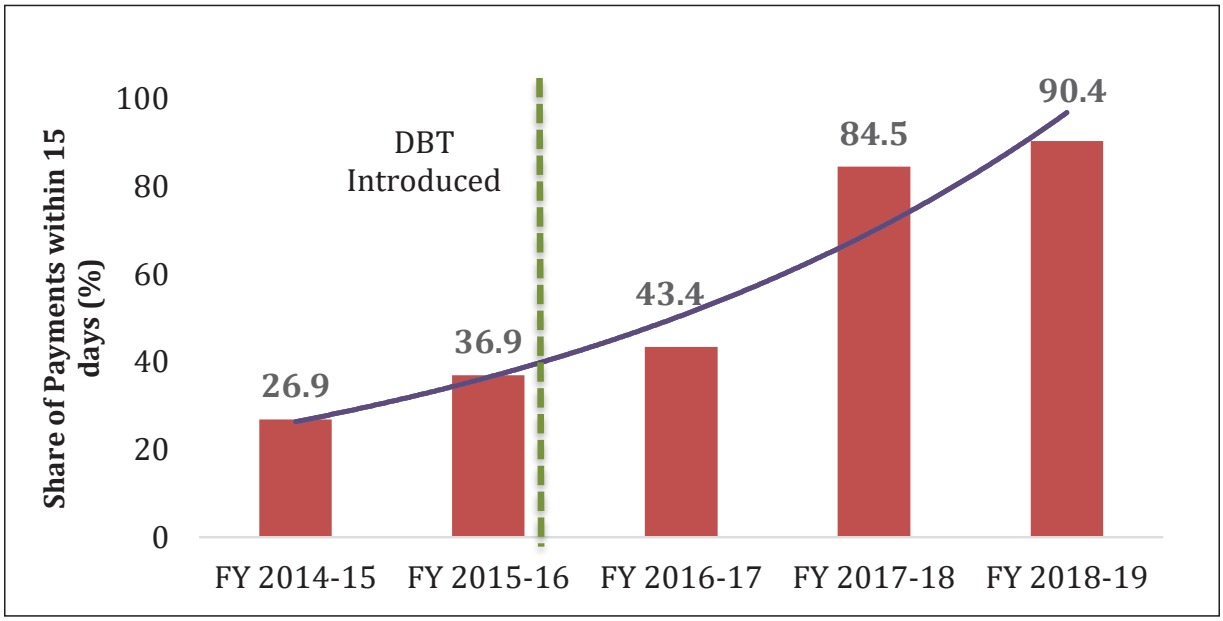
Figure 4: Share of Vulnerable Sections in Person Days under MGNREGS



Source: Adapted from data from MGNREGA portal

10.14. In the pre-ALP period, the average amount disbursed to bank accounts almost doubles from ₹1.82 crore per block per year in pre-ALP period to ₹3.98 crore per block per year. This indicates that more funds flowed through DBT after ALP was instituted. If ALP improves the efficiency of the programme, then there should be a significant reduction in the delay in wage payments. When a comparison is made between the proportion of total amount of wage payments that were received with a lag of more than 90 days before and after the implementation of ALP, it is found that the delay in payments reduced by almost one-third from 35 per cent to less than 10 per cent in the post-ALP period (Figure 6). Thus, implementation of ALP has positively impacted the flow of payments under the scheme.

Figure 5: Share of Payments done within 15 days under MGNREGS



Source: Ministry of Rural Development

Box 3: Data and variables used

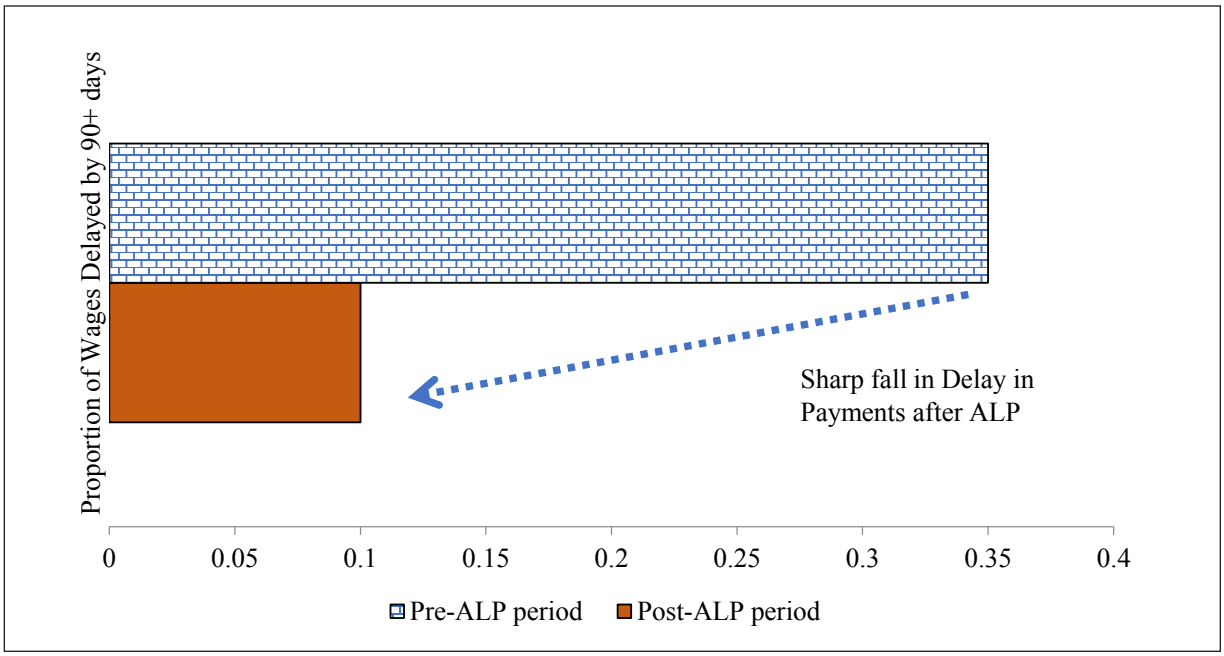
The data for MGNREGS is collected from the MGNREGS Public Data Portal for the period FY2012 to FY2017. Public data portal provides information on all the scheme's variables from FY2012 onwards at various administrative subdivision levels. Delayed payments are available at a district level from FY2015 onwards. This data provides information on the number of transactions delayed at various intervals.

As MGNREGS targets rural poor, whose primary occupation is agriculture, drought is used as a proxy for economic distress. The precipitation data is collected from the Climatic Research Unit, University of East Anglia. As the eastern-most longitudes in India span beyond the scope of the data, the blocks in the study are limited at 90°E. The data is extracted and mapped to the blocks in the country. Since the climate data is available only till FY2017, the time period of the sample is restricted to FY2017. Thus, the sample examining drought as a proxy for distress uses data where both MGNREGS and precipitation data are simultaneously available. The Schedule 1.5 of NSSO survey on Household Expenditure on Services and Durable Goods, Round 72, has been used to obtain data on consumption expenditure at the district level. To define blocks affected by drought, the definition provided by Indian Meteorological Department (IMD) is used: IMD defines an area to be affected by drought if it receives less than 75 per cent of its normal precipitation. A panel that contains weather and MGNREGS information of each block for every year from FY2012 to FY2017 is constructed. It takes value 1 if annual rainfall in a block is less than 75 per cent of normal rainfall, otherwise it takes value 0. For the purpose of the analysis, a post ALP period is also defined as per the staggered implementation of ALP – 300 districts from FY2015 and remaining districts from FY2016. The summary statistics of the analysis undertaken is given in the appendix.

Demand for MGNREGS Work

10.15 Given that there has been an increase in amount disbursed to bank accounts post implementation of ALP and a decline in delayed payments, it is expected that there will be an increase in demand for work under the programme in distressed areas (Agarwal et al., 2019).

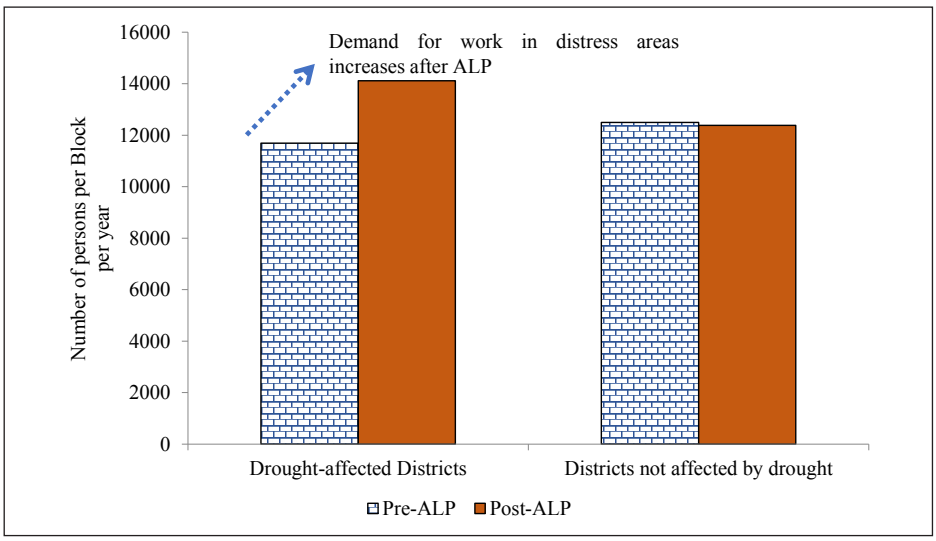
Figure 6: Delay in Payment of Wages under MGNREGS



Source: Survey Calculations.

10.16 Figure 7 displays the difference -in -difference estimate of the effect of ALP on persons demanding work. In the blocks not affected by drought, there is no effect of ALP on the number of persons demanding work. Crucially, however, in blocks that are affected by drought, the persons demanding work increases by 20.7%. As we argued above that effective implementation of MGNREGS should increase demand for work in the distressed areas, this finding is consistent with the thesis. The difference -in -difference estimate, i.e. the before- after difference in the blocks affected by drought versus the same difference in blocks not affected by drought, equals 21.8% and is statistically significant.

Figure 7: Demand for work under MGNREGS



Source: Survey Calculations.

10.17 It appears, therefore, that before the implementation of ALP, the rural poor treated MGNREGS as an option to earn additional income during good times rather than a shock absorber during bad times. This actually defeated the purpose of the programme. Post implementation of ALP, there is a reversal of trend, wherein an increase in demand for work under MGNREGS is observed in drought affected areas. The change post ALP implementation suggests that reduction in the delay of payments has an immediate positive effect on the demand for work in distressed times.

Supply of MGNREGS work

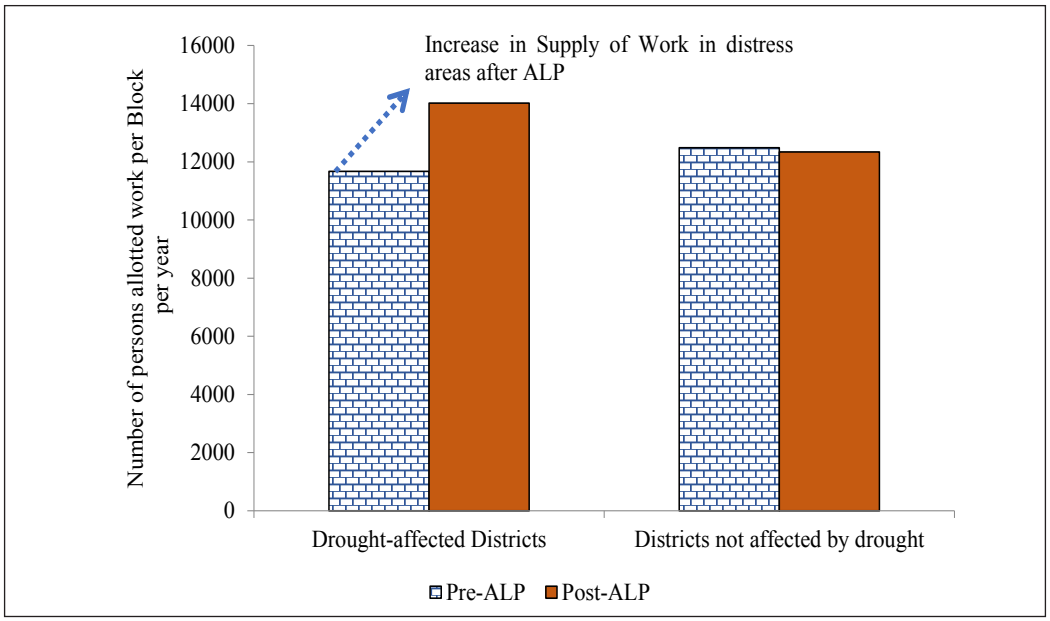
10.18 Figure 8 similarly displays the difference-in-difference estimate for the effect of ALP on the supply of work under MGNREGS. As in Figure 7, we observe very little change due to the implementation of ALP on supply of work in the blocks not affected by drought. In contrast, we observe a 20% increase in the supply of work in blocks that are affected by drought. This suggests that the supply of work under MGNREGS also responds to the increase in demand in the blocks affected by drought.

10.19 It can be inferred that the increased state capacity to implement anti-poverty programmes brought about by ALP can potentially bridge the demand supply gap in MGNREGS (Dutta et al., (2012)). With reliable data, it is possible that the Central and State governments will be able to effectively monitor the implementation of MGNREGS and nudge the officials to provide jobs wherever and whenever they are needed the most.

Work Done under MGNREGS

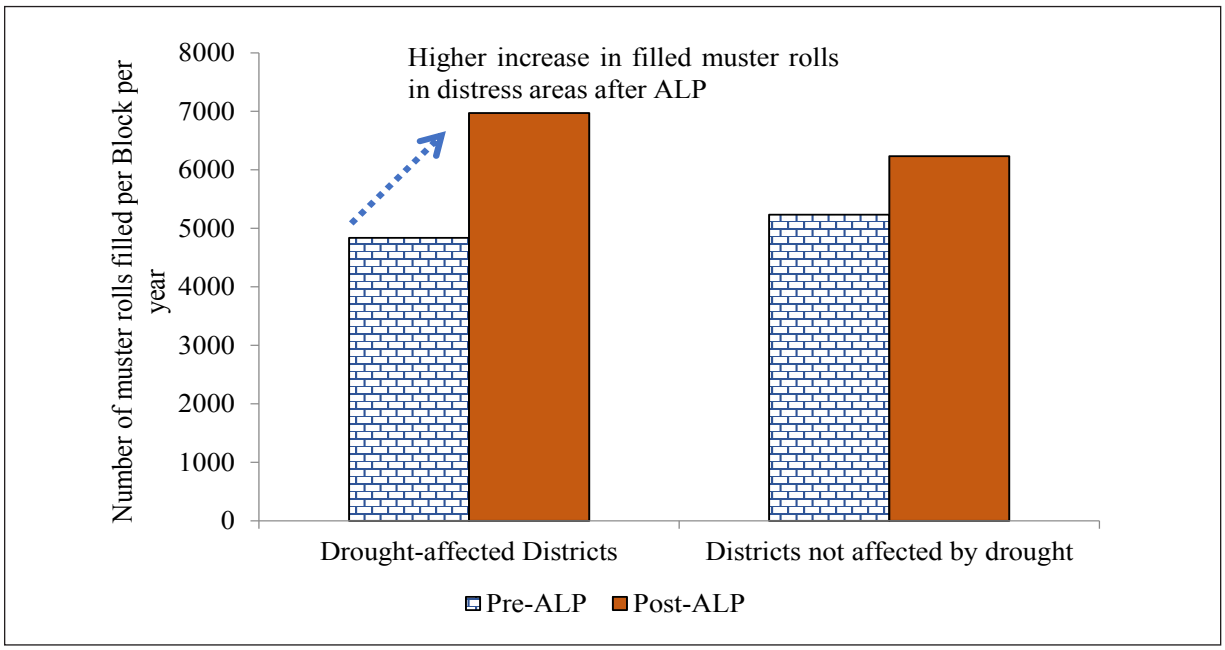
10.20 Muster rolls are a form of attendance register signed by workers. It acts as a preliminary check in the sense that, if demand and supply of work increases, but there is no change in muster rolls filled, then it means that there may be a false reporting of numbers. Figure 9 shows that the muster rolls increased by 19% in the blocks that were not affected by drought, In contrast, muster rolls increased by an enormous 44% in the blocks that were affected by drought. Thus, the evidence in Figure 9 shows that

Figure 8: Supply of Work under MGNREGS



Source: Survey Calculations.

Figure 9: Amount of work done in MGNREGS: Total muster rolls filled



Source: Survey Calculations.

the actual work done under MGNREGS also increased significantly in blocks affected by drought due to the use of ALP. This increase was more than double the increase in blocks that were unaffected by drought.

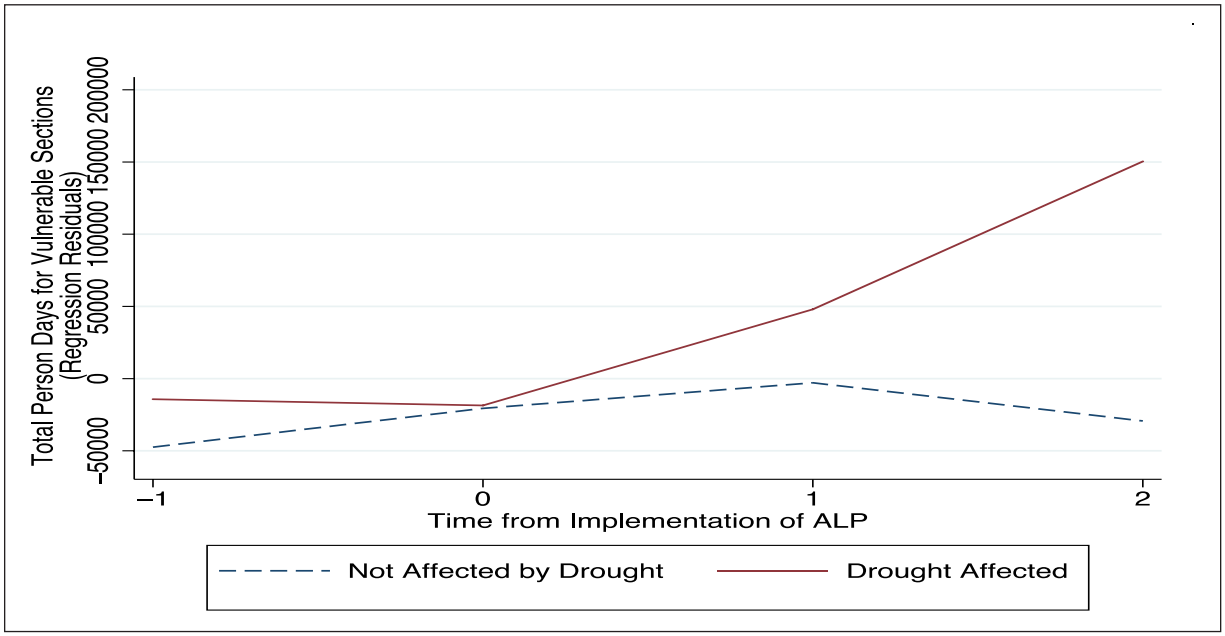
Impact on Vulnerable Sections of the Society

10.21 As economic shocks affect vulnerable sections of society (women, persons with disability, SCs and STs) the most, there are concerns that they might not be able to adapt easily to the use of technology under DBT and hence may get excluded (Khera (2011)). There is also reason to believe that such people are more likely to be unaware of technological changes that occur in implementation of social welfare programs. If that is true, then there should not be any change in MGNREGS work by these individuals in distressed areas post implementation of ALP (Agarwal et al., 2019). Figure 10 shows the differential effects of ALP for vulnerable sections of the society and others. The residuals after controlling for other determinants using a regression are plotted on the y-axis. The x-axis shows the year before and after the implementation of ALP with 0 corresponding to the year of implementation. We observe that absent ALP, there is either no change or a decline in total person days worked by vulnerable sections of the society. In the pre-ALP period, represented to the left of year zero, the gap between person days worked by vulnerable sections of the society was insignificant. In the post ALP period, represented to the right of zero, there has been a large increase in person days worked by the vulnerable sections of the society in blocks affected by drought. This means that after implementation of ALP, women, SC and ST workforce increased under MGNREGS during times of economic distress (Figure 10).

USE OF DATA ON CONSUMPTION TO PROXY DISTRESS

10.22 While drought is the primary source of rural distress, there is a possibility of some extremely local unobserved distress which is not related to drought such as pest

Figure 10: Total person days worked by vulnerable sections of the society in drought and non-drought affected areas before and after the implementation of ALP



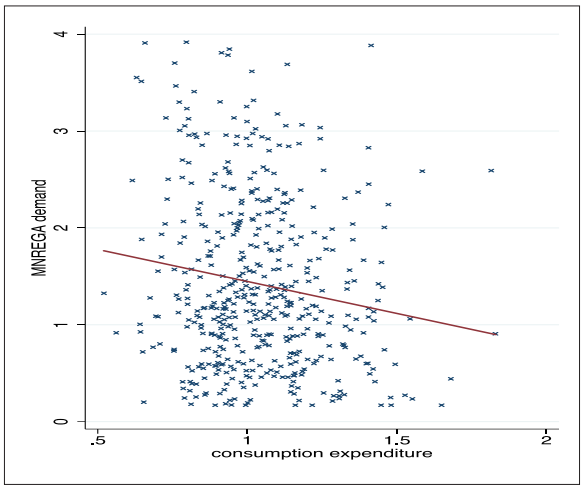
Source: Survey Calculations.

attacks, disease outbreak, sale of land for infrastructure development etc. Such distress should reduce consumption expenditure of the local areas affected by it. Therefore, monthly consumption expenditure from NSS round 72 survey data can be used as a proxy for distress. The hypothesis is that there should be an increase in demand for MGNREGS work in areas with decline in consumption expenditure. Using NSS data to identify unobservable distress, this test is performed to see if improvements in MGNREGS extend to all kinds of distress that may or may not be as easily observable as drought.

10.23 NSSO does not include block level identification, so the data is aggregated at the district level. Since the survey data is available only for FY2015, the sample is restricted to one year. To perform this test, geographical neighbours of each district are identified first. Then, the district neighbour pairs are divided such that ALP districts are matched with their ALP neighbours and non-ALP districts are matched with their non-ALP neighbours in FY2015. This also helps to distinguish localized distress from large crises because large-scale distress will be common across neighbouring regions. Once ALP district-neighbour pairs and non-ALP district neighbour pairs have been identified, the ratio of MGNREGS demand for each pair is calculated. This ratio is called MGNREGS demand factor. Similarly, the ratio of consumption expenditure for each pair is calculated. This ratio is called consumption factor. A negative relationship exists between MGNREGS demand factor and monthly consumption factor for each district neighbour pair (Figure 11). This means that areas with low consumption expenditure have higher MGNREGS demand as compared to areas with higher consumption expenditure.

10.24 Therefore, for the purpose of this test, consumption factor of less than one is used to identify distressed areas. It is evident from Table 1 that the MGNREGS demand factor is 1.45 for non-distressed districts and 1.56 in distressed districts in the pre ALP period. Even though there is an

Figure 11: Relationship between MGNREGS demand and consumption expenditure



Source: NSS, Round 72, MGNREGA portal

increase in MGNREGS demand in districts with less consumption expenditure, the increase is marginal. After implementation of ALP, in non-distressed districts, the MGNREGS demand factor is 1.18 i.e., the MGNREGS demand for these districts is like their neighbours'. In distressed districts it increases to 1.76. For distressed districts, demand for MGNREGS work is almost twice of their neighbours' in the post ALP period. It is interesting to see that not only has the gap between MGNREGS demand of distressed and non-distressed areas widened but also there is greater increase in the demand for MGNREGS in distressed areas in the post ALP period.

Table 1: Proportionate change in demand in areas with high consumption expenditure v/s areas with low consumption expenditure in ALP and non-ALP districts

	High Consumption factor	Low Consumption factor
No ALP	**1.45**	**1.56**
ALP	**1.18**	**1.76**

WAY FORWARD

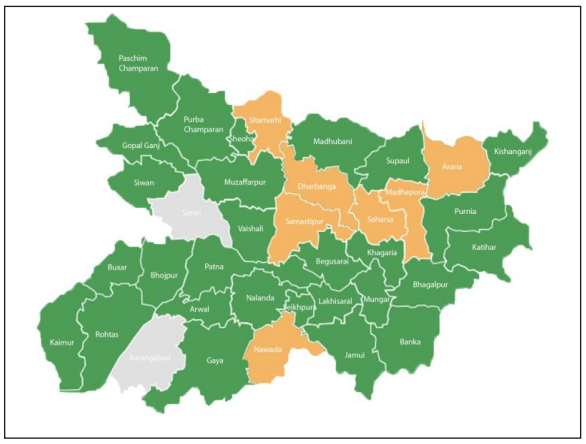
10.25 This chapter highlights the benefits of using technology in welfare schemes to improve end to end governance, create a robust evidence based implementation framework in partnership with the States, streamline the processes, timely transfer of funds to implementing agencies and beneficiaries, plugging of leakages, optimum utilization of public funds and improving overall performance (outputs/outcomes) of the programmes. It also significantly improves transparency and accountability and above all, ensuring that right benefits reach the right beneficiary at the right time.

10.26 DBT through Electronic Fund Management Systems in MGNREGS has streamlined the fund flow process and helped in better targeting, reduction in delay in payments to beneficiaries, minimized leakages and above all led to substantial saving of funds. More importantly, it has enabled MGNREGS to be effective in alleviating distress of workers. Both demand and supply of work under the Scheme increased, especially in blocks suffering from distress and from the vulnerable sections of society, including women, persons with disability, SCs and STs. The increase in the number of muster rolls that were filled also implies that distressed workers indeed turn up more frequently for work. The positive outcomes in MGNREGS are based on the *revealed preference* of the ultimate beneficiaries who are not only at the bottom of the pyramid, i.e. the rural poor, but are also distressed. As enrolment in the Scheme is voluntary, beneficiaries have strong incentives to reveal their preference by "voting with their feet" when programme delivery is inefficient or efficient.

10.27 The above analysis has the following policy implications:

Probable Indicator of distress: Demand for work under MGNREGS may be used to develop a real-time indicator of distress at the granular district/ panchayat level. Distress at the level of a district or panchayat is difficult to identify in real-time using the current datasets. While employment related NSS surveys are carried out once in 5-6 years, district-level GDP is released irregularly. Both these datasets are released with lags. The NSSO surveys, though they are available at the household level, are released after a gap of almost two years from the date of the surveys. As an adverse economic shock significantly reduces consumption expenditure of the household, it is important to provide assistance to the household at the right time. By utilizing information on demand for work under MGNREGS and correlating it with other real-time measures of weather etc., that lead to rural distress, a dashboard (Figure 12) can be created which flashes 'alerts' from areas under local distress to enable policymakers to act in a timely manner to alleviate such distress. As demand for MGNREGS work is also affected by the governance capacity in the state, this indicator of real-time distress can be constructed after accounting for the effect of the same.

Figure 12: Distress map of Bihar



Source: Generated as a sample
Note: Orange areas indicate distress areas

Expansion of 'works' under MGNREGS: To further increase the effectiveness of the Scheme, the definition of 'works' under the Scheme should be regularly reviewed and amended in light of the requirements. Inclusion of de-silting of canals and water bodies in the Water Conservation Mission would enhance their storage capacity and mitigate the frequency of floods.

Up-skilling the MGNREGS Workers: The objective of the scheme to enhance livelihoods for households can be reinforced by enabling them to acquire suitable skills, which in turn will help them increase incomes and provide horizontal and vertical mobility to them. The convergence of MGNREGS with Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) and involvement with women Self-Help Groups needs to be strengthened so that supply for skilled wage labour increases. The focus needs to be on the diversification of the livelihoods with multiple sources of income for them to come out of poverty.

Expanding use of JAM to other Welfare Schemes: The experience of increasing the effectiveness of MGNREGS by using DBT and ALP lends immense credibility to adoption of this strategy in other programmes. The adoption of DBT in programmes which involve transfer of cash benefits (scholarships or pensions) and price subsidies (such as those given for kerosene, liquefied petroleum gas (LPG), public distribution system (PDS), fertilisers and other input subsidies needs to be strengthened to minimise exclusion and inclusion errors. This will make public spending more efficient and effectively targeted.

Use of Digital Infrastructure for micro-benefits: A huge digital infrastructure, linking Aadhaar, bank accounts and mobiles has been created and effectively used for MGNREGS - the largest welfare programme. This can be used to expand the reach of the programmes

through provision of micro-insurance, micro-pensions and micro-credit to people in every corner of the country. Its wide use can lead to financial and economic inclusion benefitting the vulnerable and marginalized sections of the society.

CHAPTER AT A GLANCE

- Use of technology in streamlining MGNREGS has helped increase its efficacy.
- Adoption of NeFMS and DBT in MGNREGS helped to reduce delays in the payment of wages significantly.
- Both demand and supply of work under MGNREGS increased, especially in districts suffering from distress.
- The vulnerable sections of the society viz., women, SC and ST workforce increased under MGNREGS during times of economic distress.
- Skilful use of technology when combined with an unwavering commitment to monitoring effectiveness of government schemes can make a substantial difference on the ground.

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Appendix : Summary Statistics of the Analysis					
Variables	**Observations**	**Mean**	**SD**	**Min**	**Max**
Total person days	23022	326019.3	367448.3	0	4724609
Total households reached 100 days	23022	620.95	1122.978	0	22877
Total households demanded work	23022	7593.07	7526.75	0	67951
Total persons demanded work	23022	12630.9	13699.18	0	150125
Total households allotted work	23022	7578.99	7522.68	0	67951
Total persons allotted work	23022	12596.87	13668.93	0	149927
Total muster rolls filled	23022	5727.20	6342.09	0	85312
Total households worked	23022	7248.92	7043.5	0	66490
Total persons worked	23022	11726.19	12273.58	0	147080
Amount disbursed to bank account (Rs crore)	23022	27.3	41.9	0	672
Total pers on days worked by SCs	23022	71673.49	105123.4	0	1405991
Total person days worked by STs	23022	56170.62	154782.9	0	3566409
Total person days worked by women	23022	169081.5	247204.3	0	3296483

Redesigning a Minimum Wage System in India for Inclusive Growth

11 CHAPTER

Despite India's outstanding growth in the last two decades, low pay and wage inequality remain serious obstacles towards achieving inclusive growth. An effective minimum wage policy that targets the vulnerable bottom rung of wage earners can help in driving up aggregate demand and building and strengthening the middle class, and thus spur a phase of sustainable and inclusive growth. However, the present minimum wage system in India is extremely complex with 1,915 minimum wages defined for various scheduled job categories for unskilled workers across various states. Despite its complex structure and proliferation of scheduled employments over time, the Minimum Wages Act,1948 does not cover all wage workers. One in every three wage workers in India has fallen through the crack and is not protected by the minimum wage law. Given this situation, this chapter reviews the situation pertaining to minimum wages in India and suggests the way forward for rationalising and streamlining the policy for minimum wages.

INTRODUCTION

11.1 Minimum wages for labour rendered has been a feature of society since ancient times. For instance, the famous Indian treatise from 2nd Century BCE, *Arthashastra*, ordained "the lowest wages for state employees was 60 panas per year for unskilled workers such as servants, guards, valets, palanquin bearers, and labourers." Similarly, the minimum wages for agricultural labourers, watchmen, cowherds and other unskilled workers in the private sector was effectively set at 60 panas a year[1] (Chapter-3, Book V:"The Conduct of Courtiers"). Similarly, the Code of Hammurabi, which is often cited as the oldest written laws on record, mentions minimum wages: "If a man hires a workman, then from the beginning of the year until the fifth month he shall give six grains of silver per diem. From the sixth month until the end of the year he shall give five grains of silver per diem."

11.2 In recent years, minimum wage systems have been strengthened by many countries to lift workers out of poverty and to reduce levels of inequality. The renewed interest in minimum wage arises as recent literature and evidence suggests that minimum wages can promote social justice without any major negative implication for employment if wages are set at an adequate level.

11.3 In the last five years, during a period of global economic slowdown, sluggish global trade and export growth, India's growth story has been powered by private consumption. Therefore, with 93 per cent

[1] One pana was a punch-marked silver/copper coin of the Maurya period.

workers in the informal economy, a well designed minimum wage system can reduce inequalities in incomes, bridge gender gaps in wages and alleviate poverty.

11.4 Wage levels and distribution of wages are, to a large extent, influenced not only by skills and productivity levels, but also by the role of labour market institutions, particularly minimum wages and collective bargaining. But for the minimum wage system to play a meaningful role in aligning protection with the promotion of sustainable growth, it must be properly designed, its goals clarified, and its enforcement made effective. However, the minimum wage system in India is extremely complex with a plethora of minimum wages. Given this situation, this chapter reviews the situation pertaining to minimum wages in India and suggests the way forward for rationalising and streamlining the policy for minimum wages.

MINIMUM WAGE SYSTEM IN INDIA

11.5 The Indian Minimum Wage System has been quite a debated and dynamic issue.

- India was one of the first developing countries to introduce minimum wages with the enactment of the Minimum Wages Act way back in 1948. The Act protects both regular and casual workers. Minimum wage rates are set both by the Central and the State governments for employees working in selected 'scheduled' employment[2]. Minimum wages have been set for different categories of workers according to skill levels, location and occupations. The Act did not prescribe norms for fixing the level of the minimum wage. However, it provided for tripartite advisory boards consisting of employers, employees of scheduled employments, and independent persons to advise the Government in fixing minimum wages.
- The Indian Labour Conference (ILC) of 1957 recommended determining the minimum wage based on the principle of a household's needs.
- In 1988, the Labour Minister's Conference made recommendations for linking minimum wage with the cost of living index, which became mandatory in 1991.
- In 1992, the Supreme Court of India ruled that minimum wage should also be linked with aspects such as children's education, medical requirements etc.

NATIONAL LEVEL MINIMUM WAGE

11.6 The idea of a national level minimum wage has been debated since the enactment of the Minimum Wages Act in India. The main argument against a national minimum wage has been the existence of wide disparities in economic development and large variations in cost of living between regions and states. Box 1 portrays the time-line involved in arriving at a National Floor Level Minimum Wage (NFLMW) in India.

COMPLEX MINIMUM WAGE SYSTEM IN INDIA

11.7 Over the last 70 years, the minimum wage system in India has expanded and has become complex. The *first set of complexities* arises from issues relating to its coverage. Today, there are nearly 429 scheduled employments and 1,915 scheduled job categories for unskilled workers. This massive expansion in job categories and wage rates has led to major variations not only across states but also within states.

11.8 A *second set of complexities* arises

[2] Employments notified under the Minimum Wages Act by the Centre and States.

Box 1: Timeline of adoption of National Minimum Wage

1969
- First National Commission on Labour.
- Recommendation: National Mimimum Wage is neither 'feasible nor desirable'.

1978
- Bhoothalingam Committee
- Argued for adoption of National Floor Level Minimum Wage to ensure a uniform wage for all workers and enhance protection of the most vulnerable workers and eliminate arbitariness in the determination of level of minimum wages for different States and occupations. Recommendations were mainly for the organized sector.
- Unorganized sector and agriculture were left out.

1991
- National Commision on Rural Labour
- Recommended for a National Floor Level Minimum Wage as wide disparites were prevalent in minimum wages across States.

1996
- Central Government adopted non-statutory National Floor Level Minimum (NFLMW)- ₹ 35 per day was notified.
- This NFLMW is updated regularly as per CPI.
- NFLMW is ₹176 per day w.e.f. 01.06.2017

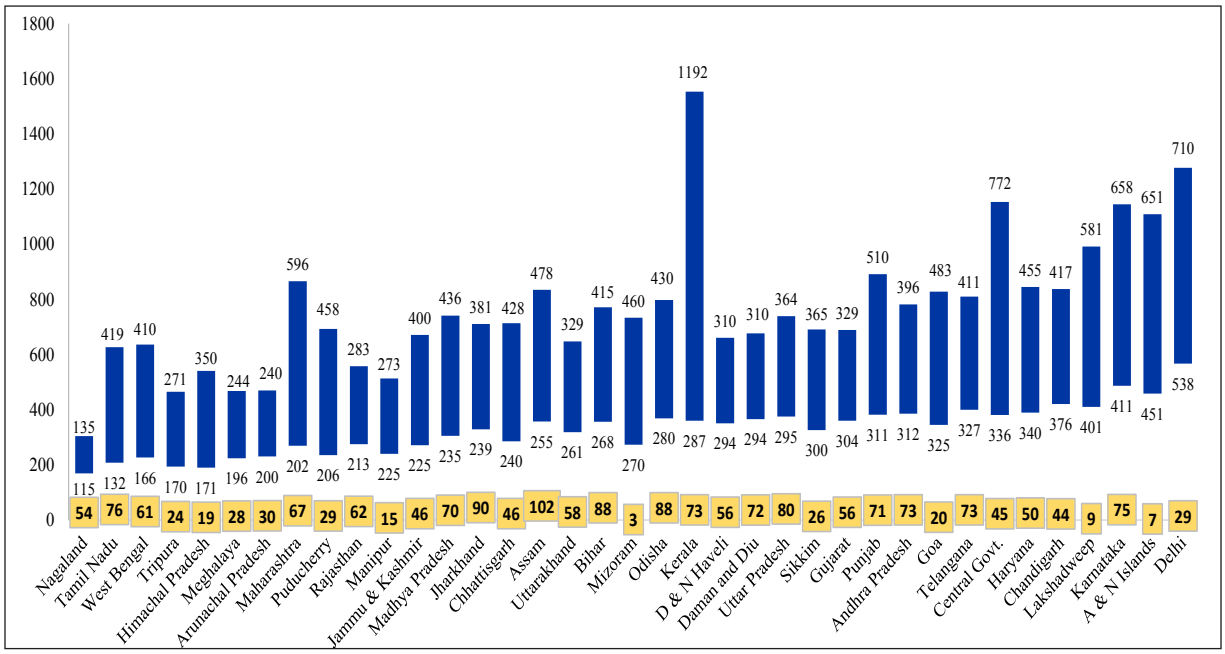
from the lack of uniform criteria for fixing the minimum wage rate. In some states or in specific scheduled employments, minimum wages are linked to the cost of living, through a variable dearness allowance (VDA) whereas other states do not include the VDA component. All this affects the level and variation of wage rates that can be observed across and within States.

11.9 The variation of scheduled employments and minimum wage rates within and across states is shown in Figure 1. The number of scheduled employments varies from 3 in Mizoram to 102 in Assam with the number of scheduled employments being in the high double digits in most states. Similarly, the notified lowest minimum wage rate (per day) varies from ₹115 in Nagaland to ₹ 538 in Delhi. The range (difference between highest and lowest minimum wages) in each state varies from ₹ 16 in Nagaland to ₹ 905 in Kerala.

11.10 The *third set of complexities* arises from the fact that Minimum Wages Act does not cover all wage workers. One in every three wage workers in India has fallen through the crack and is not protected by the minimum wage law (ILO, 2018). Some major vulnerable categories – such as domestic workers – are presently covered only in 18 States and Union Territories. Further, the revision of minimum wage rates has often been delayed (Anant and Sundaram, 1998).

11.11 India has taken a number of steps to improve overall coherence, for example, by declaring a national minimum wage floor

Figure 1: Range of Minimum Wages in India (Rs. per day)



Note: Figures on the horizontal axis indicates the number of scheduled employments notified under the Minimum Wage Act by the Central Government and all the States/Union Territories.

Source: The data pertaining to the scheduled employments and minimum wage rates notified by the State/Central Government have been collated from the latest minimum wage notifications issued by the respective Governments. These notifications have been issued at different points of time ranging from December 2014 to April 2019.

and strengthening the coordination of the Central Advisory Board with State Advisory Boards, and by promoting states to determine minimum wage rates through consultations within five broader regional committees. However, a simple system covering as many workers as possible, understood by all, and easily enforceable is the key to improve the effectiveness of minimum wage.

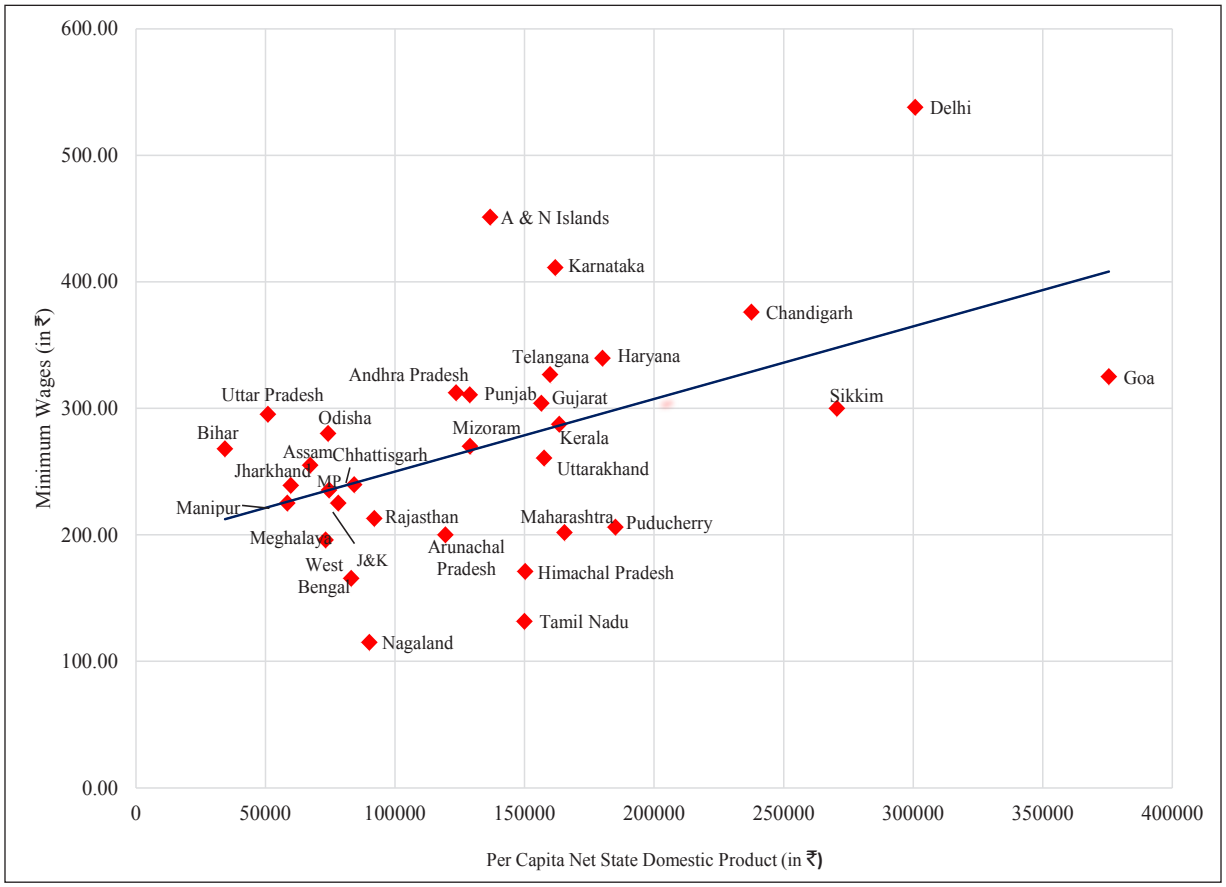
DIFFERENT MINIMUM WAGE ACROSS STATES: IS IT JUSTIFIED?

11.12 The main justification for persisting with different levels of minimum wages across states is that they reflect different levels of economic development. In Figure 2, the per capita Net State Domestic Product (NSDP) for 2016-17 is plotted against the most recently notified lowest minimum wage rates. Several states are significant outliers with some of the lowest minimum wages for unskilled workers notified by the more advanced and industrialised states and vice versa.

REFLECTION OF GENDER DISCRIMINATION THROUGH MINIMUM WAGE PROVISIONS

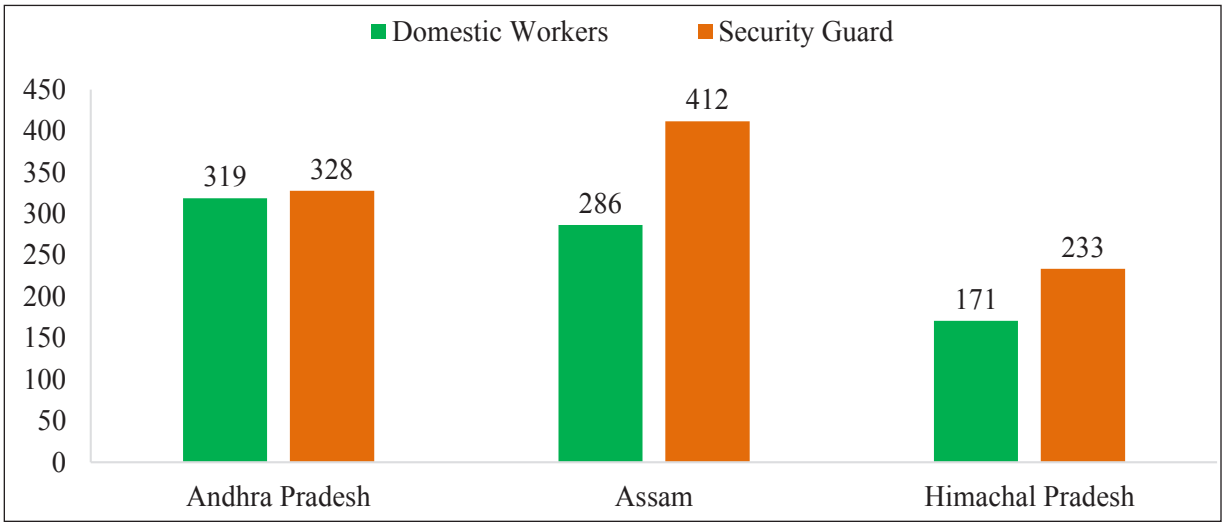
11.13 While the Minimum Wages Act does not discriminate between women and men, an analysis of minimum wages for different occupations shows persistence of systematic bias. For instance, women dominate in the category of domestic workers while men dominate in the category of security guards. While both these occupations fall within the category of unskilled workers, the minimum wage rate for domestic workers within a state is consistently lower than that for the minimum wage rates for security guards (Figure 3). Furthermore, the differences in their minimum wage rates are quite large with the minimum wage rates for security guards

Figure 2: Per Capita Net State Domestic Product 2016-17 (at current prices) and Latest Notified Lowest Minimum Wage Rates in India



Source: Per Capita NSDP 2016-17 from CSO. Data pertaining to the lowest minimum wage rates notified by the State/Central Government have been collated from the latest minimum wage notifications issued by the respective Governments. These notifications have been issued at different points of time ranging from December 2014 to April 2019.

Figure 3: Comparison of Minimum Wages for Domestic Workers (Female Dominated) and Security Guards (Male Dominated)



Source: Based on the latest minimum wage notifications issued by the respective state governments.

in Assam being 44 per cent higher than that for domestic workers. Such large differences can only be attributed to gender bias as is obvious from the disparity across states.

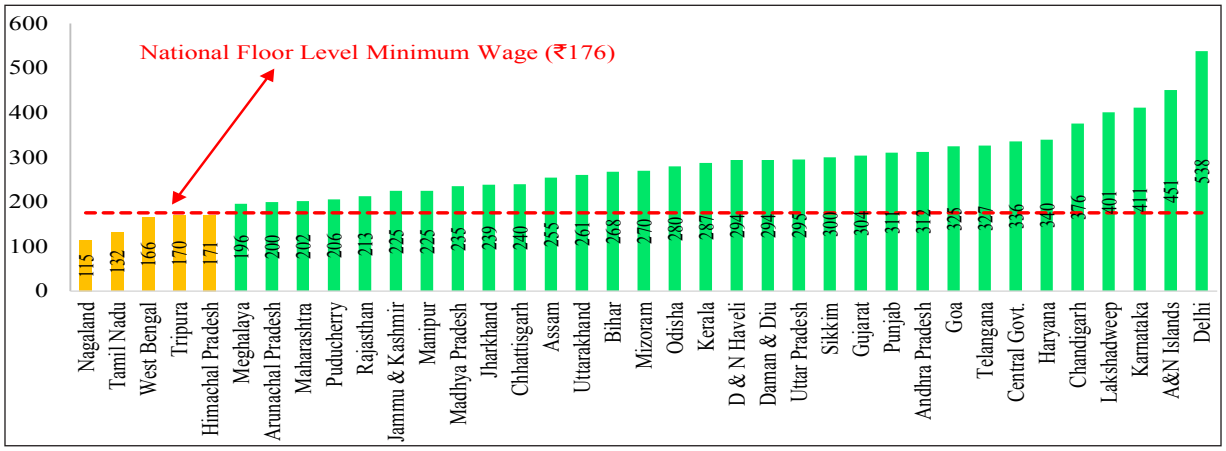
COMPLIANCE WITH THE MINIMUM WAGE ACT

11.14 The proliferation of minimum wage rates and scheduled employments is a strong deterrent for compliance. Different statutory minimum wage rates for the same occupation between states combined with the wide range between the lowest and highest minimum wages can trigger migration of the industry to lower wage regions/state. As the impact of minimum wage levels on employment and poverty depends on the level of compliance and enforcement (Soundararajan, 2014), it is of paramount importance to rationalise the minimum wage policy.

11.15 Currently NFLMW is non-statutory. Yet, the NFLMW can provide a useful benchmark for assessing the spread of the range of minimum wages fixed for unskilled workers across states. Over the years, most of the notified minimum wage rates in different states have moved above the NFLMW rate, though there are still a few states and occupations/job categories for which the prevailing minimum wage rates are below the NFLMW as of 2018-19 (Figure 4).

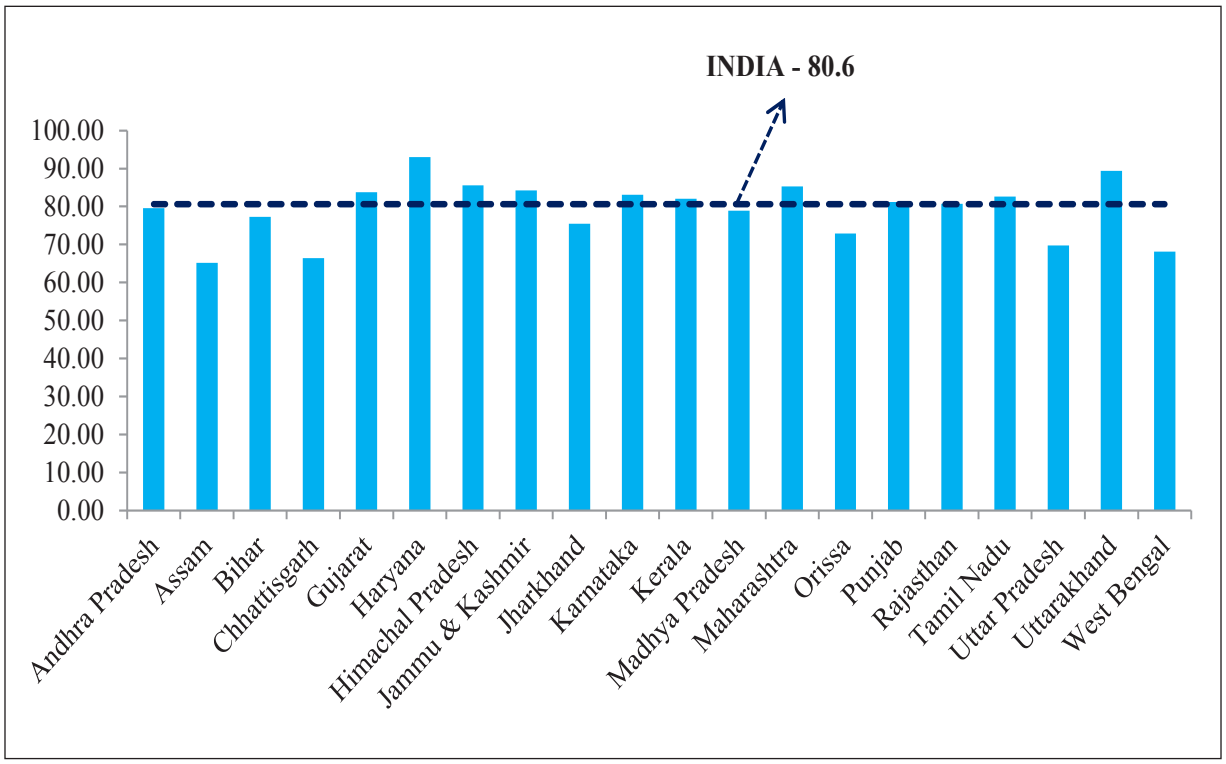
11.16 A second measure of compliance could be to compare actual wages received by various categories of workers with the notified minimum wage. To get an aggregate picture, the NFLMW is used as the notified minimum wage. By this measure, the proportion of vulnerable workers receiving wages below the NFLMW can be an index of non-compliance. Using this measure, Kannan and Papola (2017) show that 39 per cent of the male casual workers and 56 per cent of women casual workers in rural areas, and 28 per cent of male casual workers and 59 per cent of women casual workers in urban areas received wages below the NFLMW in 2012. In 2004, the same figures were 78 per cent (male rural), 96 per cent (female rural) and 49 per cent (male urban) and 88 per cent (female urban). This indicates a trend towards increasing compliance and that there is a gender gap in compliance similar to the gender gap in level of minimum wages. Using the NSSO Employment-Unemployment Survey (EUS) data, a comparison was made between the wages of regular and casual workers with NFLMW. It was observed that compliance levels were significantly higher

Figure 4: Lowest Minimum Wages for Unskilled Workers and NFLMW (INR per day)



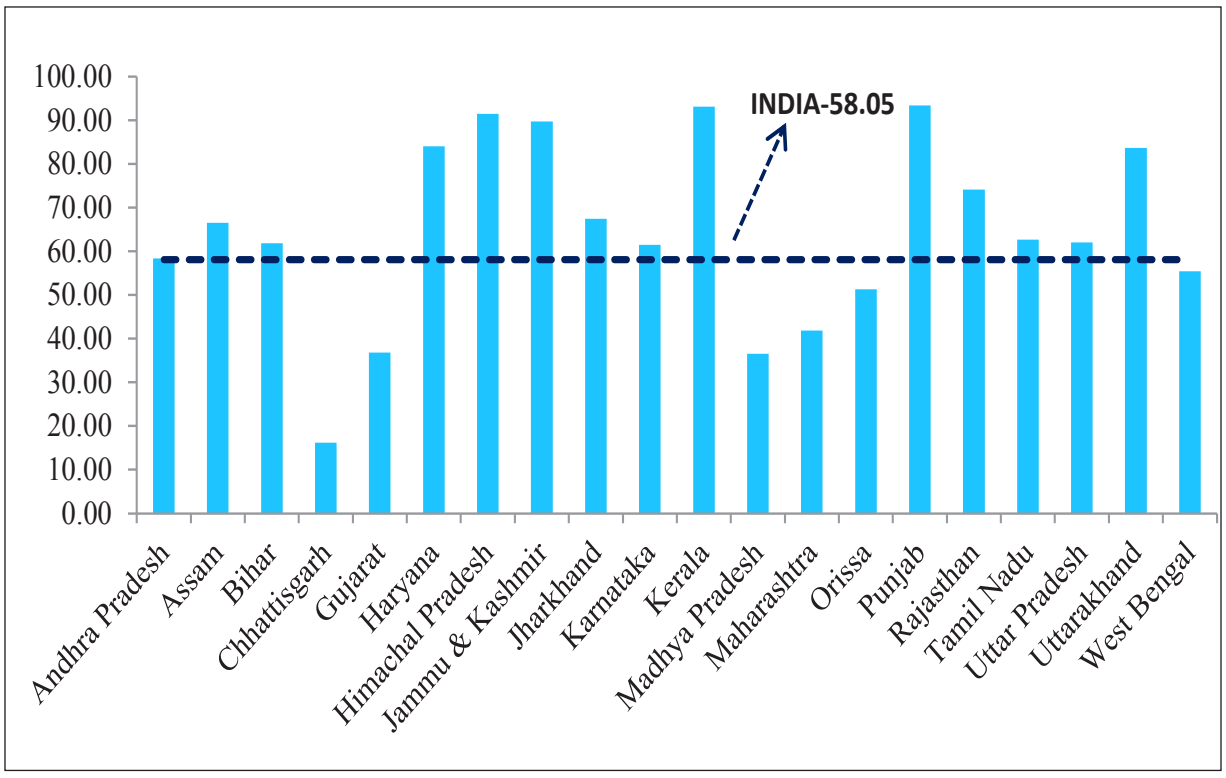
Source: The data pertaining to lowest level of minimum wage rates for unskilled workers notified by the State/ Central Government and NFLMW notified by the Central Government have been collated from the latest minimum wage notifications issued by the respective governments. These notifications have been issued at different points of time ranging from December 2014 to April 2019.

Figure 5: Percentage of Regular Workers Receiving Wages over the NFLMW, 2012



Source: Based on unit level data of the NSS Employment-Unemployment Survey, 2011-12.

Figure 6: Percentage of Casual Workers Receiving Wages over the NFLMW, 2012



Source: Based on unit level data of the NSS Employment –Unemployment Survey, 2011-12

for regular wage workers when compared to casual wage earners, as indicated in Figures 5 & 6.

IMPACT OF MINIMUM WAGES

11.17 What has been the impact of minimum wage on the labour market in India? To what extent has it been successful in fulfilling the goal of protecting the vulnerable workers, improving general wage levels, and reducing inequality and poverty? In this context, it must be remembered that a well-designed minimum wage system is only one of the several institutional mechanisms necessary for a meaningful impact on all these factors.

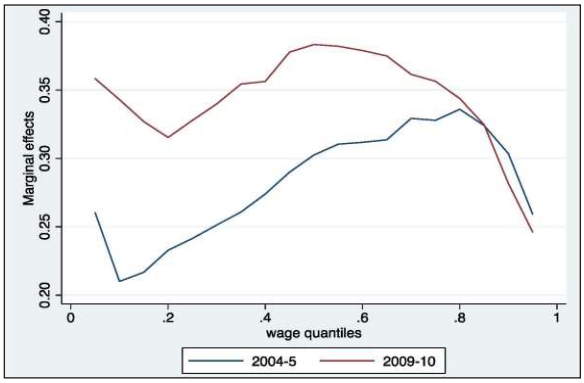
Impact on wage levels

11.18 Rani, Belser and Ranjbar (2013) demonstrate that minimum wage in India does not operate as a conventional floor wage to protect the lowest paid workers. Nevertheless, the study shows the presence of a "lighthouse effect", i.e., the minimum wage acts as a benchmark that pulls up wages in the low-paid and informal sector by enhancing the bargaining power of vulnerable workers.

11.19 Menon and Rodgers (2017) use household survey data from 1982-83 and 2008 to show a marked increase in compliance between these two periods with a stronger impact on male wages compared to female wages and on regular wages compared to casual wages during this period. Using data for workers in the construction industry, Soundararajan (2018) shows the presence of the "lighthouse effect" of minimum wage. Specifically, minimum wage seems to have shaped wage bargaining, thereby leading to rise in actual wages.

11.20 Rani and Ranjbar (2015) show that the minimum wage does impact the distribution of actual wages, with the impact depending on wage quantile. They show that for 2009-10, the marginal effects of the effective minimum wage increases gradually as we move towards the 80th quantile, i.e., the marginal wage pushes up the wages disproportionately more on the lower side of the wage distribution. This is quite different from the marginal effects observed in 2004-05, when the marginal effects of an increase in the minimum wage were greater at the higher levels of the income distribution than at lower levels (Figure 7).

Figure 7: Effect of minimum wages on wage distribution in India



Source: Rani and Ranjbar (2015)

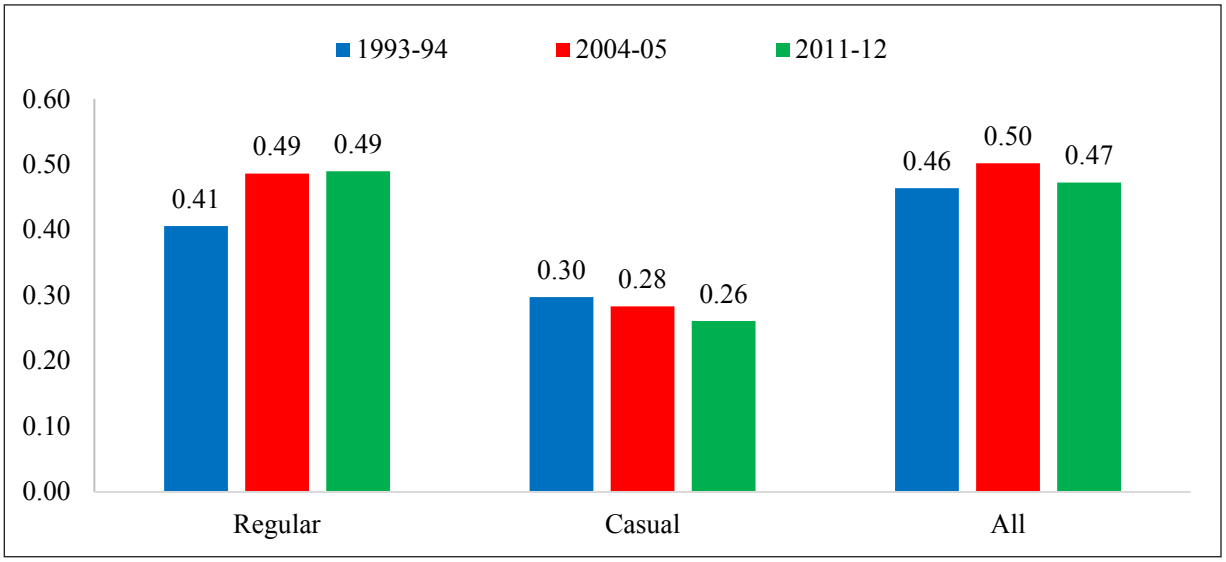
Impact on Wage Inequality

11.21 International experience suggests that greater compliance with minimum wages has led to reduction in wage inequality. India's experience regarding the impact of minimum wages on wage inequality needs to be evaluated keeping in mind the segmentation in the labour market and variations across various categories of workers.

11.22 Between 1993 and 2011, the average real wages increased in India, with the fastest growth recorded for casual labour, women's labour, and rural/agricultural labour (ILO 2018). Despite these increases, the existing wage inequality measured by the Gini coefficient remains very high by international standards (Figure 8)[3]. Going deeper, it is seen

[3] The Gini coefficient is a commonly-used measure of income inequality that condenses the entire income distribution for a country into a single number between 0 and 1: the higher the number, the greater the degree of income inequality.

Figure 8: Gini Coefficient for Regular and Casual Workers: 1993-94 to 2011-12



Source: ILO, 2018.

that this inequality has increased amongst regular workers while it has decreased among casual workers.

11.23 A similar trend is visible when we measure wage inequality through wage dispersion ratios (Tables 1 and 2). The ratio of the average wage rate of the top 10 per cent compared to the wage rate of the bottom 10 per cent of wage earners (P90/P10) declined among casual workers and increased among regular workers, except regular male rural workers. The ratio of the wage rate of the middle 10 per cent of wage earners (50th decile or P50) to the bottom 10 per cent declined consistently during 1993-2011 for

Table 1: Rural Wage Inequality Dispersion Ratios: 1993-94 to 2011-12

			1993-94			2004-05			2011-12		
			(P90/P10)	(P90/P50)	(P50/P10)	(P90/P10)	(P90/P50)	(P50/P10)	(P90/P10)	(P90/P50)	(P50/P10)
Rural	Regular	Male	7.6	2.3	3.3	9	3.5	2.6	7.1	3.6	2.0
		Female	12	4.3	2.8	15	5.8	2.6	12.5	5.0	2.5
	Casual	Male	3.3	2.0	1.7	2.9	1.7	1.7	2.9	1.7	1.7
		Female	3.1	1.7	1.8	2.8	1.8	1.5	2.5	1.5	1.7

Table 2: Urban Wage Inequality Dispersion Ratios 1993-94 to 2011-12

			1993-94			2004-05			2011-12		
			(P90/P10)	(P90/P50)	(P50/P10)	(P90/P10)	(P90/P50)	(P50/P10)	(P90/P10)	(P90/P50)	(P50/P10)
Urban	Regular	Male	7.0	2.3	3.0	8.6	3.2	2.7	8.9	3.5	2.5
		Female	12.9	2.6	5.0	18.7	5.6	3.3	15.6	5.0	3.1
	Casual	Male	3.7	1.8	2.0	3.1	1.8	1.8	3.0	1.9	1.6
		Female	3.8	1.8	2.1	3.5	1.8	2.0	4.0	2.0	2.0

Source: ILO, 2018.

regular and casual workers, both for males and females in urban and rural areas. Thus, there is a 'catching up' process because of the faster increase of wages of casual workers, which substantiates the 'lighthouse effect' of minimum wages.

11.24 This mixed trend of wage inequality – increasing amongst regular workers and declining amongst the bottom and middle level of all workers – can perhaps be explained by the rise of average minimum wages, in consonance with the increase in Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) wages, which were benchmarked to minimum wages (Berg et al., 2018). It is, therefore, established that well-designed and effective implementation of minimum wages will strengthen the trend towards decreasing wage inequality especially at lower levels. This becomes all the more significant as women constitute the majority of the bottom rungs of the wage distribution. This also shows how compliance of the statute is imperative for increasing welfare.

Impact on Employment

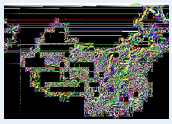
11.25 Broecke (2017) finds in a meta-study on employment across Brazil, Chile, China, Colombia, India, Indonesia, Mexico, the Russian Federation, South Africa and Turkey that minimum wages have only a minimal (or no) impact on employment in emerging economies.

11.26 Rani, Belser and Ranjbar (2013), in a study of 70 districts of India, find that there was no impact of minimum wages on employment between 2005 and 2010.

BOX 2: MINIMUM WAGE SYSTEM IN BRICS

BRICS countries have varied systems in terms of coverage, degree of tripartite consultation, criteria for setting the minimum wage and adjustment procedure. However, in all these countries, minimum wages are explicitly embedded within a larger wage policy aimed at balancing needs of the workers with overall economic factors.

Table 3: Minimum Wage System in BRICS countries

	Brazil	 China	Russia	South Africa	India
Coverage	National minimum wage, covering all workers. Regions can also define minimum wages above the national level.	Minimum wage rates are established by province.	Regional minimum wages that coexist with a national minimum wage. The regional minimum wages are fixed above the federal rate.	A national minimum wage was approved in 2018, covering all groups of wage earners.	Minimum wages are limited to Scheduled Employments, diff. skills & occupations.

Consultation	'Quadripartite commission' in 2005, composed of federal government, state government, employers and unions, formulates a long-term minimum wage policy - until 2019.	Administrative authorities, in charge of labour issues prepare a programme to fix and adjust minimum wages.	Russian Tripartite Committee- the Employers' association, trade unions and the Government of the Russian Federation decides.	The tripartite Employment Conditions Commission (ECC) advises the Minister of Labour on the determination of the minimum wage.	Minimum Wages are set through Notification or Consultation, based on the tripartite Advisory Board and Committees set for this purpose.
Criteria	Minimum wage is increased by the sum of inflation in the previous year plus the GDP growth of 2 years before (if >0)	Cost of living of workers and their dependents; the consumption price index; the average wages of workers; labour productivity; the urban economic situation; and the level of economic development.	Regions choose different criteria for their minimum wages but the subsistence minimum is a need-based income level that is the benchmark that guarantees minimum consumption requirements.	Cost of living and minimum living levels, poverty alleviation, wage differentials & inequality, OSH, conditions and level of employment, inflation, GDP, productivity, collective bargaining.	Adopted need-based norms from the 1957, 15th ILC Session and 1992 Supreme Court Judgment
Adjustment	Adjusted on an annual basis	At least every two years, and whenever appropriate when the indicators change.	No specific periodicity	Regular annual adjustment.	Adjusted at least every five years.

Source: ILO, 2018

However, Menon and Rogers (2017) report a positive effect of minimum wages on employment levels for both men and women. They find that a 10 per cent rise in minimum wages raised the employment level by 6.34 percentage points in rural areas while it had a statistically insignificant impact on urban employment levels for both men and women.

WAY FORWARD

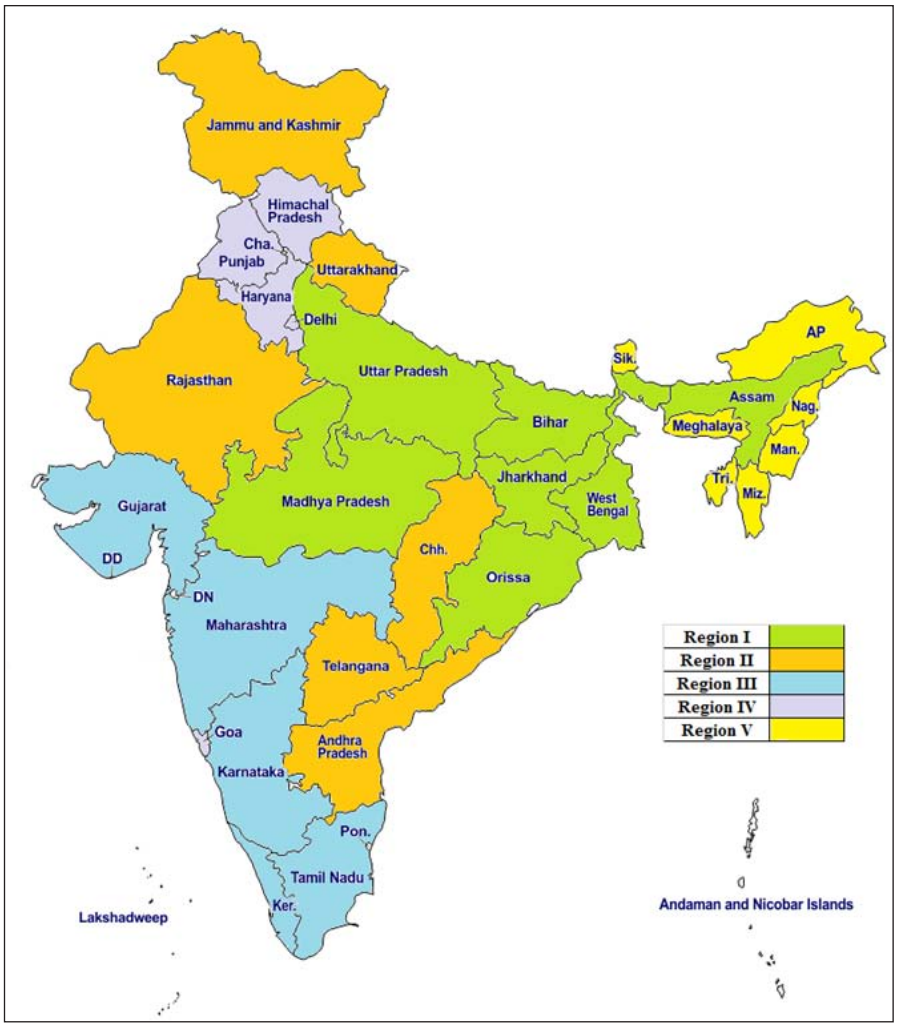
11.27 It is evident from above that a well-designed minimum wage system can be a potent tool for protecting workers and alleviating poverty, if set at an appropriate level that ensures compliance. International experience has shown that relatively simple systems are more effective and usually complex systems are least effective. Cunningham (2007) and Ghose (1997) show that a complex system of minimum wages shows lack of coherence about wage levels and wages being set in an arbitrary fashion. United Kingdom, for example, abolished its system of industry-wide trade boards in the

1980s and replaced it with a simple national minimum wage. This trend is reflected in evolution of ILO standards as well, which earlier encouraged the adoption of a select system of minimum wages to groups of workers who are in a weak bargaining position in the labour market, but later promoted a comprehensive approach that covers as many workers as possible.

11.28 Multiple minimum wages usually exist to take care of the needs of a heterogeneous labour force. For example, this is the case in India and the Latin American Countries that have a high diversity of labourers. Some policy recommendations for an effective design of minimum wages system are as follows:

- **Simplification and Rationalisation:** Rationalisation of minimum wages as proposed under the Code on Wages Bill needs to be supported. This code amalgamates the Minimum Wages Act, 1948, the Payment of Wages Act, 1936, the Payment of Bonus Act, 1965 and the Equal Remuneration Act, 1976 into a single piece of legislation. The definition of wage in the new legislation should subsume the present situation of 12 different definitions of wages in different Labour Acts.

Figure 9: Geographical regions as determined by the Expert Committee on determining the methodology for fixing the National Minimum Wage, 2019



Source: Expert Committee on determining the methodology for fixing the National Minimum Wage, 2019

- **Setting a National Floor Level Minimum Wage:** Central Government should notify a "national floor minimum wage" that can vary across the five geographical regions (Figure 9). Thereafter, states can fix the minimum wages, which shall not be less than the "floor wage." This would bring some uniformity in the minimum wages across country and would make all states almost equally attractive from the point of view of labour cost for investment as well as reduce distress migration.
- **Criteria for setting minimum wage:** Further, the Code on Wages Bill should consider fixing minimum wages based on either of the two factors viz; (i) the skill category i.e unskilled, semi-skilled, skilled and highly skilled; and (ii) the geographical region, or else both. This key change would substantially reduce the number of minimum wages in the country. For instance, Madhya Pradesh has notified minimum wages based on just four skill levels of unskilled, semi-skilled, skilled and highly skilled across occupations and regions. The state has just four basic minimum wages for the four skill categories.
- **Coverage:** The proposed Code on Wages Bill should extend applicability of minimum wages to all employments/ workers in all sectors and should cover both the organized as well as the unorganized sector.
- **Regular adjustment:** A mechanism should be developed to adjust minimum wages regularly and more frequently, similar to countries like Montenegro, Nicaragua, Netherlands, Uruguay, and Costa Rica, where the minimum wage adjustment takes place every six months (ILO, 2014). A dashboard needs to be set up by the Ministry of Labour & Employment, which shows the date of the last revision in the minimum wage adjunct to the mandated period. This would enable dissemination of information and increased transparency in the system.
- **Role of Technology:** The concept of 'bounded rationality' in behavioural economics is that there are restrictions to human information processing, due to limits in knowledge (or information) and computational capacities (Kahneman, 2003). A complex system with multiplicity of wages across states and across occupations sets limits on how workers process the information available and use it to their benefit. Technology can help in overcoming this behavioural bias by making information available in a simple and clear manner. Use of a variety of online, mobile phone and networking technologies have the potential to facilitate the collection and analysis of labour statistics, assist with the dissemination of information about labour laws and policies, reduce costs and improve transparency. A national level dashboard can be created at the Centre with access to the state governments whereby the states can regularly update the notifications regarding minimum wages. This portal must be made available at Common Service Centres (CSCs), rural haats etc., with the required mass media coverage so that the workers are well-informed and their bargaining skills and decision-making power are strengthened. Uniformity in minimum wages would also encourage industries to move towards interior areas and thereby reduce labour migration. Information on various combinations of wages, occupations/skills and states can be made available so that workers can get easy access to whatever combination of minimum wages they want to know. The system should be built in a way that

Box 3 : Use of Technology for Minimum Wage Enforcement- Cross Country Experiences

- In UAE, all enterprises have been legally required to pay wages for both national and migrant workers through banks and other financial service providers. This system allows the Ministry of Labour to have a comprehensive wage database and an electronic wage payment monitoring mechanism for enterprises within the country.
- In South Africa a system, called 'Impimpi Alive', enables workers to send anonymous SMS messages to the Department of Labour (DOL) after which an inspector is dispatched to the employer's place of business within 48 hours.
- In U.S. an app – The Wage & Hour Guide for Employers App – puts federal and state wage and hour laws at the fingertips of employers as well as law makers for better transparency.
- U.S. also has an app – GovDocs Minimum Wage app that provides the most up-to-date minimum wage rate data for all company locations.

flashes 'red' alerts if the statute is not being followed in any state or occupation in the notified area.

- **Grievance redressal:** There should be an easy to remember toll-free number for anybody to register his grievance on non-payments of the statutory minimum wages. This number should be given wide publicity to make people aware of this avenue for grievance redressal. Swift action should be taken against the offenders and this action should be flashed on the dashboard without going into specific details. The impression of action being taken would act as a deterrent to employers to flout the statute.

11.29 To sum up, the world of work is in a churn as technology is heralding major transformations both in the workplace as well as in work and employment relations. The impact is being felt both in the developed and developing countries. For India, undergoing a delayed structural and demographic transition, the challenges posed by the technology driven changes are enormous. Expanding decent employment to young aspirants in the labour markets is a major concern. Establishing an effective minimum wage system that will lead to inclusive growth is therefore an urgent necessity.

CHAPTER AT A GLANCE

- The present minimum wage system in India is complex with 1,915 minimum wages defined for various scheduled job categories across various states.
- One in every three wage workers in India is not protected by the minimum wage law.
- Minimum wages should be fixed for four categories namely, unskilled, semi-skilled, skilled and highly skilled based on the geographical region and should cover all workers, irrespective of any wage ceilings.
- A simple, coherent and enforceable Minimum Wage System should be designed with the aid of technology as minimum wages push wages up and reduce wage inequality without significantly affecting employment.
- An effective minimum wage policy is a potential tool not only for the protection of low-paid workers but is also an inclusive mechanism for more resilient and sustainable economic development.

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सत्यमेव जयते

Economic Survey 2018-19

Volume 2

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July, 2019

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Acknowledgements

The Economic Survey is a result of teamwork and collaboration. Contributions to the Survey from the Economic Division include: Sanjeev Sanyal, Sushmita Dasgupta, Arun Kumar Jha, Arun Kumar, Rajiv Mishra, Rajasree Ray, A Srija, Surbhi Jain, A. Prathibha, S. Arputhaswamy, Nikhila Menon, Ashwini Lal, Abhishek Acharya, Rajani Ranjan, Sindhumannickal Thankappan, Prerna Joshi, Dharmendra Kumar, Aakanksha Arora, M. Rahul, Rabi Ranjan, Tulsipriya Rajkumari, Shamim Ara, J.D. Vaishampayan, Arya B.K., Abhishek Anand, Sonal Ramesh, Sanjana Kadyan, Amit Sheoran, Shreya Bajaj, Subhash Chand, Riyaz Ahmad Khan, Md. Aftab Alam, Pradyut Kumar Pyne, Narendra Jena, Sribatsa Kumar Parida, Mritunjay Kumar, Rajesh Sharma and Amit Kumar Kesarwani, Arpitha Bykere, Naveen Bali, Mahima, Ankur Gupta, Lipi Budhraja, Sonum Gayatri Malhotra and Lavisha Arora.

The Survey has benefitted from the valuable comments and insights of the Hon'ble Finance Minister Smt Nirmala Sitharaman and the Hon'ble Minister of State for Finance Shri Anurag Singh Thakur.

The Survey benefitted from the comments and inputs from officials spread across various Ministries/ Departments and organisations, specifically Shri Pranab Kumar Mukhopadhyay, DG, DGCI&S, Kolkata; Shri Ajay Srivastava, Economic Adviser, Department of Commerce; Ms. Shruti Shukla, Joint Director, DGCI&S, Kolkata; Dr. M. D. Patra, Executive Director, Reserve Bank of India (RBI); Shri Rajan Goyal, Adviser, Reserve Bank of India (RBI); Prof. K. S. James and Prof. Chander Shekhar, International Institute for Population Sciences; Prof. Suresh Sharma and Vandana Sharma, Institute of Economic Growth; Mr. Surya Prakash B. S., Fellow and Programme Director; Shri Rajiv Jain, Director, RBI; Shri Dhirendra Gajbhiye, Assistant Adviser, Reserve Bank of India (RBI); Siddharth Mandrekar Rao, Research Associate, Daksh; Ms. Soumasree Tewari, Research Officer, RBI; Shri Sukhbir Singh, CAAA, Department of Economic Affairs, Ministry of Finance; Shri Abhay Bakre, Director General, Bureau of Energy Efficiency; Dr. Ashok Kumar , Director, Bureau of Energy Efficiency; Dr. Surya P Sethi and Shri Sameer Kumar- Joint Secretary, Ministry of Drinking Water and Sanitation.

Apart from the above, various ministries, departments and organisations of the Government of India made contributions in their respective sectors. Several ministries directly interacted with the CEA via presentations to provide their inputs. The Economic Survey is gratified for their valuable time, engagement and contributions. Able administrative support was given by K. Rajaraman, Rajkumar Tiwari, Jasbir Singh, Suresh Kumar, Anupam Shukla, Sadhna Sharma, Arun Gulati, Sushil Sharma, Manish Panwar, Muna Sah, Suresh Kumar, Jodh Singh, Ombir Singh, R R Meena, Subash Chand, Raj Kumar, Ram Niwas, Kesar Singh, Bal Kishan, Satish Kumar, Gajender Singh and other staff and members of the Economic Division and the Office of CEA. The cover page for the Survey was designed by India Brand Equity Foundation. Viba Press Pvt. Ltd. undertook the printing of the English and Hindi version of the Survey.

Finally, the Economic Survey owes deep gratitude to the families of all those involved in its preparation for being ever so patient, understanding and encouraging and for extending their unflinching emotional and physical support throughout the preparation. The families, indeed, are the silent pillars of strength for the dedicated contributors to the Economic Survey.

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ABBREVIATIONS

AAI	Airports Authority of India
AFD	Agence Française de Dévelopment
AH	Area Operated by Operational Land Holdings
AI	Artificial Intelligence
AIR	All India Radio
AITIGA	ASEAN India Trade in Goods Agreement
AM	Alternative Mechanism
AMC	Asset Management Company
AMFFRI	Agricultural Marketing and Farmer Friendly Reforms Index
AMRUT	Atal Mission for Rejuvenation and Urban Transformation
ANC	Ante-Natal Care
APL	Above Poverty Line
APMC	Agricultural Produce Market Committee
APWRIMS	Andhra Pradesh Water Resources Information & Management Systems
AQI	Air Quality Index
AR	Augmented Reality
ASEAN	Association of South-East Asian Nations
ASER	Annual Status of Education Report
ASI	Annual Survey of Industries
ASK	Available Seat Kilometers
AYUSH	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy
B2B	Business to business
B2C	Business to Consumer
BARC	Broadcasting Audience Research Council
BBBP	Beti Bachao Beti Padhao
BCD	Basic Customs Duty
BE	Budget Estimates
BHEL	Bharat Heavy Industries Limited
BOD	Biological Oxygen Demand
BoP	Balance of Payments
BOT	Build-Operate-Transfer
BPL	Below Poverty Line
BRE	Bureau of Resource Efficiency
BSE	Bombay Stock Exchange
BTIA	Bilateral Trade and Investment Agreement
BU	Billion Units
BUR	Biennial Update Report
C&D	Construction & Demolition
CAD	Current Account Deficit
CAG	Comptroller Auditor General of India
CAGR	Compound Annual Growth Rate
CBDR-RC	Common but Differentiated Responsibilities and Respective Capabilities
CBM	Coal Bed Methane
CCAP	Climate Change Action Programme
CCEA	Cabinet Committee on Economic Affairs
CE	Circular Economy
CECA	Comprehensive Economic Cooperation Agreement
CECPA	Comprehensive Economic Cooperation and Partnership Agreement
CEPA	Comprehensive Economic Partnership Agreement
CEPI	Custodian of Enemy Property
CER	Corporate Environmental Responsibility
CFPI	Consumer Food Price Index
CGA	Controller General of Accounts
CGST	Central Goods and Services Tax
CHCs	Custom Hiring Centres
CIB	Centre for Insolvency and Bankruptcy
CIC	Currency in Circulation
CII	Confederation of Indian Industries
CIL	Coal India Limited
CIP	Central Issue Price
CIRP	Corporate Insolvency Resolution Process
CLAF	City Level Advisory Forums
CMIE	Centre for Monitoring Indian Economy
CoC	Committee of Creditors
CPCB	Central Pollution Control Board
CPI	Consumer Price Index
CPI (AL)	Consumer Price Index (Agricultural Labourers)
CPI (IW)	Consumer Price Index (Industrial Workers)
CPI (RL)	Consumer Price Index (Rural Labourers)
CPI-C	Consumer Price Index (Combined)
CPSE	Central Public Sector Enterprise
CRAR	Capital to Risk-weighted Asset Ratio
CRF	Central Road Fund
CRIF	Central Road and Infrastructure Fund
CSL	Cochin Shipyard Limited
CSO	Central Statistics Office
CSR	Corporate Social Responsibility
CSS	Centrally Sponsored Scheme
CVD	Countervailing Duty
CwP	Currency with Public
D.Ed	Diploma in Elementary Education
DARE	Department of Agricultural Research and Education
DB	Doing Business
DBT	Direct Benefit Transfer
DCIL	Dredging Corporation of India Limited
DD	Doordarshan
DDP	Department of Defence Production
DDUGJY	Deen Dayal Upadhyay Gram Jyoti Yojana
DE	Departmental Enterprises
DEA	Department of Economic Affairs
DGAD	Directorate General of Anti-dumping and Allied Duties
DGCA	Directorate General of Civil Aviation
DGCI&S	Directorate General of Commercial Intelligence and Statistics
DGTR	Directorate General of Trade Remedies
DIDF	Dairy Processing and Infrastructure Development Fund

DIPAM	Department of Investment and Public Asset Management
DISC	Defence India Start-up Challenges
DMEO	Development Monitoring & Evaluation Office
DoE	Department of Expenditure
DPIIT	Department for Promotion of Industry and Internal Trade
DPSU	Defence Public Sector Undertaking
DTH	Direct to Home
DWT	Dead Weight Tonnage
EaEU	Eurasian Economic Union
EAG	Empowered Action Group
EAP	Externally Aided Projects
EBR	Extra Budgetary Resources
ECBs	External Commercial Borrowings
ECOWAS	Economic Community of West African States
EFTA	European Free Trade Association
ELVs	End-of-Life Vehicles(s)
EM	Emerging Market
EMDEs	Emerging Market and Developing Economies
EME	Emerging Market Economies
e-NAM	Electronic National Agriculture Market
EPC	Engineering, Procurement and Construction
EPF	Employees' Provident Fund
EPR	Extended Producer Responsibility
ESAG	Educational Statistics at a Glance
ESDM	Electronics System Design and Manufacturing
ESI	Employees' State Insurance Scheme
ETCA	Economic and Technology Cooperation Agreement
ETF	Exchange Traded Funds
EU	European Union
EY	Ernst & Young
FALLCR	Facility to Avail Liquidity for Liquidity Coverage Ratio
FAO	Food and Agriculture Organization
FC	Financial Creditor
FCI	Food Corporation of India
FDI	Foreign Direct Investment
FFPI	FAO Food Price Index
FICCI	Federation of India Chambers of Commerce and Industry
FIDF	Fisheries and Aquaculture Infrastructure Development Fund
FII	Foreign Institutional Investors
FM	Frequency Modulation
FMCG	Fast Moving Consumer Goods
FMD	Foot and Mouth Disease
FPI	Foreign Portfolio Investment
FPO	Further Public Offer
FPSs	Fair Price Shops
FRBMA	Fiscal Responsibility and Budget Management Act
FTA	Free Trade Agreement
FTP	Foreign Trade Policy
FY	Financial Year
GCA	Gross Cropped Area
GCF	Gross Capital Formation
GDP	Gross Domestic Product
GER	Gross Enrolment Ratio
GFCE	Government Final Consumption Expenditure
GFCF	Gross Fixed Capital Formation
GFSI	Global Food Security Index
Gg	Gigagram
GHG	Greenhouse Gas
GIP	Graduate Insolvency Programme
GNI	Gross National Income
GNPA	Gross Non-Performing Assets
GPI	Gender Parity Index
GPIs	Grossly Polluting Industries
GRR	Global Restructuring Review
GRSE	Garden Reach Shipbuilders & Engineers Ltd
GRT	Gross Registered Tonnage
GSAT	Geosynchronous Satellites
G-Sec	Government Security
GSLV	Geosynchronous Satellite Launch Vehicle
GSMA	Global System for Mobile Communication Association
GST	Goods and Services Tax
GSTR	Goods and Services Tax Return
GSVA	Gross State Value Added
GTR	Gross Tax Revenue
GTT	Gross Terms of Trade
GVA	Gross Value Added
Ha	Hectare
HAM	Hybrid Annuity Mode
HDI	Human Development Index
HP-HT	High Pressure-High Temperature
HPI	Housing Price Index
HSCC	Hospital Services Consultancy Corporation
IBBI	Insolvency and Bankruptcy Board of India
IBC	Insolvency and Bankruptcy Code
ICAR	Indian Council of Agricultural Research
ICE	Internal Combustion Engine
ICRA	Investment Information and Credit Rating Agency of India
ICRIER	Indian Council for Research on International Economic Relations
ICT	Information and Communications Technology
IDERA	Irrevocable De-registration & Export Request Authorization
iDEX	Innovation for Defence Excellence
IEBR	Internal and Extra Budgetary Resources
IFPRI	International Food Policy Research Institute
IFS	International Financial Statistics
IGST	Integrated Goods and Services Tax
IICA	Indian Institute of Corporate Affairs
IIP	International Investment Position
IL	Industrial License
ILC	Insolvency Law Committee
IMCECA	India and Malaysia Implement Comprehensive Economic Cooperation Agreement

IMF	International Monetary Fund
IMG	Inter-Ministerial Group
InvITs	Infrastructure Investment Trusts
IOCL	Indian Oil Corporation Limited
IoT	Internet-of-Things
IP	Insured Persons
IPCC	Intergovernmental Panel on Climate Change
IPO	Initial Public Offer
IPPU	Industrial Processes and Product Use
IR	Indian Railways
IRCON	Indian Railway Construction Company Limited
IRCTC	Indian Railways Catering and Tourism Corporation
IRF	Insolvency Research Foundation
IRFC	Indian Railway Finance Corporation
ISA	International Solar Alliance
ISLFTA	India-Sri Lanka Free Trade Agreement
ISRO	Indian Space Research organisation
IT	Information Technology
ITA	International Tourist Arrivals
IT-BPM	Information Technology - Business Process Management
ITC	Input Tax Credit
ITT	Income Terms of Trade
IU	Information Utilities
IWMP	Integrated Watershed Management Programme
IWP	Irrigation Water Productivity
JFSG	Joint Feasibility Study Group
KIOCL	Kudremukh Iron Ore Company Limited
KVKs	Krishi Vigyan Kendras
LAF	Liquidity Adjustment Facility
LCO	Local Cable Operators
LCR	Liquidity Coverage Ratio
LFPR	Labour Force Participation Rate
LIDAR	Light Detection and Ranging
LPI	Logistics Performance Index
LSG	Local Self Government
LULUCF	Land use, Land-Use Change and Forestry
M0	Reserve Money
M2M	Machine-to-Machine
M3	Broad Money
MCA	Ministry of Corporate Affairs
MeitY	Ministry of Electronics and Information Technology
MEP	Minimum Export Price
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MHA	Ministry of Home Affairs
MI	Micro Irrigation
MI	Mission Indradhanush
MI	Mixed Income
MIDHANI	Mishra Dhatu Nigam
MLD	Million Litres per Day
MMR	Maternal Mortality Ratio
MMSCM	Million Metric Standard Cubic Meters
MMT	Million Metric Tonnes
MMTPA	Million Metric Tonnes Per Annum
MNP	Mobile Number Portability
MoEF&CC	Ministry of Environment, Forest and Climate Change
MoHUA	Ministry of Housing and Urban Affairs
MoP	Margin of Preference
MORTH	Ministry of Road Transport and Highways
MOSPI	Ministry of Statistics and Programme Implementation
MOVCDNER	Mission Organic Value Chain Development for North Eastern Region
MoWCD	Ministry of Women and Child Development
MPC	Monetary Policy Committee
MPI	Municipal Performance Index
MRA	Mutual Recognition Agreement
MRFs	Material Recovery Facilities
MRO	Maintenance, Repair & Overhaul
MSEI	Metropolitan Stock Exchange of India Limited
MSF	Marginal Standing Facility
MSME	Micro Small Medium Enterprises
MSO	Multi System Operators
MSP	Minimum Support Price
MSTC	Metal Scrap Trade Corporation
MT	Metric Tonne
MT	Million Tonnes
MTFP	Medium Term Fiscal Policy
MTPA	Million Tonnes per Annum
MW	Mega Watt
MWP	Minimum Work Programme
NAAQS	National Ambient Air QualityStandards
NABARD	National Bank for Agriculture and Rural Development
NAFTA	North America Free Trade Agreement
NALCO	National Aluminium Company Limited
NAM	National Ayush Mission
NAMP	National Air Quality Monitoring Programme
NAPCC	National Action Plan on Climate Change
NAS	National Achievement Survey
NASSCOM	National Association of Software and Services Companies
NBCC	National Buildings Construction Corporation
NBFC	Non-Banking Financial Companies
NCAP	National Clean Air Program
NCLAT	National Company Law Appellate Tribunal
NCLT	National Company Law Tribunal
NCR	National Capital Region
NCTF	National Committee on Trade Facilitation
NDE	Non-Departmental Enterprises
NDTL	Net Demand and Time Liabilities
NEEPCO	North Eastern Electric Power Corporation Limited
NEER	Nominal Effective Exchange Rate
NeSL	National e-Governance Services Limited
NFC	Non Food Credit
NFSA	National Food Security Act

NGNF	Non-Governmental Non-Functional
NHAI	National Highway Authority of India
NHB	National Housing Bank
NHIDCL	National Highways and Infrastructure Development Corporation Limited
NHM	National Health Mission
NHP	National Hydrology Project
NHPC	National Hydroelectric Power Corporation
NIFAP	National lnland Fisheries and Aquaculture Policy
NIIP	Net International Investment Position
NIUA	National Institute of Urban Affairs
NIUA	National Institute of Urban Affairs
NLC	Neyveli Lignite Corporation Limited
NLH	Number of Operational Land Holdings
NMCG	National Mission for Clean Ganga
NMDC	National Mineral Development Corporation
NMSA	National Mission for Sustainable Agriculture
NNI	Net National Income
NO2	Oxides of Nitrogen
NOCs	National Oil Companies
NPA	Non-Performing Assets
NPCC	National Projects Construction Corporation Limited
NPCDCS	National Programme for the Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke
NPE	National Policy on Electronics
NPS	National Pension Scheme
NPT	Net Production Tax
NRHM	National Rural Health Mission
NRI	Non-resident Indian
NSE	National Stock Exchange
NSSF	National Social Security Fund
NSSO	National Sample Survey Office
NTT	Net Terms of Trade
NUHM	National Urban Health Mission
NUIH	National Urban Innovation Hub
O&M	Operation & Maintenance
OCEMS	Online Continuous Effluent Monitoring Systems
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
OF	Ordinance Factories
OFB	Ordinance Factory Board
OFS	Offer for Sale
OIL	Oil India Limited
OMO	Open Market Operations
OMSS	Open Market Sale Scheme
ONGC	Oil and Natural Gas Corporation
OOPE	Out of Pocket Expenditure
OS	Operating Surplus
OT	Operation Theatre
OTT	Over the Top
P	Provisional
PA	Provisional Actuals
PAN	Permanent Account Number
PAWP	Paris Agreement Work Programme
PDS	?Public Distribution System
PFC	Power Finance Corporation Limited
PFCE	Private Final Consumption Expenditure
PFRDA	Pension Fund Regulatory and Development Authority
PGI	Performance Grading Index
PIP	Pool Issue Price
PKVY	Paramparagat Krishi Vikas Yojana
PLFS	Periodic Labour Force Survey
PM10	Suspended Particulate Matter
PM2.5	Fine Particulate Matter
PMAY	Pradhan Mantri Awas Yojana
PMAY- G	Pradhan Mantri Awas Yojana (Gramin)
PMGSY	Pradhan Mantri Gram Sadak Yojana
PMI	Purchasing Managers' Index
PMJDY	Pradhan Mantri Jan-Dhan Yojana
PM-KISAN	Pradhan Mantri Kisan Samman Nidhi
PMKVY	Pradhan Mantri Kaushal Vikas Yojana
PMSMA	Pradhan Mantri Surakshit Matritva Abhiyan
PMUY	Pradhan Mantri Ujjwala Yojana
POL	Petroleum, Oil and Lubricants
PPP	Public-Private Partnership
PPP	Purchasing Power Parity
PPR	Peste des Petis Ruminants
PRASHAD	Pilgrimage Rejuvenation and Spiritual Heritage Augmentation Drive
PRO	Producer Responsibility Organizations
PSB	Public Sector Bank
PSF	Price Stabilization Fund
PSLV	Polar Satellite Launch Vehicle
PSU	Public Sector Undertaking
PTA	Preferential Trade Agreement
PTR	Pupil Teacher Ratio
QE	Quick Estimates
R & D	Research and Development
RBI	Reserve Bank of India
RCEP	Regional Comprehensive Economic Partnership
RCS	Regional Connectivity Scheme
RE	Resource Efficiency
RE	Revised Estimates
REC	Rural Electrification Corporation
REER	Real Effective Exchange Rate
REITs	Real Estate Investment Trusts
ReMS	Rashtriya e-Market Services
RERA	Real Estate (Regulation and Development) Act
RGM	Rashtriya Gokul Mission
RHS	Right hand side
RITES	Railway Infrastructure Technical & Economic Services
RKM	Route kilometers
RKVY	Rashtriya Krishi Vikas Yojana
RMNCH+A	Reproductive, Maternal, New-born, Child plus Adolescent Health

RNI	Registrar of Newspapers of India
RoA	Return on Assets
RoE	Return on Equity
ROGEP	Regional Off-grid Electrification Project
RPK-	Revenue Passenger Kilometers
RSA	Restructured Standard Advances
RTWQMS	Real Time Water Quality Monitoring Stations
RWA	Resident Welfare Association
SA	Stressed Advances
SAARC	South Asian Association for Regional Cooperation
SACU	Southern African Custom Union
SAPCC	State Action Plans on Climate Change
SAUBHAGYA	Sahaj Bijli Har Ghar Yojana
SBM	Swachh Bharat Mission
SC	Scheduled Caste
SCB	Scheduled Commercial Bank
SCI	Shipping Corporation of India
SCM	Smart Cities Mission
SDG	Sustainable Development Goals
SDR	Special Drawing Right
SEBI	Securities and Exchange Board of India
SECC	Socio-Economic Caste Census
SHDI	Subnational Human Development Index
SLSC	State Level Sanctioning Committee
SMAM	Sub Mission on Agricultural Mechanization
SO2	Sulphur Dioxide
SPCB	State Pollution Control Board
SPMGs	State Project Management Groups
SPP	Sustainable Public Procurement
SPVs	Special Purpose Vehicles
SRMI	Solar Risk Mitigation Initiative
ST	Scheduled Tribe
STPs	Sewage Treatment Plants
TDS	Tax Deduction at Source
TEPA	Trade and Economic Partnership Agreement
TFA	Trade Facilitation Agreement
THE	Total Health Expenditure
TMT	Thousand Metric Tonnes
ToT	Terms of Trade
TPD	Tons per Day
TPDS	Targeted Public Distribution System
TRAI	Telecom Regulatory Authority of India
TWRIS	Telengana Water Resources Information & Management Systems
U5MR	Under Five Mortality Rate
UAE	United Arab Emirates
UBC	Use Based Classification
UC	Universal Control
UDAN	Ude Desh ka Aam Naagarik
UDISE	Unified District Information on School Education
ULBs	Urban Local Bodies
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nation Population Fund
USA	United States of America
USD	United States Dollar
UTs	Union Territories
VFX	Visual Effects
VR	Virtual reality
WACR	Weighted Average Call Rate
WAPCOS	Water and Power Consultancy Services
WEF	World Economic Forum
WEO	World Economic Outlook
WPI	Wholesale Price Index
WPR	Worker Population Ratio
WTO	World Trade Organization
YoY	Year-on-Year
ZBNF	Zero Budget Natural Farming

State of the Economy in 2018-19: A Macro View

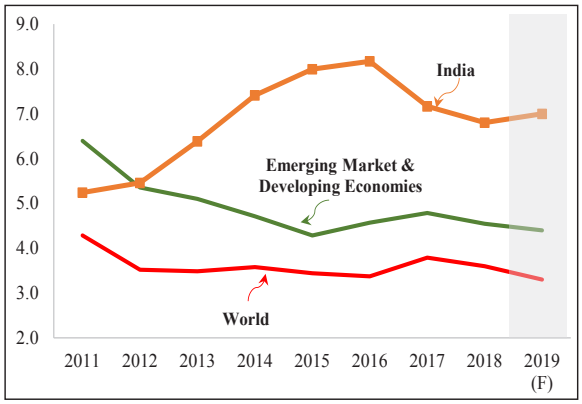
01
CHAPTER

For the global economy, the year 2018 was difficult, with the world output growth falling from 3.8 per cent in 2017 to 3.6 per cent in 2018. Growth rate of world output is projected to fall further to 3.3 per cent in 2019 as growth of both advanced economies and emerging & developing economies are expected to decline. Growth of the Indian economy moderated in 2018-19 with a growth of 6.8 per cent, slightly lower than 7.2 per cent in 2017-18. Yet, India continued to be the fastest growing major economy in the world. India maintained its macroeconomic stability by containing inflation within 4 per cent and by maintaining a manageable current account deficit to GDP ratio. The current account deficit to GDP was higher in 2018-19 as compared to 2017-18, primarily due to higher oil prices, which were about 14 $/bbl higher in 2018-19 vis-à-vis the previous year. However, the current account deficit started to narrow in the third quarter of the year. The manufacturing sector was characterised by higher growth in 2018-19 while the growth in agriculture sector witnessed tapering. Growth in investment, which had slowed down for many years, has bottomed out and has started to recover since 2017-18. In fact, growth in fixed investment picked up from 8.3 per cent in 2016-17 to 9.3 per cent in 2017-18 and further to 10.0 per cent in 2018-19. Net FDI inflows grew by 14.2 per cent in 2018-19. Capital expenditure of Central Government grew by 15.1 per cent in 2018-19 leading to increase in share of capital expenditure in total expenditure. Given the macroeconomic situation and the structural reforms being undertaken by the government, the economy is projected to grow at 7 per cent in 2019-20.

OVERVIEW: GLOBAL ECONOMIC SCENARIO

1.1 India continues to remain the fastest growing major economy in the world in 2018-19, despite a slight moderation in its GDP growth from 7.2 per cent in 2017-18 to 6.8 per cent in 2018-19. On the other hand, the world output growth declined from 3.8 per cent in 2017 to 3.6 per cent in 2018. The slowdown in the world economy and Emerging Market and Developing Economies (EMDEs) in

Figure 1: Growth rate of real GDP (per cent)



Data source: WEO, April 2019 database, CSO for India, 2019 projection for India is survey's projection.

Table 0.1 : Key Indicators

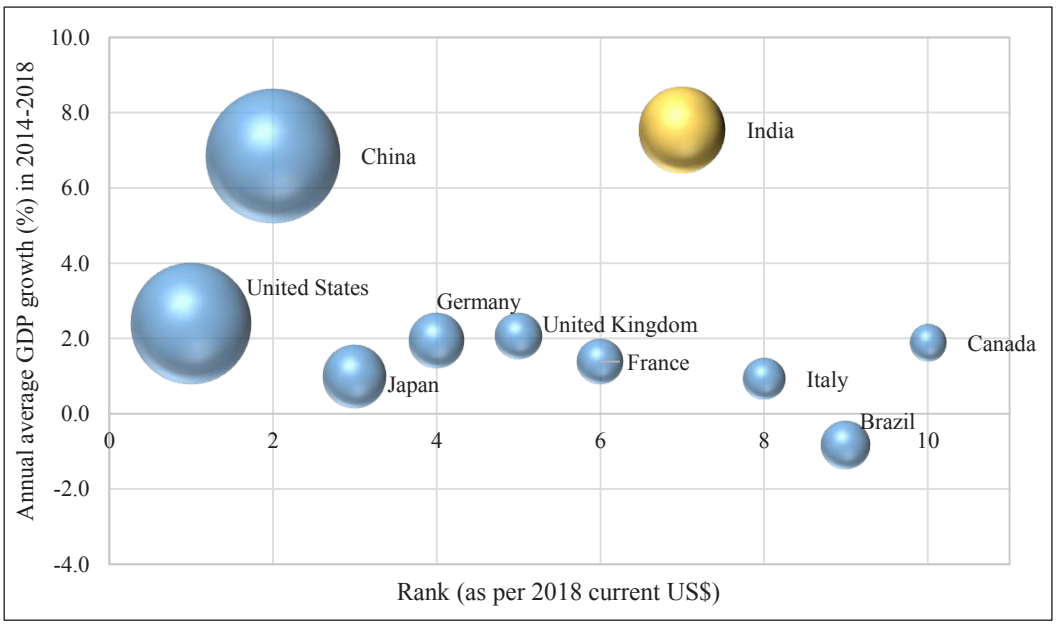
Data categories	Unit	2015-16	2016-17	2017-18	2018-19
GDP and Related Indicators					
GDP at current market prices	₹ Crore	13771874	15362386	17095005	19010164[a]
GDP at constant market prices	₹ Crore	11369493	12298327	13179857	14077586[a]
Growth Rate	(per cent)	8.0	8.2	7.2	6.8[a]
GVA at constant basic prices	₹ Crore	10491870	11318972	12104165	12906936[a]
Growth Rate	(per cent)	8.0	7.9	6.9	6.6[a]
Gross Savings	% of GDP	31.1	30.3	30.5	NA
Gross Capital Formation	% of GDP	32.1	30.9	32.3	NA
Per Capita Net National Income (at current prices)	₹	94797	104659	114958	126406[a]
Production					
Food grains	Million tonnes	251.5	275.1	285.0	283.4[b]
Index of Industrial Production (growth)	(per cent)	3.3	4.6	4.4	3.6
Electricity Generation (growth)	(per cent)	5.6	4.7	4.0	3.5
Prices					
WPI inflation (average)	(per cent)	-3.7	1.7	3.0	4.3
CPI (Combined) inflation (average)	(per cent)	4.9	4.5	3.6	3.4
External Sector					
Merchandise export growth (in US$ term)	(per cent)	-15.5	5.2	10.0	8.8
Merchandise import growth (in US$ term)	(per cent)	-15.0	0.9	21.1	10.4
Current Account Balance	% of GDP	-1.1	-0.6	-1.9	-2.6[c]
Foreign Exchange Reserves (end of year)	US$ billion	360.2	370.0	424.5	412.9
Average Exchange Rate	₹ /US$	65.5	67.1	64.5	69.9
Money and Credit					
Broad Money (M3) growth	(per cent)	10.1	10.1	9.2	10.5
Scheduled Commercial Bank Credit (Growth Rate)	(per cent)	10.9	8.2	10.0	13.3
Fiscal Indicators (Centre)					
Gross Fiscal Deficit	% of GDP	3.9	3.5	3.5	3.4[d]
Revenue Deficit	% of GDP	2.5	2.1	2.6	2.3[d]
Primary Deficit	% of GDP	0.7	0.4	0.4	0.3[d]

Notes:
NA: Not Available,
a: Provisional estimates, b: Third advance estimate,
c: (April-December) 2018, d: Provisional Actual

2018 followed the escalation of US China trade tensions, tighter credit policies in China, and financial tightening alongside the normalization of monetary policy in the larger advanced economies. In 2019, when the world economy and EMDEs are projected to slow down by 0.3 and 0.1 percentage points respectively, growth of Indian economy is forecast to increase (Figure 1). Crucially, India forms part of 30 per cent of the global economy, whose growth is not projected to decline in 2019 (World Economic Outlook (WEO), April 2019 of IMF).

1.2 India is the seventh largest economy in terms of Gross Domestic Product (GDP) in current US$ and has emerged as the fastest growing major economy (Figure 2). The average growth rate of India was not only higher than China's during 2014-15 to 2017-18 but much higher than that of other top major economies (measured in terms of GDP at current US$ terms) as well. With Purchasing Power Parity (PPP) adjustments, India's GDP at current international dollar, ranks third in the world (as shown by the size of circles in Figure 2).

Figure 2: Global comparison among top ten economies

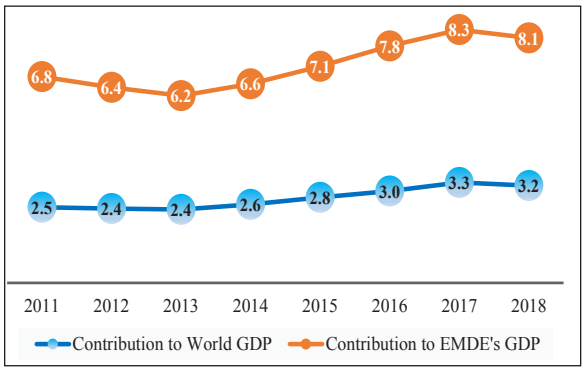


Data source: WEO, April 2019 database

Note: For France and Italy GDP of the year 2018 is the estimated figure of International Monetary Fund. Size of circle represents GDP (PPP) at current international dollar terms.

1.3 The contribution of the Indian economy to the GDP of EMDEs and world economy has increased consistently over the years (Figure 3). In a span of less than a decade, India's contribution to EMDEs GDP has increased by around 1.3 percentage points and to the world economy by around 0.7 percentage points. India's share in GDP of EMDEs stood at 8 per cent in 2018. As per the WEO, April 2019 of IMF, going forward, the growth of world economy will be bolstered mainly by growth in China and India and their increasing weights in world income. In EMDEs group, India and China are the major drivers of growth. The global economy—in particular the global growth powerhouse, China—is rebalancing, leading to an increasing role for India. Hence, India's contribution has become much more valuable to the global economy.

Figure 3: India's share in GDP of EMDEs and World (per cent)



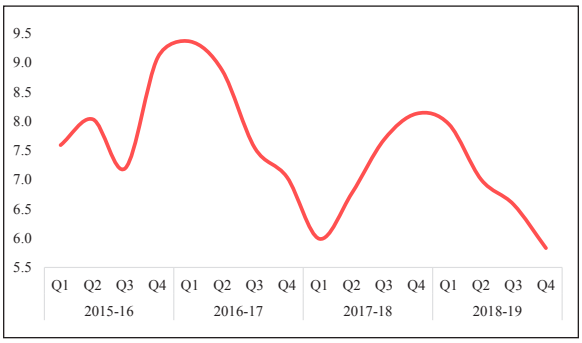
Data source: WEO, April 2019 database

OVERVIEW: INDIAN ECONOMY

1.4 India's growth of real GDP has been high with average growth of 7.5 per cent in the last 5 years (2014-15 onwards). The Indian economy grew at 6.8 per cent in 2018-19, thereby experiencing some moderation in growth when compared to the previous year. This moderation in growth momentum is mainly on account of lower growth in 'Agriculture & allied', 'Trade, hotel, transport, storage, communication and services related to broadcasting' and 'Public administration & defence' sectors. Acreage in 2018-19 for the rabi crop was marginally lower than last year, which affected agricultural performance. The contraction in food prices may have contributed to inducing farmers to produce less. On the demand side, lower growth of GDP in 2018-19 was accounted for, by a decline in growth of government final consumption, change in stocks and contraction in valuables.

1.5 When we examine the growth pattern within the various quarters of 2018-19, we note that the moderation in real GDP growth has been experienced in all quarters of 2018-19 (Figure 4) with the fourth quarter (Q4) registering a growth of 5.8 per cent. The base effect arising from a high growth of 8.1 per cent in the Q4 of 2017-18 also led to this lower growth in Q4 of 2018-19. In this quarter, election related uncertainty may have also contributed to growth moderation.

Figure 4: Quarterly real GDP growth (per cent)



Data source: Central Statistics Office

Table 1: Quarter-wise growth in Gross Value Added (per cent)

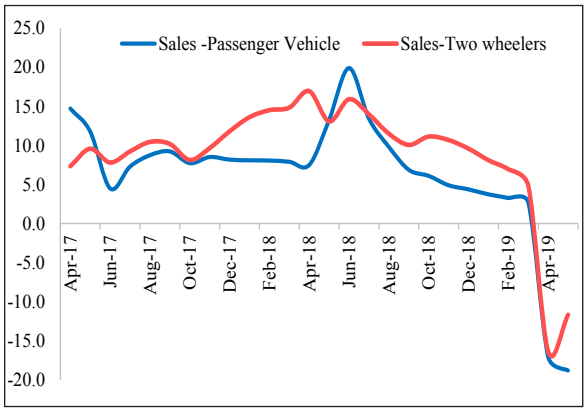
	2017-18				2018-19			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Agriculture and allied	4.2	4.5	4.6	6.5	5.1	4.9	2.8	-0.1
Industry	0.8	6.9	8.0	8.1	9.8	6.7	7.0	4.2
(*of which*) Manufacturing	-1.7	7.1	8.6	9.5	12.1	6.9	6.4	3.1
Services	9.4	6.8	8.0	8.2	7.1	7.3	7.2	8.4
GVA at basic prices	**5.9**	**6.6**	**7.3**	**7.9**	**7.7**	**6.9**	**6.3**	**5.7**
GDP at market prices	**6.0**	**6.8**	**7.7**	**8.1**	**8.0**	**7.0**	**6.6**	**5.8**

Source: Central Statistics Office

1.6 There was contraction in 'Agriculture & allied' sector in the last quarter of 2018-19, though growth was reasonable in the previous three quarters. Growth of industry sector also experienced tempering in successive quarters of 2018-19 mostly on account of

growth deceleration in the manufacturing sector (Table 1). This is also seen in Index of Industrial Production (IIP) of manufacturing sector, which grew at 0.3 per cent in Q4 of 2018-19, as compared to 7.5 per cent in the same quarter of previous year. Manufacturing sector was affected by the slowdown in the auto sector as well, where the production growth for all categories, apart from commercial vehicles declined in 2018-19, as compared to 2017-18. Sales growth decelerated in many segments of the automobile sector, including passenger vehicles, tractor sales, three and two wheeler sales (Figure 5). Stress in Non-Banking Financial Companies (NBFC) sector also contributed to the slow down by adversely impacting consumption finance (Figure 6). Despite the moderation of manufacturing growth within 2018-19, overall growth in the year was higher than in 2017-18, due to a high growth of 12.1 per cent in first quarter of 2018-19.

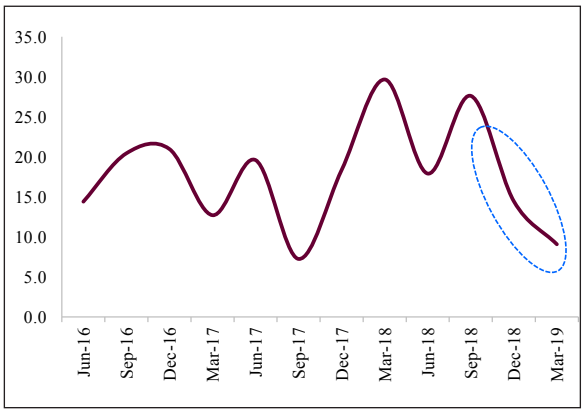
Figure 5: Change in cumulative auto sales (per cent)



Data source: Society of Indian Automobile Manufacturers

Note: Growth rates (Year on Year) are for cumulative sales from April to respective months of the year.

Figure 6: Growth of loans and advances of NBFCs (per cent)



Data source: Reserve Bank of India

Note: Data on loans and advances pertains to deposit taking NBFCs and Non-Deposit taking systematic important NBFCs including Government companies; Data from March 2018 onwards are provisional.

1.7 From the demand side, the decline in GDP growth during 2018-19 arose primarily from deceleration in private final consumption in the final two quarters. This could have been due to low farm incomes in rural areas arising from low food prices and also due to the stress in NBFCs, which affected its lending. The Q4 of 2018-19 also saw growth of exports declining.

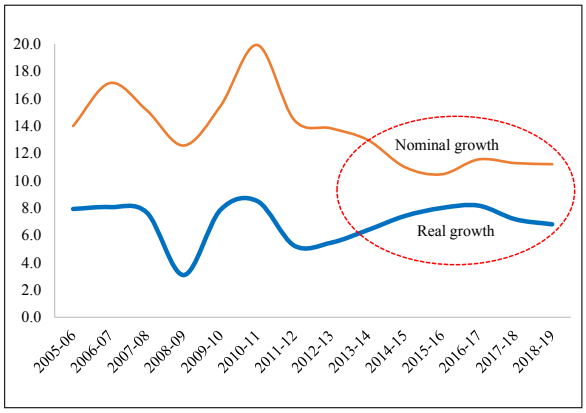
1.8 Although growth rate of real GDP was high during the last few years, the coterminous decline in the nominal GDP growth from 2010-11 onwards, points towards a secular decline in inflation. As seen in Figure 7, the gap between nominal and real growth rate has reduced significantly. Thus, the GDP deflator, which is a weighted average of Consumer Prices Index (CPI) and Wholesale Price Index (WPI), became smaller.

1.9 This is reflected in a consistent decline in CPI inflation during the last few years (Figure 8). In 2013-14, CPI headline inflation was close to double digits, but gradually declined thereafter to be within the target of 4 (+/- 2) per cent. Headline CPI declined to 3.4 per cent in 2018-19 from 3.6 per cent in 2017-18.

1.10 Headline WPI inflation stood at 4.3 per cent in 2018-19, higher as compared to

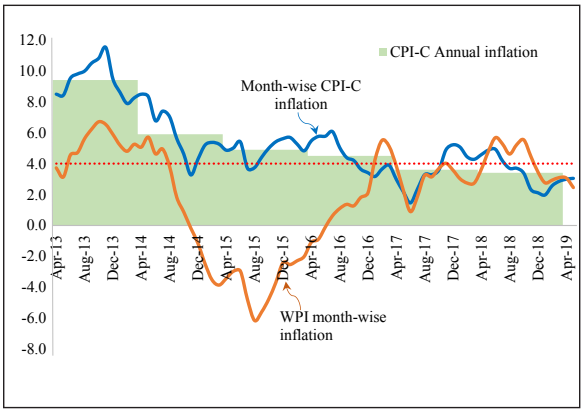
3.0 per cent in 2017-18. The increase in WPI inflation was broad based, which saw increase in inflation of all the groups except food in 2018-19. Increase in WPI led to marginal pick-up in GDP deflator from 3.8 per cent in 2017-18 to 4.1 per cent in 2018-19.

Figure 7: Growth in GDP (per cent)



Data source: Central Statistics Office

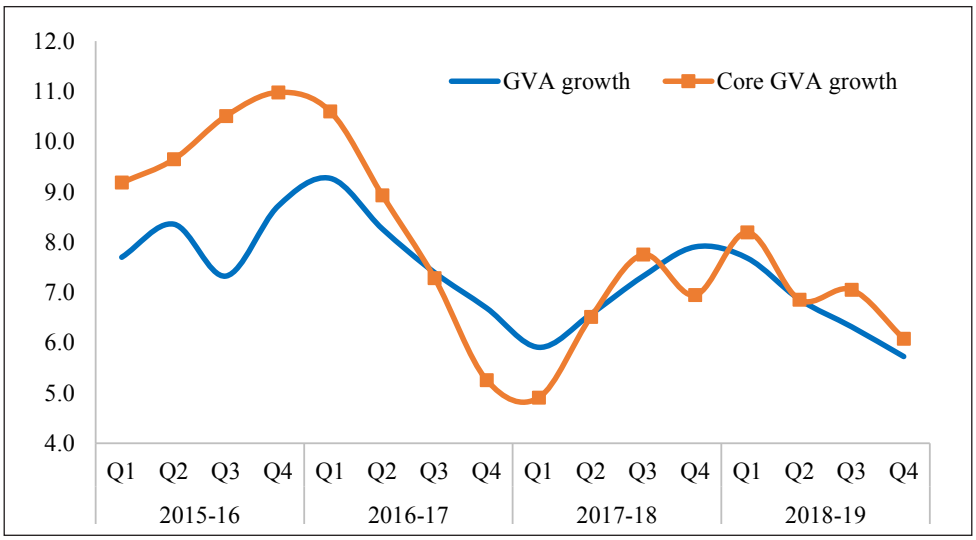
Figure 8: Significant moderation in Inflation



Data source: Central Statistics Office
Note: CPI-C stands for CPI-Combined.

1.11 Core Gross Value Added (GVA) (measured as GVA except 'Agriculture & allied' activities, and 'Public administration & defence') shows higher growth than that of overall GVA in 2018-19. Core GVA growth picked up from 6.5 per cent in 2017- 18 to 7.0 per cent in 2018-19, whereas GVA growth slowed down marginally from 6.9 per cent in 2017-18 to 6.6 per cent in 2018-19. For all quarters of 2018-19, the core GVA growth was higher than overall GVA growth, as 'Agriculture & allied' and 'Public administration & defence' experienced the largest decline in growth rates relative to other sectors. But in Q4 of 2018-19, the growth of core GVA also decelerated by 1 percentage point over previous quarter, largely on account of lower growth in manufacturing sector (Figure 9).

Figure 9: Real GVA and real core GVA growth (per cent)

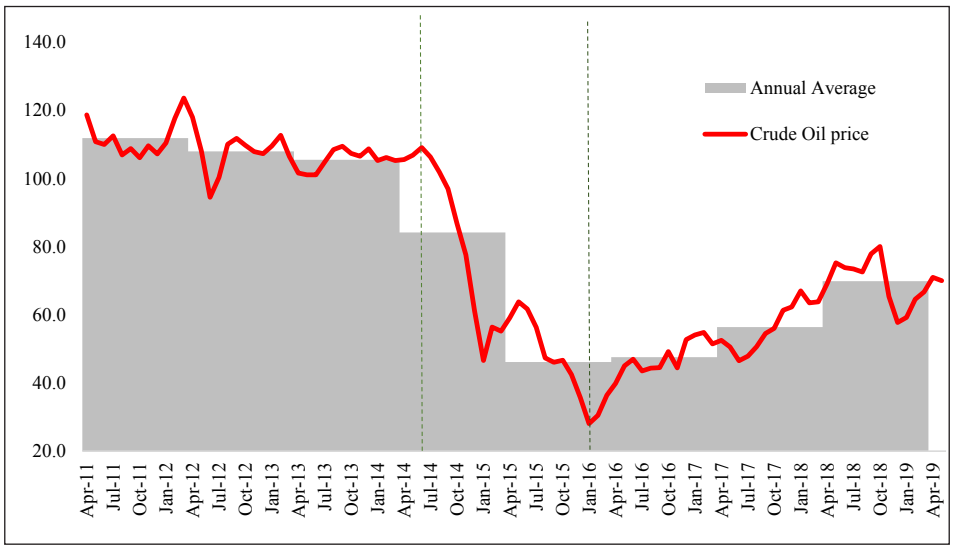


Data source: Central Statistics Office

1.12 On the external front, current account deficit (CAD) increased from 1.9 per cent of GDP in 2017-18 to 2.6 per cent in April-December 2018 (refer Figure 11). The widening of the CAD was largely on account of a higher trade deficit driven by rise in international crude oil prices (Indian basket). The trade deficit increased from US$ 162.1 billion in 2017-18 to US$ 184 billion in 2018-19.

1.13 Nominal growth of both merchandise exports and imports declined in US dollar terms in 2018-19, as compared to 2017-18. However, the decline was much sharper in merchandise imports, which reduced from 21.1 per cent to 10.4 per cent. Growth of merchandise imports declined as oil price driven increase in growth of oil imports was more than offset by contraction in value of gold imports and lower growth in the value of non-oil non-gold imports. The crude oil prices, however, showed movements in both the directions within the year. As the year commenced, crude prices increased and reached above 80 US$/bbl. in October 2018. Thereafter, it started to decline before increasing again after December 2018 (Figure 10). Overall the oil prices were substantially higher in 2018-19, as compared to previous year.

Figure 10: Crude oil price (Indian basket in US$ per barrel)



Data source: Petroleum Planning & Analysis Cell

1.14 Growth in service exports and imports in US dollar terms declined to 5.5 per cent and 6.7 per cent respectively in 2018-19, from 18.8 per cent and 22.6 per cent respectively in 2017-18.

1.15 Rupee depreciated by 7.8 per cent vis-à-vis US dollar, 7.7 per cent against Yen, and 6.8 per cent against Euro and Pound Sterling in 2018-19. During 2018-19, Indian rupee traded with a depreciating trend against US dollar and touched ₹74.4 per US dollar in October 2018 before recovering to ₹69.2 per US dollar at end March 2019. Rupee depreciated in the first half of the year due to concerns related to widening of CAD owing to rising crude oil prices coupled with tighter financial conditions in US caused by increase in Federal Funds rate by the US Federal Reserve. However, rupee performed better than some of the other major emerging market currencies, such as, Argentine Peso, Turkish Lira, Brazilian Real, and Russian Ruble, which depreciated more than 10 per cent vis-à-vis US dollar. Not only in terms

of bilateral exchange rate with US dollar, rupee also depreciated when measured as trade based weighted exchange rates in 2018-19. Nominal Effective Exchange Rate (NEER) (36 currency trade based bilateral weights) of rupee depreciated by 5.6 per cent in 2018-19. Correspondingly, Real Effective Exchange Rate (REER) also depreciated by 4.8 per cent in 2018-19 (Figure 12).

1.16 The foreign exchange reserves in nominal terms (including the valuation effects) decreased by US$ 11.6 billion at end-March 2019 over end-March 2018. Within the year, foreign exchange reserves were declining until October 2018 due to RBI's intervention to modulate exchange rate volatility. India's foreign exchange reserves continue to be comfortably placed at US$ 422.2 billion, as on 14th June 2019 (Figure 13).

1.17 Net Foreign Direct Investment (FDI) inflows grew by 14.2 per cent in 2018-19. Among the top sectors attracting FDI equity inflows, services, automobiles and chemicals were the major categories. By and large, FDI inflows have been growing at a high rate since 2015-16 (Figure 14). This pick-up indicates the improvement in confidence of the foreign investors in the Indian economy.

Figure 11: Current Account Balance (per cent of GDP)

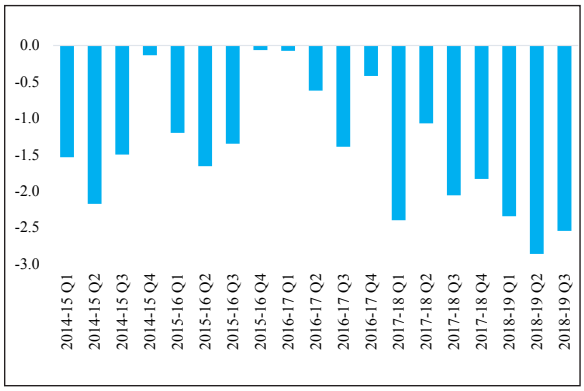


Figure 12: Index of REER and ₹/US$ exchange rate

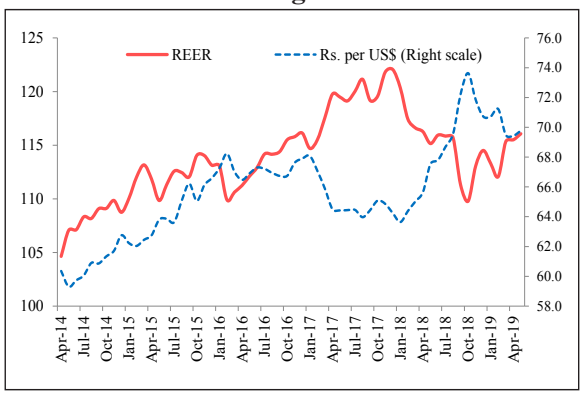


Figure 13: Foreign Exchange Reserve (US$ billion)

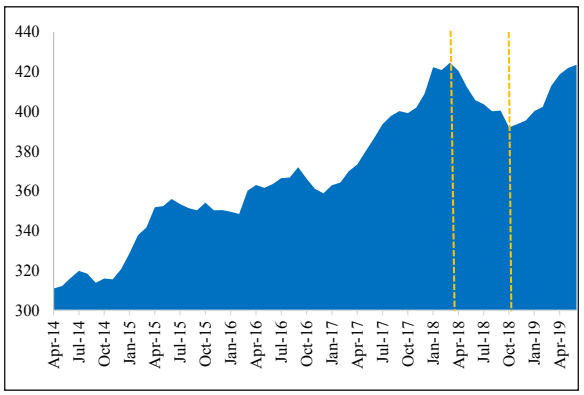
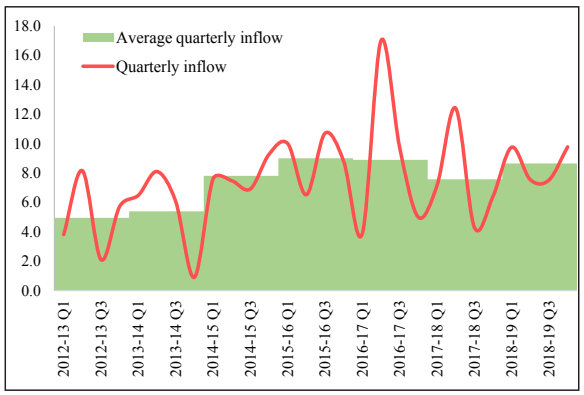


Figure 14: Net FDI inflows (US$ billion)



Data source: Reserve Bank of India (from figure 11 to 14)

Note: FDI inflow for the fourth quarter of 2018-19 (in Figure 14) is calculated on the basis of information published in the RBI Bulletin – May 2019.

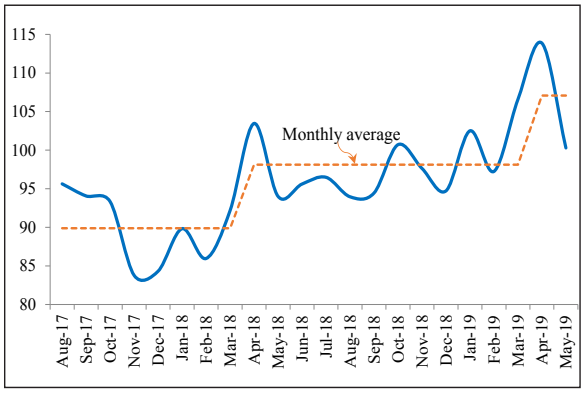
1.18 As per Provisional Actuals (PA) for 2018-19, fiscal deficit stood at 3.4 per cent of GDP. In 2018-19, direct taxes grew by 13.4 per cent (PA) owing to improved performance of corporate tax. However, indirect taxes fell short of budget estimates by about 16 per cent, following a shortfall in GST revenues (including CGST, IGST and compensation cess) as compared to the budget estimates. GST was implemented in July 2017. After the initial transitional issues following the roll-out of GST, revenue collection picked up from annual average of ₹89.8 thousand crore in 2017-18 to ₹98.1 thousand crore in 2018-19 (Figure 15). Accordingly, Gross Tax Revenue as a proportion of GDP declined to 10.9 per cent of GDP in 2018-19 (PA), lower by 0.3 percentage points as compared to 2017-18.

1.19 Total expenditure of central government grew by 7.9 per cent in 2018-19 (PA), with the growth of 15.1 per cent in capital expenditure leading to increase in share of capital expenditure in total expenditure (Figure 16). The corrosponding growth in total expenditure was 8.4 per cent and capital expenditure, (-)7.5 per cent in 2017-18.

1.20 Government stood by its path of fiscal consolidation in 2018-19. The new targeting framework was adopted in 2018-19 which rests on the twin pillars of reducing debt and fiscal deficit. There has been consolidation of revenue expenditure while expenditure quality has improved with gradual tilt towards capital spending of the Central Government in 2018-19. There has been a progressive reduction in primary and fiscal deficits. Primary deficit (amount by which a government's total expenditure exceeds its total revenue, excluding interest payments on its debt) of the central government has been consistently declining and now stands at 0.3 per cent of GDP in 2018-19 (PA) from 0.7 per cent in 2015-16. Total liabilities of the Central Government, as a ratio of GDP, have declined, as an outcome of both fiscal consolidation efforts as well as relatively high GDP growth.

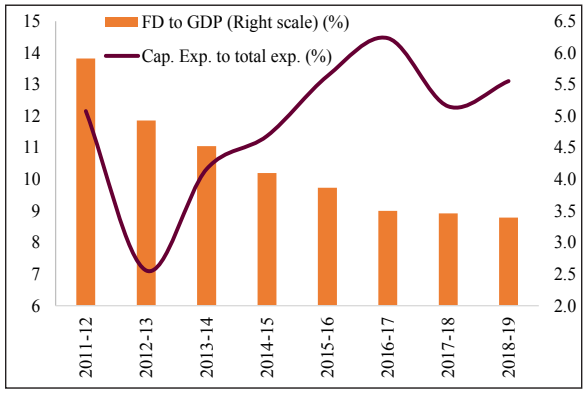
1.21 State's Gross Fiscal deficit reduced from 3.5 per cent of GDP in 2016-17 to 3.0 per cent in 2017-18 (RE), and is budgeted to decline to 2.6 per cent in 2018-19 (as per data available from RBI). The combined liabilities of General Government (Centre and States) has declined to 67 per cent of GDP as on end-March 2018. Fiscal deficit of general government is further expected to decline to 5.8 per cent of GDP in 2018-19 (BE) from 6.4 per cent of GDP in 2017-18 (RE).

Figure 15: GST revenue collections (₹ crore)



Data source: Press Information Bureau

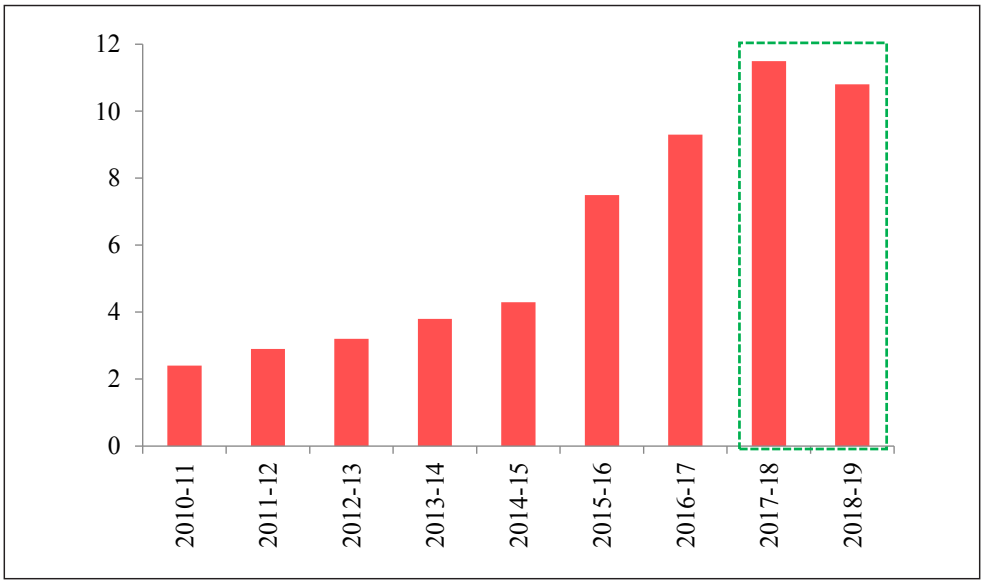
Figure 16: Expenditure of Central Government (in ₹ crore)



Data source: Controller General of Accounts

1.22 Indian banking sector has been dealing with twin balance sheet problem, which refers to stressed corporate and bank balance sheets. The increase in Non-Performing Assets (NPA) of banks led to stress on balance sheets of banks, with the Public Sector Banks (PSBs) taking in more stress. However, the performance of the banking sector (domestic operations), and PSBs in particular, improved in 2018-19. NPAs as a percentage of Gross Advances of Scheduled Commercial Banks (SCBs) decreased from 11.5 per cent to 10.1 per cent between March 2018 and December 2018 (Figure 17). The decline was sharper for PSBs from 15.5 per cent to 13.9 per cent during the same period.

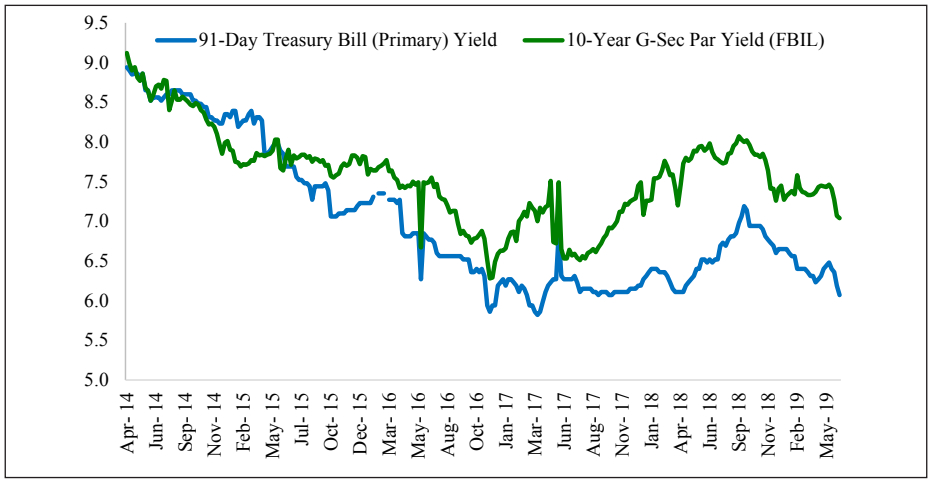
Figure 17: Non performing assets as a percentage of Gross Advances



Data source: Reserve Bank of India

1.23 During 2018-19, the 10-year benchmark Government Security (G-Sec) yields was volatile (Figure 18) and closely tracked the movement in oil prices, domestic liquidity and rupee exchange rate. It hardened in the first quarter but witnessed intermittent softening in the second and third quarters. The hardening of yields in the first quarter may be attributed to rising crude oil prices, the firming up of US treasury yields, concerns regarding the pace of rate hikes by the US Fed, and upside risks to domestic inflation. Later, with the decline in crude oil prices in July 2018, and with the announcement of Open Market Operations (OMO) purchases, the yields softened in July. However, the currency depreciation in August 2018 due to rising crude oil prices and rising US interest rates, caused the yields to harden in August again which continued into September as well, increasing the yields from end-July to mid-September, by 40 bps. Yields started softening towards the end of September reflecting the measures taken for containing rupee volatility along with expectations of lower market borrowings by the central government in H2 of 2018-19. In the third quarter of 2018-19, the OMO purchase of ₹1.36 lakh crore along with the decline in crude oil prices and CPI inflation rate, caused the yields to soften once again. Consequent upon the policy rate cut announced by the Monetary Policy Committee in February, April and June 2019, the yields have further softened. The 10-year G-Sec yield dropped to 6.97 per cent as on 10 June 2019.

Figure 18: Yield on 10 year and 91 day T Bill



Data source: Reserve Bank of India

DRIVERS OF GROWTH

1.24 Consumption has always been a strong and major driver of growth in the economy. Within total final consumption, it is the private final consumption expenditure that has a major share (close to 60 per cent) in the economy's GDP, with its growth rate mostly being higher than the overall GDP growth rate (Table 2). The huge size of the economy serves as a big market for businesses. Growth in private final consumption expenditure (PFCE) increased to 8.1 per cent in 2018-19, although within the year, the growth momentum slowed in the last two quarters. Although the share of private consumption in GDP remains high, the pattern of consumption has undergone some change over time – from essentials to luxuries and from goods to services (Box 1).

Table 2: Components of aggregate demand

Components	Real growth (per cent)			Share at current prices (per cent)		
	2016-17	2017-18	2018-19	2016-17	2017-18	2018-19
Total consumption	7.8	8.6	8.3	69.6	70.0	70.6
Government consumption	5.8	15.0	9.2	10.3	11.0	11.2
Private consumption	8.2	7.4	8.1	59.3	59.0	59.4
Fixed investment	8.3	9.3	10.0	28.2	28.6	29.3
Change in stock	-48.2	21.2	4.8	0.9	1.0	1.0
Valuables	-18.9	27.4	-9.0	1.1	1.3	1.0
Exports of goods and services	5.1	4.7	12.5	19.2	18.8	19.7
Imports of goods and services	4.4	17.6	15.4	21.0	22.0	23.6
GDP at market prices	**8.2**	**7.2**	**6.8**	**100**	**100**	**100**

Source: Central Statistics Office
Note: For 2018-19, figures are as per provisional estimate.

Box 1: India's high income elasticity of consumption and its changing pattern over time

The relationship between per capita consumption and per capita national income shows a very high elasticity of consumption, implying that the growth rate of consumption per capita is almost the same as that of per capita income. The elasticity of consumption may have reduced a bit over time, but still remains very high. Growth of real per capita PFCE is slightly higher than that of per capita GDP or per capita net national income (NNI) (Table A).

Figure a: Income elasticity of consumption
(Old GDP series)

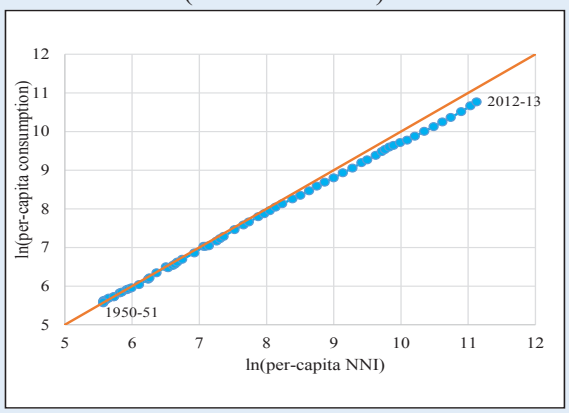
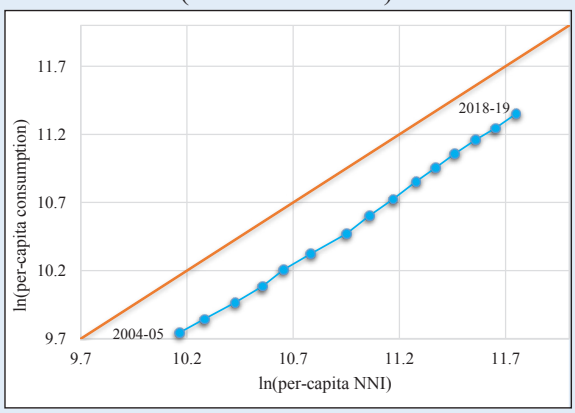


Figure b: Income elasticity of consumption
(New GDP series)



Data source: Central Statistics Office
Note: Old GDP series means series at 2004-05 base and new GDP series means series at 2011-12 base.

Table A: Level and growth of per capita income and consumption

	Level in Rupees				Real growth (in per cent)	
	Nominal		Real			
	2017-18	2018-19	2017-18	2018-19	2017-18	2018-19
Per-capita GDP	129901	142719	100151	105688	5.8	5.5
Per-capita NNI	114958	126406	87623	92565	5.7	5.6
Per-capita PFCE	76619	84760	56364	60185	6.0	6.8

Source: Central Statistics Office

Even though the elasticity of consumption has remained very high, its composition has changed in the past few years. From food & beverages, transport & communication, which are more of necessities, the spending has been shifting towards clothing & footwear, health & education, housing & maintenance (Figure c). This shows an increase in discretionary spending by the households as compared to the necessities. This shift is also visible in the change in pattern of spending from consumption of goods to services. There has been a decline in share of goods in total final consumption, which has correspondingly increased the share of services by more than 1 percentage point (Figure d).

Figure c: Share of consumption expenditure among major purposes (per cent)

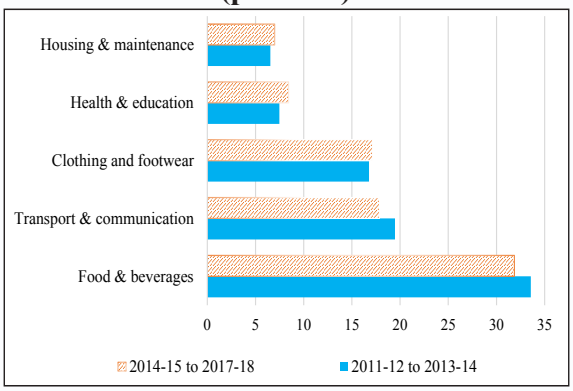
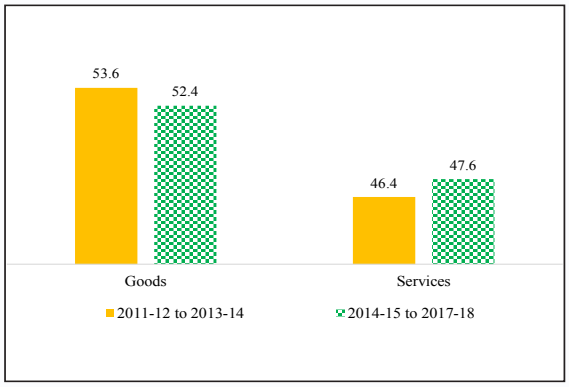


Figure d: Changes in consumption share (per cent)



Data Source: Central Statistics Office

The data from NSSO Household Consumption survey also shows the increase in share of non-food expenditure in total consumption over time. First interesting point to note is that the share of food in total consumption is more than 10 percentage points lower in urban areas (in 1999-00, 2004-05 and 2011-12 as well) as compared to rural areas. Secondly, share of food in total consumption has gone down by around 6.5 percentage points in rural areas and 5.5 percentage points in urban areas from 1999-00 to 2011-12. Within food, cereals have accounted for almost the entire decline. The share of cereals has reduced to half between 1999-00 to 2011-12 in both urban and rural areas. Overall, the share of non-food expenditure has increased with the expenditure share increasing for education, medical, conveyance and durable goods (Table B). This shows that the shift towards discretionary spending has been increasing while with the spending on necessities has been gradually decreasing. In 2011-12 as well, the share of non-food expenditure was higher by almost 10 percentage points in urban area as compared to rural areas, same as that in 1999-00. The share of spending on education was almost double in urban areas as compared to rural areas in 2011-12 (Table B).

Table B: Share of monthly per capita consumption expenditure in total (per cent)

	Rural			Urban		
	1999-00	2004-05	2011-12	1999-00	2004-05	2011-12
Food	59.4	55.1	52.9	48.1	42.5	42.6
(of which)						
Cereals	22.2	18.1	10.8	12.3	10.1	6.7
Milk & Milk products	8.8	8.4	8.0	8.7	7.9	7.0
Vegetables	6.2	6.1	6.6	5.1	4.5	4.6
Non food	40.6	44.9	47.1	51.9	57.5	57.4
(of which)						
Clothing & footwear	8.0	5.4	7.0	7.2	4.7	6.3
Education	1.9	2.7	3.5	4.3	5.0	6.9
Medical	6.1	6.6	6.6	5.1	5.2	5.6
Conveyance	2.9	3.8	4.2	5.5	6.6	6.5
Durable goods	2.6	3.4	4.5	3.6	4.1	5.3

Source: NSSO Reports on Household consumption expenditure

1.25 The second component of consumption is the government final consumption expenditure (GFCE). Growth of GFCE decelerated from 15.0 per cent in 2017-18 to 9.2 per cent in 2018-19. GFCE is calculated using growth of revenue expenditure net of interest payments and subsidies. GFCE comprises government's (revenue) expenditure on compensation of employees, net purchase of goods and services and consumption of fixed capital. This lower growth in GFCE is consistent with lower revenue expenditure growth of the government in 2018-19. On average, annual growth of GFCE in the last 5 years has been 9.0 per cent.

1.26 The third major component of demand is investment. Investment (Gross Capital Formation) accounts for nearly 32 per cent of GDP, within which fixed investment (Gross fixed capital formation) accounts for about 29 per cent of GDP. The other two components of investment are change in stocks and valuables, each having a share of around 1 per cent in GDP. Fixed investment mainly refers to the value of new machinery and equipment and the value of new construction activity of dwellings and other structures. Cultivated biological resources and intellectual property products are the other two components of fixed investment, although they constitute a very small share.

1.27 Decline in investment rate and fixed investment rate since 2011-12, seems to have bottomed out with some early signs of recovery since 2017-18 (Figure 19). Fixed investment growth picked up from 8.3 per cent in 2016-17 to 9.3 per cent in 2017-18 and further to 10.0 per cent in 2018-19. The decline in fixed investment until 2016-17 was mainly by the household sector, with fixed investment by public sector and private corporate sector remaining almost at same levels (Figure 20). The 'household' sector here includes 'quasi-corporates' as well. Unincorporated enterprises belonging to households, which have complete sets of accounts, are called quasi-corporates. Household sector mostly invests in dwellings and other structures and the quasi-corporates invest in machinery & equipment. This decline in household sector fixed investment is due to decline in investment in dwellings. This is borne out by a decline in physical savings of household sector as well.

Figure 19: Investment rate (measured as percentage of GDP)

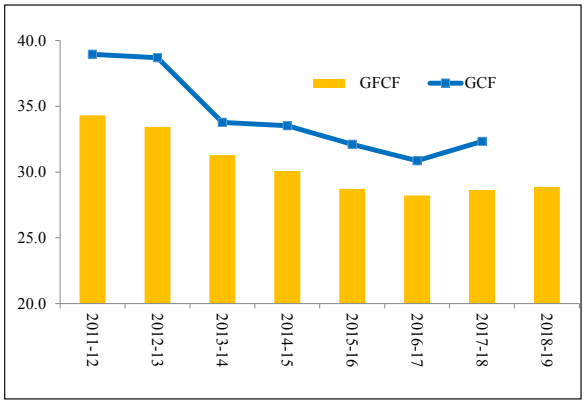
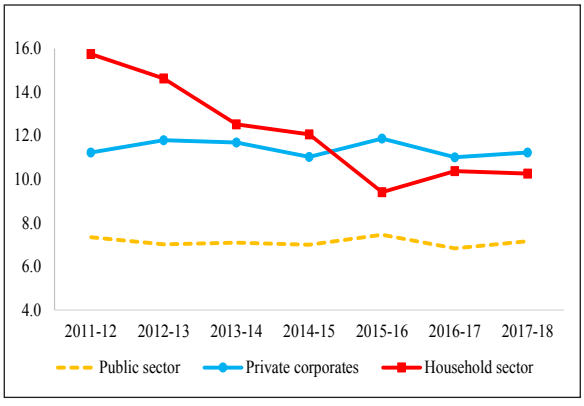


Figure 20: Sector-wise fixed investment rate (percentage share in GDP)

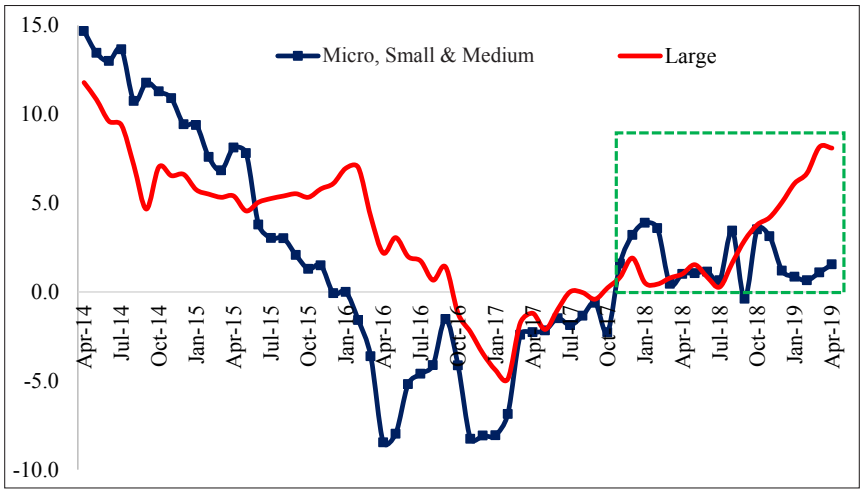


Data source: Central Statistics Office

Note: Investment data and sectoral break up of fixed investment is available only upto 2017-18.

1.28 Green shoots in the investment activity appear to be taking hold as also seen in the pickup in credit growth to industry. Credit to, both, large and micro, small & medium enterprises has seen pickup in growth. The growth of bank credit to micro, small & medium enterprises was contracting in 2016 and 2017, but has started picking up in 2018. Credit growth to large industry started declining since March 2016 and entered negative territory by October 2016. It has recovered since early 2017-18 and the momentum has picked up in the second half of 2018 (Figure 21).

Figure 21: Deployment of Bank Credit in industry sector: month wise growth (per cent)

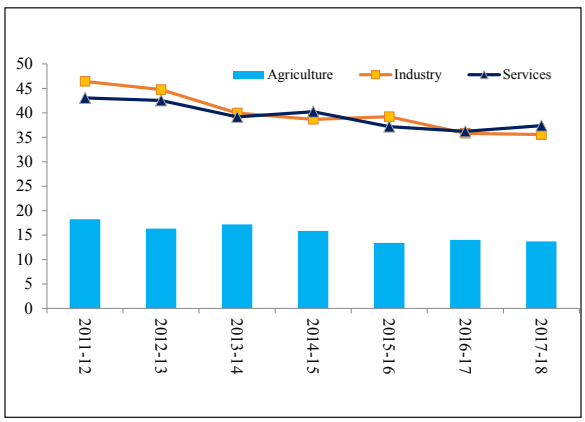


Data source: Reserve Bank of India

1.29 At the sectoral level, investment rates have been declining since 2011-12, though the investment rate in services is displaying signs of bottoming out (Figure 22). In year 2011-12, industry sector had the highest investment rate, followed by services, whereas the agriculture sector had investment rate much less than half of that of services. In 2017-18, investment rate in services sector became the highest. Investment rate in agriculture still continues to lag behind and now is half the investment rate in the industry sector.

1.30 Simultaneously, there has been a decline in savings rate as well, with the household sector entirely contributing to the decline. Household savings declined from 23.6 per cent in 2011-12 to 17.2 per cent in 2017-18. Almost this entire decline is in physical savings of the households, with only marginal decline in financial savings in 2016-17 and 2017-18 (Table 3). Household physical savings comprises gold and silver and physical assets including construction and machinery and equipment, with physical assets forming the major share. The decline in physical savings is reflected in decline in gold imports or low growth of gold imports since 2011-12 (Figure 23).

Figure 22: Ratio of GCF to GVA across sectors



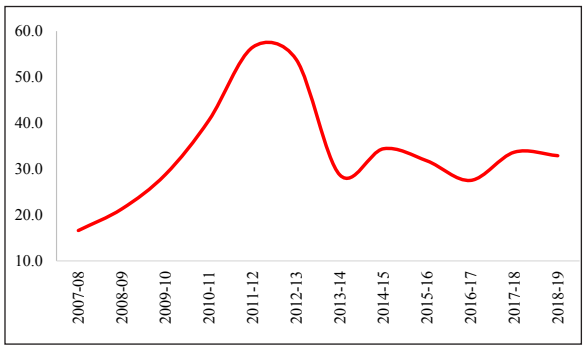
Data source: Central Statistics Office

Table 3: Gross Savings as percentage of GDP

	2011-12	2014-15	2015-16	2016-17	2017-18
Gross Savings	34.6	32.2	31.1	30.3	30.5
Public	1.5	1.0	1.2	1.7	1.7
Private corporates	9.5	11.7	11.9	11.5	11.6
Household sector	23.6	19.6	18.0	17.1	17.2
Net financial savings	7.4	7.1	8.1	6.3	6.6
Physical savings	16.3	12.5	9.9	10.8	10.6

Source: Central Statistics Office

Figure 23: Gold imports (in US$ billion)

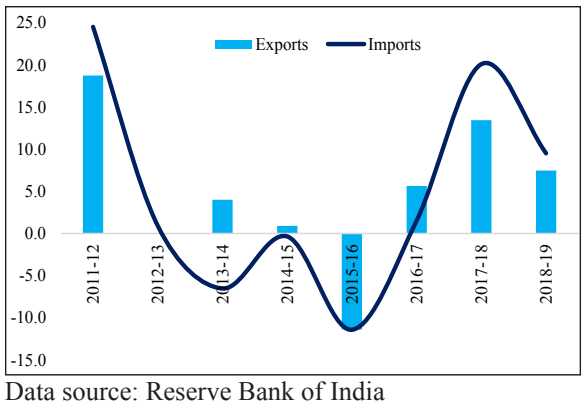


Data source: Directorate General of Commercial Intelligence and Statistics, Kolkata

1.31 As the saving rate has declined, so has the investment rate. However, the decline in investment rate has been greater than the decline in the saving rate leading to continuous narrowing of the saving-investment gap. The saving investment gap narrowed from (-)4.8 per cent of GDP in 2012-13 to (-)1.8 per cent in 2017-18. This is also reflected in the narrowing of current account deficit to GDP ratio.

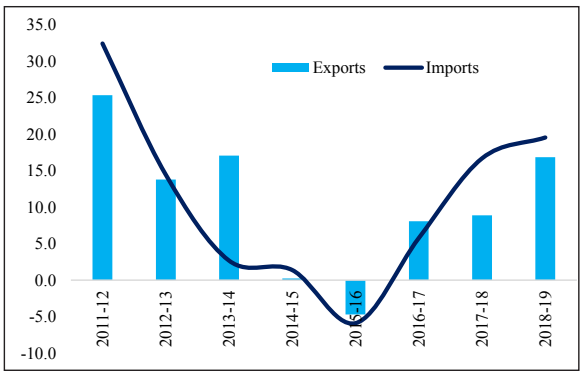
1.32 The fourth component of demand is net exports. Exports are the external component of demand of domestic goods, and imports are a leakage of income of the country for demand of products from other countries. The contribution of exports and imports to GDP would matter in rupee terms for national accounting purposes rather than US dollar. Hence, the discussion in this section is based on growth in rupee terms. Interestingly, the trend of growth of exports and imports was different in 2018-19 in rupee and US dollar terms (Figure 24 & 25). While the growth of both export and import declined in US$ terms, it increased in rupee terms (at current prices) in 2018-19.This happened due to the depreciation of rupee vis-à-vis US dollar in 2018-19 (Figure 12).

Figure 24: Nominal Growth in exports and imports in USD terms (per cent)



Data source: Reserve Bank of India

Figure 25: Nominal Growth in exports and imports in Rupee terms (per cent)



Data source: Central Statistics Office

1.33 After contraction in exports in 2015-16, the performance of exports growth started to improve from 2016-17. Exports of both service and merchandise (in rupee terms) picked up in 2018-19 in nominal terms. Nominal growth of imports also picked up in 2018-19 but the pickup in nominal export growth was much higher. So although growth of export in dollar terms declined, the positive growth in rupee terms, because of depreciation has insured a steady growth in the export earnings.

1.34 Import prices as compared to export prices in rupee terms increased sharply in 2018-19, vis-à-vis 2017-18. Growth in Unit Value Index of merchandise exports and imports was 1.1 per cent and (-)1.9 per cent respectively in 2017-18, but increased to 6.9 per cent and 17 per cent respectively in April-December 2018-19. Due to increase in price of imports, real growth of imports in rupee terms fell in 2018-19 possibly reflecting the softening of GDP growth in the year. On the other hand, real growth of exports picked up in 2018-19.

1.35 As India is a net importer, net exports are always negative. However, the growth contribution of net exports is positive in many years. In 2018-19, there was improvement in contribution of net exports to GDP growth, owing to higher growth of exports and lower growth of imports at constant prices as compared to previous year. Going forward, the prospects of export growth are dependent on the impact of rising trade protectionism and effectiveness of export promotion measures of Goverment.

Supply side of the economy

1.36 Gross Value Added (GVA), reflects the supply or production side of the economy to which net indirect taxes on products are added to get GDP at market prices. Growth of GVA reflected a decline in economic activity, registering a growth of 6.6 per cent in 2018-19, lower than 6.9 per cent in 2017-18 (Table 4). Growth of net indirect taxes was 8.8 per cent in 2018-19, lower than that of 2017-18, on account of loss of momentum of economic activity.

1.37 Real growth in 'Agriculture & allied' sector was lower in 2018-19 at 2.9 per cent, after two years of good agriculture growth (Table 4). As per the 3rd Advance Estimates released by Ministry of Agriculture & Farmers Welfare, the total production of food grains during 2018-19 is estimated at 283.4 million tonnes, as compared to 285 million tonnes in 2017-18 (final estimate). There was a significant decline in food prices in 2018-19 as indicated by nearly zero per cent consumer food price inflation in 2018-19 with prices contracting straight for five months in the year (Figure 26). This is reflected in the decline of the nominal growth rate of GVA in agriculture from 7.0 per cent in 2017-18 to 4.0 per cent in 2018-19. Share of agriculture sector in total GVA has been consistently falling and now stands at 16.1 per cent in 2018-19.

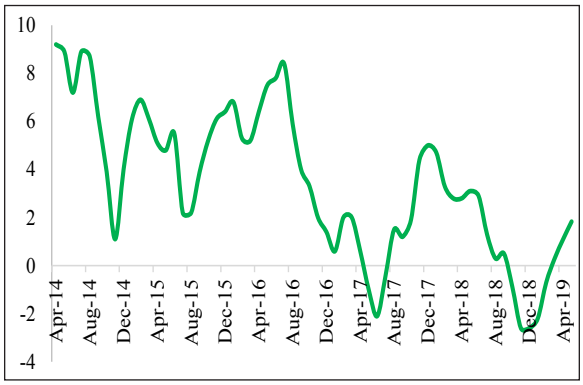
1.38 Agriculture sector in India typically goes through cyclical movement in terms of growth and production. As per the latest data series, crop sector's growth rate remains volatile largely because of vagaries of nature, although the growth in livestock and fishing has remained stable during the past four years. There has been a modest compositional shift within the 'Agriculture and allied' sectors i.e., from crop to livestock sectors and within crop sector from cereals to horticultural produce. The share of crops in GVA has reduced from 12.1 per cent in 2013-14 to 10.0 per cent in 2017-18, and that of livestock increased from 4.1 per cent to 4.9 per cent (at current prices) during the same period.

Table 4: Gross Value Added at Basic Prices by Economic Activity

	Real growth (per cent)			Share at current prices (per cent)		
	2016-17	2017-18	2018-19	2016-17	2017-18	2018-19
Agriculture, forestry & fishing	**6.3**	**5.0**	**2.9**	**17.9**	**17.2**	**16.1**
Industry	**7.7**	**5.9**	**6.9**	**29.4**	**29.3**	**29.6**
Mining & quarrying	9.5	5.1	1.3	2.3	2.3	2.4
Manufacturing	7.9	5.9	6.9	16.8	16.4	16.4
Electricity, gas, water supply & other utility services	10.0	8.6	7.0	2.5	2.7	2.8
Construction	6.1	5.6	8.7	7.8	7.8	8.0
Services	**8.4**	**8.1**	**7.5**	**52.7**	**53.5**	**54.3**
Trade, hotel, transport, storage, communication & services related to broadcasting	7.7	7.8	6.9	18.2	18.2	18.3
Financial, real estate & professional services	8.7	6.2	7.4	20.9	21.0	21.3
Public administration, defence and other services	9.2	11.9	8.6	13.6	14.3	14.7
GVA at basic prices	**7.9**	**6.9**	**6.6**	**100.0**	**100.0**	**100.0**

Source: Central Statistics Office
Note: Data for 2018-19 are as per the Provisional Estimates.

Figure 26: Decline in Food Inflation (per cent)



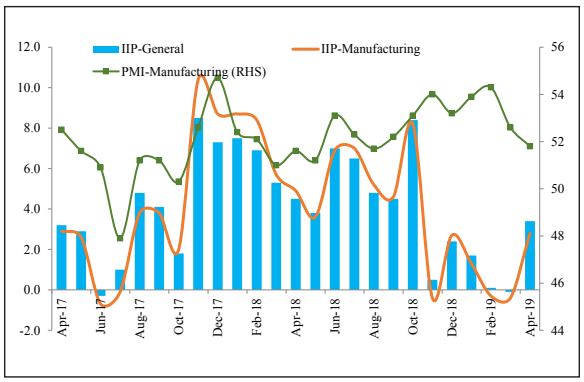
Data source: Central Statistics Office

1.39 Growth in industry accelerated during 2018-19 on the strength of improving manufacturing and construction activity (Table 4), which have more than offset the deceleration in the other two sub sectors, 'Mining & quarrying' and 'Electricity, gas, water supply & other utility services'. Manufacturing accounted for 16.4 per cent in total GVA in 2018-19, marginally higher than that of 'Agriculture & allied' sector.

1.40 The GVA of the private corporate sector, with around 70 per cent share of the manufacturing sector (estimated from available data of listed companies with BSE and NSE) grew by 8.4 per cent at constant prices in 2018-19. On the other hand, production in manufacturing sector as measured by IIP slowed down to 3.5 per cent in 2018-19 from 4.6 per cent in 2017-18 (Figure 27). Growth in IIP is used to estimate the GVA growth of 'quasi-corporate' and 'unorganized' segment of manufacturing sector. Hence, contribution of unorganised sector to growth of manufacturing sector declined in 2018-19. Another positive development in the manufacturing sector has been the gradual improvement in capacity utilisation since Q4 of 2016-17 (Figure 28) along with the pick-up in bank credit to large industry since June 2018.

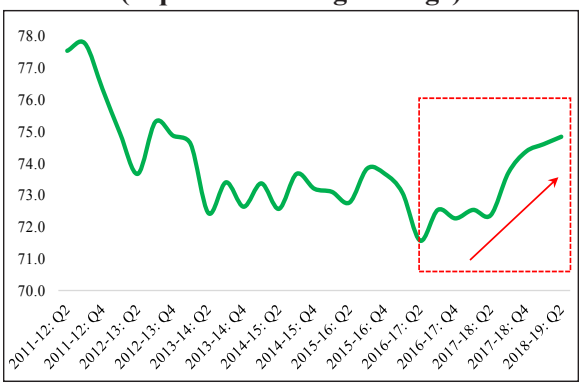
1.41 The growth in manufacturing sector picked up in 2018-19, although the momentum slowed down towards the end of

Figure 27: Index of Industrial Production growth (per cent) and PMI index



Data source: Central Statistics Office

Figure 28: Capacity utilization for selected manufacturing companies (per cent) (3 quarter moving average)



Data source: Reserve Bank of India

the financial year with a growth of 3.1 per cent in fourth quarter of the year, as compared to 12.1 per cent, 6.9 per cent and 6.4 per cent in first, second and third quarter respectively. The growth rate in Q4 of 2018-19 moderated considerably, on account of lower NBFC lending, which in part led to low sales in the auto sector. The moderation is also evident in IIP manufacturing growth that decelerated considerably in the Q4 of 2018-19, with contraction in automobile (manufacture of motor vehicle and other transport equipment) sector and low growth in basic metals sector. PMI manufacturing, despite weakening in Q4 of 2018-19, remained above 50, reflecting the non-cessation of the accelerating phase in manufacturing, although at a lower rate (Figure 27).

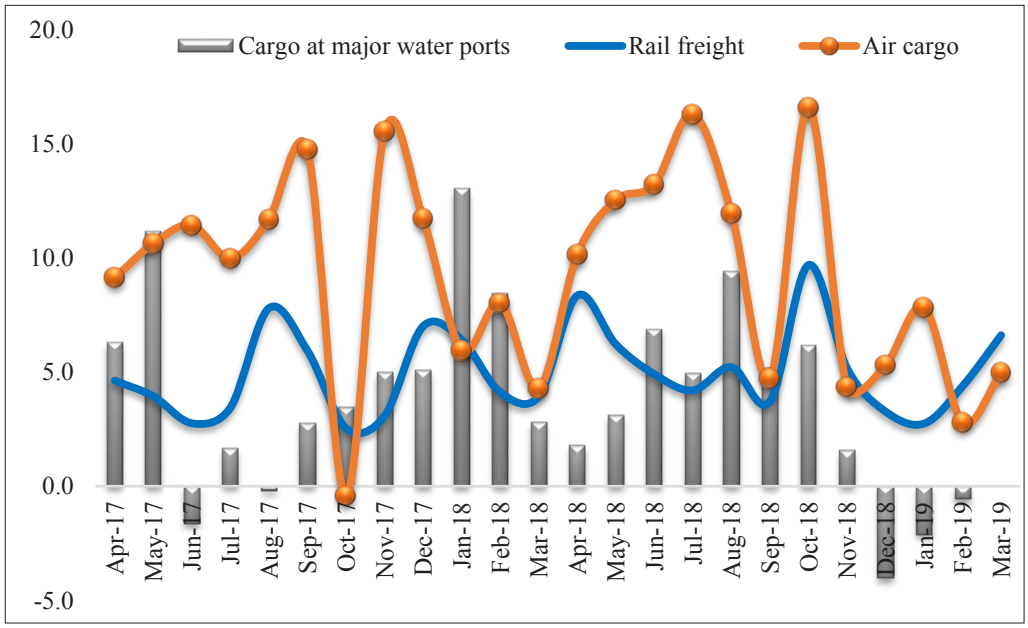
1.42 Construction sector growth is estimated using growth of production of cement and consumption of finished steel. Production of cement and consumption of finished steel grew at 13.3 per cent and 7.5 per cent respectively in 2018-19, higher than their growth rates in 2017-18 and this reflects in higher growth of construction sector in 2018-19.

1.43 Service sector is the most dynamic sector in the economy and has remained the key driver of economic growth along with being a major contributor to GVA and export basket of the Indian economy. Service exports has become one of the mainstay of India's total exports increasing manifold, from ₹0.746 lakh crore in 2000-01 to ₹14.389 lakh crore in 2018-19, raising its share in total exports from 26.8 per cent to 38.4 per cent. Share of India in world service exports has also increased from 2 per cent in 2005 to 3.5 per cent in 2017. This share is much higher than that of manufacturing exports, which stands at 1.8 per cent in 2017.

1.44 Service sector growth declined from 8.1 per cent in 2017-18 to 7.5 per cent in 2018-19, due to decline in the growth in 'Public administration, defence & other services' and 'Trade, hotel & transport' sector. Yet, the sector continues to be the main contributor to growth of the Indian economy. The share of services sector in overall economy has been increasing and now stands at a little over 54 per cent. Within the services sector, 'Financial, real estate & professional services' is the largest component, followed by 'Trade, hotel & transport' sector. PMI services continued to remain above the 50 mark in 2018-19, reflecting the non-cessation of its expansionary phase.

1.45 The 'Trade, hotel, transport, storage, communication & services related to broadcasting' sector growth decreased by 0.9 percentage point to 6.9 per cent in 2018-19. A proxy for growth in transport sector is the amount of cargo and passengers carried by air, rail and water, growth of which also declined in the second half of 2018-19 (Figure 29). Further, growth in number of passengers travelling by air and railways, which are indicators of growth of this sector, also declined in 2018-19 as well, as compared to previous year.

Figure 29: Growth in Cargo carried by various means of transport (per cent)



Data source: Directorate General of Civil Aviation, Ministry of Railway, and Ministry of Shipping

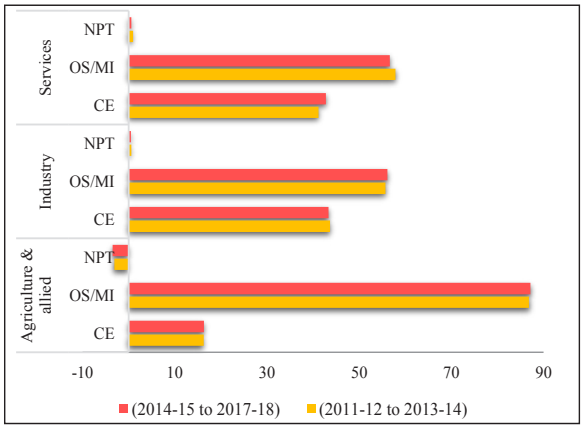
1.46 The 'Financial, real estate and professional services' sector grew at 7.4 per cent in 2018-19, higher as compared to 6.2 per cent in 2017-18. This sector accounts for more than 20 per cent of overall GVA of the economy. Major component of this sector is the 'Real estate and professional services', which has a share of more than 70 per cent (refer to GDP compilation methodology table in annex). Financial services component of the sector is estimated using growth rate of bank credit and bank deposit, which grew at 14.5 per cent and 10.0 per cent respectively in 2018-19, as compared to 10.0 per cent and 6.2 per cent respectively last year, reflecting a growth in GVA in financial services.

1.47 Union government revenue expenditure net of interest payments grew by 5.6 per cent in 2018-19, as compared to 11.3 per cent in the previous year. This is reflected in the growth rate of 'Public administration, defence and other services' (which is calculated using growth rate of revenue expenditure net of interest payments), declining from 11.9 per cent in 2017-18 to 8.6 per cent in 2018-19.

1.48 Each sector has a different composition of income going to labour, capital and entrepreneurship. Agriculture has a very small share of income going to labour as paid labour in this sector has only a marginal presence which is reflected in a very small share of Compensation of Employees (CE). Since most people work on their own farms,

Operating Surplus (OS) / Mixed income (MI) has a very large share in the GVA of agriculture. On the other hand, industry and services sector continue to show a high share of employee compensation in their GVA, which has not changed much over the last few years (Figure 30).

Figure 30: Net Value Added share in different income categories (per cent)



Data source: Central Statistics Office
Note: CE : Compensation of Employees, CFC: Consumption of Fixed Capital, OS: Operating Surplus; MI: Mixed Income of the self-employed, NPT: Net Production tax

Outlook of the economy

1.49 The year 2019-20 has delivered a huge political mandate for the government, which augurs well for the prospects of high economic growth. Real GDP growth for the year 2019-20 is projected at 7 per cent, reflecting a recovery in the economy after a deceleration in the growth momentum throughout 2018-19. The growth in the economy is expected to pick up in 2019-20 as macroeconomic conditions continue to be stable while structural reforms initiated in the previous few years are continuing on course. However, both downside risks and upside prospects persist in 2019-20.

1.50 Investment rate, which was declining from 2011-12 seems to have bottomed out. It is expected to pick up further in the year 2019-20 on the back of higher credit growth and improved demand. The political stability in the country should push the animal spirits of the economy, while the higher capacity utilization and uptick in business expectations should increase investment activity in 2019-20. Accommodative monetary policy in the beginning of the year should help in decreasing real lending rates, more so, if the transmission mechanism improves. There are signs of continuing resolution of stressed assets in the banking sector as reflected in decline in NPA to gross advances ratio as on December 2018, which should push the capex cycle.

1.51 The performance of consumption will be crucial in deciding the growth path of economy. Rural wages growth which was declining seems to have bottomed out and has started to increase since mid-2018. Further growth in rural wages should help spur rural demand. Pick up in food prices should help in increasing rural incomes and spending capacity and hence rural consumption demand. PM-Kisan scheme was announced by the government to provide an income support of ₹6000/- per year to small and marginal farmer families having combined land holding/ownership of upto 2 hectares. The condition of minimum land holding has been subsequently removed to benefit all farmers. This cash transfer scheme will also increase the rural incomes.

1.52 The oil prices increased in 2018-19 by around 14 $/bbl. However, oil prices are expected to decline in 2019-20 from the current level (based on the oil futures price for 2019-20). This should provide a positive push to consumption.

1.53 However, downside risks to consumption remain. The extent of recovery in farm sector and farm prices will decide the push to rural consumption, which is also dependent on the situation of monsoon. The

meteorological department has predicted that the rainfall over the country as a whole is likely to be near normal this year. This should lead to improvement in agriculture sector growth. However, according to IMD, some regions are expected to receive less than normal rains. This could prove to be detrimental for crop production in certain affected areas. If the impact of stress in the NBFC sector spills over to this year as well, it may lead to lower credit offtake from NBFCs, which may dampen growth in consumption spending.

1.54 Prospects of export growth remain weak for 2019-20 if status quo is maintained. However, reorientation of export policies to target countries/markets based on our own relative comparative advantage and the importing country's exposure to Indian goods can foster export performance. Under status quo, the outlook for the global economy is bleak in 2019, with most of the countries projected to slow down. The major threat facing the world economy is the increase in trade tensions between U.S. and China, which could lead to large disruptions in global value chains, outcome of Brexit and downside risk to China's growth. The lower global growth and the increased uncertainty about trade tensions may negatively affect export demand, including that of India's, which in turn will further lower GDP growth rates of several countries.

1.55 On balance, the prospects of the economy should improve with growth of the economy expected to be 7 per cent in 2019-20.

CHAPTER AT A GLANCE

- Growth of GDP moderated to 6.8 per cent in 2018-19 from 7.2 per cent in 2017-18. However, India was still the fastest growing major economy.
- This moderation in growth momentum is mainly on account of lower growth in 'Agriculture & allied', 'Trade, hotel, transport, storage, communication and services related to broadcasting' and 'Public administration & defence' sectors.
- Growth in investment, which had slowed down for many years, has bottomed out and has started to recover since 2017-18. Growth in fixed investment picked up from 8.3 per cent in 2016-17 to 9.3 per cent in 2017-18 and further to 10.0 per cent in 2018-19.
- India maintained its macroeconomic stability by containing inflation within 4 per cent and by maintaining a manageable current account deficit to GDP ratio.
- Fiscal deficit of Central Government stood at a 3.4 per cent of GDP in 2018-19. Current account deficit was 2.6 per cent in April-December 2018.
- Non-Performing Assets as percentage of Gross Advances reduced to 10.1 per cent at end December 2018 from 11.5 per cent at end March 2018.
- Outlook of Indian economy appears bright with prospects of pickup in growth in 2019-20 on back of pick up in private investment and robust consumption growth.

ANNEX

Table: Key data sources and indicators used for each sector during different stages of estimation[1] of GDP

Sector	1st Revised Estimates	2nd Revised Estimates	3rd Revised Estimates
Agriculture	**Current price:** *Crops:* Production: Fourth advance estimate for food grain production and third advance estimate/ final estimate (as available by January) for area and production of horticulture crops, both published by Ministry of Agriculture and Farmer Welfare (MoAgFW). Prices: Wholesale Price Indices (WPI) of crops (category specific) are applied on previous year price supplied by corresponding State Directorate of Economics and Statistics (DES). *Livestock:* Production: Latest data on major livestock products by MoAgFW Prices: Prices are supplied by corresponding State DES. If some State DES has not finalized the prices, item-wise WPI is applied on previous year's price supplied by corresponding State DES. *Irrigation system:* GVA at current prices are estimated by analyzing budget documents of Central and State Governments and annual reports of public sector irrigation companies.	Final estimate of crops and horticulture crops by MoAgFW. For some State specific crops, updated production data is supplied by the corresponding State DES. Price data is updated after comparable discussion from States.	Specific crop and revised prices made available during comparable discussion by some States or UTs. Latest cost of cultivation rates of by-products are used for compilation.

[1] For the methodology of Advanced and Provisional Estimates, please refer to Economic Survey Volume II of 2017-18. In First Advance Estimate, Second Advance Estimate and Provisional Estimate, indicator-based methodology is followed. The estimates are based on seven to nine months data. First Revised Estimates (RE) are released in January of the subsequent year and then second and third revised estimates are released in January of following years. For example, for the year 2015-16, First RE was released in January 2017, Second RE was released in January 2018 and Third RE in January 2019.

Sector	1st Revised Estimates	2nd Revised Estimates	3rd Revised Estimates
	Constant prices: *Crops and livestock:* Current year production is multiplied with base year price. *Irrigation system:* Base year GVA estimates are moved with the index of area irrigated through government canals.		
Forestry	**Current prices:** Latest production and prices data from State forestry departments and category-specific WPI (used in case when prices are not available from some states). Recorded production is multiplied by 1.1 to estimate actual production. **Constant prices:** Latest production and base year prices are used.	Updated production and price estimate of Industrial Wood (IW) and minor forest product provided by concerned States or UTs.	Revision of production and price data of IW and minor forest product after comparable discussion.
Fishing	**Current prices:** Production: Current data of inland fish, marine fish and curing activities from Department of Fisheries and Animal Husbandry Statistics (AHS) Division of MoAgFW and State Fisheries departments. Price: Prices are supplied by corresponding State DES. If some State DES has not finalized the prices, WPI of fish is applied on previous year price supplied by corresponding State DES. **Constant prices:** Latest production and base year prices are used.	Updated production and price estimate on curing activities as per latest data provided by concerned States or UTs.	Revision of production, information on curing activities and revision of prices after comparable discussion.
Mining & Quarrying	**Current price:** Annual reports of the public sector mining companies, MCA-21 for private corporate sector, Salt commissioner for production of salt, State geological department for minor minerals.		

Sector	1st Revised Estimates	2nd Revised Estimates	3rd Revised Estimates
	Constant price: Implicit Price Deflator (IPD) for major minerals from Indian Bureau of Mines and category specific WPI is used for the constant price estimation for coal and petroleum.		
Manufacturing	**Current price:** Annual reports of public sector manufacturing companies, Budget documents of Departmental Enterprises, MCA-21[2] for private corporate sector, Annual Survey of Industries (ASI), and NSS employment unemployment survey and Unincorporated survey data used for the base year and then carried forward by IIP and WPI (in absence of ASI data). **Constant price:** WPI manufacturing (sector-specific) is used as the deflator.		
Electricity	**Current price:** Budget documents of Departmental Enterprises (DE), Annual reports of electricity companies, MCA-21 for private corporate sector. **Constant price:** Quantum Index (created using amount of transmission and distribution of electricity companies) is used.		
Gas and Water Supply	**Current price:** MCA-21 and annual reports, NSS results taken forward by corporate growth and KVIC. **Constant price**: Base year estimates are moved with Quantum Index (created using volume of production) of gas and CPI for water supply.		
Construction	**Current price:** Pucca Construction: For compiling the estimates of pucca construction in Dwellings, other buildings and structures (DOBS), commodity flow approach is used. On site value of construction materials, i.e., cement, iron & steel, bricks & tiles, timber & roundwood, bitumen & bitumen mixtures and glass & glass products, fixture & fittings, etc. used in construction activity was compiled for the base year 2011-12 using ASI results. Further, trade and transport margins were also added. The base year estimates are further moved by growth of gross value of output of manufacturing of particular compilation categories for future years. Rates and ratios based on study on construction conducted by Central Building Research Institute are used to arrive at the GVA of pucca construction.		

[2] In the 1st RE, only common companies' growth in MCA 21 data is used, whereas for 2nd RE all companies that have filed return until the date are included.

Sector	1st Revised Estimates	2nd Revised Estimates	3rd Revised Estimates
	Kutcha Construction: For compiling the estimates of kutcha construction, expenditure approach is used. Construction activities on kutcha DOBS, land improvement, irrigation, mineral exploration, plantations, etc, are treated as kutcha construction. 75 percent of expenditure made by different institutional sectors on said activities constitutes the GVA of kutcha construction. **Constant prices:** Estimates are compiled using appropriate WPI and CPI based deflators.		
Trade & Repair services	**Current prices:** Budget documents of DE, annual reports of Non Departmental Enterprises (NDE), MCA-21 data for private corporate sector, NSS results for quasi-corporations sector taken forward by unorganised index of sales tax turnover* (for trade sector), service tax growth rate (for repair services), sale growth of motor vehicles (for maintenance and repair of motor vehicles and motor cycles). **Constant prices:** Weighted WPI and sales growth of vehicles		
Hotels & Restaurants	**Current prices:** Annual reports of DE, MCA-21 data for private corporate sector, NSS results for unorganised sector in the base year taken forward using corporate sector growth. **Constant prices:** Weighted WPI is used as a deflator.		
Rail Transport	**Current Prices:** Estimates from Central Government budget documents for Departmental Commercial Undertakings, MCA-21 data for the private Corporate Sector and latest available annual report for Non Departmental Commercial Undertakings. **Constant Prices:** Volume extrapolation using weighted volume index of passenger earning, goods earning etc. combined with their earnings in the base year as weights.		
Other (Land, water, air) transport	**Current price:** Budget documents of DE, Annual reports of NDE, MCA-21 data for private corporate sector, NSS results for unorganised sector carried forward using vehicles growth (for current price inflated using CPI -transport and communication) **Constant price:** Volume index of transport (for land transport), air volume index (for air transport), index of cargo handled (water transport), combined growth of road, water and air (for service incidental to transport).		

Sector	1st Revised Estimates	2nd Revised Estimates	3rd Revised Estimates
Communication & Broadcasting	**Current prices:** Budget document of Department of Post, annual reports of NDE (BSNL, MTNL), MCA-21 data for private corporate, unorganised sector by NSS results moved forward using Service tax growth (for courier, cable and telecommunication) and corporate growth (for recording, publishing and broadcasting services). **Constant price:** Minutes of usage growth and CPI-transport and communication		
Banking including NBFI and financial auxiliaries	**Current price:** Annual accounts data of nationalised banks, RBI data for private banks, foreign banks and urban cooperative banks, NABARD data for Regional Rural Banks and rural cooperative banks, SEBI data for financial auxiliaries, MCA data for Non-Banking Financial Institutions and financial auxiliaries, All-India Debt and Investment Survey data, RBI report on private moneylenders and NSS 67th round data of enterprise surveys and RBI data on loans and advances to households for unorganised sector. Budget documents are used to estimate the GVA of Post Office Savings Bank. **Constant price:** Estimates are prepared separately for each of the sub-sectors. In general, the base year estimates are carried forward using indicators measuring the volume of activity in the corresponding sub-sector (e.g., for banks, aggregate deposit and credit growth rates are derived using data from Reserve Bank of India). In cases where the volume of activity is measured in value terms i.e., at current prices, these are deflated by implicit price deflator of non-financial sectors to obtain the corresponding quantum index.	**Current price:** Data is updated based on latest data from the MCA, NABARD, National Federaton of State Cooperative Banks Limited and receipts of annual reports from State Financial Corporations, Central and State level public sector financial companies and corporations and budget documents for Post Office Bank. **Constant price:** The implicit price deflator also is updated based on revised estimates in current and constant prices for the non-financial sector.	

Sector	1st Revised Estimates	2nd Revised Estimates	3rd Revised Estimates
Insurance and pension	**Current price:** Data from annual accounts of public sector life and non-life insurance companies, IRDAI data for private insurance companies, PFRDA data for pension funds, and budget documents for postal life insurance are used. **Constant price:** Estimates of GVA at constant prices are prepared separately for each of the sub-sectors. In general, the base year estimates are carried forward using indicators measuring the volume of activity (for instance, using premium less reinsurance and claims paid for public non-life insurance) in the corresponding sub-sector. In cases where the volume of activity is measured in value terms i.e., at current prices, these are deflated by implicit price deflator of non-financial sectors to obtain the corresponding quantum index. For postal life insurance, current price GVA is deflated using all-India overall CPI.	In both current price and constant price, data is updated based on latest data from the IRDAI, PFRDA and analysis of budget documents. In constant price estimates, the implicit price deflator also is updated based on revised estimates in current and constant prices for the non-financial sector.	
Real Estate	**Current price:** Annual reports of NDE, MCA-21 data, NSS results for unorganised sector carried forward with corporate sector growth. **Constant price:** CPI and WPI are used for constant price estimation.		
Ownership of Dwellings	**Current price:** Gross rental is the number of census houses (urban) times rent per household as obtained from Consumer Expenditure Survey (CES) for the base year. For years subsequent to the base year, rent per household is extrapolated using the index of house rent (urban areas) and the number of dwellings is extrapolated using the inter-censal growth rate of urban dwellings. For rural dwellings, capital stock of rural residential buildings is used. **Constant price:** Base year estimate with inter-censal growth rate of dwellings for urban areas and deflated by CPI (Rural) for rural dwellings.		

Sector	1st Revised Estimates	2nd Revised Estimates	3rd Revised Estimates
Professional services	**Current Prices:** Annual reports of NDE, MCA-21 data, NSS results taken forward using private corporate sector growth). **Constant Prices:** WPI and CPI are used.		
Public Administration and Defence	**Current Prices:** Revised estimates from Centre and State budget documents along with Local Bodies (LB) and autonomous institutes' data.	Actual estimates from Centre and State budget documents along with LB and autonomous institutes' data.	Actual estimates from Centre and State budget documents along with LB and autonomous institutes' data (revision, if any, based on comparable discussion).
	Constant Prices: Current price estimates of Net Value Added are deflated using CPI and Consumption of Fixed Capital at constant prices are added to arrive at GVA.		
Product Taxes	**Current Prices:** Revised estimates from Centre and State budget documents along with LB and autonomous institutes data.	Actual estimates from Centre and State budget documents along with LB and autonomous institutes' data.	Actual estimates from Centre and State budget documents along with LB and autonomous institutes' data (revision, if any, based on comparable discussion).
	Constant Prices: Constant price estimates of taxes on products are compiled by volume extrapolation. Volume extrapolation is done separately for different product taxes. Indicators used for extrapolation are growth in volume of output of manufacturing , services, etc.		

Sector	1st Revised Estimates	2nd Revised Estimates	3rd Revised Estimates
Product Subsidies	**Current Prices:** Revised estimates from Centre and State budget documents along with LB and autonomous institutes' data.	Actual estimates from Centre and State budget documents along with LB and autonomous institutes' data.	Actual estimates from Centre and State Budget documents along with LB and autonomous institutes' data (revision, if any, based on comparable discussion).
	Constant Prices: Current price estimates are deflated using IPD of GVA.		
Private Final Consumption Expenditure	**Current prices:** (a) Agriculture: From the quantity of production, the amount used up for feed and seed, wastage, Public Distribution System (data from Ministry of Consumer Affairs), inter-industry consumption, government consumption and retained for self-consumption are subtracted to get the private final consumption. (b) Manufacturing: • Share of consumable goods is calculated from ASI data by calculating the share of items of final consumption in products and by products for the organised manufacturing. Then this ratio is used on the output produced in the public sector, private corporate sector and private unincorporated sector. • For unorganised manufacturing, base year ratio of output of organised and unorganised manufacturing is used. Total supply available for consumption is calculated by excise duty, import duty, trade and transport margin. After this, the government consumption, capital formation, exports are subtracted using Supply Use table and the remaining is Private Final Consumption Expenditure (PFCE). (c) Electricity, gas and other fuel: For the base year, consumption of electricity has been taken from consumer expenditure survey of NSS; it is moved forward with the data supplied by CEA on electricity sold for domestic consumption. Domestic consumption of natural gas is taken from Indian Petroleum and Natural Gas statistics.		

Sector	1st Revised Estimates	2nd Revised Estimates	3rd Revised Estimates
	(d) Services: • For most of the services (health, education, hotels & restaurants), base year estimates are calculated from Consumer Expenditure Survey and then further moved with growth in gross value of output. • Transport: Ratio of PFCE to passenger earnings in the base year and are assumed to be constant throughout the series, and then taken forward using registered commercial vehicles growth. • Communication and various other personal services: PFCE is fixed percentage of total output. • Housing and water supply: GVA growth is used to take the estimates forward. **Constant prices:** (a) Agriculture: Estimation done at base year prices. (b) Manufacturing: Headline WPI is used as deflator (c) Electricity, gas and other fuel: Base year estimates are moved using quantum index. (d) Services: Deflation by implicit output deflator or CPI in some cases.		
Government Final Consumption expenditure	**Current Prices:** Revised estimates from Centre and State budget documents along with LB and autonomous institutes' data.	Actual estimates from Centre and State budget documents along with LB and autonomous institutes' data.	Actual estimates from Centre and State budget documents along with LB and autonomous institutes' data (revision, if any, based on comparable discussion).
	Constant price: Individual components are deflated using CPI and WPI based indicators and CFC at constant price is added.		

Sector	1st Revised Estimates	2nd Revised Estimates	3rd Revised Estimates
Gross Fixed Capital Formation	**Current price:** Estimate of Gross Fixed Capital Formation (GFCF) is compiled by type of assets, by type of institutional sectors and by industry of use. The four types of assets and methodology used are given as follows: (a) Dwellings, other buildings and structures (DOBS): The output of new construction part of DOBS is taken as GFCF and the methodology used for compilation is the same as mentioned in the Construction Sector GVO. For compilation of institution and industry-wise estimates, expenditure on new construction given in budget documents, annual reports of public corporations, ASI, annual reports of private corporations and NSS surveys for households are used. (b) Machinery and equipment (M&E): GFCF estimates of M&E asset are compiled using commodity flow approach. For compilation of institution and industry wise estimates, capital expenditure on M&E given in budget documents, annual reports of public corporations, ASI, annual reports of private corporations and NSS surveys for households are used. (c) Cultivated Biological Resources (CBR): Increment in livestock and expenditure on increment of area of plantation crops is treated as capital formation under CBR asset. For compilation of GFCF asset of livestock and plantation, information of capital stock from Livestock Census and expenditure on plantation crops from NABARD Report are used. (d) Intellectual Property Products: Total capital expenditure on Research & Development activities, software, etc. from budget documents, annual reports of public corporations, ASI, annual reports of private corporations and NSS 67th round for software asset data for households and unincorporated enterprises is used. **Constant price:** Estimates are compiled using appropriate WPI and CPI based deflators.		
Exports of goods and services	**Current price:** Data of exports of goods and services is taken from RBI. **Constant prices:** Export of goods is deflated by unit value of export index and export of services is deflated by implicit price index of service sector.		

Sector	1st Revised Estimates	2nd Revised Estimates	3rd Revised Estimates
Imports of goods and services	**Current prices:** Data of import of goods and services is taken from RBI. **Constant prices:** Import of goods is deflated by unit value of import index and import of services is deflated by implicit price index of service sector.		
Net Factor Income from Abroad	**Current prices:** Data on receipt of compensation of employees and property & entrepreneurial incomes is taken from RBI. **Constant prices:** Deflated by implicit price of service sector.		

Note:

^ : Inputs are assumed to be 16.2 per cent of total value of output at current price in Forestry sector.
# : Commodity flow approach refers to consumption of cement and cement products, iron and steel, Bricks and tiles, timber, bitumen, glass products.
* : After the implementation of GST, sales tax is now subsumed under GST and now a comparable estimate of turnover is estimated.

Fiscal Developments

02
CHAPTER

"In the happiness of his subjects lies his happiness; in their welfare his welfare; whatever pleases himself he shall not consider as good, but whatever pleases his subjects he shall consider as good. Hence the king shall ever be active and discharge his duties; the root of wealth is activity, and of evil its reverse."

-Kautilya's Arthasastra, Chapter XIX, 'The Duties of a King' in Book I, 'Concerning Discipline'.

Tabled in the backdrop of an optimistic global scenario of the investment and trade cycle, Budget 2018-19 reiterated the objective of fiscal consolidation with introduction of a new fiscal targeting framework. Revenue augmentation and expenditure reprioritisation and rationalisation continue to be integral to fiscal reforms. Broadening and deepening the direct tax base and stabilisation of Goods and Services tax are the other priorities. Over the last six years, budgetary expenditure of the Central Government, as per cent of GDP, has seen considerable moderation with most of the reduction in the revenue expenditure. Total expenditure fell by 0.3 percentage points in 2018-19 PA (Provisional Actuals) over 2017-18, with 0.4 percentage points reduction in revenue expenditure and 0.1 percentage points increase in capital expenditure. Within revenue expenditure, major subsidies comprising food, fertiliser and petroleum continued their downward trend and have further declined by 0.1 percentage point of GDP in 2018-19 PA over 2017-18. Improving the quality of expenditure remains the key priority. Meeting allocational requirements without diversion from the newly revised fiscal glide path remains the foremost challenge.

2.1 Budget 2018-19 was presented in the backdrop of upswing in global investment and trade in the second half of 2017. The global growth was expected to continue its momentum in 2018. Despite several headwinds, Indian economy is expected to grow at 6.8 per cent (as per provisional estimates released by Central Statistics Office) in 2018-19 while maintaining macro-economic stability. The growth with macro-stability stems mainly from ongoing structural reform, fiscal discipline, efficient delivery of services and financial inclusion.

2.2 The Budget 2018-19 affirmed Government's intent on fiscal consolidation. It aimed to revert to the path of fiscal rectitude after the temporary blip in 2018-19. The new

fiscal targeting framework was adopted, which rests on twin pillars of reducing debt and fiscal deficit. The revised fiscal glide path envisaged achieving fiscal deficit of 3 per cent of GDP by FY 2020-21 and Central Government debt to 40 per cent of GDP by 2024-25.

2.3 The Medium Term Fiscal Policy (MTFP) Statement presented alongwith the Union Budget 2018-19 revised the fiscal deficit target for 2017-18, as percent of GDP, by 0.3 percentage point from 3.2 per cent to 3.5 percent, owing to spill-over impact of the new indirect tax regime. It aimed to reach the fiscal deficit target of 3.3 per cent of GDP in 2018-19 BE, with projections for 2019-20 and 2020-21 at 3.1 per cent and 3.0 per cent, respectively.The debt-GDP ratio of Central Government was projected at 48.8 per cent at end-March 2019. It is targeted to decline to 46.7 per cent by end-March 2020 and 44.6 per cent by end-March 2021, restoring the long-term trend of decline in the debt to GDP ratio. The FY 2018-19 has ended with fiscal deficit at 3.4 per cent of GDP and debt to GDP ratio of 44.5 per cent (Provisional).

2.4 This chapter reviews the fiscal developments in India during the year 2018-19. It is organised in four sections: Central Government finances, State finances, General Government, and outlook for 2019-20.

CENTRAL GOVERNMENT FINANCES

2.5 Fiscal consolidation entails revenue augmentation and expenditure rationalisation. In the post-Fiscal Responsibility and Budget Management Act (FRBMA) period from 2004-05 to 2007-08, significant fiscal consolidation could be achieved largely due to buoyant tax revenues with net tax revenue to the Centre increasing by 1.9 percentage points of GDP. As part of the strategy to revive growth post the Global financial crisis, fiscal consolidation was paused, which manifested in tax concessions and higher public expenditure. However, after 2011-12, there have been gradual, but consistent, efforts towards fiscal consolidation.

2.6 Major fiscal indicators of the Central Government are indicated in Table 1. The salient changes in the Central Government finances evident from Table 1 include improvement in the tax to GDP ratio, significant consolidation of revenue expenditure and gradual tilt towards capital spending over the years. These have led to progressive reduction in primary and fiscal deficits.

Table 1: Central Government's Fiscal Parameters

Items	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 BE	2018-19 RE	2018-19 PA
								(in ₹ lakh crore)
Revenue Receipts	10.15	11.01	11.95	13.74	14.35	17.26	17.30	15.63
Gross Tax Revenue	11.39	12.45	14.56	17.16	19.19	22.71	22.48	20.80
Net tax revenue	8.16	9.04	9.44	11.01	12.42	14.81	14.84	13.17
Non-tax revenue	1.99	1.98	2.51	2.73	1.93	2.45	2.45	2.46
Non-debt capital receipts*	0.42	0.51	0.63	0.65	1.16	0.92	0.93	1.03
Non-debt receipts	10.57	11.53	12.58	14.40	15.51	18.18	18.23	16.66
Total Expenditure	15.59	16.64	17.91	19.75	21.42	24.42	24.57	23.11
Revenue Expenditure	13.72	14.67	15.38	16.91	18.79	21.42	21.41	20.08
Capital Expenditure	1.88	1.97	2.53	2.85	2.63	3.00	3.17	3.03

Fiscal Deficit	5.03	5.11	5.33	5.36	5.91	6.24	6.34	6.45
Revenue Deficit	3.57	3.66	3.43	3.16	4.44	4.16	4.11	4.45
Primary Deficit	1.29	1.08	0.91	0.55	0.62	0.48	0.47	0.63
Memo Item								
GDP at market price	112.34	124.68	137.72	153.62	170.95	187.22	188.41	190.10
			(as per cent of GDP)					
Revenue Receipts	9.0	8.8	8.7	8.9	8.4	9.2	9.2	8.2
Gross Tax Revenue	10.1	10.0	10.6	11.2	11.2	12.1	11.9	10.9
Net tax revenue	7.3	7.2	6.9	7.2	7.3	7.9	7.9	6.9
Non-tax revenue	1.8	1.6	1.8	1.8	1.1	1.3	1.3	1.3
Non-debt capital receipts*	0.4	0.4	0.5	0.4	0.7	0.5	0.5	0.5
Non-debt receipts	9.4	9.2	9.1	9.4	9.1	9.7	9.7	8.8
Total Expenditure	13.9	13.3	13.0	12.9	12.5	13.0	13.0	12.2
Revenue Expenditure	12.2	11.8	11.2	11.0	11.0	11.4	11.4	10.6
Capital Expenditure	1.7	1.6	1.8	1.9	1.5	1.6	1.7	1.6
Fiscal Deficit	4.5	4.1	3.9	3.5	3.5	3.3	3.4	3.4
Revenue Deficit	3.2	2.9	2.5	2.1	2.6	2.2	2.2	2.3
Primary Deficit	1.1	0.9	0.7	0.4	0.4	0.3	0.2	0.3

Source: Union Budget Documents & CGA
BE: Budget Estimate, RE: Revised Estimate (as per Interim Budget), PA: Provisional Actuals
*includes disinvestment proceeds

2.7 The growth rates of fiscal indicators are presented in Table 2. The growth in non-tax revenue and capital expenditure in 2018-19 PA is considerable. In fact, the growth in both these variables in 2018-19 PA reverses the reduction in both variables in 2017-18.

Table 2: Growth Rate of Central Government's Fiscal Indicators (in per cent)

Items	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 BE#	2018-19 RE#	2018-19 PA#
Revenue Receipts	15.4	8.5	8.5	15.0	4.4	20.2	20.5	8.9
Gross Tax Revenue	9.9	9.3	16.9	17.9	11.8	18.4	17.2	8.4
Net tax revenue	10.0	10.8	4.4	16.7	12.8	19.2	19.5	6.0
Non-tax revenue	44.8	-0.5	27.0	8.6	-29.4	27.2	27.3	27.7
Non-debt capital receipts*	2.2	23.0	22.3	3.8	77.0	-20.3	-19.5	-11.1
Non-debt receipts	14.8	9.1	9.1	14.4	7.7	17.2	17.5	7.4
Total Expenditure	10.6	6.7	7.6	10.3	8.4	14.0	14.7	7.9
Revenue Expenditure	10.3	6.9	4.8	9.9	11.1	14.0	13.9	6.9
Capital Expenditure	12.5	4.8	28.6	12.5	-7.5	14.2	20.3	15.1

Source: Union Budget Documents & CGA
BE: Budget Estimates, RE: Revised Estimates (as per Interim Budget), PA: Provisional Actuals
*includes disinvestment proceeds
growth over 2017-18

Trends in Receipts

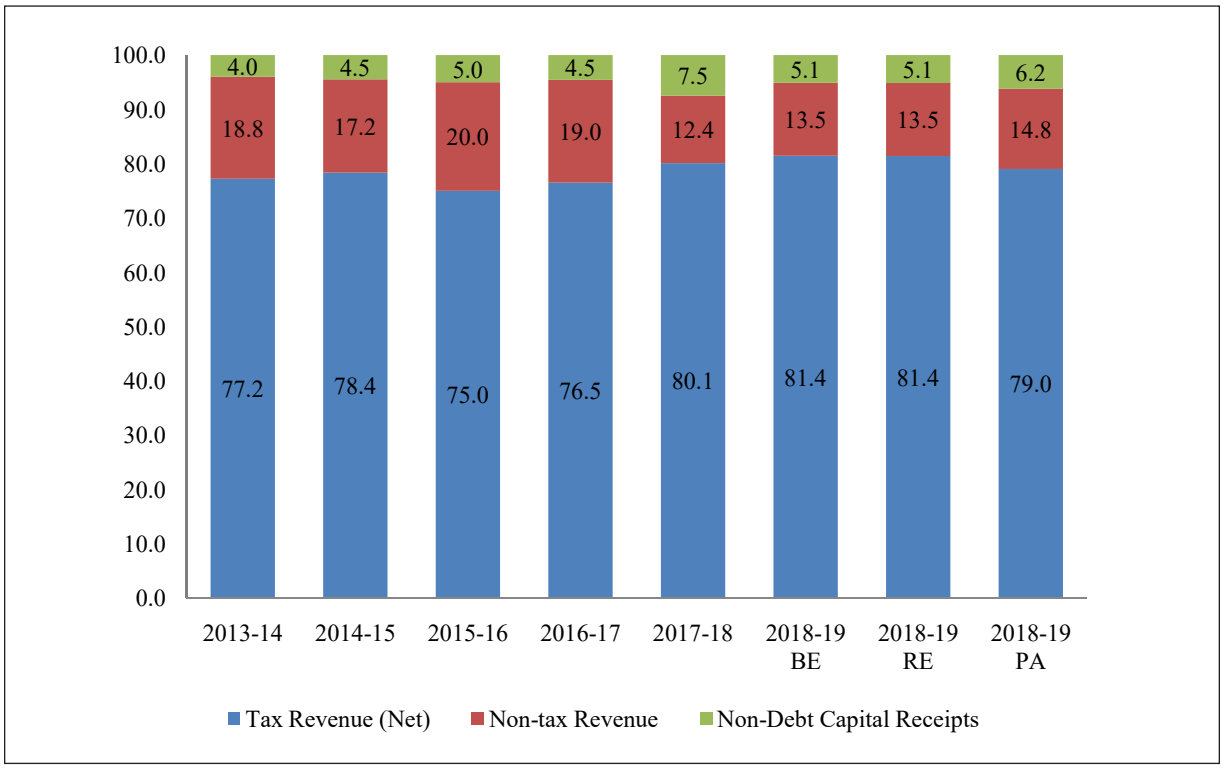
2.8 Central government receipts can broadly be divided into non-debt and debt receipts. The non-debt receipts comprise of tax revenue, non-tax revenue, recovery of loans, and disinvestment receipts. Debt receipts mostly consist of market borrowings and other liabilities, which the government is obliged to repay in the future. The Budget 2018-19 targeted significantly high growth in non-debt receipts of the Central Government, which was driven by robust growth in net tax revenue and non-tax revenue (refer to Table 2). The outcome as reflected in the Provisional Actual figures is lower than the budget estimate owing to reduction in the net tax revenue. This is also evident from the composition of non-debt receipts plotted in Figure 1.

Tax Revenue

2.9 Budget 2018-19 envisaged a growth of 16.7 per cent in gross tax revenue (GTR) over the revised estimates (RE) of 2017-18. GTR was estimated at ₹22.7 lakh crore for BE 2018-19, which was 12.1 per cent of the GDP. The growth in GTR was estimated to be led by 17.3 per cent growth in indirect taxes and 14.4 per cent growth in direct taxes over the revised estimates of 2017-18. Broadly, 51 per cent of GTR was estimated to accrue from direct taxes and the remaining 49 per cent from indirect taxes. The contribution of different taxes in GTR for 2018-19 BE and 2018-19 PA is shown in Figure 2.

2.10 As per Provisional Actual figures released by the Controller General of Accounts for FY 2018-19, the growth in GTR in 2018-19 has been lower than envisaged in

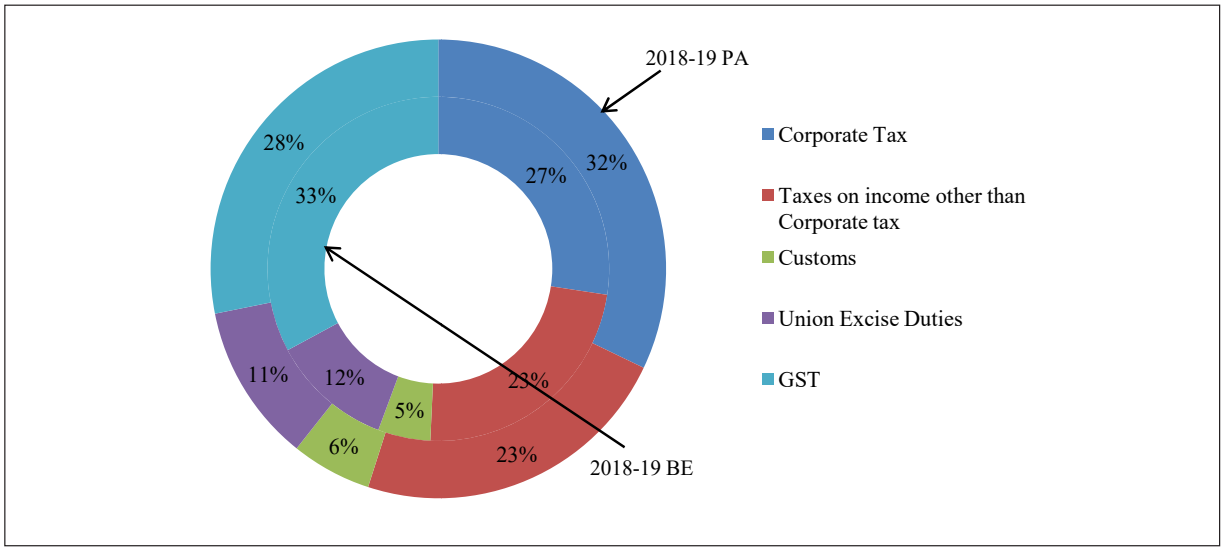
Figure 1: Composition of Non-Debt Receipts (in per cent)



Source: Union Budget Documents & CGA
BE: Budget Estimates, RE: Revised Estimates (as per Interim Budget), PA: Provisional Actuals

the budget (refer to Table 2). Direct taxes have grown by 13.4 per cent owing to improved performance of corporate tax. However, indirect taxes have fallen short of budget estimates by about 16 per cent. This is largely owing to the shortfall in GST revenues[1]. The GST collections are yet to stabilise and several changes have been carried out following decisions of the GST Council during the course of the year. These changes, *inter alia*, relate to rate rationalisation for goods and services, changes in the threshold limits and exemptions granted, which are detailed in Annex I.

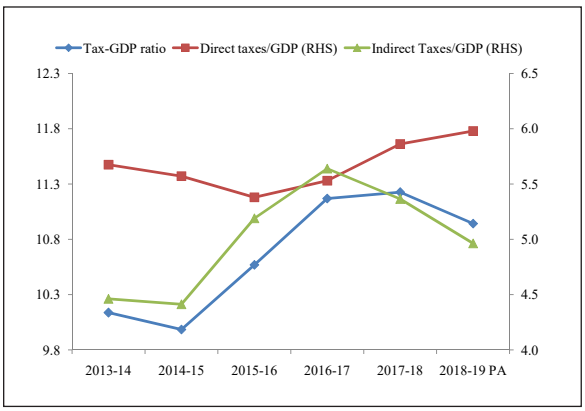
Figure 2: Composition of Gross Tax Revenue



Source: Union Budget Documents & CGA
BE: Budget Estimates, PA: Provisional Actuals

2.11 Though there has been improvement in tax to GDP ratio over the last six years (Figure 3), GTR as a proportion of GDP has declined by 0.3 percentage points in 2018-19 PA over 2017-18. Indirect taxes have fallen by 0.4 percentage points of GDP primarily due to shortfall in GST collections. This has been partly offset by 0.1 percentage points increase in direct taxes. Trends in major taxes in relation to GDP displayed in Figure 4 show that receipts from corporate tax have considerably improved in 2018-19 PA. Better tax administration, widening of TDS carried over the years, anti-tax evasion measures and increase in effective tax payers base have contributed to direct tax buoyancy. Widening of tax base due to increase in the number of indirect tax filers in the GST regime has also led to improved tax buoyancy. Going forward, sustaining improvement in tax collection will depend on the revenue buoyancy of GST.

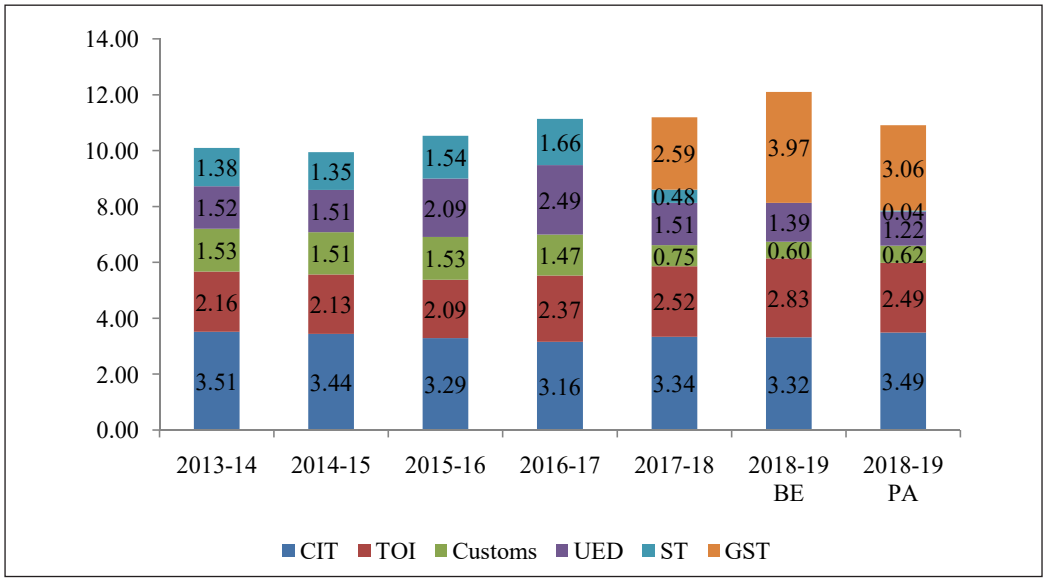
Figure 3: Tax to GDP ratio (in per cent)



Source: Union Budget Documents & CGA
PA: Provisional Actuals

[1] Includes CGST, IGST and compensation cess.

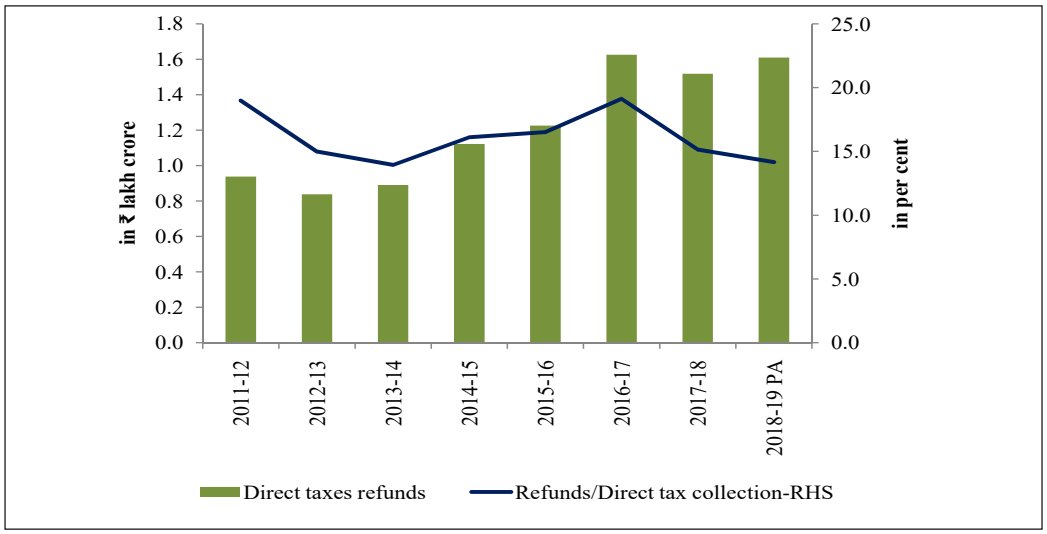
Figure 4: Taxes as per cent of GDP



Source: Union Budget Documents & CGA
BE: Budget Estimates, PA: Provisional Actuals
CIT=Corporate tax, TOI=Taxes on Income other than Corp. Tax, UED=Union Excise duties, ST=Service Tax, GST=Goods & Service Tax

2.12 Analysis of direct tax receipts shows that a significant portion of tax collected are refunded every year (refer to Figure 5). As per cent of direct tax collections, refunds have declined after 2016-17. Significant reduction in pendency of direct refund cases[2] as well as quality of assessment perhaps explain the trend in refunds over the last few years.

Figure 5: Direct Tax Refunds



Source: Union Budget Documents & CGA
PA: Provisional Actuals

[2] As per CAG Report No. 40 of 2017, pendency of direct refund cases has declined from 28.9 per cent in 2012-13 to 10.7 per cent in 2016-17.

2.13 Major measures announced for direct taxes in Budget 2018-19 and 2019-20 (Interim Budget) are presented in Annex II.

Non-Tax Revenue

2.14 Non-tax revenue consists mainly of interest receipts on loans to States and Union Territories, dividends and profits from Public Sector Enterprises including surplus of Reserve Bank of India transferred to GOI, and external grants and receipts for services provided by the Central Government. These services include fiscal services like currency, coinage and mint, general services such as Public Service Commission and police, social services like education and health, and economic services like irrigation, transportation and communication. The Budget for 2018-19 envisaged generation of ₹2.45 lakh crore of non-tax revenue, 27.2 per cent higher than 2017-18, of which roughly one-third of the increase is attributable to dividends and profits (refer to Table 3). Non-tax revenue constitutes about 1.3 per cent of GDP in 2018-19.

2.15 As per the Provisional Actual figures for 2018-19, receipts from non-tax revenue have exceeded the budget estimate. Table 3 shows that increased realisation from dividends and profits has offset slight declines in its other components.

Non-Debt Capital Receipts

2.16 Non-debt capital receipts mainly consist of recovery of loans and advances, and disinvestment receipts. The share of recovery of loans has declined over the years following disintermediation of loan portion of Central assistance to States consequent to the recommendation of the Twelfth Finance Commission, and States allowed to borrow directly from the market. The Budget for 2018-19 has envisaged generation of ₹0.92 lakh crore of non-debt capital receipts, comprising ₹0.12 lakh crore of recovery of loans and advances, and ₹0.80 lakh crore of disinvestment receipts. As against this, ₹1.03 lakh crore of non-debt capital receipts including ₹0.85 lakh crore from disinvestment, as per provisional actual

Table 3: Trends in Non-tax Revenue

Items	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 BE	2018-19 RE	2018-19 PA
								(in ₹ lakh crore)
Interest receipts	0.22	0.24	0.25	0.16	0.14	0.15	0.12	0.13
Dividends & Profits	0.90	0.90	1.12	1.23	0.91	1.07	1.19	1.13
External Grants	0.04	0.02	0.02	0.01	0.04	0.03	0.01	0.01
Others	0.83	0.83	1.12	1.32	0.84	1.20	1.13	1.19
Non-tax Revenue	1.99	1.98	2.51	2.73	1.93	2.45	2.45	2.46

Source: Union Budget Documents & CGA
BE: Budget Estimates, RE: Revised Estimates (as per Interim Budget), PA: Provisional Actuals

figures, have been realised during 2018-19. The details of disinvestment during 2018-19 and new initiatives being undertaken by the Department of Investment and Public Asset Management (DIPAM) are given in Box 1.

Box 1: Disinvestment

The B.E. for disinvestment for the year 2018-19 was fixed at ₹0.80 lakh crore. Against this, ₹0.85 lakh crore was collected using a variety of instruments like Initial Public Offers (IPOs), Offer for Sale (OFS), Buyback, Exchange Traded Funds (ETF), etc. Details are as under:

IPOs:

Proceeds from listing of five companies (MIDHANI, RITES, IRCON, GRSE and MSTC) in the stock exchanges: ₹1,914 crore.

OFS:

Proceeds from the Coal India Offer for Sale (OFS) including Employee OFS: ₹5,236 crore.

Buybacks:

Buyback of shares of eleven companies (KIOCL, NALCO, NLC, CSL, BHEL, NHPC, IOCL, ONGC, NMDC, OIL and CIL): ₹10,669 crore.

ETFs:

Exchange Traded Funds (ETFs) consisting of (i) CPSE-ETF and (ii) Bharat-22 ETF yielded ₹45,080 crore during 2018-19.

Strategic Disinvestment:

Progress was made in respect of the 28 cases of Strategic Disinvestment approved by the Government, which are at different stages, with three companies stra tegically sold off during FY 2018-19, namely, (i) Hospital Services Consultancy Corporation Ltd. (HSCC Ltd.), (ii) Dredging Corporation of India Ltd. (DCIL) and (iii) National Projects Construction Corporation Ltd. (NPCC Ltd.).

HSCC was acquired by NBCC India at a consideration of ₹285 crore while Dredging Corporation was acquired by a Consortium of four ports at ₹1,049 crore. NPCC was acquired by WAPCOS at a consideration of ₹79.80 crore.

A major transaction for strategic acquisition of Government of India's equity holding in Rural Electrification Corporation Ltd. (REC) was completed by Power Finance Corporation Ltd. (PFC) in an off-market deal at a consideration of ₹14,500 crore.

Listing of unlisted CPSEs:

CCEA has given 'in-principle' approval for Initial Public Offer/ Further Public Offer (FPO) of seven CPSEs, namely, Telecommunication Consultants (India) Ltd. (IPO), RailTel Corporation India Ltd. (IPO), National Seed Corporation India Ltd. (IPO), Tehri Hydro Development Corporation Ltd. (IPO), Water & Power Consultancy Services (India) Ltd. (IPO), FCI Aravali Gypsum and Mineral (India) Ltd. (IPO) and Kudremukh Iron Ore Company Ltd. (FPO). Necessary action for listing of these companies has been initiated. Listing of IRCTC, IRFC and NEEPCO earlier approved is also being taken up.

New Initiatives undertaken by DIPAM:

1. Focus on Asset Monetisation – Policy & Process:

(i) The Institutional framework was notified on 8 March, 2019 covering:

(a) Identified non-core assets of CPSEs under Strategic Disinvestment.

(b) Immovable Enemy Property under the custody of CEPI, MHA.

(c) Assets of other CPSEs/PSUs/other Government Organization including sick/loss making CPSEs.

(ii) Process has been set in motion:

(a) Alternative Mechanism (AM), Inter-ministerial Group (IMG) and Consultative Groups have been notified;

(b) Hiring of intermediaries for Asset Monetisation Cell started.

(c) Process of identification of potential assets to be monetized has been started.

2. Debt- ETF**:**

Following an announcement in the Budget Speech of Finance Minister in February 2018, DIPAM is in the process of creating a Debt-ETF to enable CPSEs to access the debt/ bond market to partially meet the capital expenditure needs by leveraging their aggregate strength. Adviser, Legal Adviser, and AMC have been appointed.

Source: Department of Investment and Public Asset Management (DIPAM)

Trends in Expenditure

2.17 Rationalisation and reprioritisation of government expenditure is integral to fiscal reforms. As India's tax to GDP ratio is low, Government faces the challenge of providing sufficient funds for investment and infrastructure expansion while maintaining fiscal discipline. Therefore, improving the composition and quality of expenditure towards capital spending becomes significant.

2.18 The composition of government expenditure (refer to Figure 7) reveals that expenditure on defence, salaries, pensions, interest payments and subsidies account for more than sixty per cent of total expenditure. Several initiatives have been undertaken by the Ministry of Defence to improve efficiency and utilisation of defence expenditure, promote self-reliance, and encourage private sector participation in the defence sector. These are detailed in Box 2. Expenditures on salaries, pensions and interest payments are, by and large, committed in nature and have limited headroom for creation of additional fiscal space. Subsidies have seen significant moderation through improved targeting (refer to Figure 8). There has been considerable restructuring and reclassification of Central sector and Centrally Sponsored Schemes in the recent past. Even capital expenditure[3] was rationalised in 2017-18, wherein support provided to Railways and the mechanism for transferring Externally Aided Project loans to States were rationalised.

[3] There was a reduction to the tune of approximately ₹15,000 crore in Government of India's support to Railways as it was decided that the Railways would access the market directly to transition towards greater financial autonomy. With respect to Externally Aided Projects (EAP) loans to States, the BE was ₹18,500 crore. This expenditure, under a loan Major Head (7601), was actually in the nature of pass through as the states could only borrow externally against the guarantee of the Consolidated Fund of India. Therefore, this arrangement was impacting the fiscal deficit of the Government of India, when the loans were the liabilities of the state governments. This arrangement was changed to reflect the fact that only final repayments to the international organisations amounting to ₹4,500 crore would form part of the expenditure of the Government of India. This accounting arrangement would reflect as a reduced capital expenditure for Central Government.

Box 2: Defence Initiatives

Budget

- The allocation for Defence Budget, including Civil estimates and Pensions for 2018-19 is ₹4,04,364.71 crore, which is ₹44,510.50 crore over BE 2017-18.
- Capital Expenditure in absolute terms has gone up in the past few years. The allocated Capital Budget has been fully utilized since 2016-17, reversing the previous trends of surrender of funds.
- The trend of underutilization of Defence Budget has also been reversed in FY 2016-17 and 2017-18.
- Delegation of enhanced financial powers to Vice-Chiefs of the three Services has been done primarily to expedite the decision-making process involved in revenue procurements of the Armed Forces. With the latest delegation, the Vice-Chiefs now have powers up to ₹500 crore for revenue procurement. On the capital side also, the ceiling has been enhanced to ₹300 crore from ₹150 crore.
- Ministry of Defence has comprehensively reviewed the Defence Procurement Procedure 2016. Several measures as part of "Business Process Re-engineering" have been undertaken to make the acquisition process industry friendly, provide a level playing field for various stakeholders and reduce the complexities and time lines in provisioning of defence platforms, equipment and systems for modernization of the Indian Armed Forces.

Self-Reliance

- To achieve self-reliance in the defence sector and make India a global hub in defence manufacturing, the Ordinance Factories (OFs), Defence Public Sector Undertakings (DPSUs) and the private industry ecosystem have enhanced their capabilities and widened the product range. A large number of major products have been developed through Research and Development initiatives. In addition, a number of products and equipment are being produced through transfer of technology.
- As a policy, DPSUs and OFs have been outsourcing many of their requirements and have over the years, developed a wide vendor base that includes a large number of medium and small scale enterprises and large scale industries. In addition, the DPSUs and OFs are also striving to increase the indigenous content in the equipments and products manufactured by them.

Policy Initiative

- In order to encourage participation of Indian industry in design and development of defence items, a **'Make-II' procedure** was notified in February 2018 wherein a number of industry friendly provisions have been introduced, such as relaxation of eligibility criteria, minimal documentation, and provision for consideration of suo-moto proposals suggested by industry/ individual. The framework for implementation of Make-II at OFs and DPSUs level has been issued in February 2019. The framework will enable OFs & DPSUs to undertake indigenization of the items, particularly of the import substitution nature, through Indian private industry.

- An innovation ecosystem for Defence, titled "Innovation for Defence Excellence" (iDEX) was launched in April 2018 by the Hon'ble PM. iDEX is aimed at creating an ecosystem to foster innovation and technology development in Defence and Aerospace. iDEX intends to engage industries including MSMEs, Start-ups, Individual Innovators, R&D institutes and Academia and provide them grants/funding and other support to carry out R&D, which has potential for future adoption for Indian defence and aerospace needs. The iDEX programme has been operationalized through launch of the 'Defence India Startup Challenges (DISC)' in two legs, wherein innovators, organizations as well as individuals have been presented with 'Problem Statements' for resolution.
- A Defence Investor Cell has been made functional in the Department of Defence Production (DDP) since January 2018. It has played an important role as one-stop solution for all types of defence production related queries.

Private Sector Participation

- To achieve the goal of self-reliance in the Defence sector, continuous efforts are being made to increase indigenization wherever technologically feasible and economically viable. To facilitate private sector participation, several measures have been undertaken:
    - In May 2001, the Defence Industry sector, which was hitherto reserved for the public sector, was opened upto 100 per cent for Indian private sector participation, with Foreign Direct Investment (FDI) upto 26 per cent, both subject to licensing. FDI policy was further liberalized and has been allowed under automatic route upto 49 per cent, and above 49 per cent wherever it is likely to result in access to modern technology or for other reasons to be recorded.
    - After opening of the Defence Industry Sector for Indian private sector participation, so far 42 FDI proposals/Joint Ventures have been approved in defence sector for manufacture of various defence equipment, both in public and private sectors. DPIIT has issued 439 Industrial Licenses (ILs) to private companies till March 2019 for manufacture of a wide range of defence items, which were 214 till the end of March 2014.

Export Promotion

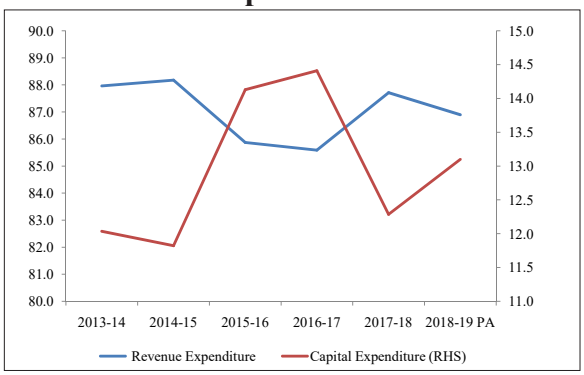
- Exports from Ordinance Factory Board (OFB), DPSUs and the private sector (based on authorization issued by DDP) in the Financial Year 2017-18 had increased to ₹4,682 crore from ₹1,522 crore in the financial year 2016-17. Further, exports have more than doubled in 2018-19 to ₹10,746 crore over the previous year.

Source: Ministry of Defence

2.19 Comparison of Provisional Actuals with budget estimates for the year 2018-19 reveals that Government has been able to contain fiscal deficit at 3.4 per cent of GDP through compression of Government expenditure. The entire reduction is in revenue expenditure (refer to Table 1). As per cent of GDP, total expenditure fell by 0.3 percentage points in 2018-19 PA over 2017-18, with 0.4 percentage points reduction in revenue expenditure and 0.1 percentage point increase in capital expenditure. Over 2017-18, total expenditure has grown by 7.9 per cent in 2018-19 PA with its capital component growing at more than twice the rate of growth in revenue (refer to Table 2).

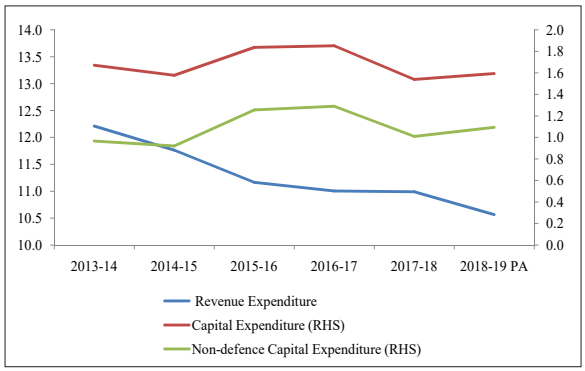
2.20 The quality of expenditure reflected in the share of capital expenditure in total expenditure has improved in 2018-19 PA over 2017-18 (refer to Figure 6). As a proportion of GDP, both capital expenditure and non-defence capital expenditure register a rise of 0.1 percentage point in 2018-19 PA (refer to Figure 6A). Expansion in capital expenditure on roads, railways and others has been met without compromising defence capital expenditure. In fact, capital expenditure of Ministry of Road Transport and Highways and Ministry of Railways has recorded impressive growth of 33 per cent and 22 per cent, respectively, in 2018-19 PA over 2017-18.

Figure 6: Revenue and Capital Expenditure as per cent of Total Expenditure



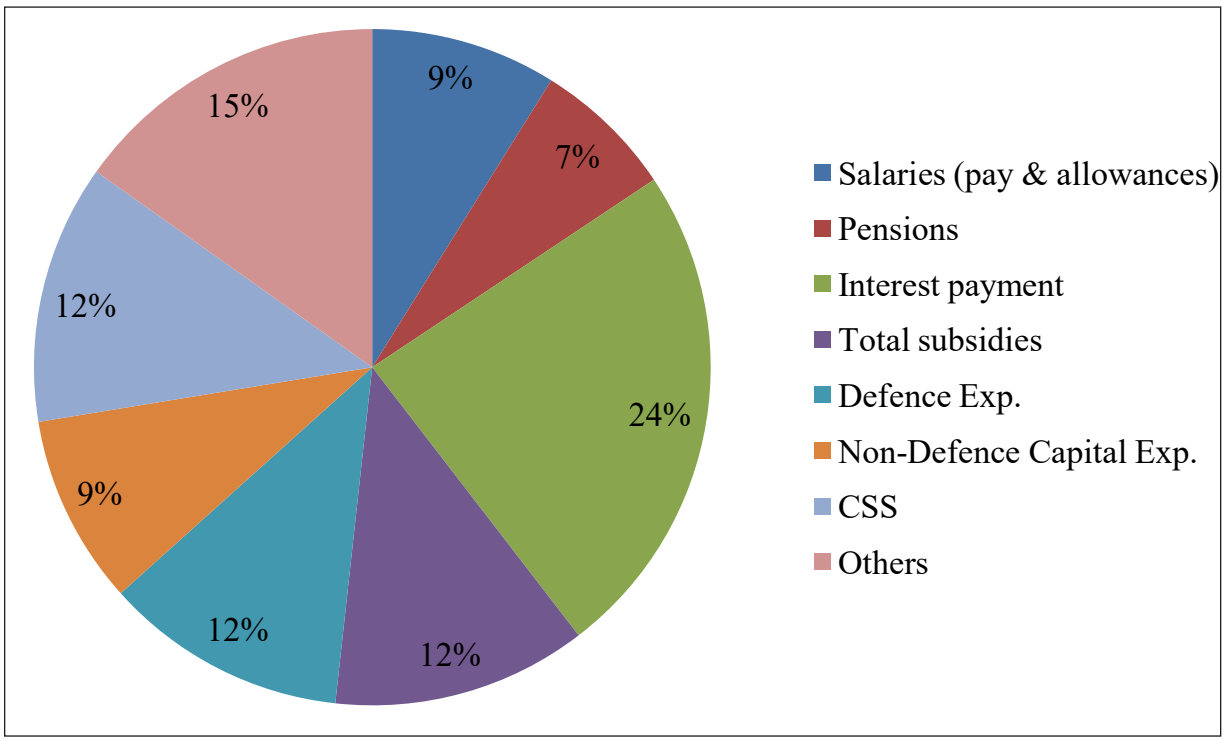
Source: Union Budget Documents & CGA
PA: Provisional Actuals

Figure 6A: Revenue & Capital Expenditure as per cent of GDP



Source: Union Budget Documents & CGA
PA: Provisional Actuals

Figure 7: Composition of Expenditure in 2018-19 RE



Source: Union Budget Documents
RE: Revised Estimates (as per Interim Budget)

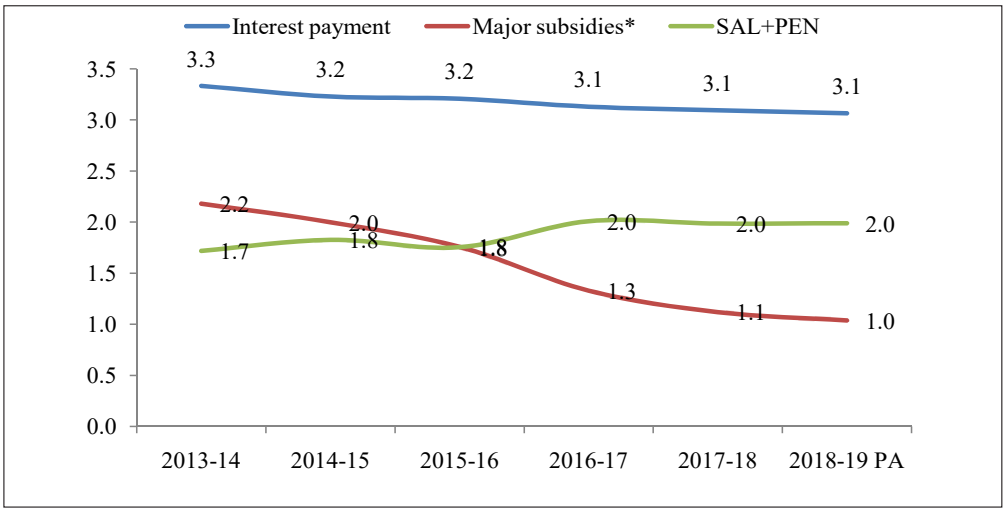
2.21 The growth in revenue expenditure in 2018-19 PA though moderate, has been led by salaries, pensions and interest payments (refer to Tables 4 & 5). Major subsidies comprising food, fertiliser and petroleum have continued their downward trend and have further declined by 0.1 percentage point of GDP in 2018-19 PA over 2017-18 (refer to Figures 8 & 9).

Table 4: Major Items of Revenue Expenditure

Items	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 BE	2018-19 RE	2018-19 PA
								(in ₹ lakh crore)
a. Salaries (pay & allowances)	1.18	1.34	1.45	1.77	1.94	2.02	2.18	2.18#
b. Pensions	0.75	0.94	0.97	1.31	1.46	1.68	1.67	1.60
c. Interest payment	3.74	4.02	4.42	4.81	5.29	5.76	5.88	5.83
d. Major subsidies*	2.45	2.49	2.42	2.04	1.91	2.64	2.66	1.97

Source: Union Budget Documents & CGA
BE: Budget Estimates, RE: Revised Estimates (as per Interim Budget), PA: Provisional Actuals
*Major subsidies here include food, fertilizer and petroleum subsidies.
#2018-19 RE as per Interim Budget

Figure 8: Major Items of Revenue Expenditure as per cent of GDP



Source: Union Budget Documents & CGA
PA : Provisional Actuals, SAL: Salary, PEN: Pensions
*Major subsidies here include food, fertilizer and petroleum subsidies.
SAL for 2018-19 PA is 2018-19 RE number

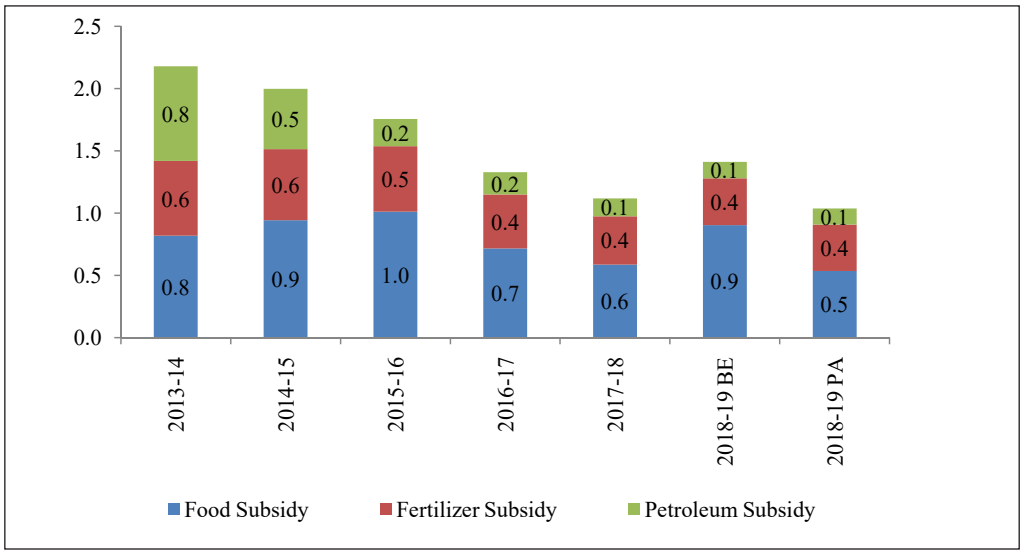
Table 5: Growth in major components of Revenue Expenditure

Items	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 BE#	2018-19 RE#	2018-19 PA#
								(in per cent)
Revenue Expenditure, of which	10.3	6.9	4.8	9.9	11.1	14.0	13.9	6.9
a. Salaries (pay & allowances)	8.9	13.6	7.9	22.6	9.2	4.4	12.7	12.7

b. Pensions	7.8	25.0	3.4	35.8	10.9	15.6	14.3	9.9
c. Interest payment	19.5	7.5	9.7	8.8	10.0	8.9	11.1	10.2
d. Major subsidies*	-1.1	1.8	-2.9	-15.6	-6.3	38.3	39.2	3.1

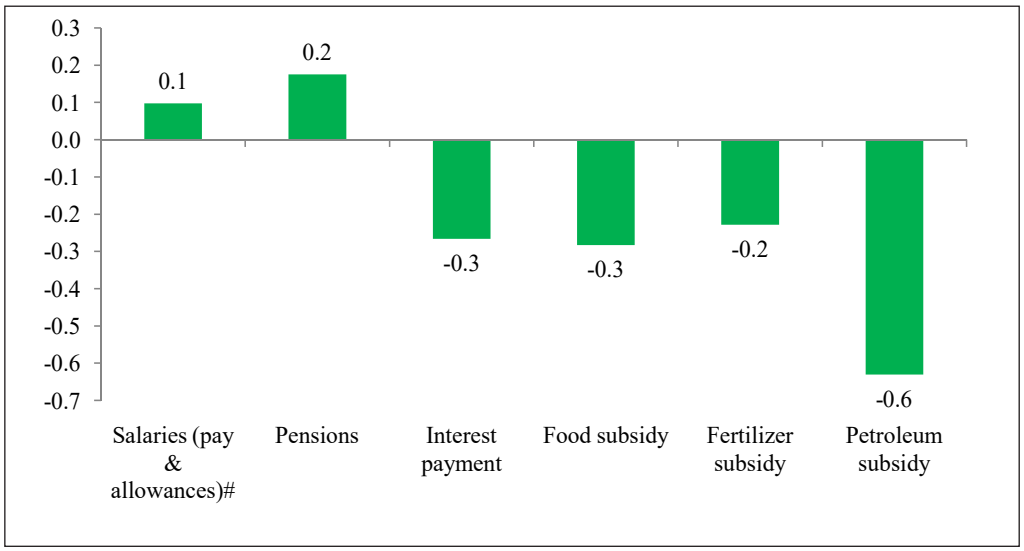
Source: Union Budget Documents & CGA
BE: Budget Estimates, RE: Revised Estimates (as per Interim Budget), PA: Provisional Actuals
*Major subsidies here include food, fertilizer and petroleum subsidies, # growth over 2017-18

Figure 9: Major subsidies* as per cent of GDP



Source: Union Budget Documents & CGA
BE: Budget Estimates, PA: Provisional Actuals
*Major subsidies here include food, fertilizer and petroleum subsidies.

Figure 10: Changes in major components of Revenue Expenditure in 2018-19 PA over 2013-014 as per cent of GDP



Source: Union Budget Documents & CGA
PA: Provisional Actuals, #2018-19 RE number (as per Interim Budget)

2.22 During 2013-14 to 2018-19 PA, the total budgetary expenditure of the Central Government has declined by 1.7 percentage points of GDP (refer to Table 1). Revenue expenditure declined by 1.6 percentage points and capital expenditure by 0.1 percentage point. Figure 10 shows that more than two-thirds of the fiscal space created by compression of revenue expenditure is on account of reduction in food, fertiliser and petroleum subsidies. This is an outcome of decline in global crude prices, decontrol of prices and better targeting through direct benefit transfer of subsidies. The recent expenditure trends show improved expenditure quality, with capital expenditure as a proportion of GDP, rising by nearly 0.1 percentage point in 2018-19 PA over 2017-18 (refer to Table 1). Apart from budgetary spending, Extra Budgetary Resources (EBR) have also been mobilised to finance infrastructure investment since 2016-17. Government has raised EBRs of ₹88,452 crore during three years from 2016-17 to 2018-19.

Transfers to States

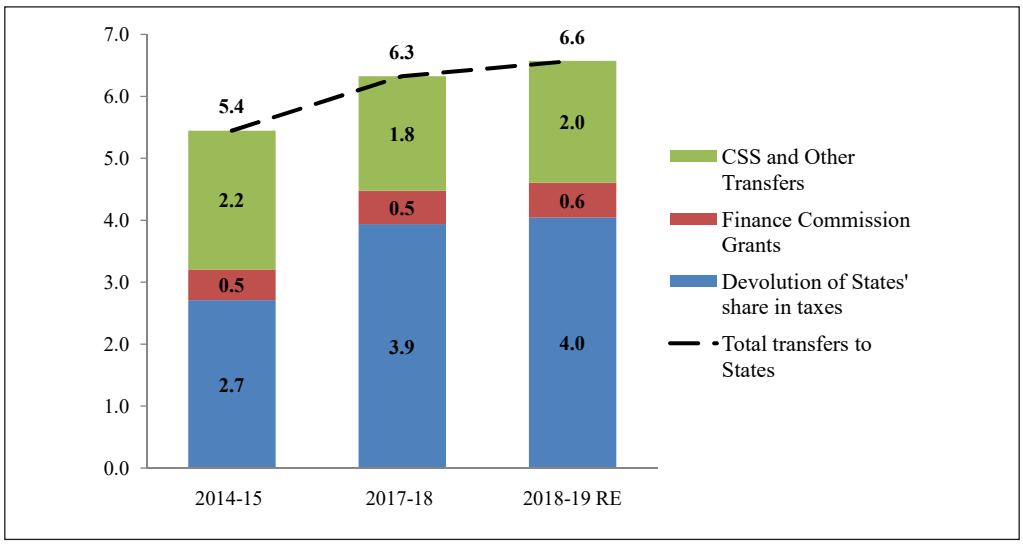
2.23 Transfer of funds to States comprises essentially of three components: share of States in Central taxes devolved to the States, Finance Commission Grants, and Centrally Sponsored Schemes (CSS), and other transfers. Till 2013-14, funds for CSS were routed through two channels, the Consolidated Funds of the States and directly to the State implementing agencies. In 2014-15, direct transfers to State implementing agencies were discontinued and all transfers to States including for the CSS were routed through the Consolidated Funds of the States. Another significant development has been award of the Fourteenth Finance Commission to devolve 42 per cent of the divisible pool of taxes to the States, up from 32 per cent earlier.

2.24 Both in absolute terms, and as a percentage of GDP, total transfers to States have risen between 2014-15 and 2018-19 RE (refer to Table 6 and Figure 11). Total transfers to States have risen by 1.2 percentage points of GDP over this period.

Central Government Debt

2.25 Total liabilities of the Central Government include debt contracted against

Figure 11: Transfers to States (as per cent of GDP)



Source: Department of Expenditure

RE: Revised Estimates (as per Interim Budget)

Table 6: Transfers to States (in ₹ crore)

Items	2014-15	2015-16	2016-17	2017-18	2018-19 BE	2018-19 RE
a. Devolution of States' share in taxes	3,37,808	5,06,193	6,08,000	6,73,005	7,88,093	7,61,454
b. Finance Commission Grants	61,813	84,579	95,550	92,244	1,09,373	1,06,129
c. CSS and Other Transfers	2,79,198	2,38,572	2,77,011	3,16,047	3,65,475	3,70,691
Total transfers to States (a+b+c)	**6,78,819**	**8,29,344**	**9,80,561**	**10,81,296**	**12,62,941**	**12,38,274**

Source: Department of Expenditure

BE: Budget Estimates, RE: Revised Estimates (as per Interim Union Budget 2019-20)

the Consolidated Fund of India, technically defined as Public Debt, as well as liabilities in the Public Account. These liabilities include external debt (end-of-the financial year) at current exchange rate but exclude part of NSSF liabilities to the extent of States' borrowings from the NSSF and investments in public agencies out of the NSSF, which do not finance Central Government deficit. Total liabilities of the Central Government at end-March 2019 stood at ₹84.7 lakh crore and 90 per cent of which was public debt (refer to Table 7).

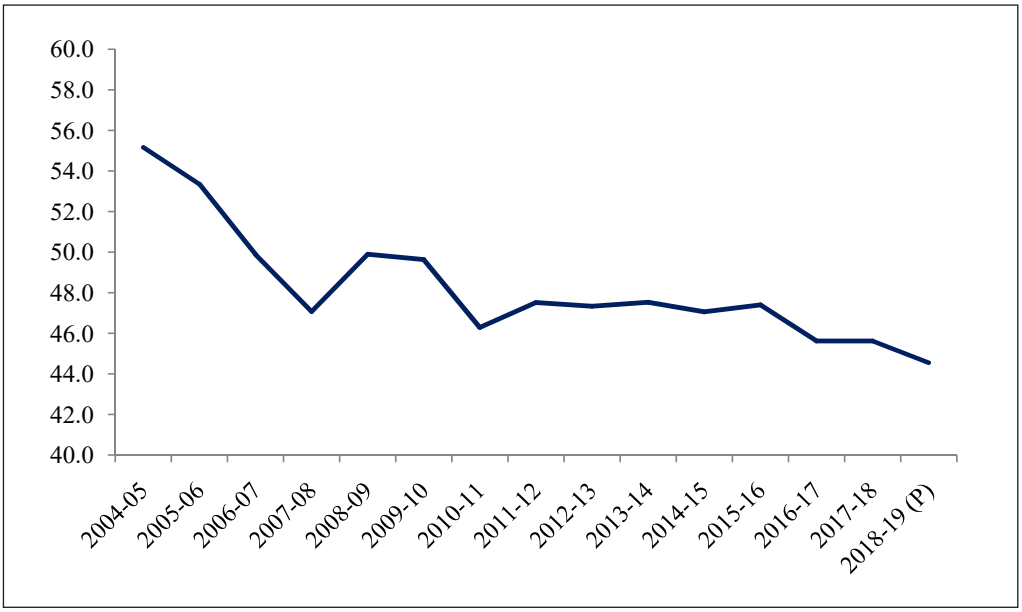
Table 7: Debt Position of the Central Government (in ₹ lakh crore)

Items	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (P)
A. Public Debt (A1+A2)	40.97	46.15	51.05	57.11	61.50	68.84	75.79
A1. Internal Debt (a+b)	37.65	42.41	47.38	53.05	57.42	64.01	70.66
a. Marketable Securities	33.61	38.54	43.09	47.28	50.49	55.10	59.68
b. Non-marketable Securities	4.04	3.87	4.29	5.77	6.93	8.91	10.98
A2. External Debt*	3.32	3.74	3.66	4.07	4.08	4.83	5.13
B. Public Account - Other Liabilities	6.10	7.23	7.62	8.16	8.57	9.15	8.89
C. Total Liabilities (A+B)	47.07	53.39	58.66	65.27	70.07	77.99	84.68

Source: Various issues of Status Paper on Government Debt and Quarterly Report on Public Debt for December 2018, P: Provisional, * The external debt at current exchange rates from Aid, Account and Audit Division, Ministry of Finance. Data for 2017-18 and 2018-19 include net cumulative SDR allocations by the IMF.

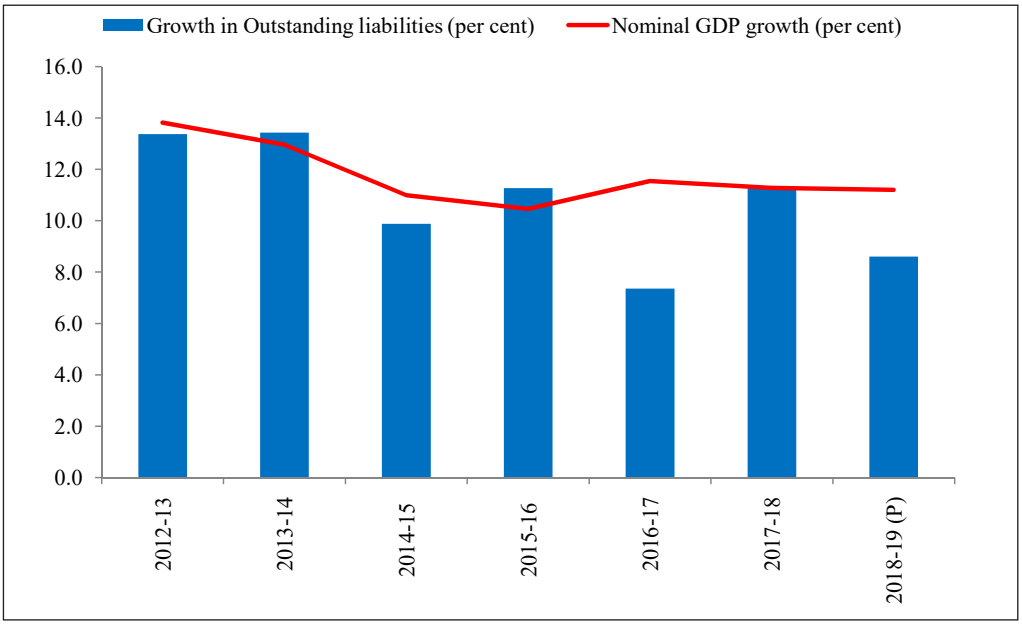
2.26 Figure 12 shows that total liabilities of the Central Government as a ratio of GDP, has been consistently declining, particularly after the enactment of the FRBM Act, 2003. This is an outcome of both fiscal consolidation efforts as well as relatively high GDP growth (Figure 13).

Figure 12: Trend in Centre's Debt-GDP ratio (in per cent)



Source: Various Issues of Status Paper on Government Debt, P: Provisional

Figure 13: GDP growth and growth in Outstanding Liabilities



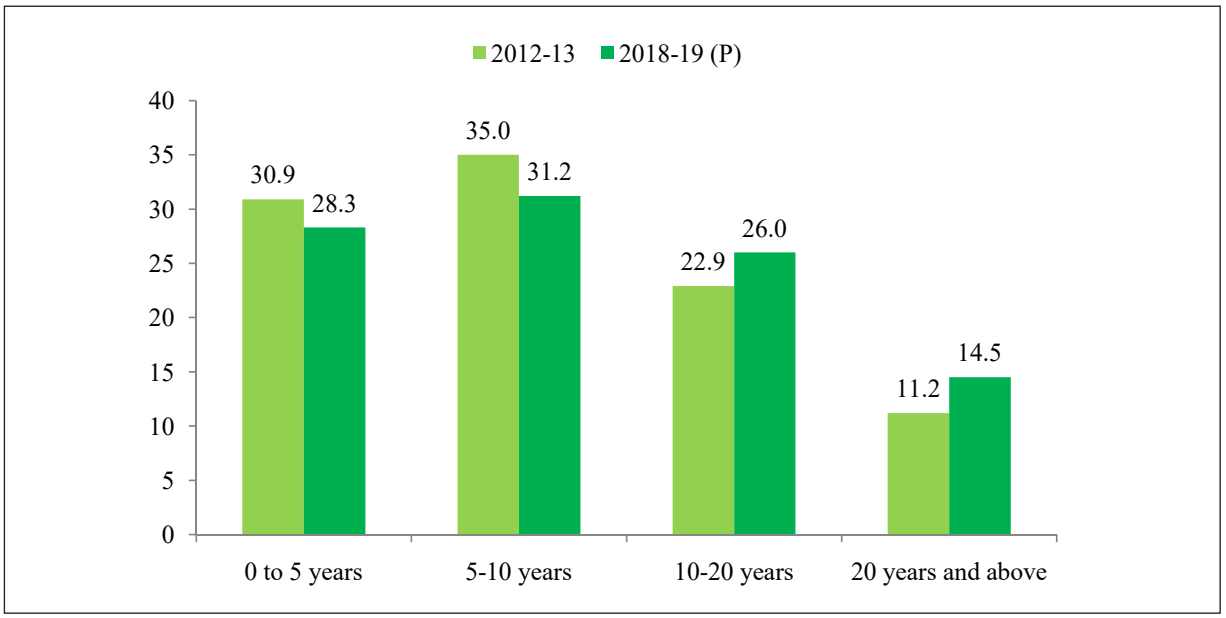
Source*:* Various Issues of Status Paper on Government Debt, P: Provisional

2.27 Central government debt is characterised by low currency and interest rate risks. This is owing to low share of external debt in the debt portfolio and almost entire external borrowings being from official sources. Further, most of the public debt has been contracted at fixed interest rate making India's debt stock virtually insulated from interest rate volatility. This lends certainty and stability to budget in terms of interest payments.

2.28 The other salient feature is the gradual elongation of the maturity profile of the Central Government's debt (refer to

Figure 14) leading to reduced rollover risks. The proportion of dated securities maturing in less than five years has seen consistent decline in recent years. The weighted average maturity of outstanding stock of dated securities of the GOI has increased from 9.7 years at end-March 2010 to 10.4 years at end-March 2019.

Figure 14: Maturity Profile of Outstanding Dated Central Government Securities (as per cent of total)



Source: Status Paper on Government Debt, 2017-18 and Quarterly Report on Public Debt Management for April-March 2018-19, P: Provisional

STATE FINANCES

2.29 The State budgets expanded considerably in 2017-18 RE over 2016-17 on account of increase in revenue expenditure (refer to Table 8 and Figure 15A). Capital expenditure consists of capital outlay and loans and advances by the State Governments. The loans and advances by the State Governments declined sharply in 2017-18 RE owing to reduction in loans and advances by States for power projects and food storage and warehousing. On the revenue front, States own tax and non-tax revenue display robust growth in 2017-18 RE which is envisaged to be maintained in 2018-19 BE (Table 8 & Figure 15B).

Table 8: Fiscal Indicators of States (combined)

Items	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE	2018-19 BE
								(in ₹ lakh crore)
Own Tax Revenue	5.6	6.5	7.1	7.8	8.5	9.1	10.5	12.0
		(17.4)	(8.8)	(9.4)	(8.7)	(7.8)	(15.1)	(14.1)
Own Non tax revenue	1.0	1.2	1.3	1.4	1.5	1.7	1.9	2.2
		(18.3)	(13.0)	(8.4)	(6.9)	(10.3)	(14.8)	(15.6)

Revenue Expenditure	10.7	12.3	13.8	16.4	18.4	20.9	25.2	27.8
		(14.6)	(12.0)	(18.7)	(12.3)	(13.5)	(20.7)	(10.5)
Capital Expenditure	2.1	2.2	2.4	3.0	4.2	5.1	5.1	5.8
		(6.2)	(9.6)	(23.3)	(40.5)	(20.4)	(-0.1)	(12.9)
Total Expenditure	12.8	14.5	16.2	19.4	22.6	26.0	30.3	33.6
		(13.2)	(11.6)	(19.4)	(16.7)	(14.8)	(16.6)	(10.9)

Source: RBI State Finances: A Study of Budgets, RE : Revised Estimates, BE : Budget Estimates
Numbers in parenthesis are growth rates

Figure 15A : States' Expenditure in ₹ lakh crore

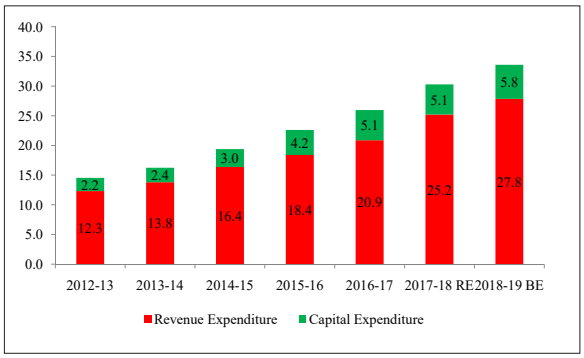
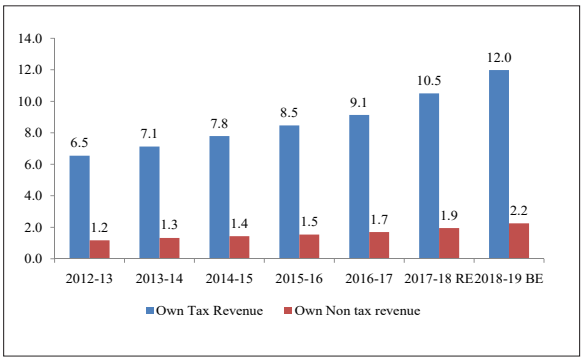


Figure 15B : Own Tax & Non-tax Revenue of States (combined) in ₹ lakh crore



Source: RBI State Finances: A Study of Budgets, RE : Revised Estimates, BE : Budget Estimates

2.30 The RBI study on State Finances points to the deterioration in fiscal deficit to GDP ratio in 2017-18 RE when compared to the budget estimate. This deterioration occurred due to the overshooting of revenue expenditure mainly due to farm loan waiver and pay revisions. However, over 2016-17, there is consolidation in fiscal deficit by about 0.4 percentage points (refer to Figure 16 A).

2.31 States have budgeted for fiscal deficit of 2.6 per cent of GDP in 2018-19 BE. Consolidation is mainly due to posting of surplus of about 0.2 percentage points of GDP on the revenue account (refer to Figure 16 B).

Figure 16A: Gross Fiscal Deficit of States (as per cent of GDP)

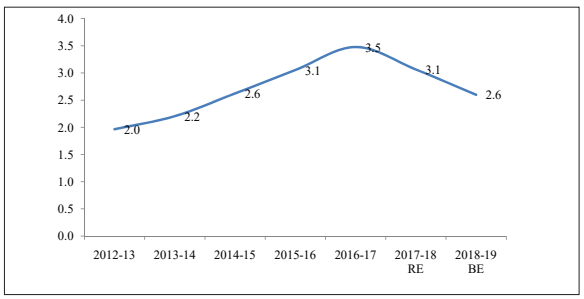
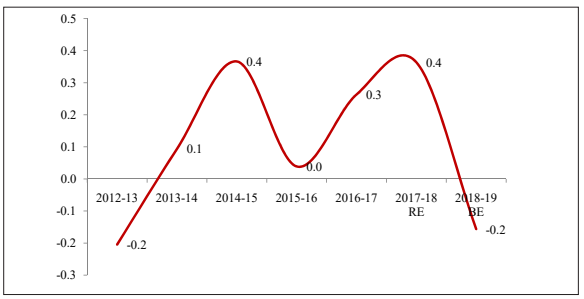


Figure 16B: Revenue Deficit of States (as per cent of GDP)



Source: RBI State Finances: A Study of Budgets, RE : Revised Estimates, BE : Budget Estimates

2.32 Figure 17 shows that outstanding liabilities of states, as per cent of GDP, has increased after 2014-15. The issuance of UDAY bonds in 2015-16 and 2016-17, farm loan waivers, and the implementation of pay commission awards have led to higher debt to GDP ratio. Economic Survey 2016-17 had estimated impact of UDAY bonds on fiscal deficit to be 0.7 percentage points of GDP. However, despite rising States' debt to GDP ratio, interest payment as proportion of revenue receipts has not deteriorated (refer to Figure 18).

Figure 17: Total Outstanding liabilities of the State Governments (as per cent of GDP)

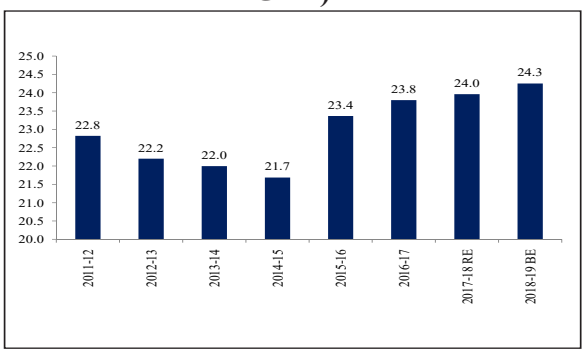
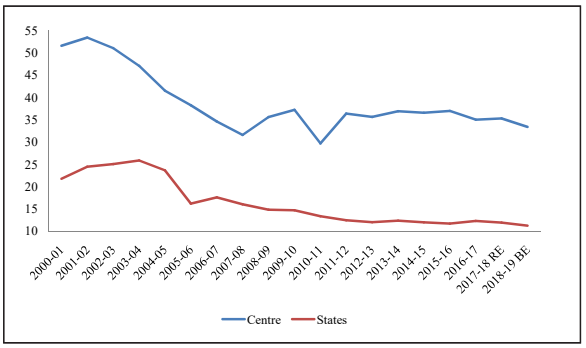


Figure 18: Interest Payments/Revenue Receipts (in per cent)



Source: RBI State Finances: A Study of Budgets, Union Budget Documents, RE : Revised Estimates, BE : Budget Estimates

GENERAL GOVERNMENT FINANCES

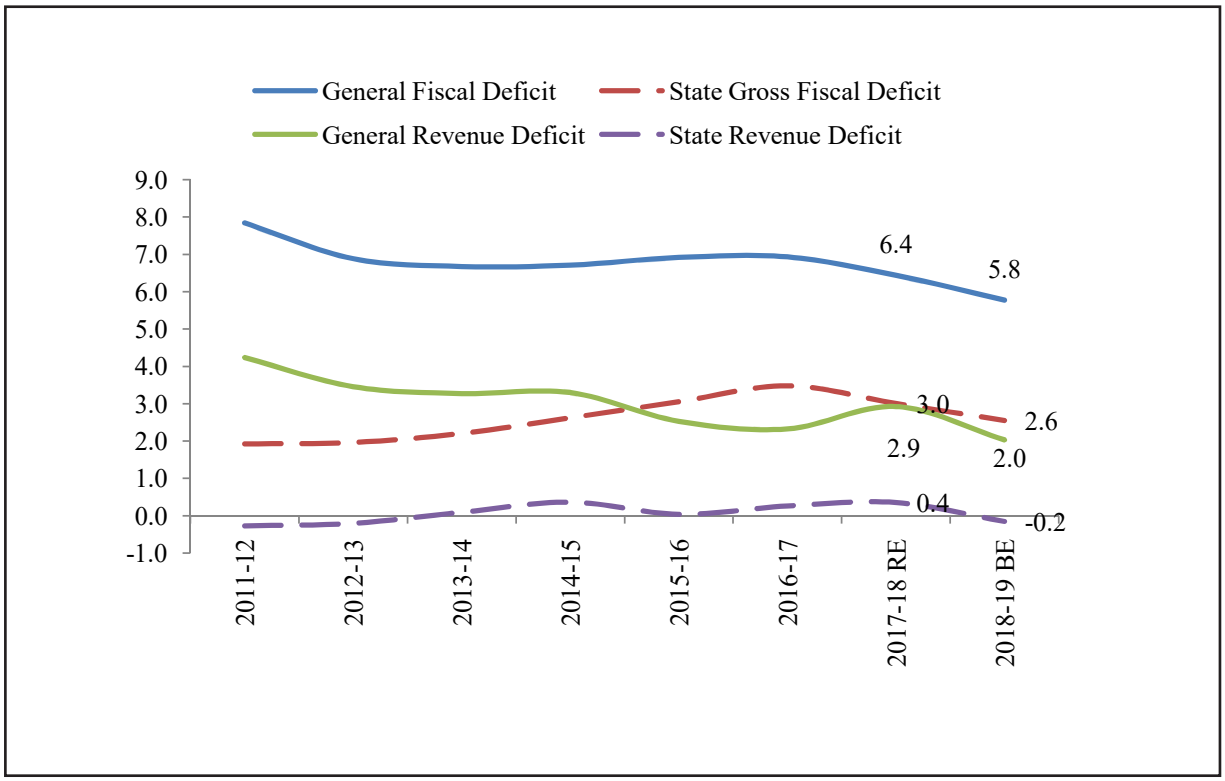
2.33 The General Government (Centre plus States) has been on the path of fiscal consolidation and fiscal discipline. The combined liabilities of Centre and States have declined to 67 per cent of GDP as on end-March 2018 from 68.5 per cent of GDP as on end-March 2016 (refer to Table 9). The fiscal deficit of General Government is further expected to decline from 6.4 per cent of GDP in 2017-18 RE to 5.8 per cent of GDP in 2018-19 BE (Figure 19).

Table 9: Total outstanding liabilities of Centre and States (as per cent of GDP)

Year	Liabilities of Centre	Liabilities of States	Combined Liabilities of the Centre & States
2011-12	47.5	22.8	67.4
2012-13	47.3	22.2	66.7
2013-14	47.5	22.0	67.1
2014-15	47.1	21.7	66.6
2015-16	47.4	23.4	68.5
2016-17	45.6	23.8	67.0
2017-18	45.6	24.0 (RE)	67.0

Source: Various Issues of Status Paper on Government Debt & RBI State Finances: A Study of Budgets
RE : Revised Estimates

Figure 19: Gross Fiscal Deficit & Revenue Deficit of General and State Governments (as per cent of GDP)



Source: RBI. RE : Revised Estimates, BE : Budget Estimates

OUTLOOK

2.34 The coming year will pose several challenges on the fiscal front. Firstly, there are apprehensions of slowing of growth, which will have implications for revenue collections. Secondly, the financial year 2018-19 has ended with shortfall in GST collections. Therefore, revenue buoyancy of GST will be key to improved resource position of both Central and State Governments. Thirdly, resources for now expanded Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) and Ayushmaan Bharat, as well as new initiatives of the new Government, will have to be found without compromising the fiscal deficit target as per the revised glide path. Fourthly, US sanctions on oil import from Iran is likely to have impact on oil prices and thereby on the petroleum subsidy, apart from implications for current account balances. Finally, Fifteenth Finance Commission will submit its report for next five years beginning April 2020. Its recommendation especially on tax devolution will have implications for Central Government finances.

CHAPTER AT A GLANCE

- The revised fiscal glide path envisages achieving fiscal deficit of 3 per cent of GDP by FY 2020-21 and Central Government debt to 40 per cent of GDP by 2024-25. The FY 2018-19 has ended with fiscal deficit at 3.4 per cent of GDP and debt to GDP ratio of 44.5 per cent (Provisional).
- As per cent of GDP, total Central Government expenditure fell by 0.3 percentage points in 2018-19 PA over 2017-18, with 0.4 percentage points reduction in revenue expenditure and 0.1 percentage point increase in capital expenditure.
- With respect to States finances, their own tax and non-tax revenue display robust growth in 2017-18 RE which is envisaged to be maintained in 2018-19 BE.
- The General Government (Centre plus States) has been on the path of fiscal consolidation and fiscal discipline.
- Several challenges on the fiscal front in 2019-20 include revenue implications on account of apprehensions of slowing of growth, revenue buoyancy of GST and provisioning for schemes such as PM-KISAN without compromising the fiscal deficit target.

Annex I*: Status of implementation of GST and Recent Initiatives in Customs Duty

A. Implementation Status of GST

Facilitation measures in GST

(i) Threshold limit of aggregate turnover for exemption from registration and payment of GST for the suppliers of goods has been enhanced from ₹10 lakhs to ₹20 lakhs (in the States of Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Puducherry, Sikkim, Telangana, Tripura and Uttarakhand) and from ₹20 lakhs to ₹40 lakhs for other States, with effect from 01.04.2019.

(ii) Composition scheme has been formulated for small businessman - supplier of goods and restaurant services. Under the scheme, persons with turnover up to ₹1.5 crore (₹75 lakhs in States of Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura and Uttarakhand) need to pay tax equal to 1 per cent to 5 per cent on his turnover and to file returns annually, with quarterly payment from FY 2019-20.

(iii) Composition scheme has been formulated for suppliers of services. Under the scheme, persons with turnover up to ₹50 lakhs need to pay tax equal to 6 per cent on their turnover and need to file their returns annually with quarterly payment from financial year 2019-20.

(iv) GST Council once again allowed the migration process for taxpayers from erstwhile tax regimes. Due dates for furnishing return in Form GSTR-3B & Form GSTR-1 (for taxpayers with turnover more than ₹1.5 crore) for such newly migrated taxpayers for the months from July, 2017 to December, 2018 was extended till 31.03.2019. Similarly, Form GSTR-1 (for taxpayers with turnover upto ₹1.5 crore) for the quarters from July, 2017 to December, 2018 was extended till 31.03.2019.

(v) As per the new return filing system, there would be only one return form to be filed monthly. Frequency for filing of return for small taxpayers having turnover upto ₹5 crore in previous FY will be quarterly [Sahaj (only B2C), Sugam (B2B and B2C) and normal quarterly]. In the new system, supplier will be allowed to upload the invoices continuously anytime during the month and the recipient would also be able to continuously view the uploaded invoice. Misuse of ITC due to default in payment of tax by the supplier shall be controlled primarily by recovery of tax from the supplier. However, reversal of credit from buyer shall also be an option available with the revenue authorities in certain exceptional circumstances. The new return system will be implemented on a trial basis from 01.04.2019 and will be mandatory from 01.07.2019.

(vi) Government has been very pro-active in ensuring that GST gets implemented smoothly. GST Law / Rules / procedures have been adapted to the needs of the trade and industry. To this effect, since the date of introduction, Centre has issued 495 notifications, 101 circulars, 18 orders, 12 removal of difficulties orders & more than 125 press releases (as on 28.02.2019).

(vii) Exemption from TDS has been granted in case of supply made by any Government authority / PSU to another Government authority / PSU.

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* The tax measures and rate changes given in this Annex are only meant for general readers and will not serve as reference points for tax payers.

Measures under GST to boost exports

(i) Relief has been given to exporters by giving them an option to export without payment of tax, by submitting a simple letter of undertaking on their letter heads. This is in line with the philosophy of charging no tax on exports.

(ii) Glitches in the refund process were overcome by devising a manual process for the same. Requisite circulars were issued in order to bring clarity and make the procedure certain. A concerted drive was undertaken to make refund to the taxpayers.

(iii) Total amount of RFD-01A claims disposed by Centre and States is ₹65,567 crore (approximately). Further, IGST refund claims to the tune of ₹68,014 crore (approximately) have also been disposed. Thus, refund claims totalling to ₹1,33,581 crore have been disposed of till 31.03.2019.

(iv) Merchant exporters have to pay nominal GST of 0.1 per cent for procuring goods from domestic suppliers for export. This was done in order to provide a big thrust to the growth of the export sector and resolve their working capital issues. The permanent solution to cash blockage is "e-Wallet" scheme, which is proposed to be launched with effect from 01.04.2020.

GST rate rationalization

Goods

(i) With the expansion of tax base and the stabilization of revenues under GST, a continuous rationalization of GST rate structure has been done. Today, only about 32 items are remaining in the 28 per cent slab. Bulk of the items remaining in this category are either luxury or sin goods.

(ii) The major rate reductions during the financial year 2018-19 are as follows:

a. **28 per cent to 18 per cent/12 per cent/5 per cent:** The GST rates were reduced to lower the cost to the consumers, thereby increasing purchasing power of consumers, this has added to the increased consumption in the economy. Some of the items on which the rates were brought down from 28 per cent were consumer goods such as televisions upto the size of 68 cm, refrigerators, freezers and other refrigerating equipment including water coolers, milk coolers, washing machines, vacuum cleaners, domestic electrical appliances such as food grinders and mixers etc., storage water heaters, immersion heaters, hair dryers, digital cameras and video camera recorders, etc. Certain other industrial use items were also removed from the 28 per cent list such as pulleys, transmission shafts and cranks, gear boxes etc., lithium ion batteries, refrigerating equipment for the leather industry, ice cream freezers, special purpose motor vehicles, works trucks [self-propelled, not fitted with lifting or handling equipment] of the type used in factories, warehouses, dock areas or airports, fuel cell vehicle, re-treaded or used pneumatic tyres of rubber etc.

b. 18 per cent to 12 per cent/5 per cent/nil: GST rates were rationalized to avoid classification disputes on cork (roughly squared or debagged), articles of natural cork, agglomerated cork and marble rubble. Similarly, for the benefit of masses, the GST rates have been

rationalized for stone/marble/wooden deities, bamboo flooring, brass kerosene pressure stove, hand operated rubber roller, zip and slide fasteners etc.

c. 12 per cent to 5 per cent: GST rates on natural cork, walking stick, fly-ash blocks, handloom dari, fertilizer grade phosphoric acid, knitted cap/topi having retail sale value less than ₹1000 have been rationalised.

d. Other significant rationalization measures under GST:

- Considering the difficulty faced by the Fabric sector on account of the blocking of input tax credit on fabrics arising out of the inverted duty structure, the GST Council in its 28th meeting held on 21st July, 2018 recommended allowing refund to fabrics on account of inverted duty structure. The refund of accumulated ITC was allowed only with the prospective effect on the purchases made after the notification is issued.
- GST rates have been rationalized on specified handicraft items.
- IGST @5per cent on Pool Issue Price (PIP) of Urea imported on Govt. account for direct agriculture use, instead of assessable value plus custom duty.

(iii) Exemption from the levy of GST on goods

- The GST Council recommended granting exemption to the following goods used by the common man, namely, sanitary napkins, coir pith compost, sal leaves, siali leaves and their products and sabai rope, phool bhari jhadoo, khalidona, music books, vegetables (uncooked or cooked by steaming or boiling in water, frozen, branded and put in a unit container), vegetable provisionally preserved (for example by sulphur dioxide gas, in brine, in sulphur water or in other preservative solutions), but unsuitable in that state for immediate consumption etc.
- Clarifications/ amendments as regards the applicability of GST rate in respect of certain goods such as sprinkler system consisting of nozzles, lateral and other components, movement of rigs, tools & spares and all goods on wheels on own account, LPG supplied in bulk to an OMC by refiners/fractioners for bottling for further supply, etc.

Services

(i) After implementation of GST regime, rates have been rationalized significantly to address the concerns of trade and consumers. The major rate reductions during the financial year 2018-19 are as follows:

- The GST rate on services provided by restaurants (except by restaurants in hotels having tariff of ₹7500 per unit per day or more) have been reduced from 18 per cent to 5 per cent.
- With effect from 1st April, 2019, effective GST rate on construction of affordable houses has been reduced from 8per cent to 1 per cent and on other houses i.e. not in the affordable category, from 12 per cent to 5 per cent. Affordable houses have been defined as houses having carpet area of 60 sqm in metropolitan areas and upto 90 sqm in non-metro areas and having cost of upto ₹45 lakhs.

- GST rate on cinema theatres having entry ticket of upto ₹100 has been prescribed at reduced rate of 18 per cent.
- GST rate on services provided by amusement parks including theme parks, water parks, joy rides, merry go rounds, go carting and ballet has been reduced from 28 per cent to 18 per cent.

(ii) Exemption from the levy of GST on Services:

Two major services consumed by the common man, namely, health care services provided by clinical establishments and educational services provided by educational institutions are exempted from GST.

In addition, following services consumed by the common man have been completely exempted from GST:

(a) Services received from a provider of service located by way of supply of online educational journals or periodicals to a higher educational institution (i.e., other than an institution providing pre-school education and education up to higher secondary school or equivalent).

(b) Services provided by an educational institution by way of conduct of entrance examination against consideration in the form of entrance fee.

(c) Services provided to an educational institution, by way of supply of services relating to admission to, or conduct of examination by all educational institutions.

(d) Services provided by Fair Price Shops to Central Government, State Government or Union Territory by way of sale of food grains, kerosene, sugar, edible oil, etc. under Public Distribution System against consideration in the form of commission or margin.

(e) Services by way of giving on hire motor vehicle for transport of students, faculty and staff, to a person providing services of transportation of students, faculty and staff to an educational institution providing services by way of pre-school education and education upto higher secondary school or equivalent (sub-contractor will also be exempt from GST).

(f) Services by way of admission to a protected monument so declared under the Ancient Monuments and Archaeological Sites and Remains Act 1958 or any of the State Acts, for the time being in force.

(g) Services by way of right to admission to circus, dance, or theatrical performance including drama or ballet; award function, concert, pageant, musical performance or any sporting event other than a recognised sporting event; recognised sporting event; planetarium, where the consideration for right to admission to the events or places is not more than ₹500 per person.

(h) Services of life insurance business provided by way of annuity under National Pension System regulated by PFRDA is exempt.

(i) Services of a Resident Welfare Associations (RWA) to its members against contribution of an amount upto ₹7500 per month.

(iii) Multiple reliefs from GST taxation have been provided to following categories of services:

(i) Agriculture, farming and food processing industry,

(ii) Education, training and skill development,

(iii) Pension, social security and old age support.

(iv) Banking/ Finance/ Insurance services,

(v) Government Services,

(vi) Tourism and hospitality services,

(vii) Construction and works contract services,

(viii) Transportation services.

B. Customs Duty

- There has been concerted effort from the Government to avoid inverted duty structure on goods imported into India. The Basic Customs Duty (BCD) rates have been rationalized to the rate of 2.5 per cent/5 per cent/7.5 per cent on most of the inputs and intermediate products like industrial chemicals, ores and concentrates, fuels for industrial use, textile fibres and yarns etc. used in industries for manufacturing.

- Government has followed a conscious policy to promote the "Make in India" initiative. Therefore, several end use-based exemptions and lower rates of customs duty have been prescribed on goods imported for further processing in India and higher import duties on finished products. The customs duty was increased on finished products like footwear, processed foods, cellular mobile phones, perfumes, cosmetics and other toilet preparations, watches, furniture, toys, light fittings etc., in Union Budget 2018-19. In October, 2018, duties were increased on plastic articles, washing machine, refrigerator, air conditioners, speakers, telecom equipment and certain other items that are largely imported from China.

- The customs duty rates on most of the electronic and IT products imported from China have been increased several times over the last two years. There has been an increase in customs duty on finished electronics goods and consumer durables like cellular mobile phones, LED TVs, microwave ovens, refrigerators, air conditioners etc. to promote domestic value addition.

- Further the customs duty on 298 tariff lines of man-made fibre fabrics was increased from 10 per cent to 20 per cent for protecting domestic industry from imports. Further BCD was increased on 504 tariff lines of textile articles including garments.

Annex II*: Recent Initiatives in Direct Taxes in Budget 2018-19 and 2019-20 (Interim Budget)

A. Summary of important measures announced in the Union Budget 2018-19:

- The rate of income-tax for companies with a turnover up to ₹250 crores in FY 2016-17 was reduced to 25 per cent.
- To allow a standard deduction upto ₹40,000/- or the amount of salary received, whichever is less and rationalised exemption in respect of transport allowance and reimbursement of miscellaneous medical expenses.
- The following incentives have been provided for senior citizens:
  - The limit of deduction for health insurance premium and/or medical expenditure has been increased from ₹30,000/- to ₹50,000.
  - The limit of deduction for medical expenditure in respect of certain critical illnesses has been increased up to ₹1,00,000/- in the case of all senior citizens (of the age of 60 years or more).
  - A deduction of ₹50,000/- has been provided to senior citizens on interest income from deposits with banks, co-operative societies and post offices.
  - The threshold limit for deduction of tax at source on interest income for senior citizens has been increased from ₹10,000/- to ₹50,000/-.
  - A senior citizen having pension income shall be eligible to claim standard deduction of upto ₹40,000/- or the amount of pension received, whichever is less.
- It is provided that every person, not being an individual, which enters into a financial transaction of an amount aggregating to ₹2.5 lakh or more in a financial year, and the managing director, director, partner, trustee, author, founder, karta, chief executive officer, principal officer or office bearer or any person competent to act on behalf of such person shall be required to apply for allotment of PAN.
- It is provided that in the case of an amalgamated company, accumulated profits, whether capitalised or not, or losses as the case may be, shall be increased by the accumulated profits of the amalgamating company, whether capitalized or not, on the date of amalgamation.
- It is provided to bring deemed dividends also under the scope of dividend distribution tax and to tax such deemed dividend at the rate of 30 per cent (without grossing up) in order to prevent camouflaging dividend in various ways such as loans and advances.
- The exemption under section 10(38) of the Act has been withdrawn and a new section 112A has been inserted in the Act to provide that long term capital gains arising from transfer of a long term capital asset being an equity share in a company or a unit of an equity oriented fund or a unit of a business trust shall be taxed at 10 per cent of such capital

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* The tax measures and rate changes given in this Annex are only meant for general readers and will not serve as reference points for tax payers.

gains exceeding one lakh rupees. Foreign Institutional Investors (FIIs) will also be liable to tax on such long term capital gains only in respect of amount of such gains exceeding one lakh rupees. Further, it is also provided that where any income is distributed by an equity-oriented Mutual Fund, the mutual fund shall be liable to pay additional income tax at the rate of 10 per cent on income so distributed.

- To tackle the direct tax challenges arising in digital businesses, the scope of the definition of business connection was enlarged to provide that a non-resident is taxable in India if it has a 'Significant Economic Presence' in India.
- The conditions for availing the deduction of 30 per cent under section 80JJAA of the Act have been relaxed by allowing the benefit for a new employee who is employed for less than the minimum period during the first year but continues to remain employed for the minimum period in subsequent year. The minimum period of employment of 150 days has been extended to footwear and leather industry.
- Following changes in the taxation regime for the start-ups under section 80IAC have been made:
  - The benefits would also be available to start ups incorporated on or after 1st April 2019 but before 1st April, 2021;
  - The requirement of the turnover not exceeding ₹25 Crore would apply to the previous year relevant to the assessment year to which deduction under this section is claimed;
  - The definition of eligible business has been expanded to provide that the benefit would be available if the start-up is engaged in innovation, development or improvement of products or processes or services, or a scalable business model with a high potential of employment generation or wealth creation.

B. Summary of important measures announced in the Interim Budget 2019-20:

- Enhanced the amount of tax rebate for an individual taxpayer from ₹2,500 to ₹12,500.
- Increased the limit of standard deduction from ₹40,000 to ₹50,000.
- There will be no tax on notional rent of two self-occupied houses instead of currently available one self-occupied house. However, the existing limit for deduction of interest of ₹2 lakhs shall continue.
- One-time option provided for investment of the entire capital gain in purchase or construction of two residential houses under section 54 of the Act where capital gains from the sale of residential property do not exceed ₹2 crore.
- Threshold limit for application of TDS on bank interest, etc., increased from ₹10,000 to ₹40,000 and
- Threshold limit increased for application of TDS on rental income from ₹1.8 lakh to ₹2.4 lakh.

C. Other measures taken during the year 2018 and 2019.

- The Centralised Verification Scheme, 2019 has been notified for setting up of a centre for centralised issuance of notice and for processing of information or documents and making available the outcome of the processing to the Assessing Officer.
- The process of PAN allotment has been relaxed so that an applicant, having mother as 'single parent', may apply for PAN by furnishing mother's name only. Before this, furnishing of father's name was mandatory for all applicants.
- The process of issuance of certificate for no deduction of tax or deduction/collection of tax at lower rate has been rationalised. Now, the entire process of filing of an application to the generation of appropriate certificate has been made electronic. This shall minimise the human interface and reduce the compliance burden on the applicant.
- Form for application filed for the registration of a charitable trust or institution under section 12A of the Act has been rationalised and electronic filing thereof has been enabled as well.
- Forms for filing appeal to the Appellate Tribunal have been rationalised to make them more informative.
- In order to facilitate the conversion of Indian branch of foreign bank, the Notification S.O. 6053(E) dated 06.12.2018 has been issued specifying the conditions to be fulfilled by the conversion and also specifying modifications, exceptions, etc., in applicability of certain provisions of the Act to such conversion.
- Part B of Form No 16 and Annexure-II of Form No 24Q were amended for enabling e-issuance of salary TDS certificate in Form No 16 and for enabling the pre-filing of Income-tax returns on the basis of information furnished in Form No 24Q.

Monetary Management and Financial Intermediation

03
CHAPTER

Monetary policy witnessed a u-turn over the last year. The benchmark policy rate was first hiked by 50 bps and later reduced by 75 bps due to weaker-than-anticipated inflation, growth slowdown and softer international monetary conditions. Liquidity conditions, however, have remained systematically tight since September 2018. The performance of the banking system has improved as NPA ratios declined and credit growth accelerated. However, financial flows to the economy remained constrained because of decline in the amount of equity finance raised from capital markets and stress in the NBFC sector. The ecosystem for insolvency and bankruptcy is getting systematically built out. It has already led to recovery and resolution of significant amount of distressed assets as well as palpably improved business culture.

MONETARY DEVELOPMENTS DURING 2018-19

3.1 The Monetary Policy Committee (MPC) of the Reserve Bank of India (RBI), at the time of writing, had met six times in 2018-19 and twice in 2019-20. In its First Bi-monthly Monetary Policy Statement for 2018-19 in April 2018, the MPC decided to keep the policy repo rate unchanged at 6.0 per cent and continue with neutral policy stance.

3.2 With the perceived risk to inflation from increase in crude oil prices as well as expectation of tightening of monetary policy by the Federal Reserve, the MPC in the Second and Third Bi-monthly Monetary Policy Statement, decided to increase the policy repo rate by 25 basis points (bps) each while keeping the policy stance as neutral.

3.3 The policy rates remained unchanged in the Fourth and Fifth Bi-monthly Monetary Policy Statement due to the persistence of unusually soft food price readings and its impact on the evolving headline inflation trajectory. However, the policy stance was changed from "neutral" to "calibrated tightening" in the Fourth Bi-monthly Monetary Policy Statement of October 2018.

3.4 In its Sixth Bi-monthly Monetary policy Statement, the MPC noted the pause in the rate hiking cycle by the Fed, expectations of a positive outcome from US-China trade negotiations and downward risks to domestic inflation. Consequently, the MPC decided to

change the stance of monetary policy from "calibrated tightening" to "neutral" and reduced the policy repo rate by 25 bps to 6.25 per cent in February 2019. The policy rate was further cut by 25 bps each in the First and the Second Bi-monthly Monetary Policy Statement for 2019-20 in April and June 2019 (Table 1). Moreover, the monetary policy stance was changed to "accommodative" in June 2019.

Table 1: Revision in Policy Rates

Effective date	Bank rate/ MSF rate* (per cent)	Repo rate (per cent)	Reverse repo rate (per cent)	Cash reserve ratio (per cent of NDTL)	Statutory liquidity ratio (per cent of NDTL)
05-04-18	6.25	6.00	5.75	4.00	19.50
06-06-18	6.50	6.25	6.00	4.00	19.50
01-08-18	6.75	6.50	6.25	4.00	19.50
05-10-18	6.75	6.50	6.25	4.00	19.50
05-12-18	6.75	6.50	6.25	4.00	19.50
05-01-19	6.75	6.50	6.25	4.00	19.25
07-02-19	6.50	6.25	6.00	4.00	19.25
04-04-19	6.25	6.00	5.75	4.00	19.25
13-04-19	6.25	6.00	5.75	4.00	19.00
06-06-19	6.00	5.75	5.50	4.00	19.00

Source: RBI.
Notes: *: Bank Rate was aligned to MSF rate with effect from February 13, 2012.
NDTL is Net Demand and Time Liabilities and MSF is Marginal Standing Facility.

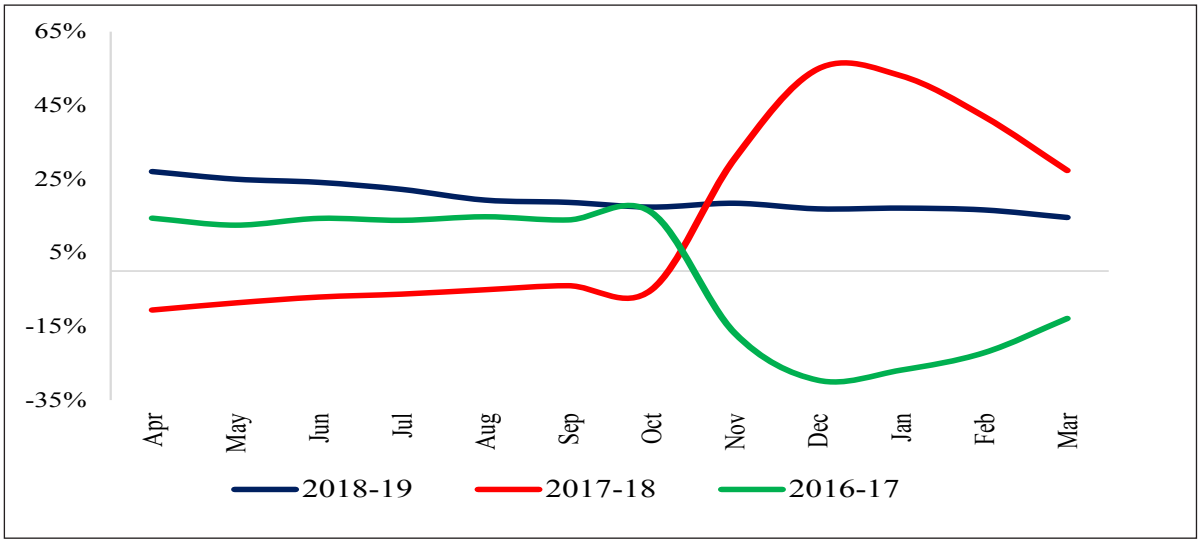
3.5 During 2018-19, the growth rate of monetary aggregates reverted to their long-term trend after experiencing unusual behaviour in 2016-17 due to demonetisation and again in 2017-18 due to the process of remonetisation (Table 2). Reserve Money (M0) as on March 31, 2019, recorded a growth of 14.5 per cent over the previous year (Figure 1). On the component side, the expansion in M0 was mainly driven by Currency in Circulation (CiC).

Table 2: Year-on-Year Growth in Monetary Aggregates (per cent)

Items	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Currency in Circulation	19.2	14.1	12.2	9.9	10.6	11.9	-4.0	9.8	22.6
Cash with Banks	18.8	18.7	16.7	6.8	14.4	13.3	45.8	-20.1	3.5
Currency with the Public	19.2	13.9	12.0	10.0	10.4	11.8	-6.2	11.9	23.5
Bankers' Deposits with the RBI	29.1	14.8	-10.9	4.6	7.6	11.0	8.6	7.9	7.9
Demand Deposits	14.2	-3.8	5.9	8.6	10.5	9.7	20.0	13.8	7.9
Time Deposits	16.0	19.3	14.7	14.7	12.3	10.6	10.8	6.4	8.5
Reserve Money (M0)	21.5	13.9	6.2	8.8	10.1	12.1	-1.3	9.6	19.5
Narrow Money (M1)	16.8	5.8	9.5	9.6	10.6	11.3	3.9	12.9	16.5
Broad Money (M3)	16.2	15.9	13.5	13.6	11.9	10.7	9.3	7.8	10.2

Source: RBI.
Note: Growth rates have been calculated for financial year averages of the monetary aggregates.

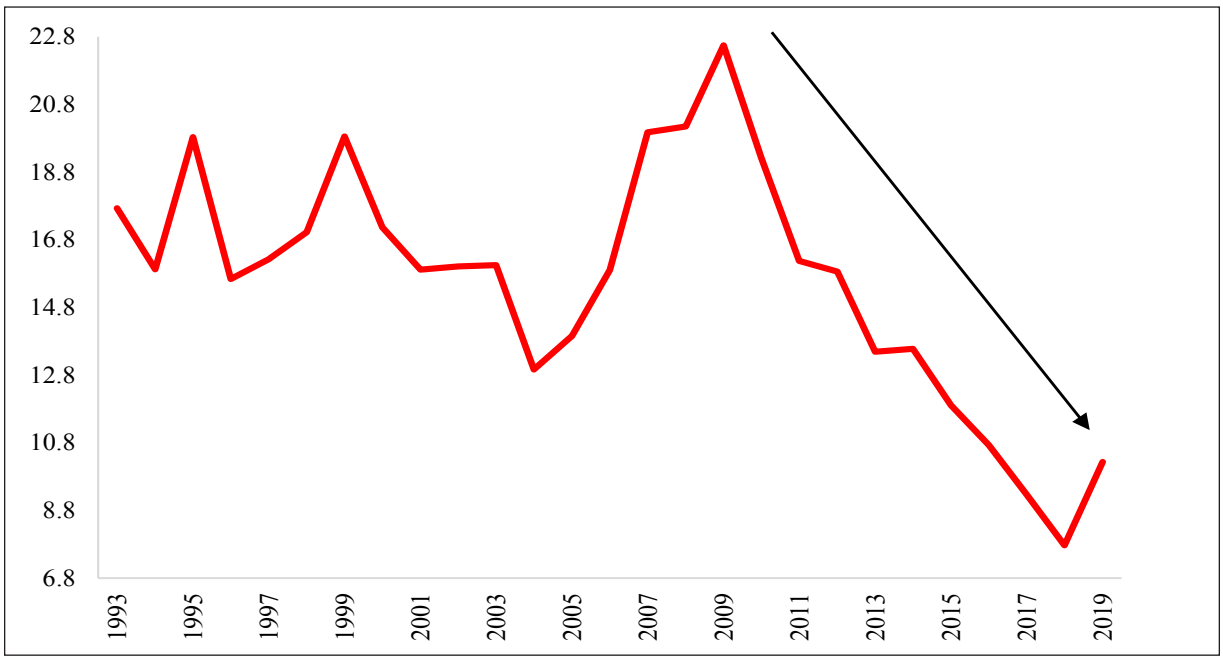
Figure 1: Reserve Money Growth (Y-o-Y)



Source: RBI.

3.6 From the sources side, expansion in M0 during 2018-19 was contributed mainly by net RBI credit to the government as against driven by net foreign assets in the previous year. Increase in net RBI credit to government was mainly from the recourse to open market operations (OMOs) undertaken during the year. Among other sources, RBI's claims on banks increased, indicating tight liquidity conditions (this issue is further discussed in next section). Net foreign assets also contributed to M0 expansion albeit at a lower magnitude vis-à-vis previous year.

Figure 2: M3 Growth (Y-o-Y, per cent)

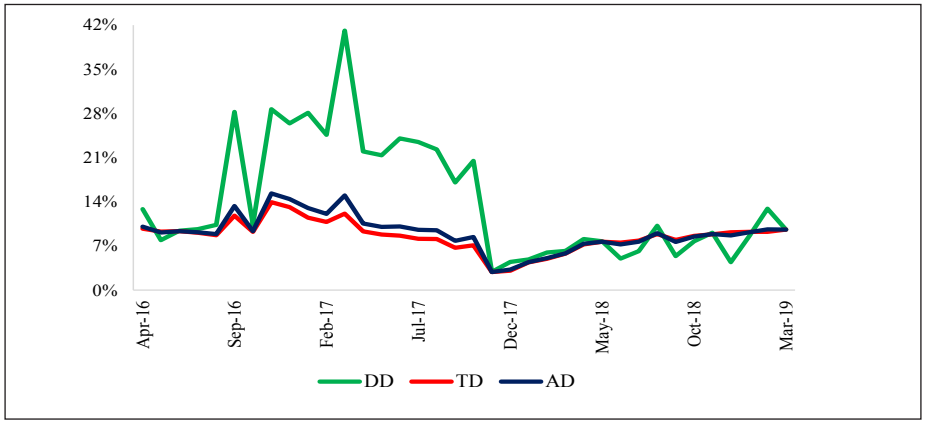


Source: RBI.

Note: Growth rates have been calculated for Financial Year averages of the monetary aggregates.

3.7 Broad money growth (M3) has been on declining trend since 2009. However, in 20018-19, M3 improved marginally driven mainly by aggregate deposits (Figure 2). From the component side, the expansion in M3 during the year was broad-based, contributed by both currency and deposits. Deposits with the banking system, both demand and time, recorded acceleration in their growth leading to an increase in aggregate deposits by 9.6 per cent in 2018-19 vis-à-vis the 5.8 per cent during 2017-18 (Figure 3). Amongst sources, credit from scheduled commercial banks (SCBs) to the commercial sector primarily contributed to an increase in M3 during the year. Bank credit to government, mainly from RBI, also supplemented M3 expansion.

Figure 3: Y-o-Y Variation in Deposits

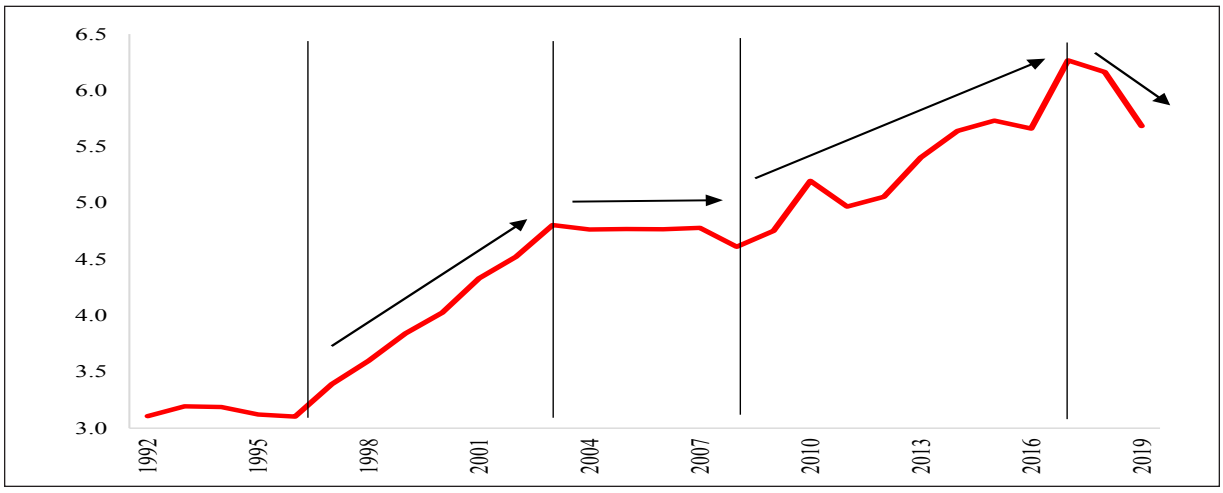


Source: RBI.

Note: AD– Aggregate Deposits, DD– Demand Deposits, TD– Time Deposits.

3.8 The money multiplier (M3/M0) expanded sharply between 1996 and 2003 and stabilizing thereafter till 2008. It started rising again till 2017 but declined for two successive years in 2017-18 and 2018-19, reflecting expansion in M0 at faster pace than M3. As on March 31, 2019, it stood lower at 5.7 per cent, converging broadly to its average level recorded during 2013-16 (Figure 4). Trends in money multiplier is an area of further investigation but the tightening of bank capital and regulatory norms may have contributed to it.

Figure 4: Money Multiplier



Source: RBI.

LIQUIDITY CONDITIONS AND ITS MANAGEMENT

3.9 In 2018-19, liquidity conditions were comfortable till August 2018 but has been systematically tight since September 2018. Liquidity situation, on average, moved in the deficit zone in the last two quarters of 2018-19 as well as in first quarter of 2019-20.

3.10 The banking system faced huge shortage of liquidity for the first time in the fiscal between September 15 and 26 and the deficit was nearly ₹1.18 lakh crore. The RBI, consequently, announced OMOs of ₹30,000 crore. This move did ease liquidity temporarily but the liquidity shortage has been persistent (Figure 5).

3.11 The monetary policy statement of December 2018 highlighted the issue of liquidity crunch being faced by the banking system. The statement noted that the tight liquidity conditions had led to overnight call money rate breaching the policy corridor on several occasions. Consequently, the RBI decided to scale up OMOs in December and January. It further added that liquidity conditions will continue to be monitored and depending on the assessment, RBI will consider similar quantum of OMO purchases until the end of March 2019.

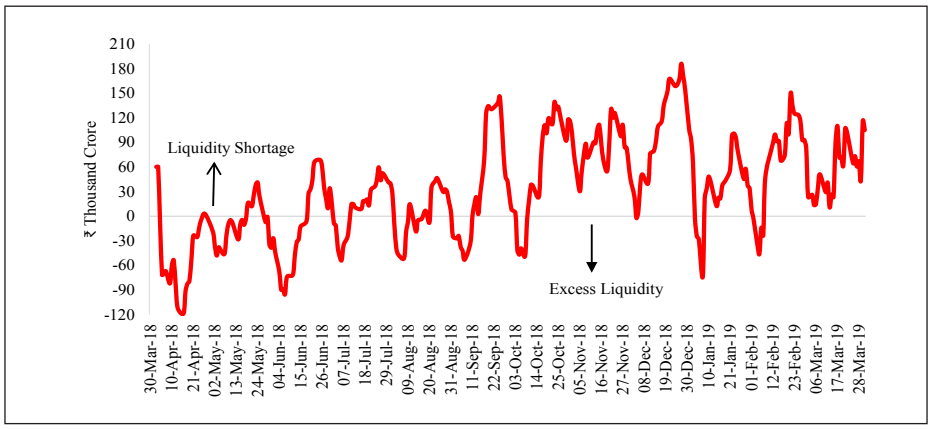
3.12 Remember that the RBI had changed its liquidity management objective in June 2016. Prior to this period, the RBI used to maintain ex-ante liquidity deficit in the system at around 1% of net time and demand liabilities (NDTL) of banks. However, since June 2016, the stated objective of the RBI is to keep the ex-ante liquidity closer to neutral position.

3.13 The tight liquidity has shown up in interest rates as well. The weighted average call rate (WACR) breached the policy repo rate 33 time since mid-September 2018. There were three key factors which have led to this situation of liquidity tightening. First, the growth in bank credit has improved in last two quarters of 2018-19, however growth in bank deposits remained tepid. Second, growth in currency in circulation also accelerated during this period. Third, and the most significant, the RBI had to draw down its foreign exchange reserves in excess of $32 billion in 2018-19 to smoothen exchange rate volatility. Consequently, liquidity in excess of ₹2 lakh crore was sucked out of the system.

3.14 The RBI responded to solve this issue by infusing liquidity through OMOs. The frequency of OMOs have increased considerably since September 2018. In view of the need to inject durable liquidity given the prevailing liquidity conditions, the RBI conducted twenty-seven OMOs aggregating ₹2.98 lakh crore billion during the year. Moreover, based on an assessment of financial market conditions, the RBI increased the Facility to Avail Liquidity for Liquidity Coverage Ratio (FALLCR) effective October 1, 2018, which supplemented the ability of individual banks to avail liquidity from the repo market against high-quality collateral. Furthermore, it was decided to reduce the statutory liquidity ratio (SLR) by 25 bps every calendar quarter until it reaches 18 per cent of NDTL to align the SLR with the liquidity coverage ratio (LCR) requirement. Accordingly, effective from the quarter commencing January 2019, the SLR was reduced to 19.25 per cent of NDTL and further to 19.00 per cent of NDTL in April 2019.

3.15 Moreover, the RBI decided to augment its liquidity management toolkit and injected rupee liquidity for longer duration through long-term foreign exchange buy/sell swaps. Accordingly, it conducted a US$/₹ buy/sell swap auction of US$5 billion for a tenor of 3 years on March 26, 2019 to inject durable liquidity of ₹345.6 billion into the system.

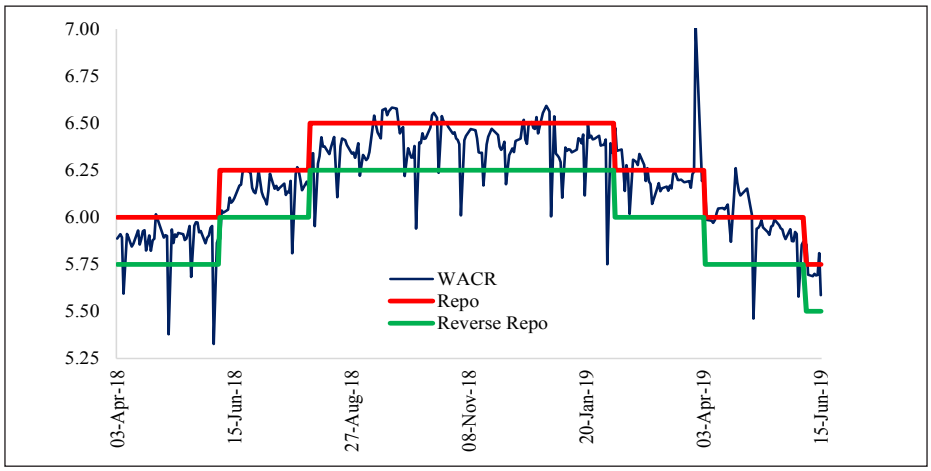
Figure 5: Daily Liquidity Management



Source: RBI.

Note: LAF stands for liquidity adjustment facility.

Figure 6: Policy Corridor and Call Rate (Per cent)

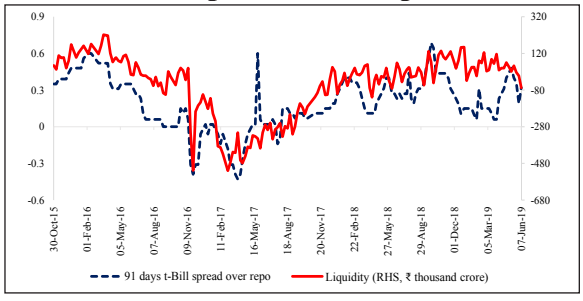


Source: RBI.

Note: MSF – Marginal Standing Facility, WACR – Weighted Average Call Money Rate

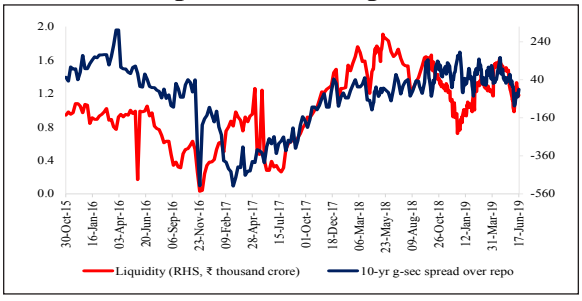
3.16 Tightness in liquidity has a significant impact on short-term as well as long term interest rates. Figures 7(a) and 7(b) show the impact of liquidity condition on interest rates. As can be seen, tight liquidity in the recent past has led to increase in spread of treasury bills (t-bill) and Goverment security (g-sec) rates over the repo rate. Availability of durable liquidity has a big impact on the market borrowing cost of the government.

Figure 7(a): Liquidity and 91 Day T-bill Spread over Repo



Source: RBI.

Figure 7(b): Liquidity and 10-yr G-Sec Spread over Repo

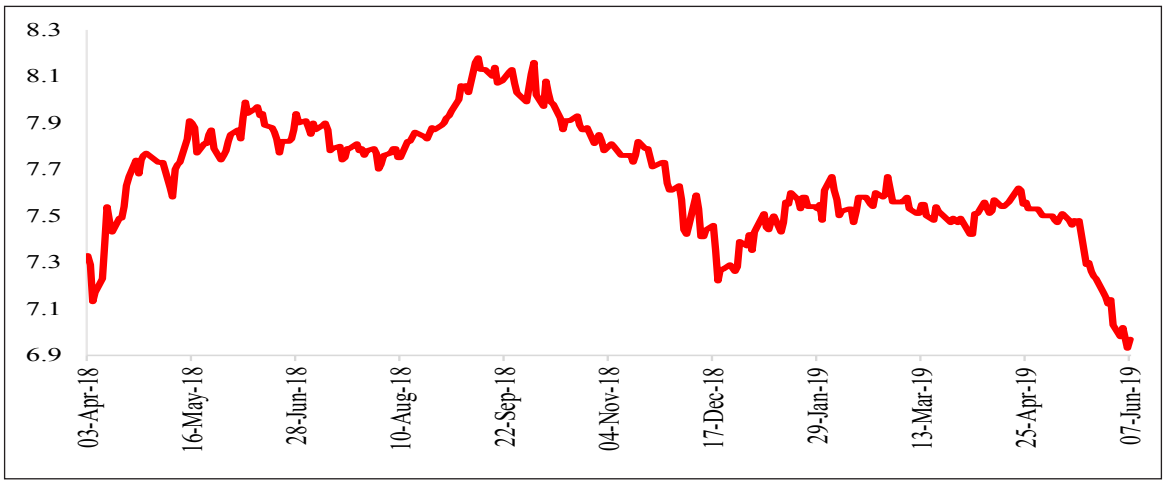


Source: RBI.

DEVELOPMENTS IN THE G-SEC MARKET

3.17 During 2018-19, the 10-year benchmark g-sec yields were volatile and closely tracked the movement in oil prices, domestic liquidity and rupee exchange rate (Figure 8). It hardened in the first quarter but witnessed intermittent softening in the second and third quarters. The hardening of yields in the first quarter may be attributed to rising crude oil prices, the firming up of US treasury yields, concerns regarding the pace of rate hikes by the US Fed, upside risks to domestic inflation. Later, with the decline in crude oil prices in July 2018, and with the announcement of OMO purchases, the yields softened in July. However, the currency depreciation in August 2018 due to rising crude oil prices and rising US interest rates, caused the yields to harden, taking the rise in yields from end-July to mid-September to 40 bps. Yields softened towards the end of September reflecting the measures taken for containing rupee volatility along with expectations of lower market borrowings by the central government in second half of 2018-19.

Figure 8: 10 Year G-Sec Yield (per cent)



Source: RBI.

3.18 The benchmark yield continued to trade with a softening bias in October 2018 as the RBI announced OMO purchases of higher amount. In the third quarter of 2018-19, the OMO purchase of ₹1.36 lakh crore along with the decline in crude oil prices and CPI inflation rates caused the yields to soften in general. During January 2019, however, the yields traded with a hardening bias amidst fiscal concerns, tightening liquidity and rise in crude oil prices. Later in the quarter, consequent upon the policy rate cut announced by the MPC in February, April and June 2019, the yields softened. The 10-year g-sec yield dropped to 6.97 per cent as on 10 June, 2019.

BANKING SECTOR

3.19 The performance of the banking sector (domestic operations), Public Sector Banks (PSBs) in particular, improved in 2018-19. The Gross Non-Performing Advances (GNPA) ratio of SCBs decreased from 11.5 per cent to 10.1 per cent between March 2018 and December 2018. Their Restructured Standard Advances (RSA) ratio declined from 0.7 per cent to 0.4 per cent. The Stressed Advances (SA) ratio decreased from 12.1 per cent to 10.5 per cent during the same period. GNPA ratio of PSBs decreased from 15.5 per cent to 13.9 per cent between March 2018 and December 2018. SA ratio of PSBs decreased

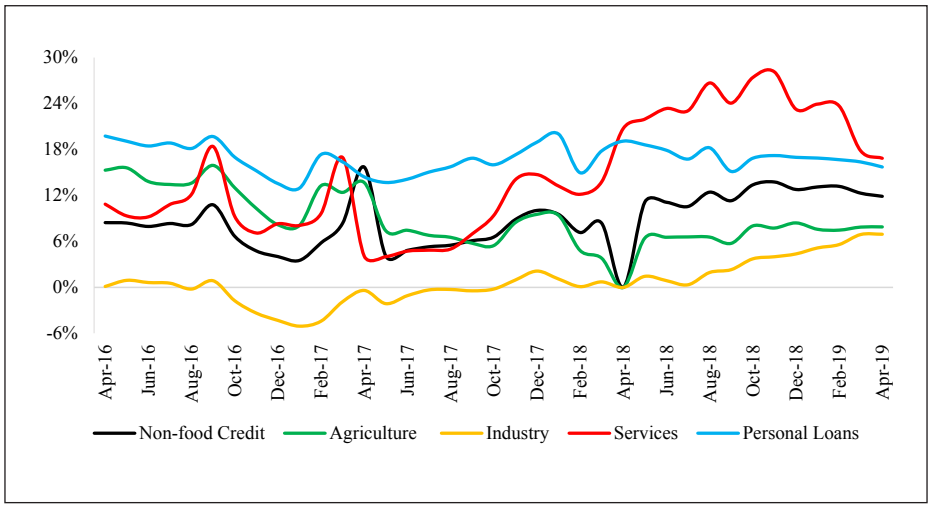
from 16.3 per cent to 14.4 per cent during the same period.

3.20 Capital to risk-weighted asset ratio (CRAR) of SCBs increased from 13.8 per cent to 14.0 per cent between March 2018 and December 2018 largely due to improvement of CRAR of Public sector banks (PSBs). SCBs' return on assets (RoA) decreased from 0.21 per cent in 2017-18 to 0.03 per cent in 2018-19 while their return on equity (RoE) decreased from 2.41 per cent to 0.4 per cent during the same period.

CREDIT GROWTH

3.21 Growth in non-food bank credit (NFC), which remained sluggish in last few years, showed improvement in 2018-19. The average NFC growth in 2018-19 improved to 11.2 per cent *vis-à-vis* 7.7 per cent in 2017-18. Bank credit to large industry and services segments were the main drivers of overall NFC growth in 2018-19 (Figure 9). However, the pace of credit growth has moderated in last few months. Credit growth has come down from 13.8 per cent in November 2018 to 11.9 per cent in April 2019. The main contributor to this moderation has been the services sector which has decelerated from 28.1 per cent to 16.8 per cent between November 2018 and April 2019. The growth in bank credit to large industries have improved in recent months (Table 4).

Figure 9: Bank Credit Growth (Y-o-Y)



Source: RBI.

Table 4: Industry-wise Deployment of Bank Credit by Major Sectors (Y-o-Y, per cent)

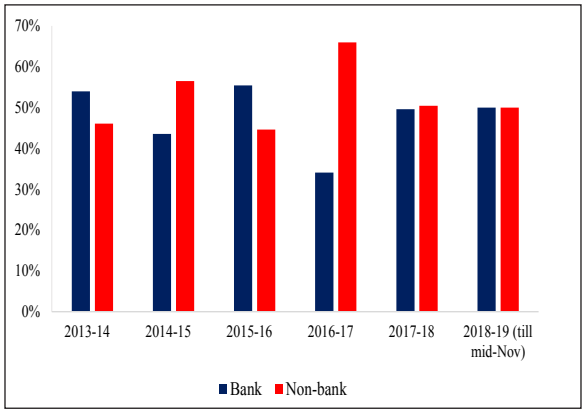
Sector	Mar-12	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17	Mar-18	Mar-19	Apr-19
Industry	20.7	15.1	12.8	5.6	2.7	-1.9	0.7	6.9	6.9
Micro & Small	12.6	20.2	22.5	9.1	-2.3	-0.5	0.9	0.7	1.0
Medium	7.1	-0.1	-0.5	0.4	-7.8	-8.7	-1.1	2.6	3.5
Large	23.3	15.6	12.3	5.3	4.2	-1.7	0.8	8.2	8.1
Textiles	9.9	15.1	10.2	-0.1	1.9	-4.6	6.9	-3.0	-2.8
Infrastructure	20.8	15.8	14.6	10.5	4.4	-6.1	-1.7	18.5	19.9

Source: RBI.
Note: Data are provisional and relate to select banks which cover about 90 per cent of total non-food credit extended by all scheduled commercial banks.

NON-BANKING FINANCIAL SECTOR

3.22 Non-Banking Financial Companies (NBFCs) bring in diversity and efficiency to the financial sector and makes it more responsive to the needs of the customers. In the recent past, the NBFCs have played increasingly important role in resource mobilization and credit intermediation, thereby helping commercial sector to make up for low bank credit growth (Figure 10).

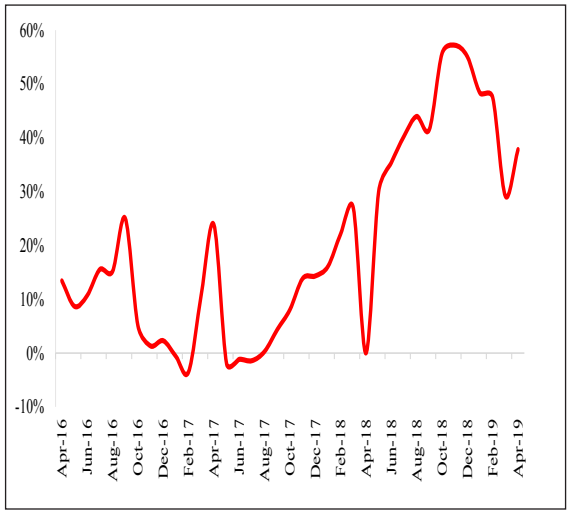
Figure 10: Share in Net Credit Flow to Commercial Sector



Source: RBI.

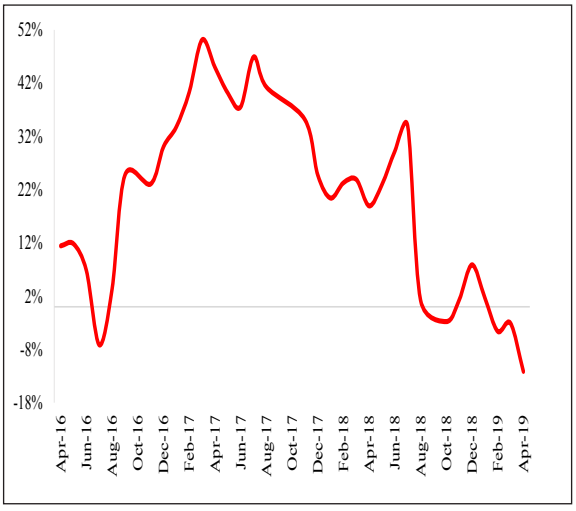
3.23 However, the NBFCs experienced difficult times in 2018-19 in the aftermath of the ratings downgrades and default of IL&FS Group. NBFCs depend largely on public funds which account for 70 per cent of total liabilities of the sector. Bank borrowings, debentures and commercial paper are the major sources of funding for NBFCs. Immediately after the IL&FS crisis, NBFCs faced severe liquidity crunch as mutual funds (MFs) stopped refinancing the loans of NBFCs. However, the government moved in quickly and took immediate measures to ringfence the problem and limit contagion. Consequently, the flow of resources from the banking sector to NBFCs improved for some time. However, the flow of resources from the banking side has contracted since November 2018. In fact, deployment of funds by MFs has turned negative and stood at -12 per cent in April 2019 (Figures 11(a) & 11(b)).This squeeze in flow of resources to NBFCs has impacted the lending capability of the sector in recent quarters (see Figure 12).

Figure 11(a): Growth in Bank Credit to NBFCs



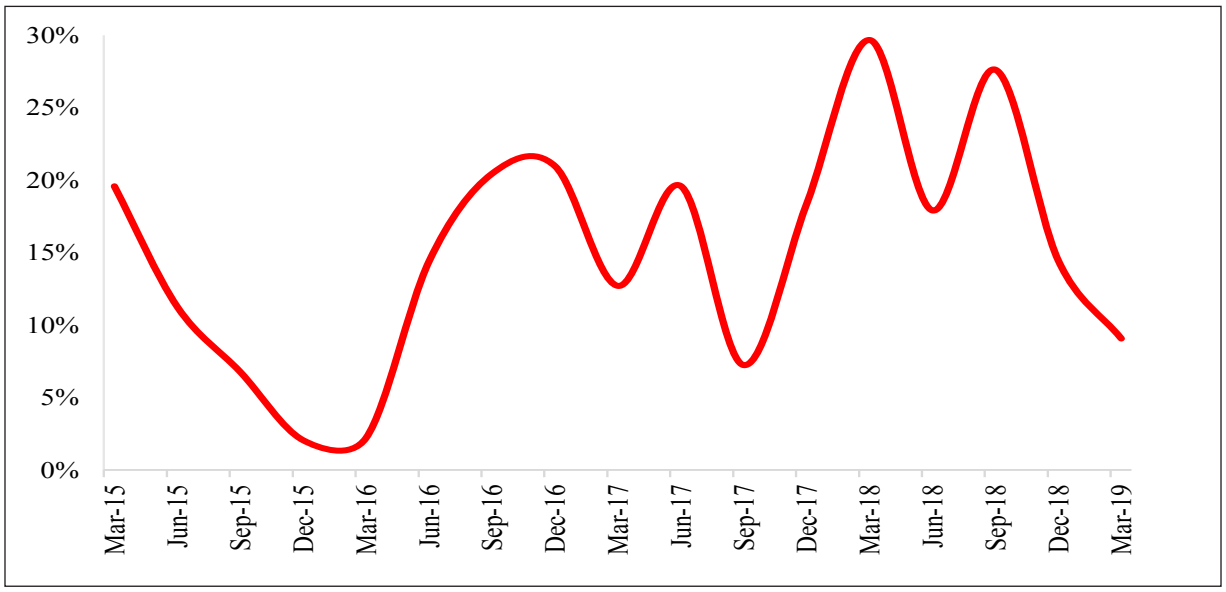
Source: RBI.

Figure 11(b): Growth in Deployment of funds by MFs to NBFCs



Source: Estimated from SEBI data.

Figure 12: Growth in Loans and Advances of NBFCs



Source: RBI.

Note: Data pertains to Deposit taking NBFCs and Non-Deposit Taking Systematic Important NBFCs including Government Companies. Data from June 2018 to March 2019 are provisional.

3.24 Other performance indicators of the NBFCs have also been affected adversely. At the end of December 2018, CRAR of NBFC sector worsened to 22.2 per cent from 22.8 per cent at end-March 2018. The GNPA ratio of NBFC sector deteriorated to 6.5 per cent as in December 2018 from 6.1 per cent in March 2018. The net NPA also increased marginally to 3.6 per cent in December 2018 from 3.2 per cent in March 2018. The RoA of the sector stood at 1.4 per cent in December 2018 compared with 1.6 per cent in March 2018. The RoE decreased to 6.1 per cent in December 2018 from 7.0 per cent in March 2018.

DEVELOPMENTS IN CAPITAL MARKET

Primary Market

A. Public Issue

3.25 The year 2018-19 witnessed a significant decrease in resource mobilization through public issue and rights issue of equity compared to the previous year. During 2018-19, 123 companies mobilized ₹16,087 crore through public equity issuance compared to 202 companies amounting ₹83,696 crore in the previous year, indicating a decrease of 81 per cent over the period. Further, during 2018-19, there were 21 rights issues which raised ₹2,149 crore compared to 21 rights issues which raised ₹21,400 crore in 2017-18.

3.26 Resource mobilization through issuance of debt public issue rose quite significantly during 2018-19 as compared to previous year. There were 25 debt public issues which raised ₹36,679 crore in 2018-19 compared to eight issues which raised ₹5,173 crore in 2017-18.

3.27 Overall, total public issue declined by 50 per cent from ₹1,10,269 crore in 2017-18 to ₹54,915 crore in 2018-19.

Table 5: Primary Market Resource Mobilisation through Public and Rights Issue

Issue Type	2017-18		2018-19	
	No of issues	Amount (₹crore)	No of issues	Amount (₹crore)
Public Issue (Equity)	202	83,696	123	16,087
Rights Issue (Equity)	21	21,400	21	2,149
Public Issue(Debt)	8	5,173	25	36,679
Total Public Issue	231	110,269	158	54,915

Source: SEBI.

B. Private Placement

3.28 During 2018-19, Indian corporates preferred private placement route to gear up the capital requirement. There were 416 issues which raised ₹2,17,632 crore in 2018-19 compared to 460 issues which raised ₹1,26,711 crore during 2017-18. Out of the 416 issues, there were 12 qualified institutional placement (QIP) allotments and 404 preferential allotments which raised ₹7,469 crore and ₹2,10,163 crore, respectively during 2018-19 compared to 53 QIPs allotments and 407 preferential allotments which raised ₹67,238 crore and ₹59,473 crore, respectively during 2017-18.

3.29 Further, the resource mobilization through issuance of corporate bonds private placement stood at ₹5,79,425 crore in 2018-19 compared to ₹5,99,147 crore in 2017-18.

Table 6: Primary Market Resource Mobilisation through Private Placements

Issue Type	2017-18		2018-19	
	No of issues	Amount (₹crore)	No of issues	Amount (₹crore)
QIPs Allotment (Equity)	53	67,238	12	7,469
Preferential Allotment (Equity)	407	59,473	404	2,10,163
Private Placement of Bonds	2706	5,99,147	2358	5,79,425
Total Private Placement	3166	7,25,858	2774	797,056

Sources: BSE, NSE, MSEI and SEBI.

Mutual Fund Activities

3.30 During 2018-19, there was a net inflow of ₹1,09,701 crore in the MF industry as compared to a net inflow of ₹2,71,797 crore during 2017-18. The cumulative net assets under management of all MF increased by 11.4 per cent to ₹23,79,584 crore in March 2019 from ₹21,36,036 crore in March 2018.

Table 7: Mobilisation Funds by Mutual Funds (in ₹crore)

Financial Year	No of Folios	Gross Mobilisation	Redemption	Net Inflow	Assets at the end of the period
2017-18	7,13,47,301	2,09,98,652	2,07,26,855	2,71,797	21,36,036
2018-19	8,24,56,411	2,43,94,362	2,42,84,661	1,09,701	23,79,584

Source: SEBI.

Investment by Foreign Portfolio Investors (FPIs)

3.31 There was a net outflow of ₹5,499 crore by FPIs in 2018-19 compared to an inflow of ₹22,466 crore in 2017-18. Total cumulative investment by FPIs decreased to ₹2,48,154 crore as on March 31 2019 as against ₹2,53,653 crore as on March 31 2018. The assets of the FPIs in India, as reported by the custodians, increased to ₹33,42,680 crore as on March 31 2019 from ₹31,48,349 crore as on March 31 2018. However, the notional value of offshore derivative instruments (including ODIs on derivatives) decreased to ₹77,287 crore from ₹1,02,726 crore during the same period.

Table 8: Investment by FPIs

Year/Month	Gross Purchase (₹crore)	Gross Sales (₹crores)	Net Investment (₹crores)	Net Investment (USD Million)
2017-18	17,28,360	15,83,679	1,44,681	22,466
2018-19	16,40,810	16,79,741	-38,931	-5,499

Source: NSDL.

Table 9: Notional Value of Offshore Derivatives Instruments vs Assets Under Custody of FPIs (in ₹Crore)

Year	Notional value of ODIs on Equity, Debt & Derivatives	Notional value of ODIs on Equity &Debt excluding Derivatives	AUC of FPIs/deemed FPIs	Notional value of ODIs on Equity, Debt & Derivatives as % of Notional Value of ODI
2017-18	1,06,403	1,02,726	31,48,349	3.4
2018-19	78,110	77,287	33,42,680	2.3

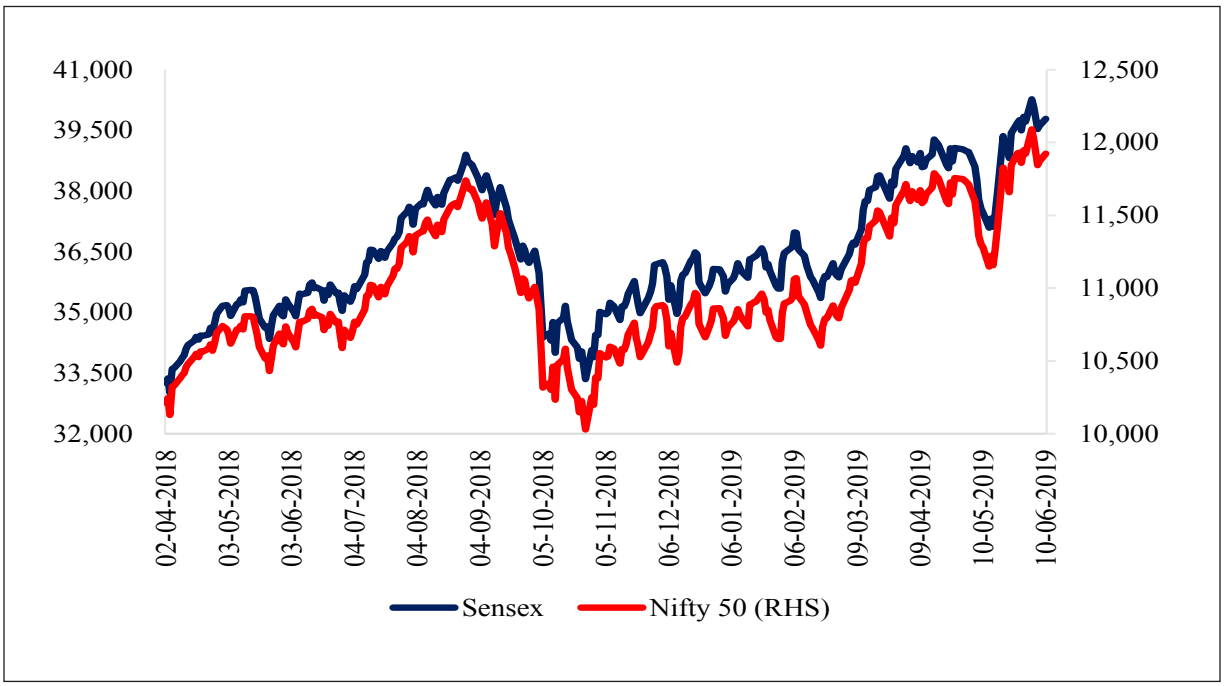
Source: SEBI.

Movement of Indian Benchmark Indices

3.32 S&P BSE Sensex, the benchmark index of Bombay Stock Exchange (BSE), closed at 38,673 on March 31, 2019, witnessing an increase of 17.3 per cent from its closing value of 32,969 as on March 31, 2018 (see Figure 13). During this period, S&P BSE Sensex closed its highest level of 38,897 on August 28, 2018 and its lowest of 33,019 on April 04, 2018. In addition, Nifty 50, the benchmark index of National Stock Exchange (NSE) closed at 11,624 on March 31, 2019, witnessing a gain of 14.9 per cent from its closing value of 10,114 as on March 31, 2018. During the period Nifty 50 closed at its highest value of 11,739 on August 28,2018 and its lowest level of 10,030 on October 26, 2018.

3.33 In 2019-20, the Sensex crossed 40,000 for the first time on 3rd June and closed at 40,268. As on 10 June, 2019, the Sensex closed at 39,785 whereas Nifty closed at 11,923.

Figure 13: Movement of Indian Benchmark Indices



Sources: BSE & NSE.

INSURANCE SECTOR

3.34 Insurance has evolved as a tool of safeguarding the interest of people from loss and uncertainty. Apart from protecting against mortality; property; and casualty risks; it provids a safety net for individuals and enterprises in urban and rural areas. The insurance sector encourages savings and provides long-term funds to individuals. It also provids funds for infrastructure development and other long gestation projects of the nation.

3.35 The potential and performance of the insurance sector are generally assessed on the basis of two parameters, viz., insurance penetration and insurance density. The measure of insurance penetration and density reflects the level of development of insurance sector in a country. While insurance penetration is measured as the percentage of insurance premium to GDP, insurance density is calculated as the ratio of premium to population (measured in US$ for convenience of international comparison).

3.36 Insurance penetration which was 2.71 per cent in 2001, has steadily increased to 3.69 per cent in 2017 (Life 2.76 per cent and Non-Life 0.93 per cent). Insurance penetration in some of the emerging economies in Asia, i.e., Malaysia, Thailand and China during the same year were 4.77, 5.29 and 4.57 per cent respectively. The insurance density in India which was US$11.5 in 2001, reached to US$73 in 2017 (Life-55$ and Non-Life -18$). The comparative figures for Malaysia, Thailand and China during the same period were US$486, US$348 and US$384 respectively. Globally insurance penetration and density were 3.33 per cent and US$353 for the life segment and 2.80 per cent and US$297 for the non-life segment respectively.

Table 10: Penetration in Life Insurance

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Insurance Penetration (per cent)	3.4	3.17	3.1	2.6	2.7	2.72	2.76
Insurance Density (US $)	49.0	42.7	41.0	44.0	43.0	46.5	55

Source:IRDA.

Table 11: Penetration in General Insurance

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Insurance Penetration (per cent)	0.70	0.78	0.80	0.7	0.7	0.77	0.93
Insurance Density (US$)	10.0	10.5	11.0	11.0	12.0	13.2	18

Source: IRDA.

3.37 During the fiscal 2017-18, the gross direct premium of general insurers (within India) was ₹1,50,660 crores as against ₹1,28,130 crores, in 2016-17 registering 17.6 per cent growth. Motor, health and others segments of insurance helped the industry report this growth. Life insurance industry recorded a premium income of ₹4,58,810 crores as against ₹4,18,480 crores in the previous financial year, registering a growth of 9.64 per cent. While renewal premium accounted for 57.68 per cent of the total premium received by the life insurers, new business contributed the remaining 42.32 per cent.

INSOLVENCY AND BANKRUPTCY CODE 2016: RESOLVING CORPORATE STRESS IN A CHANGED PARADIGM

Introduction

3.38 The Indian banking sector has been at the forefront of driving the economic growth of the country. In the last several years, however, the sector has been plagued by growing NPAs on account of various reasons. The total stressed assets pool reached about ₹10.6 lakh crore for PSBs and ₹12-13 lakh crore for the overall banking system as on March 31, 2018.[1]

3.39 Resolving stressed assets requires significant and concerted efforts. Since 2014, many steps have been taken by the government, the RBI and individual banks to enable rescue and revival. A robust, modern and sophisticated insolvency framework was established with the enactment of the Insolvency and Bankruptcy Code, 2016 (IBC). The IBC seeks to achieve resolution of corporate debtors (CDs) in distress and failing that, its liquidation in a time-bound manner under the non-intrusive oversight of the National Company Law Tribunal (NCLT). The Financial Creditors (FC) have been provided with greater role and powers through the committee of creditors. The management and control of assets of the

[1] Committee Report on Resolution of Stressed Assets, Project Sashakt, 2018

debtor are handed over to an Insolvency Professional (IP) who is responsible for operating the debtor's enterprise as a going concern and managing the corporate insolvency resolution process (CIRP) besides performing other crucial functions. Although based on global principles, the IBC has been customized for Indian conditions to make it compatible with local conditions. It is one of the most important economic reforms of recent times designed to effectively deal with non-performing CDs and the resultant logjam in the availability of credit.

3.40 An effective bilateral work-out restructuring mechanism can complement the robust insolvency framework. In June 2017, the RBI substituted harmonized and simplified generic framework for resolution of stressed assets. Sashakt - the resolution scheme to resolve the problem of NPAs through a market-led approach, was introduced in July 2018. Sashakt entails participating banks to work together under an Inter-Creditor Agreement (ICA). As of March 31, 2019, 35 banks had signed the ICA. Further, the notification on "Prudential Framework for Resolution of Stressed Assets" was released by RBI dated June 7, 2019 [2].

Implementation of IBC

3.41 The success of any law depends on its implementation. The IBC was enacted on May 28, 2016. The Government moved quickly to operationalize the IBC. On June 1, 2016, the National Company Law Appellate Tribunal (NCLAT), the Principal Bench of NCLT at New Delhi, and 11 benches of NCLT – two at New Delhi and one each at Ahmedabad, Allahabad, Bengaluru, Chandigarh, Chennai, Guwahati, Hyderabad, Kolkata, and Mumbai were constituted.

3.42 The Insolvency and Bankruptcy Board of India (IBBI) – the regulator, was established on October 1, 2016. It registered three Insolvency Professional Agencies (IPAs), namely, the Indian Institute of Insolvency Professionals of Institute of Chartered Accountants of India (IIIP of ICAI), the Institute of Company Secretaries of India's Institute of Insolvency Professionals (ICSI IIP), and the Insolvency Professional Agency of Institute of Cost Accountants of India (IPA of ICMAI), were registered in November, 2016. With a view to make available a cadre of IPs, 977 individuals with professional qualifications and 15 years of experience were granted temporary registration. The IBBI commenced the Limited Insolvency Examination (LIE) on December 31, 2016. The professionals with ten years of experience and has passed the Limited Insolvency Examination were granted regular registration as IPs from January 2017. The subordinate legislation relating to eco-system as well as the corporate insolvency processes under the Code was put in place by the IBBI and the corporate processes commenced on December 1, 2016.

3.43 An important concern of many observers was the ability of the new framework to withstand the legal challenges. However, the Hon'ble Supreme Court upheld the Constitutional validity of the IBC in entirety in the matter of *Swiss Ribbons Pvt. Ltd. & Anr. Vs. UoI & Ors.*

Progress Made

3.44 The first case under the IBC was admitted by NCLT[3] on January 17, 2017, in just over a month from the operationalization of the IBC, and the first insolvency resolution plan was approved on August 2, 2017.[4] The Banking Regulations Act, 1949 was amended

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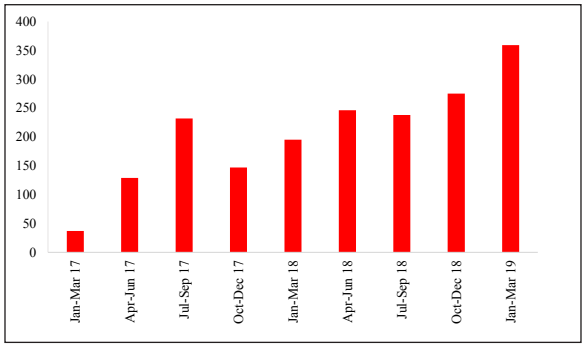
[2] The Supreme Court *vide* its judgment dated April 8, 2019 held that the RBI circular dated February 12, 2018 was *ultra vires*.
[3] *ICICI Bank Limited vs. Innoventive Industries Limited.*
[4] *Synergies-Dooray Automotive Ltd.*

on May 4, 2017, to enable the RBI to direct banks to take defaulting borrowers into insolvency. The RBI constituted an Internal Advisory Committee which recommended the filing of cases under the IBC in all accounts with fund and non-fund based outstanding amounts greater than ₹5,000 crore, with 60 per cent or more classified as non-performing by banks as of March 31, 2016. Under the recommended criterion, 12 large accounts aggregating about 25 per cent of the current GNPAs of the banking system qualified for immediate reference under IBC. Later, during 2017, another list of 28 larger accounts with a total outstanding loan amount of ₹2.3 lakh crore was released by the RBI.

3.45 As on February 2019[5], that is, within 27 months of operationalization of the IBC, as many as 14,000 applications had been filed for initiation of CIRPs under the IBC. As on March 31, 2019[6], NCLT had ordered the commencement of CIRP of 1,858 CDs. The quarterly trend of the CDs admitted into CIRP under the IBC is presented below.

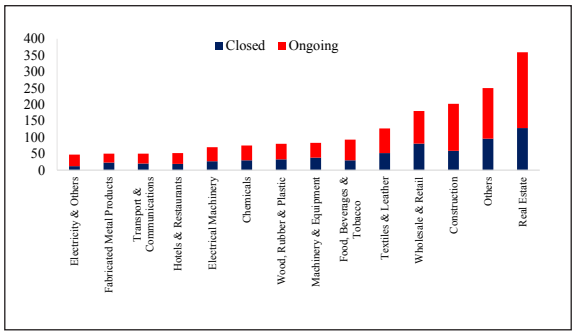
Figure 14: Quarterly trend of cases admitted



Source: IBBI.

3.46 These cases have been filed across various sectors. 42 per cent of cases filed are from the manufacturing sector covering industries like steel, fast moving consumer goods (FMCG), chemical products, electrical machinery, basic metals, etc.; 20 per cent in real estate; 10 per cent in engineering, procurement, and construction (EPC) sector and 10 per cent in trading companies. Other sectors under stress are textiles, power & utilities, FMCG, and hospitality. These are mostly late-stage cases where the overall sector has already been under stress due to internal and external issues. The sector-wise distribution of cases admitted is presented in Figure 15.

Figure 15: Sector-wise distribution of cases admitted



Source: IBBI.

3.47 Out of the total cases admitted, 152 cases were closed on appeal, review or settlement, 91 were withdrawn on account of settlement under section 12A of the IBC, 94 yielded resolutions and 378 resulted in liquidation. 1,143 cases are presently undergoing resolution process. Further, 383 cases of voluntary liquidation were admitted against which dissolution orders were passed in 41 cases.

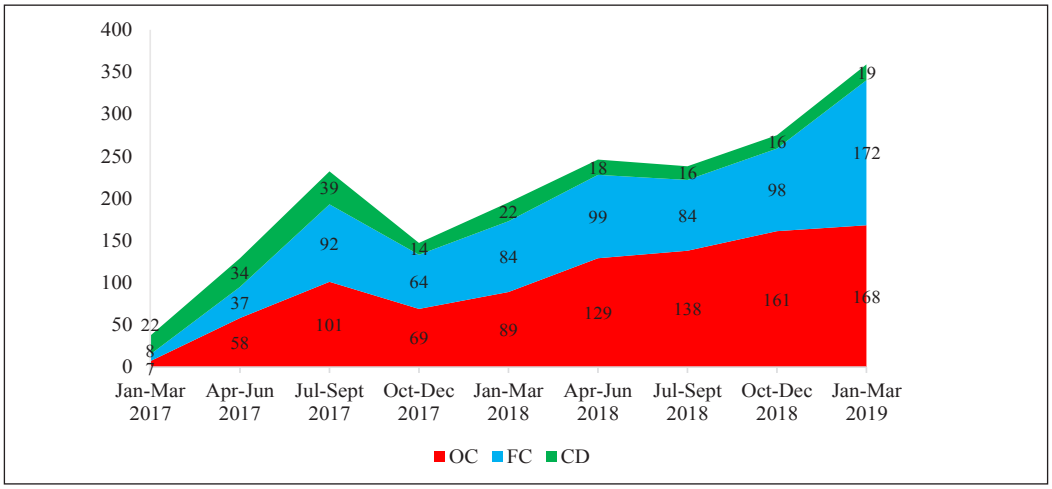
3.48 Further, 920 (50 per cent) cases were filed by Operational Creditors (OCs), 738 (40 per cent) were filed by FCs and 200 (10 per cent) were filed by Corporate Debtor. In the quarter ending March 2019, 172 cases have been filed by FCs in comparison to average 90 cases in the initial 3 quarters. The growing number of cases by the FCs indicate that the IBC has already struck a chord with the banks and financial institutions, who view the IBC as a preferred mode to resolve distressed assets and maximize returns. Similarly, the OCs, which include vendors and suppliers from small and medium enterprises, are using the IBC as a feasible recourse to enforce payment discipline by corporate debtors.

[5] Source: IBBI.

[6] IBBI newsletter, March 2019.

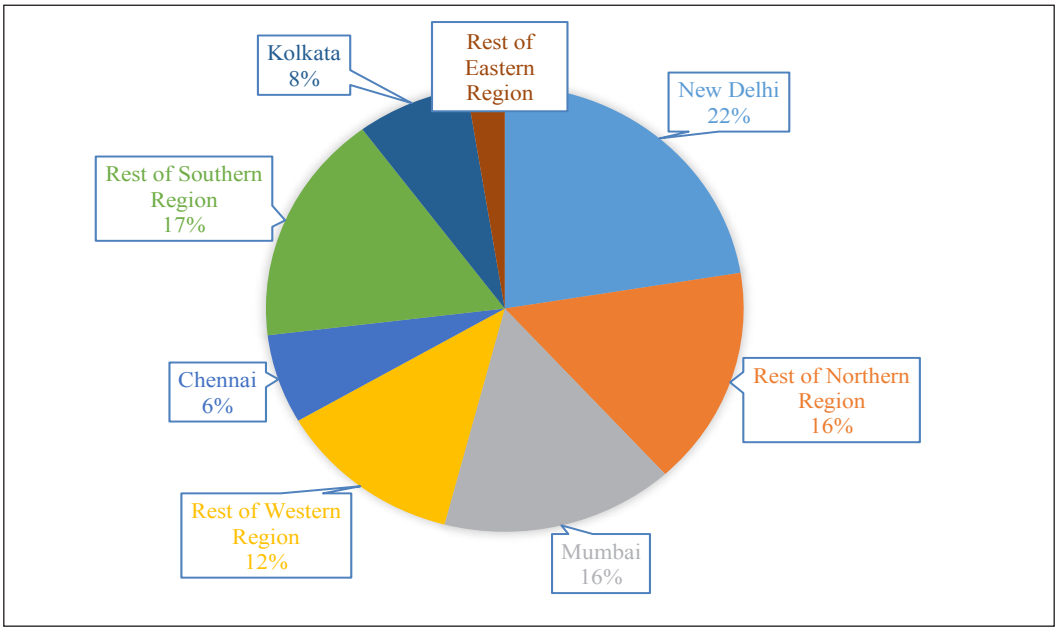
3.49 An analysis of stakeholders who triggered CIRP is shown in Figure 16. The IBC has enabled the creation of a new cadre of professionals capable of managing stressed businesses as a going concern while facilitating an effective resolution. As on March 31, 2019, 2,456 IPs were registered with the IBBI from different parts of the country. An analysis of registered IPs by region is provided in Figure 17.

Figure 16: Category-wise CIRP initiated



Source: IBBI.

Figure 17: Region-wise IP registered as on March 2019



Source: IBBI.

3.50 Figure 17 reveals the concentration of IPs in New Delhi (22 per cent) and Mumbai (16 per cent). Opportunities have also proliferated for a number of support service providers like valuers, process advisors, turnaround specialists, lawyers, security services providers, and others.

3.51 The IBC provides for the establishment of Information Utilities (IU) to collect financial information from creditors, get it authenticated by debtors, store and provide access to the resolution professional, creditors, liquidator and other stakeholders so that they can make informed decisions.

3.52 The National e-Governance Services Limited (NeSL) was registered as the first IU by the IBBI. The details of information filed with NeSL show a growing trend of use of IU by creditors. Increased use of IUs is expected to eliminate information asymmetry and improve implementation timelines under the IBC. In the quarter ending March 2019, 173 FCs entered into an agreement with NeSL and 15,085 registered as users, and 13,762 loan records have been authenticated by the debtors, involving ₹41,14,988 crore[7].

3.53 A key objective of the IBC is the maximization of the value of assets of the CDs and consequently value for its stakeholders. A critical element towards achieving this objective is the transparent and credible determination of the value of the assets of CD to facilitate comparison and informed decision making. The Code and the regulations framed thereunder assign this responsibility to the 'Registered Valuer' (RV). The Central Government designated the IBBI as the 'Authority' under section 247 of the Companies Act vide notification dated October 18, 2017.

Institutional Response

3.54 The Government and the regulator keenly observed the developments and experience in the insolvency process of cases filed and rapidly brought in necessary changes to make the process and outcomes more efficient. Two sets of amendments were introduced in the IBC, one in November 2017[8] and the second in June 2018[9]. The former introduced Section 29A, prohibiting persons with certain disabilities from submitting a resolution plan. The latter introduced changes to make the IBC easier to operate by reducing the threshold for decision making by the committee of creditors from 75 per cent to 66 per cent in specified matters and to 51 per cent for routine decisions. This amendment also entailed the recognition of home buyers as FCs. The 2018 amendment was based on recommendations of the Insolvency Law Committee (ILC)[10] set up by the Government in November 2017. The ILC has since been reconstituted as a Standing Committee.

3.55 The IBBI has been at the vanguard of creating the regulatory architecture underpinning the insolvency law. Since December 2016[11], the IBBI has introduced 25 amendments in various regulations to streamline the resolution and liquidation processes responding real-time to the market situation. All such amendments have been done after detailed stakeholder consultations and crowdsourcing of ideas by putting out proposed amendments in public domain for comments and suggestions, thus ensuring the robustness of outcomes.

3.56 The NCLTs and NCLAT continue to play an important role as adjudicating and appellate authorities respectively for IBC. The geographical distribution of the NCLT benches are presented in Table 12.

[7] IBBI newsletter, March 2019.

[8] IBBI (Amendment) Ordinance, 2017 which was later passed by the Parliament as The Insolvency and Bankruptcy Code (Amendment) Act, 2018 on 18th January 2018.

[9] IBBI (Second Amendment) Ordinance, 2018 which was later passed by the Parliament as The Insolvency and Bankruptcy Code (Second Amendment) Act, 2018.

[10] The mandate of the committee is, inter-alia, to analyse the functioning and implementation of the Code, identify isues impacting the efficiency and effectiveness of corporate insolvency resolution and iquidation framework and make suitable recommendations to address them .

[11] IBBI website (under legal framework).

Table 12: Geographical location of NCLT Benches

#	Location	No. of Benches
1	New Delhi	4
2	Kolkata	2
3	Allahabad	1
4	Ahmedabad	1
5	Chennai	2
6	Mumbai	3
7	Chandigarh	2
8	Bengaluru	1
9	Jaipur	2
10	Hyderabad	2
	Total	20

Source: NCLT website.

3.57 Keeping in view the rising caseload under the IBC, the government has notified additional benches in Amravati and Indore in March 2019 and Cuttack and Kochi in July 2018.

3.58 At present, there are 32 Judicial Members and 17 Technical Members of the NCLT. In August 2018, e-filing of applications, petitions, appeals, replies, etc. commenced at the Delhi NCLT. Digitization and e-filing at other NCLT Benches are expected to commence in due course. While the various Benches of NCLTs and NCLAT have facilitated in the recovery of ₹1,83,519 crore (approx.) under CIRP till April 2019 (MCA), the NCLT infrastructure requires to be scaled. Time-sensitive resolution is a cornerstone of the IBC. Delays affect the value of the asset causing loss to stakeholders and deter the resolution applicant from participating in the process. The Government is actively considering measures to address delays and has created six additional posts of the judicial and technical members for NCLAT. Setting up Circuit Benches of NCLAT is under consideration.

3.59 As the implementation of the IBC progressed, other regulators and agencies carried out various amendments in their respective rules and regulations for effective implementation of the IBC. the Securities and Exchange Board of India amended its regulations with respect to minimum public shareholding, preferential issue of shares, delisting of companies, open offer requirements, etc. to enable smooth implementation of the resolution plan. Various requirements like audit committee, nomination and remuneration committee and stakeholder's relationship committee, etc. for listed companies, were relaxed. The Securities Contracts (Regulation) Rules, 1957 was amended to protect the interest of minority shareholders. It was provided that if the public shareholding falls below 25 per cent as a result of the approval of the resolution plan under the IBC, it shall be brought back to 25 per cent within three years. If public shareholding falls below 10 per cent, the same should be brought back to 10 per cent within 18 months. The RBI allowed the resolution applicants submitting resolution plans to raise external commercial borrowings from recognized lenders, for repayment of rupee term loans of the target company, under an approval route.

Impact of IBC

3.60 It is often difficult to tangibly measure the contribution of an efficient insolvency system in national prosperity. Direct measures of the impact tend to underestimate its importance as they may fail to account for the 'enabling' and 'preventive' role played by the insolvency system. While the sustainable impact of the IBC will be known in due course, green shoots have already emerged and some significant benefits of the IBC are visible.

A. Behavioural change

3.61 An effective exit law promotes responsible corporate behaviour by encouraging higher standards of corporate governance, including cash and financial

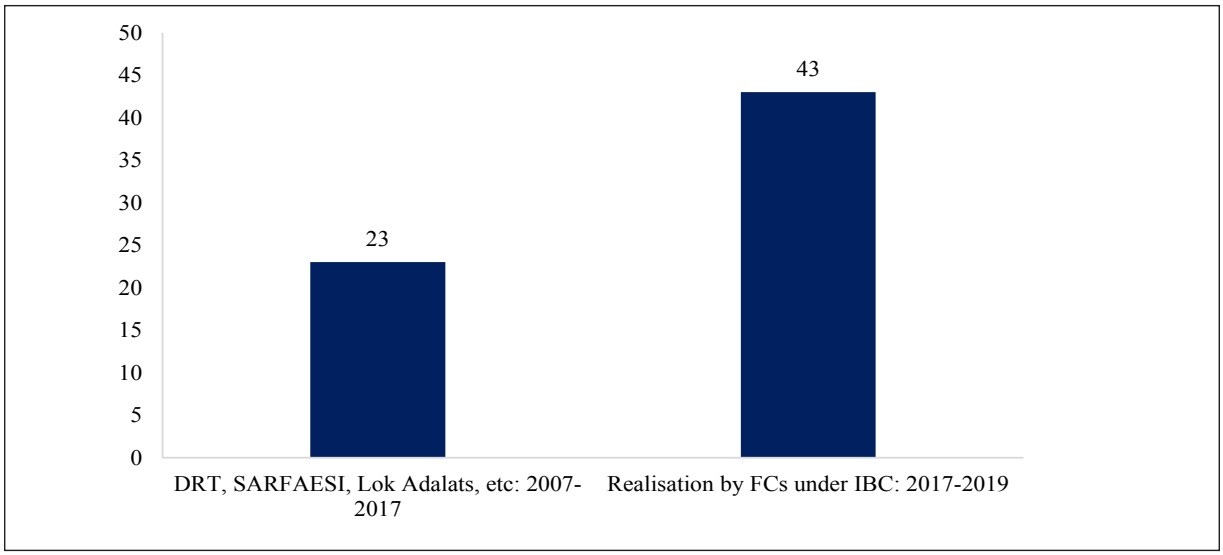
discipline, to avoid consequences of insolvency. The IBC has made a significant impact on the way the default of debts is viewed and treated by promoters and management. It has initiated a cultural shift in the dynamics between lender and borrower, promoter and creditor. The IBC has paved the way for Operational Creditors, mostly SMEs and small vendors to use the IBC as a recovery tool. The threat of promoters losing control of the company or protracted legal proceedings is forcing many corporate defaulters to pay off their debt even before the insolvency can be started. As on February 28, 2019, 6079 cases involving a total amount of ₹2.84 lakh crores have been withdrawn before admission under provisions of IBC (MCA). Further, as per RBI reports, ₹50,000 crore has been received by banks from previously non-performing accounts. RBI also reports that additional ₹50,000 crore has been "upgraded" from non-standard to standard assets. All these shows behavioural change for the wider lending ecosystem even before entering the IBC process.

3.62 Section 12A, inserted in the IBC in 2018 allows companies to withdraw CIRP proceedings with the consent of 90 per cent of FCs. In less than a year's time, nearly 5 per cent of admitted cases (91 cases) have been withdrawn under Section 12A indicating an acceptable resolution being proposed by the corporate borrower. Out of the above, about 65 per cent cases were withdrawn on account of full/partial settlement with creditors and/or applicant[12].

B. Increase in the resolution of stressed assets

3.63 Before enactment of the IBC, the recovery mechanisms available to the lenders were through Lok Adalat, Debt Recovery Tribunal, and SARFAESI Act. These mechanisms are recovery focused as compared to the IBC which aims at the turnaround of the debtor while maximizing returns for the creditors. Predictably, these earlier mechanisms have resulted in an average recovery of 23 per cent to lenders as against nearly 43 per cent under the IBC. A comparison of the realization under the IBC with previous regimes is provided in Figure 18.

Figure 18: Average recovery under various recovery regimes (in per cent)



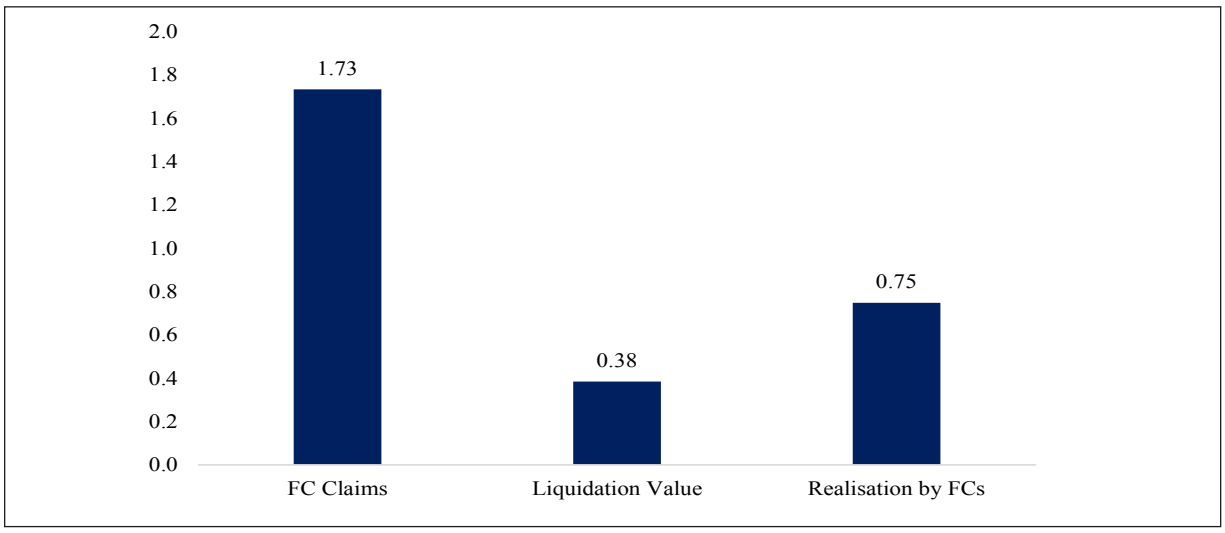
Sources: IBBI and RBI.

[12] IBBI Newsletter – March 2019.

3.64 Till March 31, 2019, the CIRP yielded a resolution of 94 cases which has resulted in the settlement of claims of FCs of ₹1,73,359 crore[13]. These cases include 6 out of 12 large accounts - insolvency resolution in respect of which was initiated by banks, as per directions of the RBI in 2017.

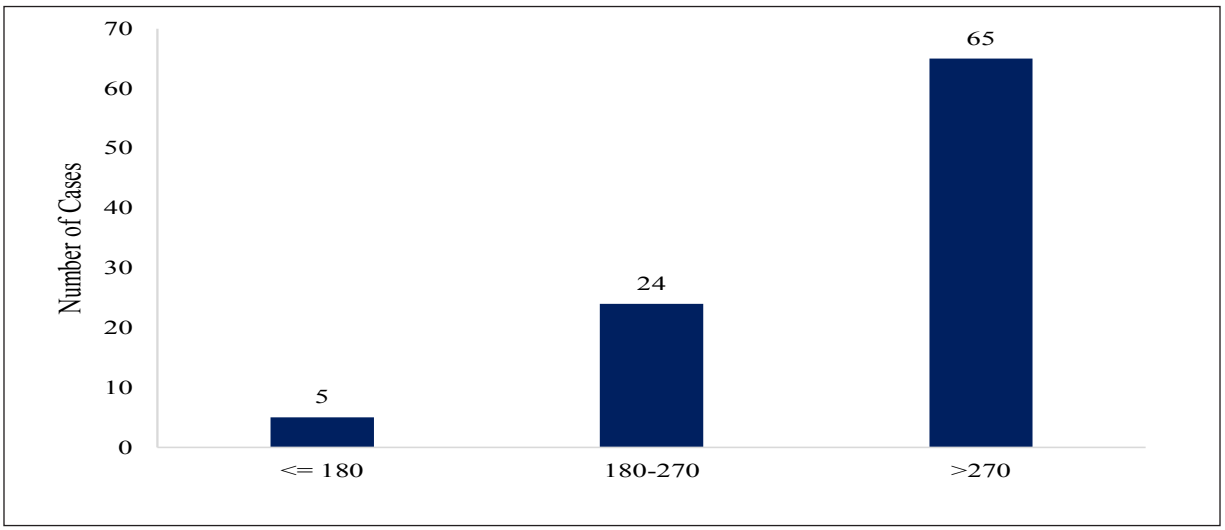
3.65 The overall recovery in case of resolved cases is nearly 43 per cent (₹74,497 crores) to FCs. This is 194 per cent of the liquidation value (₹38,443 crore). This realisation of 43 per cent of claims and 194 per cent of liquidation value is in addition to rescue of the defaulting CDs and preventing defaults. The realisation by FCs is presented in Figure 19. Out of the 94 CIRPs which ended with a resolution plan, the resolution plan for 65 cases was approved after 270 days. Figure 20 shows break up for resolution of the cases by duration.

Figure 19: Overall recovery by FCs in resolved cases (in ₹lakh crore)



Source: IBBI.

Figure 20: Number of days taken to approve resolution plan



Source: IBBI.

[13] IBBI Newsletter – March 2019.

3.66 As of March 2019, the CIRP for 378 companies ended in liquidation. The total claims on these liquidation cases are ₹2,57,634 crore. Of these, 283 companies were with BIFR or already defunct. The economic value of most of these companies had already eroded before they were admitted into CIRP. One of the key objectives of the IBC is to allow companies to be liquidated swiftly to maximize value if resolutions cannot be reached.

Achievements and Recognitions

3.67 As a concerted effort made in the enactment and implementation of the IBC, India improved its 'Resolving Insolvency' ranking from 134 in 2014 to 108 in 2019. This is a significant jump given that the country was stagnating in earlier position for many years. India won the Global Restructuring Review (GRR) award for the most improved jurisdiction in 2018. Financial Sector Assessment Program of IMF- World Bank in January 2018 observed: "India is moving towards a new state of the art bankruptcy regime. Making use of the recently enacted IBC, the RBI has identified several accounts that are non-performing and asked banks to follow up with NCLT for resolution/ insolvency in accordance with the time-bound process laid down in the Code. The move is expected to make a significant dent to the quantum of NPAs starting next year."

Research and Training

3.68 The future of the IBC lies greatly in the hands of young entrepreneurs, professionals, and scholars who will contribute to building a robust economic order through a dynamic insolvency framework. The government is in the process of creating a suitable architecture comprising programmes and institutions that will help in advancing this goal.

3.69 The IBBI has announced the launch of Graduate Insolvency Programme (GIP), the first of its kind, for those aspiring to take up the discipline of IPs as a career or other roles in the value chain. A student who completes the GIP will be eligible for registration as an IP, without having to wait to acquire the 10-year experience as required presently, thus opening job opportunities for the youth.

3.70 Research and constant review can identify how the framework will need to adapt to meet future challenges and help in robust policymaking. The Insolvency Research Foundation (IRF) has been established by the Indian Institute of Corporate Affairs (IICA), an autonomous body under the Ministry of Corporate Affairs, in partnership with SIPI- an industry think-tank-as an independent research centre. The Centre for Insolvency and Bankruptcy (CIB) has been set up at IICA to serve as an apex institute of learning, training, and development in the area of insolvency and its spheres of influence. Multiple Practice Chairs and Research Desks are being set up in CIB by the key stakeholders to help in deep thinking and future looking insolvency policy building for India.

Reforms in Pipeline

A. Cross Border Insolvency

3.71 In today's world, business and trade are increasingly international. Investors and companies frequently transact business in more than one sovereign jurisdiction. For investors, banks and companies alike, it is important to know what is going to happen when things go wrong from a financial perspective in a particular country. The UNCITRAL Model Law on Cross-Border Insolvency (Model Law) is the most widely accepted blueprint to effectively deal with cross-border insolvency issues while ensuring the least intrusion into each country's internal insolvency and bankruptcy laws. Most sophisticated economies have well-developed cross border

insolvency laws. India has initiated the steps to adopt the Model Law. A draft Bill has been placed in the public domain for discussion. Once enacted, the law will address the key tenets of cross border insolvency – access, recognition, relief, and cooperation by way of a comprehensive legislative and regulatory framework, and provide a fair, efficient, transparent and predictable mechanism to deal with cross border issues. Once enacted, the Model Law will help in increased foreign investment.

B. Group Insolvency

3.72 It is a common practice for commercial ventures to operate through groups of entities and for each entity in the group to have a separate legal personality. As long as a group of companies remains solvent, the fact the business is formally divided into several corporations is a non-issue. However, if one or more of the companies in the group become insolvent, treatment of such company or companies as separate legal personality or personalities raises a number of complex issues. Presently, the insolvency of different companies belonging to the same group is dealt with through separate insolvency proceedings for each company. A coherent approach can address information asymmetry, provide coordination and prevent delay and clogging up of insolvency infrastructure.

3.73 Recognising the need for a legal framework to deal with insolvency of group companies, the IBBI has recently set up a working group under former SEBI Chairman Mr. U. K. Sinha to recommend a complete regulatory framework to facilitate insolvency resolution and liquidation of debtors in a corporate group.

C. Insolvency and bankruptcy of individuals

3.74 Implementing insolvency law for individuals and partnership firms poses distinct challenges. The dynamics, conditions, and factors involved in the insolvency and bankruptcy of individuals without business interest and individuals who have extended the personal guarantee to corporate debtors or carry out business activities through partnership firms or proprietorship firm are likely different. Individuals with business are likely to behave in a way consistent with the classical economic ideals on which business insolvency systems are founded. On the other hand, the behaviour of individuals without business interest is expected to be somewhat informal.

3.75 Recognising the complexities involved, a Working Group under the chairmanship of Mr. P. K. Malhotra, former law secretary, has been set up by the IBBI to recommend the strategy and approach for implementation of the provisions of IBC dealing with insolvency and bankruptcy of individuals. The IBC was amended to provide three classes of individuals -individuals who have executed personal guarantees for corporate debtors; individuals who are engaged in economic activities through proprietorship and partnership firms; and other individuals.

3.76 While insolvent individuals face a shared core of key issues, the majority of insolvency and bankruptcy proceedings involving individuals may not involve contentious issues, voluminous stakeholders, and high amount of debt or disputes which might well be more efficiently resolved with the intervention and assistance of a trained cadre of mediators. Mediation and counselling are known practices prevalent in most sophisticated jurisdictions. Similarly, counselling is a critical component of individual bankruptcy. The Working Group is presently considering measures to provide easier access and reduce the time and cost of insolvency proceedings relating to individuals.

D. Improving NCLT capacity

3.77 While 32 Members have been appointed to the NCLT recently and 6 additional posts have been sanctioned for NCLAT, the capacity of the NCLT and NCLAT will have to review from time to time and necessary infrastructure support provided. A centralized research wing can assist NCLT to stay abreast with the international best practices. This will be more crucial with the enactment of the Model Law. Although technology is being used to an extent by the NCLT and the IBBI, it is crucial to advance the application of technology to enhance case management by the NCLT for strict timekeeping of insolvency cases. Technology can also be used for data mining and analysis for constant review of the IBC impact on the ground. IPs should be encouraged to use technology to speed up data collection and access for the purpose of efficient CIRP.

CHAPTER AT A GLANCE

- Monetary policy witnessed a u-turn over the last year as the benchmark policy rate was first hiked by 50 bps and later reduced by 75 bps due to weaker-than-anticipated inflation, growth slowdown and softer international monetary conditions.
- Liquidity conditions, however, have remained systematically tight since September 2018 (as illustrated by the LAF data) thereby impacting the yields on government papers.
- The performance of the banking system has improved as NPA ratios declined and credit growth accelerated.
- However, financial flows to the economy remained constrained because of decline in the amount of equity finance raised from capital markets and stress in the NBFC sector. Capital mobilized through public equity issuance declined by 81 per cent in 2018-19. Credit growth rate y-o-y of the NBFCs have declined from 30 per cent in March 2018 to 9 per cent in March 2019.
- The ecosystem for insolvency and bankruptcy is getting systematically built out with recovery and resolution of significant amount of distressed assets as well as palpably improved business culture. Till March 31, 2019, the CIRP yielded a resolution of 94 cases which has resulted in the settlement of claims of FCs of ₹1,73,359 crore.
- Moreover, as on February 28, 2019, 6079 cases involving a total amount of ₹2.84 lakh crores have been withdrawn before admission under provisions of IBC. Further, as per RBI reports, ₹50,000 crore has been received by banks from previously non-performing accounts. RBI also reports that additional ₹50,000 crore has been "upgraded" from non-standard to standard assets. All these shows behavioural change for the wider lending ecosystem even before entering the IBC process.

Prices and Inflation

04
CHAPTER

"The Superintendent of Commerce shall ascertain demand or absence of demand for, and rise or fall in the price of, various kinds of merchandise which may be the products either of land or of water and which may have been brought in either by land or by water path. He shall also ascertain the time suitable for their distribution, centralisation, purchase, and sale."

- Kautilya's Arthasástra, Chapter XVI, 'the Superintendent of Commerce,' in Book II, 'The Duties of Government Superintendents.'

During FY 19 headline (CPI-C) inflation continued its downward trajectory on the back of low food inflation. Core inflation which was above 6 per cent in the six out of first seven months of FY 19 started moderating November onwards. Services and goods are trending differently. Rural inflation moderated but urban inflation rose in 2018-19 over the previous year. States too witnessed decline in inflation during the year.

INTRODUCTION

4.1 The economy witnessed a gradual transition from a period of high and variable inflation to more stable and low level of inflation in the last five years. Headline inflation based on the Consumer Price Index – Combined (CPI-C) has been declining continuously for the last five years. Headline CPI inflation declined to 3.4 per cent in 2018-19 from 3.6 per cent in 2017-18, 4.5 per cent in 2016-17, 4.9 per cent in 2015-16 and 5.9 per cent in 2014-15. It stood at 2.9 per cent in April 2019 as compared to 4.6 per cent in April 2018. Food inflation based on Consumer Food Price Index (CFPI) declined to a low of 0.1 per cent during the financial year (FY) 2018-19.

4.2 Inflation based on Wholesale Price Index (WPI) remained moderate at 3.0 per cent in 2017-18 compared to 1.7 per cent in 2016-17, (-)3.7 per cent in 2015-16 and 1.2 per cent in 2014-15. During the FY 2018-19, WPI inflation stood at 4.3 per cent. Inflation based on the major series of the price indices for the last seven years are given in Table 1 and the movement of WPI and CPI inflation since April 2014 is displayed in Figure 1.

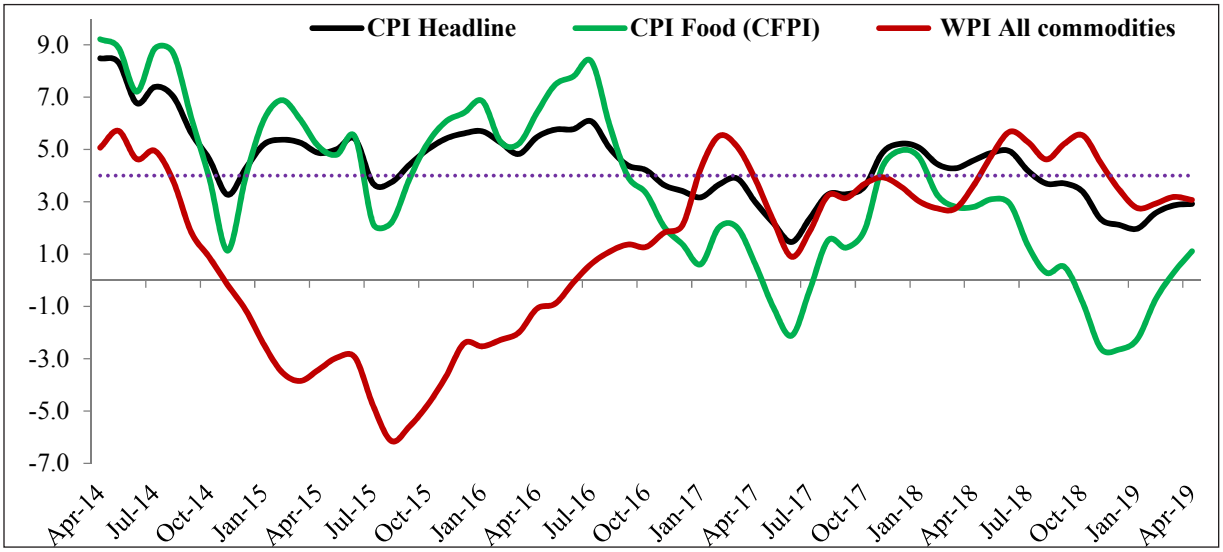
Table 1: General inflation based on different price indices (in per cent)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
WPI	6.9	5.2	1.2	-3.7	1.7	3.0	4.3 (P)
CPI - C	9.9	9.4	5.9	4.9	4.5	3.6	3.4
CPI - IW	10.4	9.7	6.3	5.6	4.1	3.1	5.4
CPI - AL	10.0	11.6	6.6	4.4	4.2	2.2	2.1
CPI - RL	10.2	11.5	6.9	4.6	4.2	2.3	2.2

Source: Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade (DPIIT) for WPI, Central Statistics Office (CSO) for CPI-C and Labour Bureau for CPI-IW, CPI-AL and CPI-RL.

Note: CPI-C inflation for 2012-13 and 2013-14 is based on old series 2010=100; (P) - Provisional; C stands for Combined, IW stands for Industrial Workers, AL stands for Agricultural Labourers and RL stands for Rural Labourers.

Figure 1: Inflation based on WPI and CPI (in per cent)



Source: Computed from CSO and Office of the Economic Adviser, DPIIT data

CURRENT TRENDS IN INFLATION

4.3 The average CPI-C headline inflation declined to 3.4 per cent in 2018-19, which is the lowest average since the new series of CPI-C began. Headline CPI-C inflation has remained below 4.0 per cent for two consecutive years. The decline in the inflation in the FY 2018-19 was mainly due to low food inflation which ranged between (-)2.6 to 3.1 per cent. The moderate inflation rate of less than 4 per cent was maintained for straight 8 months during the FY 2018-19 (Figure 1). The CPI-C inflation for the month of April 2019 stood at 2.9 per cent same as in March 2019 as compared to 4.6 per cent in April 2018.

4.4 **Food Inflation** in the country has been extremely benign. Even globally, food inflation has been moderate. Food inflation

based on Consumer Food Price Index (CFPI) declined to 1.8 per cent in 2017-18 from 4.2 per cent in 2016-17, 4.9 per cent in 2015-16 and 6.4 per cent in 2014-15. Average food inflation for the financial year 2018-19 declined to a low of 0.1 per cent. Food inflation stood at 1.1 per cent in April 2019 compared to 0.3 per cent in March 2019 and 2.8 per cent in April 2018. The food deflation in the second half of FY 2018-19 is mainly due to deflation in vegetables, fruits, pulses and products, sugar & confectionery and eggs, which together account for 13.1 per cent weight in overall CPI-C. Vegetables, which account for 6.04 per cent weightage in overall CPI-C, recorded deflation of 5.2 per cent during 2018-19. Pulses and products, which account for 2.4 per cent weightage, too recorded deflation during FY 2018-19 at 8.3 per cent. Volatility in prices of pulses has been low. Amongst pulses, Moong has seen the least price fluctuation (Figure 2).

4.5 Food inflation based on Wholesale Price Index too declined over the last two financial years. It was over 0.6 per cent in 2018-19. The decline in WPI food inflation during 2018-19 is mainly due to deflation in pulses, vegetables, fruits and sugar, which together account for 5.2 per cent weight in the overall WPI basket. WPI food inflation was at 4.9 per cent in April 2019 as compared to 3.9 per cent in March, 2019 and 0.8 per cent in April 2018.

Table 2: Inflation in selected groups of CPI-Base 2012 (in per cent)

Description	Weights	2017-18	2018-19	Apr-18	Mar-19	Apr-19 (P)
All Groups	**100**	**3.6**	**3.4**	**4.6**	**2.9**	**2.9**
CFPI*	***39.1***	***1.8***	***0.1***	***2.8***	***0.3***	***1.1***
Food & beverages	***45.9***	***2.2***	***0.7***	***3.0***	***0.7***	***1.4***
Cereals & products	9.7	3.5	2.1	2.6	1.2	1.2
Meat & fish	3.6	3.2	4.0	3.6	6.5	7.5
Egg	0.4	3.6	2.3	6.2	1.4	1.9
Milk & products	6.6	4.1	1.8	3.2	0.8	0.4
Oils & fats	3.6	1.6	2.1	2.2	1.1	0.7
Fruits	2.9	4.6	2.3	9.7	-5.9	-4.9
Vegetables	6.0	5.8	-5.2	7.5	-1.5	2.9
Pulses & products	2.4	-21.0	-8.3	-12.3	-2.2	-0.9
Sugar & confectionery	1.4	6.1	-7.0	-4.1	-6.1	-4.0
Fuel & Light	**6.8**	**6.2**	**5.7**	**5.2**	**2.3**	**2.6**
CPI excl. food and fuel group (Core)	***47.3***	***4.6***	***5.8***	***6.1***	***5.1***	***4.5***

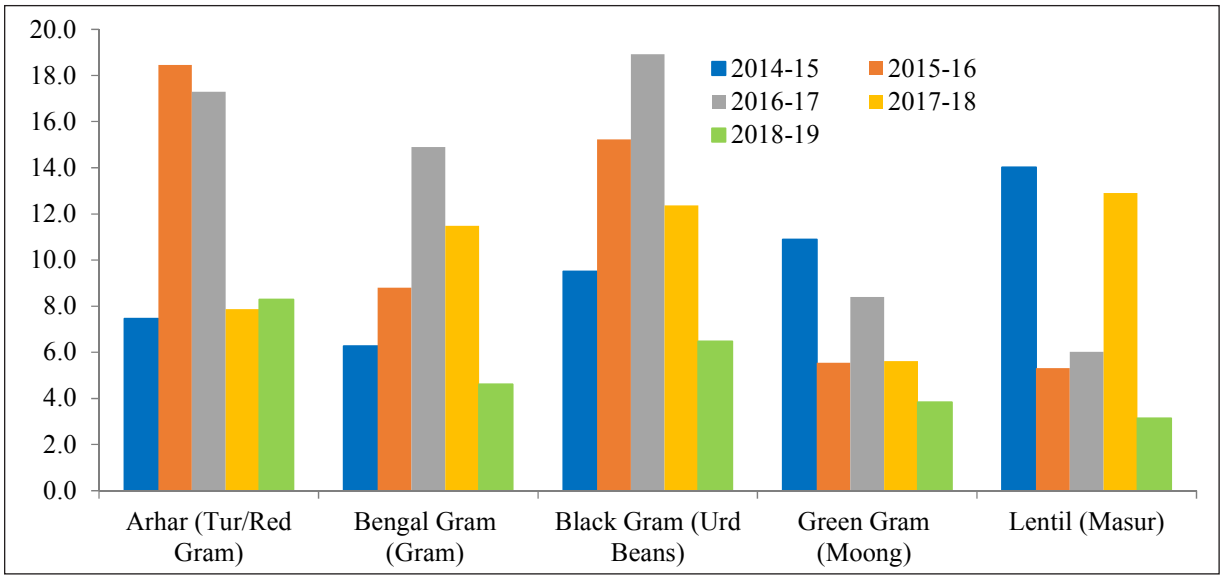
Source: CSO P: Provisional * Consumer Food Price Index

Table 3: Inflation in selected groups of WPI- Base 2011-12 (in per cent)

	Weight	2017-18	2018-19	Apr-18	Mar-19 (P)	Apr-19 (P)
All Commodities	**100**	**3.0**	**4.3**	**3.6**	**3.2**	**3.1**
Food Index	**24.4**	**1.9**	**0.6**	**0.8**	**3.9**	**4.9**
Food articles	***15.3***	***2.1***	***0.4***	***0.9***	***5.7***	***7.4***
Cereals	2.8	0.3	5.5	0.2	8.9	8.4
Pulses	0.6	-27.1	-9.4	-22.5	10.6	14.3
Vegetables	1.9	18.8	-8.2	-0.4	28.1	40.6
Fruits	1.6	5.0	-1.7	19.4	-7.6	-6.9
Milk	4.4	4.0	2.4	2.5	1.8	1.5
Egg, meat & fish	2.4	2.0	1.7	-2.0	5.9	6.9
Food products	***9.1***	***1.6***	***1.0***	***0.6***	***0.5***	***0.6***
Edible oils	2.6	2.2	7.5	11.2	-2.4	-5.0
Sugar	1.1	3.4	-10.7	-15.6	-2.2	5.1
Fuel & power	**13.2**	**8.1**	**11.6**	**8.0**	**5.4**	**3.8**
Non-Food manufactured products (Core)	***55.1***	***3.0***	***4.2***	***3.8***	***2.5***	***1.9***

Source: Office of the Economic Adviser, DPIIT P: Provisional

Figure 2: Coefficient of variation of wholesale price of pulses (in per cent)

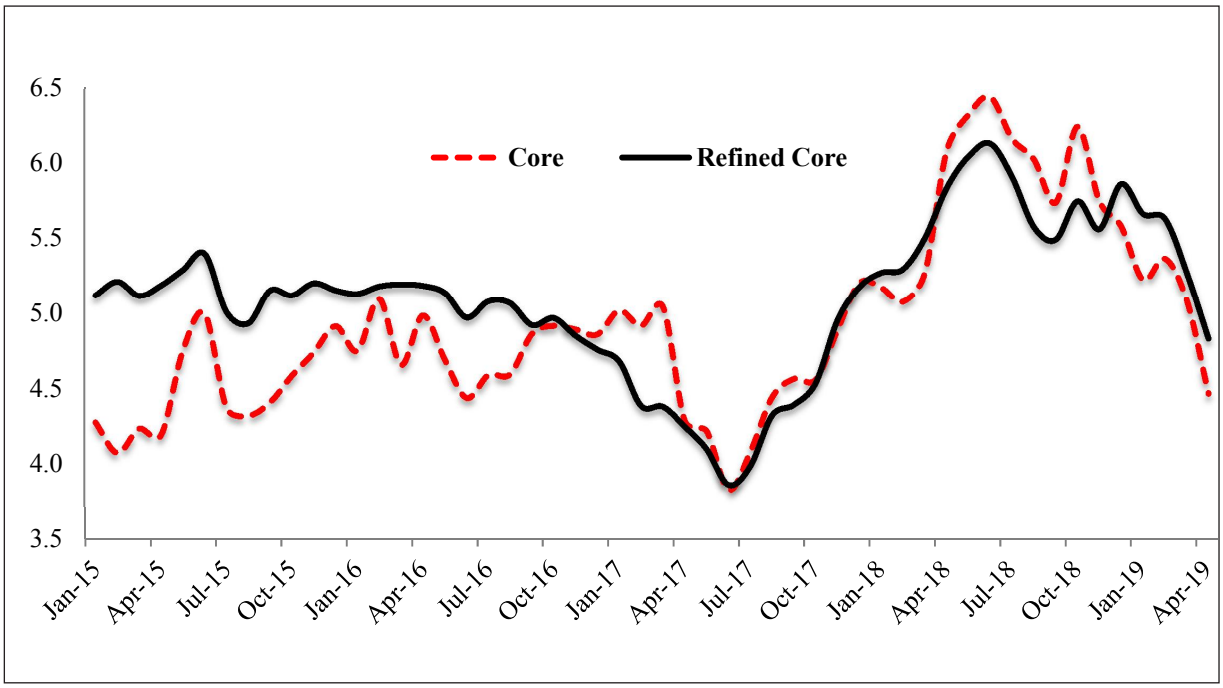


Source: Computed from Agmarknet data

4.6 **Core Inflation** corresponds to the component of inflation that is likely to continue for a long period. Thus, core inflation captures the underlying trend of inflation and is, therefore, more stable. Unlike the non-core component of inflation, core inflation is not affected by temporary shocks. In India, core inflation is generally measured by excluding highly volatile components from the headline inflation. By their very nature, food and fuel have been highly volatile. Therefore, we arrive at core inflation by removing food and fuel components from the headline inflation. As headline inflation exhibits volatility due to short run shocks, Central banks in many countries focus on core inflation.

4.7 CPI-C based core inflation, which equals CPI excluding the food and fuel group, has remained above 4 per cent since the start of new series of CPI-C. Core inflation based on CPI-C increased to 5.8 per cent in 2018-19 from 4.6 per cent in 2017-18. However, it has declined from 5.7 per cent in November 2018 to 4.5 per cent in April 2019 (Figure 3). Refined core inflation, which equals CPI excluding food and fuel group, petrol & diesel, too has moved closely with core inflation; it was 5.7 per cent in 2018-19 as compared to 4.6 per cent in 2017-18 and stood at 4.8 per cent in April 2019.

Figure 3: CPI-C based Core Inflation (in per cent)

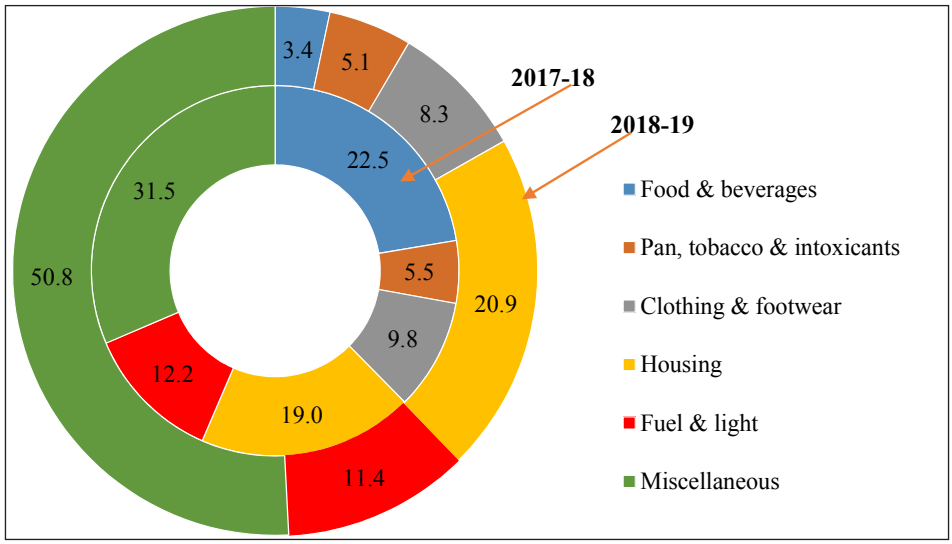


Source: Computed from CSO data

DRIVERS OF INFLATION

4.8 At the all India level, CPI-C inflation during FY 2018-19 was driven mainly by miscellaneous group followed by housing as well as fuel and light group (Figure 4). As can be seen in Figure 5, goods inflation, which accounts for a weight of 76.6 per cent in CPI-C, was 2.6 per cent during FY 2018-19 as compared to 3.2 per cent during FY 2017-18. In contrast, services inflation, which accounts for a weight of 23.4 per cent, was 6.3 per cent during FY 2018-19 when compared to 5.0 per cent during 2017-18.

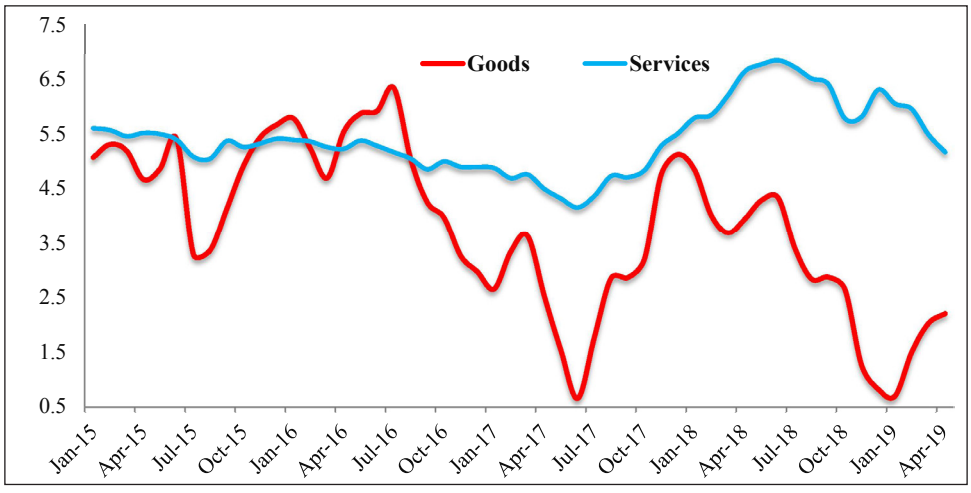
Figure 4: Contribution to CPI - Combined inflation 2017-18 and 2018-19 (Share in per cent)



Source: Computed from CSO data

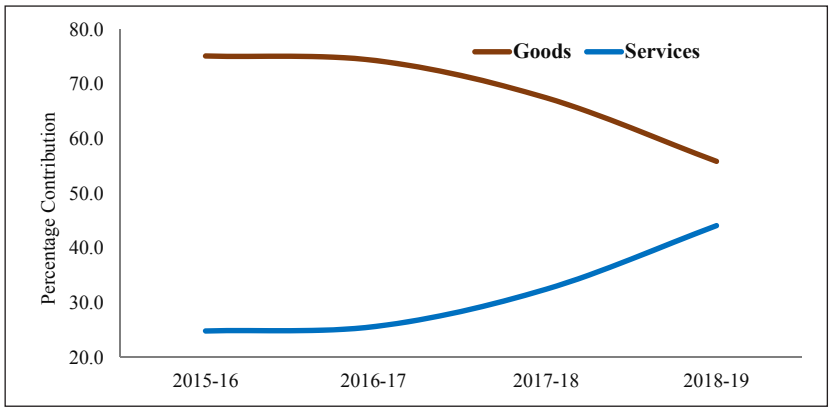
4.9 Services inflation has been higher than goods inflation and the gap between the two is growing (Figure 5). In recent times, services inflation has influenced headline inflation as it has contributed more than its weight (Figure 6). 40 items of services account for 23.37 per cent weight in CPI-C. Housing has the highest weight amongst services which is (10.07 per cent), followed by transport and communication (4.59 per cent), education (3.51 per cent) and health (1.82 per cent) (Table 4). Contribution of health, education, transport and communication in driving services inflation has gained prominence across rural and urban areas (refer to Figures 7 to 11). Inflation in health is more prominent in rural than urban areas probably owing to supply side constraints. Box 1 presents the inflation dynamics of education, health and transport components of services.

Figure 5: CPI inflation in goods and services (in per cent)



Source: Computed from CSO data

Figure 6: Contribution of Goods and Services in Headline CPI Inflation



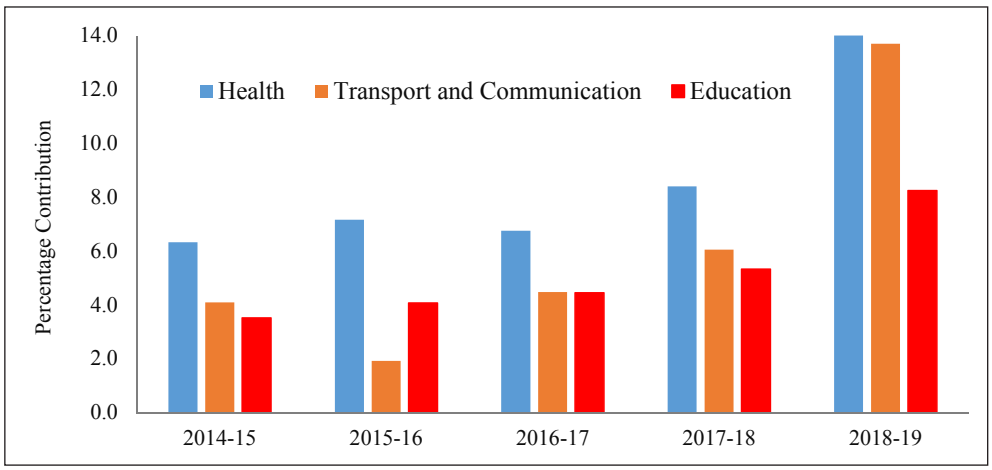
Source: Computed from CSO data

Table 4: Break up of CPI-C in Goods and Services by 'weight' and 'items'

	Total		Goods		Services	
Description	Weight	Item	Weight	Item	Weight	Item
Housing	10.07	4			10.07	4
Transport and communication	8.59	21	4.00	8	4.59	13
Education	4.46	5	0.95	2	3.51	3
Health	5.89	7	4.07	3	1.82	4
Recreation and amusement	1.68	17	0.59	9	1.10	8
Household goods and services	3.80	48	2.93	44	0.88	4
Personal care and effects	3.89	16	3.34	15	0.55	1
Clothing	5.58	22	5.06	20	0.51	2
Cereals and products	9.67	20	9.35	19	0.32	1
Others	46.37	139	46.34	139	-	-
All Groups	100	299	76.63	259	23.37	40

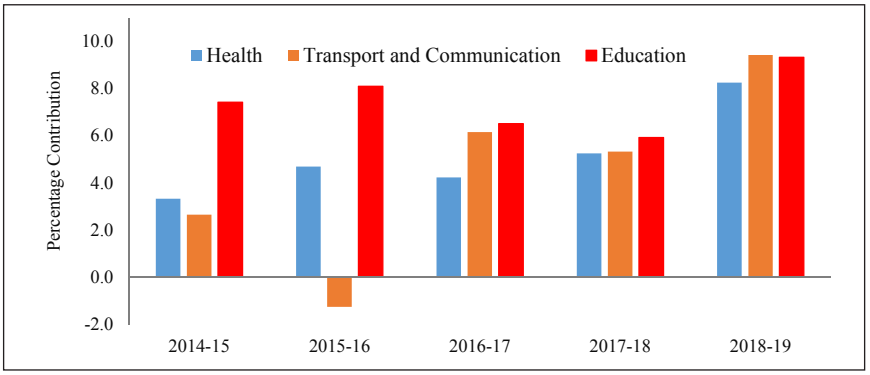
Source: Compiled from CSO data

Figure 7: Percentage Contribution of Health, Education and Transport & Communication in CPI-Rural inflation



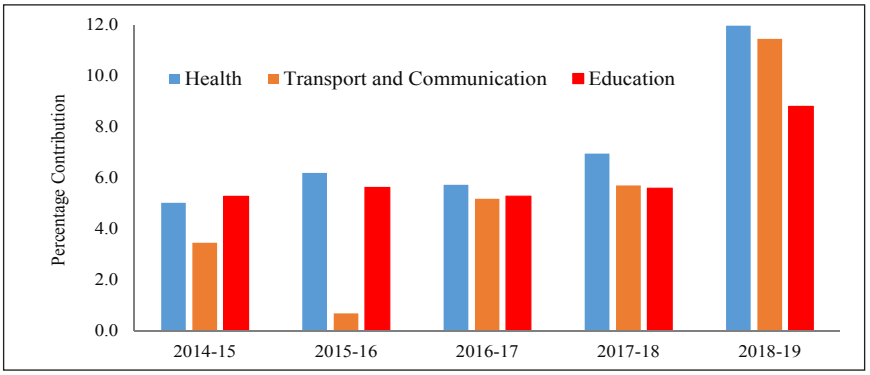
Source: Computed from CSO data

Figure 8: Percentage Contribution of Health, Education and Transport & Communication in CPI-Urban inflation



Source: Computed from CSO data

Figure 9: Percentage Contribution of Health, Education and Transport & Communication in CPI-Combined inflation



Source: Computed from CSO data

RURAL – URBAN INFLATION

4.10 The current phase of low inflation is also marked by reduction in both urban and rural inflation. However, the trend of lower urban inflation when compared to rural inflation seems to be getting moderated/ reversed in the financial year 2018-19. The decline in rural inflation is steeper than that of urban inflation since July 2018, resulting in decline in headline inflation. Fall in rural inflation is due to moderation in food inflation, which has been negative for the last six months (October 2018 to March 2019). The importance of food in determining rural inflation has been declining over the years. In contrast, the role of miscellaneous category i.e. services in determining rural inflation has increased (Figure 10).

4.11 Miscellaneous group was the main driver of CPI (Rural) inflation in 2018-19, contributing more than 70 per cent to the overall rural inflation. In urban areas, miscellaneous group and housing have contributed to inflation in equal measure during FY 2018-19 (Figure 11).

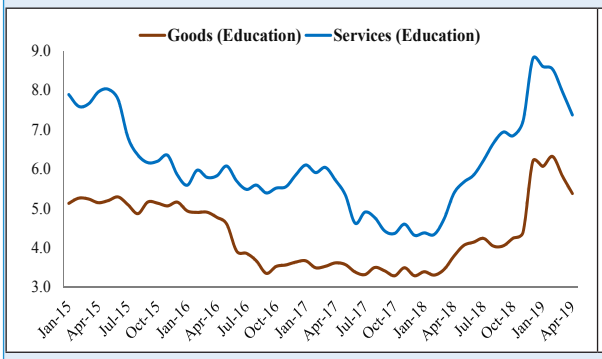
Box 1: Analysis of Components of Services inflation

I. Education

Education with weight of 4.46 per cent in the Combined CPI is spread over 5 items. Of these five items, two items i.e. 'books, journals: first hand' and 'stationery, photocopying charges' are goods with weight of 0.95 per cent. The remaining three items i.e. 'tuition and other fees (school, college, etc.)', 'private tutor/ coaching centre' and 'other educational expenses (incl. fees for enrollment in web-based training)' with weight of 3.51 per cent belong to services. Analysis of monthly Combined CPI data since January 2015 shows that goods components are witnessing lower inflation than the services (Figure 1). Inflation of 'private tutor/ coaching centers' and 'tuition and other fees (school, college, etc)' has risen during 2018-19.

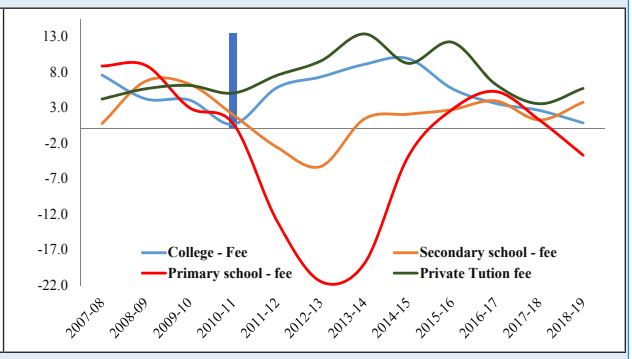
To analyze the inflation dynamics of 'education' sub-group over a longer period, we have used the CPI for Industrial Workers. Figure 2 below depicts the services component of education sub-group under CPI-IW. Inflation of 'primary school-fee' started declining from 2010-11 and bottomed out at (-)21.5 per cent in 2012-13. Secondary school-fee also shows decline in inflation during the period from 2009-10 to 2012-13. As opposed to 'school fee' which declined or rose marginally during 2009-10 to 2014-15, 'college fee' and 'private tuition fee' rose during this period. In recent years, these components of education have seen moderate inflation. The sharp decline in 'primary school-fee' inflation may be possibly due to the enactment of Right to Education Act (RTE) in 2010.

Figure 1: Inflation based on CPI-C for Education Sub-group by goods & services (in per cent)



Source: Computed from CSO data

Figure 2: Inflation based on CPI-IW for items under Education, Recreation & Amusement Sub-group (in per cent)



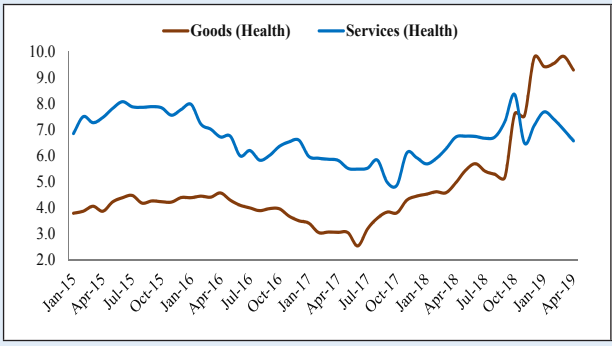
Source: Computed from Labour Bureau data

II. Health

Health with weight of 5.89 per cent in the Combined CPI is spread over seven items. Of these seven items, three items i.e. 'medicine (non-institutional)', 'family planning devices' and 'spectacles' are goods with weight of 4.07 per cent. The remaining four items i.e. 'hospital & nursing home charges', 'other medical expenses (non-institutional)', 'doctor's/ surgeon's fee-first consultation (non-institutional)' and 'X-ray, ECG, pathological test, etc. (non-institutional)' with weight of 1.82 per cent belong to services.

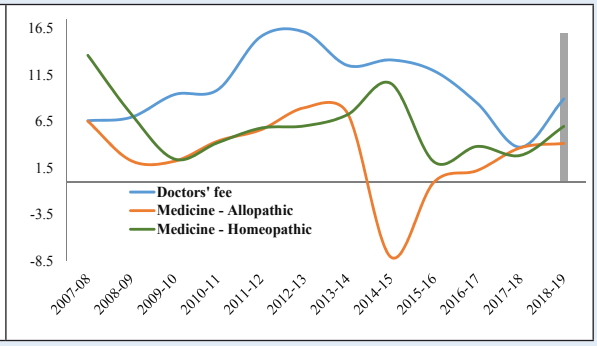
Services components of health are witnessing higher inflation than the goods embedded into it. However, in the last few months, trend seems to have reversed (Figure 3).

Figure 3: Inflation based on CPI-C for Health Sub-group by goods & services (in per cent)



Source: Computed from CSO data

Figure 4: Inflation based on CPI-IW for items under Medical Care Sub-group (in per cent)



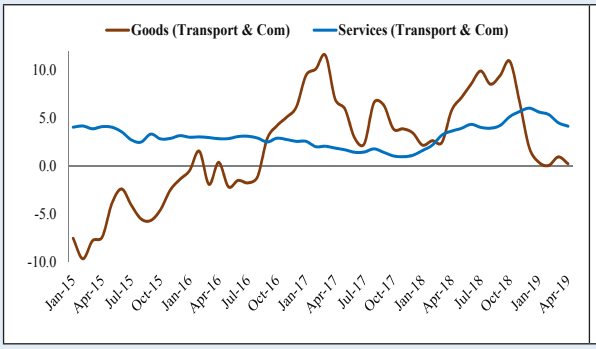
Source: Computed from Labour Bureau data

III. Transport and Communication

Transport and Communication, with a weight of 8.59 per cent in the Combined CPI, is spread over twenty-one items. Of these twenty-one items, eight items i.e. 'motor car, jeep', 'motor cycle, scooter', 'bicycle (without accessories)', 'tyres & tubes', 'petrol for vehicle', 'diesel for vehicle', 'lubricants & other fuels for vehicle' and 'mobile handset' are goods with weight of 4.0 per cent. The remaining thirteen items i.e. 'other conveyance expenses', 'railway fare', 'bus/tram fare', 'taxi, auto-rickshaw fare', 'rickshaw (hand drawn & cycle) fare', 'horse cart fare', 'school bus, van, etc.', 'air fare (normal): economy class (adult)', 'steamer, boat fare', 'porter charges', 'telephone charges: landline', 'telephone charges: mobile' and 'internet expenses' with weight of 4.59 per cent belong to services.

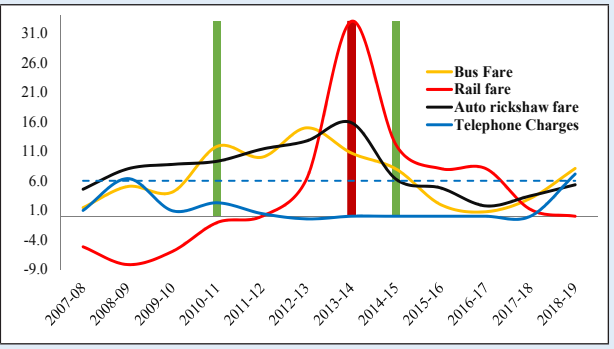
Within 'transport & communication', on an average, services components are witnessing higher inflation than goods. However, volatility is more for goods than for services (Figure 5). Analysis of CPI-IW data indicates that inflation of 'telephone charges' has remained quite stable over the years (Figure 6). Inflation for 'bus fare' and 'auto rickshaw fare' remained above 6 per cent between FY 2009-10 to 2014-15 mainly due to high oil prices. The fall in inflation of 'bus fare' and 'auto rickshaw fare' since 2014-15 onwards can be attributed to moderation in crude oil prices and deregulation of diesel prices in October 2014. The sudden rise in inflation of 'rail fare' in 2013-14 is due to a steep rise in rail fare.

Figure 5: Inflation based on CPI-C for Transport & Communication Sub-group by goods & services (in per cent)



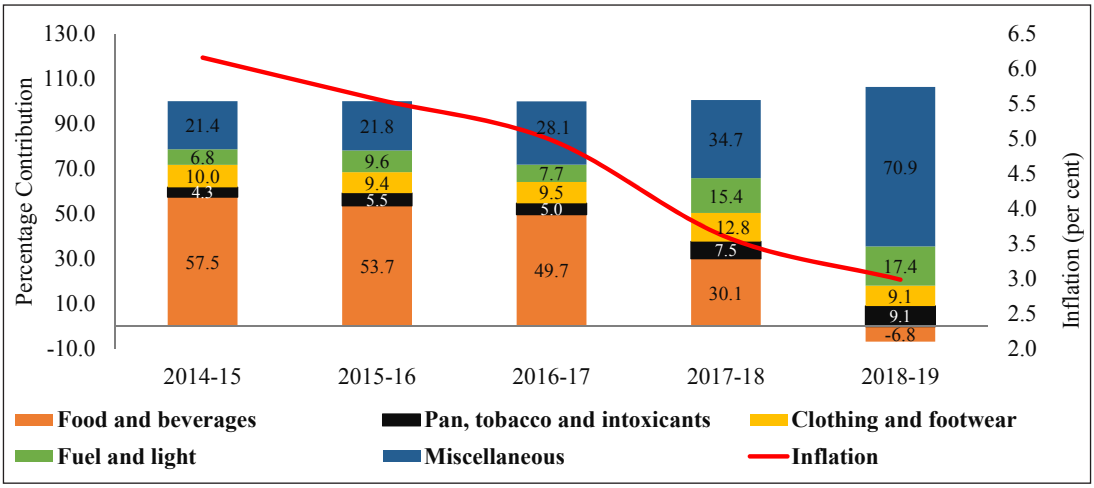
Source: Computed from CSO data

Figure 6: Inflation based on CPI-IW for items under Transport & Communication Sub-group (in per cent)



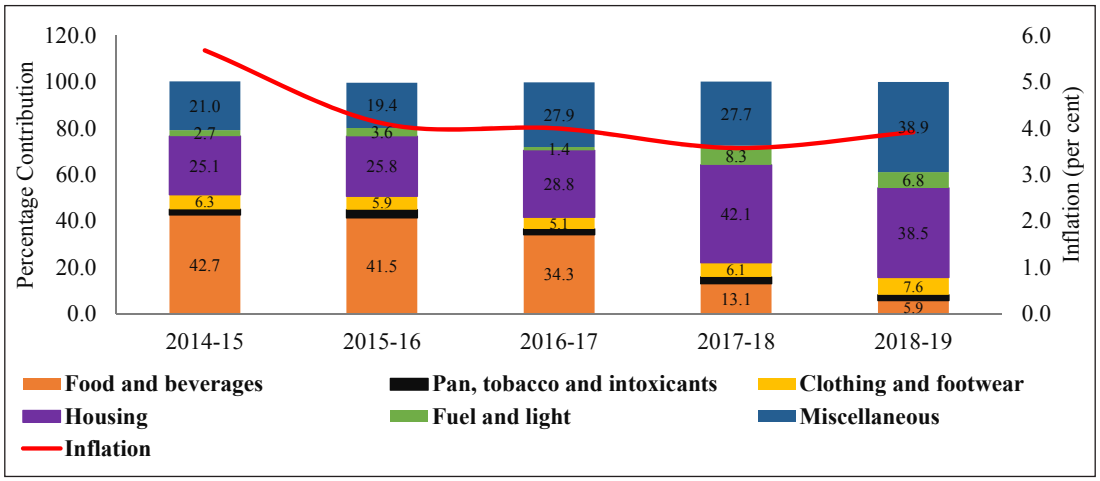
Source: Computed from CSO data

Figure 10: Contribution of different groups in CPI - Rural Inflation



Source: Computed from CSO data

Figure 11: Contribution of different groups in CPI - Urban Inflation



Source: Computed from CSO data

Box 2: Housing Price Index

I. NHB RESIDEX

The Housing Price Indices (HPIs) are a broad measure of movement of residential property prices observed within a geographical boundary. The first official housing price index for the country named 'NHB RESIDEX' was launched in July 2007 by the National Housing Bank. Over time, the base year has been revised to FY 2017-18 to capture the latest information and to accurately reflect the current economic situation in the country.

Currently, National Housing Bank publishes NHB RESIDEX for 50 cities on a quarterly basis with FY 2017-18 as the base year. Among the 50 cities covered are 18 State/UT capitals and 33 are part of the smart city list released by Government of India. The indices are computed using the Laspeyres methodology and a four quarter weighted moving average.

HPI at Assessment Prices is computed using lenders' valuation data received from Banks/ Housing Finance Companies (HFCs), while HPI at Market Prices for under construction properties is based on primary market data for under construction properties collected from developers, builders and brokers. NHB also publishes Composite HPI at Assessment and Market Prices based on 50 cities indices. The composite indices are derived by applying population weights to city level indices.

The rate of growth in housing prices for Composite HPI at Assessment Prices is shown in Figure 1. Figure 2 shows the trend in housing prices for under construction properties at market prices.

Figure 1: Growth rate based on Composite HPI at Assessment Prices (in per cent)

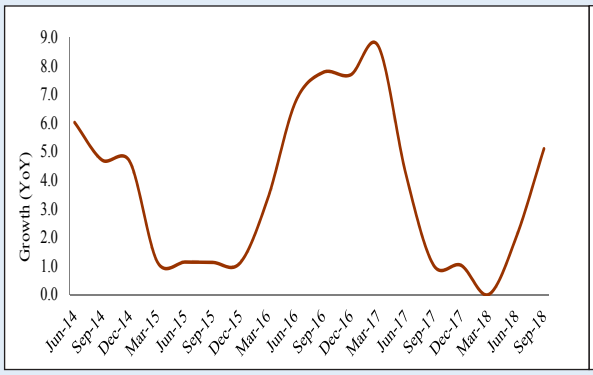
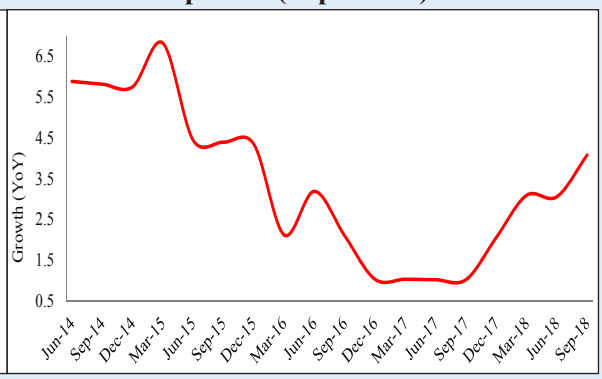


Figure 2: Growth rate based on Composite HPI at Market Prices for Under Construction Properties (in per cent)



II. HPI (RBI)

The Reserve Bank of India (RBI) began compiling a House Price Index (HPI) in 2007 with a quarterly HPI for Mumbai city (Base 2002-03=100). Since then, it has extended its coverage to nine more cities, revised its base to 2010-11=100, and started publishing a composite All India HPI. RBI's quarterly HPI is based on transactions data received from housing registration authorities in ten major cities. Growth (YoY) in housing prices shows a downward trend (refer to Figure 3).

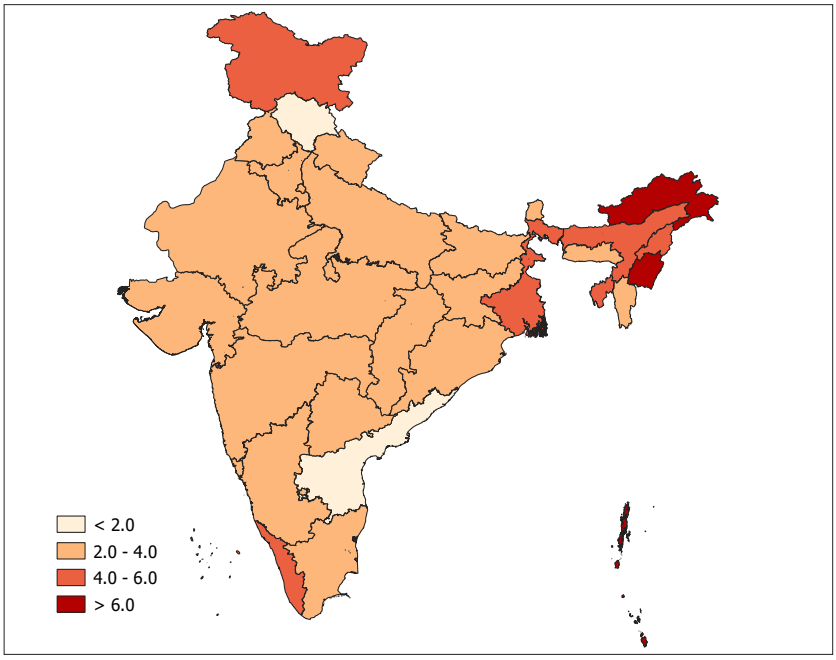
Figure 3: HPI Growth rate based on RBI's All-India HPI (in per cent)

STATE-WISE INFLATION

4.12 Many States have witnessed fall in CPI inflation during 2018-19. Inflation in twenty-three States/Union Territories (UTs) was below 4 per cent in FY 2018-19 (Figure 12). Inflation ranged between (-)1.9 per cent to 8.9 per cent across States in FY 2018-19 compared to 1.5 per cent to 12.4 per cent in FY 2017-18 (Figure 13). Sixteen States/UTs had inflation rate lower than All India average for FY 2018-19 with Daman & Diu having the lowest inflation followed by Himachal Pradesh and Andhra Pradesh.

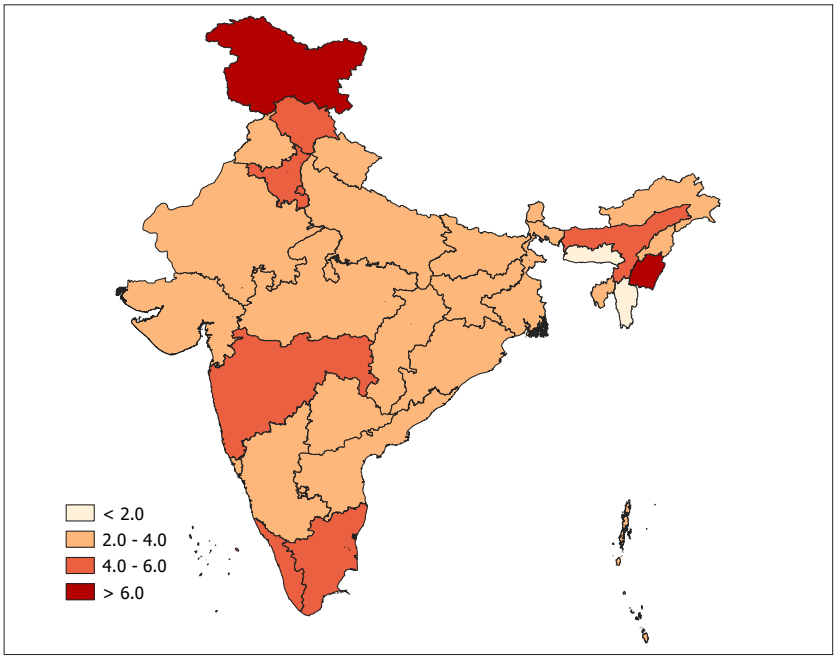
4.13 In rural areas, among major States/ UTs, sixteen States had recorded inflation of less than 4 per cent in FY 2018-19 as compared to thirteen in FY 2017-18 (Figure 14). However, in the case of urban areas, nine States recorded inflation of less than 4 per cent in FY 2018-19 as against fifteen in 2017-18 (Figure 15).

Figure 12: CPI inflation 2018-19 (in per cent)



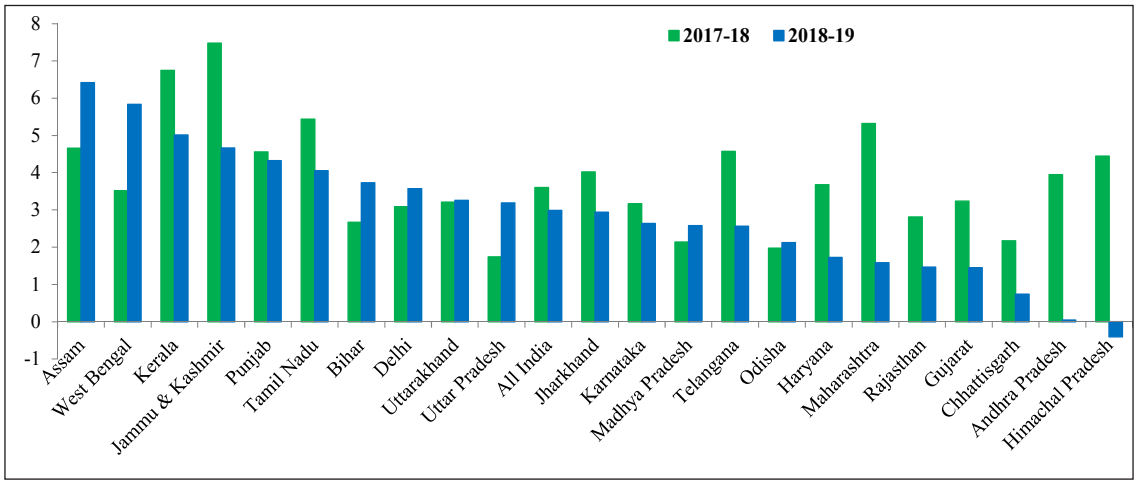
Source: Computed from CSO data

Figure 13: CPI inflation 2017-18 (in per cent)



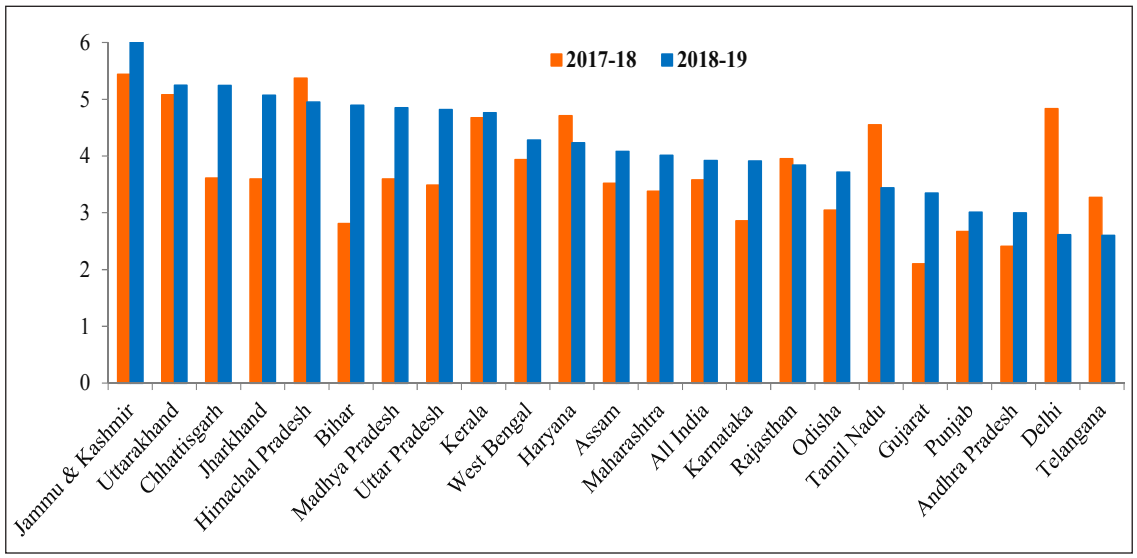
Source: Computed from CSO data

Figure 14: CPI (Rural) Inflation for Major States/ Union Territories (in per cent)



Source: Computed from CSO data

Figure 15: CPI (Urban) Inflation for Major States/ Union Territories (in per cent)

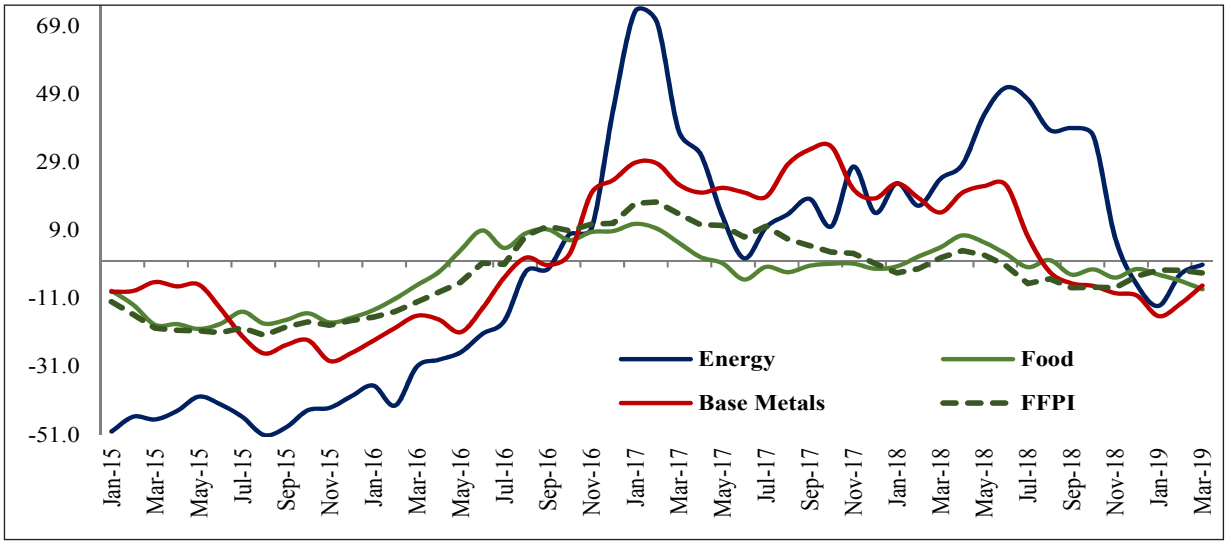


Source: Computed from CSO data

TRENDS IN GLOBAL COMMODITY PRICES

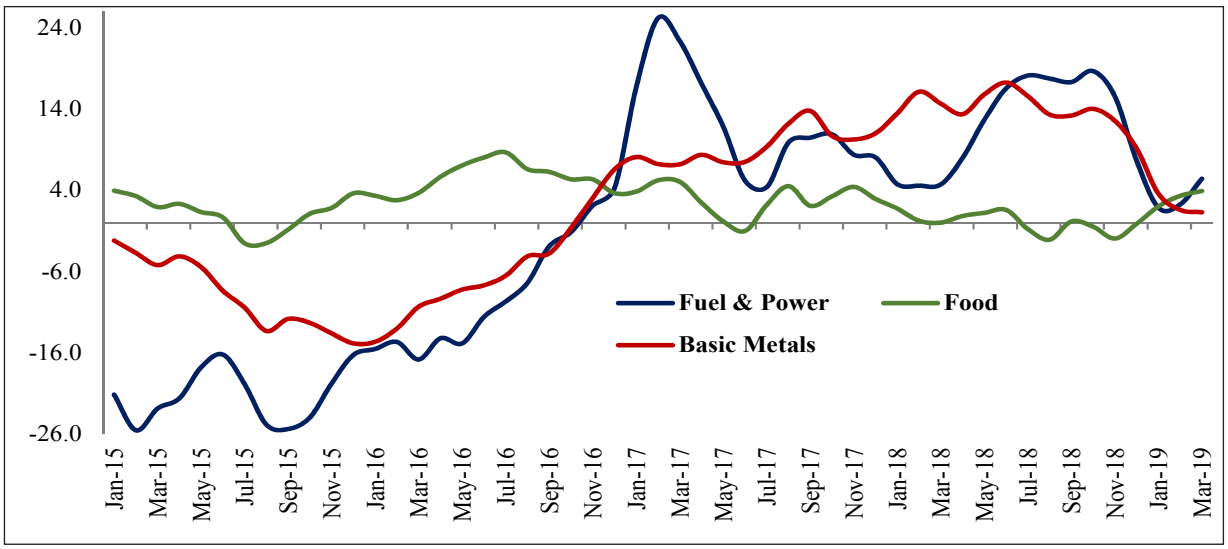
4.14 As per the commodity prices published by the World Bank, energy commodity prices have continued their increasing trend in FY 2018-19. These recorded average inflation of 22.1 per cent in 2018-19 as compared to 16.8 per cent in 2017-18 (Figure 16). Movement of 'Fuel & Power' inflation based on All India WPI tracks World Bank Energy price index; it increased at an average of 11.5 per cent in FY 2018-19 when compared to 8.1 per cent in FY 2017-18. Both World Bank food prices as well as Food and Agriculture Organization (FAO) food prices recorded deflation during FY 2018-19. WPI based food inflation too declined during 2018-19 (Figure 17).

Figure 16: Inflation based on World Bank Price Indices and FAO Food Price Index (FFPI) (in per cent)



Source: Computed from World Bank and FAO data

Figure 17: Inflation based on WPI (in per cent)



Source: Computed from Office of the Economic Adviser, DPIIT data

EFFORTS TO CONTAIN INFLATION

4.15 Central Government monitors the price situation on a regular basis as controlling inflation remains a key area of policy focus. Government has taken a number of measures to control inflation especially food inflation. *Inter alia*, the measures taken include both general measures and specific measures.

4.16 The following general measures are being taken to control inflation. First, advisories are being issued, as and when required, to State Governments to take strict action against hoarding & black marketing, especially for commodities in short supply. These measures are taken to effectively enforce the Essential Commodities Act, 1955 & the Prevention of Black-marketing and Maintenance of Supplies of Essential

Commodities Act, 1980. Second, regular review meetings on prices and availability of key commodities are held at the highest level, including at the level of Ministers, Committee of Secretaries, Inter Ministerial Committee, Price Stabilization Fund Management Committee (PSFMC), and other Departmental level review meetings to take stock of the prevailing price and availability situation and recommend appropriate policy intervention. Third, higher Minimum Support Price (MSP) for pulses and other crops has been announced so as to incentivize production and thereby enhance availability of food items, which may help moderate prices. And finally, Government has set up Price Stabilization Fund (PSF) for procurement of agri-horticultural commodities including potatoes, onions and pulses for its release during lean period to improve availability and moderate their prices.

4.17 The specific measures taken by the Government include the following. First, during lean periods of 2017-18 and 2018-19, to control the rise in onion prices, onions were released at reasonable prices from the stock procured under PSF. Second, pulses from the buffer are utilized for strategic market intervention for price management, meeting institutional requirements like supplies to State Governments/UTs for Mid-Day Meal Scheme (MDM), Integrated Child Development Services (ICDS) Scheme, and Public Distribution System (PDS), and through Open Market Sale, etc. In addition, pulses from the buffer are being utilized to meet the requirement of Army and Central Para-Military Forces. Third, prohibition on export has been withdrawn in April 2018 on all varieties of edible oils, except mustard oil. Export of mustard oil in branded consumer packs of up to 5 kgs is permitted with a Minimum Export Price (MEP) of United States Dollar (USD) 900 per million ton (MT). Finally, the order empowering States/UTs to impose controls including Stock Limits on Edible Oils and Edible Oilseeds has been withdrawn vide Notification dated June 13, 2018.

CONCLUSION

4.18 FY 2018-19 saw low headline as well as food inflation. The year witnessed deflation in prices of pulses, vegetables and sugar. Core inflation averaged higher than the previous year.

CHAPTER AT A GLANCE
➢ Headline inflation based on CPI-C continued its declining trend for fifth straight financial year. It has remained below 4.0 per cent in the last two years.
➢ Food inflation based on Consumer Food Price Index (CFPI) too declined over the last five years, and has remained below 2.0 per cent for the last two consecutive years.
➢ CPI-C based core inflation (CPI excluding the food and fuel group) increased during FY 2018-19 as compared to FY 2017-18. However, it has started declining since March 2019.
➢ Main contributors of headline inflation based on CPI-C during FY 2018-19 are miscellaneous, housing, and fuel and light groups. Relative importance of services in shaping up headline inflation has increased.
➢ CPI rural inflation declined during FY 2018-19 over FY 2017-18. However, CPI urban inflation increased marginally during FY 2018-19. Many States witnessed fall in CPI inflation during FY 2018-19.

Sustainable Development and Climate Change

05
CHAPTER

"You know that India is one sixth of the global community. Our development needs are enormous. Our poverty or prosperity will have direct impact on the global poverty or prosperity. People in India have waited too long for access to modern amenities and means of development. We have committed to complete this task sooner than anticipated. However, we have also said that we will do all this in a cleaner and greener way"

- Prime Minister Narendra Modi (2018)

In adoption of 2030 global agenda, the countries are moving forward for achieving a world free from poverty, gender inequality and economic inequality and thereby ensuring a healthy planet for future generations. These goals are multi-dimensional and integrate various social, economic and environmental dimensions. India continues to target and maintain its economic growth by introducing and implementing various policies and measures relating to sustainable development, climate change, resource efficiency and air pollution. India has been progressing rapidly towards achieving the Sustainable Development Goals (SDGs). With increasing demand for resources to cater to the different developmental needs, policies need to nudge economic agents towards achieving the maximum output from the available resources. Developing countries like India need to endeavor to do the best possible within their own domestic resources, keeping in mind the sustainable development imperatives. It is time for the global community to exhibit the requisite momentum to act upon their responsibilities on establishing the enabling environment for sustainable development and climate actions.

INTRODUCTION

5.1 The 2030 Agenda for Sustainable Development and its 17 SDGs adopted by World leaders in 2015 presents a roadmap for future development trajectory to all nations with focus on poverty eradication, environmental sustainability, peace and prosperity. The achievement of these goals is an imperative for, not just, any particular country but the global community as a whole. The need for global cooperation in helping the developing countries in achieving the climate targets cannot be overstated. India's development agenda has for long been based on principles that are closely related to those that have been propounded in the 2030 Development Agenda. Climate change requires concerted global efforts and India has been preserving to address the climate challenges along with other developmental imperatives. The country has been making substantial additions to its installation of renewable power capacity. Increasing growth rate and rapid urbanization in India have

spurred the demand for natural resources, exerting pressures on the environment and raising sustainability concerns. Resource efficiency can be a major tool to meet the resource needs of the country at the least possible cost to the environment. Air pollution has emerged as a serious issue in India. National Clean Air Program (NCAP) has been launched by the Government as a pan-India, time bound, national level initiative to address the country-wide issues of air pollution in a comprehensive manner.

ACHIEVING THE SDGs

5.2 The SDGs are global goals, built upon the erstwhile Millennium Development Goals. They are exhaustive, universal and integrated and emphasize on core areas of poverty and inequality, economic growth, innovation, sustainable consumption and production, climate change, peace and justice and partnerships.

5.3 Estimates suggest that US$5 to US$7 trillion per year is required for financing these goals worldwide and US$3.9 trillion per year in developing countries. However, the current investment in developing countries is around US$1.4 trillion leading to a shortfall of US$2.5 trillion per year (UNCTAD, 2014). Global action of this scale requires strong coordination between different governments, development institutions, private sector and financial institutions for the effective financing and implementation across the globe.

India's Progress towards the SDGs

5.4 Sustainable development requires every nation to prioritize their targets and carefully implement various schemes/programmes in accordance with local challenges, capacities and available resources. India follows a holistic approach for achieving the SDGs by implementing a comprehensive array of schemes. Current flagship policies and programmes of Government of India such as Swachh Bharat Mission (SBM), Beti Bachao Beti Padhao (BBBP), Pradhan Mantri Awas Yojana (PMAY), Pradhan Mantri Jan-Dhan Yojana (PMJDY), Deen Dayal Upadhyay Gram Jyoti Yojana (DDUGJY) and Pradhan Mantri Ujjwala Yojana (PMUY) have substantially contributed to India's progress in this regard.

5.5 In the federal context of India, programmes and schemes are basically implemented at the level of States and Union Territories. Tracking of progress on different SDGs, therefore, is important for appropriate policy actions and building up a competitive spirit among the States and UTs. NITI Aayog has come up with a single measurable index to track the progress of all the States and UTs across 13 out of 17 SDGs (excluding Goal 12, 13, 14 and 17 on account of unavailability of comparable data across States/UTs). This SDG index provides an aggregate assessment of India's progress. This index helps in informed policy formulations as it captures status of both national and state-level social, economic, and environmental parameters across a set of 62 select indicators. The score varies from 0 to 100. States with scores equal to/greater than 65 are considered as **Front-Runners (in Green); as Performers (in Yellow)** in the range of 50-64 and as **Aspirants (in Red)** if the score is less than 50. States with an index score of 100 are classified as **Achievers (in Blue)** i.e. the states have achieved the national target set for 2030. A score of 0 denotes worst performance. The SDG Index Score ranges between 42 and 69 for States and between 57 and 68 for UTs and is presented in Table 1 below.

Table1: Performance of States/UTs on each SDG

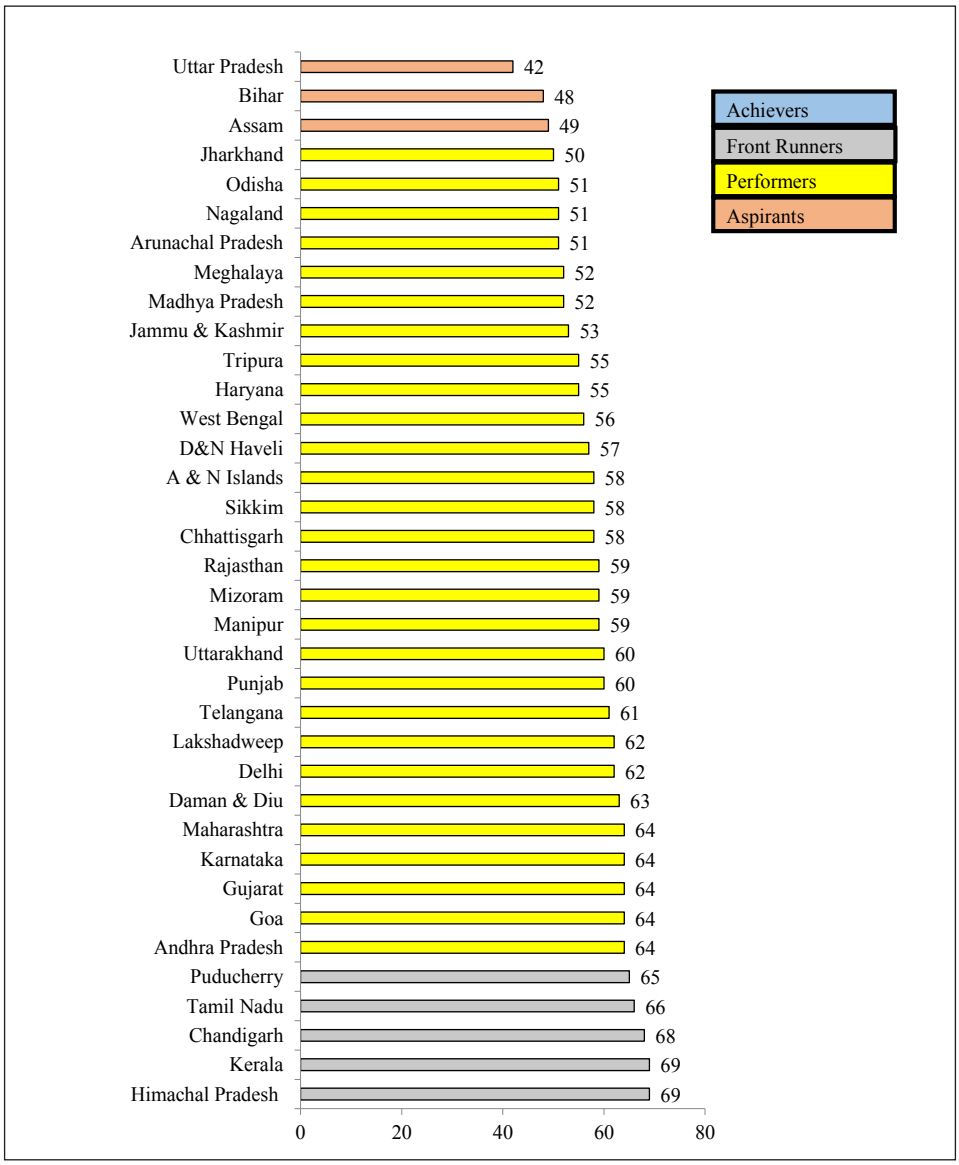
States	SDG 1 (End Poverty)	SDG 2 (End Hunger)	SDG 3 Health	SDG 4 Education	SDG 5 Gender Equality	SDG 6 Water	SDG 7 Energy	SDG 8 Eco Growth	SDG 9 Infrastructure and Industrialization	SDG 10 Inequality	SDG 11 Resilient cities	SDG 15 Ecosystem and Biodiversity	SDG 16 Institutions
Andhra Pradesh	67	50	68	77	44	59	76	81	31	75	26	87	90
Arunachal Pradesh	52	58	38	44	32	64	44	72	16	47	44	73	77
Assam	53	53	30	54	36	42	18	61	35	75	32	100	53
Bihar	45	39	40	36	24	31	67	58	38	82	43	56	60
Chhattisgarh	50	46	42	53	49	98	36	56	30	73	54	100	65
Goa	62	80	65	71	35	65	61	90	0	50	71	100	87
Gujarat	48	49	52	67	31	100	67	80	65	79	52	71	73
Haryana	50	53	57	65	31	80	50	72	50	55	30	43	78
Himachal Pradesh	60	58	62	82	42	95	62	71	43	98	41	93	91
Jammu & Kashmir	61	60	53	51	39	52	58	43	35	71	23	74	69
Jharkhand	37	35	40	58	32	51	20	52	47	72	52	96	64
Karnataka	52	54	69	76	43	62	77	72	57	68	36	88	74
Kerala	66	72	92	87	50	62	60	61	68	72	46	75	82
Madhya Pradesh	44	41	38	49	33	63	58	57	27	75	39	91	59
Maharashtra	47	47	60	74	43	81	69	74	53	76	34	86	82
Manipur	44	74	67	65	25	44	39	33	72	98	31	100	70
Meghalaya	68	43	52	38	36	40	11	62	42	100	39	94	53
Mizoram	71	69	53	54	43	67	78	65	0	100	32	69	71
Nagaland	59	69	34	45	42	58	45	40	0	80	32	75	87
Odisha	59	46	54	46	43	46	23	53	32	78	34	100	55
Punjab	56	71	71	63	43	60	61	57	48	62	36	67	84
Rajasthan	59	45	49	73	37	43	63	57	62	79	45	68	81
Sikkim	64	67	52	47	50	78	47	57	1	67	56	98	66
Tamil Nadu	76	61	77	75	38	66	89	71	46	85	33	74	61
Telangana	52	53	73	66	43	55	63	75	16	100	44	83	66
Tripura	71	58	53	56	38	38	32	52	38	89	38	86	71
Uttar Pradesh	48	43	25	53	27	55	23	55	29	38	37	55	61
Uttarakhand	65	53	36	68	41	78	55	67	33	62	41	100	86
West Bengal	57	50	66	51	40	54	40	63	45	76	25	88	72
A & N Islands	57	38	60	69	58	71	56	60	0	69	64	84	72
Chandigarh	39	70	23	85	51	100	96	82	76	52	40	83	90
Daman & Diu	58	42	47	46	38	99	84	91	0	100	49	84	79
D&N Haveli	21	40	32	77	41	100	73	84	0	100	6	100	63
Delhi	30	72	47	58	37	62	51	86	100	80	39	77	68
Lakshadweep	43	47	64	62	35	100	60	60	0	100	Null	100	74
Puducherry	61	71	66	69	27	45	61	85	100	94	27	50	92
India	54	48	52	58	36	63	51	65	44	71	39	90	71

Source: NITI Aayog's SDG India Index Baseline Report, 2018

5.6 India's growth trajectory for achieving SDG 10 (Reduced Inequality) and SDG 15 (Life on Land) is impressive as compared to the other SDGs as several states have achieved 100 in these SDGs. This may be due to performance in worthy initiatives such as PMJDY, Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), the National Environment Policy, National Agro-forestry Policy and Green Highways Policy. India is struggling to achieve its targets of SDG 5 (Gender Equality) and SDG 11 (Sustainable Cities and Communities) as large number of states are in the 'Aspirants' category'. Goa, a front runner among all the States and UTs in SDG 11, has been doing exceptionally well in waste management.

5.7 NITI Aayog has also developed a composite index for each State/UT which aggregates progress towards each SDG. Kerala and Himachal Pradesh are the front runners amongst all the states with a score of 69. Tamil Nadu is also

Figure 1: Performance of States and UTs on SDG Composite India Index



Source: NITI Aayog's SDG India Index Baseline Report, 2018

progressing very fast. Among the UTs, Chandigarh and Puducherry are the front runners with a score of 68 and 65 respectively (Figure 1). Kerala's good performance is attributable to the provision of good health, reducing hunger, achieving gender equality and providing quality education. Himachal Pradesh has performed well on providing clean water and sanitation along with reducing inequalities and preserving mountain ecosystem. Chandigarh, among other UTs, has performed well in providing clean water and sanitation along with affordable clean energy and quality education.

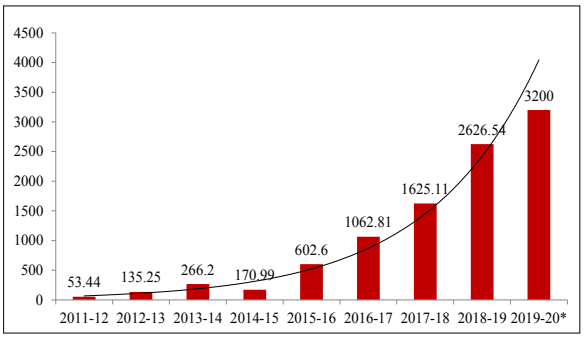
5.8 A close collaboration between the national and sub-national governments as well as active participation of all other relevant stakeholders are required for meeting the challenges of financing, technical support and continuous monitoring of the progress of each state and UT to achieve the National Sustainable Development Agenda.

GANGA – THE LIFELINE OF INDIA

5.9 A key policy priority of the Government towards achieving the SDG 6 (Ensure availability and sustainable management of water and sanitation for all) has been the cleanliness of mighty River Ganga through Namami Gange Mission. The mission was launched as a priority programme with a budget outlay of ₹20,000 crore for the period 2015-2020. During the period 2014-15 to 2018-19, a total amount of ₹6,106.25 crore has been spent on the programme indicating a substantial jump over earlier similar programmes (Figure 2).

5.10 For effective implementation and proper synchronization with the State and Local Bodies, National Mission for Clean Ganga (NMCG) was empowered as an Authority under the Environment (Protection) Act, 1986 for fast track implementation and to formulate policies for long term sustainability of the Ganga rejuvenation efforts.

Figure 2: Financial Progress of National Mission for Clean Ganga (Actual Expenditure in ₹ crore)



Source: National Mission for Clean Ganga

Note: The figure for 2019-20 is projected expenditure based on current liabilities of sanctioned projects.

Major Components of Namami Gange Mission

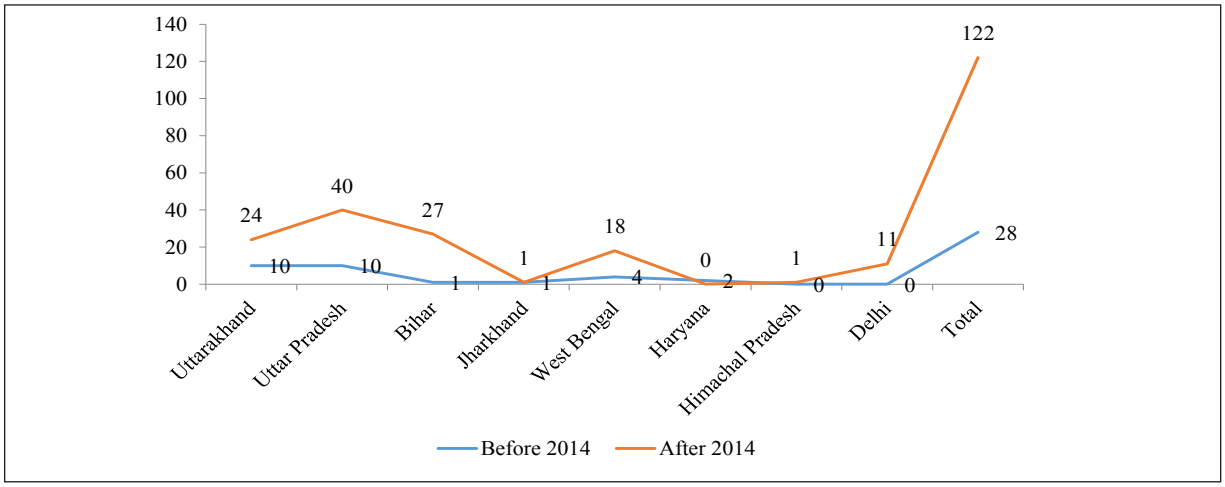
i. **Sewerage Project Management:** For sewerage projects, the policy decision to use Public-Private Partnership (PPP) approach of Hybrid Annuity Mode (HAM) and 15 years long-term Operation & Maintenance (O&M) included in the project cost and improved governance through 'One City One Operator' approach ensured competitive and positive market participation along with synergy in implementation.

ii. **Urban Sanitation:** A report prepared by the Consortium of 7 IITs identified 10 cities that contributed more than 60 per cent pollution load in Ganga. The Mission extended a comprehensive coverage of these cities with construction and rehabilitation of Sewage Treatment Plants (STPs) for a prospective year of 2035, inception and diversion of drains, solid waste management through cleanliness drives on *ghats* and deployment of skimmers for river surface cleaning.

iii. **Sewerage Infrastructure:** 150 sewerage projects (111 on Ganga stem & 39 in

tributaries) at sanctioned cost of ₹23,130.95 crore has been approved for creation of new STP capacity of 3,729.92 Millions of Litres per day (MLD), 1,114.39 MLD rehabilitated STP capacity and laying of around 4,972.35 km sewerage networks (Figure 3).

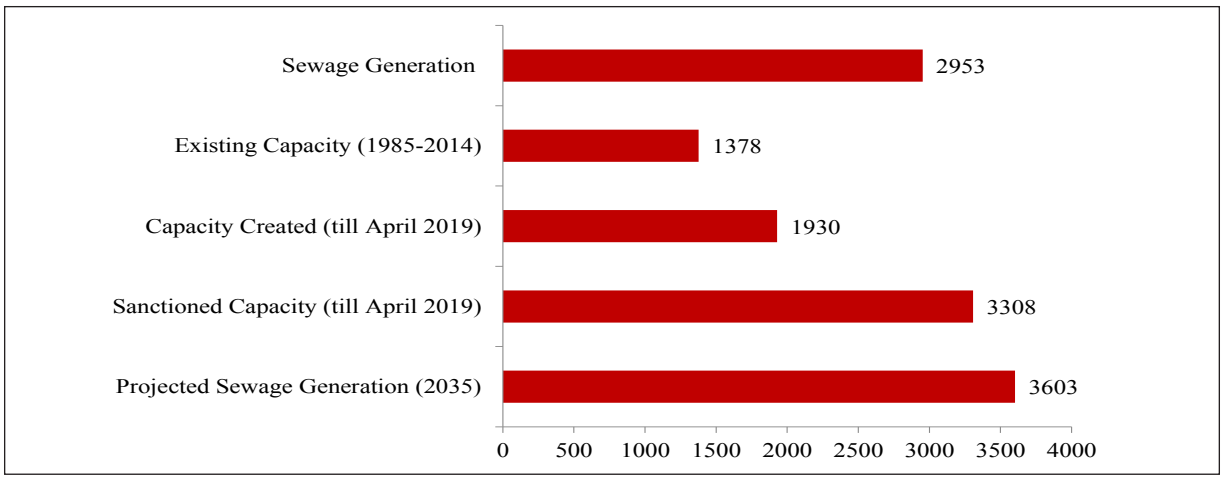
Figure 3: Number of Sewerage Projects before and after 2014 taken up in Namami Gange Program



Source: National Mission for Clean Ganga

As of May 2019, 43 of these projects have been completed, which has resulted in laying of 2,645.6 km sewer networks and of 575.84 MLD of STP capacities in Ganga basin (Figure 4).

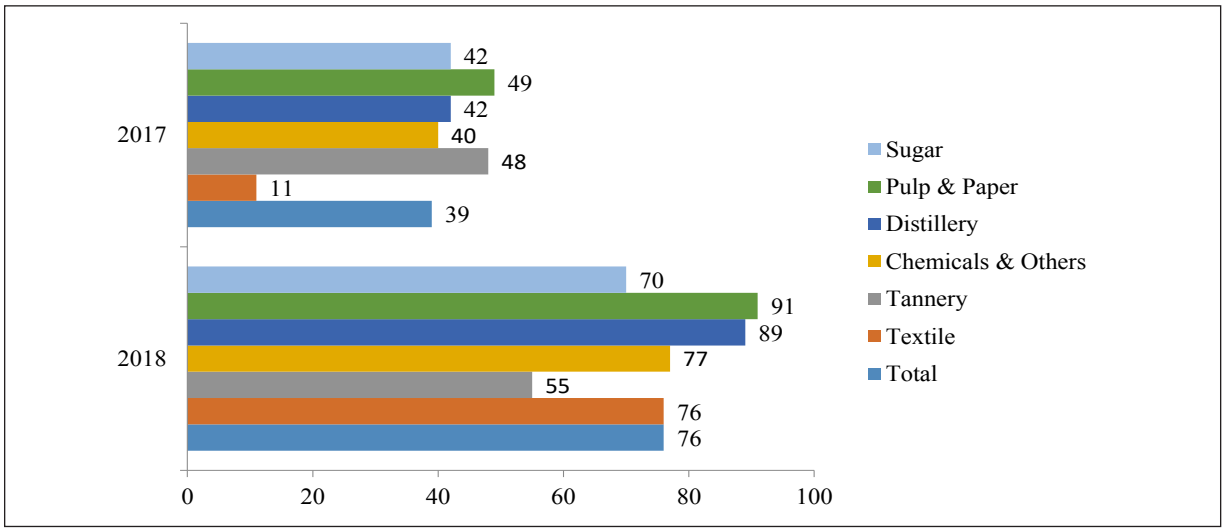
Figure 4: Sewage Generation vs. Treatment Capacity in 97 Ganga Towns



Source: National Mission for Clean Ganga

iv. Industrial Pollution: To ensure proper inventorisation and inspection of point source pollution from industrial units, 1,109 Grossly Polluting Industries (GPIs) were identified and surveyed independently by 12 Technical Institutions. The compliance of the operational GPIs in 2017 as against 2018 improved from 39 per cent to 76 per cent (Figure 5).

Figure 5: Percentage Compliance of GPIs (as of May 2019)

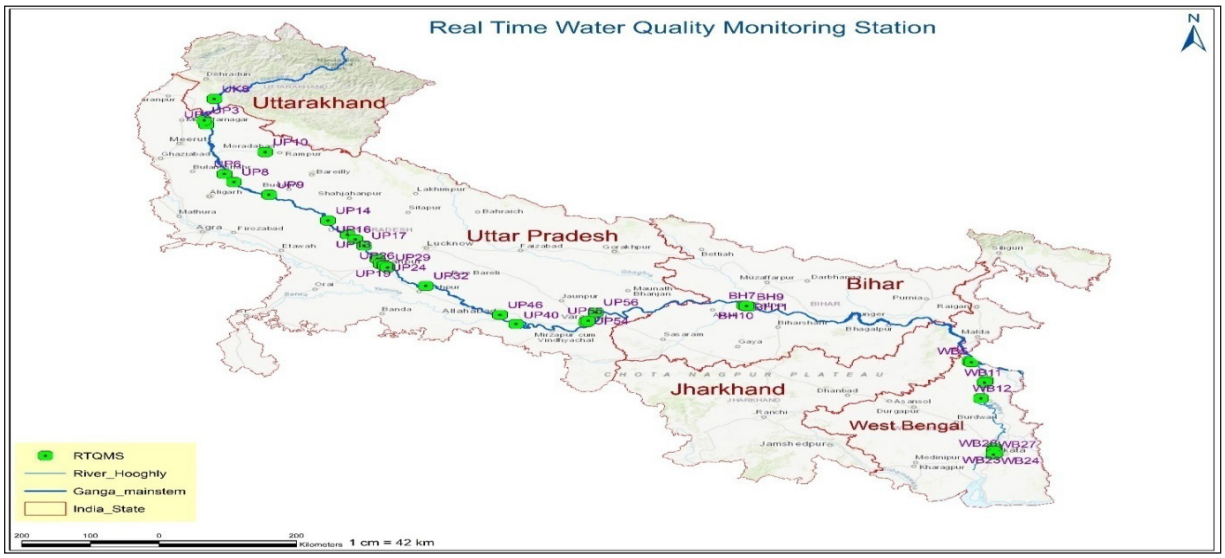


Source: National Mission for Clean Ganga

Online Continuous Effluent Monitoring Systems (OCEMS) of all operating GPIs have been connected with Central Pollution Control Board (CPCB) & State Pollution Control Board (SPCB) servers and a system of SMS alerts have been initiated to non-complying GPIs, district officials and State Project Management Groups (SPMGs). Besides, zero black liquor discharge has been achieved in Paper and Pulp industry and in distillery.

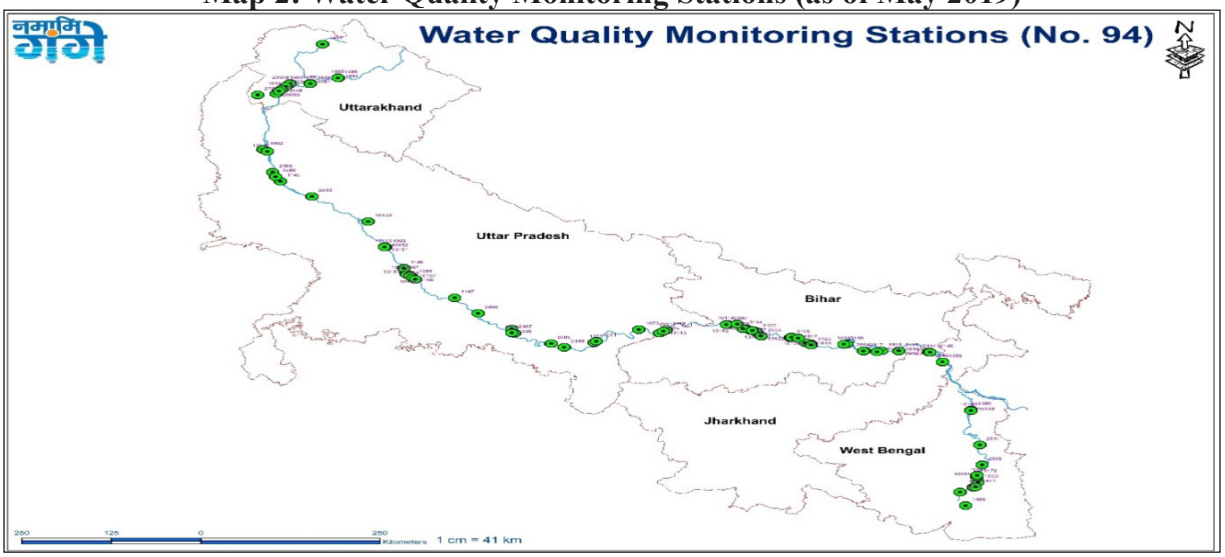
v. Water Quality: 36 Real Time Water Quality Monitoring Stations (RTWQMS) are operational under Namami Gange Programme (Map 1).

Map 1: Real Time Water Quality Monitoring Station (as of May 2019)



Manual water quality monitoring is carried out at 94 locations. Dissolved Oxygen levels being the indicator of the river health improved at 36 locations, Biological Oxygen Demand (BOD) decreased at 42 locations and coliform bacteria count decreased at 47 locations (2017 vs 2018 data) (Map 2).

Map 2: Water Quality Monitoring Stations (as of May 2019)



The organic pollution load on the river has decreased from 263 kg/MLD in 2011-12 to 65.24 kg/MLD in 2018-19 due to the various constructive steps taken in this direction such as implementation of Charters for water recycling and pollution prevention in the respective sector, adoption of cleaner technologies and practices and regular inspection of the compliance status. This can be seen in the data on the effluent generation and pollution load from the GPIs on the main stem of river Ganga and its major tributaries before and during the implementation of the Namami Gange Programme as given in Table 2.

Table 2: Data on the effluent generation and the pollution load before and during the implementation of the Namami Gange Programme

Sectors	No. of units			Effluent generation (MLD)			Organic Pollution Load (TPD)		
Year	2011-12	2016-17	2018-19	2011-12	2016-17	2018-19	2011-12	2016-17	2018-19
Pulp & Paper	67	90	85	201	173.5	87.88	76.5	8.9	5.78
Distillery	35	48	50	37	9.6	3.59	22.2	2.9	0.06
Sugar	67	88	85	96	61.5	63.18	12.5	8.4	5.41
Textile	63	242	193	11	28.2	22.97	0.5	2.3	1.21
Tanneries	442	489	409	22	17.8	10.52	6.4	2.9	3.08
Chemicals & others	90	152	139	134	378.5	133.73	13.6	41.8	5.45
Total	764	1109	961	501	669.1	321.87	131.7	67.2	21.00
MLD=Million Litres Per Day TPD= Tons Per Day							(263 kg/ MLD)	(100 kg/ MLD)	(65.24 kg/MLD)

Source: Central Pollution Control Board

vi. River as Public Space: 143 ghats have been taken up under the Mission out of which 100 have been completed. Under the Mission, 54 crematories have also been taken up for ensuring safe crematory rituals. Supporting the sanitation initiative during Kumbh 2019, NMCG sanctioned financial assistance of ₹116.6 crore for the construction of 27,500 toilets, 20,000 urinals and 16,000 dustbins and lining bags. Innovative campaigns of 'Paint My City' and other exhibitions to connect people with the city and the river were also organized.

vii. Rural Sanitation: Under Namami Gange, 4,465 villages on the Ganga stem have been declared ODF with completion of construction of about 11 lakh independent toilets. Support is also being extended to 1,662 Gram Panchayats along Ganga for solid and liquid waste management.

viii. Ecosystem Conservation: Afforestation along banks of Ganga has been taken up scientifically with the help of Forest Research Institute, Dehradun. Local communities have been involved in massive afforestation drive undertaken in the five Ganga States with total plantation of 96,46,607 leading to increase in forested area of 8,631 hectares.

ix. Urban River Management: NMCG, in partnership with National Institute of Urban Affairs (NIUA), is preparing an Urban River Management Plan to protect and enhance the status of river health within the city, to prevent their deterioration and to ensure sustainable use of water resources. A comprehensive survey for generating high-resolution Light Detection and Ranging (LIDAR) maps of the entire Ganga stretch to create a baseline of its spatial status has also been initiated.

x. Water Use Efficiency: A market for reuse of treated wastewater is being developed and the re-use of 20 MLD of treated wastewater in Mathura Refinery is a milestone in propagating this waste-to-wealth approach as well as saving the water-stressed Yamuna river.

xi. Clean Ganga Fund: Clean Ganga Fund has been set up for encouraging and facilitating corporates and individuals to join the efforts of rejuvenation of Ganga by contributing to this Fund and sponsoring certain projects. A total of ₹371 crore has been received in the Clean Ganga Fund as of April 2019 of which, ₹101.59 crore has been received in 2018-19.

RESOURCE EFFICIENCY

5.11 Resource Efficiency (RE) has emerged as one of the key strategies towards the 2030 Agenda of achieving the SDGs. SDG 12 aims to 'Ensure Sustainable Consumption and Production Patterns' along with the eight other SDG goals (2, 6, 7, 8, 9, 11, 14 and 15) have a bearing on resource efficiency. Sustainable consumption and production is also a priority for the Government of India and is reflected in various policies/programme announcements like Make in India, Zero Effect-Zero Defect Scheme, Smart Cities, Swachh Bharat, and Ganga Rejuvenation Mission. A resource efficient development approach essentially means a transition of the management of natural resources with a progressive minimization of waste in both consumption and production processes through various policies and measures.

5.12 Economic growth and urbanization in India have spurred the demand for natural resources. This growing demand has resulted in high imports, in particular, imports of fossil fuels and metals. Against this background, the availability and accessibility of primary raw materials have become major concerns. Integrated, concerted and collaborative policy of resource efficiency could be a suitable response strategy to address resource security and the growing demand with the limited

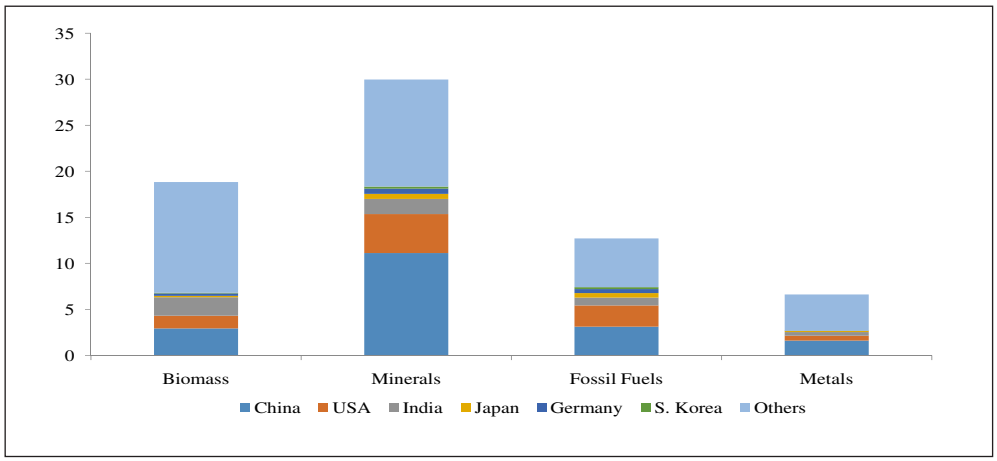
supply of the materials and at the same time ensures environmental sustainability.

5.13 The International Resource Panel estimated that efficient resource policies in G7 countries could reduce the global use of natural resource by 28 per cent, diminish greenhouse gas (GHG) emissions by an additional 15 to 20 per cent and deliver annual economic benefits of US$2 trillion globally by 2050 relative to existing trends (UNEP, 2018). Around the world, several countries have introduced various policies specific to the different stages of material life cycle. Iceland and United Kingdom have focused on reducing the use of primary raw materials and impact of material extraction respectively in the stage of 'Extraction of Raw Materials'. France has introduced the strategy of integrating the environmental aspects into designing of the products whereas Ireland has tried to extend the lifespan of the products. Both the strategies were introduced with respect to the stage of designing. Waste prevention and recycling are the most common strategies adopted worldwide. For instance, Croatia has stressed on collection of metal and bio-waste to improve recycling rates and Poland has initiated the Transform waste into resources (UNEP, 2018).

Current and Future Projections for India

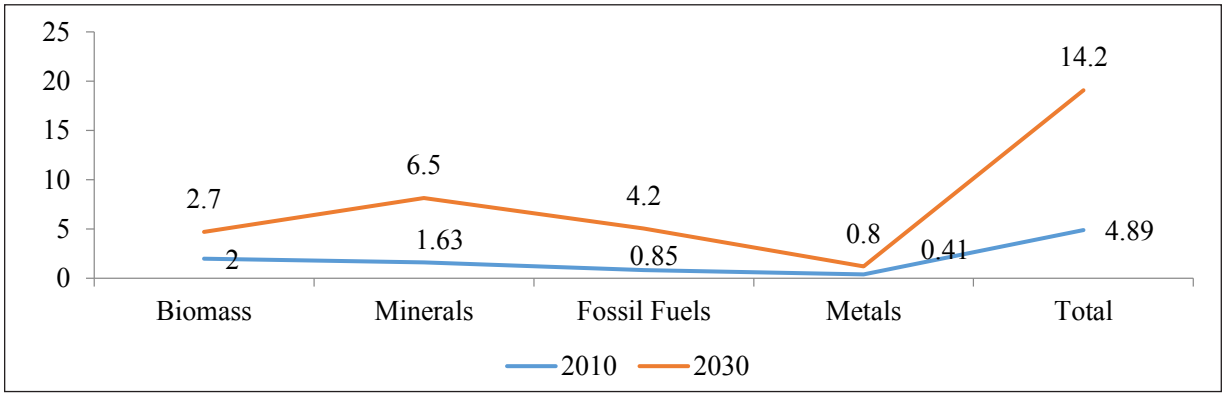
5.14 In 2010, India accounted for 7.2 per cent consumption of globally extracted raw materials. India's average share of material cost in the total production cost was estimated to be more than 70 per cent and rate of recycling is very low as compared to other developed economies which siginifies an urgent need for improving productivity and efficiency (TERI, 2019). The consumption of key natural resources by the major countries in the year 2010 has been showcased in Figure 6. As per the NITI Aayog's Strategy Paper on Resource Efficiency 2017, India consumed 5 billion tonnes of biomass, fossil fuels, minerals and metals in 2010 and was the third largest consumer after China (21.5 billion tonnes) and USA (6.1 billion tonnes). It is projected that India's demand for total material will more than double by 2030 under the assumption of continued economic growth of 8 per cent till 2030 and possible slowing down to 5 per cent thereafter till 2050 and medium growth in population. India would be requiring around 6.5 billion tonnes of minerals in order to sustain the demand of growing population (Figure 7).

Figure 6: Consumption of key natural resources (in billion tonnes in 2010)



Source: TERI, 2019

Figure 7: Projections for the consumption of key natural resources in India (in billion tonnes)



Source: TERI, 2019

Assessment of Priority Sectors for enhancing Resource Efficiency in India

5.15 For the formulation of effective RE strategy for the country, a detailed assessment for each of the sector contributing to the national income, its consumption of the raw materials as key inputs and its import dependence, volume of wastes/scrap generated and recycled and availability of relevant technologies must be undertaken. Various studies have analyzed the economic impact of effective RE strategy and identified that ₹6000 crore can be saved in the manufacturing sector with its implementation (IGEP, 2013). Estimates suggest that US$1 billion worth of gold can be extracted with mining of urban e-waste. Effective waste management policies can generate 14 lakh jobs and nearly US$2.7 billion opportunity can be created from the extraction of eight million tonnes of steel from the end of life vehicles (TERI, 2019). Table 3 highlights the contribution to the national income of different sectors in the economy, their consumption base of raw materials and import dependency.

5.16 Indian auto industry is fourth largest in the world (TERI, 2019) and India's transport sector is being dominated by internal combustion engine (ICE) based vehicles. Studies estimate that Indian auto industry will consume around 70-80 million tonnes of iron and steel by 2030 which is around 70-80 per cent of the total steel production capacity in India. As India has a fragmented process of scrap collection, nearly 6-7 million tonnes per annum of steel scrap are being imported. Research suggest around 2,18,95,439 vehicles will reach End of Life by 2025 which would generate more than 10 million tonnes of steel scrap (TERI, 2019).

5.17 India consumed nearly 14.5 million tonnes of plastic in 2016 (TERI, 2019). Due to flexibility, low price and high durability, plastic polymers are widely used in the country. Collection and recycling of plastics is majorly being performed by unorganized sector (nearly 4,000 recycling units) and organized sector (around 3,500 recycling units) (FICCI, 2017).

5.18 Increased usage of Electronics in the recent times has given impetus to their demand. Estimates reveal that the demand of electronic products will reach US$400 billion in 2020 and Compound Annual Growth Rate (CAGR) of 41 per cent from 2016 to 2020 from the CAGR of 9.6 per cent in 2010-2016 periods with the production facility to increase at the CAGR of 16 per cent from

2012 to 2020. Global E-waste Monitor, 2017 estimated that India was the fifth largest producer of e-waste by generating nearly 2 million metric tons of e-waste in 2016 and can earn the value of raw materials to the tune of 55 billion Euros if e-waste was properly mined. A great potential exists for RE in this sector by utilizing recycling opportunities that exist. It is estimated that the steel production in India will reach 128.6 Million Tonnes (MT) by 2021 and its consumption will increase to 140 MT by 2023. Thus, there is a need to augment the steel production capacity to 300 Million Tonnes Per Annum (MTPA) from 125 MTPA by 2030-31 which will require ₹10 lakh crore of investment. It is estimated that 1.4 tonnes of iron ore, 0.6-0.7 tonnes of coking coal and around 0.2-0.3 tonnes of fluxes can be saved from recycling of one tonnes of steel scrap and thus indirectly will reduce the production which saves around 16-17 per cent of energy (TERI, 2019).

Table 3: Contribution of selected sectors to the national income, consumption base of raw materials and import dependency

Sl. No	Economic Sectors	Share in national income (in %)	Selected raw materials	Import dependency (in %)
1.	Automobile sector (incl. electric vehicles)	7.1	ICE: Steel, Copper, Aluminium, Zinc, nickel, lead, glass, rubber, various plastics/synthetics E-vehicles: Lithium, Cobalt, Nickel, Rare Earths, various plastics/synthetics, Steel, Copper, Aluminium	Copper (50-60) Lithium (100) Co (100) Aluminium scrap (90) Steel scrap (20-25) Lead (75) Rare Earths (100)
2.	Chemicals (plastics)	2 (0.5 - 0.8)	Crude oil	Oil (80)
3.	Construction & Demolition	9	Cement, Limestone, clay bricks, steel, aluminium, Copper	Aluminium scraps (90) Steel scrap (20-25), Copper (50-60)
4.	Electronics (including E-waste)	1.8	Gold, Silver, Rare Earths, Plastics, Platinum, Copper	Silver (75), Rare Earths (100), Gold (90), Platinum (95), Copper (50-60)
5.	Steel	2	Iron ore, Molybdenum, Nickel, Tugsten	Steel scrap (20-25), Molybdenum (100), Nickel (100), Tugsten (100)
6	Aluminium	0.8	Bauxite, Aluminium Scrap	Aluminium scraps (90)
7	Solar PV	2.1	Aluminium, Silver, Copper, Silicon	Aluminium scraps (90), Silver (75), and Copper (50-60)

Source: TERI, 2019
Note: Numbers in parenthesis indicates share of plastics in chemicals.

5.19 NITI Aayog's Status Paper "Circular Economy (CE) and Resource Efficiency (RE)- Current Status and Way Forward" (January, 2019) has reviewed the status, concerns and opportunities of four focus sectors/areas- steel, aluminium, e-waste and construction & demolition (C&D) waste in fulfilling the goals of RE. The paper suggests a way forward to achieve RE with sustainability of the growth process. While there are already provisions made to promote RE in some of the national policies (national mineral policy, national steel policy, national housing and habitat policy, etc.), in many cases these policy elements are implicit and may need to be explicitly stated. The Paper argues in favour of a harmonized overarching national policy on RE, building upon the existing policies to address multiple sectors. Specific recommendations have been made by NITI Aayog for mainstreaming RE approach in the development pathway for achieving SDGs and also steering a new paradigm of economic development by generating wealth from waste and for promoting recycling industry (Box 1).

Box 1: Six Pillars for a Resource Efficiency Framework in India

Policies

i. Formulate a national policy on RE for all types of resources (biotic, abiotic) addressing various lifecycle stages and key stakeholders

ii. Formulate a national policy on Sustainable Public Procurement (SPP) to minimize consumption of resources, reduce waste generation and GHG emissions, as well as contribute to innovation in materials and technology in the space of RE.

iii. Strengthen existing sectoral policies and programmes of Ministry of Mines by incorporating RE principles.

iv. Formulate a national policy for End-of-Life Vehicles (ELVs).

v. Formulate a Waste to Resource Management Directive based on existing waste and hazardous substance management rules/regulations following a lifecycle approach targeting relevant stakeholders and focusing on RE.

Programmes and Mainstreaming

i. Mainstream RE initiatives by leveraging existing flagship programmes and schemes like Swachh Bharat Abhiyan, Smart Cities, Make in India, Start-up India, Digital India and others.

ii. Industry may leverage Corporate Social Responsibility (CSR), Corporate Environmental Responsibility (CER) and Extended Producer Responsibility (EPR) for RE initiatives.

iii. Build on the National Chemical Management Plan being drafted by Ministry of Environment, Forest and Climate Change (MoEF&CC) to develop a strategy, framework and guidelines for the safe and circular management of chemicals.

iv. Leverage the national clean energy and environment fund to finance infrastructure, clean technologies and related RE initiatives.

Regulations

i. Establish a national coordinating body- Bureau of Resource Efficiency (BRE) between various ministries to identify, implement and achieve national RE goals.

ii. Establish State Level coordinating bodies to identify, implement and achieve State level RE goals.

iii. Large and resource intensive industries and bulk waste generators may be mandated to file the Resource Use and Efficiency Statement.

iv. Establish and mandate a 'Consent to Close' requirement for medium and large industries in the 'RED' category to ensure that waste streams are responsibly managed and recycled before closure.

v. Rationalise tax regime on critical virgin raw materials to make secondary raw materials price competitive.

Setting up a Dynamic Recycling Industry

i. Promote the establishment of Material Recovery Facilities (MRFs) with the allocation of land in urban areas and industrial estates.

ii. Facilitate Urban Local Bodies (ULBs) to undertake urban mining and create secure landfills.

iii. Facilitate the establishment of Producer Responsibility Organizations (PRO) for waste recycling and for engagement with the informal sector.

iv. Facilitate innovation to enhance resource recovery and improve working conditions by integrating the informal sector into the waste value chain.

v. Establish a remanufacturing council or association to catalyse the growth of the remanufacturing industry.

vi. Establish and manage platforms for waste exchange by expanding the SBM portal.

R&D and Technology Development

i. Support R&D to develop scalable technologies for RE.

ii. Create and manage knowledge platforms that facilitate open innovation, provide access to experts, and engage academia to support the transition towards RE.

iii. Leverage technologies like Artificial Intelligence (AI), robotics, block-chain etc. for the recycling industry.

Capacity Development, Outreach & Monitoring

i. Facilitate creation of accredited laboratories that could conduct testing (especially for recycled products) as well as provide advisory services.

ii. Provide capacity development support on RE for ministries/departments at the National and State levels.

iii. Develop and promote programmes and certifications for informal sector skill development in RE.

iv. Develop and launch citizen awareness programmes on RE.

v. Foster inter-governmental collaboration and knowledge exchange with the G20, RE dialogue and other bodies like International Resource Panel and other national and international forums.

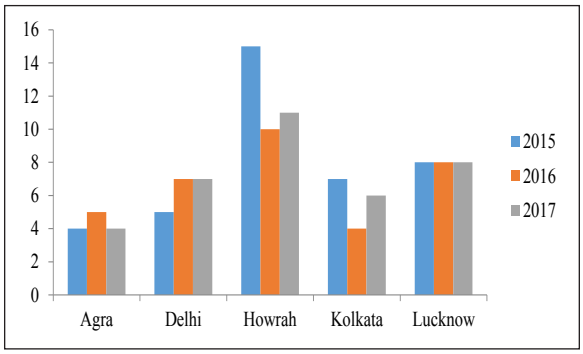
vi. Develop monitoring and outcome indicators for tracking progress on RE.

vii. Establish and mandate the certification for operators managing waste-to-resource recycling centres to ensure safe, efficient, and net positive operations.

AIR POLLUTION

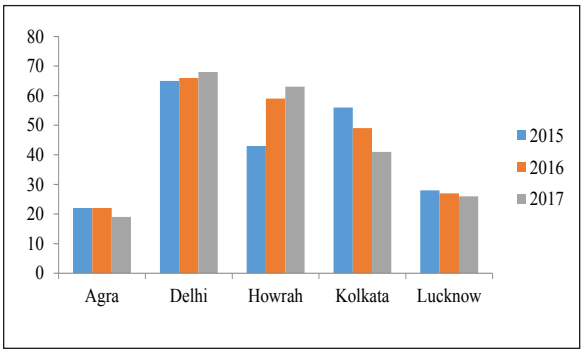
5.20 Air pollution is one of the biggest global environmental challenges of today. Air pollution is a serious issue in India also. Government is executing National Air Quality Monitoring Programme (NAMP) covering 312 cities/towns in 29 states and 6 Union Territories of the country. Under NAMP, four major air pollutants viz. Sulphur Dioxide (SO_2), Oxides of Nitrogen as NO_2, Suspended Particulate Matter (PM_{10}) and Fine Particulate Matter ($PM_{2.5}$) have been identified for regular monitoring at all the locations. The smaller $PM_{2.5}$ is particularly deadly as it can penetrate deeper into the lungs. For PM $_{2.5,}$ as per the available statistics in year 2017, few cities have been selected to show the concentration of various pollutants from 2015-17. Figure 8, 9, 10, and 11 shows the concentration of SO_2, NO_2, PM_{10} and $PM_{2.5}$ for the selected cities from 2015 to 2017.

Figure 8: SO_2 Concentrations in Major Cities



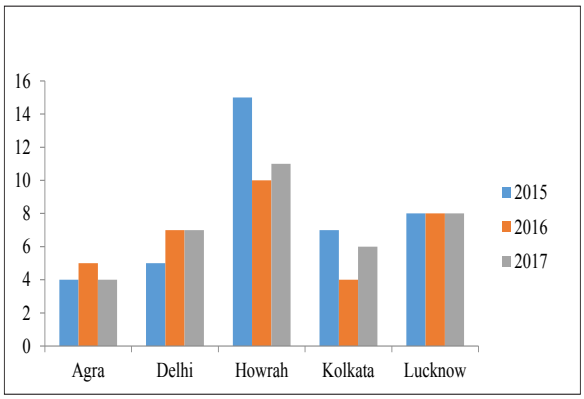
Source: MoEF&CC

Figure 9: NO_2 Concentrations in Major Cities



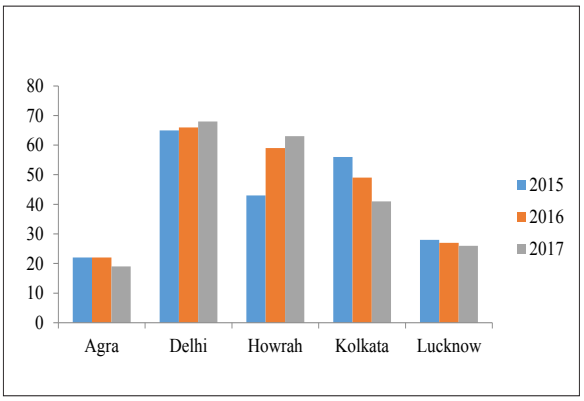
Source: MoEF&CC

Figure 10: PM_{10} Concentrations in Major Cities



Source: MoEF&CC

Figure 11: $PM_{2.5}$ Concentrations in Major Cities



Source: MoEF&CC

Major Government Initiatives

5.21 To tackle the increasing air pollution problem across the country in a comprehensive manner, a number of initiatives have been launched. National Ambient Air Quality Standards (NAAQS) are the standards for ambient air quality with reference to various identified pollutant notified by the CPCB under the Air (Prevention and Control of Pollution) Act, 1981. Major objectives of NAAQS are (i) to indicate necessary air quality levels and appropriate margins required to ensure the protection of vegetation, health and property (ii) to provide a uniform yardstick for

assessment of air quality at the national level.

5.22 Air Quality Index (AQI) is a tool for effective communication of air quality status to people in terms, which are easy to understand. It transforms complex air quality data of various pollutants into a single number (index value), nomenclature and colour. There are six AQI categories, namely - Good, Satisfactory, Moderately Polluted, Poor, Very Poor and Severe.

5.23 CPCB has issued a comprehensive set of directions under section 18 (1) (b) of Air (Prevention and Control of Pollution) Act, 1986 for implementation of forty-two measures to mitigate air pollution in major cities including Delhi and National Capital Region (NCR) comprising of action points to counter air pollution which include control and mitigation measures related to vehicular emissions, re-suspension of road dust and other fugitive emissions, bio-mass/municipal solid waste burning, industrial pollution, construction and demolition activities and other general steps.

5.24 The Government has notified a Graded Response Action Plan for Delhi and NCR, which comprises of the graded measures for each source framed according to the AQI categories. It also takes note of the broad health advisory for each level of AQI that was adopted by the Government of India along with the AQI. The proposal has been framed keeping in view the key pollution sources in Delhi and NCR.

5.25 In order to address the increasing air pollution across the country in a comprehensive manner, MoEF&CC has launched NCAP in 2019 as a pan India time bound national level strategy. A budgetary allocation of ₹150 crore has been made under NCAP during the financial year 2019-20. Overall objective of the NCAP is comprehensive management plan for prevention, control and abatement of air pollution besides augmenting the air quality monitoring network across the country. The tentative national level target of 20-30 per cent reduction of $PM_{2.5}$ and PM_{10} concentration by 2024 is proposed under the NCAP with 2017 as the base year for comparison of concentration. This will be mid-term five (5) years action plan beginning from 2019.

CLIMATE CHANGE

5.26 Since the adoption of United Nations Framework Convention on Climate Change (UNFCCC) in 1992, the global community has strengthened the response mechanisms to the threat of climate change through various milestones. The journey since then witnessed the adoption of various related instruments to address climate change including the adoption of Kyoto Protocol in 1997 and the latest most ambitious one being the Paris Agreement. The ultimate objective of UNFCCC is to stabilize GHG concentration in the atmosphere at a level that will prevent dangerous human interference with the climate system, in a time frame which allows ecosystems to adapt naturally and enables sustainable development. The main aim of the Paris Agreement is to hold the increase in the global average temperature well below 2^{o}C above pre-industrial levels and pursuing efforts to limit the temperature increase even further to 1.5^{o}C above pre-industrial levels. The Paris Agreement sets a roadmap for all nations in the world to take actions against climate change in the post-2020 period.

5.27 Human anthropogenic activities have raised the global average temperature. As per the recent Intergovernmental Panel on Climate Change (IPCC) Special Report on Global warming of 1.5^{o}C, human-induced warming reached approximately 1°C (likely between 0.8°C and 1.2°C) above pre-industrial levels in 2017, increasing at 0.2°C (likely between 0.1°C and 0.3°C)

per decade (high confidence). The report has warned of a warmer planet and has raised the demand for unprecedented efforts to reduce GHG emissions. In line with the global trends, during the year 2018, annual mean surface air temperature of India was +0.41°C, significantly above normal. The year 2018 was the sixth warmest year on record since the nation-wide records commenced in 1901.

India's Climate Actions

5.28 India has continuously demonstrated its responsibility towards acknowledging the emerging threats from climate change and implementing the climate actions on the basis of the principles of Equity and Common but Differentiated Responsiblities for improving efficiency of the economy and its engines of growth. India has been actively promoting clean energy and clean technology as well as continuing the flagship schemes on combating climate change in both adaptation and mitigation fronts. The major policies and plans include National Action Plan on Climate Change (NAPCC), launched in 2008, formulated in the backdrop of India's voluntary commitment to reduce emission intensity of its GDP by 20 to 25 per cent by 2020 over 2005 levels. It was also meant to focus on key adaptation requirements and creation of scientific knowledge and preparedness for dealing with climate change. States/Union Territories have also State Action Plans on Climate Change (SAPCC) in line with the NAPCC taking into account State's specific issues relating to climate change. So far, 33 States/ UTs have prepared their SAPCCs. Central sector scheme called Climate Change Action Programme (CCAP) has been launched in 2014 with a total cost of ₹290 crore, with the objective to build and support capacity at central and state levels, strengthening scientific and analytical capacity for climate change assessment, establishing appropriate institutional framework and implementing climate related actions in the context of sustainable development. The budget outlay of CCAP scheme for the period of three years from 2017-18 to 2019-20 is ₹132.40 crore. A National Adaptation Fund on Climate Change was established in 2015 to meet the cost of adaptation to climate change for the State and Union Territories that are particularly vulnerable to the adverse effects of climate change. The Scheme will continue till 31 March 2020 with a financial implication of ₹364 crore. Till date, 30 adaptation projects have been approved at a total cost of ₹847 crore covering vulnerable sectors such as Water, Agriculture and Animal Husbandry, Forestry Ecosystems and Biodiversity. Out of which, Government of India has released an amount of ₹437 crore. Renewable energy sources are strategic to India's national policies on effective climate action. A detailed analysis on this is elaborated in Economic Survey volume-1, Chapter 9.

5.29 The outcomes of these initiatives are reflected in India's Second Biennial Update Report (BUR) submitted to UNFCCC in December 2018 as per the reporting obligations under the Convention. The report shows that emission intensity of India's GDP came down by 21 per cent between 2005 & 2014 and its achievement of climate goal for pre-2020 period is on track. A total of 2.607 billion tons of CO_2 equivalent of GHGs were emitted from all activities (excluding Land use, Land-Use Change, and Forestry (LULUCF)) in India. Energy sector accounted for 73 per cent, Industrial Processes and Product Use (IPPU) 8 per cent, agriculture 16 per cent and waste sector 3 per cent. About 12 per cent of emissions were offset by the carbon sink action of forestland, cropland and settlements (Table 4).

Table 4: Total and net emissions in CO_2 equivalent (Gg) across various sectors

Category	CO_2 equivalent (Gg)
Energy	19,09,765.74
Industrial Process and Product Use	2,02,277.69
Agriculture	4,17,217.54
Waste	78,227.15
LULUCF**	-3,01,192.69
TOTAL without LULUCF	26,07,488.12
TOTAL with LULUCF (Net emissions)	23,06,295.43

Source : MoEF&CC

**negative emission value implies sink action i.e. net carbon removal from the atmosphere

Gg- Gigagram

Katowice Climate Package

5.30 Parties to the Paris Agreement made concerted efforts to develop the modalities, procedures and guidelines for implementing the Agreement and the Paris Agreement Work Programme (PAWP) was adopted at the 24th session of the UNFCCC Climate Change Conference, held from 2 to 15 December in 2018 in Katowice, Poland. India engaged positively and constructively in the negotiations while protecting its key interests including recognition of different starting points of developed and developing countries; flexibilities for developing countries and consideration of principles including equity and Common but Differentiated Responsibilities and Respective Capabilities (CBDR–RC). India reiterated its promise to implement the Paris Agreement in its spirit and to act collectively to address climate change. The key takeaways of Katowice package are the guidance on Nationally Determined Contributions (NDCs) that preserves the nationally determined nature of NDCs and provides for Parties to submit different types of contributions including adaptation. The overall guidance reflects the principles of the Paris Agreement and recognizes the leadership that developed countries have to display for achieving the objectives of the Paris Agreement; the guidance on adaptation recognizes the adaptation needs of developing countries; the differentiation has been operationalized by incorporating provisions on providing support for adaptation activities of developing country Parties; the Enhanced Transparency Framework builds upon the existing guidelines while providing flexibilities for developing countries; the guidance on finance provisions operationalizes the obligation of developed countries in providing means of implementation to developing countries and recognizes the need for climate finance to be new and additional and climate specific. Parties have also agreed to initiate the work on setting up the new collective finance goals post-2020 from the floor of US$100 billion; the overarching framework for technology recognizes the need for enhanced support towards operationalization of the framework and comprehensively covers all stages of technology development and transfer.

5.31 Provision of financial support to developing countries is an important pillar of climate change response. UNFCCC mandates

that countries in Annex-II (industrialized countries) provide financial resources, including for the transfer of technology, needed by the developing country Parties to take climate actions. Paris Agreement also emphasizes the role of climate finance in strengthening the global response to climate change. Though the international community witnessed various claims by developed countries about climate finance flows, the actual amount of flows is far from these claims. In fact, without sufficient climate finance, the proposed NDCs would not fructify. Yet there are calls for enhanced climate action by developing countries. However, the means to achieve the climate goals is not commensurate to the urgency shown, nor do we witness the seriousness required in the discourse on climate finance. Global action on climate change is contingent on the delivery of timely and adequate finance. The Scope, Scale and Speed of climate finance required to take climate actions effectively is lacking in the debate on climate actions (Box 2).

Box 2: Three Essential 'S's of Climate Finance

i) Scope

Climate finance should support both the adaptation and mitigation activities of the developing countries in accordance with the country needs and priorities. The Paris Agreement gives equal weightage to adaptation and mitigation. Under the UNFCCC, the intent and obligation of climate finance is unambiguous, that developed country Parties shall provide financial resources to developing countries; but what constitutes of financial resources and its key elements for climate finance itself are very broadly defined. The essential elements that need to be taken up as parameters for accounting climate finance are -public grants, unrequited equity and grant-equivalent values of loans. Also counting only such transfers of finance ex-post that are formalized in entry in a book of accounts as specifically climate finance and actual disbursements of such finance crossing borders in a particular year need to be ensured. Some more important parameters such as how to treat private climate finance flows that are 'mobilized' or 'leveraged', the clarity on "new and additional" also need to be understood in this context.

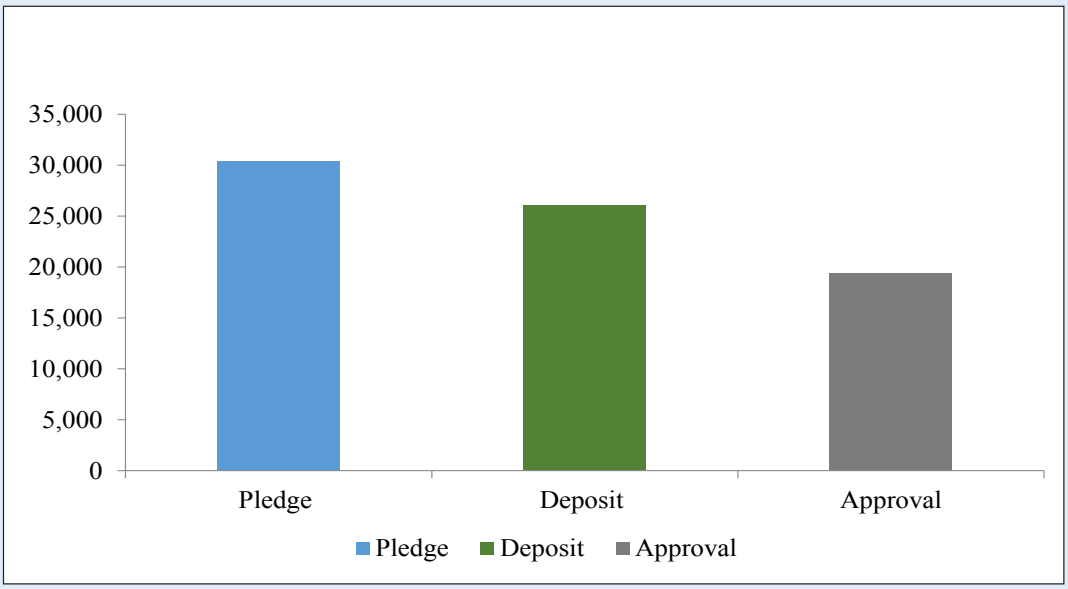
ii) Scale

Developing countries have myriad developmental challenges and climate change puts additional burden on the already scarce resources. The climate finance requirements of developing countries are likely to be enormous. Even preliminary estimates by simply summing the finance needs in NDCs with a conditional component, comes to around US$4.4 trillion (Weischer et al., 2016). A recent report by Oxfam, 2018 indicated, "People in poorer countries are on average five times more likely than people in rich countries to be displaced by extreme weather events. Adaptation costs in developing countries are expected to be US$140 - 300 billion a year by 2025/30. By mid-century, the costs of climate change to developing countries are estimated to exceed US$1trillion per year, even if global average temperature remains below 2°C."

iii) Speed

To answer the question, whether the speed of climate finance in the multilateral climate regime is sufficient, we need to understand if the developed countries have fulfilled their commitments and the progress of delivery of finance is from developed to developing countries. As of February 2019, the pledge and approval of multilateral climate change funds shows lagged performance.

Figure: Status of the Funds (in US$ million)



Source : Climate Funds update Feb 2019

Oxfam, 2018 provides an assessment of US$100 billion goal. What it states is that, the aggregated climate finance, estimated as net climate-specific assistance is far lower than the reported climate finance; new climate-specific assistance may be just US$16-21 billion. The value of loans is being over-reported. If the finance for development projects that only partially cover climate change were reported more accurately, annual bilateral flows of public climate finance could be between US$10 billion and US$15 billion lower than reported. Grant based assistance is too low and is rising too slowly; only an estimated US$11-13 billion was given as grants per year, forming just 23-27 per cent of the total, public climate finance amounted to 21 per cent of total global official development assistance (ODA) budgets in 2015-16.

The message is loud and clear – we need to establish more credible, accurate and verifiable numbers on the exact size of the climate finance flows from developed to developing countries. Paris Agreement and the NDC implementation will commence post 2020 and International public finance flows from developed to developing countries remain the critical enabler in ramping up these actions.

India's Nationally Determined Contribution (NDC)

5.32 An important feature of Paris Agreement is that it seeks to elicit ambitious action by each country by basing it on a country-driven approach with the contribution by each country to the global fight against climate change determined at national level. Each Party's successive NDC will have to be a progression of Party's previous efforts. India's NDC outlines the post-2020 climate actions India intends to undertake under the Paris Agreement on climate change adopted in December 2015. India ratified the Paris Agreement on October 2, 2016. At the national level, the roadmap for implementation of India's NDC is being prepared. An overall assessment and quantification of finance requirements for adaptation and mitigation for a country with so much diversity and demand is a difficult task given the rapid pace of changing technologies and innovation. India's NDC states, "Preliminary estimates indicate that India would need around US$206 billion (at 2014-15 prices) between 2015 and 2030 for implementing adaptation actions in key areas like agriculture, forestry,

fisheries infrastructure, water resources and ecosystems." Apart from this there will be additional investments needed for strengthening resilience and disaster management. NDC further provides the preliminary total estimates for meeting India's climate change actions between now and 2030 which is at US$2.5 trillion (at 2014-15 prices). Finding required financial resources is going to be a daunting challenge for the country.

Developments in the Sustainable Finance Arena

5.33 Implementing 2030 Sustainable Development Agenda and the Paris Agreement requires investments of scale and size which is unprecedented. This essentially means that along with domestic public budgets and international public finance, resources would have to be mobilized from a variety of sources, in particular, private sector. Currently, private sector financing has been mostly done by the banks and resides on their balance sheets. However, in future to increase the scale of sustainable investments there may be funding capacity problems for the banks if they are the primary provider of sustainable debt. Therefore, capital market products are required to free-up the banks' balance sheet capacity and allow them to underwrite loans to meet the accelerating demands for new sustainable investments. Further, by doing so institutional investors and certain retail investors can get access to sustainable debt as institutional investors are well situated to hold long term sustainable debt and they look to match long term liability funding requirements with long term assets.

5.34 Globally, the green bond market has seen remarkable growth over the past 5 years as increasing number of investors have sought environmentally sustainable investments without having to sacrifice financial returns. In the first quarter (Q1) of 2019, green bond issuance reached US$47.9 billion, and surpassed Q1 2018 volume of US$33.8 billion by 42 per cent, on a clear upward trend. 81 per cent of volume came from developed markets issuers. USA, France and Canada topped the country rankings, accounting for 48 per cent of Q1 2019 global issuance.

5.35 In markets in which regulators have provided a favorable environment for green bonds, supply has increased. green bonds makes way for investors to create environmentally aware portfolios without having to compromise on risk and return objectives that may fit nicely into a core bond allocation. Over the past few years regulators, stock exchanges and market associations have stepped in to provide some guidance to market participants for the green debt issuance process. In India, SEBI has provided a regulatory environment for issuance of green bonds in May 2017, the fruits of which are reflected in the cumulative issuance of green bonds in India. India stands at 11th position in global country ranking and accounts for 33 per cent of the Certified Climate bonds by number in emerging markets. Going forward, possible capital market structures for sustainable finance may include Real Estate Investment Trusts (REITs) and Infrastructure Investment Trusts (InvITs) which can be leveraged for transfer of green and sustainable assets such as energy efficient buildings, renewable power projects, mass transportation systems, etc. to the institutional investors. Another option is that banks and financial institutions may securitize the future cash flows emanating from their existing set of assets, thereby selling such securitized debt instruments to the investors including institutional investors. This provides investors with an opportunity to invest in regular yielding investment which is backed by sustainable assets.

INTERNATIONAL SOLAR ALLIANCE (ISA)

5.36 ISA is the first treaty-based International Intergovernmental Organization launched by India and France on 30 November, 2015 in Paris and entered into force on 6 December, 2017. As on June 2019, 75 countries have signed and out of which, 52 countries have ratified the ISA Framework Agreement. The first Assembly of the ISA was convened on October 3, 2018. ISA's motto is, "let us together make the sun brighter". ISA has launched five programmes so far: 1) Scaling Solar Applications for Agriculture Use; 2) Affordable Finance at Scale; 3) Scaling Solar Mini Grids; 4) Scaling Solar Rooftop, and 5) Scaling Solar in E-mobility and Storage.

Key Initiatives

- ISA has been working with various financial institutions for scaling up financing, lowering the cost of capital, and designing innovative financial instruments to accelerate the massive deployment of solar energy. ISA's engagement with Indian Diplomatic Missions in member countries, financing by the Export Import Bank of India, among others, resulted in development of a portfolio of 27 solar projects in 15 countries. These projects are being supported with India's concessional financing of US$ 1.4 billion.
- In addition, "Action to Transaction" meets, an innovative platform where project developers and bankers were brought together, facilitated 238 projects in ISA countries. France has also committed 1.5 billion Euros for financing solar projects and thereby, 27 projects have been funded by the French Development Financing Agency for approximately 720 million Euros.
- A task force was constituted to design a Common Risk Mitigation Mechanism to reduce risks and financial cost of solar projects. Also, the World Bank and Agence Française de Dévelopment (AFD) are developing a joint Global Solar Risk Mitigation Initiative (SRMI), an integrated approach to tackle policy, technical and financial issues. As a first implementation phase of the SRMI, the World Bank has launched in April 2019, US$337 million risk mitigation fund for 23 West African countries focusing on Regional Off-grid Electrification Project (ROGEP).
- The ISA is also working with the European Investment Bank and the EU Commission to launch an off-grid fund, initially for four Asian member countries of the ISA, to rapidly scale up to Africa and Latin America.
- A project pipeline of US$5 billion in mini-grids and rooftops is created.
- ISA has forged financial partnerships with various MDBs, UN agencies, Climate Parliament, European Commission, Commonwealth Secretariat and other International and Intergovernmental organizations.
- ISA Solar Award has been instituted for Solar Scientists doing extraordinary work across ISA countries with a one-time corpus contribution of US$1.5 million from the Government of Haryana.

5.37 Efforts for mobilizing financial resources for ISA activities resulted in augmenting initial corpus of US$16 million (Government of India contribution) to US$27 million, wherein US$3 million came from Japanese and Chinese companies. True to its motto, ISA from scratch has now transformed into an action oriented international organization, scaling newer heights under the collective leadership and supervision of the member countries.

WAY FORWARD

5.38 India has been progressing rapidly towards achieving the SDGs. India's progress in achieving SDG 10 (Reduced Inequality) and SDG 15 (Life on Land) has been impressive. However, there has been a wide variation in the way different states have performed. It is important that in the race towards SDGs no State is left behind. At the global level, given the myriad developmental challenges faced by the developing economies, lack of adequate resources is a major challenge in achieving the SDGs and international cooperation is essential in achieving these goals.

5.39 Efficient utilization of resources also plays an important role. With increasing demand for resources to cater to the different developmental needs, policies need to nudge economic agents towards achieving the maximum output from the available resources. India's policies have already taken the correct initiatives in this direction.

5.41 India's NDC has set clear targets for achieving its climate goals. However, a substantial scaling up of financial resources and technology are needed to implement this target by 2030. The fulfillment of pledges by developed countries through provision of 'new and additional' financial resources is an important contingent factor. The developing countries like India will endeavor to do the best possible within their own domestic resources, keeping in mind the sustainable development imperatives. It is time for the global community to exhibit the requisite momentum to act upon their responsibilities on establishing the enabling environment for climate action.

CHAPTER AT A GLANCE

- India follows a holistic approach towards its 2030 SDG targets by launching various schemes.
- India's SDG Index Score ranges between 42 and 69 for States and between 57 and 68 for UTs.
- Kerala and Himachal Pradesh are the front runners amongst all the states with a score of 69, Chandigarh and Puducherry are the front runners with a score of 68 and 65 respectively among the UT's.
- Namami Gange Mission- a key policy priority towards achieving the SDG 6 - was launched as a priority programme with a budget outlay of ₹20,000 crore for the period 2015-2020.
- A harmonized overarching national policy on Resource Efficiency, building upon the existing policies to address multiple sectors should be devised for mainstreaming Resource Efficiency approach in the development pathway for achieving SDGs.
- In order to address the increasing air pollution across the country in a comprehensive manner, the Government of India has launched NCAP in 2019 as a pan India time bound national level strategy for prevention, control and abatement of air pollution besides augmenting the air quality monitoring network across the country.
- India has continuously demonstrated its responsibility towards acknowledging the emerging threats from climate change and implementing climate actions, on the basis of the principles of Equity and Common but Differentiated Responsibilities.

- India's positive engagement at CoP 24 negotiations in Katowice, Poland in 2018 resulted in protection of key interests including recognition of different starting points for developed and developing countries; flexibilities for developing countries and consideration of principles including equity and Common but Differentiated Responsibilities and Respective Capabilities.
- Paris Agreement also emphasizes the role of climate finance in strengthening the global response to climate change. Though the international community witnessed various claims by developed countries about climate finance flows, the actual amount of flows is far from these claims. In fact, without sufficient climate finance, the proposed NDCs would not fructify.
- Implementing India's NDC requires investments of scale and size which is unprecedented. This essentially means that along with domestic public budgets, international public finance and private sector resources would have to be mobilized from a variety of sources.

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External Sector

06
CHAPTER

India's macroeconomic situation on the external side continues to be stable. Though the current account deficit is projected at 2.4 per cent of GDP in 2018-19, up from 1.8 per cent in 2017-18, this is within reasonable levels. The widening of the current account deficit has been driven by a deterioration of trade deficit from 6.0 per cent of GDP to 6.7 per cent across the two years. Rise in crude prices in Q4 of 2018-19 and a decline in the growth of merchandize exports have led to the deterioration of trade deficit. The acceleration in the growth of remittances has offset the deterioration of the current account deficit. In funding the current account deficit, the total liabilities-to-GDP ratio, inclusive of both debt and non-debt components, has declined from 43 per cent in 2015 to about 38 per cent at end of 2018. The share of foreign direct investment has risen and that of net portfolio investment has fallen in total liabilities, thereby reflecting a transition to more stable sources of funding the current account deficit. In sum, although the current account deficit to GDP ratio has started to increase lately, the external indebtedness continues to be on a declining path. India's foreign exchange reserves continue to be comfortably placed in excess of US$400 billion. The Indian Rupee traded in the range of 65-68 per US$ in 2017-18 but depreciated to a range of 70-74 in 2018-19. The Real Effective Exchange Rate also depreciated in 2018-19, making India's exports potentially more competitive. The income terms of trade, a metric that measures the purchasing power to import, has been on a rising trend, possibly because the growth of crude prices has still not exceeded the growth of India's export prices. The exchange rate in 2018-19 has been more volatile than in the previous year, mainly due to volatility in crude prices, but not much due to net portfolio flows. The composition of India's exports and import basket has almost remained unchanged in 2018-19 over 2017-18. Petroleum products, precious stones, drug formulations, gold and other precious metals continue to be top export items. Crude petroleum, pearl, precious, semi-precious stones and gold remain as top import items. India's main trading partners continue to be the US, China, Hong Kong, the UAE and Saudi Arabia.

GLOBAL ECONOMIC ENVIRONMENT

Increasing Trade Protectionism and Slowing down of Global Output

6.1 2018-19 has closed with growth in world output on a downward trajectory. The World Economic Outlook (WEO) in its April 2019 issue has projected growth in world output at 3.3 per cent in 2019, down from 3.6 per cent obtained in 2018. Heightened US-China trade tensions has been stated as one of the reasons behind the global slowdown that has spilled into other economies including India through the channel of exports. Beginning 2019 global slowdown has made advanced countries persist with their accommodative monetary policy stance. This has escalated portfolio investment into emerging market economies making their currencies stronger and imports cheaper.

6.2 The WEO further states that growing trade protectionism in the world, of which US-China trade tensions is the most recent

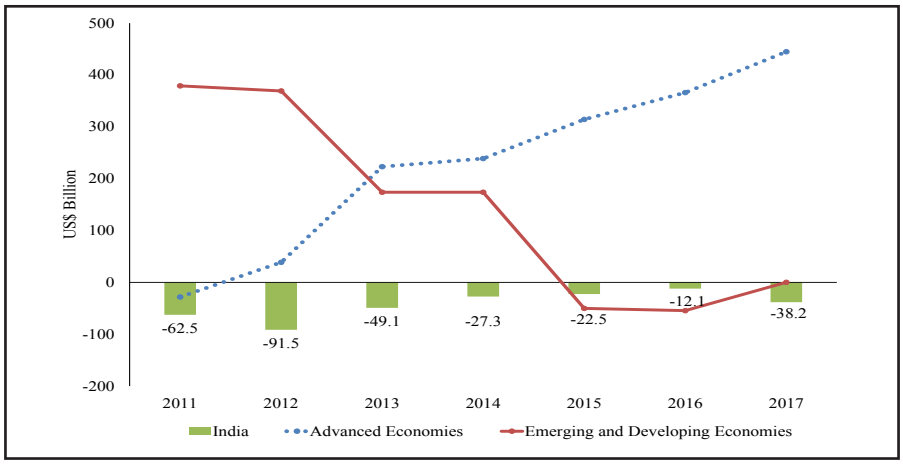
manifestation, places at risk the low relative price of machinery and equipment that over the years has declined, partly due to increasing trade integration, and supported the rise in real investment rate in developing countries. The WEO also clarifies that trade-protectionism will only divert bi-lateral trade imbalances from one country to another as the root cause of trade deficits is the macroeconomic imbalance.

6.3 The WEO accordingly advises that at the multi-lateral level, the main priority is for countries to resolve trade disagreements cooperatively, without raising distortionary barriers that would further destabilize a slowing global economy. It seems countries are well advised to do so as beginning 2019, crude oil prices have begun to harden following production cuts by oil exporting countries with the US also cutting out oil supplies from Iran, while prices of other commodities have also risen due to supply distortions. These developments increase the vulnerability of external sector of emerging market economies like India, which are dependent on crude imports for fueling their economic growth.

6.4 In its April 2019 Press Release, WTO has also stated that world trade growth in 2018 at 3 per cent has been much below the growth rate of 4.6 per cent in 2017 following the introduction of new and retaliatory measures around the world that by affecting widely-traded goods has caused weaker global economic growth and volatility in financial markets. The release has further stated that apart from trade tensions, trade and output were also influenced by temporary shocks, including the federal government shutdown in the United States and production problems in the automotive sector in Germany toward the end of the year. World commercial services on the other hand recorded a strong growth of 7.7 per cent in 2018 but was still lower than 8.4 per cent in 2017. However, goods related services growth shot up to 10.6 per cent in 2018, up from 8.3 per cent in the previous year.

6.5 Along with the slowing down of world trade seen in 2018 there has been a spatial shift in the nature of BoP balances as well in the last few years. Figure 1 shows that advanced economies had a current account deficit of US$28.1 billion in 2011, which has been reducing consistently since then and turned into current account surplus of US$444.7 billion in 2017. Emerging and developing economies on the other hand slipped from their current account surplus position of US$379.0 billion in 2011 to US$0.1

Figure 1: International Comparison of Current Account Balance



Source: International Monetary Fund (IMF)- Information is available till 2017 only.

billion in 2017. This reflects the shifting of the consumption hub of the world from the advanced to the less advanced countries.

6.6 It is in this context of global slowdown of output and trade, increase in trade protectionism across the world and shifting of the consumption hub to the emerging and developing economies that the developments on India's trade and BoP fronts have been discussed.

INDIA'S BALANCE OF PAYMENTS DEVELOPMENTS

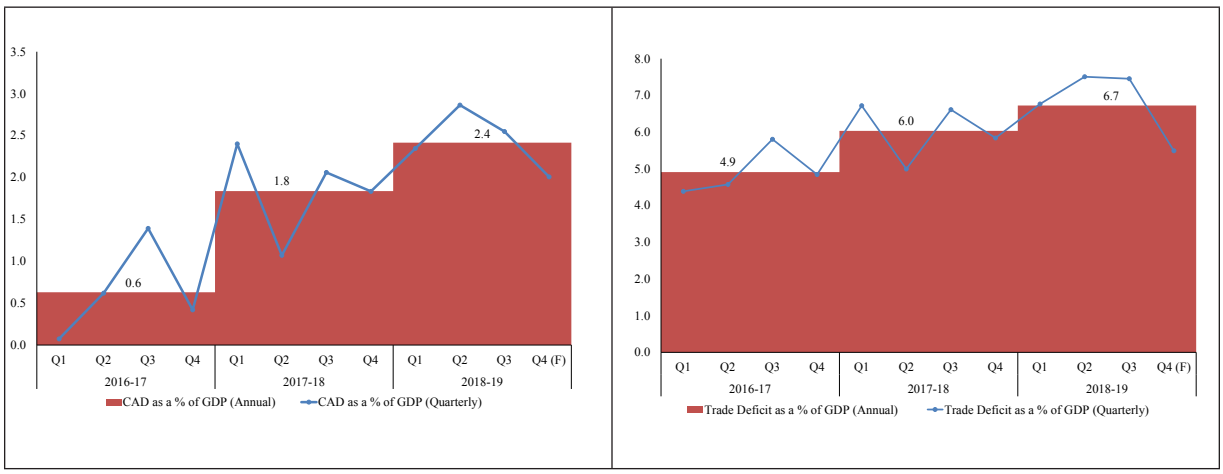
Overview of Balance of Payments

Current Account Developments

6.7 India's balance of payment situation showed some signs of stress during H1 of 2018-19 as sharp rise in crude oil prices caused current account deficit (CAD) to deteriorate. However, CAD moderated somewhat in Q3-2018-19 as international crude oil prices eased. Until end of Q3 for which data is available (April-December 2018-19), India's CAD stood at US$51.9 billion (2.6 per cent of GDP) as compared to US$35.7 billion (1.8 per cent of GDP) a year ago for the same period. The widening of the CAD was largely on account of a higher trade deficit driven by rise in international crude oil prices (Indian basket) making merchandise imports grow relatively faster than exports. The trade deficit increased to US$145.3 billion during the same period from US$118.4 billion in the corresponding period of previous year.

6.8 India's CAD has been increasing for some years now after attaining a high of 0.6 per cent of GDP in 2016-17. It increased to 1.8 per cent of GDP in 2017-18 and has been projected at 2.4 per cent for the full year of 2018-19. Expectedly the increase in CAD is driven by increasing merchandise trade deficit, which as proportion of GDP, increased from 4.9 per cent in 2016-17 to 6.0 per cent in 2017-18 and further enhanced to 6.7 per cent in 2018-19 (Figure 2).

Figure 2: Current Account Deficit and Trade Deficit as per cent of GDP



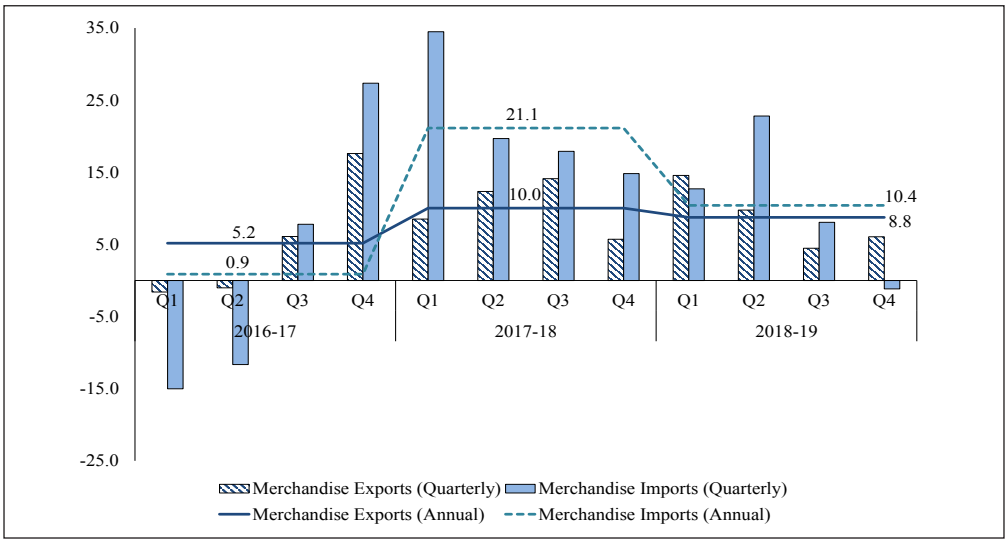
Source: Based on data of Reserve Bank of India.

Note: F: Forecasted figures have been used for Q4 of 2018-19.

6.9 The trend in merchandise trade deficit reflect the movement of merchandise exports net of merchandize imports. The broad trends in merchandise exports, merchandize imports and trade balance in the last ten years are indicated in Annexure I. For the recent period, as shown in Figure 3, growth of both merchandize exports and merchandize

imports accelerated from 2016-17 to 2017-18. However, thereafter the annual growth rate of merchandise exports fell from10 per cent in 2017-18, to 8.8 per cent in 2018-19. Annual growth rate of merchandise imports also fell from 21.1 per cent in 2017-18 to 10.4 per cent in 2018-19. In Q4 of 2018-19, merchandise imports registered negative growth that has led to slight improvement in the trade and current account deficit.

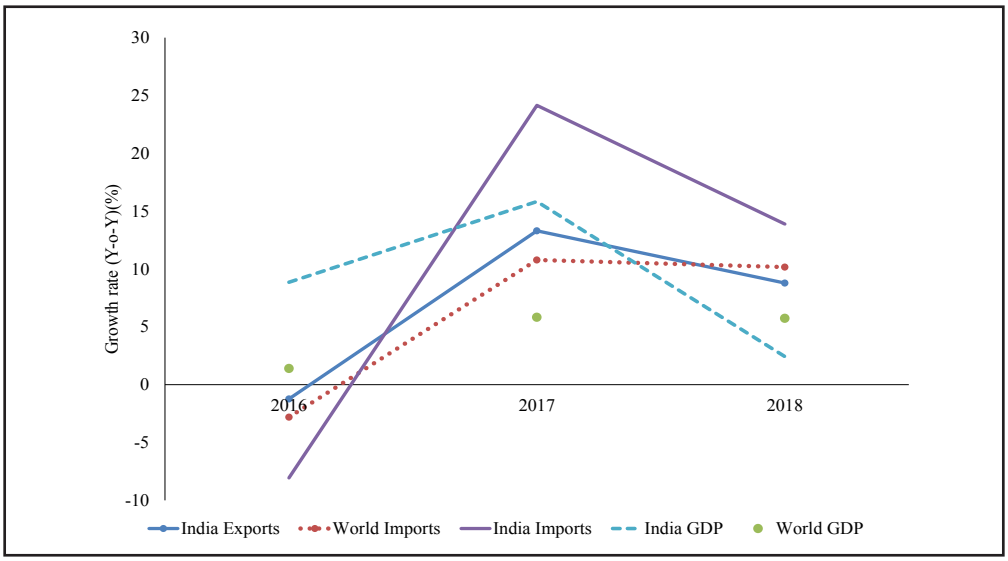
Figure 3: Growth rate of Merchandise Exports and Imports (Per cent)



Source: Based on data of Department of Commerce.

6.10 Placing the trends of merchandize exports and imports in the global context (Figure 4), it appears that growth of India's merchandize imports fell on the back of lower GDP growth in 2018-19 among other factors while slower growth of merchandize exports may have resulted from slower growth of world output and trade.

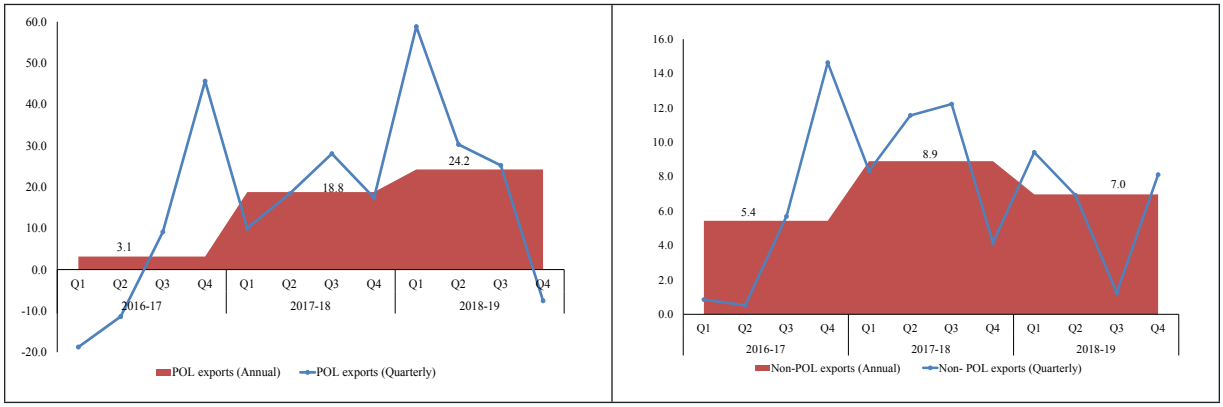
Figure 4: Impact of global and domestic economy on India's Exports and Imports



Source: Latest harmonised figures for India's Exports/ Imports and World Imports from World Trade Organization (WTO). India and World GDP from International Monetary Fund (IMF), 2019.

6.11 The growth in merchandise exports from 5.2 per cent in 2016-17 to 8.8 per cent in 2018-19 mainly resulted from high growth in Petroleum, Oil & Lubricants (POL) exports, which increased from 3.1 per cent in 2016-17 to 24.2 per cent in 2018-19, while non-POL exports grew modestly from 5.4 per cent to 7.0 per cent during the same period (Figure 5). However, from Q1 of 2018-19, the growth rate of POL exports has been declining continuously and turned negative in Q4. Be that as it may, petroleum products continue to have the largest share in India's export basket at 14.1 per cent in 2018-19.

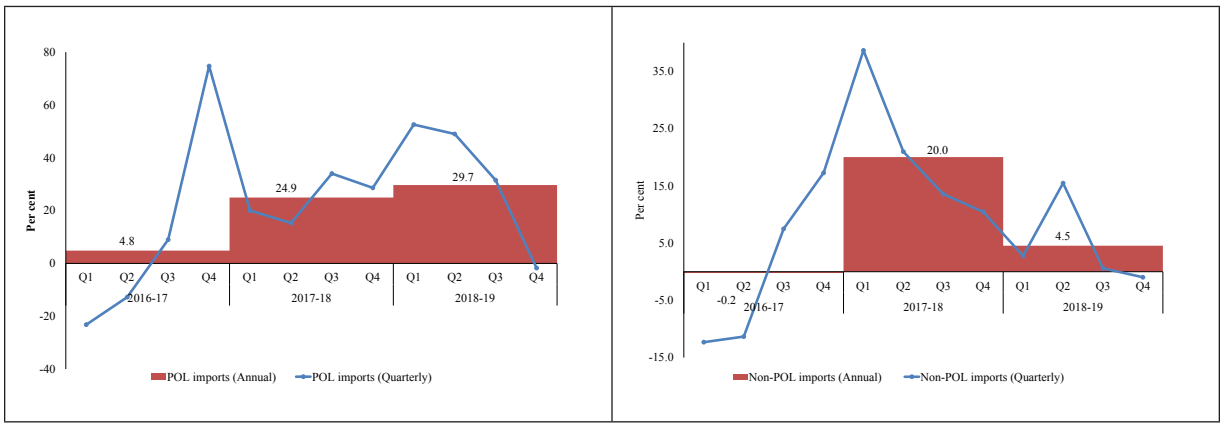
Figure 5: Growth in POL and Non-POL Exports (Per cent)



Source: Based on data of Department of Commerce.

6.12 The growth in merchandise imports from 0.9 per cent in 2016-17 to 10.4 per cent in 2018-19 can also be attributed to a sharp rise in growth rate of POL imports from 4.8 per cent in 2016-17 to 29.7 per cent in 2018-19. The non-POL imports also increased from -0.2 per cent in 2016-17 to 4.5 per cent in 2018-19 (Figure 6), possibly depicting a downturn in the economy. This appears to be all the more so as in Q4 of 2018-19 both POL and Non-POL imports registered negative growth rate. Even then, Crude petroleum continues to be the largest imported commodity in 2018-19 with a share of 22.2 per cent, followed by Gold/Silver; Pearl, Precious, Semi-Precious Stones; and Petroleum Products; having share of 6.4 per cent, 5.3 per cent and 5.2 per cent respectively, in the import basket.

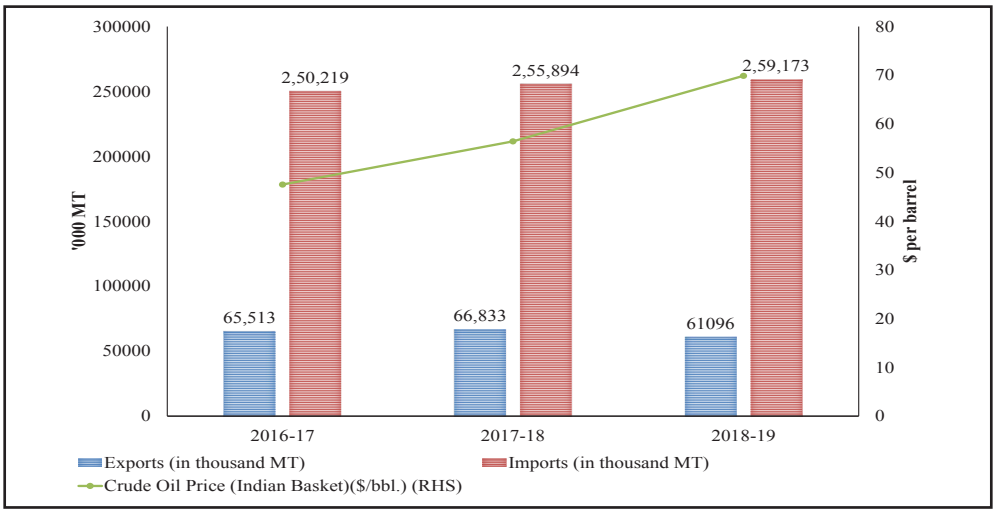
Figure 6: Growth in POL and Non-POL Imports (Per cent)



Source: Based on data of Department of Commerce.

6.13 Figure 7 reveals an interesting narrative of India's POL trade during 2016-17 to 2018-19. The acceleration in growth of POL imports from 2016-17 to 2018-19 was on account of both price increase in the international market and volume consumed by India. However, growth of POL exports was only driven by price rise as volume exported by India actually contracted from 2016-17 to 2018-19. This reflects that India is more dependent on POL imports than the world is on India's POL exports.

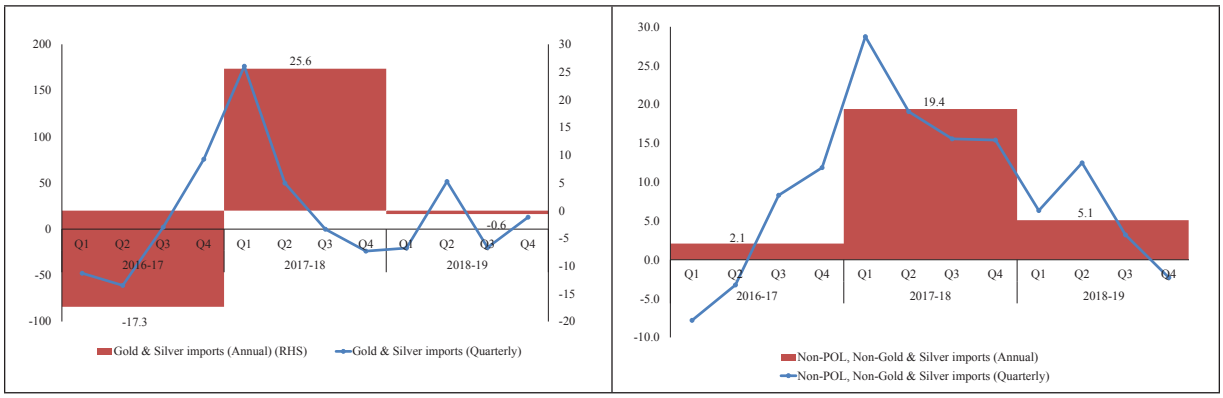
Figure 7: Volume of POL Exports and Imports and Crude Oil Price (Indian basket)



Source: Petroleum Planning and Analysis Cell.

6.14 Within Non-POL imports, sharp movements can be seen with respect to annual growth rates of gold and silver imports, which increased from -17.3 per cent in 2016-17 to 25.6 per cent in 2017-18, and then reduced to -0.6 per cent in 2018-19. Non-POL, Non-Gold and Silver Imports witnessed the same trend with increase in growth rate from 2.1 per cent in 2016-17 to 19.4 per cent in 2017-18, and then a deceleration to 5.1 per cent in 2018-19, unlike Gold and Silver Imports (Figure 8), whose growth again turned negative in 2018-19, although not to the same extent as in 2016-17. A positive Q4 growth of gold and silver imports did not allow its growth to fall as much for the full year whereas the negative growth rate of Non-POL, Non-Gold & Silver Imports in Q4 significantly pulled down its full year growth rate.

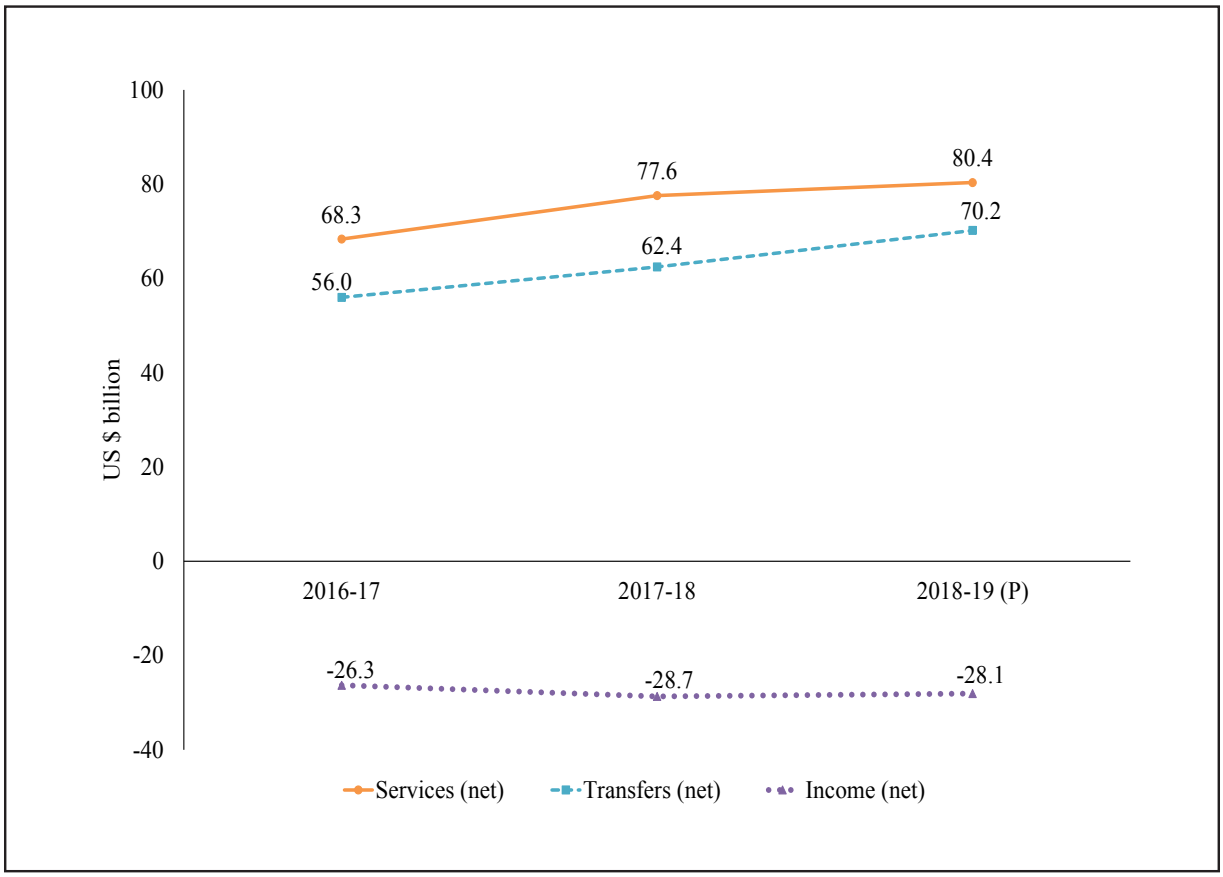
Figure 8: Growth rate in Gold & Silver Imports and Non-POL Non-Gold & Silver Imports (Per cent)



Source: Based on data of Department of Commerce.

6.15 Of three main components of net invisibles, net services followed the same trend as merchandize receipts did from 2016-17 to 2018-19, accelerating initially in 2017-18 before decelerating in 2018-19 (Figure 9). The growth of net transfers however kept on accelerating while there was no growth in net factor income during this period. The contribution of net services to financing merchandize trade deficit has fallen from 62.2 per cent in 2016-17 to 43.7 per cent in 2018-19, reflecting a muted performance of service exports in recent times. Software services, accounting for about 40 per cent of total services receipts, along with financial services, have been the main drivers in the service exports. The broad trend in India's Services trade in the last ten years is indicated in Annexure I.

Figure 9: Net Services, Net Transfers and Net Income (in US$ billion)

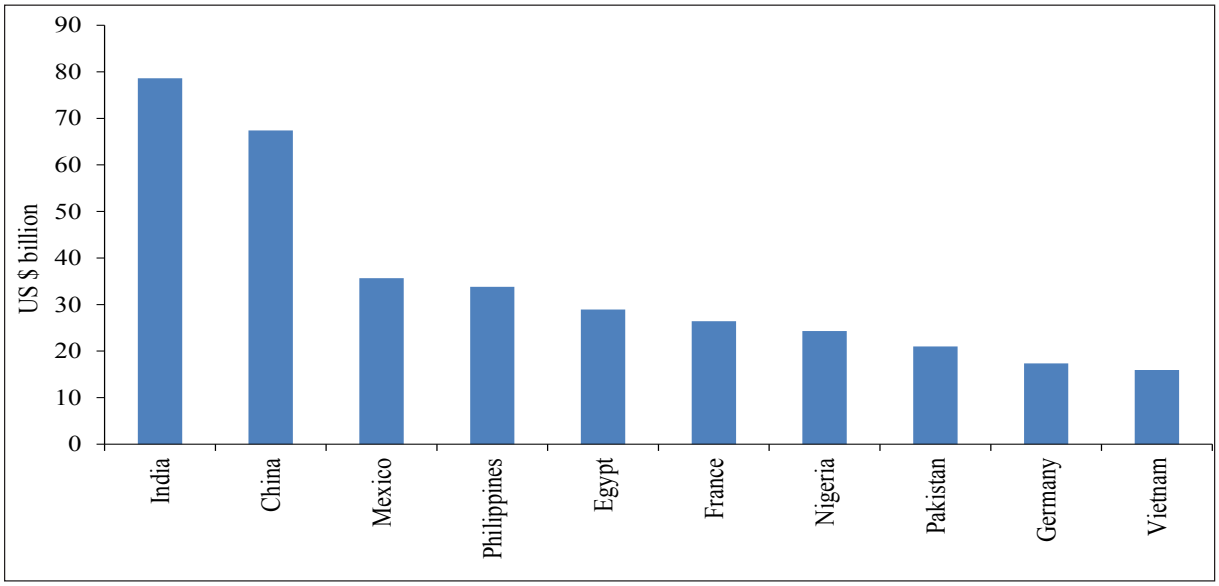


Source: Based on data of Reserve Bank of India and Ministry's projections.

Note: P: Provisional.

6.16 Net Private transfer receipts, mainly representing remittances by Indians employed overseas, increased by 12.4 per cent in 2018-19 (P) as compared to 11.5 per cent in 2017-18 and 10.6 per cent in 2016-17 (Figure 9). Improved income conditions in the Gulf countries with rise in oil prices, might have led to this rise in remittances as a significant portion of remittances are sourced from these countries. According to the World Bank (April 2019), India remained a top remittance recipient country in 2018, followed by China, Mexico, Philippines, and Egypt, with remittance inflows peaking at all-time high at US$78.6 billion (Figure 10).

Figure 10: Top Remittance Receivers in 2018

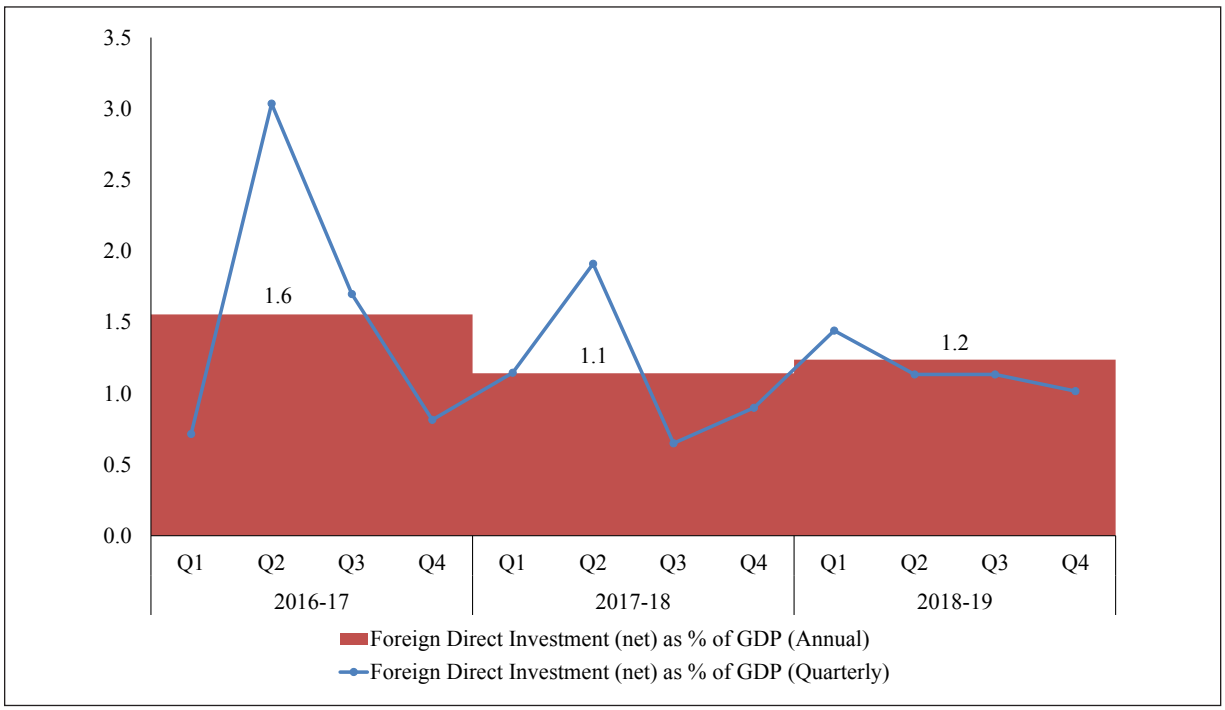


Source: Latest available figures from World Bank.

Developments in Capital Account of BOP

6.17 During 2018-19, net foreign investment declined to US$31.3 billion as compared to US$52.4 billion in the corresponding period of 2017-18. Robust foreign direct investment (FDI) inflows, were more than outweighed by withdrawals under portfolio investment reflecting an escalation of global risk aversion. As a proportion of GDP, net FDI fell from 1.6 per cent in 2016-17 to 1.1 per cent in 2017-18, before rising to 1.2 per cent in 2018-19 (Figure 11).

Figure 11: Foreign Direct Investment as a per cent of GDP

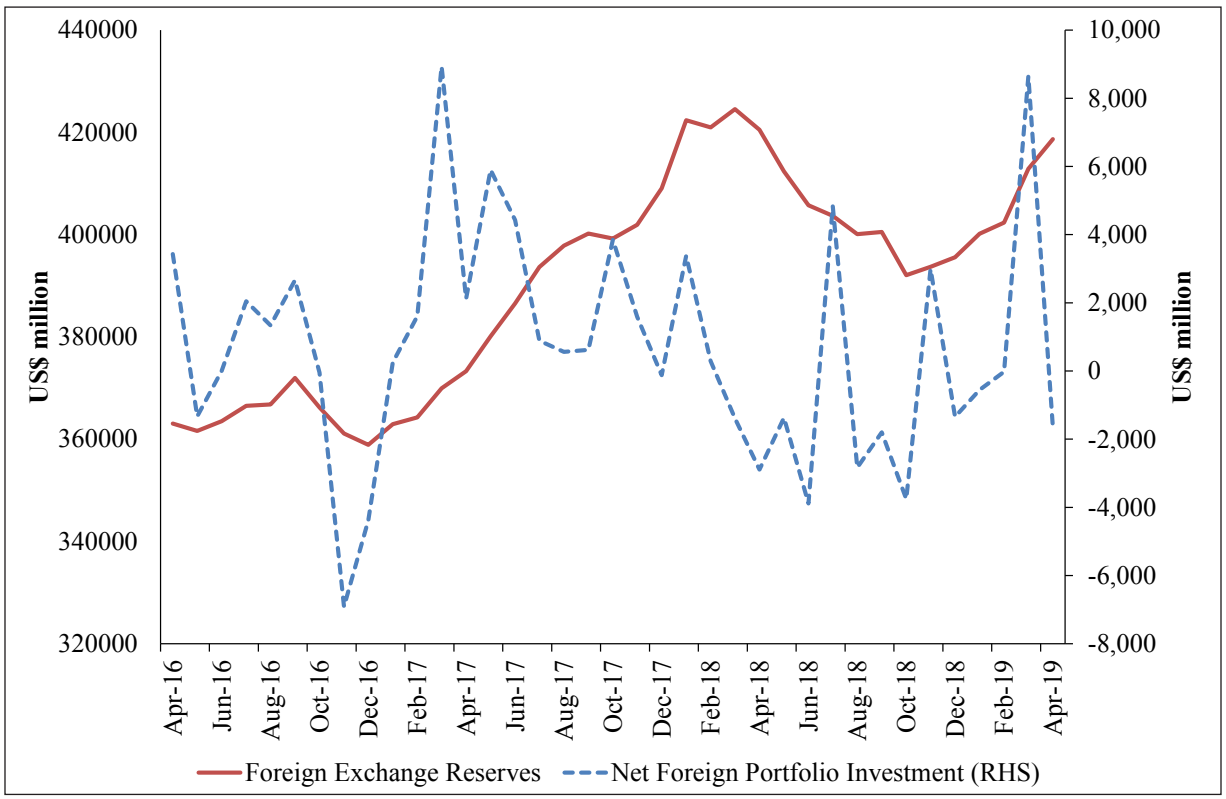


Source: Based on data of Reserve Bank of India.

6.18 Among other forms of capital flows, banking capital recorded a net inflow of US$15.5 billion in 2018-19 (April-December), a 34 per cent increase over US$11.6 billion in the corresponding period of the previous year. Among debt creating capital flows, net external assistance increased by 42.7 per cent to US$2.2 billion in 2018-19 (April-December) as against US$1.5 billion in the corresponding period of the previous year. Net External Commercial Borrowings (ECBs) also experienced a net inflow of US$2.8 billion during 2018-19 (April-December) as against a net outflow of US$1.2 billion in the corresponding period of the previous year, reflecting in part a possible credit crunch in the country. Net NRI deposit increased to US$7.0 billion in 2018-19 (April-December) as against US$5.0 billion in 2017-18 (April-December), while net short-term trade credit recorded a sharp decline during April-December 2018 as import contraction started to set in. Overall, net capital flows fell short of financing CAD resulting in depletion of foreign exchange reserves by US$17.5 billion during April-December 2018. The balance of payments table from 2013-14 to 2018-19 (April-December) is at Annexure II.

6.19 Over a longer period a change in the sources of funding the CAD is discernible. In 2009-14 net portfolio investment funded 45.6 per cent of current account deficit but declined to 17.1 per cent in 2014-19. The financing of the current account deficit in 2014-19 thus became less vulnerable to capital flight as compared to the previous period. The reduced dependency on FPIs to fund CAD in recent times is also reflected in the fact that growth of forex reserves in the country bears no correlation with movements in net FPI (Figure 12).

Figure 12: Monthly Movement in Net Foreign Portfolio Investment and Foreign Exchange Reserves

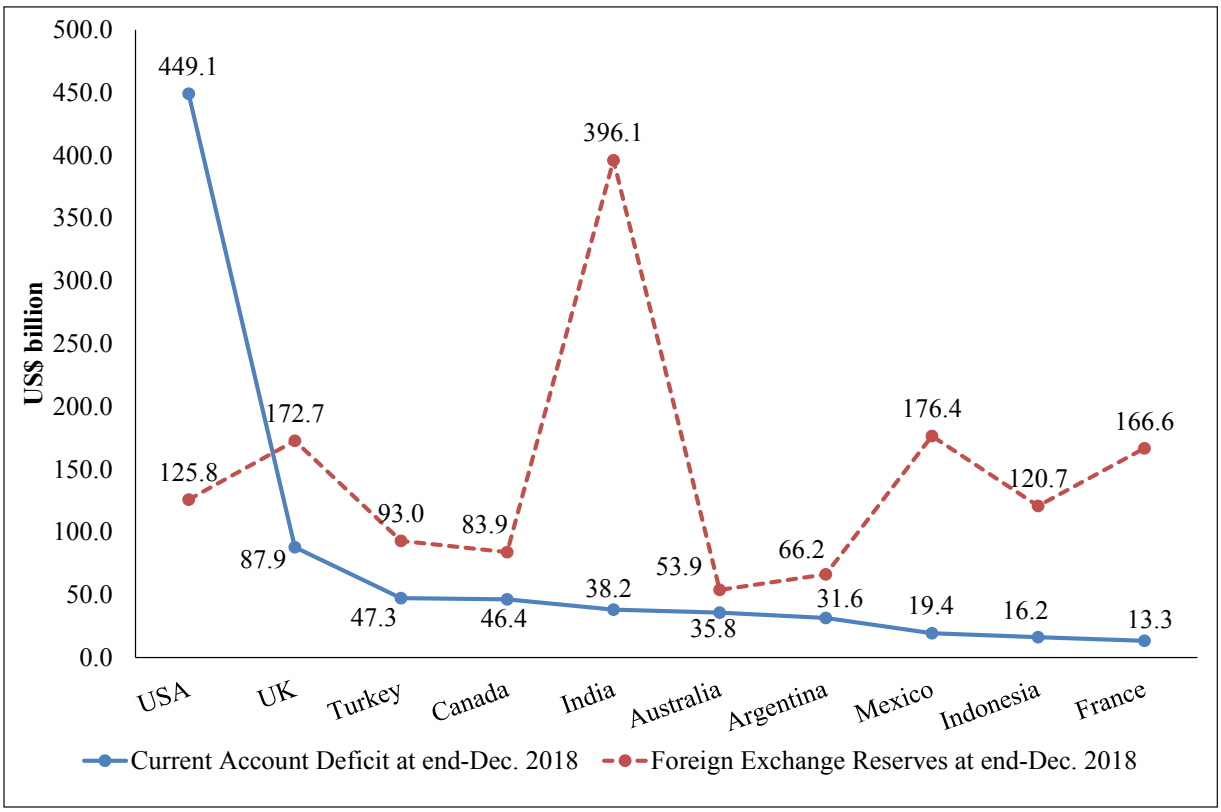


Source: Based on data of Reserve Bank of India.

6.20 India's foreign exchange reserves stood at US$422.2 billion as on June 14, 2019. The level of foreign exchange reserves can change due to change in reserves on BoP basis as well as valuation changes in the assets held by the Reserve Bank of India. The foreign exchange reserves in nominal terms (including the valuation effects) decreased by US$29.0 billion during April-December 2018 as against an increase of US$39.1 billion during the same period of the preceding year. However, on a balance of payments basis (*i.e.*, excluding valuation effects), the foreign exchange reserves decreased by US$17.5 billion during April-December 2018 as against an increase of US$30.3 billion during the corresponding period of the same year. The valuation loss, mainly reflecting the appreciation of the US dollar against major currencies, of US$11.5 billion during April-December 2018 followed a valuation gain of US$8.8 billion during the same period of the preceding year. The table depicting summary of changes in Foreign Exchange Reserves (US$ billion) is given in Annexure-III. The decline in forex reserves reduced the import cover of India's foreign exchange reserves to 9.1 months at end-December 2018, from 10.9 months at end-March 2018. Subsequently however in Q4 of 2018-19, there was a net accretion to the foreign exchange in nominal terms to the tune of US$17.3 billion partly reflecting the robust foreign portfolio investments.

6.21 Among the major economies running current account deficit, India is the largest foreign exchange reserve holder and eighth largest among all countries of the world (Figure 13).

Figure 13: Countries with highest Current Account Deficit and their Forex Reserves, 2018

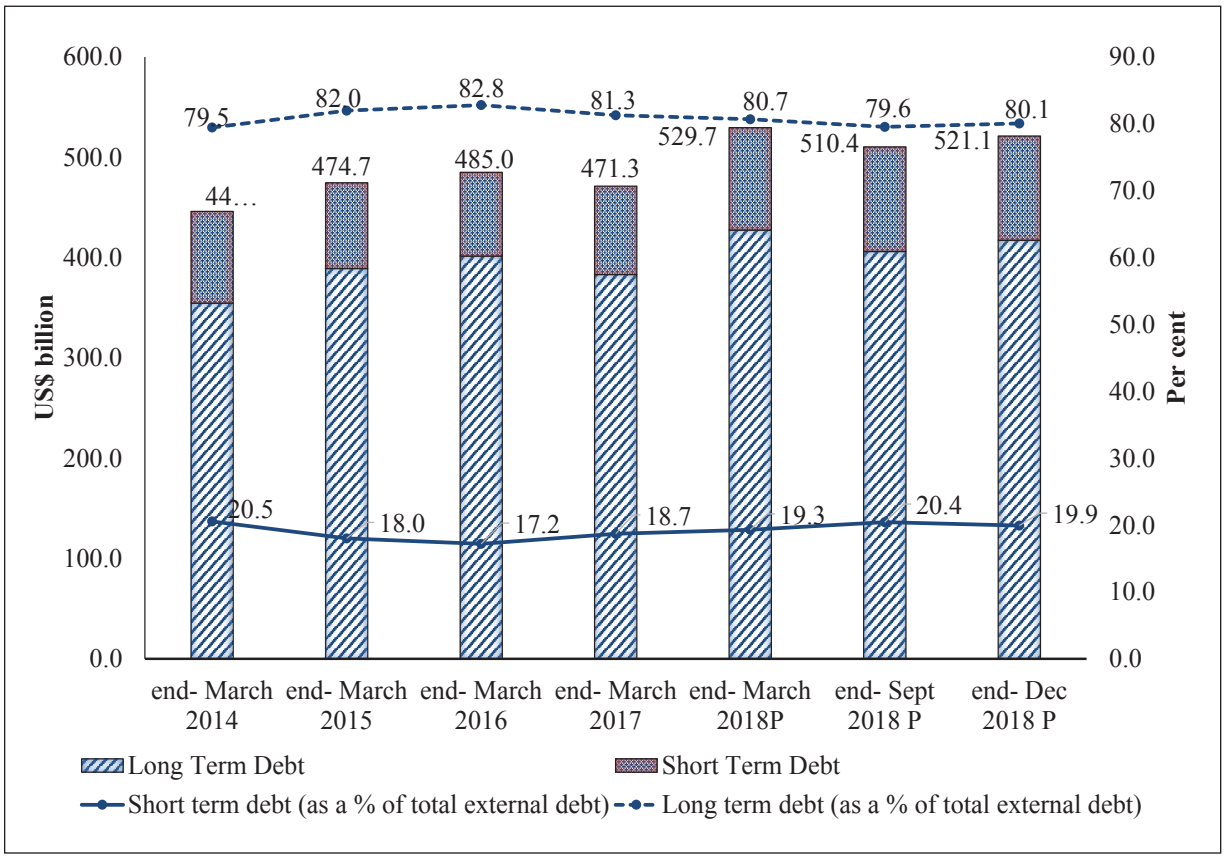


Source: Based on International Financial Statistics (IFS), IMF.

External Debt

6.22 India's External Debt was US$521.1 billion at end-December 2018, 1.6 per cent lower than its level at end-March 2018 (Figure 14). The long-term debt declined by 2.4 per cent to US$417.3 billion at end-December 2018 over end-March 2018, though its share was mostly same at 80.1 per cent compared to 80.7 per cent during the same period. This constancy of share has been in evidence since 2014. Short term debt grew by 1.7 per cent in end-December 2018 compared to end-March 2018, primarily due to increase in trade related credits.

Figure 14: India's Outstanding External Debt

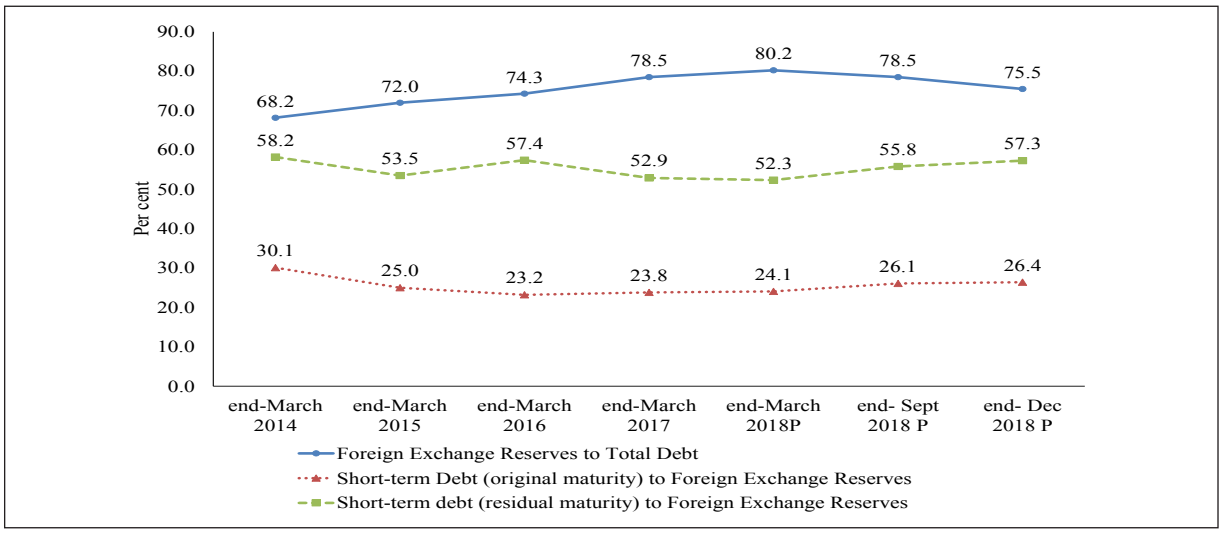


Source: Reserve Bank of India and Quarterly Report of India's External Debt ending December 2018 (latest available), Department of Economic Affairs.

Note: P: Provisional.

6.23 Foreign Exchange cover to total external debt deteriorated to 75.5 per cent at end-December 2018 from 80.2 per cent at end-March 2018, with the ratio of short term debt by original maturity to foreign exchange reserves rising to 26.4 per cent in end-December 2018 from 24.1 per cent at end-March 2018 (Figure 15). The ratio of short-term debt by residual maturity to foreign exchange reserves also increased to 57.3 per cent from 52.3 per cent during the same period (Figure 15). The share of short term debt by residual maturity in total external debt, which is useful in assessing liquidity requirements to service contractual obligations within a year, was 43.5 per cent at end-December 2018 as against 42.0 per cent at end-March 2018 reflecting increase in liquid conditions.

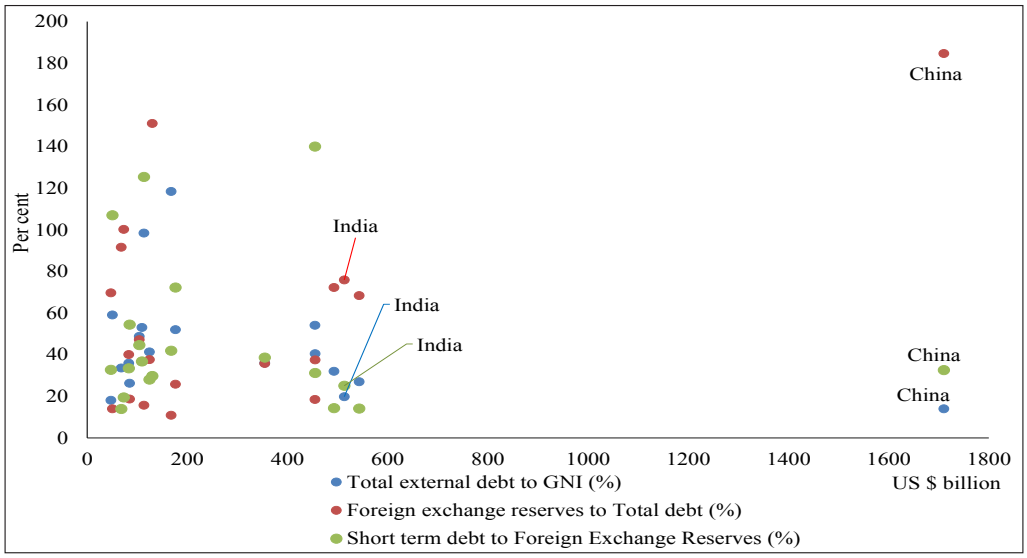
Figure 15: Foreign Exchange Reserves and Debt



Source: Reserve Bank of India and Quarterly Report of India's External Debt ending December 2018 (latest available), DEA
Note: P: Provisional. The foreign exchange reserves as on 14 June, 2019 is US$422.2 billion.

6.24 International comparison of external debt based on World Bank data shows that among the top twenty developing debtor countries in 2017, India's external debt to Gross National Income (GNI) ratio at 19.8 per cent was fourth lowest, while China continues to have the lowest ratio of 14 per cent (Figure 16). In terms of the foreign exchange reserves cover to external debt, India's position is fifth highest at 75.9 per cent, whereas India has fifth lowest short-term debt to foreign exchange reserves at 25.1 per cent among the top twenty developing debtor countries (Figure 16). Again as per the World Bank data, though India is the third largest debtor country (in absolute amounts) among developing countries (after China and Brazil), its average-age of debt is much higher given that its ratio of short-term debt to total debt is only about 19.0 while that of China is 69 per cent. Higher age of debt reduces the roll-over risk.

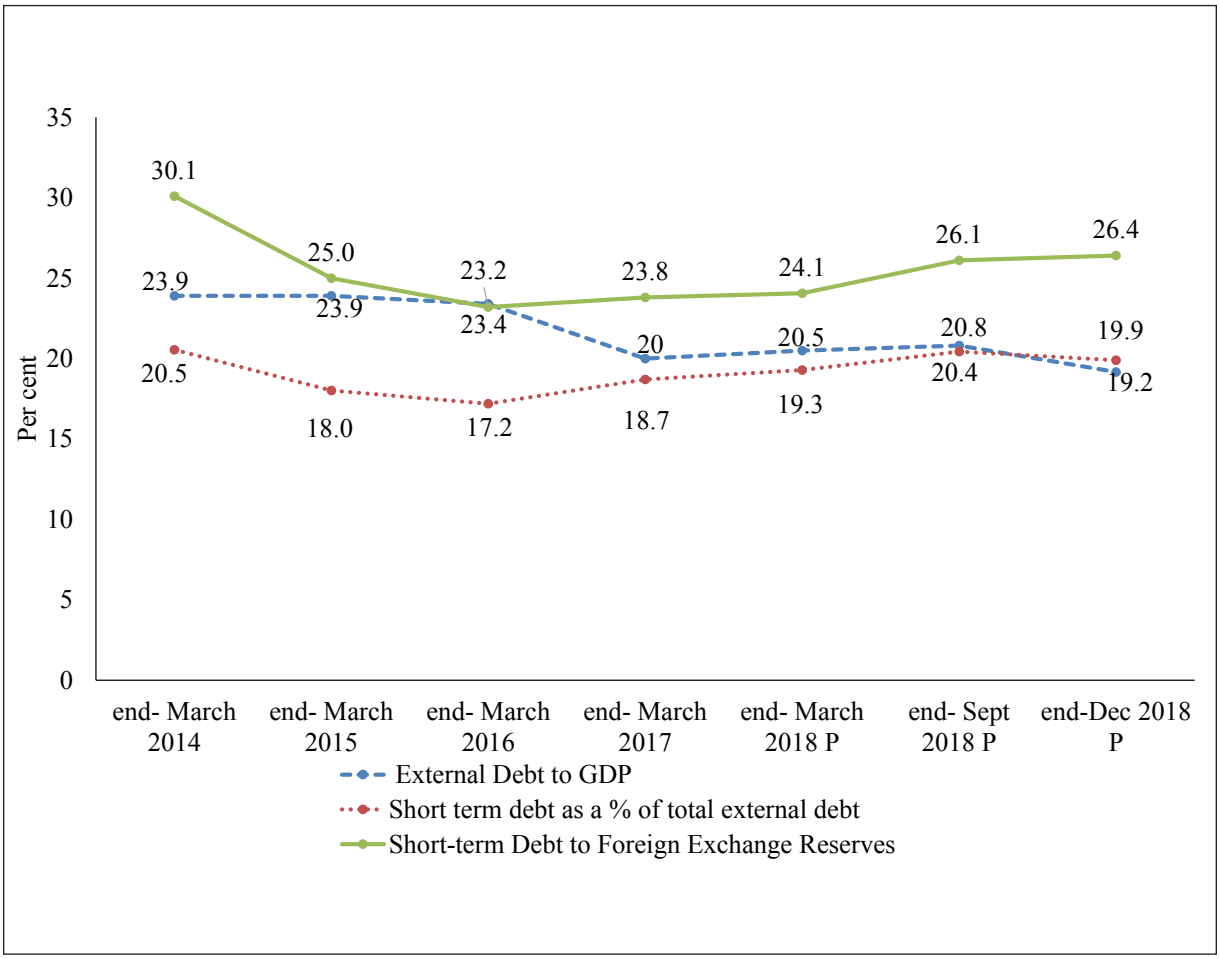
Figure 16: Cross- Country Comparison of External Debt Indicators in 2017



Source: International Debt Statistics, 2019, World Bank.

6.25 Figure 17 summarizes the key external debt indicators of India reflecting that India's external debt is not unsustainable.

Figure 17: External debt Key Indicators

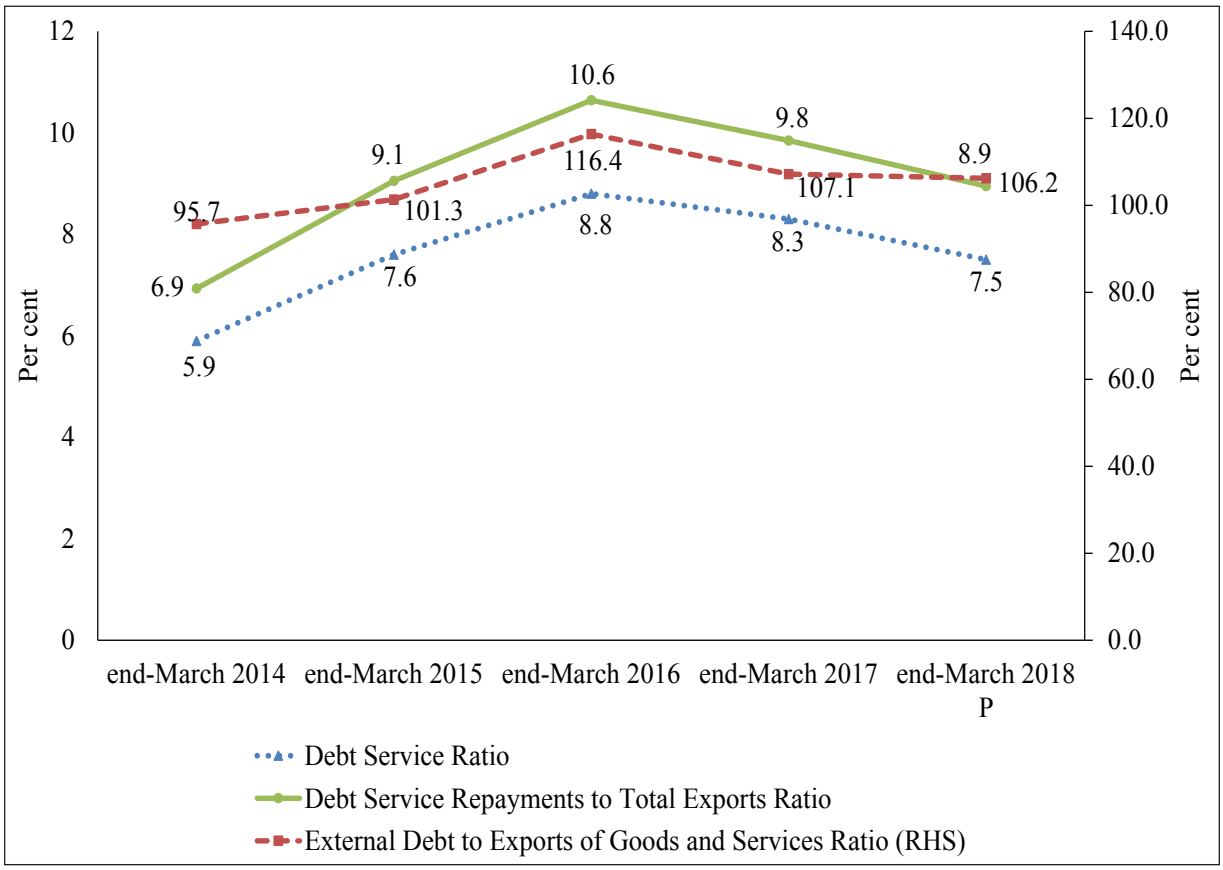


Source: Reserve Bank of India and Quarterly Report of India's External Debt ending December 2018 (latest available), DEA.

Note: P: Provisional.

6.26 Debt Service ratio indicates the claim that servicing of external debt makes on current receipts and is, therefore, a measure of strain on BoP due to servicing of debt service obligations. Debt Service ratio increased till 2016 and then declined continuously since 2016 from 8.8 per cent to 8.3 per cent in 2017 to 7.5 per cent in 2018 (end-March) (Figure 18). The total external debt to exports ratio, another measure of debt sustainability, increased since 2014 till 2016 and then reduced to 107.1 per cent in end-March 2017 and 106.2 per cent in end-March 2018 (Figure 18). Further, the ratio of debt service repayments (including principal and interest) to total exports of goods and services also depict the same trend of increase till 2016 and then a decline in 2017 (9.8 per cent) and 2018 (8.9 per cent) (Figure 18). The declining ratios of debt service, total external debt to exports and debt service to exports in 2016-17 and 2017-18 may be seen as favorable for India.

Figure 18: Indicators of Debt Sustainability



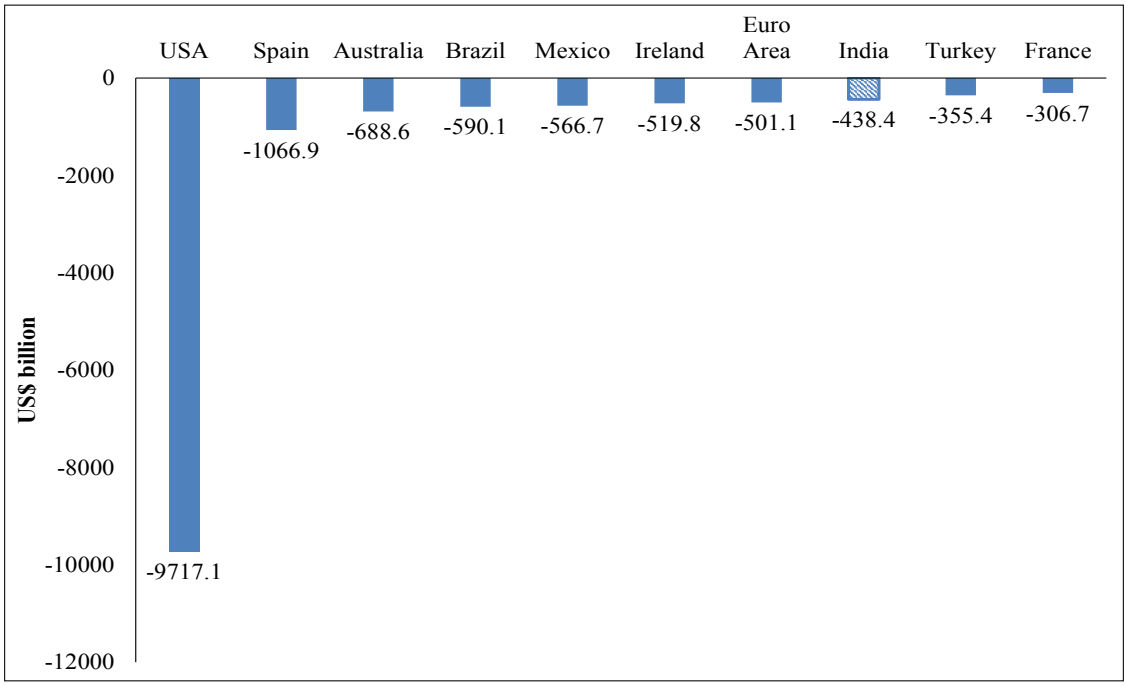
Source: Based on data of Reserve Bank of India.
Note: P: Provisional.

Net International Investment Position

6.27 The International Investment Position (IIP) is a statistical statement that shows at a point in time the value of financial assets of residents of an economy that are claims on non-residents or are gold bullion held as reserve assets; and the liabilities of residents of an economy to non-residents (International Monetary Fund (IMF)). The difference between the assets and liabilities is the net position in the IIP and represents either a net claim on or a net liability to the rest of the world. A positive NIIP value indicates a nation is a creditor nation, while a negative value indicates it is a debtor nation.

6.28 Among the top ten economies having Net IIP deficit in 2018, United States is ranked first with net IIP deficit of US$9.7 trillion, followed by Spain (US$1.1 trillion) and Australia (US$0.7 trillion) (Figure 19). India's net international investment deficit is the eighth highest in 2018, that however has been increasing consistently from US$323.2 billion in 2013 to US$438.4 billion in 2018, an increase of 35.6 per cent. In comparison to previous year 2017, India's net IIP deficit increased by 2.8 per cent from US$426.6 billion in 2017 to US$438.4 billion in 2018.

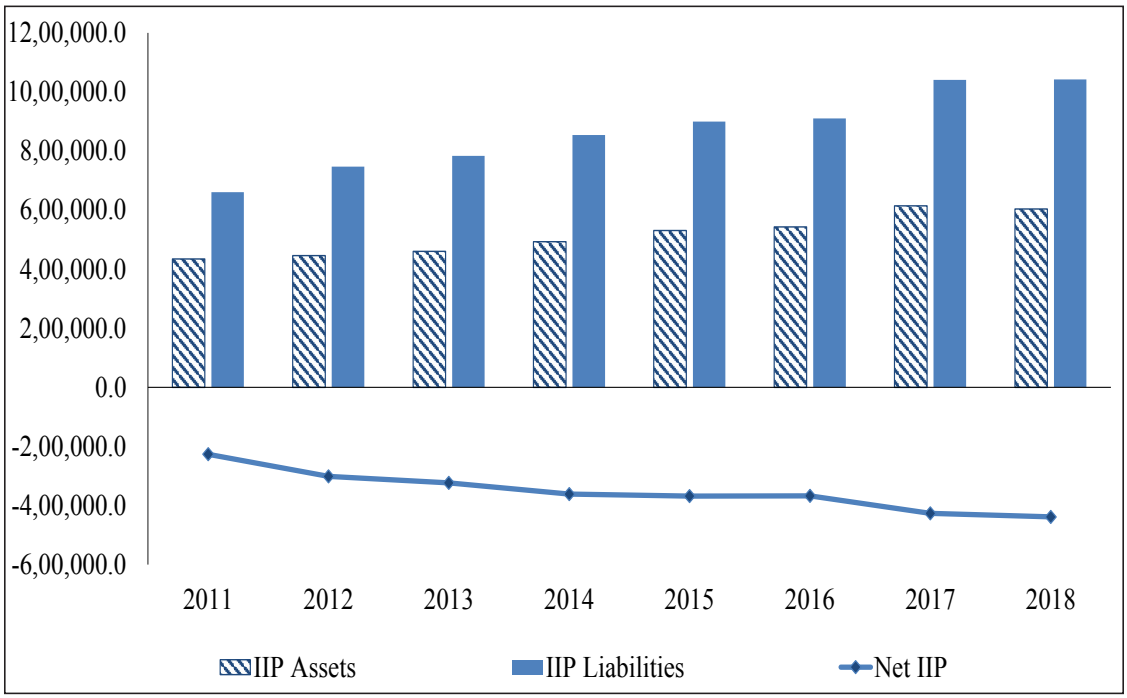
Figure 19: Net IIP Deficit of Top 10 Economies in 2018



Source: IMF.

6.29 Figure 20 shows that there is continuous deterioration in net IIP of India from 2011 till 2018, on account of consistent increase in IIP liabilities over the corresponding period of time.

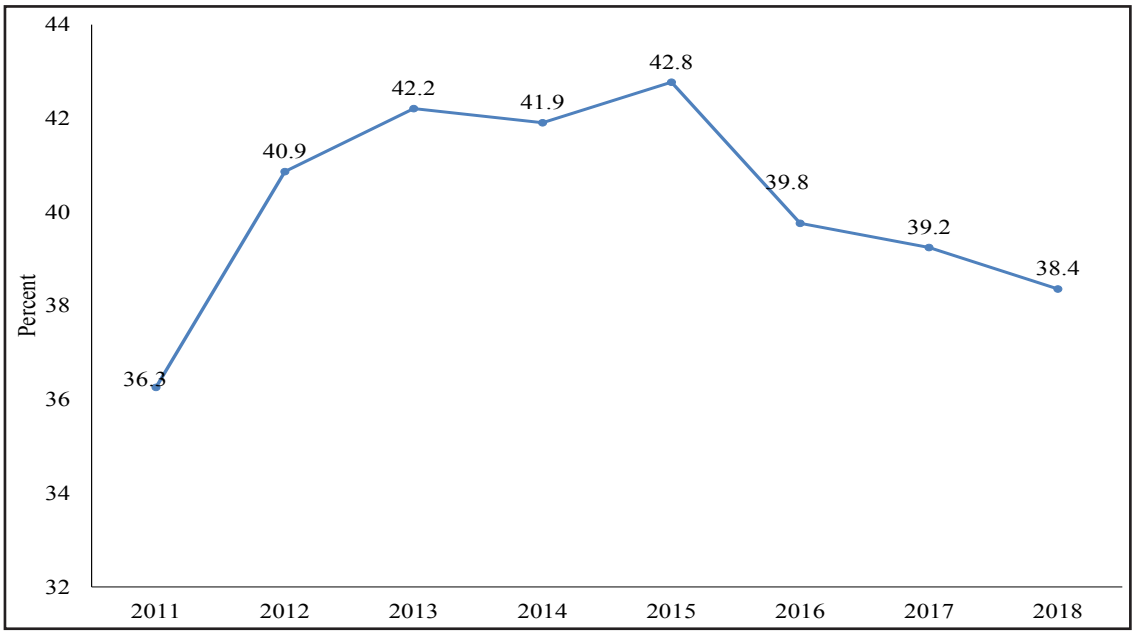
Figure 20: India's International Investment Position (US$ million)



Source: IMF.

6.30 However as per centage of GDP, IIP liabilities, which had earlier increased from 2011 to 2015, have been declining since then (Figure 21).

Figure 21: Total liabilities as per cent of GDP

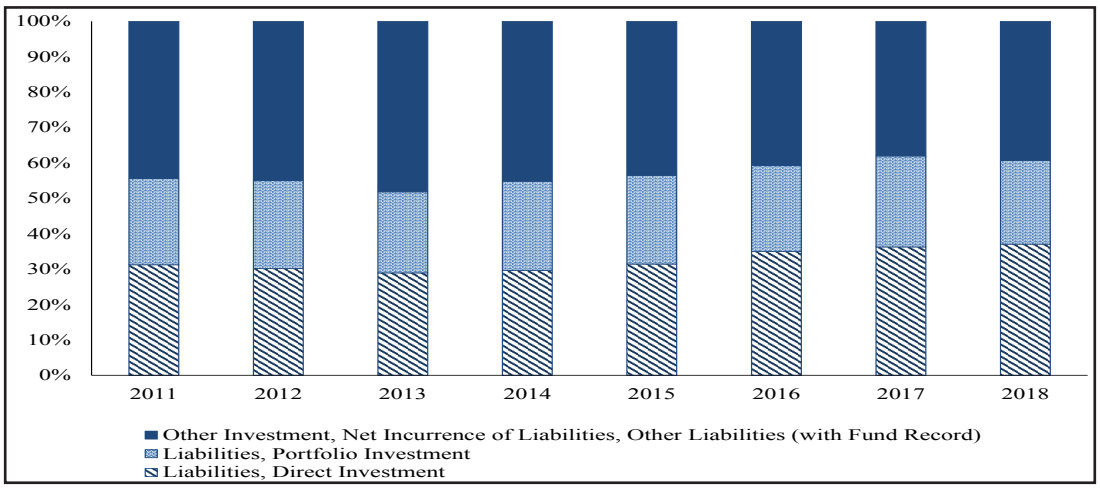


Source: Based on data of IMF.

6.31 The total liabilities in the IIP statement is a more comprehensive measure of external indebtedness than merely external debt as the former also includes net equity inflows, which is used for financing the CAD. The declining external indebtedness as evident from Figure 21 emerged in 2015 and can stabilize at is most recent level provided CAD as a percentage of GDP stays in the range of 2.2 to 2.5 per cent of GDP.

6.32 The share of net FDI inflows in total liabilities has seen a secular increase since 2013 reflecting an increase in dependence on more stable sources of financing the CAD (Figure 22).

Figure 22: India's IIP Liabilities



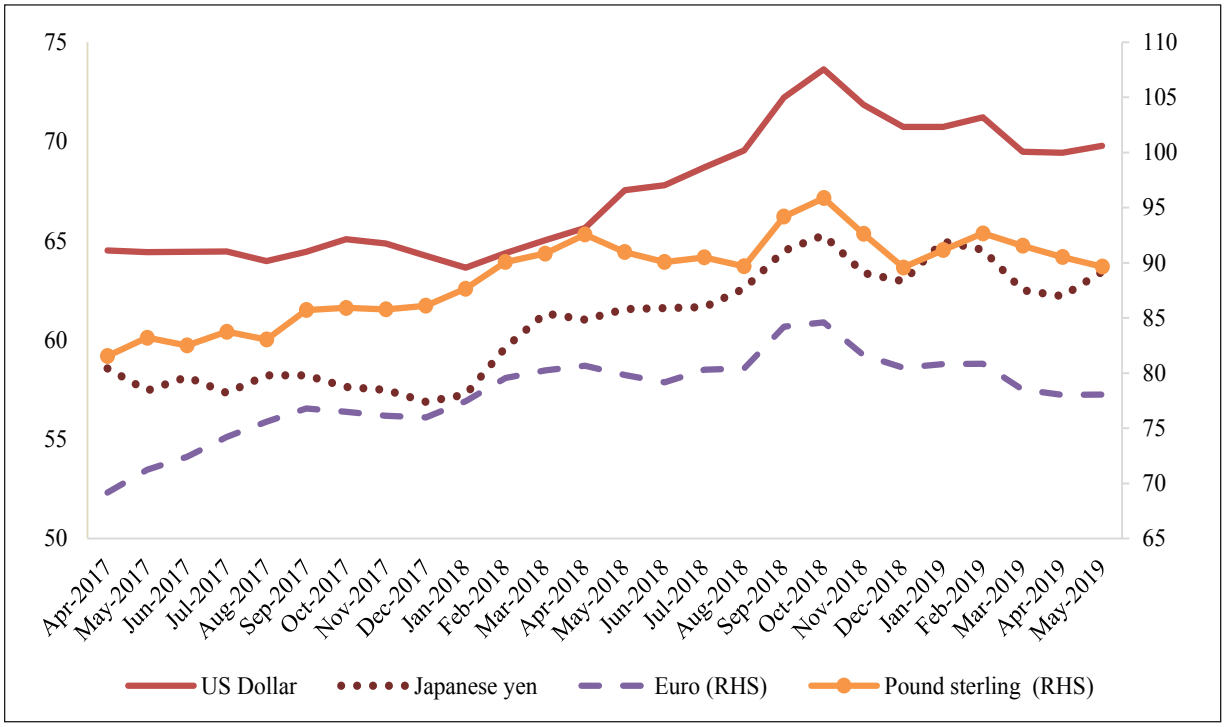
Source: Based on data of IMF.

NOMINAL AND REAL EXCHANGE RATE AND TERMS OF TRADE

Exchange rate

6.33 The Indian rupee was one of the least volatile Emerging Market (EM) currencies during 2017-18 and traded in the range of 63.63 to 65.08 per US$. During 2018-19, Indian rupee traded with a depreciating trend against US dollar and touched a historical low of 74.4 per US$ (reference rate) on October 11, 2018 before recovering by 4.1 per cent to 69.2 per US$ on March 29, 2019. During H1 of 2018-19, rupee remained weak due to concerns related to widening of CAD owing to rising crude oil prices coupled with the tightening of financial conditions caused by increase in Federal Funds rate by the US Federal Reserve. Thereafter, softer monetary policy stance across major central banks and easing of crude oil prices coupled with return of risk-on sentiment triggered FPIs inflows and helped rupee to recover in Q4 of 2018-19. Notwithstanding the overall depreciation of rupee against US dollar in 2018-19, as against 2017-18, it performed better than some of other major EME currencies, such as, Argentine peso, Turkish lira, Brazilian real, and Russian ruble, which depreciated by more than 10 per cent *vis-à-vis* US dollar. Apart from rupee depreciating by 7.8 per cent *vis-à-vis* US dollar in 2018-19, it also depreciated against other major currencies. It depreciated by 7.7 per cent against Yen, and 6.8 per cent against Euro and Pound Sterling each (Figure 23). The exchange rate of rupee per unit of foreign currency and RBI's sale/ purchase of US dollar in exchange market during 2018-19 is at Annexure IV.

Figure 23: Movement of Rupee against US Dollar, Euro, Pound Sterling and Japanese Yen



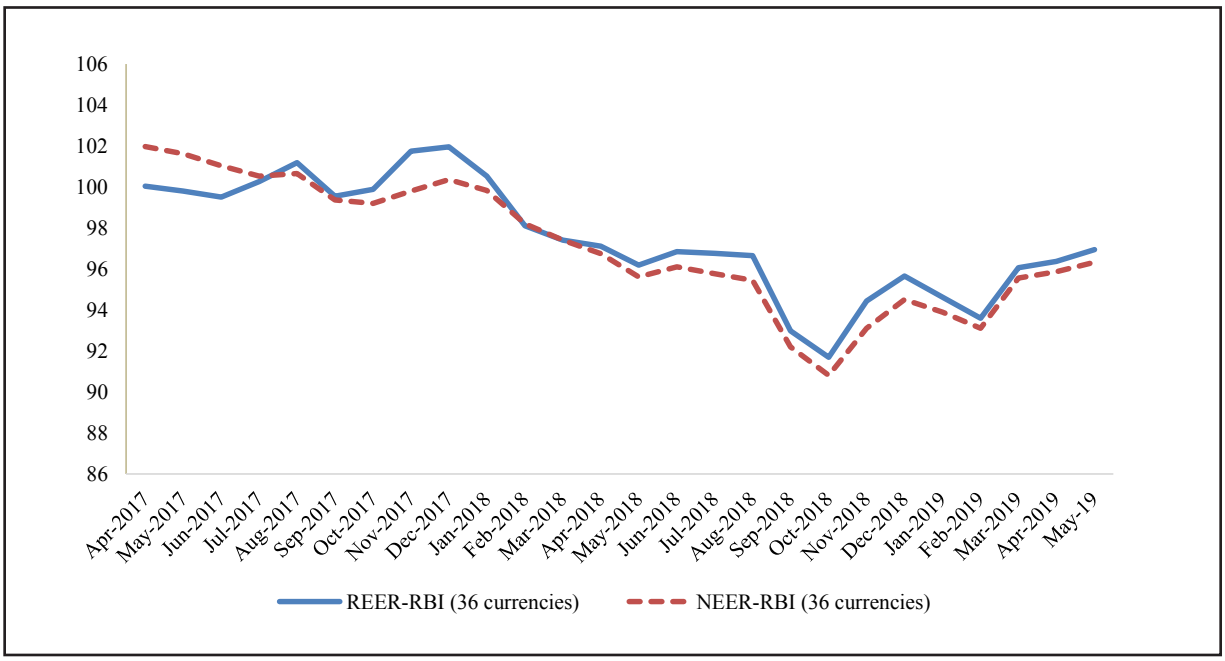
Source: RBI (Exchange Rate of the Indian Rupee vis-a-vis US Dollar, Pound Sterling, Euro and Japanese Yen - Monthly average)

Note: The exchange rate for Japanese yen is in rupees per 100 yen.

NEER and REER

6.34 In terms of the 6 and 36 currency Nominal Effective Exchange Rate (NEER) (trade based weights), rupee depreciated by 7.1 and 5.6 per cent respectively in the fiscal year 2018-19 over 2017-18. In terms of 6 and 36 currency Real Effective Exchange Rate (REER), rupee depreciated by 5.8 per cent and 4.8 per cent respectively in 2018-19 over 2017-18. The sharpest depreciation was seen in October 2018 as shown in Figure 24 after which the rupee witnessed signs of trend reversal. This can be attributed to strong economic fundamentals, softening of crude oil prices, sustained selling of the dollar by exporters and banks, and improving investor confidence on account of recovery in the Indian equity markets. The indices of NEER and REER (CPI Based) of the Indian rupee (with base year 2004-05) may be seen at Annexure V.

Figure 24: Movement of Indices in REER, NEER (Trade based) (2017-18 =100)



Source: Reserve Bank of India.

Exchange Rate Volatility

6.35 Table 1 below uses the highest and lowest monthly exchange rate within a year to calculate variation between month highs and lows. The standard deviation is calculated using monthly data as an indicator of exchange rate volatility. It indicates that the rupee witnessed a spike in volatility in 2018-19 after two years of relative stability.

Table 1: Exchange rate (₹/$) volatility

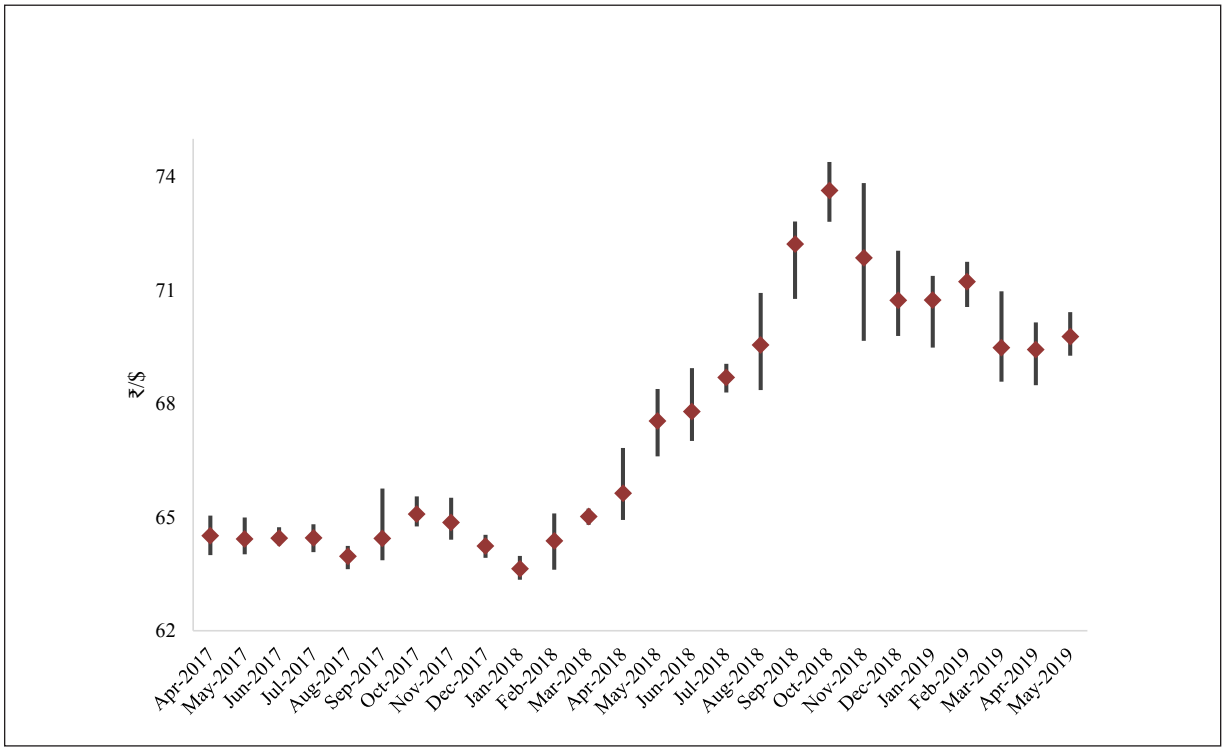
Year	Month-high	Month-low	High-low % change	Standard deviation
2011-12	43.9	54.2	23.4	3.1
2012-13	50.58	57.22	13.1	1.1

2013-14	53.74	68.36	27.2	3.1
2014-15	58.43	63.75	9.1	1.1
2015-16	62.16	68.78	10.6	1.7
2016-17	64.84	68.72	6.0	0.6
2017-18	63.35	65.76	3.8	0.4
2018-19	64.93	74.39	14.6	2.3

Source: Based on data of Reserve Bank of India.

6.36 Figure 25 demonstrates the monthly highs, lows and average of the Indian rupee vis-à-vis the dollar from April 2017 to April 2019 from where also it is evident that the rupee has been relatively more volatile in 2018-19 as compared to the previous year.

Figure 25: Exchange rate highs and lows



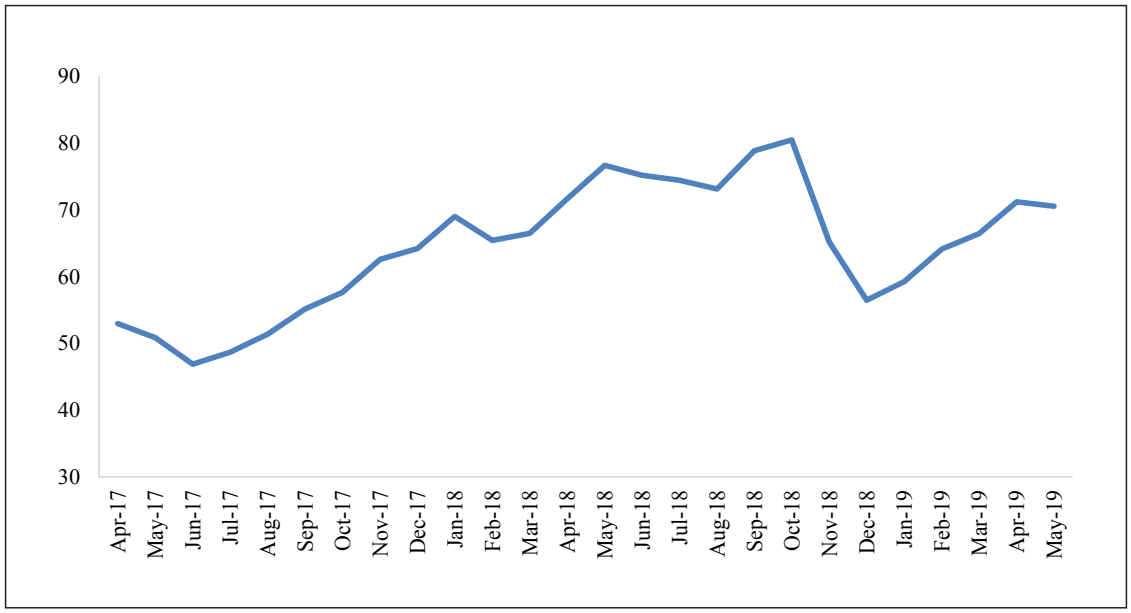
Source: Based on data of Reserve Bank of India.

6.37 The degree of exchange rate volatility will depend on the extent to which exchange rate movements can be anticipated. In particular, crude oil prices and net portfolio flows have been major drivers of exchange rate movements in recent years. Movements in these variables can help foresee likely variance in exchange rates which will enable hedging of the volatility and impact on trade to some extent.

6.38 Figure 26 indicates the movement in price of crude oil from April 2017 to May 2019. 2018-19 seems to be a year of mixed fortunes for the oil and gas industry with prices firming up before dipping down in November

against the backdrop of anticipation of global oversupply, amid slowdown in world economic growth. However, since December 2018, crude prices have shown an uptick following US announcement of cutting out Iran totally from the oil market.

Figure 26: Crude Oil Price ($/bbl)



Source: Based on World Bank Pink Sheet data for Brent Crude oil price

6.39 As in Table 1, Table 2 also uses the highest and lowest monthly price to calculate variation between month highs and lows. The standard deviation is calculated using monthly data as an indicator of variance in the price. Highest variance was recorded in 2014-15. Standard deviation figures indicate that crude oil price remained relatively volatile in 2017-18 and 2018-19 compared to 2016-17.

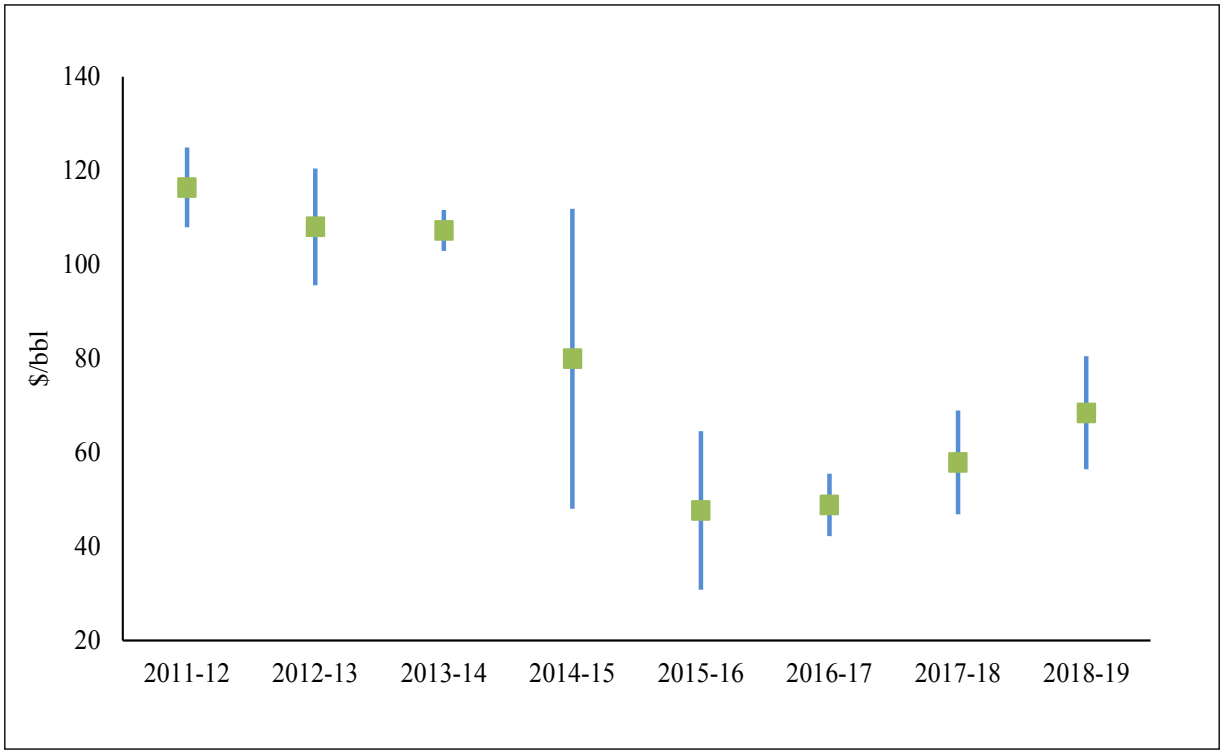
Table 2: Crude Oil Price ($/bbl) volatility

Year	Month-high	Month-low	High-low % change	Standard deviation
2011-12	124.9	107.9	15.8	5.6
2012-13	120.5	95.6	26.0	6.3
2013-14	111.6	102.9	8.5	3.1
2014-15	111.9	48.1	132.7	23.9
2015-16	64.6	30.8	109.6	11.2
2016-17	55.5	42.3	31.3	4.3
2017-18	69.0	46.9	47.1	7.6
2018-19	80.5	56.5	42.5	7.7

Source: Based on World Bank Pink Sheet data for Brent Crude oil price

6.40 Figure 27 demonstrates the highs, lows and average of the crude oil price from 2011-12 to 2018-19, where the lows possibly correspond with high real GDP growth in India and the highs with low real GDP growth rates.

Figure 27: Crude Oil price highs and lows



Source: Based on World Bank Pink Sheet data for Brent Crude oil price

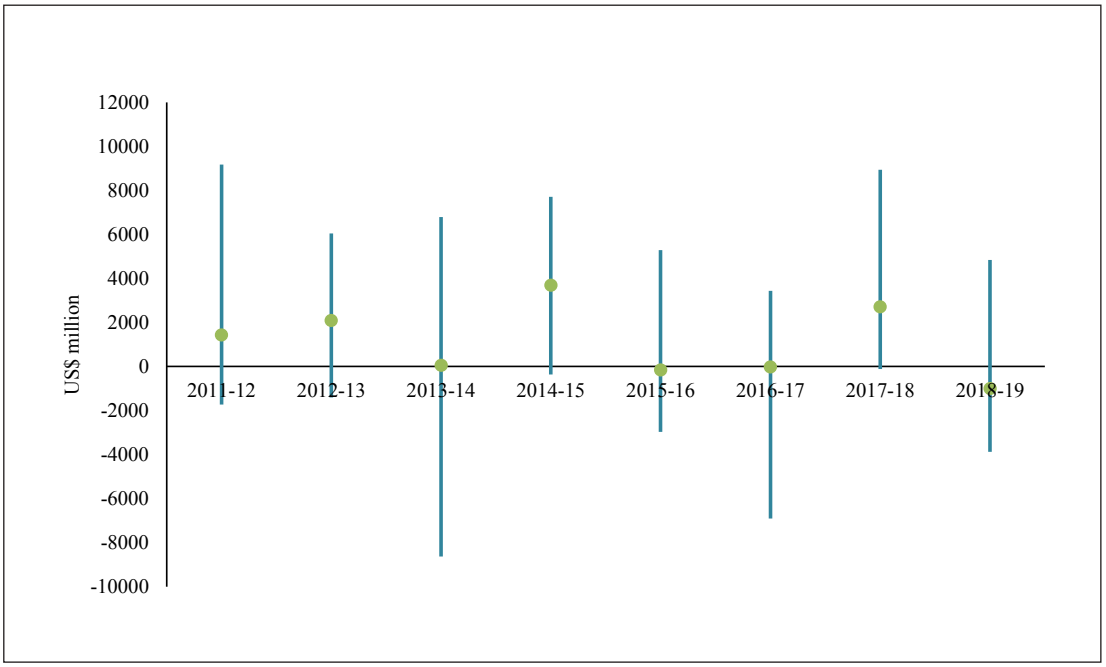
6.41 Table 3 uses monthly net Foreign Portfolio Investment (FPI) data for the period 2011-12 to 2018-19 to calculate variation between highs and lows. The standard deviation is calculated using monthly figures. It indicates that net FPI witnessed highest volatility in 2013-14 after which it has been relatively stable in 2018-19.

Table 3: Net Foreign Portfolio Investment (FPI) volatility

Year	Month-high	Month-low	High-low % change	Standard deviation
2011-12	9170	-1734	-628.84	3250.93
2012-13	6042	-1409	-528.81	2395.78
2013-14	6782	-8628	-178.60	3904.63
2014-15	7701	-361	-2233.24	2554.61
2015-16	5288	-2973	-277.87	2847.21
2016-17	3429	-6911	-149.62	2976.37
2017-18	8935	-120	-7545.83	2720.91
2018-19	4831	-3882	-224.45	2610.56

Source: Based on data of Reserve Bank of India.

Figure 28: Net Foreign Portfolio Investment highs and lows



Source: Based on data of Reserve Bank of India.

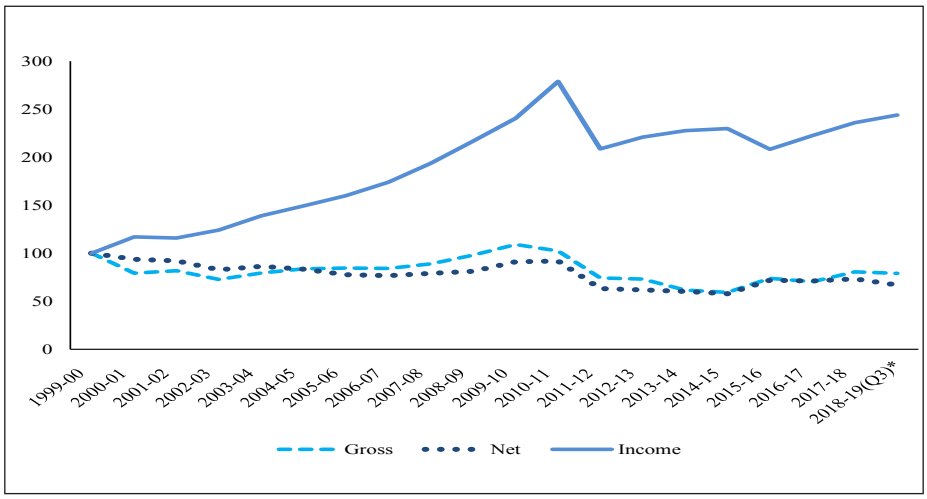
6.42 Figure 28 demonstrates the highs, lows and average of the net FPI flows from 2011-12 to 2018-19.

6.43 It is evident that movements in exchange rate are closely associated with movements in crude oil price and net FPI flows. The rupee remained volatile in 2018-19 on account of both global and domestic factors including rising crude oil prices, erratic trade balance, strengthening of dollar and continuous FPI outflows. Additional factors impacting the rupee include trade war between US and China and US sanctions on Iran and interest rate hikes by the US Federal Reserve.

Terms of Trade

6.44 While depreciation of REER indicates that India's exports must have become more competitive, appreciation of REER indicates less competitive exports. Price competitiveness of exports can however be better assessed by looking at how Terms of Trade (ToT) have fared across a time period. Commodity or net terms of trade (NTT) of a country is the ratio of the unit value (price) of export to the corresponding unit value (price) of import measured relative to a base year. If this ratio increases, it implies that the country, for every unit of exports it exchanges for imports, is receiving relatively more; if the ratio decreases then the country is receiving relatively less. Two other commonly used terms of trade indices are gross terms of trade (GTT) and income terms of trade (ITT). The GTT is a ratio of total quantity of imports to that of exports of a given country. The ITT is the value of exports divided by the unit value (price) of imports to reflect how better or worse a country's purchasing power to imports has become. Figure 29 plots the movement in these three indices from 1999-2000 to 2018-19. Compared to 2017-18, India's NTT and GTT have declined by 8.9 per cent and 2.1 per cent during 2018-19 respectively while income terms of trade have increased by 3.4 per cent. However, all indices of terms of trade have been on an upward trend since 2015-16.

Figure 29: Terms of Trade (Base Year 1999-2000)

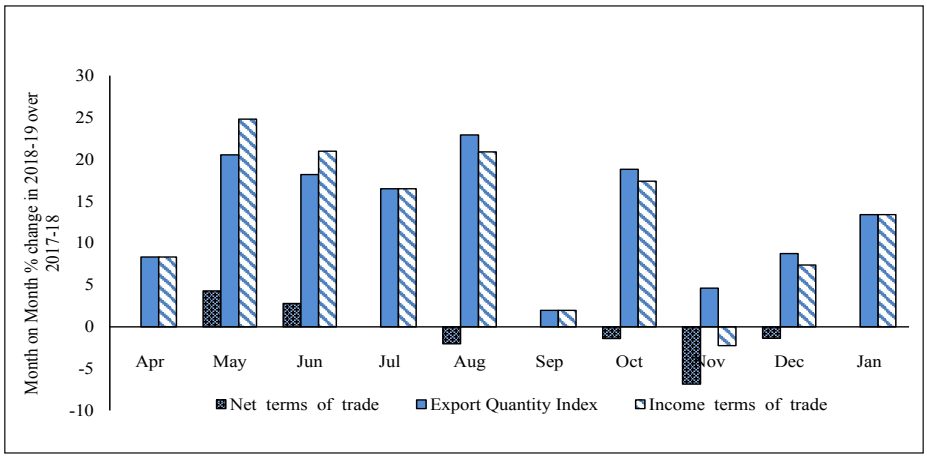


Source: DGCI&S, Kolkata

* Data available till Q3 of 2018-19

6.45 ITT comes out to be the most relevant ToT indicator for developing countries as they are more worried about changes in their capacity to import particularly when they are heavily dependent on commodity imports, such as India being dependent on crude imports. With a rising trend of ITT since the year 2000, India has been steadily increasing its purchasing power to import. In order to understand what drives the changes in ITT, Figure 30 decomposes change in ITT in terms of changes in NTT and export quantity index for April-January, 2018-19. The figure reflects that changes in ITT are more closely tracked by changes in export volume than by changes in relative unit prices of export and imports. Since increase in export volumes is directly correlated with increase in growth of world output, a slow-down in world output has eroded the capacity to import during April-January of 2018-19 even when import prices of India have declined faster than the country's export prices. Perhaps it would take a much larger drop in import prices to counter-balance the slow-down of world output to generate a positive ITT effect for the country.

Figure 30: Decomposition of change in Income Terms of Trade, 2018-19

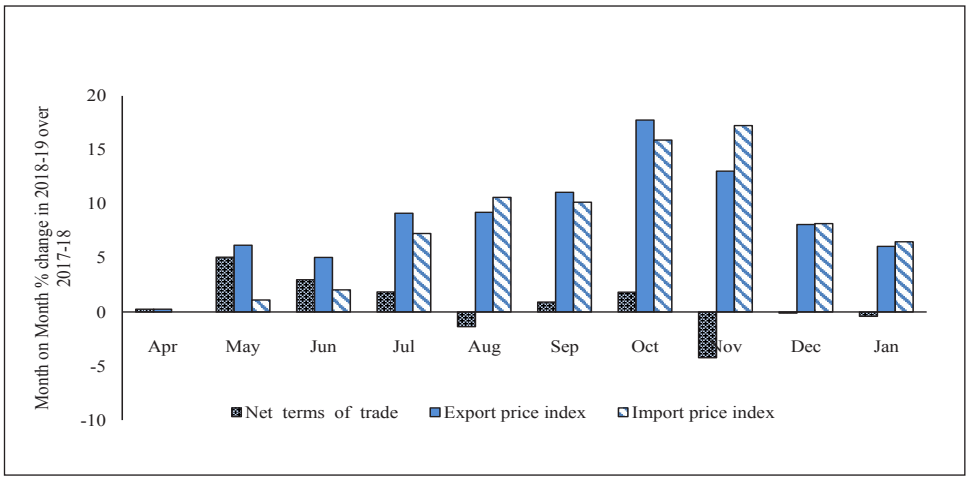


Source: Based on data of DGCI&S, Kolkata.

Note : Data available till January 2019.

6.46 Figure 31 shows that the drop in import price index towards January 2019 is yet to reach the level of April 2018, which may have allowed the fall in export volumes to decrease the capacity to import.

Figure 31: Decomposition of change in Net Terms of Trade, 2018-19



Source: Based on data of DGCI&S, Kolkata.

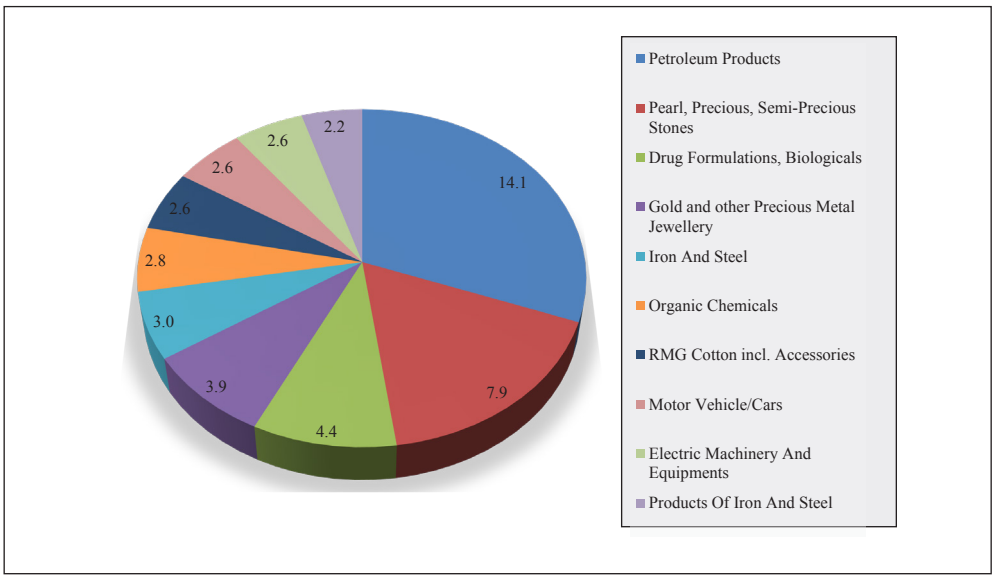
Note : Data available till January 2019.

COMPOSITION OF TRADE

Major Products Exchanged in 2018-19

6.47 In 2018-19, petroleum products continued to be the largest exported commodity, in value terms, with a share of 14.1 per cent in the country's export basket. Other major exports included pearls, precious, semi-precious stones as also gold and other precious metal jewelry besides drug formulations, biologicals (Figure 32). However, it was exports of organic chemicals which grew the highest at 30.6 per cent in 2018-19.

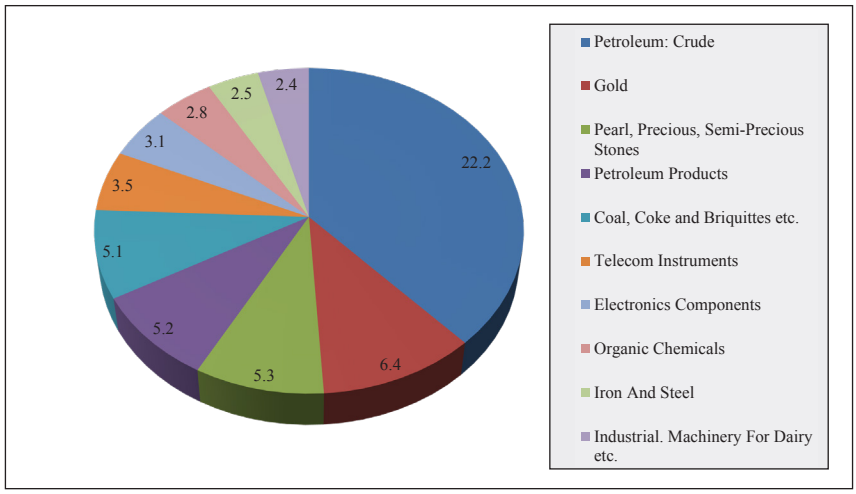
Figure 32: Commodity-wise Composition of Exports in 2018-19 (Per cent)



Source: DGCI&S, Kolkata.

6.48 In the import basket of 2018-19, petroleum: crude, at 22.2 per cent had the largest share followed by gold and other precious metal Jewelry at 6.4 per cent and pearls precious/semi-precious stones at 5.3 per cent (Figure 33). Growth rates of gold and pearls (including precious and semi-precious stones) however declined in 2018-19. Electronics components grew the fastest at 54.6 per cent in 2018-19, followed by petroleum: crude and iron and steel. The exports/imports of top ten commodities, their growth rates and per centage shares in 2017-18 and 2018-19 are indicated at Annexure VI.

Figure 33: Commodity-wise Composition of Imports in 2018-19 (Per cent)

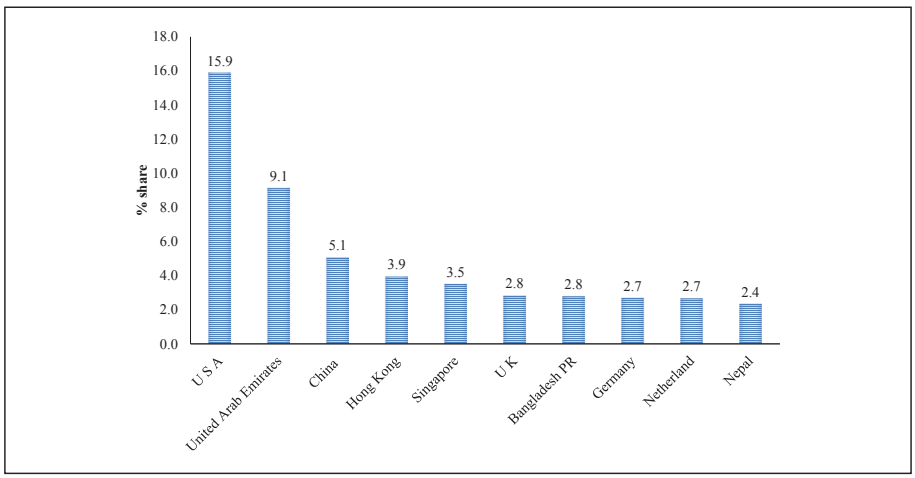


Source: DGCI&S, Kolkata.

Major trading partners in 2018-19

6.49 India's largest export destination country continues to be the United States of America (USA), which accounted for 16 per cent of India's exports (in value terms) in 2018-19, followed by United Arab Emirates (UAE), China and Hong Kong (Figure 34). However, in 2018-19, growth of India's exports to the Netherlands was the highest (40.7 per cent), followed by China (25.6 per cent) and Nepal (17.4 per cent).

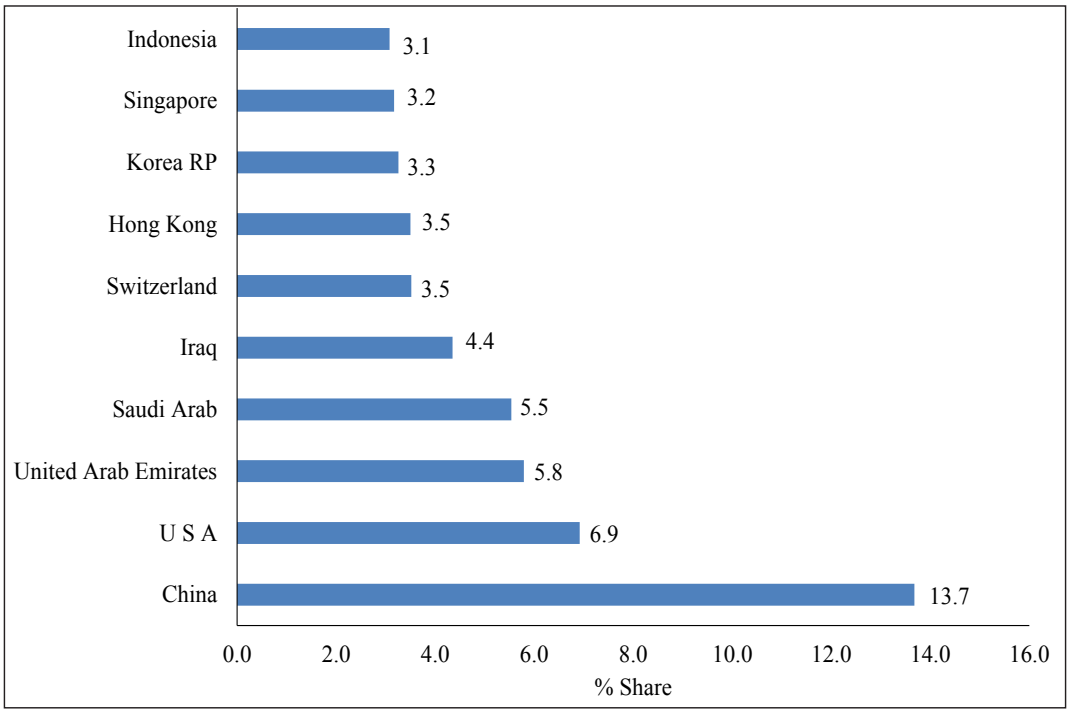
Figure 34: Top 10 Export Destinations of India in 2018-19



Source: DGCI&S, Kolkata.

6.50 China continues to be the largest source of imports of India accounting for 13.7 per cent of the total imported value in 2018-19. The other important sources from which India imports are the USA, UAE and Saudi Arabia. (Figure 35). In terms of growth rates, imports from Singapore grew the highest at 118.1 per cent in 2018-19, followed by Hong-Kong (68.5 per cent) and UAE (37.0 per cent). Further, though China continues to be the largest exporter to India, India's imports from China fell from US$76.4 billion in 2017-18 to US$70.3 billion in 2018-19, registering a negative growth. The top ten export destinations and import sources of India in 2017-18 and 2018-19 are indicated at Annexure VII.

Figure 35: Top 10 Import Sources of India in 2018-19



Source: DGCI&S, Kolkata.

TRADE POLICY

6.51 India has bilateral trade arrangements with all major regional groupings. In Europe, it is a part of European Free Trade Association (EFTA), consisting of Switzerland, Norway, Iceland and Liechtenstein. In 2018-19, India exports to and imports from EFTA stood at US$1,534.00 million and US$18,076.88 million respectively.

6.52 Among SAARC countries, India and Bangladesh have a bilateral trade agreement and both countries are exploring the possibility of entering into a bilateral Comprehensive Economic Partnership Agreement (CEPA). In 2018-19, India's exports to and imports from Bangladesh stood at US$8,933.47 million and US$1,043.03 million respectively. Negotiations for India and Iran entering into a Preferential Trading Agreement (PTA) is under way. Review meetings for India-Nepal Treaty of Trade is going on. With Sri Lanka, India has India-Sri Lanka Free Trade Agreement (ISLFTA), under which duty-free access for almost all the products except a few is provided. India is also negotiating a

new Economic and Technology Cooperation Agreement (ETCA) with Sri Lanka. In 2018-19, India's exports to and imports from Sri Lanka stood at US$4,707.14 million and US$1,473.10 million respectively.

6.53 India and ASEAN have agreed to start examining the preliminary proposals related to the scope of the review of ASEAN India Trade in Goods Agreement (AITIGA). Within ASEAN, India has Comprehensive Economic Cooperation Agreement (CECA) with Singapore, Thailand and Malaysia. In 2018-19, India exports to and imports from the ASEAN block stood at US$37,460.34 million and US$59,293.36 million respectively.

6.54 Among Latin American countries, India has Preferential Trade Agreements (PTA) with MERCOSUR (Argentina, Brazil, Paraguay and Uruguay) and Chile. Possibilities are being explored for PTA with Colombia also. India is negotiating a Trade Agreement with Peru and Ecuador. Among Commonwealth of Independent States, negotiations are going on for Free Trade Agreement (FTA) with Georgia and PTA with Eurasian Economic Union (EaEU). In 2018-19, India exports to and imports from MERCOSUR block stood at US$4,705.08 million and US$6,425.35 million respectively.

6.55 Under North America Free Trade Agreement (NAFTA), negotiations are underway for India Canada Comprehensive Economic Policy Agreement (CEPA). India is also negotiating bilateral Comprehensive Economic Cooperation Agreement (CECA) with Australia and New Zealand. Negotiations are underway for Comprehensive Economic Cooperation and Partnership Agreement (CECPA) with Mauritius and FTA with Israel. The table depicting progress on Bilateral Trade Agreements may be seen at Annexure VIII.

6.56 India has signed 28 bilateral/ multilateral trade agreements with various country/group of countries. In 2018-19, India's exports to countries with which it has a trade agreement stood at US$121.7 billion accounting for 36.9 per cent of India's export to all the countries. Similarly, in the same year, India's imports from countries with which it has a trade agreement stood at US$266.9 billion accounting for 52.0 per cent of India's imports from all the countries.

TRADE FACILITATION

6.57 India ratified the WTO Agreement on Trade Facilitation (TFA) in April 2016 and subsequently constituted a National Committee on Trade Facilitation (NCTF) with the Cabinet Secretary of India as the Chair. Further, to coordinate overall implementation of India's notified facilitation commitments, a Steering Committee co-chaired by the Commerce Secretary and the Revenue Secretary has been formed.

6.58 Since then, the NCTF has played an important role in reducing the high cost of imports and exports so as to integrate our cross-border trade with the global value chain. Some of the landmarks being -

i. establishment of a National Single Window system to route all import related formalities viz., examination, sampling, clearance, etc., which involves plethora of agencies, through a single online national portal;

ii. simplification of fees and charges for various clearance related activities at the borders;

iii. paperless filing of import/ export documents through 'E-sanchit' project; and

iv. publishing of resource information viz., procedures for import/ export, laws and regulations, etc., online for ease of access.

6.59 Consistent trade facilitation efforts have resulted in substantive improvement of India's performance in *Trading Across Borders* indicator from 146 in 2017 to 80 in the year 2018. Further, these initiatives have also contributed to overall improvement in 'Ease of Doing Business' environment in the country, as also recognized by the World Bank.

TRADE RELATED LOGISTICS

6.60 The Indian logistics sector is on a big growth tide. According to the domestic rating agency ICRA, Indian logistics sector is expected to grow at a rate of 8-10 per cent over the medium term. This is an improvement over the compound annual growth rate (CAGR) of 7.8 per cent at which the industry grew during the last five years. The logistics industry of India is currently estimated to be around US$215 billion.

6.61 The last few years have seen significant development for this industry which is reflected in the global rankings. According to the Global Ranking of the World Bank's 2016 Logistics Performance Index, India jumped to 35th rank in 2016 from 54th rank in 2014 in terms of overall logistics performance. In 2018, India stood at 44th rank. Experts predict that the logistics sector can be the largest job creator by 2022.The sector currently provides employment to more than 72 crore people in the country.

6.62 Government of India has announced a draft National Logistics policy for which a national logistics action plan is being developed. The key objective is to drive economic growth and trade competitiveness of the country through a truly integrated, seamless, efficient, reliable and cost effective logistics network, leveraging best in class technology, processes and skilled manpower. Various logistics schemes have been introduced, which are as under:

i. The Government has launched many flagship programmes like the Bharatmala Yojana, the Sagarmala Yojana and the Dedicated Freight Corridors. The objective of these programmes is to develop infrastructure to meet the growing demand of logistics in the country and to make a modal shift on more cost effective modes of transport.

ii. 111 waterways have been identified for development.

iii. Infrastructure status has been given to select logistics activities like warehousing, cold chains, Multi modal logistics parks and slurry pipelines.

iv. Subsidy is provided to develop cold chains and pack houses.

6.63 Indian logistics industry is a sunshine sector and there are multiple factors on both demand and supply side that are driving this sector. On the demand side, the reduction in truck turnaround time following GST is a major stimulus to logistics growth as also pick up in industrial production. On the supply side, the outsourcing of non-core activities like warehousing is allowing main players to focus on improving efficiency of transportation. Automation of large warehouses is also adding to the efficiency of the logistics sector.

6.64 According to Bowersox, Calantone and Rodrigues, India's logistics cost as a per centage of GDP was 15.4 in 1997 and 17 per cent in the year 2000. As per an international market research conducted by Armstrong & Associates (October 2017), India's logistics cost as a per centage of GDP is estimated to be 13 per cent. A comparison of India with the rest of the world, taking 2016 as reference year, is in Table 4.

Table 4: Logistics Cost of India and rest of the world (Reference Year= 2016)

2016 Comparative Analysis	Logistics Cost** (US$Billions)	Logistics % GDP
India	293.1	12.80
Brazil	208.6	11.62
China	1626.7	14.50
USA	1522.7	8.14
World	8226.3	10.86

Source: **Armstrong & Associates, October 2017

6.65 Driving logistics cost down from estimated current levels of 13-14 per cent of GDP to 10 per cent in line with best-in-class global standards is essential for India to become globally competitive.

ANTI-DUMPING AND SAFEGUARD MEASURES

6.66 India conducts anti-dumping investigations on the basis of applications filed by the domestic industry with prima facie evidence of dumping of goods in the country, injury to the domestic industry and causal link between dumping and injury to the domestic industry. The countries involved in these investigations are China PR, Hong Kong, Korea, Germany, EU, USA, Malaysia, South Africa, Thailand, Brazil among others.

6.67 During the period from 01.04.2018 to 31.03.2019, DGTR initiated 24 anti-dumping (both fresh and review) investigations, and issued final findings in 50 anti-dumping investigations. During 2018-19, DGTR initiated 5 countervailing duty investigations and issued final findings in two CVD cases. One safeguard measure investigation was also finalized during 2018-19. DGTR is also in the process of developing a web application for online submission of petitions, information, submissions, rejoinders etc. related to anti-dumping/ countervailing/ anti-circumvention investigations, for convenience of the industry and for enabling DGAD to provide trade remedies available under the WTO framework to the various stakeholders.

OUTLOOK

6.68 The WEO, April 2019 has forecast acceleration of world output in second half of 2019. The key assumptions in this regard are continued accommodative monetary policy stance in advanced countries and fiscal stimulus in China and de-escalation of trade tensions between the US and China. There could be pressure on crude prices to increase as world output grows yet that may not impact India since growth in world output will also favorably impact India's exports, which is not decoupled from growth of world trade. Government policies are expected to further lift restrictions on FDI inflows, which will continue to increase the stability of sources funding the current account deficit. From a macro-economic perspective the deterioration of CAD may be contained if consumption slows down in the economy while increase in investment and exports become the new drivers of the Indian economy.

CHAPTER AT A GLANCE

- As per WTO, World trade growth has slowed down to 3 per cent in 2018, much below the growth rate of 4.6 per cent in 2017, following the introduction of new and retaliatory tariff measures, heightened US-China trade tensions, weaker global economic growth and volatility in financial markets.
- India's balance of payment situation witnessed some signs of deterioration during H1 of 2018-19 due to the sharp rise in crude oil prices causing higher current account deficit (CAD). However, CAD moderated somewhat in Q3-2018-19 as international crude oil prices eased sequentially in November and December 2018. The widening of the CAD was largely on account of a higher trade deficit driven by rise in international crude oil prices (Indian basket).
- The growth rate of merchandise exports and imports fell in 2018-19 compared to previous year, attributable to the slower growth of world output and trade, accompanied with lower domestic GDP growth in 2018-19, among other factors.
- The contribution of net services to financing merchandize trade deficit has fallen from 62.2 per cent in 2016-17 to 43.7 per cent in 2018-19 reflecting a muted performance of service exports in recent times.
- Net capital flows moderated in April-December of 2018-19 despite robust foreign direct investment (FDI) inflows, outweighed by withdrawals under portfolio investment.
- The net remittances by Indians employed overseas increased in 2018-19 (P) compared to last year, possibly due to improved income conditions in the Gulf countries along with rise in oil prices. India remained a top remittance recipient country in 2018.
- Among the major economies running current account deficit, India is the largest foreign exchange reserve holder and eighth largest among all countries of the world.
- India's External Debt was US$521.1 billion at end-December 2018, 1.6 per cent lower than its level at end-March 2018. The key external debt indicators reflect that India's external debt is not unsustainable.
- The total liabilities-to-GDP ratio, inclusive of both debt and non-debt components, has declined from 43 per cent in 2015 to about 38 per cent at end of 2018. The share of foreign direct investment has risen and that of net portfolio investment has fallen in total liabilities, thereby reflecting a transition to more stable sources of funding the current account deficit.
- The Indian Rupee traded in the range of 65-68 per US$ in 2017-18 but depreciated to a range of 70-74 in 2018-19. During H1 of 2018-19, rupee remained weak due to concerns related to widening of CAD owing to rising crude oil prices coupled with the tightening of financial conditions caused by increase in Federal Funds rate by the US Federal Reserve.
- The income terms of trade, a metric that measures the purchasing power to import, has been on a rising trend, possibly because the growth of crude prices has still not exceeded the growth of India's export prices. The exchange rate in 2018-19 has been more volatile than in the previous year, mainly due to volatility in crude prices, but not much due to net portfolio flows.
- The composition of India's exports and import basket has almost remained unchanged in 2018-19 over 2017-18. Petroleum products, precious stones, drug formulations, gold and other precious metals continue to be top export items. Crude petroleum, pearl, precious, semi-precious stones and gold remain as top import items. India's main trading partners continue to be the US, China, Hong Kong, the UAE and Saudi Arabia.
- India has signed 28 bilateral/multilateral trade agreements with various country/group of countries. In 2018-19, India's exports to countries with which it has a trade agreement stood at US$121.7 billion accounting for 36.9 per cent of India's export to all the countries. Similarly, in the same year, India's imports from countries with which it has a trade agreement stood at US$266.9 billion accounting for 52.0 per cent of India's imports from all the countries.
- The logistics industry of India is currently estimated to be around US$215 billion. The significant developments in this industry led to an increase in the ranking of India in overall logistics performance, according to the Global Ranking of the World Bank's 2016 Logistics Performance Index. In 2018, India stood at 44th rank.

Annexure I

I. Merchandise Trade

- The broad trends in Merchandise Exports, Imports and Trade Balance in the last ten years are indicated in the table below:

Table 1: Merchandise Trade **Values in US$ billion**

S. No.	Year	Exports	Growth (%)	Import	Growth (%)	Trade Balance
1	2009-10	178.75	-3.53	288.37	-5.05	-109.62
2	2010-11	249.82	39.76	369.77	28.23	-119.95
3	2011-12	305.96	22.48	489.32	32.33	-183.36
4	2012-13	300.40	-1.82	490.74	0.29	-190.34
5	2013-14	314.41	4.66	450.20	-8.26	-135.80
6	2014-15	310.34	-1.29	448.03	-0.48	-137.70
7	2015-16	262.29	-15.48	381.01	-14.96	-118.72
8	2016-17	275.85	5.17	384.36	0.88	-108.51
9	2017-18	303.53	10.03	465.58	21.13	-162.06
10	2018-19	330.07	8.75	514.03	10.41	-183.96

Source: DGCI&S, Kolkata.

II. India's Services Trade

Table 2: Services Trade **Values in US$ billion**

S. No	Year	Exports	Growth (%)	Imports	Growth (%)	Net of Services
1	2009-10	96.04	-9.36	60.03	15.34	36.02
2	2010-11	124.64	29.77	80.55	34.19	44.08
3	2011-12	142.32	14.19	78.23	-2.89	64.10
4	2012-13	145.68	2.36	80.76	3.24	64.91
5	2013-14	151.81	4.21	78.75	-2.50	73.07
6	2014-15	158.11	4.15	81.58	3.59	76.53
7	2015-16	154.31	-2.40	84.63	3.75	69.68
8	2016-17	164.20	6.41	95.85	13.25	68.34
9	2017-18	195.09	18.81	117.53	22.61	77.56
10	2018-19 (P)*	205.79	5.49	125.46	6.75	80.33

Source: RBI database and Press Releases, Note: P stands for provisional

*Note 2: Services data pertains to March 2019 as it is the latest data available as per RBI's Press Release dated 15th May 2019. 2018-19 is arrived at by adding quarterly data of RBI for Q1, Q2 & Q3 of 2018-19 with Month-wise QE data of RBI's press release for January, February & March 2018-19. This data is provisional and subject to revision by RBI

It may be mentioned here that Net of Services is financing 43.67 per cent of the merchandise trade deficit in 2018-19.

Annexure II

Table 3: Balance of Payments (US$ million)

Sl No	Item	2013-14	2014-15	2015-16	2016-17	2017-18	2017-18 Apr-Dec	2018-19 Apr-Dec P
1	2	3	4	5	6	7	9	8
I	Current Account							
1	Exports	3,18,607	3,16,545	2,66,365	2,80,138	3,08,970	2,26,753	2,49,869
2	Imports	4,66,216	4,61,484	3,96,444	3,92,580	4,69,006	3,45,166	3,95,142
3	Trade Balance (1-2)	-1,47,609	-1,44,940	-1,30,079	-1,12,442	-1,60,036	-1,18,413	-1,45,272
4	Invisibles (net)	1,15,313	1,18,081	1,07,928	98,026	1,11,319	82,762	93,407
	A. Services	73,066	76,529	69,676	68,345	77,562	57,398	60,254
	B. Income	-23,028	-24,140	-24,375	-26,302	-28,681	-20,861	-20,452
	C. Transfers	65,276	65,692	62,627	55,983	62,438	46,225	53,605
5	Goods and Services Balance	-74,544	-68,411	-60,402	-44,098	-82,474	-61,015	-85,019
6	Current Account Balance (3+4)	-32,296	-26,859	-22,151	-14,417	-48,717	-35,651	-51,865
II	Capital Account							
	Capital Account Balance	48,787	89,286	41,128	36,447	91,390	66,366	35,275
	i. External Assistance (net)	1,032	1,725	1,505	2,013	2,944	1,514	2,160
	ii. External Commercial Borrowings (net)	11,777	1,570	-4,529	-6,102	-183	-1,175	2,785
	iii. Short-term credit	-5,044	-111	-1,610	6,467	13,900	9,357	553
	iv. Banking Capital(net) of which:	25,449	11,618	10,630	-16,616	16,190	11,561	15,496
	Non-Resident Deposits (net)	38,892	14,057	16,052	-12,367	9,676	5,040	6,977
	v. Foreign Investment(net) of which	26,386	73,456	31,891	43,224	52,401	43,718	14,766
	A. FDI (net)	21,564	31,251	36,021	35,612	30,286	23,879	24,820
	B. Portfolio (net)	4,822	42,205	-4,130	7,612	22,115	19,839	-10,054
	vi. Other Flows (net)	-10,813	1,028	3,242	7,460	6,138	1,393	-485
III	Errors and Omission	-983	-1,021	-1,073	-480	902	-378	-912
IV	Overall Balance	15,508	61,406	17,905	21,550	43,574	30,338	17,502
V	Reserves change	-15,508	-61,406	-17,905	-21,550	-43,574	-30,338	17,502
	[increase (-) / decrease (+)]							

Source: Reserve Bank of India

Annexure III

Table 4: Summary of Changes in Foreign Exchange Reserves (US$ billion)

Sl. No.	Year	Foreign Exchange reserves at the end of financial year (end March)	Total Increase (+)/ decrease (-) in reserves	Increase (+) / decrease (-) in reserves on a BoP basis	Gain (+)/Loss (-) in reserves due to valuation effect
1	2007-08	309.7	110.5	92.2	18.3
1	2008-09	252.0	-57.7	-20.1	-37.6
2	2009-10	279.1	27.1	13.4	13.7
3	2010-11	304.8	25.8	13.1	12.7
4	2011-12	294.4	-10.4	-12.8	2.4
5	2012-13	292.0	-2.4	3.8	-6.2
6	2013-14	304.2	12.2	15.5	-3.3
7	2014-15	341.6	37.4	61.4	-24.0
8	2015-16	360.2	18.5	17.9	0.6
9	2016-17	370.0	9.8	21.6	-11.8
10	2017-18	424.5	54.6	43.6	11.0
1	Apr.-Dec. 2017-18	409.1	39.1	30.3	8.8
2	Apr.-Dec. 2018-19	395.6	-29.0	-17.5	-11.5

Source: Reserve Bank of India (RBI)

Annexure IV

Table 5:Exchange Rates of Rupee per Foreign Currency and RBI's Sale/Purchase of US Dollar in the Exchange Market during 2018-19

Average Exchange Rates (₹ per foreign currency)

Month	US Dollar	Pound Sterling	Euro	Japanese Yen#	RBI Net sale (-)/ purchase (+) (US$ million)
1	2	3	4	5	6
2016-17	67.07	87.69	73.61	62.04	12351
	(-2.4)	(12.6)	(-1.8)	(-12.0)	
2017-18	64.45	85.51	75.44	58.18	33689
	(4.1)	(2.5)	(-2.4)	(6.6)	
2018-19	69.92	91.79	80.96	63.05	-15377
	(-7.8)	(-6.8)	(-6.8)	(-7.7)	
Monthly average					
Apr-18	65.64	92.57	80.66	61.02	-2483
	(-0.9)	(-1.9)	(-0.5)	(0.5)	
May-18	67.54	90.97	79.82	61.55	-5767
	(-2.8)	(1.8)	(1.0)	(-0.9)	
Jun-18	67.79	90.07	79.16	61.61	-6184
	(-0.4)	(1.0)	(0.8)	(-0.1)	
Jul-18	68.69	90.50	80.30	61.66	-1874
	(-1.3)	(-0.5)	(-1.4)	(-0.1)	
Aug-18	69.55	89.69	80.44	62.59	-2323
	(-1.2)	(0.9)	(-0.2)	(-1.5)	
Sep-18	72.22	94.19	84.22	64.50	-31
	(-3.7)	(-4.8)	(-4.5)	(-3.0)	
Oct-18	73.63	95.87	84.61	65.27	-7204
	(-1.9)	(-1.8)	(-0.5)	(-1.2)	
Nov-18	71.85	92.62	81.62	63.37	-644
	(2.5)	(3.5)	(3.7)	(3.0)	
Dec-18	70.73	89.58	80.48	62.96	607
	(1.6)	(3.4)	(1.4)	(0.7)	
Jan-19	70.73	91.16	80.83	64.96	293
	(0.0)	(-1.7)	(-0.4)	(-3.1)	
Feb-19	71.22	92.67	80.85	64.55	825
	(-0.7)	(-1.6)	(0.0)	(0.6)	
Mar-19	69.48	91.55	78.51	62.51	9048
	(2.5)	(1.2)	(3.0)	(3.3)	

Source: Reserve Bank of India

Note: # Per 100 Yen

Figures in parentheses indicate appreciation (+) and depreciation (-) over the previous month/year in per cent. Figures may not tally due to rounding off.

Data of Net sale and purchase of dollar is available till September, 2017.

Annexure V

Table 6: Indices of NEER and REER (CPI Based) of the Indian Rupee

(Six-Currency Trade based Weights)

Base year: 2004-2005 (April-March) = 100

Monthly Average	NEER	Appreciation (+)/ depreciation (-) NEER over previous period/ month	REER	Appreciation (+)/ depreciation (-) REER over previous period/ month
1	2	3	4	5
2016-17	66.86	-1.0	125.17	2.0
2017-18	67.91	1.6	121.19	3.2
2018-19	63.07	-7.1	121.70	-5.8
2018-19 (P)				
Apr. 2018	64.53	-0.9	123.47	-0.8
May. 2018	63.84	-1.1	123.06	-0.3
June. 2018	64.1	0.4	123.18	0.1
Jul. 2018	64.03	-0.1	123.37	0.2
Aug. 2018	63.84	-0.3	123.63	0.2
Sep. 2018	61.35	-3.9	118.69	-4.0
Oct. 2018	60.64	-1.2	117.29	-1.2
Nov. 2018	62.4	2.9	121.25	3.4
Dec. 2018	63.23	1.3	122.74	1.2
Jan. 2019	62.76	-0.7	120.67	-1.7
Feb. 2019	62.29	-0.7	119.72	-0.8
Mar. 2019	63.88	2.5	123.3	3.0

Source: Reserve Bank of India

Annexure VI

I. Exports of Top Ten Commodities in 2017-18

Values in US$ billion

Rank	Commodity	2016-17	2017-18	%Growth	% Share
1	Petroleum Products	31.55	37.47	18.77	12.34
2	Pearl, Precious, Semi-Precious Stones	24.92	25.87	3.8	8.52
3	Drug Formulations, Biologicals	12.67	12.91	1.92	4.25
4	Gold and other Precious Metal Jewellery	11.93	12.81	7.31	4.22
5	Iron And Steel	8.68	11.24	29.5	3.7
6	RMG Cotton incl. Accessories	8.51	8.51	-0.03	2.8
7	Motor Vehicle/Cars	7.55	8.47	12.26	2.79
8	Marine Products	5.90	7.39	25.18	2.43
9	Organic Chemicals	4.84	7.14	47.44	2.35
10	Products Of Iron And Steel	5.90	6.77	14.84	2.23

Source: DGCI&S, Kolkata

II. Exports of Top Ten Commodities in 2018-19

Values in US$ billion

Rank	Commodity	2017-18	2018-19	%Growth	%Share
1	Petroleum Products	37.47	46.54	24.23	14.10
2	Pearl, Precious, Semi-Precious Stones	25.87	25.98	0.43	7.87
3	Drug Formulations, Biologicals	12.91	14.39	11.46	4.36
4	Gold and other Precious Metal Jewellery	12.81	12.94	1.02	3.92
5	Iron And Steel	11.24	9.74	-13.36	2.95
6	Organic Chemicals	7.14	9.33	30.58	2.83
7	RMG Cotton incl. Accessories	8.51	8.69	2.16	2.63
8	Motor Vehicle/Cars	8.47	8.50	0.32	2.58
9	Electric Machinery And Equipments	6.71	8.42	25.58	2.55
10	Products Of Iron And Steel	6.77	7.26	7.22	2.2

Source: DGCI&S, Kolkata

Annexure VI (contd.)

III. Imports of Top Ten Commodities in 2017-18

Values in US$ billion

Rank	Commodity	2016-17	2017-18	%Growth	%Share
1	Petroleum: Crude	70.71	87.37	23.57	18.77
2	Pearl, Precious, Semi-Precious Stones	23.81	34.28	43.98	7.36
3	Gold	27.52	33.66	22.31	7.23
4	Coal, Coke and Briquittes etc.	15.76	22.90	45.31	4.92
5	Telecom Instruments	16.57	21.85	31.84	4.69
6	Petroleum Products	16.26	21.29	30.93	4.57
7	Organic Chemicals	9.88	12.43	25.81	2.67
8	Vegetable Oils	10.89	11.64	6.84	2.5
9	Plastic Raw Materials	8.81	10.69	21.34	2.3
10	Industrial. Machinery For Dairy etc.	9.38	10.48	11.8	2.25

Source: DGCI&S, Kolkata

IV. Imports of Top Ten Commodities in 2018-19

Values in US$ billion

Rank	Commodity	2017-18	2018-19	%Growth	%Share
1	Petroleum: Crude	87.37	114.04	30.52	22.19
2	Gold	33.66	32.90	-2.26	6.40
3	Pearl, Precious, Semi-Precious Stones	34.28	27.08	-21.01	5.27
4	Petroleum Products	21.29	26.88	21.26	5.23
5	Coal, Coke and Briquittes etc.	22.90	26.17	14.28	5.09
6	Telecom Instruments	21.85	17.92	-17.99	3.49
7	Electronics Components	10.18	15.75	54.63	3.06
8	Organic Chemicals	12.43	14.25	14.66	2.77
9	Iron And Steel	10.43	12.58	20.60	2.45
10	Industrial. Machinery For Dairy etc.	10.48	12.47	18.97	2.43

Source: DGCI&S, Kolkata

Annexure VII

I. Top Ten Export Destinations of India in 2017-18

Values in US$ billion

Rank	Country	2016-17	2017-18	%Growth	%Share
1	U S A	42.22	47.88	13.42	15.78
2	United Arab Emirates	31.18	28.15	-9.72	9.27
3	Hong Kong	14.05	14.69	4.58	4.84
4	China P RP	10.17	13.33	31.08	4.39
5	Singapore	9.56	10.20	6.67	3.36
6	U K	8.55	9.71	13.58	3.2
7	Germany	7.18	8.69	20.96	2.86
8	Bangladesh PR	6.82	8.61	26.31	2.84
9	Vietnam Soc. Rep	6.79	7.81	15.13	2.57
10	Nepal	5.45	6.61	21.26	2.18

Source: DGCI&S, Kolkata

II. Top Ten Export Destinations of India in 2018-19

Values in US$ billion

Rank	Country	2017-18	2018-19	%Growth	%Share
1	U S A	47.88	52.43	9.49	15.88
2	United Arab Emirates	28.15	30.13	7.04	9.13
3	China P RP	13.33	16.75	25.62	5.07
4	Hong Kong	14.69	13.00	-11.49	3.94
5	Singapore	10.20	11.57	13.41	3.51
6	U K	9.71	9.33	-3.94	2.83
7	Bangladesh PR	8.61	9.21	6.96	2.79
8	Germany	8.69	8.90	2.48	2.70
9	Netherland	6.26	8.81	40.73	2.67
10	Nepal	6.61	7.76	17.40	2.3

Source: DGCI&S, Kolkata

Annexure VII (contd.)

III. Top Ten Import Sources of India in 2017-18

Values in US$ billion

Rank	Country	2016-17	2017-18	%Growth	%Share
1	China P RP	61.28	76.38	24.64	16.41
2	U S A	22.31	26.61	19.29	5.72
3	Saudi Arab	19.97	22.07	10.5	4.74
4	United Arab Emirates	21.51	21.74	1.07	4.67
5	Switzerland	17.25	18.92	9.71	4.06
6	Iraq	11.71	17.62	50.46	3.78
7	Indonesia	13.43	16.44	22.42	3.53
8	Korea RP	12.59	16.36	30.01	3.51
9	Australia	11.15	13.99	25.45	3.01
10	Germany	11.58	13.30	14.78	2.86

Source: DGCI&S, Kolkata

IV. Top Ten Import Sources of India in 2018-19

Values in US$ billion

Rank	Country	2017-18	2018-19	%Growth	%Share
1	China P RP	76.38	70.32	-7.94	13.68
2	U S A	26.61	35.55	33.59	6.92
3	United Arab Emirates	21.74	29.78	37.01	5.79
4	Saudi Arab	22.07	28.48	29.04	5.54
5	Iraq	17.62	22.37	27.00	4.35
6	Switzerland	18.92	18.08	-4.47	3.52
7	Hong Kong	10.68	17.99	68.48	3.50
8	Korea RP	16.36	16.76	2.43	3.26
9	Singapore	7.47	16.28	118.05	3.17
10	Indonesia	16.44	15.85	-3.59	3.08

Source: DGCI&S, Kolkata

Annexure VIII

PROGRESS ON BILATERAL TRADE ARRANGEMENTS

S. No.	Regional Grouping	Country/ ies	Agreement Name	Salient Features
1.	Europe	EU countries	INDIA-EU BTIA (Negotiation Stage)	Commenced in the year 2007. Sixteen rounds of negotiations till 2013
		Consists of Switzerland, Norway, Iceland and Liechtenstein.	European Free Trade Association (EFTA)	Total bilateral trade US$19.9 billion during 2018-19.
		Consists of Switzerland, Norway, Iceland and Liechtenstein	INDIA – EFTA TEPA (Negotiation Stage)	Trade and Economic Partnership Agreement (TEPA) initiated in October, 2008. Seventeen rounds of negotiations have been held. Last round of negotiation was held from 18-21 September, 2017.
2.	South Asia & Middle East	Bangladesh	Bilateral trade agreement	Last renewed w.e.f. 1st April 2015 for five years, with automatic renewal clause. No preferential tariffs for imports of products, only facilitative mechanism. Exploring possibility to enter into Comprehensive Economic Partnership Agreement (CEPA).
		Iran	Preferential Trading Agreement (PTA) (Negotiation Stage)	Commenced in 2013. Four rounds of negotiations have taken place. Next Round is tentatively scheduled in June 2019 in India.
		Nepal	India-Nepal Treaty of Trade	Last renewed on 27th October 2016. Duty free access provided. Comprehensive Review of the Treaty has commenced and two meetings held in August 2018 and February 2019.
		Sri Lanka	India-Sri Lanka Free Trade Agreement (ISLFTA)	Came into force in 2000. Tariff-concessions provided. India provided duty-free access to almost all the lines, except few.
		Sri Lanka	Comprehensive Economic Partnership Agreement (CEPA)	Negotiations completed in 2008. But agreement could not be made effective.

S. No.	Regional Grouping	Country/ ies	Agreement Name	Salient Features
		Sri Lanka	Economic and Technology Cooperation Agreement (ETCA) (Negotiation Stage)	Bilateral meetings commenced in 2015. Eleven Rounds completed till October 2018.
3.	ASEAN	India, Malaysia, Singapore and Thailand.	ASEAN India Trade in Goods Agreement (AITIGA)	Came into force on 1st January, 2010. All ASEAN members signatory to FTA. Review of AITIGA on hold until conclusion of RCEP negotiations.
		Singapore	India-Singapore Comprehensive Economic Cooperation Agreement (CECA)	Signed on 29th June, 2005, covering goods, services and investment. First review in 2006. Second review in 2010.
		Singapore	Mutual Recognition Agreement (MRA) in Nursing with Singapore	Singapore agreed to expand coverage of Indian nursing institutions by recognizing seven nursing institutions.
		Thailand	India Thailand CECA	Came into force in 2004. Agreed to implement an Early Harvest Scheme covering 84 products for Tariff Reduction and Elimination in a phased manner. Thirty rounds of negotiations held for comprehensive FTA with Thailand.
		Malaysia	India-Malaysia CECA	Came into force w.e.f. 1st July, 2011. First meeting of the Joint Committee for implementing IMCECA held in 2014.
4.	Latin American	Argentina, Brazil, Paraguay and Uruguay	India- MERCOSUR Preferential Trade Agreement (PTA)	Came into operation in 2009. Margin of Preference (MoP) is offered on tariff lines.
		Chile	India-Chile Preferential Trade Agreement (PTA)	Came into effect in 2007. Margin of Preference (MoP) is offered on tariff lines.

S. No.	Regional Grouping	Country/ ies	Agreement Name	Salient Features
		Peru	India Peru Trade Agreement (Negotiation stage)	Four rounds of negotiations held. Last negotiation held in March 2019. Next is proposed in August 2019.
		Ecuador	India-Ecuador Trade Agreement (Negotiation stage)	Exploring feasibility of Trade Agreement.
		Colombia	India-Colombia Trade Agreement (Negotiation stage)	Exploring feasibility of Trade Agreement.
5.	Common-wealth Independent States (CIS)		PTA with Eurasian Economic Union (EaEU) (Negotiation Stage)	Initiation of negotiations for PTA with Eurasian Economic Union (EaEU)
		Georgia	FTA with Georgia (Negotiation Stage)	Initiation of FTA with Georgia.
		Uzbekistan	JFSG with Uzbekistan (Negotiation Stage)	Signing of Joint Statement for initiation of JFSG with Uzbekistan
6.	Africa-WANA (West Asia North Africa)	Mauritius	India-Mauritius Comprehensive Economic Cooperation & Partnership Agreement (CECPA) (Negotiation stage)	Seven Rounds have been held
		Israel	India-Israel FTA (Negotiation stage)	
		Botswana, Lesotho, Namibia, South Africa and Eswatini	India-SACU PTA (Negotiation stage)	Southern African Custom Union (SACU). Sixth Round in 2010

S. No.	Regional Grouping	Country/ ies	Agreement Name	Salient Features
		Group of fifteen countries namely Benin, Burkina Faso, Cabo Verde, Cote D'Ivoire, Gambia, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo	India-ECOWAS PTA (Negotiation stage)	
7.	North America		North America Free Trade Agreement (NAFTA)	India-US Commercial Dialogue signed in 2000
		USA		India-US Trade Policy Forum announced in 2005, instrumental in creating an institutional mechanism to resolve host of trade issues
		Canada		India-Canada Comprehensive Economic Policy Agreement (CEPA): Launched in 2010, ten rounds of negotiations held till date.
8.	Oceania	Australia and New Zealand	FTAs with Australia and New Zealand	Nine rounds of negotiations with Australia and ten rounds of negotiations with New Zealand taken place

07 CHAPTER

Agriculture and Food Management

"Since nature has the most sustainable ecosystem and since ultimately agriculture comes out of nature, our standard for a sustainable world should be nature's own ecosystem"

-Wes Jackson[1]

Agriculture remains the pre-dominant occupation in India for vast sections of the population. Over the years, several new challenges have emerged before the sector. With fragmentation of agricultural holdings and depletion of water resources, the adoption of a resource-efficient, ICT based climate-smart agriculture can enhance agricultural productivity and sustainability. Smallholder farming can be a lucrative livelihood opportunity with the application of appropriate technologies and adoption of natural, organic and Zero Budget Natural Farming. To transform the rural economy, greater emphasis should be given to allied sectors with a major focus on dairy, poultry, fisheries and rearing of small ruminants. The rationalisation of food subsidy and greater use of technology in food management will ensure food security for all.

INTRODUCTION

7.1 Agriculture and allied sectors are critical in terms of employment and livelihoods for the small and marginal farmers, who dominate the agriculture ecosystem in India. To attain the Sustainable Development Goals (SDGs) of ending poverty and bringing in inclusive growth, activities related to agriculture need to be closely integrated with the SDG targets. With decline in the size of landholdings in agriculture, India has to focus on resource efficiency in smallholder farming to meet the SDG targets and also to attain sustainability in agriculture. A combination of resource efficient methods, dynamic cropping patterns, farming that is responsive to climate change and intensive use of ICTs should be the backbone of smallholder farming in India. For a safe and food secure future, the agriculture landscape has to undergo tremendous transformation and shift

[1] Co-founder of The Land Institute and a prominent leader of the international sustainable agriculture movement.

from the philosophy of '*green revolution led'* productivity to '*green methods'* led *sustainability* in agriculture.

OVERVIEW OF AGRICULTURE AND ALLIED SECTORS

Gross Value Added in Agriculture

7.2 Agriculture sector in India typically goes through cyclical movement in terms of its growth. The Gross Value Added (GVA) in agriculture improved from a negative 0.2 per cent in 2014-15 to 6.3 per cent in 2016-17 only to decelerate to 2.9 per cent in 2018-19. While the crops, livestock and forestry sector showed fluctuating growth rates over the period from 2014-15 to 2017-18, the fisheries sector has shown a rapid growth from 4.9 per cent in 2012-13 to 11.9 per cent in 2017-18. (Table 1 and Figure 1).

Table 1 : Growth of GVA in Agriculture & Allied Sectors at 2011-12 prices

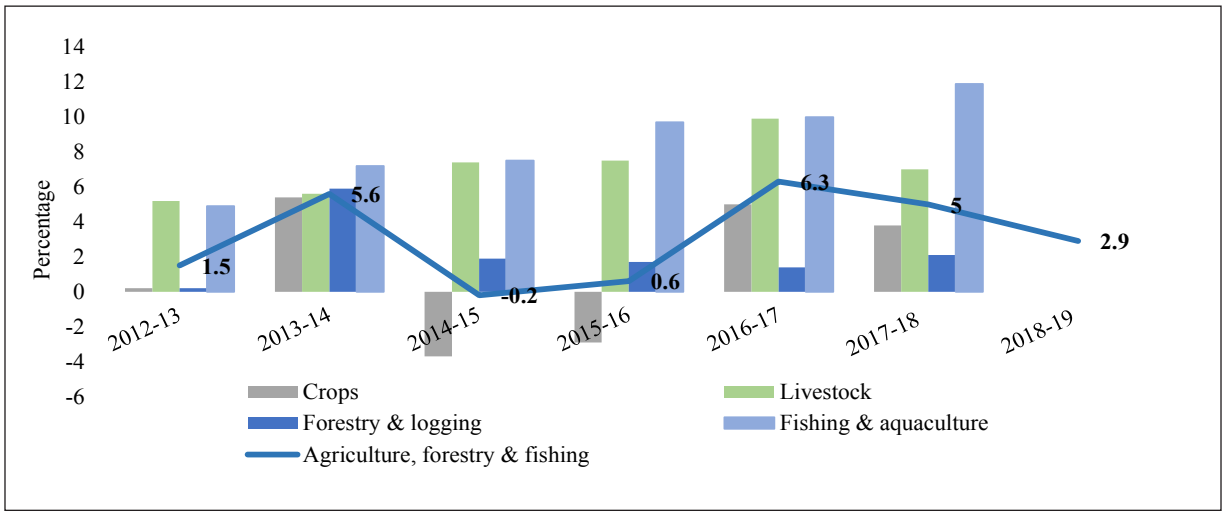
Item	2012-13	2013-14	2014-15	2015-16* (3RE)	2016-17 (2RE)#	2017-18 (1RE)@	2018-19 PE**
Total GVA at basic prices	5.4	6.1	7.2	8.0	7.9	6.9	6.6
Agriculture, forestry & fishing	1.5	5.6	-0.2	0.6	6.3	5.0	2.9
Crops	0.2	5.4	-3.7	-2.9	5.0	3.8	na
Livestock	5.2	5.6	7.4	7.5	9.9	7.0	na
Forestry & logging	0.2	5.9	1.9	1.7	1.4	2.1	na
Fishing & aquaculture	4.9	7.2	7.5	9.7	10.0	11.9	na

Source: Central Statistics Office, Ministry of Statistics & Programme Implementation (MoSPI)

Note-* Third Revised Estimate, # Second Revised Estimate, @ First Revised Estimate

**As per the press note on Provisional Estimates of Annual National Income 2018-19 and Quarterly Estimates of Gross Domestic Product for the Fourth Quarter (Q4) of 2018-19 released by CSO on 31st May 2019

Figure 1: Growth Rate of GVA in Agriculture & Allied Sectors (2011-12 prices)



Source: Central Statistics Office, Ministry of Statistics & Programme Implementation (MoSPI)

7.3 Average annual growth rate in real terms in agricultural & allied sectors has remained at around 2.88 per cent during 2014-15 to 2018-19. However, the volatility of output growth as measured by the coefficient of variation has declined from 2.7 in the period of 1961-1988 to 1.6 during 1989-2004 and further to 0.8 during 2005 to 2018[2].

Share of Agriculture Sector in GVA

7.4 The share of agriculture, forestry & fishing sector in GVA has seen a steady decrease over the years from 15.4 per cent in 2015-16 to 14.4 per cent in 2018-19.The decline was mainly due to decline in the share of crops in GVA from 9.2 per cent in 2015-16 to 8.7 per cent in 2017-18. The share of the fisheries in GVA has increased by 0.1 per cent points during the three years from 0.8 per cent in 2014-15 to 0.9 per cent in 2017-18. The share of the livestock in GVA has remained around 4 per cent from 2012-13 to 2017-18. The share of forestry & logging was 1.2 per cent in 2017-18. (Table 2)

Table 2: Share of Agriculture, Forestry & Fishing at 2011-12 Prices (in per cent)

Item	2012-13	2013-14	2014-15	2015-16*	2016-17#	2017-18 @	2018-19 **
Agriculture, forestry & fishing	17.8	17.8	16.5	15.4	15.2	14.9	14.4
Crops	11.5	11.4	10.3	9.2	9.0	8.7	NA
Livestock	4.0	4.0	4.0	4.0	4.1	4.1	NA
Forestry & logging	1.5	1.5	1.4	1.3	1.2	1.2	NA
Fishing & aquaculture	0.8	0.8	0.8	0.9	0.9	0.9	NA

Source: Central Statistics Office, Ministry of Statistics & Programme Implementation (MoSPI).

Note-* Third Revised Estimate,# Second Revised Estimate, @ First Revised Estimate

**As per the press note on Provisional Estimates of Annual National Income 2018-19 and Quarterly Estimates of Gross Domestic Product for the Fourth Quarter (Q4) of 2018-19 released by CSO on 31st May 2019

Gross Capital Formation in Agriculture & Allied Sector

7.5 Gross Capital Formation (GCF) in agriculture and allied sectors as a percentage of GVA saw a rise to 17.7 per cent in 2013-14 but declined thereafter to 15.2 per cent in 2017-18. The GCF in agriculture and allied sectors in absolute terms increased from ₹2,51,094 crore in 2012-13 to ₹2,73,755 crore in 2017-18 at 2011-12 prices.

[2] Dev, SM (2018), Transformation of Indian Agriculture? Growth, Inclusiveness and Sustainability.

Table 3: Gross Capital Formation in Agriculture & Allied Sectors

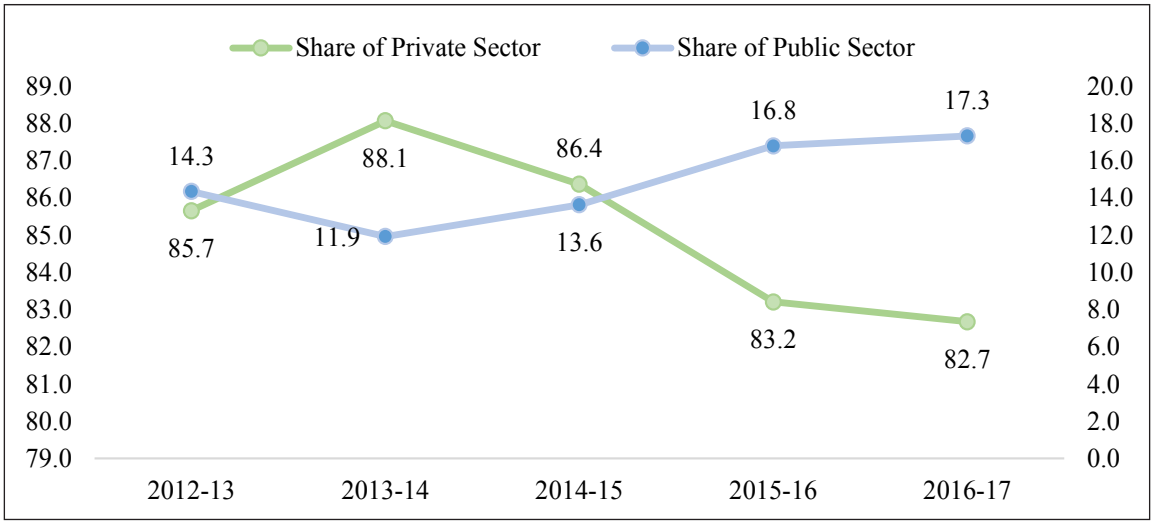
Period	Gross Capital formation in Agriculture and Allied sector (in ₹ crore) at 2011-12 prices			GVA in Agriculture & Allied Sector (at 2011-12 prices)	GCF in Agriculture & Allied Sector as percentage of GVA of Agriculture & Allied Sector		
	Public	Private	Total		Public	Private	Total
2012-13	36019	215075	251094	1524288	2.4	14.1	16.5
2013-14	33925	250499	284424	1609198	2.1	15.6	17.7
2014-15	37172	235491	272663	1605715	2.3	14.7	17.0
2015-16	39105	193734	232839	1616146*	2.4	12.0	14.7
2016-17	45981	219371	265352	1717467#	2.7	12.8	15.6
2017-18	NA	NA	273755	1803039@	NA	NA	15.2

Source: Central Statistics Office, Ministry of Statistics & Programme Implementation (MoSPI)

Note:* Third Revised Estimate,# second revised estimate, @ first revised estimate.

7.6 A comparison of the share of public and private investment in GCF in agriculture and allied sectors shows that while the share of public investment in agriculture and allied sectors registers an increase from 2014-15 and maintains an upward trend till 2016-17, the share of private investment in GCF shows a decline during this period (Figure 2).

Figure 2: Share of Public and Private Sector in Total GCF in Agriculture & Allied Sector (in per cent)



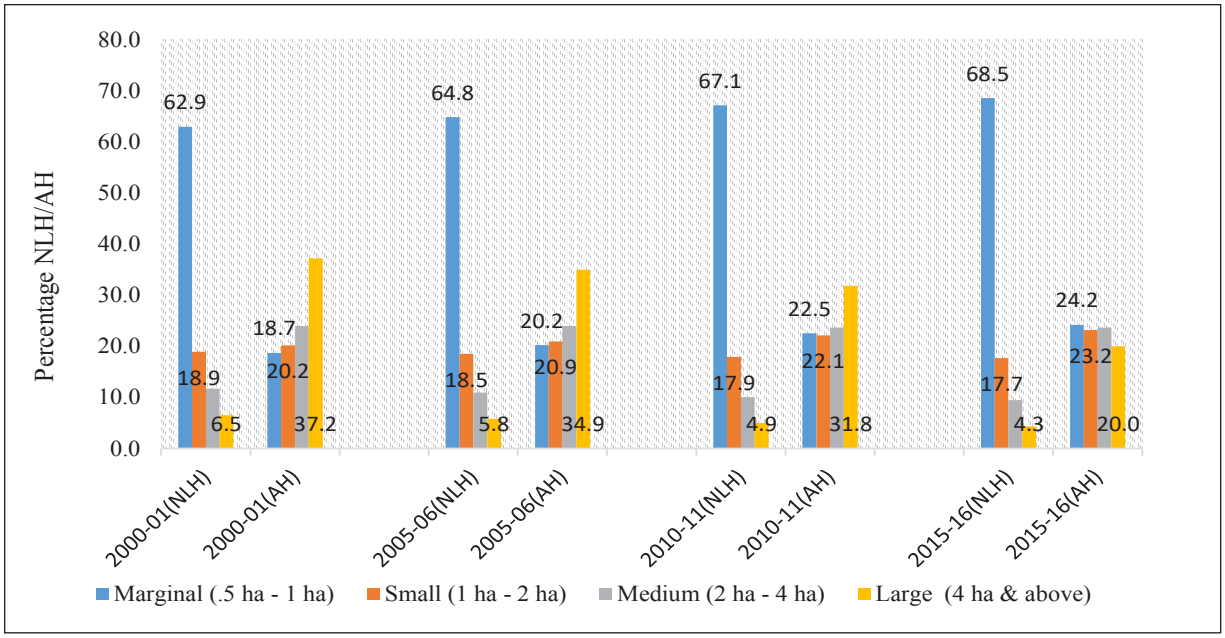
Source: Central Statistics Office, Ministry of Statistics & Programme Implementation (MoSPI)

PATTERN OF AGRICULTURAL LAND HOLDINGS IN INDIA

7.7 As per Phase-I results of the Agriculture Census, 2015-16, the number of operational holdings, i.e. land put to agricultural use, has increased to 14.6 crore in 2015-16 from 13.8 crore in 2010-11, thereby registering an increase of 5.3 per cent. The share of

marginal holdings (less than 1 ha) in total operational holdings increased from 62.9 per cent in 2000-01 to 68.5 per cent in 2015-16, while the share of small holdings (1 ha to 2 ha) decreased from 18.9 per cent to 17.7 per cent during this period. Large holdings (above 4 ha) decreased from 6.5 per cent to 4.3 percent. The area operated by the marginal and small holdings increased from 38.9 per cent in 2000-01 to 47.4 per cent in 2015-16, while that of the large holdings decreased from 37.2 per cent to 20 per cent during this period (Figure 3).

Figure 3: Operational Land Holdings (Number & Area Operated in Ha)



Source: Agriculture Census 2015-16.

Note: NLH: Number of Operational Land Holdings, AH: Area Operated by Operational Land Holdings.

Growing Number of Women Farmers

7.8 Women play a significant and crucial role in agriculture including crop production, livestock production, horticulture, post-harvest operations, agro/social forestry, fisheries, etc. The share of operational holdings cultivated by women has increased from 11.7 per cent in 2005-06 to 13.9 per cent in 2015-16. The marginal and small holdings operated by women farmers together constitute 27.9 per cent of total operational holdings cultivated by women (Table 4).

Table 4: Operational Land Holdings Operated by Women (in percent)

Size Group	2005-06	2010-11	2015-16*
Marginal (below 1.00 ha.)	12.6	13.6	**14.6**
Small (1.00-2.00 ha.)	11.1	12.2	**13.3**
Semi-Medium (2.00-4.00 ha.)	9.6	10.5	11.5
Medium (4.00-10.00 ha.)	7.8	8.5	9.6
Large (10.00 ha. & above)	6.0	6.8	7.7
All Size Groups	**11.7**	**12.8**	**13.9**

Source: Agriculture Census 2015-16; * - provisional results

BRINGING RESOURCE EFFICIENCY IN SMALLHOLDER AGRICULTURE

7.9 The pattern of agricultural holdings reflects pre-dominance (85 per cent) of small and marginal farmers in agriculture sector. The development strategy for agriculture should prioritise smallholder agriculture in order to promote sustainable livelihoods and for reduction of poverty in India. The productivity of a farm depends on the use of inputs like fertiliser, access to irrigation, technology, crop intensity and choice of crops (crop pattern) grown at the farm. One of the key aspects which can improve productivity of small farm holdings is improving resource use efficiency (one of the sources of income growth identified by the Committee on Doubling Farmers' Income. See Annexure 1), be they, natural resources like water or other resources/inputs like fertilisers, pesticides etc.

7.10 The following section examines the key factors which will bring resource efficiency in smallholder agriculture in India and lays out the main policy changes that are required to bring about resource efficiency.

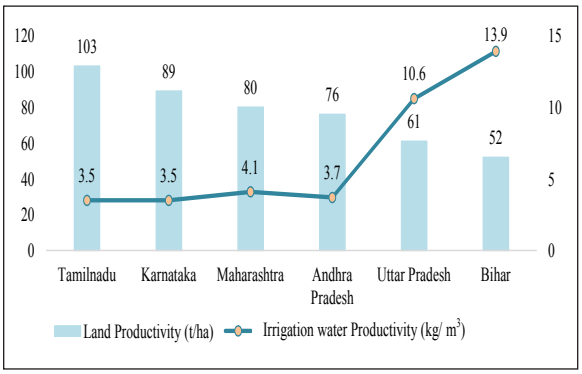
Increasing Irrigation Water Productivity (IWP) in Agriculture

7.11 In India, according to the Asian Water Development Outlook, 2016, almost 89 per cent of groundwater extracted is for irrigation. There is a major concern whether the present practice of groundwater use can be sustained as the depth of the groundwater level continues to drop. By 2050, India will be in the global hot spot for 'water insecurity[3]'. Agriculture remains the predominant occupation in terms of number of people employed. Also, agriculture is dependent highly on water. So, appropriate mechanism needs to be framed for economical use of water among small and marginal farmers.

7.12 The cropping pattern in India is highly skewed towards crops that are water intensive. The incentive structures like MSP, heavily subsidized electricity, water and fertilizers have played a significant role in the misalignment of crop patterns in the country. 'The water guzzlers, paddy and sugarcane, consume more than 60 per cent of irrigation water available in the country, thereby reducing water availability for other crops'[4].

7.13 Figure 4 highlights the divergence between land productivity and irrigation water productivity in the major sugarcane producing States in India reflecting the urgent need to focus on irrigation water productivity[5] to raise agricultural productivity. The States like Tamil Nadu, Karnataka, Maharashtra and Andhra Pradesh which have high land productivity tend to have very low irrigation water productivity, reflecting inefficient use of water and the need to re-calibrate the cropping pattern.

Figure 4: Comparison of Land Productivity and Irrigation Water Productivity across the Major Sugarcane Growing States



Source: NABARD and ICRIER, 2018.

[3] India's water insecurity index shows that the resilience score of India is also very low.

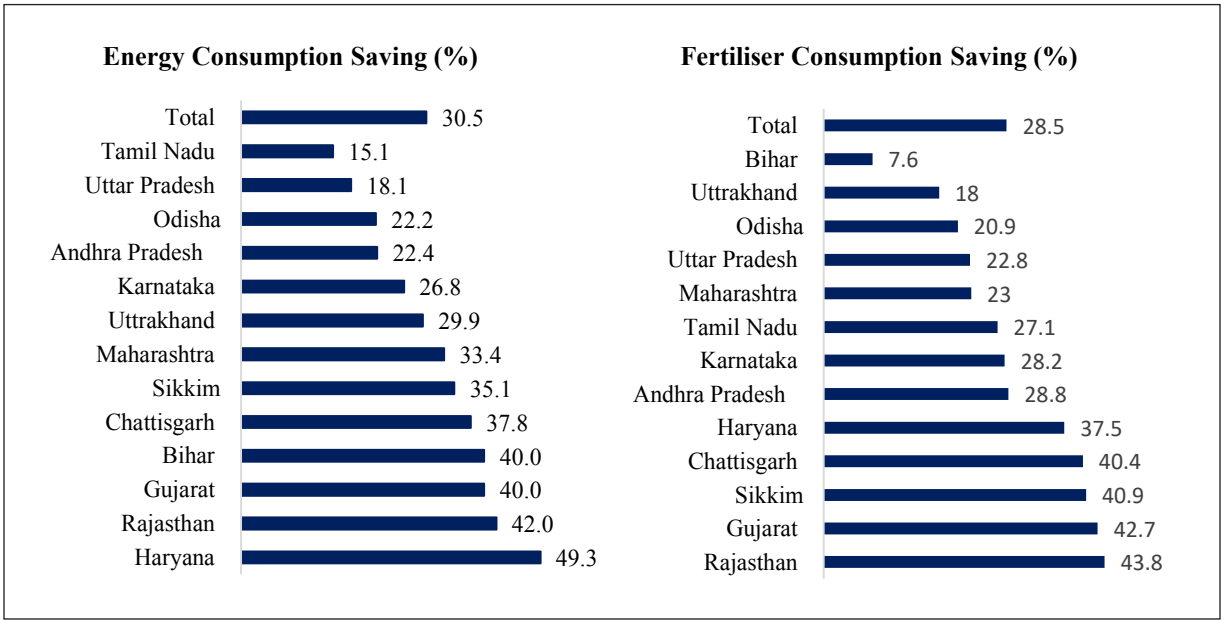
[4] Water Productivity Mapping of Major Indian Crops, NABARD AND ICRIER Study, April 2018.

[5] Irrigation water productivity is defined as ratio of the crop output to the irrigation water applied by the farmer/ irrigation system either through surface canals, tank, pond or the well and tubewell during the crop growth. Thus irrigation is an economic activity and the farmer has to incur certain expenditure to apply the water (kg/m^3).This is a practical indicator which helps in estimating the crop output obtained with respect to the actual irrigation water applied by the farmer.

7.14 Adopting improved methods of irrigation and irrigation technologies will have a critical role in increasing irrigation water productivity along with re-calibrating the cropping patterns. While adoption of micro-irrigation systems (MI) is one of the possible ways to improve water use efficiency, it can be seen that the States with penetration of MI systems and improved adoption of micro irrigation systems have almost 40 to 50 per cent savings in energy and fertiliser consumption (Figure 5). *Though, the costs of installation of MI systems can be a disincentive unless subsidies are given by the government to small and marginal farmers, it needs to be examined whether the procurement supported systems which are resource inefficient in terms of subsidies and water use, can be replaced with MI supported cropping patterns and systems which will maximise irrigation productivity and resource use efficiency.* A study[6] has found that there are 'bright spots' which can be models for sustainable water use in agriculture.

7.15 A combination of measures which suit the local agro-economic context need to be applied to improve irrigation productivity in agriculture which will reflect sustainable water use in agriculture. In this regard, focus in agriculture should shift from 'land productivity' to 'irrigation water productivity'. Therefore, devising policies to incentivise farmers to adopt efficient ways of water use should become a national priority to avert the looming water crisis.

Figure 5. Energy Consumption and Fertilizer Consumption Savings from Micro Irrigation, 2015



Source: Indian Council of Food and Agriculture, Micro Irrigation: Market Update.

Economizing the Use of Fertilizers and Pesticides

7.16 For the small and marginal farmers, the costs of fertilizers are key determinants of profitability of farming. Since 2002, the fertilizer consumption in India has continually increased till 2011. However, the fertiliser consumption has been declining since then.

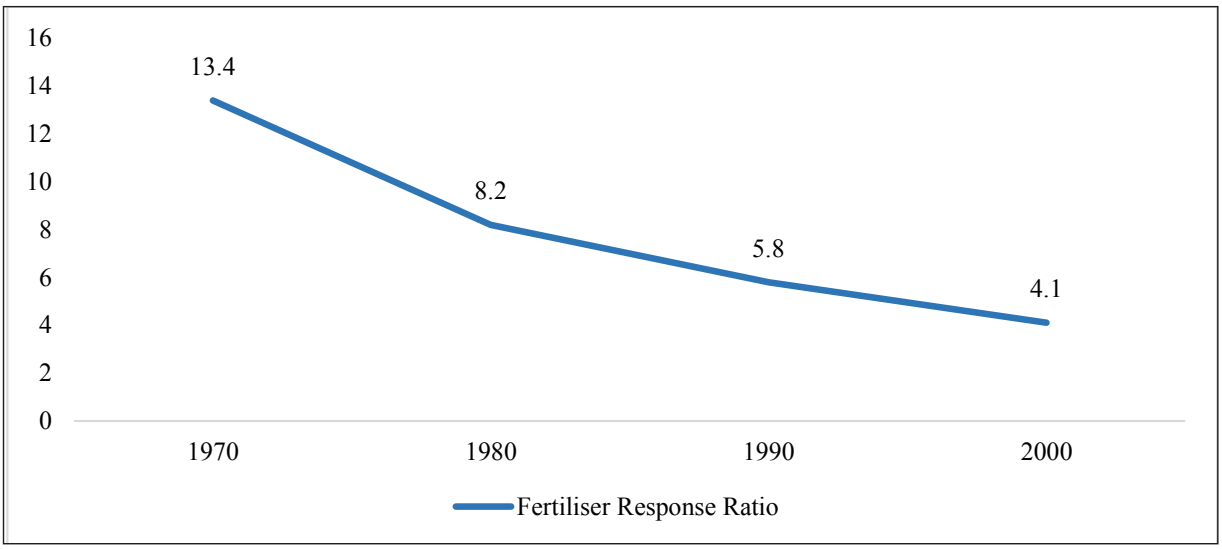
[6] Water Productivity Mapping of Major Indian Crops, NABARD and ICRIER, 2018

7.17 Further, the fertilizer response ratio is showing a declining trend (Figure 6). The declining fertilizer response ratio is an indicator of declining responsiveness of soil fertility to fertiliser application.

7.18 According to Department of Fertilisers, the declining fertilizer response ratio in Indian agriculture is due to inadequacy and imbalance in fertiliser use, increasing multi-nutrient deficiency, lack of farmers awareness about balanced plant nutrition and poor crop management.

7.19 The improvement in fertilizer use efficiency[7] requires farmers' knowledge regarding the right product, dosage, time and method of application. Some of the suggested measures are the use of optimal dose based on soil health status, promotion of neem-coated urea, promotion of micronutrients, promotion of organic fertilizers, and promotion of water-soluble fertilizers.

Figure 6: Declining Fertilizer Response Ratio



Source: Department of Fertilizers.

Increasing Sustainability in Agriculture - Turning to Organic and Natural Farming

7.20 The main objective of the National Mission for Sustainable Agriculture (NMSA) is to make agriculture more productive, sustainable, remunerative and climate resilient by promoting location specific integrated/composite farming systems and to conserve natural resources through appropriate soil and moisture conservation measures.

7.21 The Government has been promoting organic farming in the country through the schemes such as Paramparagat Krishi Vikas Yojana (PKVY) and Rashtriya Krishi Vikas Yojana (RKVY). In the revised guidelines of PKVY scheme during the year 2018, various organic farming models like Natural Farming, Vedic Farming, Cow Farming, Homa Farming, Zero Budget Natural Farming

[7] Yield per unit of fertilizer input

[8] "Zero Budget" primarily means without using any credit, and without spending any money on purchased inputs. ''Natural farming'' means farming with nature and without chemicals.

(ZBNF)[8] etc. have been included wherein flexibility lies with the States to adopt any model of Organic Farming depending on the farmer's choice. Under the RKVY scheme, organic farming/natural farming project components are considered by the respective State Level Sanctioning Committee (SLSC) according to their priority/choice.

7.22 The main aim of Zero Budget Natural Farming (ZBNF) is elimination of chemical pesticides and promotion of good agronomic practices. ZBNF also aims to sustain agriculture production with eco-friendly processes in tune with nature to produce agricultural produce free of chemicals. Soil fertility & soil organic matter is restored by pursuing ZBNF. Less water is required under ZBNF and it is a climate friendly agriculture system.The programme is being implemented in 131 clusters covering 704 villages under RKVY and 1300 clusters covering 268 villages under PKVY. So far, 1,63,034 farmers are practicing ZBNF. Organic farming is also being promoted through the scheme Mission Organic Value Chain Development for North Eastern Region (MOVCDNER) under National Mission for Sustainable Agriculture (NMSA).

7.23 Some of the States which are progressively practicing ZBNF are Karnataka, Himachal Pradesh and Andhra Pradesh. After ZBNF, Andhra Pradesh has witnessed a sharp decline in input costs and improvement in yields (Government of Telangana, 2017).

Adopting Appropriate Technologies for Smallholder Farms

7.24 In smallholder farms, resource efficiency can be brought about through adoption of appropriate technologies. However, use of technology, investment in costly farm machinery, or scaling up the existing technology may not be economically feasible for small and marginal farmers. Hence, there is need to promote use of environment-friendly automated farm machinery tools suited to small scale operations. The Custom Hiring Centers (CHCs) can be set up to promote use of high-tech machinery for the mechanization of small and marginal farm holdings, especially in difficult terrains. From 2014-15 to 2017-18, a total of 8162 CHCs were established under the Sub Mission on Agricultural Mechanization (SMAM) scheme.

7.25 To facilitate communication and reduce transaction costs, the ICT (Information and Communication Technology) applications are crucial in smallholder farming. The spread of mobile phones in rural areas has already impacted the way the small and marginal farmers get access to information about soil health, weather and prices. In the context of poor infrastructure, adoption of ICT in agriculture will promote market access, facilitate financial inclusion and contribute significantly to early warning signals that are critical for the development of smallholder community. Technology can play a critical role in bridging the information gaps that

Box 1: Coffee Board Activates Blockchain Based Marketplace in India

Coffee Board has launched blockchain based coffee e-marketplace. This is a pilot project which is likely to help integrate the farmers with markets in a transparent manner and lead to realization of fair price for the coffee producer. It will also reduce the number of layers between coffee growers and buyers and help farmers double their income.

India is the only country in the world where entire coffee is grown under shade, handpicked and sun dried. Coffee is produced in India by small coffee growers, tribal farmers adjacent to National Parks and Wildlife Sanctuaries in Western and Eastern Ghats, which are two of the major bio-

diversity hot spots in the world. Indian coffee is highly valued in the world market and sold as premium coffee. However, the share of farmers in the final returns from coffee is very meagre.

Blockchain based market place app for trading of Indian coffees is intended to bring in transparency in the trade of Indian coffee, maintain the traceability of Indian coffee from bean to cup so as consumer tastes real Indian coffee, the grower is paid fairly for his coffee produced. This initiative will reduce grower's dependency on intermediaries by providing direct access to buyers at a fair price for their produce. The initiative will also help coffee producers find exporters within the stipulated time to meet the growing demands and in building greater trust through increased transparency.

Coffee Board is in the process of developing Blockchain based marketplace application. This platform has already registered a group of 15-20 coffee farmers, exporters, importers and retailers are already registered on the platform from India and abroad. India is one of the few coffee blockchain processors for coffee in the world, after France and Ethiopia.

The stakeholders like coffee farmers, traders, exporters register on platform to make trade transactions. The coffee farmers register credentials like place where coffee is grown, details of crop, elevation etc. A block is created for each lot farmer sells. The credentials of the lot are stored on the blockchain throughout its journey and is immutable.

prevail in agricultural markets. The use of blockchain technology in the coffee market represents one such example (Box.1).

Improving Infrastructure and Access to Markets

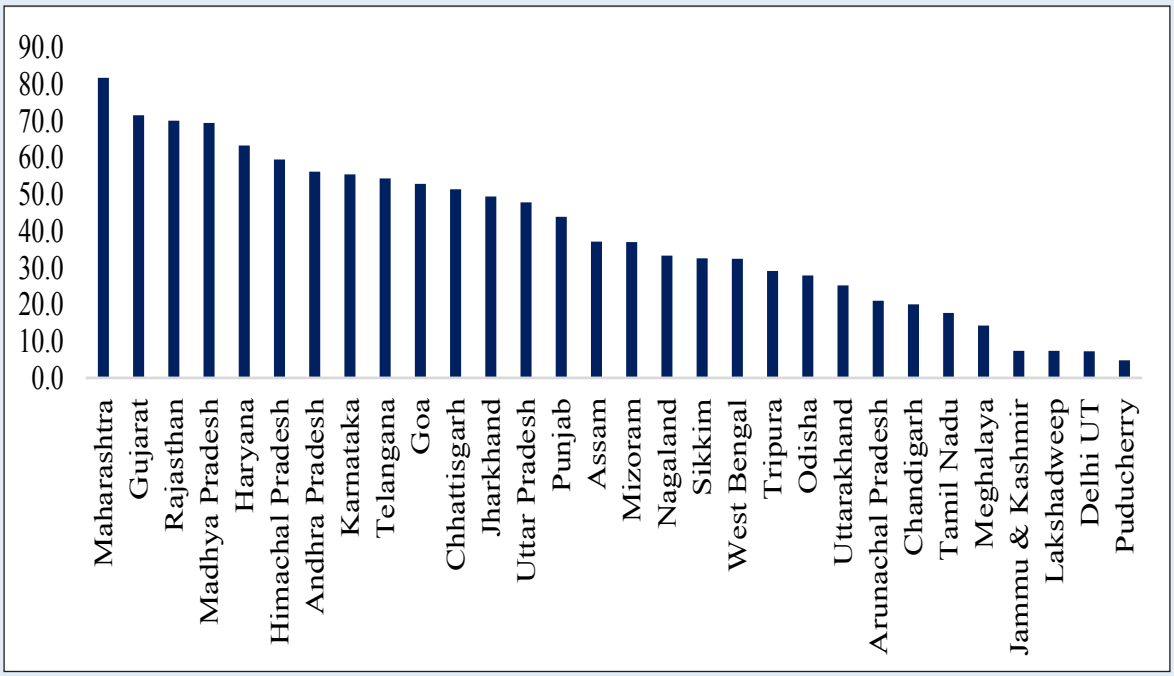
7.26 The informal actors like local traders and input dealers are more prominent in the marketing channels of the smallholder farmers. However, if farmers' access to markets are improved through better connectivity to nearby mandis, it will help farmers fetch better prices for their agricultural produce. A combination of enhancing rural infrastructure to improve connectivity, Information, Communication Technology (ICT) to provide timely information about prices, aggregation and storage facilities can help small and marginal farmers in overcoming the marketing bottlenecks.

Box 2. Agricultural Marketing and Farmer Friendly Reforms Index (AMFFRI)

NITI Aayog launched in 2016 an index to rank States and UTs based on implementation of seven provisions proposed under model APMC Act like joining e-NAM initiative, special treatment to fruits and vegetables for marketing and level of taxes in mandis. These indicators reveal ease of doing agribusiness as well as opportunities for farmers to benefit from modern trade and commerce and have wider option for sale of her/his produce. These indicators also represent competitiveness, efficiency and transparency in agri markets. The second area of reforms captured by the index include facilitation and liberalization of land lease. The third area included in the index represent freedom given to farmers for felling and transit of trees grown on private land. This represent opportunity to diversify farm business.

The Index is named as "Agricultural Marketing and Farmer Friendly Reforms Index (AMFFRI)" and it has a score that can have minimum value "0" implying no reforms and maximum value "100" implying complete reforms in the selected areas. States and UTs have been ranked using this index.

Ranking of States in terms of implementation of marketing and other farmer friendly reforms



Source: NITI Aayog Study Report on Agricultural Marketing and Farmer Friendly Reforms across Indian States and UTs, October, 2016.

Ranking of States based on AMFFRI

No state in the country has implemented the entire set of market reforms. Also, land leasing and harvest and marketing of some tree species on private farm land are subjected to various degrees of restrictions in almost all the States/UTs. The State of Maharashtra achieved first rank in implementation of various reforms. The State has implemented most of the marketing reforms and it offers best environment for doing agri-business among all the States/UTs. Gujarat ranks second with a score of 71.5 out of 100, closely followed by Rajasthan and Madhya Pradesh.

The State of Karnataka, which is considered progressive in implementing market reforms, did not figure among the top states for two reasons. It is lagging in liberalization of land lease and restrictions on felling of trees on private land. Two, it is not yet integrated with eNAM. However, the State has its own Unified Market Platform operated by ReMS, which has all the provisions as envisaged under eNAM. If this reform in the State is treated at par with eNAM, then Karnataka earns additional score of 7.4. This increases the score of the State in AMFFRI from 55.5 to 62.9 and raises its rank from 8th place to the 6th place.

Agriculturally developed State of Punjab ranks 14th with a score of 43.9. This is because of poor implementation of market reforms in the State.

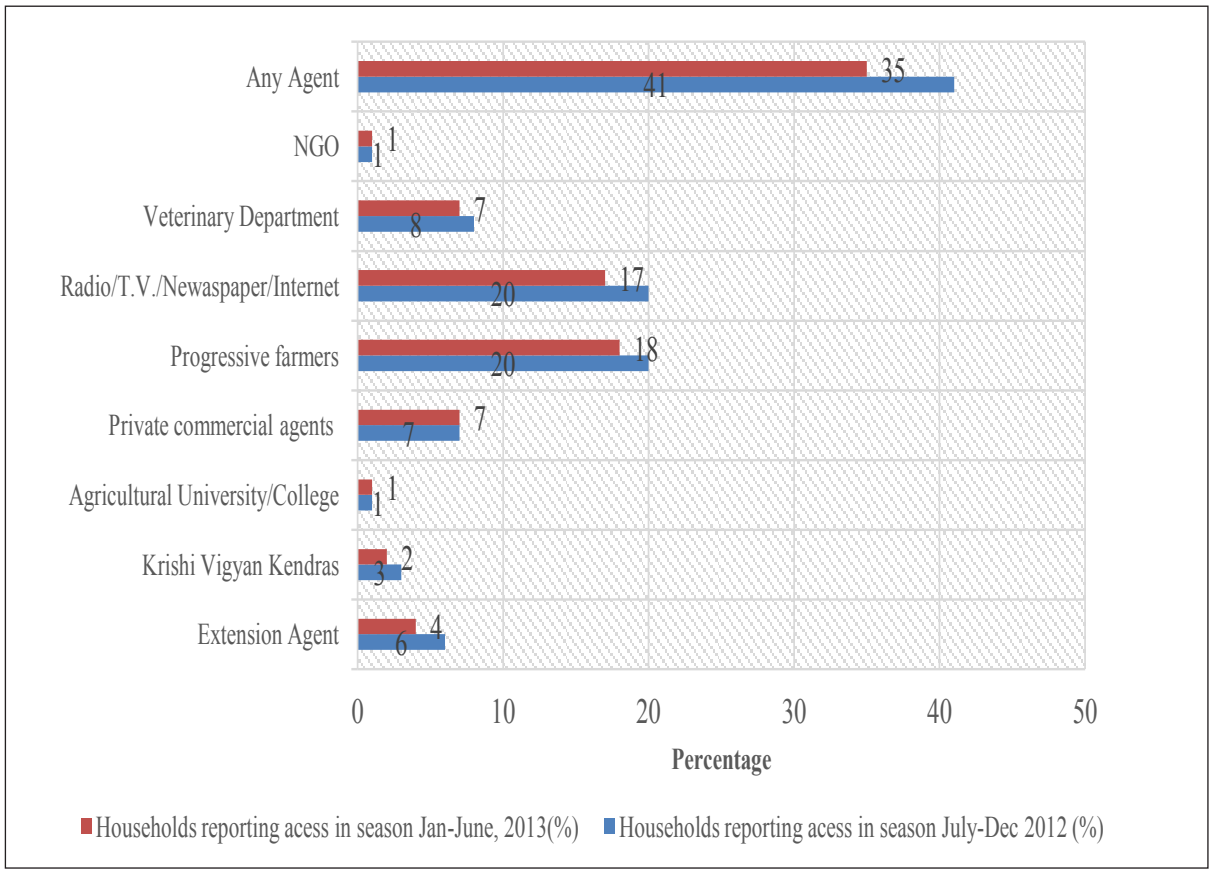
Almost two third States/UTs could not reach even halfway mark of reforms score. Major States like U.P., Punjab, West Bengal, Assam, Jharkhand, Tamil Nadu and J&K are in this group. It is also pertinent to mention that some States/UTs do not have APMC Act. It is a challenge to provide ranking to these States in market reforms.

ROLE OF EXTENSION SERVICES

7.27 Agricultural extension plays a key role in boosting agricultural productivity, enhancing food security, improving rural livelihoods and changing farmers' preferences and farming practices positively (for example, adoption of better quality seeds and cutting down loss by getting their crops insured). A Report on Review of Agricultural Extension in India, 2010 by IFPRI had highlighted the increasing need to share knowledge and skills in order to provide locally relevant services that meet the information needs of small and marginal farmers. Secondly, the report highlighted the need to bring small and marginal farmers within the framework of extension services.

7.28 As per the latest '*NSSO Report on Some Aspects of Farming in India, 2012-13'* reflects results of the survey that collected information regarding the agricultural household's access to technical advices specific to the crops they harvested during the two halves of the agricultural year July 2012- June 2013.

Figure 7: Distribution of Agricultural Households by Source of Accessing Technical Advice



Source: NSS Report No. 573: Some Aspects of Farming in India, 2012-13.

7.29 The farmers tend to access technical advice more during the second half of the year i.e., during January-June (Figure 7). About 41 per cent of the agricultural households engaged in crop production during the period July-December 2012 accessed technical advice on agriculture from some of the listed sources (Any agent). 'Progressive farmer' and 'radio/ TV/newspaper/internet' were the two

most accessed sources for technical advice by the agricultural households during this period; 20 per cent of the agricultural households reported accessing technical advice from these two sources. There is thus greater scope to improve services by Krishi Vigyan Kendras (KVKs) and agricultural universities in agriculture advisory services.

Adoption of Accessed Advice and Its Usefulness

7.30 The adoption of technical advice was highest among the agricultural households that received advice from veterinary department and progressive farmers during both the halves of the agricultural year and was the least for the source radio/TV/ newspaper/internet.

Table 5: Accessing Agricultural Households Who Adopted Technical Advice

Sources	Accessing households who adopted advice during the season Jan-June, 2013 (per cent)	Adopting households who reported the advice as useful during the season Jan-June, 2013 (per cent)
Extension Agent	86	94
Krishi Vigyan Kendra	79	98
Agricultural university /college	81	93
Private commercial agents (including drilling contractor)	87	96
Progressive farmer	92	97
Radio/t.v./newspaper/internet	64	95
Veterinary department	92	98
NGO	85	99
Any agent	85	NA

Source: NSS Report No. 573: Some Aspects of farming in India, 2012-13.

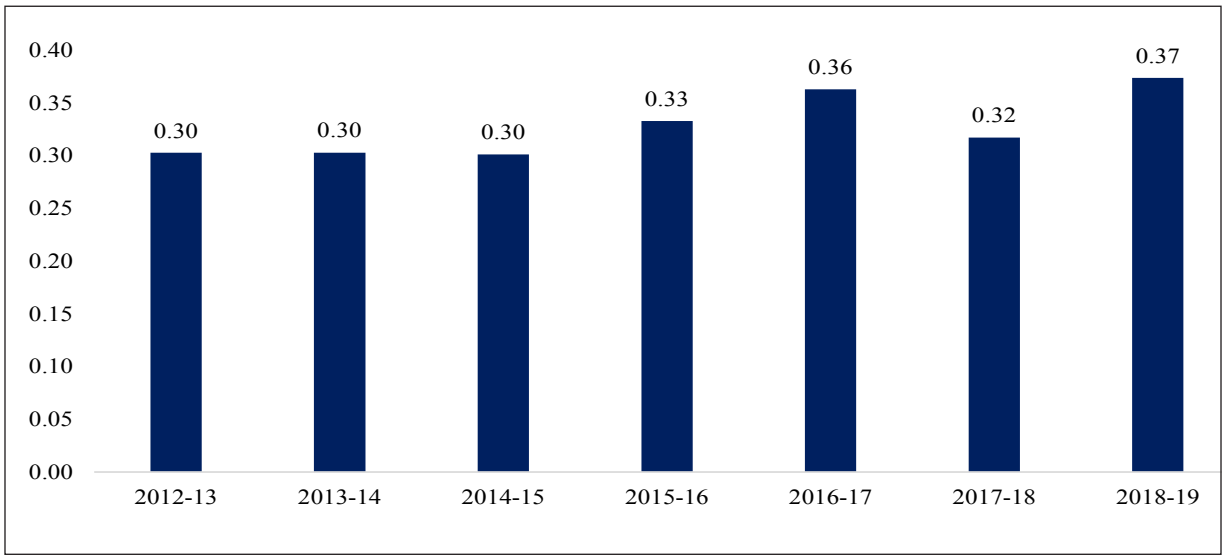
NA: Data not available.

7.31 Among the households that had adopted the received technical advice, majority of them found the advice to be beneficial which reflects the significance of extension services in agriculture.

Trend of Expenditure on Agriculture Research & Education

7.32 There has been an increasing trend in the expenditure on agricultural research and education as a percentage of total agricultural GVA with an exception of 2017-18.

Figure 8: Share of Expenditure on Agriculture Research & Education in Agricultural GVA (in per cent)

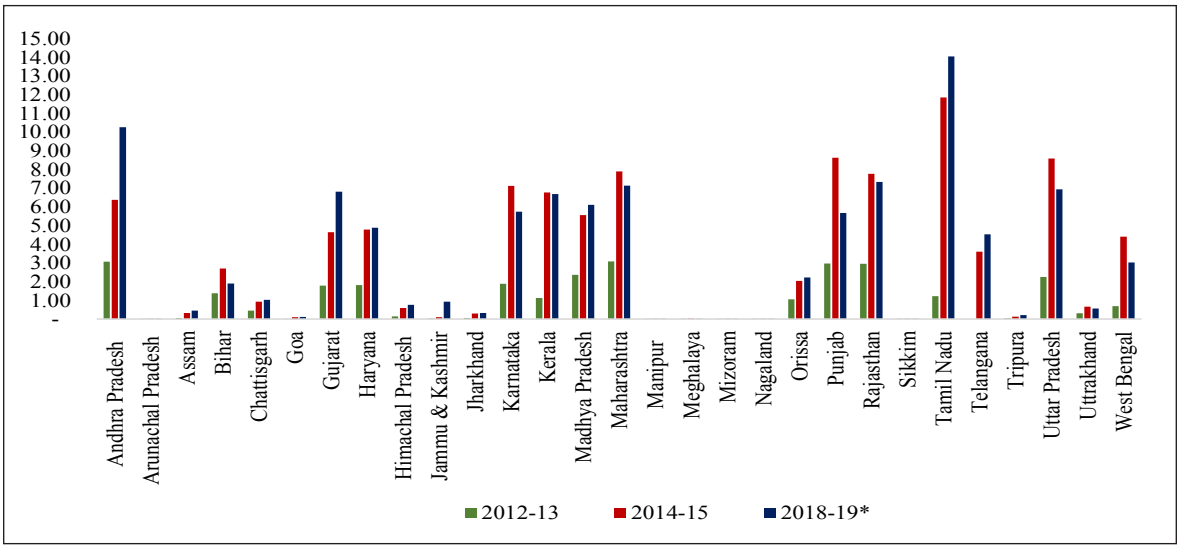


Source: Expenditure Budget

AGRICULTURAL CREDIT

7.33 The access to timely credit or finance is a critical determinant of profitability of agriculture. If credit is not available to purchase seeds at the time of sowing, or if lack of credit delays the administering of fertilizers, it can severely impact agricultural productivity. The regional distribution of agricultural credit in India (Figure 9) shows that the distribution of credit is highly skewed. It is seen that the distribution of agricultural credit is low in North Eastern, Hilly and Eastern States. The share of North Eastern States has been less than one per cent in total agricultural credit disbursement.

Figure 9: Percentage of Agricultural Credit Disbursement



Source: Department of Agriculture Cooperation and Farmers Welfare.

*As on September 2018

7.34 The financial inclusion in the eastern and north eastern India is relatively less as compared to the South and West (Crisil, 2018)[9]. The small and marginal holdings constitute majority (more than 85 per cent) of total operational holdings in the eastern region, north-eastern region and central region, which warrants greater distribution of agricultural credit disbursement to this region.

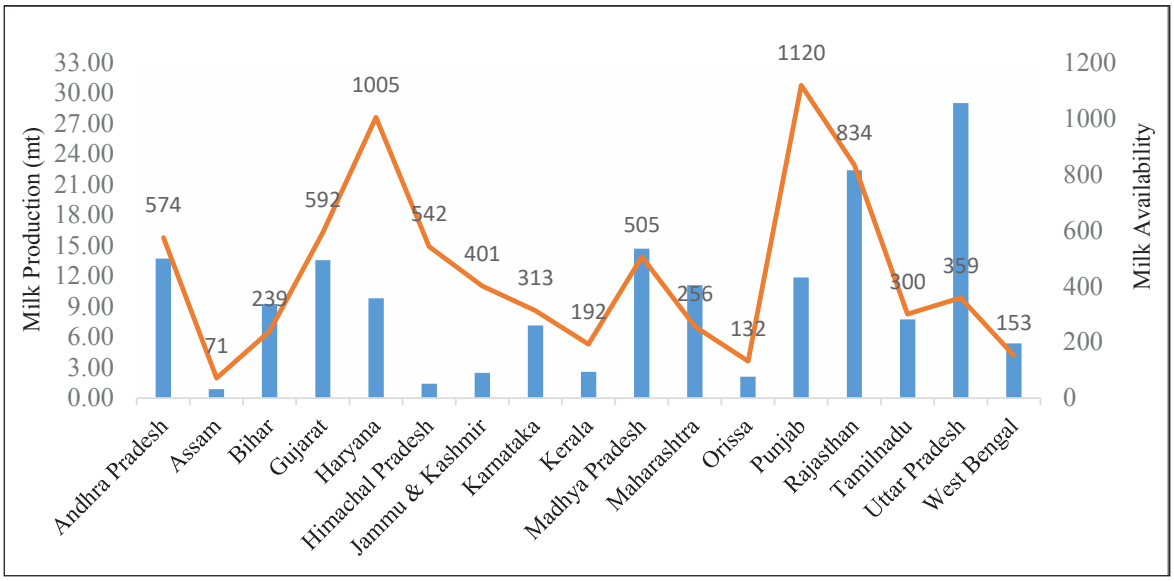
ALLIED SECTORS: ANIMAL HUSBANDRY, DAIRYING AND FISHERIES

7.35 Livestock, poultry, dairying and fisheries is a sub-sector of agriculture that provides livelihood to agricultural households during phases of seasonal unemployment. According to the 19th Livestock Census, India has vast resource of livestock comprising about 300 million bovines, 65.1 million sheep, 135.2 million goats and 10.3 million pigs. Livestock farming in India is part of a composite farming system characterized by crop-livestock interactions. The by-products from several of the crops (crop residues, hay and straw) are used as input for dairy production, in addition to other inputs for which they have to directly incur costs (cattle feed, veterinary medicines and artificial insemination). Animal dung and urine are used as inputs (bio-fertilizers and bio pesticides) by farmers to improve soil fertility.

Animal Husbandry and Dairying

7.36 India ranks first in milk production, accounting for 20 per cent of world production. Milk production in India has been increasing steadily over the years from 55.6 million tonnes in 1991-92 to 176.3 million tonnes in 2017-18, at an average annual growth rate of 4.5 percent. But there exists wide inter-state variability in milk production (Figure 10). The per capita availability of milk is determined by the production of milk in the State. While the All India per capita availability of milk is 375 grams per day, it varies between 71 grams per day in Assam to 1120 grams per day in Punjab.

Figure 10: Inter-State Variability in Milk Production & Per Capita Availability



Source: National Dairy Development Board.

[9] Crisil Inclusix, Februray,2018

Domestic Demand and Price of Milk

7.37 An analysis of the data on production of milk and its wholesale price index shows that though production of milk has been rising at an increasing rate, the change in its price shows a fluctuating trend. After rising 9 per cent in 2014-15, it increased only by 2.91 per cent in 2016-17 (Table 6). There are three key drivers of increasing milk demand viz; (i) population growth (ii) urbanization and (iii) income growth which leads to an increase in the price of milk[10].

Table 6: Milk Production and WPI of Milk

Year	Milk Production	Wholesale Price Index (WPI) of Milk	% Change in Production	% Change in Price
2012-13	132.4	107.6	-	-
2013-14	137.7	116	4.00	7.81
2014-15	146.3	126.6	6.25	9.14
2015-16	155.5	130.5	6.29	3.08
2016-17	165.4	134.3	6.37	2.91
2017-18	176.3	139.7	6.59	4.02

Source: National Dairy Development Board and Price Data from O/o Economic Adviser

7.38 Of the total milk produced in rural areas around 52 per cent is the marketable surplus. Of this surplus less than half of the milk sold is handled by the organized sector comprising of dairy cooperatives and private dairy companies and the rest by the unorganized sector.

Small Ruminant Sector

7.39 As per the 70th round of NSSO, livestock rearing was the principal source of income to about 3.7 per cent of the agricultural households. Sheep and goat are collectively known as small ruminants. India supports 16.1 per cent of the world's goat population and 6.4 per cent of its sheep (Food & Agriculture Organisation). Nationally, total livestock population is 512.1 million, of which goat and sheep population stands at 200 million (39 per cent of the country's total livestock population). Sheep/Goat rearing is practiced mainly by resource-poor families and is a supplementary source of income for farmers during lean seasons especially for marginal, women and landless farmers.

7.40 Small ruminants have higher survival rates under drought conditions compared to large ruminants. Moreover, because of their higher reproductive rates and smaller reproductive cycle flock numbers can be restored more rapidly. With regard to goats, water economy is also an important biological feature. Due to their short reproductive cycles (short kidding interval) and high incidence of multiple births, there is potential for a higher annual off take of goats than seen with cattle & buffaloes. This allows farmers/producers a quick interval of selling part of their flock and generating cash income. Sheep/goats can also efficiently survive on available shrubs and trees in adverse harsh environment in low fertility lands where no other crop or animals can survive except some rare exceptions like camel.

[10] Vision 2022, Dairy Development by Department of Animal Husbandry and Dairying.

Box 3: Schemes/Initiatives to Improve Productivity of Livestock and Dairy Sector

Rashtriya Gokul Mission (RGM): To undertake breed improvement programme for indigenous breeds so as to improve the genetic makeup and increase the stock. Indigenous cattle are well known for their quality of heat tolerance and ability to withstand extreme climatic conditions.

E Pashu Haat Portal: Under the scheme National Mission on Bovine Productivity, E Pashudhan Haat portal was developed for connecting breeders and farmers regarding availability of quality bovine germplasm. Through the portal, breeders/farmers can sell or purchase their breeding stock. Information on all forms of germplasm including semen embryos and live animals with all the agencies and stakeholders in the country has been uploaded on the portal.

National Livestock Mission: National Livestock Mission ensures intensive development of livestock, especially small livestock (sheep/goat, poultry rearing etc.) along with adequate availability of quality feed and fodder.

Livestock Health & Disease Control Scheme: Assistance provided under the Scheme for prevention and control of animal diseases like Foot and Mouth Disease (FMD), Peste des Petits Ruminants, (PPR), Brucellosis, Classical Swine Fever etc. In order to strengthen and expand the trained veterinary manpower, the number of recognized veterinary colleges has been increased.

Dairy Development: The Government is making efforts for strengthening infrastructure for production of quality milk, procurement, processing and marketing of milk and milk products through the following dairy development schemes viz; National Programme for Dairy Development, National Dairy Plan (Phase-I), Dairy Entrepreneurship Development Scheme, Dairy Processing and Infrastructure Development Fund (DIDF).

Fisheries Sector

7.41 Fisheries is a fast-growing sector in India, which provides nutrition and food security to a large population of the country besides providing income and employment to more than 14.5 million people. India is the second largest fish producer in the world with a total production of 13.7 million metric tonnes in 2018-19 of which 65 per cent was from inland sector. Almost 50 per cent of inland fish production is from culture fisheries, which constitutes 6.5 per cent of global fish production. The sector has been showing a steady growth in the total gross value added and accounts for 5.23 per cent share of agricultural GDP. Fish and fish product exports emerged as the largest group in agricultural exports and in value terms accounted for ₹47,620 crore in 2018-19.

7.42 Foreseeing the vast resource potential and possibilities in the fisheries sector, a separate Department of Fisheries was created in February 2019. The Government has merged all the schemes of fisheries Sector into an umbrella scheme of 'Blue Revolution: Integrated Development and Management of Fisheries' focusing on increasing fish production and productivity from aquaculture and fisheries resources, both inland and marine. Towards realization of these objectives the creation of the Fisheries and Aquaculture Infrastructure Development Fund (FIDF) was approved with a total fund size of ₹7522.48 crore.

7.43 While enhancing incomes through livestock development and fisheries sector, it is significant to integrate the SDGs of ensuring incomes and livelihoods for the poor. This must be undertaken without compromising the needs of the future generation by over exploiting/depleting marine resources.

Box 4: Draft National Inland Fisheries and Aquaculture Policy (NIFAP), 2019

Although inland fisheries and aquaculture have grown in absolute terms, the development in terms of its potential is yet to be realized. The unutilized and underutilized vast and varied resources, in the form of 191,024 km of rivers and canals, 1.2 million hectares of floodplain lakes, 2.36 million hectares of ponds and tanks, 3.54 million hectares of reservoirs and 1.24 million hectares of brackish water resources offer great opportunities for livelihood development and ushering economic prosperity. As the sector is extremely diverse and dynamic, there is a need to streamline policies and programmes, infuse public and private investments, and take R&D benefits to the farmers and fishers. These will help to bring optimal resource utilization and development of the sector as an instrument of growth.

Major Policy Recommendations in the NIFAP, 2019

Inland fisheries: The policy measures recommended for inland fisheries include: (i) conserving indigenous resources, and restoring natural ecosystem of rivers, (ii) transferring management of fisheries in manmade reservoirs to the state fisheries departments for scientific enhancement and efficient governance, (iii) conserving and restoring ecosystem in natural wetlands, and (iv) bringing policies, law, and conservation programmes for development of fisheries in the Himalayan and north-eastern states.

Aquaculture: Measures recommended for development of aquaculture include: (i) developing state and area-specific action plans, (ii) redefining land use categories to include fisheries and aquaculture as components of agriculture, (iii) developing separate programmes for small farmers, (iv) simplifying requirements for registration and leasing of farms, (v) encouraging private sector in production of seed, feed and other aquaculture inputs, and (vi) developing the required regulatory frameworks.

Other policy measures include: (i) making registration of all aquaculture inputs compulsory, (ii) regulating exotic species, (iii) improving disease surveillance, (iv) diversifying species, (v) developing post-harvest and marketing infrastructure, (vi) strengthening fisheries cooperatives, (vii) strengthening of current welfare and social protection programmes in convergence with other similar schemes to enhance fishers and farmers' welfare, (viii) Strengthening of inland fisheries and aquaculture database through census at regular intervals covering inland fisheries and aquaculture and (ix) gender equity through empowerment of women and strengthening their organization and leadership capabilities.

FOOD SECURITY AND FOOD MANAGEMENT IN INDIA

7.44 Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences to ensure an active and healthy life (FAO, 2018). The timely availability and affordability of food are critical for a developing country like India.

Food Security

7.45 The Global Food Security Index (GFSI), 2018 considered four core issues of food security across 113 countries: (i) affordability, (ii) availability, (iii) quality & safety and (iv) natural resources and resilience. The GFSI ranks countries on a score of 0-100 based on the first three categories while natural resources and resilience is used as an adjustment factor. A rank of 100 is considered most favourable. GFSI's major goal is to assess in a timely manner which countries are most and least vulnerable to food insecurity (Table 7).

Table 7: India's Food Security Score, 2018

Category	India (Score)	Score of All Countries (average)	India's Rank out of 113 Countries
OVERALL	**50.1**	**58.4**	**76**
1) Affordability	46.4	56.3	73
2) Availability	54.1	60.3	70
3) Quality and Safety	48.2	58.2	79
1) AFFORDABILITY			
1.1) Food consumption as a share of household expenditure	53.5	55.6	61
1.2) Proportion of population under global poverty line	66.0	80.9	87
1.3) Gross domestic product per capita (US$ PPP)	5.0	16.7	73
1.4) Agricultural import tariffs	46.4	75.4	108
1.5) Presence of food safety net programmes	50.0	65.5	66
1.6) Access to financing for farmers	75.0	62.6	43
2) AVAILABILITY			
2.1) Sufficiency of supply	27.4	56.8	100
2.2) Public expenditure on agricultural R&D*	0.0	15.6	62
2.3) Agricultural infrastructure	41.7	58.7	78
2.4) Volatility of agricultural production	93.5	86.4	39
2.5) Political stability risk	70.6	46.8	18
2.6) Corruption	25.0	37.6	49
2.7) Urban absorption capacity	94.8	76.9	3
2.8) Food loss	86.4	84.9	70
3) QUALITY AND SAFETY			
3.1) Diet diversification	39.7	56.0	81
3.2) Nutritional standards	100.0	80.1	1
3.3) Micronutrient availability	26.5	43.9	98
3.4) Protein quality**	18.5	47.2	98
3.5) Food safety	91.3	80.3	70

Source: Global Food Security Index, 2018, Economic Intelligence Unit, The Economist
Note: * It is a measure of govt spending on R&D taken as a per cent of GDP. Taken from OECD and Agricultural Science & Technology Indicators. ** measures the amount of high-quality protein in the average national diet.

7.46 India's food security challenges lie in the areas of low GDP per capita, sufficiency of supply, public expenditure on R&D and protein quality (Table 7). India ranks No.1 in Nutritional standards. India's overall Food Security Score is 50.1 out of 100 which ranks India 76 out of 113 countries. This reflects the need for India to further improve the management of food supply in various aspects.

7.47 The Central Government takes several steps to prudently manage foodgrain stock, to ensure adequate availability of wheat and rice in the Central pool, to keep a check on the open market prices, to augment the domestic availability of wheat and rice, and to ensure food security. The Government specifically undertakes the following measures:

(i) Announcing Minimum Support Prices and Central Issue Price

(ii) Undertake procurement of food grains through FCI and decentralised procurement by State Agencies

(iii) Maintain buffer stocks; and

(iv) Open market sale of wheat and rice to check inflation.

MSP and Foodgrains Procurement

7.48 The Minimum Support Price (MSP) is announced for 22 crops before the sowing season. The objective is to give guaranteed prices and assured market to the farmers and protect them from price fluctuations. In 2018-19, the government raised the MSP of both kharif and rabi crops to ensure a return of at least 50 per cent above the cost of production to enhance farmers' income. An increase in MSP leads to increase in production, but only about one-third of the total production of foodgrains are procured. The rest of the foodgrains are sold in the open market (Table 8).

Table 8: Foodgrains Production, Procurement & Offtake (In million tonnes)

Years	Foodgrains Production minus pulses	Foodgrains Procurement	Procurement (% share in Production)	Offtake (TPDS + Welfare schemes	Balance stock as of 1st July
2015-16	235.22	64.91	27.6	53.73	54.72
2016-17	251.98	61.14	24.3	56.45	49.85
2017-18	259.60	69.10	26.6	57.85	53.48
2018-19	257.36	75.28	29.3	56.40	65.14

Source: Foodgrain Bulletin, DFPD.

7.49 In States like Punjab, Haryana, Chhattisgarh, Uttar Pradesh, Madhya Pradesh etc. where MSP procurement is well established, there arise problems in storage of foodgrains. The procurement from these States exceeds the buffer stock norms fixed by the Government in 2015 (Table 8). While the offtake of food grains from the Central Pool for TPDS and other welfare schemes varies between 53-58 million tonnes, the stock of food grains in the Central Pool continues to be in excess of the prescribed buffer stock norms. As on 1st July, 2018, the Central stock was 65 million tonnes against the norm of 41 million tonnes. The government tries to liquidate excess stocks through open market sale to bulk buyers above the reserve price, which equals the MSP plus the procurement cost. Bulk buyers prefer wheat over rice

and in 2018-19 about nine million tonnes was sold in the open market of which 8.2 million tonnes was wheat. Exports of food grains by FCI at prices lower than the reserve price would effectively imply and export subsidy. Moreover, this would expose India to disputes in the multilateral trade framework. Exports of food grains by FCI either as aid or commercial sale has been less than 1 million tonnes.

Table 9: Foodgrains Stocking Norms for Central Pool from January, 2015

(in million tonnes)

Date	Rice			Wheat			Total food grains
	Operational stocks	Strategic Reserve	Total	Operational stocks	Strategic Reserve	Total	
1st April	11.58	2.00	13.58	4.46	3.00	7.46	21.04
1st July	11.54	2.00	13.54	24.58	3.00	27.58	41.12
1st October	8.25	2.00	10.25	17.52	3.00	20.52	30.77
1st January	5.61	2.00	7.61	10.8	3.00	13.80	21.41

Source: Department of Food and Public Distribution.

7.50 According to an Evaluation Study on Minimum Support Price conducted by Development Monitoring & Evaluation Office (DMEO), NITI Aayog (January 2016), in majority of the sample states, farmers are unaware of the MSP announcement before the sowing season. In Eastern India, in States such as Assam, West Bengal, the poor impact of the scheme could be judged from the fact that none of the selected farmers were even aware of the existence of such a scheme. In certain cases, though aware of the MSP, the absence of procurement centres in the villages, transportation costs, reluctance of mill owners to buy small quantities from the farmers remain stumbling blocks.

Food Subsidy

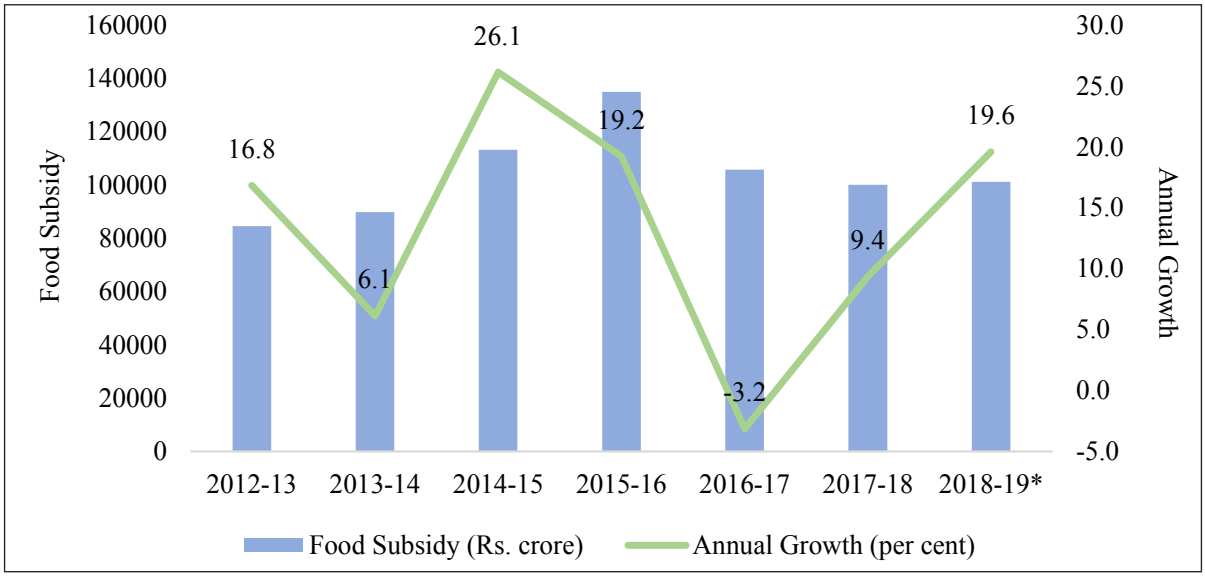
7.51 Food subsidy comprises of two main components. The first component includes subsidy provided to the Food Corporation of India (FCI) for procurement and distribution of wheat and rice under the National Food Security Act (NFSA), 2013 and other welfare schemes and for maintaining the buffer stock of food grains as a measure of food security. The second component comprises subsidy provided to States undertaking decentralized procurement. The acquisition and distribution costs of procuring food grains for the central pool constitute the economic cost. The difference between the per quintal economic cost and the per quintal Central Issue Price (CIP) gives the quantum of per quintal consumer subsidy.

7.52 The economic cost of wheat for FCI operations has increased from ₹1908.32 per quintal in 2013-14 to ₹2435.23 per quintal in 2018-19. Similarly, the economic cost of rice has increased from ₹2615.51 per quintal in 2013-14 to ₹3472.94 per quintal in 2018-19. However, the CIP of wheat and rice for NFSA beneficiaries has not been revised from ₹200 per quintal in case of wheat and ₹300 per quintal in case of rice. These rates were fixed under the National Food Security Act, 2013 initially for a period of three years from the date of commencement of the Act (July 13, 2013). Thereafter, they were to be fixed by the Central Government from time to time, while not exceeding the minimum support price.

7.53 In order to ensure food security to the vulnerable sections, Government continues with the subsidized pricing under NFSA. This has resulted in widening of the gap between the economic cost and CIP and the per quintal food subsidy incurred by the Government has risen substantially over the years. The subsidized CIPs of ₹3/2/1 per kg for rice, wheat and coarse grains respectively under NFSA were earlier applicable only to the Antyodaya Anna Yojana Families *(which constitute about 2.5 crore poorest of the poor households)* under the Targeted Public Distribution System (TPDS). The BPL/APL categories were required to pay higher CIPs.

7.54 The NFSA provides a wider coverage than the erstwhile TPDS. It also made the Antyodaya CIPs uniformly applicable to all NFSA beneficiaries. APL/BPL categorization was done away with under NFSA. The wider coverage provided under the Act together with lower CIPs have obvious implications for the food subsidy bill. The trend in the amount of food subsidy released by the Government of India since 2012-13 may be seen in Figure 11.

Figure 11: Expenditure on Food Subsidy (₹ Crore) & Annual Growth Rate (%)



Source: Department of Food & Public Distribution.

*As on 05.03.2019

For sustainability of food security operations, the issue of burgeoning food subsidy bill needs to be addressed.

Computerization of Targeted Public Distribution System

7.55 The Targeted Public Distribution System (TPDS) is operated under the joint responsibility of the Central and State/UT Governments. The Central Government is responsible for procurement, allocation and transportation of food grains upto the designated depots of the FCI. The State Governments are responsible for allocation and distribution of food grains involving identification of eligible beneficiaries/ families, issuance of ration cards to them and supervision and monitoring of functioning of Fair Price Shops (FPSs).

7.56 Instructions have been issued to States/UTs and Food Corporation of India (FCI) to ensure supply of good quality food grains under PDS. Therefore, as and when complaints are received by the Government

from individuals and organizations as well as through press reports, they are sent to State/UT Governments concerned for inquiry and appropriate action. An offence committed in violation of the provisions of TPDS (Control) Order, 2015 is liable for penal action under the Essential Commodities Act, 1955. Thus, the Order empowers State/UT Governments to take punitive action in case of contravention of relevant provisions of these Orders.

Table 10: Achievements of TPDS Computerisation

Scheme Components	Achievement
Digitization of ration cards/ beneficiary's data	Completed in all States/UTs
Online allocation of food grains	Completed in all States/UTs except UTs of Chandigarh & Puducherry, which have adopted DBT/Cash transfer scheme
Computerization of supply chain management	Completed in 25 States/UTs and the work is in progress in the remaining States/UTs
Transparency portals	Set up in all States/UTs
Intra-State portability of ration cards to enable purchase from any FPS in the State	Operational in 11 States
Grievance redressal facilities	Toll-free helplines/online registration facility is available in all States/UTs

Source: Department of Food & Public Distribution.

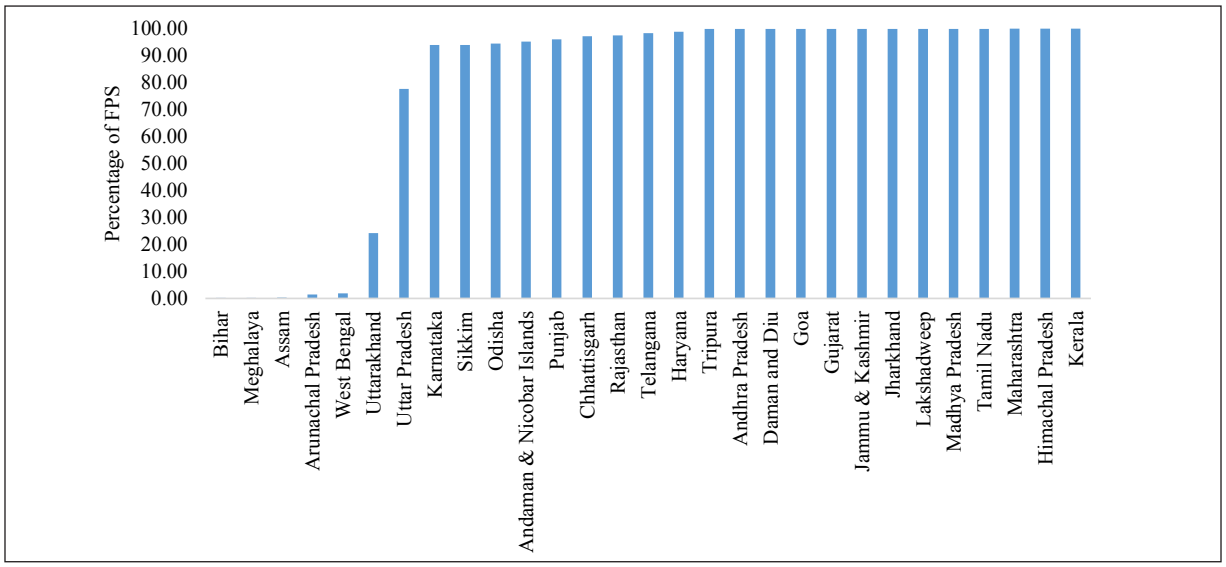
7.57 To modernize and bring about transparency in the TPDS operations, the Central Government is implementing the Scheme 'End-to-end Computerisation of TPDS Operations'[11] on cost sharing basis with the States/UTs. The validity of the scheme was extended upto March 2019. The scheme provides for digitization of ration cards and beneficiary records, computerization of supply chain management, setting up of transparency portal and grievance redressal mechanisms. The outcomes of the scheme are given at Table 10.

7.58 Through technology and digital intervention, the TPDS has become more transparent at the FPS. However, there needs to be holistic monitoring along the supply chain to completely prevent the diversions and leakages of foodgrains and also to maintain the quality of foodgrains distributed through the FPS.

7.59 There are 5.33 lakh Fair Price Shops (FPSs) and over 23 crore ration card holders in the country as on March 2019. About 3.95 lakh FPSs have been automated by installing the electronic point of sale device. However, the level of computerization of FPSs across States is not uniform (Figure 12).

[11] The Justice Wadhwa Committee Report for PDS (2011) divided computerization into two parts: a first one to prevent diversion, and a second one to enable secure identification at ration shops. The Committee has recognized Chhattisgarh as a model state for the first component, and Gujarat as a model for the second.

Figure 12: End-to end Computerization in Fair Price Shops



Source: Department of Food & Public Distribution.

CHAPTER AT A GLANCE

- Although, contribution of Agriculture's Gross Value Added (GVA) to overall GVA has been declining (14.4 per cent in 2018-19) it is still a crucial sector, as a large proportion of the population engage in agriculture. Furthermore, agriculture is critical for the country's food security. Gross Capital Formation (GCF) in agriculture as percentage of GVA declined to 15.2 per cent in 2017-18 and the role of public sector in GCF in agriculture has increased.
- The number of operational land holdings and area under operation have shifted towards small and marginal farmers. Women's participation in agriculture has increased and their concentration is highest (28 per cent) among small and marginal farmers.
- Around 89 per cent of groundwater extracted is used for irrigation and crops such as paddy and sugarcane consume more than 60 per cent of irrigation water. Focus should shift from land productivity to 'irrigation water productivity'. Therefore devising policies to incentivize farmers to improve water use should become a national priority. Thrust should be on micro-irrigation that can improve water use efficiency.
- Fertilizer response ratio has been declining over time. Organic and natural farming techniques including Zero Budget Natural Farming (ZBNF) can improve both water use efficiency and soil fertility.
- Adopting appropriate technologies through Custom Hiring Centers and implementation of ICT are critical to improve resource use efficiency among small and marginal farmers.
- Diversification of livelihoods is critical for inclusive and sustainable development in agriculture and allied sectors. Policies should focus on (i) dairying as India is the largest producer of milk;(ii) livestock rearing particularly of small ruminants; and (iii) fisheries sector, as India is the third largest producer.

ANNEXURE-1

ACTION PLAN FOR DOUBLING THE INCOME OF FARMERS

The Government has set a target of doubling of farmers' income by the year 2022. For the said purpose, the Government had constituted an Inter-Ministerial Committee to examine issues relating to Doubling of Farmers' Income (DFI) and recommend strategies. The Committee has identified seven sources of income growth viz, improvement in crop productivity; improvement in livestock productivity; resource use efficiency or savings in the cost of production; increase in the cropping intensity; diversification towards high value crops; improvement in real prices received by farmers; and shift from farm to non-farm occupations. Several initiatives have already been rolled out on the recommendations of DFI Committee which inter-alia include advocating progressive market reforms through the State Governments, Encouraging contract farming through the State Governments by promulgating of Model Contract Farming Act, Up-gradation of Gramin Haats to work as centers of aggregation and for direct purchase of agricultural commodities from the farmers, e-NAM to provide farmers an electronic online trading platform, Distribution of Soil health Cards to farmers so that the use of fertilizers can be rationalized, Increase water efficiency through Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)-" Per drop more crop", Better insurance coverage to crops for risk mitigation under Pradhan Mantri Fasal Bima Yojana (PMFBY), providing total interest subvention up to 5 per cent (inclusive of 3 per cent prompt repayment incentive) on short-term crop loans up to ₹3 lakh, thus making loan available to farmers at a reduced rate of 4 per cent per annum and extended the facility of Kisan Credit Card (KCC) for animal husbandry and fisheries related activities as well as Interest Subvention facilities to such categories of farmers.

Giving a major boost for the farmers' income, the Government has approved the increase in the Minimum Support Price (MSPs) for all Kharif & Rabi crops for 2018-19 season at a level of at least one and half times of the cost of production.

Further, with a view to provide social security net for small and marginal farmers as they have minimal or no savings to provide for old age and to support them in the event of consequent loss of livelihood, the Government has decided to implement a new Central Sector Scheme for providing old age pension of ₹3000/- to the eligible small and marginal farmers, subject to certain exclusion clauses, on attaining the age of 60 years. The scheme aims to cover around 5 crore beneficiaries in the first three years. It would be a voluntary and contributory pension scheme, with entry age of 18 to 40 years. The Government has approved a budgetary provision of ₹10774.50 crore for the scheme till March 2022.

The Government has constituted an Empowered Body on 23.01.2019 for monitoring the implementation of the recommendations of the DFI Strategy.

Source: Ministry of Agriculture & Farmers Welfare.

Industry and Infrastructure

08
CHAPTER

Sloth makes all things difficult, but industry, all things easy.

— Benjamin Franklin

The king shall promote trade and commerce by setting up trade routes by land and by water and market town/ports.

— The Arthashastra

The story of economic growth is half-documented without narrating the story of industry-infrastructure nexus. India, being home to more than 133 crore people, needs to build a robust industry with a buoyant and resilient infrastructure. The industrial growth rate in terms of Index of Industrial Production (IIP) during 2018-19 stood at 3.6 per cent as compared to 4.4 per cent growth rate in 2017-18. The moderation in 2018-19 has been mainly due to subdued manufacturing activities in Q3 and Q4 due to slower credit flow to medium and small industries, reduced lending by NBFCs owing to liquidity crunch, tapering of domestic demand for key sectors such as automotive sector, pharmaceuticals, and machinery and equipment, volatility in international crude oil prices etc. Meanwhile, the eight core infrastructure supportive industries have achieved the overall growth rate of 4.3 per cent during 2018-19 similar to the increase achieved in 2017-18. The Government has initiated a number of measures in crucial sectors to accelerate higher manufacturing growth such as Start-up India, Ease of doing Business, Make in India, Foreign Direct Investment Policy reforms. India has considerably improved its ranking to 77th position in 2018 among 190 countries assessed by the World Bank Doing Business Report, 2019 in which India has leapt 23 ranks over its rank of 100 in 2017.

A robust and resilient Infrastructure is fundamental and essential for budding industries. While India has invested in its infrastructure over the years, the challenge is to mobilize adequate investment in infrastructure sector which runs into several trillions of dollars. The investment gaps in the infrastructure would have to be addressed through various innovative approaches with the collaboration of both public and private sector.

INDIAN INDUSTRY: AN OVERVIEW

8.1 Industry plays a decisive role in determining the overall growth of an economy. The industrial sector performance during 2018-19 has improved as compared to 2017-18. As per the provisional estimates of the Annual National Income 2018-19 released by Central Statistics Office (CSO), the growth of industry real Gross Value Added (GVA) was higher at 6.9 per cent in 2018-19 as compared to 5.9 per cent in 2017-18 (Table 1). Construction and manufacturing

sectors have experienced 8.7 per cent and 6.9 per cent growth rate respectively during 2018-19. The mining and quarrying sector has experienced sluggish growth in 2018-19 as compared to 2017-18.

Index of Industrial Production (IIP)

8.2 The IIP is a measure of industrial performance which sheds some light on where we stand in terms of industrial growth. The IIP assigns a weight of 77.63 per cent to manufacturing sector, 14.37 per cent to mining sector and 7.99 per cent to electricity sector. The industrial growth rate in terms of IIP was 3.6 per cent in 2018-19 as compared to 4.4 per cent in 2017-18. The Mining, Manufacturing and Electricity sectors registered positive growth rates of 2.9 per cent, 3.6 per cent and 5.2 per cent respectively in 2018-19. (Table 2).

Table 1: Gross Value Added in Industry Sector

Sectors	Growth rate of GVA at constant prices (in per cent)			Share of GVA at current prices (in per cent)
	2016-17	2017-18	2018-19 (P)^	2018-19 (P)^
Mining & Quarrying	9.5	5.1	1.3	2.4
Manufacturing	7.9	5.9	6.9	16.4
Electricity, Gas, Water Supply & Other Utility Services	10.0	8.6	7.0	2.8
Construction	6.1	5.6	8.7	8.0
Industry	7.7	5.9	6.9	29.6

Source: Central Statistics Office (CSO). ^ P: Provisional estimates

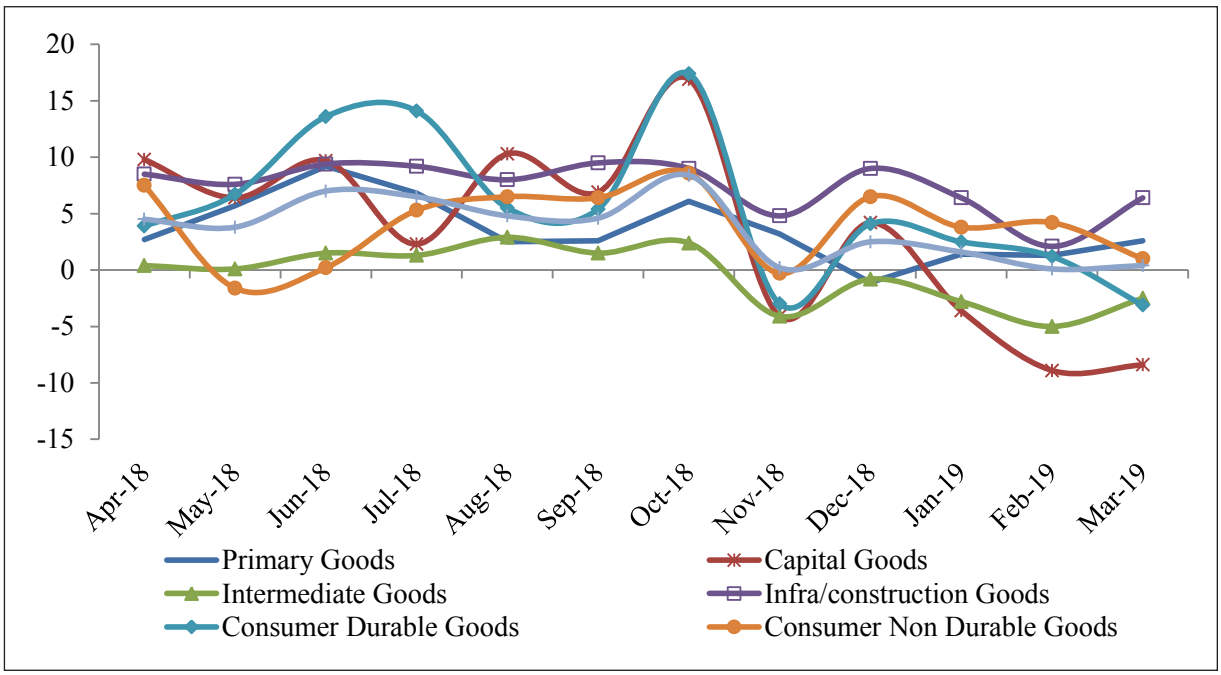
Table 2: Growth Rates of IIP (Base: 2011-12) (in Per cent)

Sector/ UBC	Weight	2016-17	2017-18	2018-19 (P)
Sectoral classification				
Mining	14.3725	5.3	2.3	2.9
Manufacturing	77.6332	4.4	4.6	3.6
Electricity	7.9943	5.8	5.4	5.2
General Index	100.00	4.6	4.4	3.6
Use Based Classification (UBC)				
Primary goods	34.0486	4.9	3.7	3.5
Capital goods	8.2230	3.2	4.0	2.8
Intermediate goods	17.2215	3.3	2.3	-0.5
Infrastructure/ construction goods	12.3384	3.9	5.6	7.5
Consumer durables	12.8393	2.9	0.8	5.5
Consumer non-durables	15.3292	7.9	10.6	3.9

Source: CSO. P: Provisional

8.3 In terms of use-based classification of IIP, the index of infrastructure/construction goods remained higher at 7.5 per cent in 2018-19 driven by the robust performance of cement and steel sectors (Figure 1). Large scale public spending has boosted the demand for these sectors. Primary goods and consumer non-durables have registered a positive growth rate of 3.5 per cent and 3.9 per cent in 2018-19 respectively. On the other hand, the capital goods sectors registered a moderate growth of 2.8 per cent in 2018-19 which is indicative of shortfall in investment activities. Overall investment as indicated by the real gross fixed capital formation has increased by 10 per cent in 2018-19. But its share in GDP at current prices is estimated to be only marginally higher at 29.3 per cent during 2018-19. Within consumer goods, consumer durables have shown improved performance with a growth of 5.5 per cent in 2018-19.

Figure 1: Monthly growth (in per cent) of IIP (Use based classification)



Source: CSO.

8.4 The Index of eight core industries measures the performance of Coal, Crude Oil, Natural Gas, Petroleum Refinery Products, Fertilizers, Steel, Cement and Electricity. The eight core industries comprise about 40.3 per cent weight in the IIP. The overall Index of eight core industries registered a growth rate of 4.3 per cent in 2018-19 similar to the increase achieved in 2017-18. The production of Coal, Steel, Cement, Electricity, Refinery Products, Natural Gas and Fertilizers registered positive growth rate in 2018-19 with Cement and Coal registering a higher growth rate of 13.3 per cent and 7.4 per cent respectively (Table 3). The growth rate of 3 months moving average Month-on-Month (M-o-M) of IIP, eight core industries and manufacturing sector during 2017-18 and 2018-19 (in per cent) shows that the three indicators move simultaneously and started improving from February 2019 (Figure 2).

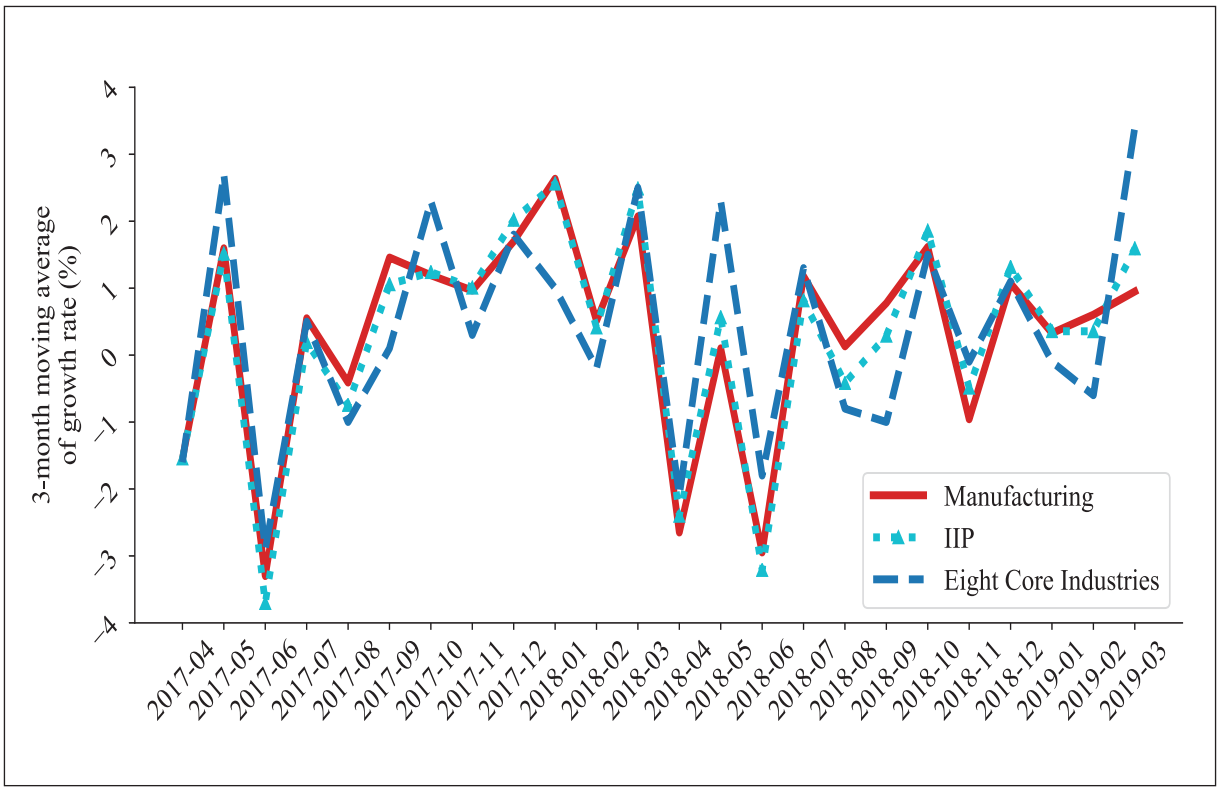
Table 3: Growth in production of Eight Core Industries (in Per cent)

Sector	Weight	2016-17	2017-18	2018-19 (P)
Coal	10.3335	3.2	2.6	7.4
Crude Oil	8.9833	-2.5	-0.9	-4.1
Natural Gas	6.8768	-1.0	2.9	0.8
Refinery Products	28.0376	4.9	4.6	3.1
Fertilizers	2.6276	0.2	0.03	0.3
Steel	17.9166	10.7	5.6	4.7
Cement	5.3720	-1.2	6.3	13.3
Electricity	19.8530	5.8	5.3	5.2
Overall Index	100.00	4.8	4.3	4.3

Source: Office of the Economic Adviser, DPIIT; P : Provisional

Note: The industry-wise weights indicated above are individual industry weight derived from IIP and blown up on pro rata basis to a combined weight of Index of Core Industries equal to 100.

Figure 2: Growth rate of 3 Months Moving Average Month-on-Month (M-o-M) of IIP, Eight Core Industries and Manufacturing sector in 2017-18 and 2018-19 (in Per cent).

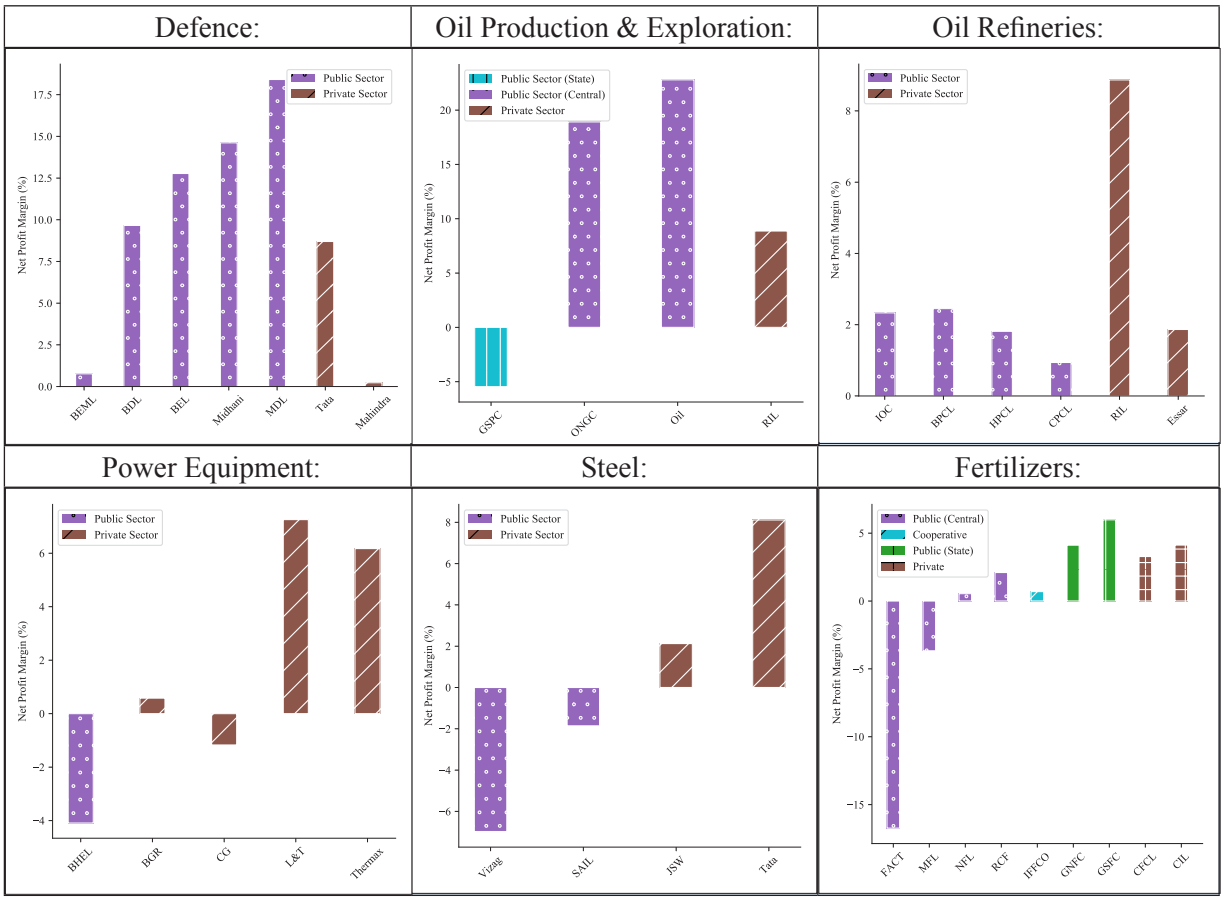


Source: Office of the Economic Adviser, DPIIT & CSO.

Central Public Sector Enterprises (CPSEs)

8.5 The CPSEs play a significant role in Indian economy. According to Department of Public Enterprises, there are 339 CPSEs as on 31 March, 2018. Out of these 339 CPSEs, 257 are in operation and 82 are non-operational during 2017-18. Out of the operating 257 CPSEs, 184 CPSEs were profit making, 71 loss making and 2 CPSEs at no profit no loss. The profit of profit making CPSEs (184) stood at ₹1,59,635 crore, while the loss of loss-making CPSEs (71) stood at ₹31,261 crore during 2017-18. The overall net profit of the 257 operating CPSEs went up by 2.29 per cent to ₹1,28,374 crore during 2017-18. Further, the CPSEs contribution to the total Central Exchequer decreased by 2.98 per cent in 2017-18 as against the previous year. A comparative analysis of the performance of a few CPSEs vis-a-vis private sector using 5 year average net profit margin (in per cent) in selected sectors show that there is a great scope for improvement for CPSEs in some sectors as the private sector firms have performed relatively better than the public sector firms (Figure 3). The return on assets and return on equity depicts a similar picture of the public and private firms in these selected industries.

Figure 3: Performance of a few CPSEs vis-a-vis Private sector in terms of 5 year average Net Profit Margin in selected sectors (in per cent).



Source: CMIE

Corporate sector Performance

8.6 Growth of sales (YoY) of over 1700 non-governmental non-financial (NGNF) listed manufacturing companies was 21.6 per cent in Q1, 19.3 per cent in Q2 and 13.2 per cent in Q3 during 2018-19. According to RBI, NGNF listed manufacturing companies posted double digit growth rate in nominal sales in Q4 of 2016-17 and continued its recovery path till Q2 of 2018-19 with minor moderations in between. In Q3 of 2018-19, moderation was observed in nominal sales growth of manufacturing companies due to subdued demand conditions faced by textiles; iron and steel; motor vehicles and other transport equipments. On the positive side, the demand scenario improved for consumer driven sectors such as food products, beverages and pharmaceuticals. The capacity utilization of India's manufacturing sector increased to 75.9 per cent in Q3 of 2018-19 which is higher than Q3 of 2017-18 (Table 4).

Table 4: Growth of Sales, Net Profits and Capacity Utilisation for the Corporate Sector (in Per cent)

Item	2016-17				2017-18				2018-19		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Sales	-1.0	3.7	4.9	10.2	8.9	9.5	14.0	13.4	21.6	19.3	13.2
Net Profit	28.8	27.5	57.5	22.2	-33.6	-4.0	-2.4	6.3	59.8	29.4	43.1
Capacity Utilisation	71.7	72.0	71.0	74.6	71.2	71.8	74.1	75.2	73.8	74.8	75.9

Source: RBI.

Note: The sales and net profits of over 1700 listed manufacturing companies and capacity utilisation on a sample of over 800 responding Companies.

Gross Capital Formation in Industrial Sector

8.7 As per the data on national income, consumption expenditure, saving and capital formation released by CSO on 31 January, 2019, the rate of growth of Gross Capital Formation (GCF) in industry has registered a sharp rise from (-) 0.7 per cent in 2016-17 to 7.6 per cent in 2017-18, showing upward momentum of investment in industry. The Mining & Quarrying, Manufacturing, Electricity, Gas, Water Supply & Other Utility Services and Construction had registered a growth rate of 7.1 per cent, 8.0 per cent, 6.1 per cent and 8.4 per cent respectively in 2017-18 (Table 5).

Table 5: Growth rate of GCF by Industry (at 2011-12 constant prices) (in Per cent)

	2015-16*	2016-17#	2017-18@
Industry	11.1	-0.7	7.6
Mining & Quarrying	-19.6	16.4	7.1
Manufacturing	11.4	1.3	8.0
Electricity, Gas, Water Supply & Other Utility Services	22.4	-12.9	6.1
Construction	2.6	10.1	8.4

Source: CSO

Note:*= Third Revised Estimates, #=Second Revised Estimates, @=First Revised Estimates

Credit Flow to the Industrial sector

8.8 According to RBI, the growth in gross bank credit flow to the industrial sector has increased by 6.9 per cent in March, 2019 compared to the increase of 0.7 per cent in March, 2018. Credit flow to industries like chemicals and chemical products, cement and cement products, all engineering industries, construction, infrastructure, other industries increased in 2018-19 while a sharp decline was noticed in industries like textiles, petroleum, coal products and nuclear fuel, basic metal & metal products in 2018-19. Mining and quarrying, food processing, vehicles, vehicle parts and transport equipment registered lower growth rate in 2018-19 (Table 6).

Table 6: Growth of Industry-wise deployment of Gross Bank Credit (in Per cent)

	2017-18*	2018-19**
Industry	0.7	6.9
Mining and Quarrying (including Coal)	19.7	1.1
Food processing	6.8	1.1
Textiles	6.9	-3.0
Petroleum, coal products & nuclear fuel	9.4	-3.1
Wood and Wood Products	3.3	10.2
Chemicals and Chemical Products	-5.5	17.5
Glass and glassware products	6.5	17.0
All engineering	3.8	8.6
Cement & cement products	-3.1	5.9
Basic metal & metal products	-1.2	-10.7
Vehicles, Vehicle Parts and Transport equipment	7.0	1.4
Construction	9.5	10.4
Infrastructure	-1.7	18.5
Other industries	-4.2	6.8

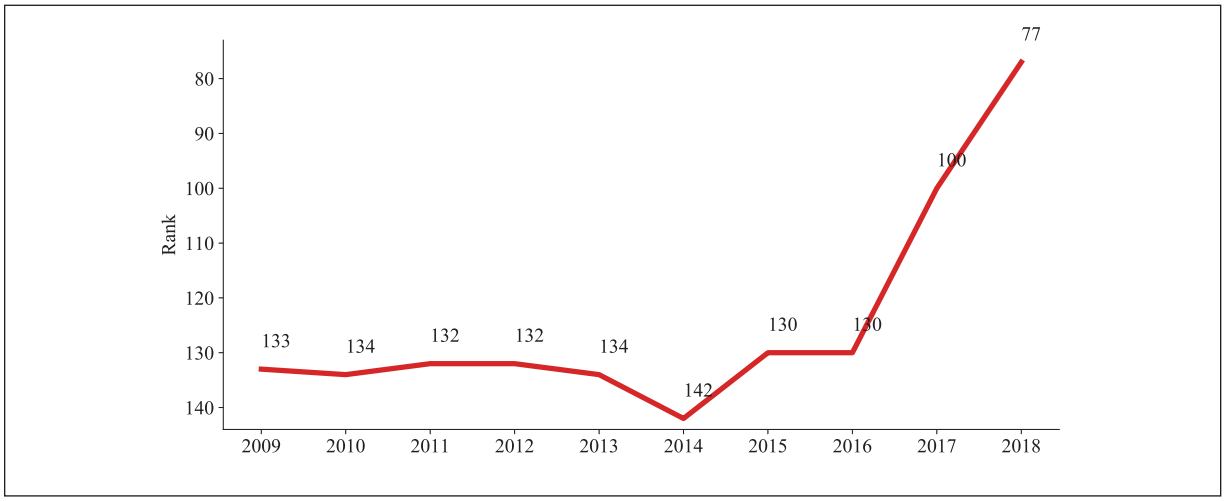
Source: RBI

Note: * End March 2018 over end March 2017 : ** End March 2019 over end March 2018

Key Initiatives taken to boost Industrial Sector in India

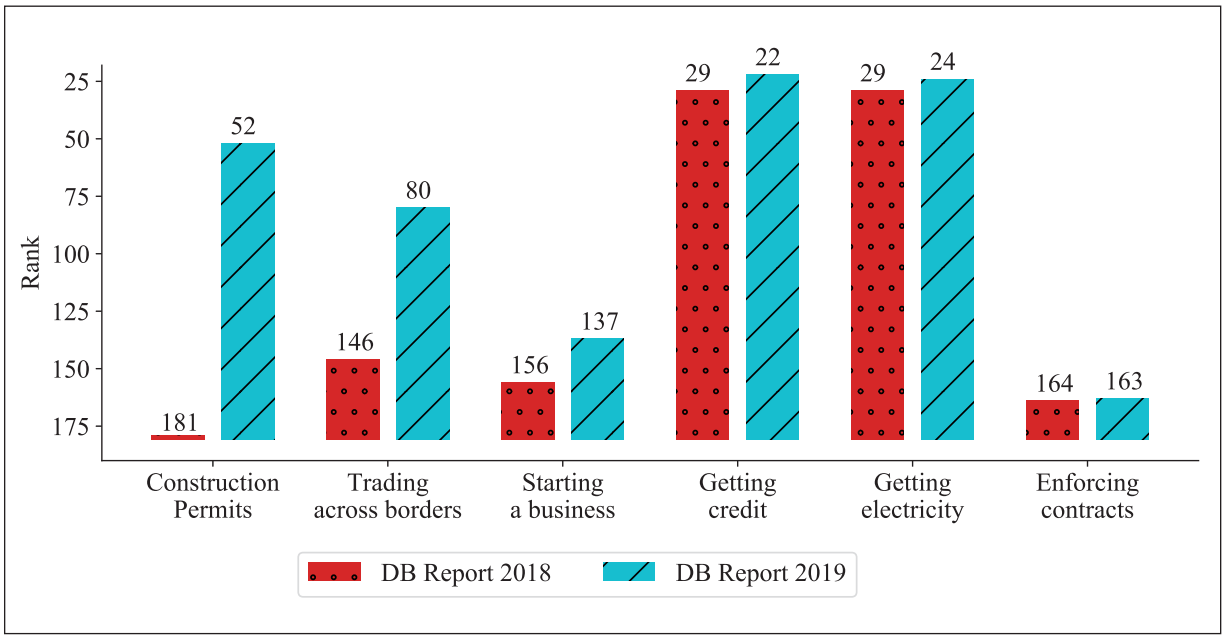
8.9 The Government of India has taken several industry specific reform initiatives since 2014 that has significantly improved the overall business environment. To improve ease of doing business, the emphasis has been given to simplification and rationalization of the existing rules and introduction of information technology to make governance more efficient and effective. As per the World Bank Doing Business (DB) Report released on 31 October 2018, India has considerably improved its ranking to 77th position among the 190 countries and has leapt 23 ranks over its previous rank of 100 (Figure 4).

Figure 4: India's ranking in World Bank Ease of Doing Business Reports



8.10 The World Bank Doing Business Report 2019 covers 10 indicators which span the life-cycle of a business. India has improved its rank in 6 out of 10 indicators and has moved closer to international best practices (Distance to Frontier score) (Figure 5).

Figure 5: India's progress in Ease of Doing Business Report Rankings



Start-up India

8.11 Start-ups drive economic growth, create employment and foster a culture of innovation. In order to promote innovation and entrepreneurship among enterprising youth, the Hon'ble Prime Minister of India had announced the "Start-up India, Stand-up India" initiative on August 15, 2015. The initiative aims to create an ecosystem that is conducive for the growth of Start-ups. A plan comprising 19 action points was unveiled on January 16, 2016. As on March 1, 2019, 16,578 new start-ups were recognized

across 499 districts, 47 per cent Start-ups from Tier II and III cities and 46 per cent of Recognized Start-ups have at least one woman director. Steps are taken for easing regulations such as exemption from Income tax on investments raised by Start-ups, 22 regulatory reforms implemented to improve Ease of Doing Business for Start-ups, Self-certification regime for six labour laws and three environmental laws, Start-up India Hub as 'One Stop Shop' for the start-up ecosystem in which 2,37,902 users have availed free Start-up India Learning Program to build business plans, 647 Start-ups supported through dedicated facilitation services, 1,262 start-ups connected to mentors, etc. Maharashtra, followed by Karnataka and Delhi, are among the top ten performers in terms of State-wise distribution of recognized Start-ups in India (Table 7).

Table 7 : Major State-Wise Distribution of recognized Start-ups in India (in per cent)

Sl. No.	State / Union Territory	Percentage of Recognized Start-ups
1	Maharashtra	18.91
2	Karnataka	14.67
3	Delhi	13.38
4	Uttar Pradesh	8.23
5	Telangana	5.59
6	Haryana	5.33
7	Tamil Nadu	5.18
8	Gujarat	5.17
9	Kerala	4.00
10	West Bengal	3.03

Source: DPIIT

8.12 As per industry-wise distribution of recognized start-ups, IT Services accounted for around 15 per cent followed by Healthcare and Life Sciences at around 9 per cent and education at 8 per cent (Table 8):

Table 8: Major Industry-Wise Distribution of Recognised Start-ups in India (in per cent)

Sl. No.	Industry	Per centage of Recognized Start-ups
1	IT Services	15.23
2	Healthcare & Life sciences	8.97
3	Education	8.07
4	Professional & Commercial Services	4.15
5	Food & Beverages	4.01
6	Agriculture	3.73
7	Finance, Technology	3.10
8	Renewable Energy	3.09
9	Internet of Things	3.05
10	Technology Hardware	3.04

Source: DPIIT

Foreign Direct Investment (FDI)

8.13 FDI is a major driver of economic growth as it enhances productivity by bringing capital, skills and technology to the host country. The Government is playing a proactive role in investment promotion through a liberal FDI policy. During 2018-19, total FDI equity inflows were US$44.36 billion as compared to US$44.85 billion during 2017-18. Out of FDI equity inflows of US$44.36 billion during 2018-19, more than 70 per cent have come mainly from Singapore, Mauritius, Netherlands, Japan and United Kingdom.

SECTOR WISE ISSUES AND PERFORMANCES

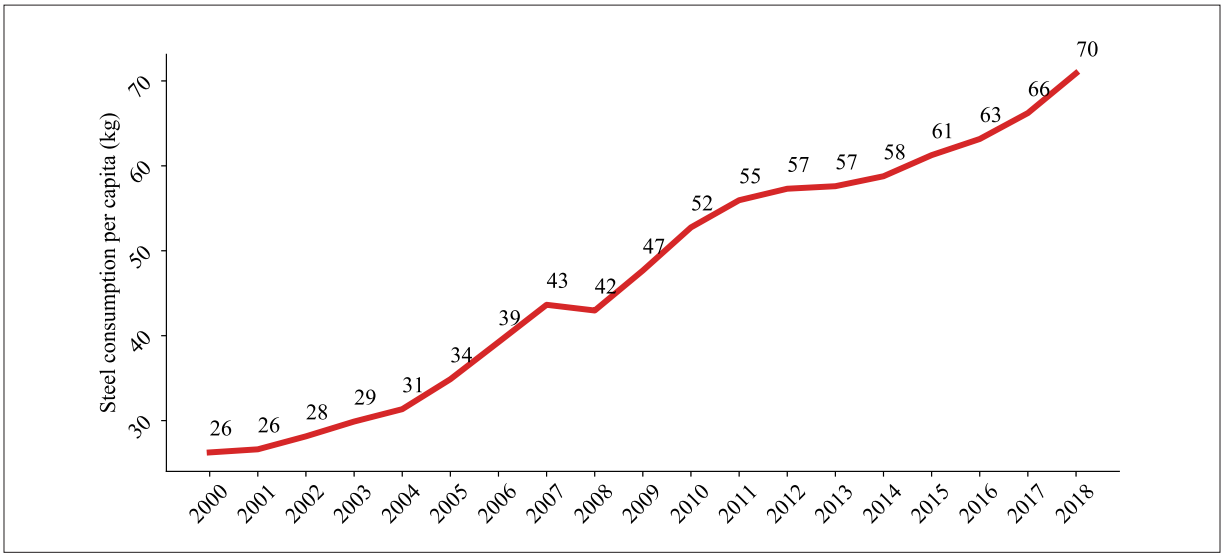
Steel

8.14 The steel sector is one of the core industries in the economy that have strong forward and backward linkages in terms of material flows and income generation. As per estimates, the Steel industry directly contributes to about 1.4 to 2 per cent of India's GDP and its weightage in the official IIP is 7.22 per cent and it accounts for 7.53 per cent of the Wholesale Price Index (WPI). Globally, India is the second largest producer of crude steel in the world surpassing Japan with a global share of 6 per cent. During 2018-19, crude steel's production stood at 106.56 million tonnes, witnessing a growth rate of 3.3 per cent over the corresponding period of 2017-18 at 103.13 million tonnes with utilisation capacity of 77.24 per cent.

8.15 India is the third largest consumer of the finished steel after China and USA, however, its per capita consumption is only 69 kg as against the global average of 214 kg (Figure 6). With huge investments in infrastructure, construction and automobile sector, steel demand and corresponding consumption is growing at an average of 7.4 per cent. This will lead steel production to go up to 255 million tonnes by 2030 and per capita steel consumption to 160 kg.

8.16 In the global scenario, the year 2018-19 witnessed weakening of steel market fundamentals, increase in trade friction,

Figure 6: Per capita consumption per kg of Indian steel sector from 2012 to 2018 (in Kg)



Source: Ministry of Steel & World Steel Association

imposition of protectionist measures and excess steel capacity. Pursuant to the imposition of trade restrictive measures by USA, European Union and Canada, India's exports have declined. The total export with highest volume of 9.62 million tonnes during 2017-18 fell to 6.36 million tonnes during 2018-19. On the other hand, imports have gone up particularly from Korea, Japan and ASEAN countries. India remained an importer of finished steel at 7.84 million tonnes during 2018-19 as against 7.48 million tonnes during 2017-18.

8.17 The National Steel Policy, 2017 gives broad policy directives to the industry for encouraging long-term growth for Indian steel on both supply and demand fronts. It envisages focus on domestic production especially of value added steel in order to meet the growing demand. Further, there is a need for investment in capacity addition and infusion of modern technology for production.

8.18 Some of the key challenges faced by the Indian steel Industry are capacity expansion as the demand for steel is bound to rise with economic growth. High grade and value-added steel are used in power, defence and automobile which is currently imported. Difficulties in acquiring mining lease and high dependency on import of coking coal add to cost of steel production. High logistics costs also act as a major constraint.

Leather and Footwear

8.19 Indian leather and footwear industry, a highly employment intensive sector, is the second largest producer of footwear, second largest exporter of leather garments and fifth largest exporter of leather goods. The global demand for footwear is moving towards non leather footwear, while Indian tax policies favour leather footwear production. India faces high tariffs in partner country markets for leather goods and non-leather footwear. In order to address these challenges, a special package of ₹2600 crore under the scheme Indian Footwear and Accessories Development Programme is being implemented (2017-20). The special package for the leather industry has the potential to generate 3.24 lakh new jobs in three years and assist in formalization of 2 lakh jobs.

Gems and Jewellery

8.20 The gem and jewellery sector contributes to exports and employment generation of around 5 million. During the year 2017-18, the gem and jewellery exports were 13.69 per cent of total merchandise exports in the country. With a view to strengthen the sector, the Government has taken a number of steps, such as establishment of Special Notified Zone, setting up of Common Facility Centres for gems and jewellery sector, creation of separate ITC HS Code for lab grown diamond, reduction of GST rates for cut and polished diamonds and precious stones, exempting Integrated Goods and Service Tax on import of gold by specified agencies and banks, exemption from GST on supply of gold by nominated agencies to exporters and providing financial assistance for participation of international fairs. To strengthen the domestic manufacturing and to help organise the small scale based domestic jewellery industry, a Domestic Council for Gems & Jewellery has been envisaged and launched in January 2019.

MSME

8.21 The Micro, Small and Medium Enterprises (MSME) sector in India plays a crucial role by providing large employment opportunities, industrialization of rural

areas, reducing regional imbalances, etc. Government is committed to supporting this important sector with better credit flow, technology upgradation, ease of doing business and market access. In November 2018, Government made various key announcements for faster growth of this sector and for promoting ease of doing business that included 'in-principle approval' for loans up to ₹1 crore within 59 minutes through online portal. Interest subvention of 2 per cent for all GST registered MSMEs on incremental credit up to ₹1 crore is also being provided and will be in operation for a period of two financial years 2018-19 and 2019-20 with an allocation of ₹975 crore. Small Industries Development Bank of India acts as the Nodal Agency for implementation of the Scheme. The term loan or working capital extended by Scheduled Commercial Banks and RBI Registered Systemically Important Non-Banking Finance Companies and Regional Rural Banks will be covered under the Scheme.

8.22 The Government has undertaken a number of schemes/programmes like the Prime Minister's Employment Generation Programme, Credit Guarantee Trust Fund for Micro and Small Enterprises, Credit Linked Capital Subsidy Scheme for Technology Up-gradation, Scheme of Fund for Regeneration of Traditional Industries, and Micro and Small Enterprises-Cluster Development Programme for the establishment of new enterprises and development of existing ones.

Textiles and Apparels

8.23 Indian textile industry, the second largest manufacturer and exporter in the world, contributes 12.65 per cent to manufacturing and 2.3 per cent to GDP. India has a share of 5 per cent of the global trade in textiles and apparel. During 2018-19, the share of textile and clothing in India's total exports stands at a significant 12 per cent. The sector is the biggest employer after agriculture employing 4.5 crore people directly and another 6 crore people in allied sectors. Apparel also plays a critical role in improving social dynamics as mostly women are employed in the sector. Above all, the backward linkages of the sector to the rural economy give huge opportunities to millions of farmers, artisans, handloom and handicraft manufacturers. The sector is perfectly aligned with Government's key initiatives viz., Make in India, Skill India, Women Empowerment and Rural Youth Employment.

8.24 The textile supply chain is perhaps one of the most diverse in terms of the raw materials used, technologies deployed and products produced. However, the challenges lie in the absence of scale or fragmented and scattered manufacturing. Except for the spinning segment, all other sectors lack scale. While the ginning and spinning sectors are on par with international standards, marginal technological gap exists in weaving, processing and embroidery and larger gaps in knitting, technical textile and garmenting segments. In recent times, several developing countries, enjoying zero/preferential duty access to key markets, have become major competitors of India in the garments sector. Indian exports of apparel continue to face higher average tariffs in external markets as compared with competing nations which enjoy duty free access.

8.25 To address the issue of competitiveness and to boost textiles and apparel exports, Government announced a Special Package for garments and made-ups sectors. The

package offers Rebate of State Levies, labour law reforms, additional incentives under Amended Technology Up-gradation Fund Scheme and relaxation of Section 80JJAA of Income Tax Act. Further, the rates under Merchandise Exports from India Scheme have been enhanced from 2 to 4 per cent for apparel, 5 to 7 per cent for made-ups, handloom and handicrafts from 1 November 2017. Products such as fibre, yarn and fabric in the textile value chain are being strengthened and made competitive through various schemes. Assistance is also provided to exporters under Market Access Initiative Scheme. Further, Government has enhanced interest equalization rate for pre and post shipment credit for the textile sector from 3 to 5 per cent with effect from 02 November, 2018. The benefit which was limited to only manufacturers earlier has been extended to merchant exporters from 2019.

INFRASTRUCTURE

8.26 In Economic literature, infrastructure is popular by the name "Overhead Capital" or "Social Overhead Capital". The famous economist A.O Hirschman stated that Social Overhead capital is the "basic services without which primary, secondary and tertiary productive activities cannot function". The very success of social and economic transformation of an economy lies in providing inclusive and sustainable infrastructure amenities to the people and the pace of economic growth depends on how competently and judiciously an economy is able to address its infrastructure bottlenecks. SDG goal number 9 aims to "Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all".

8.27 The role of infrastructure development in economic growth has been well recognized in the literature. The correlation between infrastructure investment and economic growth for India is very high (Figures 7 to 10). The correlation of investments in inland, road, rail and airport infrastructure to GDP are higher than 0.90 indicating that there exists a strong correlation between GDP and investment in infrastructure. This further reiterates the fact that massive investment is needed in infrastructure to achieve targeted economic growth in the country.

Figure 7: GDP & Inland transport infrastructure investment

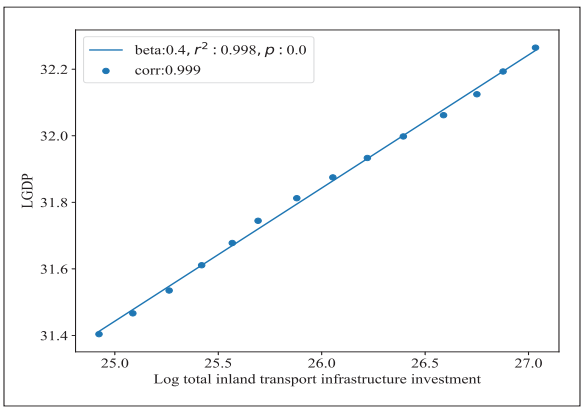


Figure 8: GDP & Airport infrastructure investment

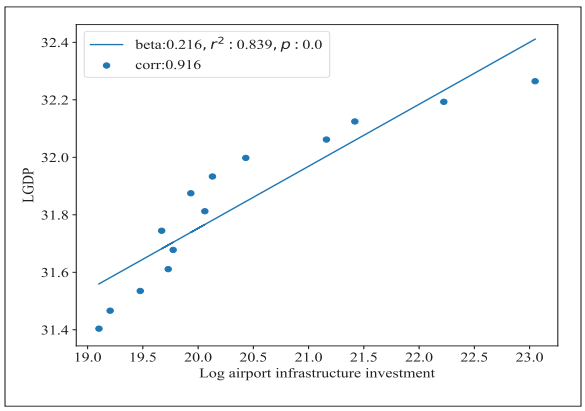


Figure 9: GDP & rail infrastructure investment

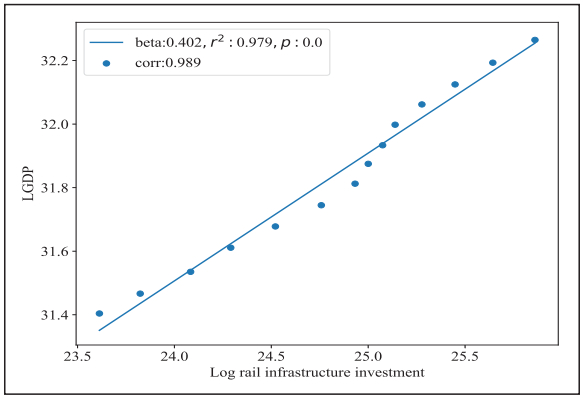
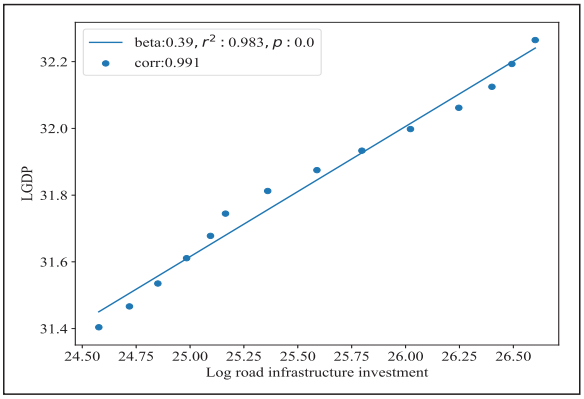


Figure 10: GDP & road transport investment



Source: Indian Public Finance Statistics, MOSPI & ITF-OECD (Rail Investment Data)
Note: beta is regression coefficient/slope, r^2 is r squared, p is p-value

8.28 India needs to spend 7-8 per cent of its GDP on infrastructure annually, which translates into annual infrastructure investment of US$200 billion currently. However, India has been able to spend only about US$100-110 billion annually on infrastructure, leaving a deficit of around US$90 Billion per annum. Given the fiscal constraints that leave less room for expanding public investment at the scale required, there is an urgent need to accelerate the flow of private capital into infrastructure. With the aim of boosting investment in infrastructure, National Investment and Infrastructure Fund has been created with a capital of approximately ₹400 billion to provide investment opportunities to commercially viable projects. In addition, a Credit Enhancement Fund for infrastructure projects for increasing the credit rating of bonds floated by infrastructure companies is going to be launched in the country. A new Credit Rating System for infrastructure projects, based on Expected Loss approach, has also been launched which seeks to provide additional risk assessment mechanism for informed decision making by long-term investors. Further, measures like infrastructure investment trusts and Real Estate Investment Trusts have been formulated to pool investment in infrastructure.

Road Sector

8.29 Roads are part of an integrated multi-modal system of transport which provides crucial links to airports, railway stations, ports and other logistical hubs and acts as a catalyst for economic growth by playing a critical role in the supply chain management. It is the dominant mode of transportation in comparison with rail, air traffic and inland water-ways and accounts for about 3.14 per cent of GVA and 69 per cent and 90 per cent of the country wide freight and passenger traffic respectively. India has a road network of about 58.98 lakh kms as on 31 March, 2017 with rural roads constituting 70.65 per cent and National highways constituting 1.94 per cent (Table 9). Ministry of Road Transport and Highways (MORTH) declared 2018-19 as the 'Year of Construction', and has been making constant efforts to expand and upgrade the network of National Highways in the country as a result of which road construction in kms grew @ 30 kms per day in 2018-19 as compared to 12 kms per day in 2014-15 (Table 10).

8.30 The major constraints faced are availability of funds for financing large projects, lengthy processes in acquisition of land and payment of compensation to the

Table 9 : Road Length Category wise

Category of Road	Length of Roads (km)	Share of Total Roads (per cent)
National Highways (NHs)	1,14,158	1.94
State Highways	1,75,036	2.97
District Roads	5,86,181	9.94
Rural Roads(including JRY Roads)	41,66,916	70.65
Urban Roads	5,26,483	8.93
Project Roads	3,28,897	5.58
Total	58,97,671	100

Source: MORTH, Government of India

Table: 10: Road Length Awarded & Constructed (Length in km)

Information regarding Road Length Awarded & Constructed during the period 2014 -15 to 2018-19					
	2014–15	2015–16	2016–17	2017-18	2018-19
Award of NHs/ Road projects	7,972	10,098	15,948	17055	5470
Construction of NHs/ Roads	4,410	6,061	8,231	9,829	10,824
Road construction per day	12	17	23	27	30

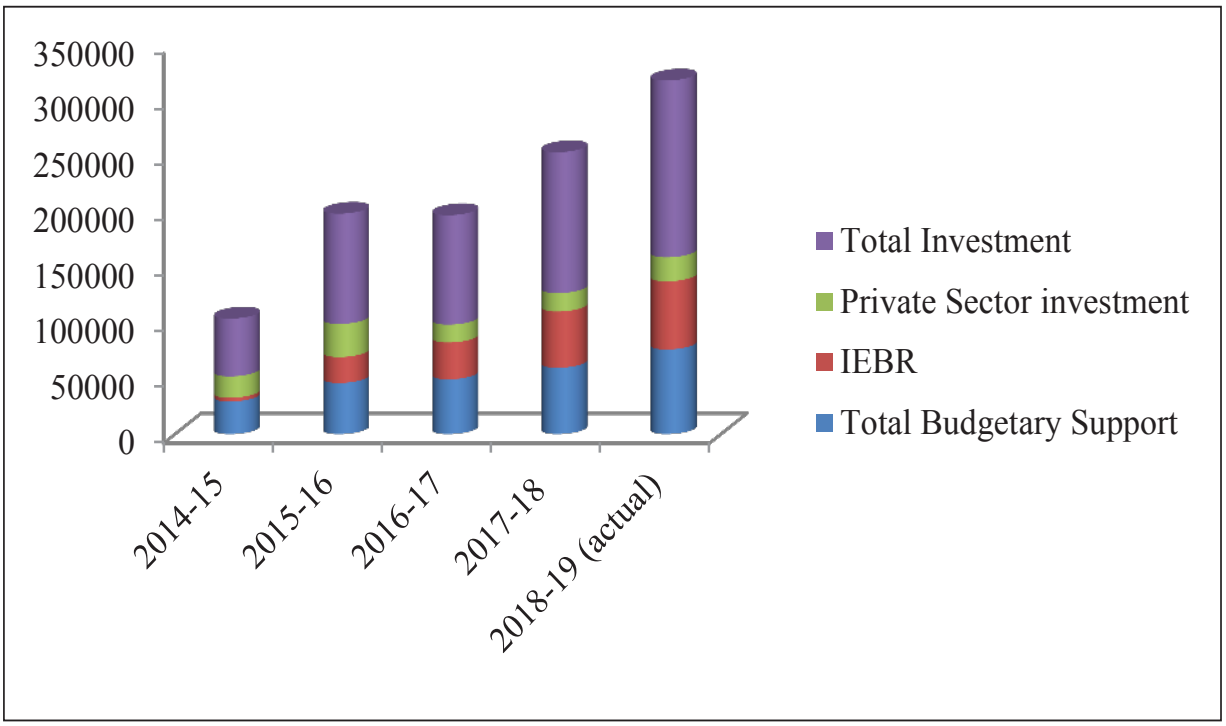
Source: MORTH, Government of India

beneficiaries, environmental concerns, time and cost overruns due to delays in project implementation, procedural delays, lesser traffic growth than expected increasing the riskiness of the projects resulting in stalled or languishing projects and shortfall in funds for maintenance.

8.31 The increase in the pace of construction was achieved by introducing a proactive sector policy to respond to the major challenges faced by the sector, including process streamlining indicating approval authorities with enhanced delegation of approval limits, putting in place mechanisms for inter-ministerial coordination, detailing steps to be taken for languishing projects, introducing innovative project financing for leveraging both private and public funding, streamlining land acquisition processes, issue of explicit guidelines on standards of road construction in hill areas etc.

8.32 Huge investments have been made in the sector with total investment increasing more than three times from ₹51,914 crore in 2014-15 to ₹158,839 crore in 2018-19. In India, the investments in roads have been financed from budgetary support, internal and extra-budgetary resources (IEBR) and private sector investment. Budgetary Support accounted for 48 per cent of the investments in 2018-19 and IEBR accounted for 39 per cent with private investment accounting for 14 per cent (Figure 11).

Figure 11: Investment in Road Sector (in ₹ crore)



Source: MORTH

8.33 Private sector investment has been tardy as private investors are interested in short term investments while NHAI and NHIDCL were looking for long-term borrowing arrangements keeping in view long gestation period of road projects. There are also the associated risks from the projected revenue streams not materialising from tolls because of uncertainty of traffic.

8.34 Central Road Fund (CRF) which is a major source of budgetary support for the Highway sector was also amended by the Finance Act, 2018, and replaced by Central Road and Infrastructure Fund (CRIF) wherein the fund now is to be earmarked for various infrastructure sectors such as Transport, Energy, Water and Sanitation, Communication, Social and Commercial infrastructure.

8.35 Major outcomes in Road sector during the period 2014-15 to 2018-19 were construction of Eastern Peripheral Expressway, Delhi-Meerut expressway and Dhola-Sadiya Bridge. Eastern Peripheral Expressway constructed with the objective to decongest the national capital by providing an alternate route to the traffic not destined for Delhi. Delhi-Meerut Expressway is the first national highway in the country with 14 lanes, dedicated cycle tracks and pedestrian paths with several eco-friendly features. Dhola-Sadiya Bridge connects Assam to Arunachal Pradesh and ensures 24X7 connectivity.

Railways

8.36 The history of rail transport in India dates back to 1832. Being a cost-effective

long distant transport mode, Indian Railways (IR) has witnessed commendable progress. In order to provide safe, secure and comfortable journey to passengers, IR has taken numerous steps such as provision of lifts/escalators, plastic bottle crusher machines, mechanized cleaning and housekeeping etc. at major stations.

8.37 Freight and passenger performance: Revenue Earning Freight loading (excluding loading by Konkan Railways) by Indian Railways during 2017-18 was placed at 1159.55 million tonnes, as against 1106.15 million tonnes during 2016-17, registering an increase of 4.83 per cent, with incremental loading of 53.40 million tonnes over 2016-17. In 2018-19, IR carried 1221.39 million tonnes of revenue earning freight showing an increase of 61.84 million tonnes over the freight traffic of 2017-18 and translating into an increase of 5.33 per cent. There is an increase of 2.09 per cent the number of passengers carried by IR during 2017-18 as compared to 2016-17 and 0.64 per cent increase in 2018-19 as compared to 2017-18.

8.38 Rail Safety: The category-wise break-up of consequential train accidents shows that the incident of train collisions has come down to zero in the year 2018-19 (Table11). The incidents of derailment have decreased from 78 in 2016-17 to 46 in the year 2018-19. However, the occurrence of fire in trains has increased to six in the year 2018-19 as compared to one in 2016-17 (Table 11).

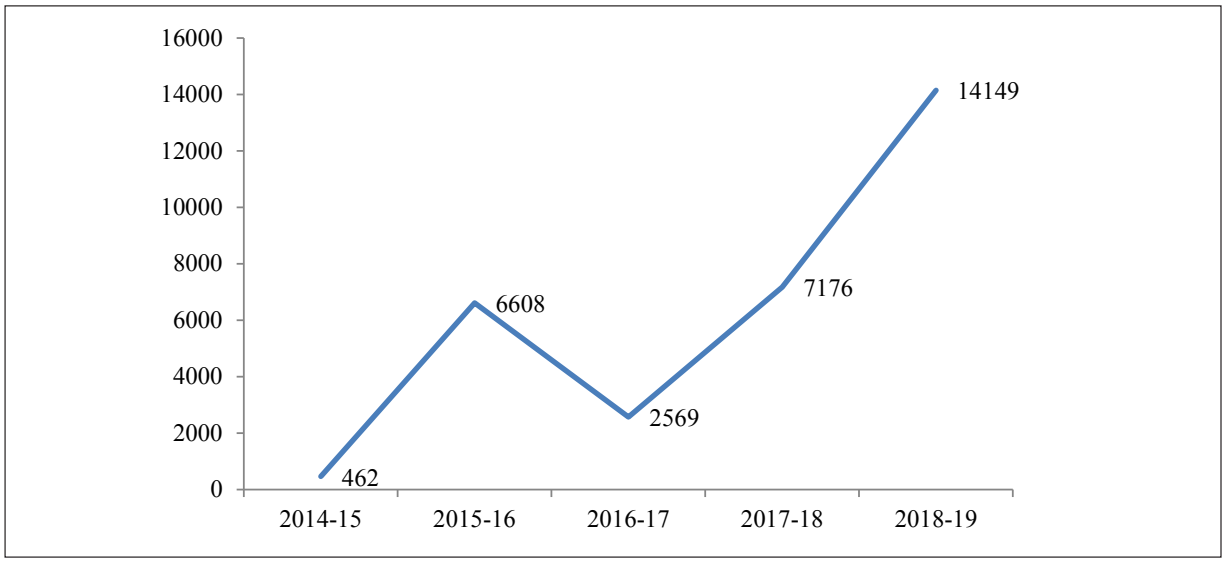
Table 11: Rate of occurrence of rail accidents

Type of Accidents	2016-17	2017-18	2018-19
Collisions	5	3	0
Derailments	78	54	46
Manned Level Crossing Accidents	0	3	3
Unmanned Level Crossing Accidents	20	10	3
Fire in Trains	1	3	6
Miscellaneous	0	0	1
Total	104	73	59

Source: Ministry of Railways

8.39 Mission Electrification: IR has initiated a major electrification program for electrifying 100 per cent of its Broad Gauge network. This would reduce the nation's dependence on imported diesel oil. As on 01 April, 2019, Indian Railways has 35,488 Route Kilometre (RKM) of network commissioned on electric traction which constitutes 51.85 per cent of total network and carries 64.50 per cent of freight and 53.70 per cent of coaching traffic. The pace of electrification accelerated and a total of 38,000 RKM has been identified for electrification by 2021 (Figure 12).

Figure 12: Trends of Electrification works sanctioned (Route Kilometre)



Source: CORE Website https://core.indianrailways.gov.in

8.40 'Swachh Rail, Swachh Bharat', mission focuses on cleanliness. As per the swacch rail portal, Beas station ranked first in India in the case of cleanliness among 'A' category stations and 'Visakhapatnam' tops the list among 'A1' category stations. IR has also made sincere efforts in the area of energy and water conservation and there is an increasing competition among stations to obtain "Green Rating". Similarly IR has also encouraged Green Certification of Workshop and Production Units through Green Industries Certification in collaboration with Confederation of Indian Industry. So far 10 Railway Stations, 34 workshops and 4 production units have been green certified by CII. The progress made in Swachh Rail, Swachh Bharat is given in Table 12.

Table 12: Progress of Swachh Rail; Swachh Bharat

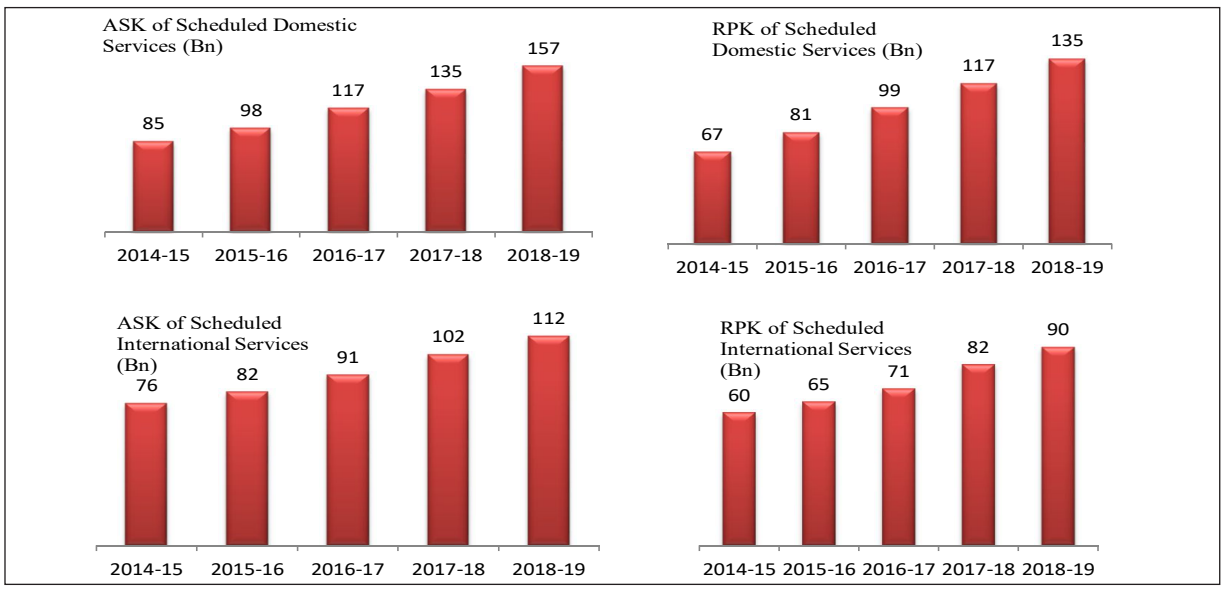
Activity	Status as on 31.03.2015	Status as on 31.03.2019
Bio-toilets in passenger coaches	19746 Nos	195917 Nos
Mechanized cleaning contracts at stations	584 stations	890 stations
Plastic bottle crushing machines	Nil	128 stations
Rag picking contracts	877 stations	1280 stations
Dustbins	Provided at some stations only	Provided at all major stations
EMS (ISO: 14001) certification	Nil	8 stations
Funds allocated for Station sanitation (₹)	294 Crore	643 Crore
No. of persons penalized for littering activities	3.7 lakhs	4.4 lakhs

Source: Ministry of Railways

Civil Aviation

8.41 India's scheduled domestic air transportation for passengers and goods has grown by 14 per cent and 12 per cent respectively in 2018-19. Domestic passenger traffic in revenue passenger kilometre (RPK) recorded the fastest growth in the world at about 20 per cent for over 50 consecutive months up to December 2018, which has positively impacted India's economy. Total domestic and international passengers were 204 million in 2018-19. To meet the surging demand and providing air connectivity to remote regions, new Greenfield airports are being rapidly developed. At the end of 2018-19, a total of 107 airports provided scheduled airline operations. Based on the performance of joint ventures in the airport sector, Government has decided to lease out six brownfield airports of Airports Authority of India (AAI) in Public-Private Partnership on Operation, Maintenance and Development model (Guwahati, Lucknow, Jaipur, Ahmedabad, Mangalore and Thiruvananthapuram), which is expected to enhance service quality at these airports besides bringing enhanced revenue to AAI. The demand and supply trends in civil aviation shows that passenger demand is higher than the seat supply (Figure 13).

Figure 13: Indian Aviation Demand and Supply Trends



Source: DGCA data, 2019
ASK: Available Seat Kilometres; RPK: Revenue Passenger Kilometres

8.42 UDAN: Under "Ude Desh ka Aam Naagrik-UDAN", a total of 719 routes have been awarded in three rounds of bidding for regional connectivity, 182 of which are operational (Table 13). The routes are widely spread geographically providing connectivity country-wide and ensuring balanced regional growth, while making air travel convenient and affordable. Currently, connectivity has already been provided to more than 22 States/ UTs. Once all routes are operationalized, more than 1 crore RCS-UDAN seats will be provided annually, and 21 States would have more than 3 operational airports each. Prior to UDAN, only 7 States had more than 3 operational airports each. Overall, the scheme has provided connectivity to 23 unserved airports out of the aim to operationalize 100

by the year 2026-27. UDAN (International) Scheme has been launched recently, under which Guwahati Airport will be connected to Bangkok and Dhaka shortly. The benefit of international connectivity is open to other cities as well.

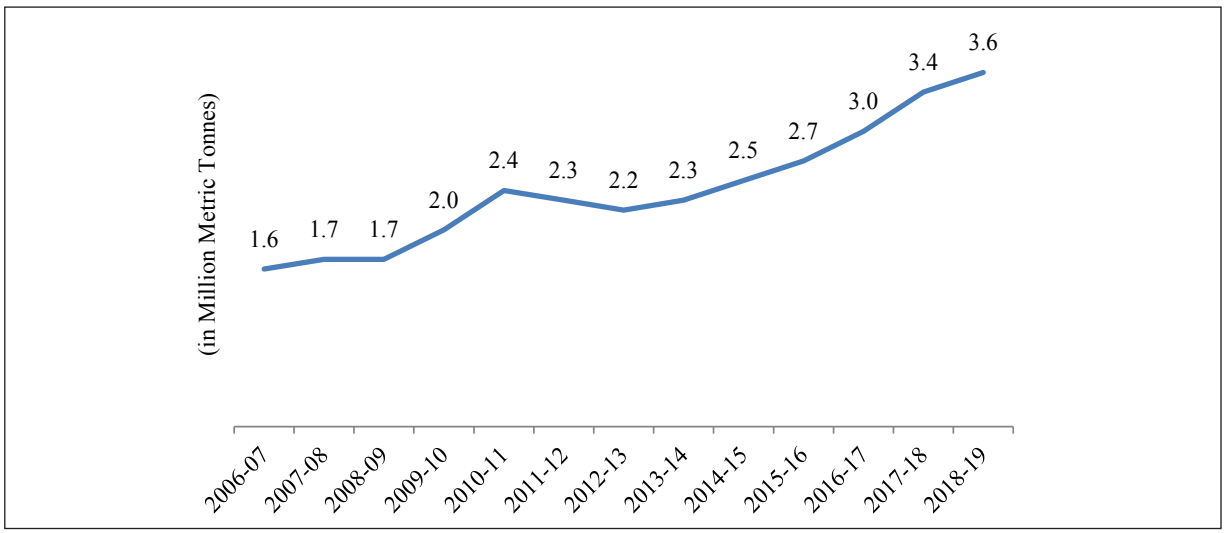
Table 13 : Snapshot of Regional Connectivity Scheme (RCS-UDAN)

Scheme	RCS Routes awarded	Number of RCS Airports + Heliports	RCS routes operationalized
UDAN-1	128	43	72
UDAN-2	312	30 Airports+31 Heliports	84
UDAN-3	279	42 Airports+10 Waterdromes	26
UDAN (Total)	719	115 Airports+ 31 Heliports + 10 Waterdromes	182

Source : Ministry of Civil Aviation

8.43 Air Cargo: Impressive double-digit domestic air cargo growth of 12.1 per cent in 2018-19 over 2017-18 was achieved and air cargo handled reached 3.6 MMT. General cargo tonnage handled increased by over 10 per cent per year in last four years with courier services increasing by 17 per cent. In conformance with the objectives of the holistic National Civil Aviation Policy, 2016, a number of initiatives and measures were taken up. The first National Air Cargo Policy's outline was released at the Global Aviation Summit in January 2019. It aims to achieve fundamental re-engineering of the whole-of-the-value-chains for domestic and export-import air freight for reaching the target of handling 10 million tonnes by 2026-27. The objectives are to leverage the Indian air cargo network to provide cargo transportation by air at an affordable cost and connect every village to the national and global supply chains. It also aims to make air cargo and logistics in India among the most efficient, seamless, and cost and time effective in the world over a period of 10 years (Figure 14).

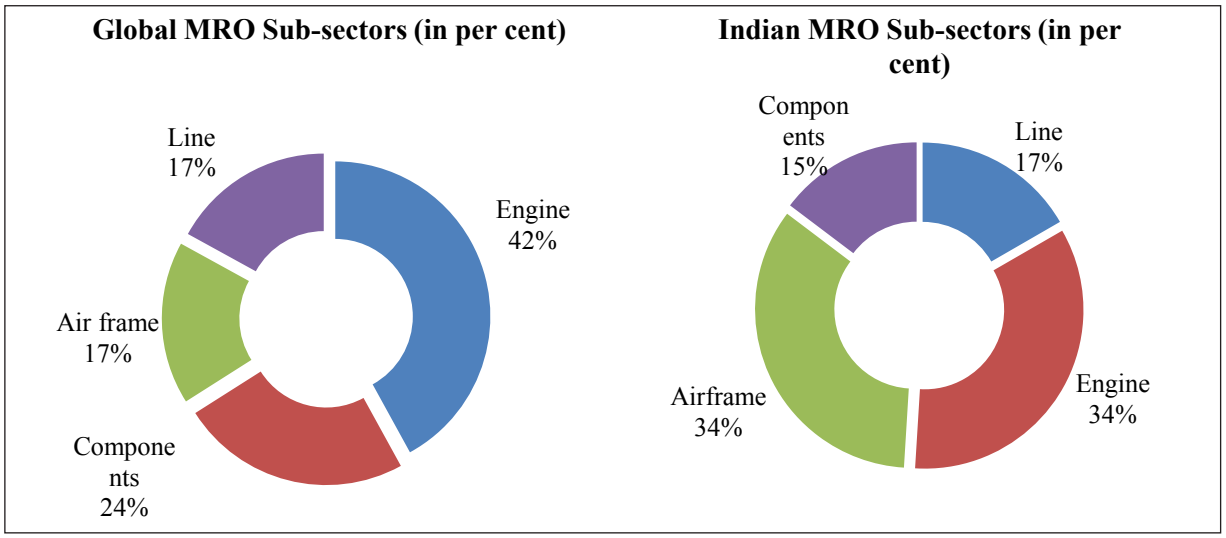
Figure 14: Indian Air Cargo growth



Source : Ministry of Civil Aviation

8.44 MRO: High airport tariffs, royalty and other charges, shortages of certain skilled manpower in civil aviation sector and recourse to overseas suppliers of Maintenance Repair & Overhaul (MRO) facilities, particularly for periodic engine, landing gears, propellers and airframes, besides the intensive and multiple checks at the end of lease tenor of aircraft, have contributed to engendering cut-throat competition amongst domestic airlines. Currently annual import of MRO services by airlines in India is about ₹9,700 crore.With airlines' fleet growing annually by 100, the size of domestic and imported Indian airline MRO is set to grow annually to ₹21,600 crore in the next five years and to ₹36,000 crore once the fleet size reaches 2,000 aircraft (Figure 15).

Figure 15. India MRO as of May 2019



Source : Ministry of Civil Aviation

8.45 Aviation Turbine Fuel: High and unpredictable change in global crude oil prices during 2018-19 have been compounded by a high domestic tax regime on aviation turbine fuel. These have led to the demand from airline carriers and general aviation to bring the fuel within the ambit of GST with input tax credit in order to create a level playing field for them vis-à-vis international carriers.

Shipping

8.46 Shipping plays a pivotal role in India's trade dynamics. As per the Indian Shipping Statistics 2018, "India had a fleet strength of 1400 vessels with gross registered tonnage (GRT) of 12.68 million as compared to fleet strength of 1371 vessels with 12.35 million GRT at the end of December 2017". As on January 31, 2019, India had a fleet strength of 1405 ships with dead weight tonnage (DWT) of 19.22 million (12.74 million GT) including Indian controlled tonnage, with Shipping Corporation of India (SCI) having the largest share of around 30.52 per cent. Of this, around 458 ships of 17.58 million DWT (11.26 million GT) cater to India's overseas trade and the rest to coastal trade.

8.47 Ports Sector: Port sector development is very crucial for the development of any economy. Ports handle around 90 per cent of EXIM Cargo by volume and 70 per cent by value. In order to meet the ever increasing trade requirements, expansion of Port Capacity has been accorded the highest priority with implementation of well-conceived infrastructure development projects like

sagarmala, project Unnati etc. As per the Port Performance Benchmarking & Performance Index published by Logistics Data Bank for February, 2019, Gateway Terminals India is in the top performing category and International Container Transhipment Terminal, Kochi in the low performing category.

8.48 Towards facilitating Ease of Doing Business, Ministry of Shipping had identified various parameters for reducing dwell time and transaction costs in the major ports. These include elimination of manual forms, accommodation for laboratories to Participating Government Agencies, Direct Port Delivery, Installation of Container Scanners, E-delivery orders, Radio Frequency Identification based Gate-automation System, etc. These initiatives have already been implemented at Jawaharlal Nehru Port Trust and are being taken up in other major ports.

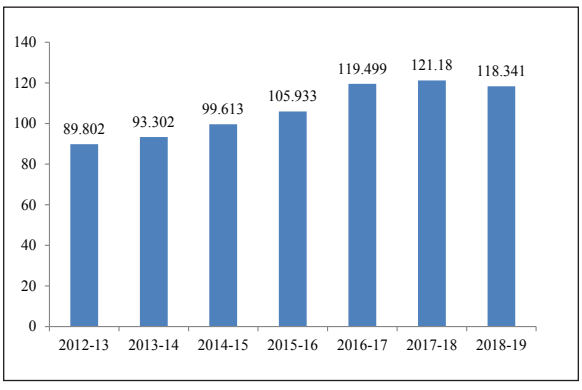
8.49 Inland Water Transport**:** India's first inland waterway multimodal terminal (MMT) at Varanasi was inaugurated on 12 November 2018 by Hon'ble Prime Minister and the first container consignment on Ganga which had sailed from Kolkata was received at Varanasi MMT on the same day. The main focus of MMT is to promote inland waterways as it is cheap and environment friendly. To enhance the access and establish alternative connectivity to the North East through Indo-Bangladesh Protocol route, dredging works between Ashuganj and Zakiganj and Sirajganj and Daikhawa in Bangladesh through 80:20 sharing (80 per cent by India and 20 per cent by Bangladesh) have been awarded. In October 2018, a Standard Operating Procedure of MoU on Passenger and Cruise service on the Coastal and Protocol routes between India and Bangladesh has been signed to enhance bilateral movement of passengers/tourists. The cargo traffic on National Waterways was 55 million tonnes in 2017-18 and has increased by 31 per cent in 2018-19.

Telecom Sector

8.50 Telecommunication has been recognized world-over as a powerful tool of development and poverty reduction through empowerment of masses. Growth in the telecom sector in India remains strong over the last few years on the back of strong consumer demand and supportive policies of the Government.

8.51 From a low of 93.30 crore in 2013-2014, total telephone connections in India touched 118.34 crore in 2018-19, registering a growth of 26.84 per cent (Figure 16). As on March 2019, the total subscription stood at 118.34 crore out of which 51.42 crore connections were in the rural areas and 66.91 crore in the urban areas. The wire-less telephony now constitutes 98.17 per cent of all subscriptions whereas share of landline telephones now stands at only 1.83 per cent. The overall tele-density in India stands at 90.10 per cent, the rural tele-density being 57.50 per cent and urban tele-density being 159.66 per cent at the end of March 2019. The private sector dominated overall connections with a share of 88.72 per cent (104.99 crore) at the end of March'19 while the share of public sector was 11.28 per cent (13.35 crore).

Figure 16: Total telephone connections (in crore)



Source: Ministry of Telecommunications

8.52 India's Mobile Economy: The mobile industry has witnessed exponential growth over the last few years driven by affordable tariffs, wider availability, roll out of Mobile Number Portability (MNP), expanding 3G and 4G coverage, evolving consumption patterns and a conducive policy and regulatory environment. As per a GSMA report, the mobile industry supports about 6.5 per cent of India's GDP. Telecom industry contribution to GDP is expected to reach 8.2 per cent by 2020. In 2018, mobile technologies and services generated 4.6 per cent of GDP globally, a contribution that amounted to US$3.9 trillion of economic value added. By 2023, mobile's contribution will reach US$4.8 trillion (4.8 per cent of GDP). The wider mobile ecosystem also supported a total of 32 million jobs (directly and indirectly) and made a substantial contribution to the funding of the public sector, with almost US$500 billion raised through general taxation (before regulatory and spectrum fees). Further ahead, 5G technologies are expected to contribute US$2.2 trillion to the global economy over the next 15 years, with key sectors such as manufacturing, utilities and professional/ financial services benefiting the most from the new technology.

Policy Initiatives

8.53 Making India 5G ready by 2020: The world is at the cusp of a next generation of wireless technology-5G. The 5G has been conceived as a foundation for expanding the potential of the Networked Society. The landscape is expanding to include massive scale of "smart things" to be interconnected. For India, 5G provides an opportunity for industry to reach out to global markets, and consumers to gain with the economies of scale and citizens to reap the benefits of doorstep governance and availability of services, medical support, benefits transfers, education, entertainment and build a digital payment, knowledge and services economy. The Government has constituted High Level 5G India 2020 Forum to articulate the Vision for 5G in India and submitted its report on "Making India 5G Ready" in August, 2018. Based on the recommendations of the forum, seven committees have been constituted for action on Spectrum Policy, Regulatory Policy, Education and Awareness Promotion Program, Application & Use Case Labs, Development of Application Layer Standards, Major Trials & Technology Demonstration and Participation in International Standards for 5G.

8.54 13-digit Machine to Machine (M2M) Numbering Plan for M2M communication: M2M Communications /Internet of Things (IoT) refers to technologies which involve machines or devices communicating among themselves through a network without human intervention. Sensors and communication modules are often embedded within M2M devices, enabling data to be transmitted from one device to another device through wired and wireless communications networks. The transformational impact of M2M/IoT for the common people will be realized through transformation of the way services are designed and how they utilize information to meet the needs of citizens more efficiently and effectively.

8.55 FDI in telecom sector: FDI has played a crucial role in shaping the progress of the telecom sector over the years by providing much needed finances for expansion of telecom infrastructure in the country. During 2018-19 FDI equity inflow touched US$2.67 billion – more than double rise from the level of US$1.3 billion witnessed in 2015-16. The substantial foreign inflows in the telecom sector is indicative of the faith of global

community in Government policy, reforms and measures taken towards ease of doing business, as well as the bright prospects of the telecom sector in the country.

8.56 Digital Communications Commission: until recently known as the Telecom Commission, was set up by the Government of India vide resolution dated 11 April, 1989 with administrative and financial powers of the Government of India to deal with various aspects of Telecommunications. Vide Resolution dated 22 October, 2018, the 'Telecom Commission' has been re-designated as the 'Digital Communications Commission' to ensure effective implementation and monitoring of the newly announced 'National Digital Communications Policy- 2018'.

Petroleum & Natural Gas

8.57 The Government aims to "Reform, Perform and Transform" the energy sector of the country by achieving self-sufficiency. India's primary energy demand is expected to grow at a CAGR of 4.2[1] per cent during 2017-2040, much faster than any major economy in the world. There is thus a need to augment refining capacity to meet growing demand for petroleum fuels and petrochemicals, which play significant role in sustaining GDP. Crude oil production during 2018-19 was 34.203 Million Metric Tonnes (MMT) which was 4.15 per cent lower as compared to production achieved during 2017-18. Crude oil production during March, 2019 was 2854.32 Thousand Metric Tonnes (TMT) which is 12.99 per cent lower than target and 6.16 per cent lower compared with March, 2018 (Figure 17). Natural gas production during 2018-19 was 32.873 BCM which was 0.69 per cent higher than the production achieved in 2017-18.

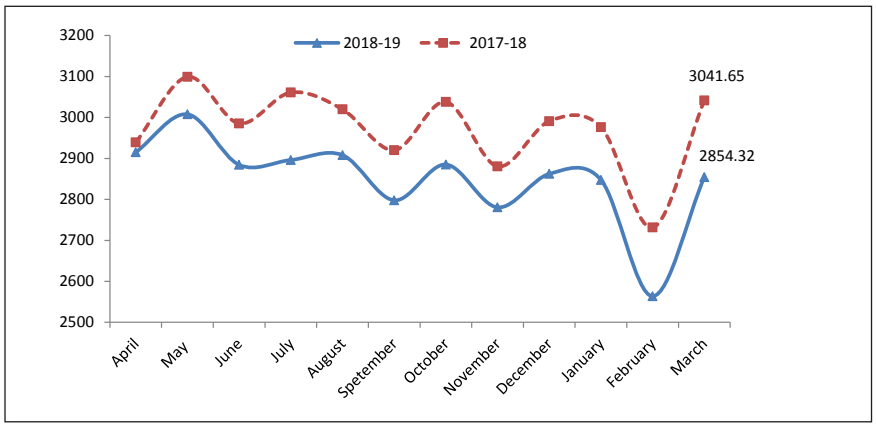
8.58 Refinery production (in terms of crude oil processed), during 2018-19 was 257.20 MMT which was 2.09 per cent higher than the production in year 2017-18. Refinery production during March, 2019 was 22495.43 TMT which is higher at 6.51 per cent compared to March, 2018 and 8.18 per cent higher than the target for the month. There are total 23 refineries in the country, 18 in the public sector, 2 in the joint venture sector and 3 in the private sector. Refinery capacity in India is projected to be 400 approximately MMTPA by the year 2030 through capacity revamps/ expansions at existing refineries and a number of grass-root refineries (Figure 18).

Policy Initiatives

8.59 Ministry of Petroleum & Natural Gas has undertaken a series of reforms and new initiatives. Some of these include Hydrocarbon Exploration Licensing Policy (HELP)/ Open Acreage Licensing Policy (OALP), Discovered Small Field (DSF) Policy, Policy to Promote and Incentivize Enhanced Recovery Methods for Oil and Gas, Policy framework for exploration and exploitation of Unconventional Hydrocarbons under existing Production Sharing Contracts (PSCs), Coal Bed Methane contracts and Nomination fields, Policy for Relaxations, Extensions and Clarifications under PSC regime for early monetization of hydrocarbon discoveries, Policy for early monetization of Coal Bed Methane, Setting up of National Data Repository, Appraisal of Unappraised areas in Sedimentary Basins, Re-assessment of Hydrocarbon Resources, Policy for Extension of PSCs, Policy framework to streamline the working of PSCs in Pre-NELP and NELP Blocks.

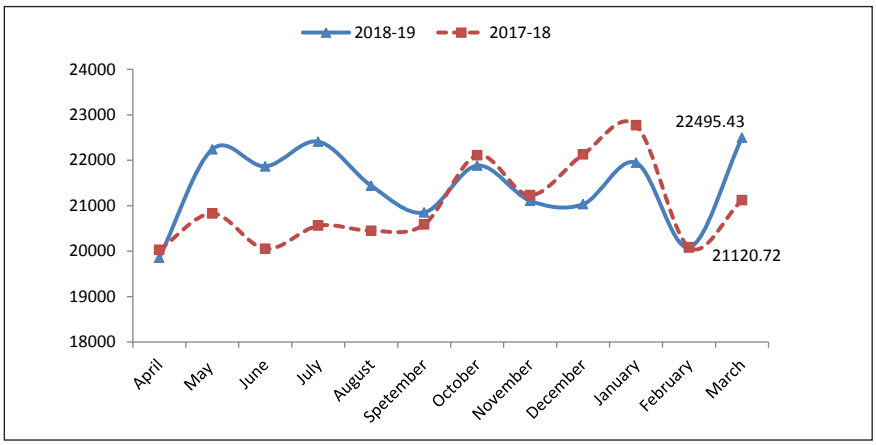
[1] BP Energy Outlook 2019

Figure 17: Monthly Crude Oil Production (Quantity in TMT)



Source: Monthly Report, MoP&NG

Figure 18: Monthly Refinery Production (Quantity in TMT)



Source: Monthly Report, MoP&NG

8.60 With a view to promote exploration, early monetization, incentivise production, streamline procedure and promote ease of doing business, a series of policy decisions have been taken by the Government on 19 February, 2019 in the hydrocarbon sector, the highlights of which are given below:

(i) Weightage to Minimum Work Programme (MWP) has been enhanced.

(ii) Revenue sharing ceiling at highest revenue point to be set at 50 per cent.

(iii) The timeline for completion of committing Minimum Work Programme reduced.

(iv) No production and revenue sharing, only statutory levies except in case of windfall gain.

(v) Full marketing and pricing freedom at Arm's Length basis based on competitive bidding.

(vi) Grant of concessional royalty, if production commences within 4 years / 5 years.

(vii) National Oil Companies (NOCs) have been given freedom to choose field specific implementation model

like Technical Services Model, Joint-Venture Model, Farming-out Model, etc., for enhancing production.

(viii) New gas discoveries to get pricing and marketing freedom.

(ix) NOCs have also been mandated to bid-out fields with complete marketing and pricing freedom on revenue sharing model under the supervision of DGH.

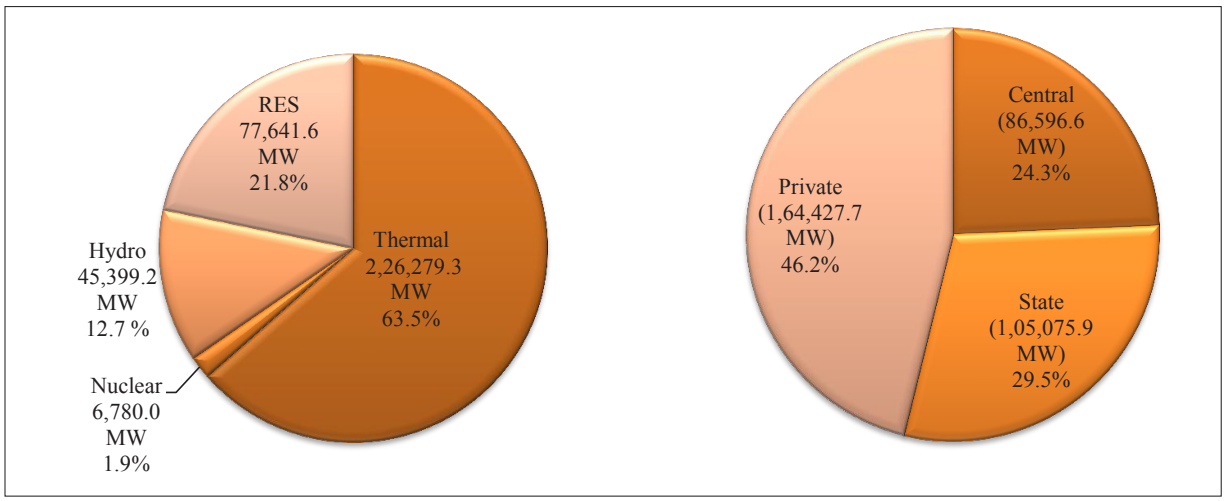
8.61 Pradhan Mantri Ujjwala Yojana (PMUY) was launched with the objective of providing LPG connections to five crore women belonging to the Below Poverty Line (BPL) families over a period of three years starting from 2016-17. The target was subsequently increased from 5 crore to 8 crore to be achieved by 2019-20. More than 7.189 crore LPG connections have been released under this scheme as of 31 March, 2019. The original target of issuing 5 crore LPG connections was achieved by 3 August, 2018, eight months in advance of the target.

Power Sector

8.62 Power sector in India has witnessed a paradigm shift over the years due to the constant efforts of Government to foster investment in the sector. As a result, India improved its ranking in the Energy Transition Index published by World Economic Forum (76th position). Fostering Effective Energy Transition, 2019 report of WEF states that "India, Indonesia and Bangladesh have made fast progress towards universal electrification due to strong political commitment, a stable policy regime, use of grid expansion, and decentralized generation sources, and a supportive environment for investment in infrastructure."

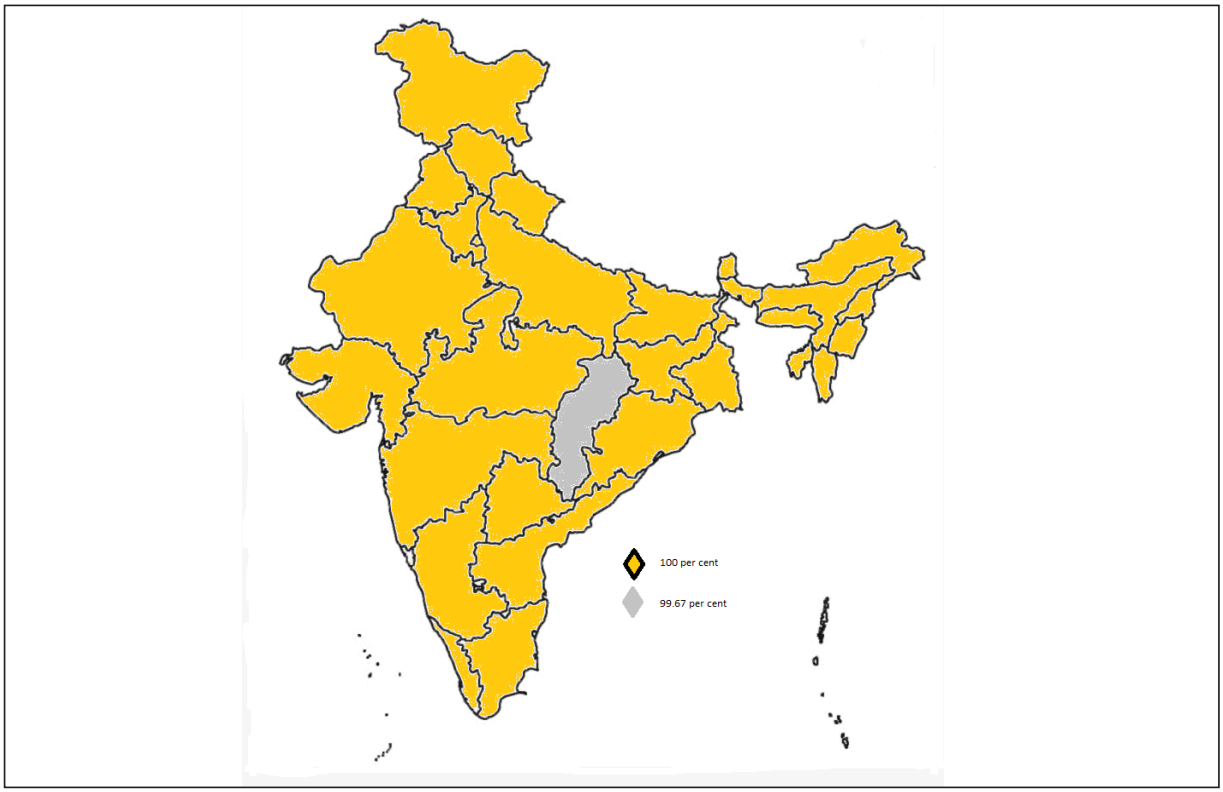
8.63 Along with universal electrification, commendable progress has been made in generation and transmission of electricity. The installed capacity has increased from 3,44,002 MW in 2018 to 3,56,100.19 MW in 2019. Total generation of energy during 2018-19 was 1376 BU (including imports and renewable sources of energy). The capacity of thermal power is 64 per cent followed by renewable energy (Figure 19). Further, more than 46 per cent of power generation comes from private sector. In addition, the peak deficit i.e. the percentage shortfall in peak power supply vis-à-vis peak hour demand has

Figure 19: Total Power Generation Capacity as on April, 2019 (Fuel-wise & Sector-wise)



Source: Ministry of Power

Figure 20: Electrification Status



Source: https://saubhagya.gov.in

declined from around 9 per cent in 2012-13 to 0.8 per cent during 2018-19 (March 2019).

8.64 The Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA) was launched in October, 2017 with the aim of universal household electrification by providing last mile connectivity and electricity connections to all remaining un-electrified households in rural and all poor households in urban areas. As on March 2019, 2.62 crore households have been electrified since the launch of SAUBHAGYA scheme (Figure 20).

Housing

8.65 Housing is one of the fastest moving sectors in the country. According to Census 2011, 377.1 million Indians comprising 31.14 per cent of the country's population lived in urban areas, which are projected to grow more than 600 million by 2031. Urbanization in India has become an important and irreversible process, and it is an important determinant of economic growth and poverty reduction. The process of urbanization has been characterized by increase in the number of large cities, although India may be said to be in the midst of transition from a predominantly rural to a quasi-urban society. Ministry of Housing and Urban Affairs (MoHUA) addresses various issues relevant to urban sector through appropriate policy guidelines, subordinate legislation and sectoral programmes.

Policy Initiatives

8.66 The Real Estate (Regulation and Development) Act, 2016 (RERA): One of the important concerns in the real estate sector is the legal battle being fought by home buyers against the builders for delaying the housing

Table 14: Four rounds of SCM

	Round 1	Round 2	Round 3	Round 4	Total
No. of selected cities	20	40	30	10*	100
Period of selection	Jan 2016	May to Sep 2016	Jun 2017	Jan 2018	
Total No. of projects	829	1,959	1,891	472	5,151
Investment (in Rs. crores)	48,064	83,698	57,393	15,863	2,05,018
Avr. SCP size (in Rs. Crores)	2,403	2,092	1,913	1,586	2,050

Source : Ministry of Housing and Urban Affairs

Note: *Shillong selected as 100th Smart City in June 2018

projects. The RERA is one of the significant reforms implemented in the real estate sector. The core objective of this transformative legislation is to ensure regulation and promote real estate sector in an efficient and transparent manner and to protect the interest of home buyers. Rules under RERA has been notified by 30 States/UTs and 28 States/UTs have set up the Regulatory Authorities. North Eastern States (Arunachal Pradesh, Meghalaya, Nagaland and Sikkim) are under process to notify the rules under RERA. Though RERA was not applicable in the state of Jammu & Kashmir, the State has notified its own legislation named as 'The Jammu and Kashmir Real Estate (Regulation and Development) Act, 2018' on 16 December, 2018.

8.67 Pradhan Mantri Awas Yojana (Urban): PMAY was launched on 25 June 2015 with the objective of providing housing facilities to all the eligible families/beneficiaries by 2022. So far 4,427 cities/towns have been included under PMAY (U). The duration of the Mission is seven years (2015-16 to 2021-22) and has four components: "In-situ" Slum Redevelopment, Credit Linked Subsidy Scheme, Affordable Housing in Partnership with public or private sector and Beneficiary-led individual house construction/ enhancements.

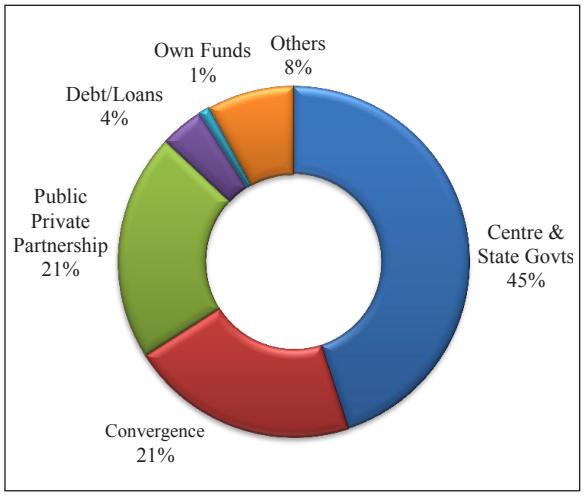
Smart Cities Mission

8.68 Smart Cities Mission (SCM) was launched in June 2015 for a 5-year period with the objective of promoting cities that provide core infrastructure and give a decent quality life to its citizens (Table 14). The strategic components of Smart Cities initiative are area-based development involving city improvement (retrofitting), city renewal (redevelopment) and city extension (Greenfield development) and a Pan-city development in which Smart Solutions are applied covering larger parts of the city. The 100 cities under the Mission have proposed to execute 5,151 projects worth ₹2,05,018 crore in 5 years from their respective dates of selection. Financial innovation is in-built in the design of the programme. The distribution of funding from Central and State Government is ₹93,552 crore (45 per cent) and funds from PPP is ₹41,022 crore (21 per cent) (Figure 21).

Current Implementation Status

8.69 Under the SCM, all 100 cities have incorporated Special Purpose Vehicles (SPVs), City Level Advisory Forums (CLAFs) and appointed Project Management Consultants (PMCs). Significant progress has been made with respect to implementation of projects pertaining to

Figure 21: Source of funding under the Smart Cities Mission



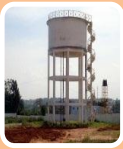
Source : Ministry of Housing and Urban Affairs

Integrated Command and Control Centres, Smart Roads, Smart Water, Solar Rooftops, and Vibrant Public Spaces (Table 15).

Other Smart Cities Mission Initiatives

8.70 The Mission has launched several new initiatives that will not only ensure integrated development across various aspects of urban development but also catapult the mission to the next stage of development. The first framework on 'Ease of Living' Index for cities was launched in June 2017 with the objective of framing an index to enable a shift to data driven approach in urban planning and management and promote healthy competition among cities. As a part of improving the index, a new edition 'The Ease of Living (EoL) Index 2019' was introduced with more focus on outcomes and aims to assess the ease of living of citizens across three pillars such as quality of life, economic ability and sustainability which are further divided into 14 categories across 50 indicators. Another index, Municipal Performance Index (MPI), 2019, seeks to examine the sectoral performance of municipalities across a set of 5 verticals namely Service, Finance, Planning, Technology and Governance. The EoL 2019 focuses on outcome indicators, accompanied by MPI 2019 which would assess the performance of cities based on enablers. The Ease of Living indicators are strongly linked to Sustainable Development Goals (SDGs) and this exercise will help our Country to track and achieve SDGs.

Table 15: Progress achieved under Smart Cities Mission

Smart Command & Control Centres •Completed- 16 cities (₹ 2, 927 cr) •Work started- 44 Cities (₹ 4, 170 cr) •Tendered- 11 cities (₹1,509 cr)	 Smart water •Completed- 24 cities (₹ 1,218 cr) •Work started- 54 cities (₹10,119 cr) •Tendered - 36 cities (₹9,614 cr)
Smart Roads •Completed- 23 cities (₹ 835 cr) •Work started -58 cities (₹9,511 cr) •Tendered- 36 cities (₹4,119 cr)	Public Private Partnership •Completed- 26 cities (₹2,282 cr) •Work started- 45 cities (₹10,552 cr) •Tendered- 36 cities (₹9,614 cr)
Smart Solar •Completed- 15 cities (₹ 113 cr) •Work started -37 cities (₹707 cr) •Tendered- 8 cities (₹140 cr)	Vibrant Public Spaces •Completed- 21 cities (₹277 cr) •Work started- 34 cities (₹4,688 cr) •Tendered- 20 cities (₹3,293 cr)

Source : Ministry of Housing and Urban Affairs

8.71 To drive the new urban transformation agenda of the Government through innovation and delivery, there is a growing need to nurture a well-knit ecosystem of urban innovation to encourage innovation in technology, governance, financing, and citizen engagement. It is envisaged that NUIH with necessary physical and digital infrastructure will anchor the innovation efforts and build necessary capacity for urban transformation. NUIH will be the apex national level institution that will drive the MoHUA's whole-of -system innovation through a Hub-and-Spoke network across states and UTs and for delivering the capacity building and governance reforms in urban sector.

Infrastructure Financing: Public Private Partnerships (PPPs)

8.72 Private investment in infrastructure has come mainly in the form of PPPs. More than a third of the infrastructure investment in India in the past decade has come from the private sector. PPPs help in addressing the infrastructure gap as well as improving efficiency in infrastructure service delivery. As per the Private Participation in Infrastructure database of World Bank, India is ranked second among developing countries both by the number of PPP Projects as well as the associated investments. Indian private participation in infrastructure program supports a number of PPP models including management contracts, Build-Operate-Transfer (BOT) contracts, Design-Build-Finance-Operate-Transfer contracts, Rehabilitate - Operate - Transfer, Hybrid Annuity Model, and Toll-Operate-Transfer model. Under the BOT model, there are two variants – BOT (Toll) and BOT (Annuity) depending on who bears the traffic risk. In the case of BOT (Toll), the traffic risk is borne by the PPP concessionaire while in the case of BOT (Annuity), it is borne by the Government (Public Authority).

8.73 One of the challenges facing this sector is to devise a comprehensive resolution/ settlement option for projects which are either stuck-up mid-way or wherein the arbitral disputes/ claims have not been settled. The need is to establish an institutional mechanism to deal with time-bound resolution of disputes in infrastructure sectors. Further, private developers have faced issues of leveraged balance sheets and aggressive bidding making it difficult for them to mobilize resources for completion of projects. Accordingly, Government has adopted the Hybrid Annuity Mode of PPP to encourage private participation in infrastructure projects. Government contributes 40 per cent of the total project cost in the construction period, remaining 60 per cent is paid as biannual annuity after the completion of the project construction. The HAM model is considerably de-risked for the private concessionaires. In order to discourage aggressive bidding under HAM model, there is a provision of Additional Performance Security which will be applicable in case the Bid Project Cost of the Lowest Bidder is lower by more than 10 per cent with respect to the estimated project Cost.

WAY FORWARD

8.74 In a fast moving world to maintain growth momentum, India has to develop its industry and infrastructure. As an emerging economy, the scope for Industry 4.0 and Next generation infrastructure are enormous. To experience the potential of the perfect blend of Industry 4.0 and next generation infrastructure, it is necessary to clear the decks which are obstructing the way forward. Industry 4.0 encompasses automation in industrial sectors whereas next generation infrastructure brings physical infrastructure and technology like internet of things, automation together to maximize

the efficiency of physical infrastructure. For a smooth and fast travelling, India needs adequate and timely investment in quality infrastructure.

8.75 In order to create a ten trillion dollar economy by 2032, India needs a robust and resilient infrastructure. Public investment cannot fund the entire infrastructure investment requirements of the country. Further, private players are usually eager to bring their capital into developed Indian states as compared to less developed states. Therefore, the real challenge lies in bringing adequate private investment across the country with the collaboration of public sector. Along with physical infrastructure; provision of social infrastructure is also equally important as these two would determine where India will be placed in the world by 2030.

CHAPTER AT A GLANCE

- The industrial growth in terms of Index of Industrial Production (IIP) registered 3.6 per cent in 2018-19 as compared to 4.4 per cent growth rate in 2017-18. The moderation in IIP growth is mainly due to subdued manufacturing activities in Q3 and Q4 of 2018-19.
- The overall Index of Eight Core Industries registered a growth rate of 4.3 per cent in 2018-19 similar to the increase achieved in 2017-18.
- India has considerably improved its ranking to 77th position in 2018 among 190 countries assessed by the World Bank Doing Business (DB) Report, 2019 in which India has leapt 23 ranks over its rank of 100 in 2017.
- Building sustainable and resilient infrastructure has been given due importance with the formulation of sector specific programmes such as SAUBHAGYA scheme, PMAY etc.
- Road construction in kms grew @ 30 kms per day in 2018-19 as compared to 12 kms per day in 2014-15.
- Rail freight and passenger traffic grew by 5.33 per cent and 0.64 per cent respectively in 2018-19 as compared to 2017-18.
- Total telephone connections in India touched 118.34 crore in 2018-19.
- The installed capacity of electricity has increased from 3,44,002 MW in 2018 to 3,56,100 MW in 2019.
- Public Private Partnerships are quintessential for addressing infrastructure gaps in the country.
- There is a need for establishing an institutional mechanism to deal with time-bound resolution of disputes in infrastructure sectors.

Services Sector

09
CHAPTER

The services sector accounts for 54 per cent of India's Gross Value Added (GVA). Its growth rate moderated to 7.5 per cent in 2018-19 from 8.1 per cent in 2017-18. The segments that saw deceleration are tourism, trade, hotels, transport, communication and services related to broadcasting, public administration and defence. Financial, real estate and professional services category accelerated. An important finding is that India's services sector does not generate jobs in proportion to its share in GVA. This contrasts with the international experience. India received 10.6 million foreign tourists in 2018-19 compared to 10.4 million in 2017-18. Foreign exchange earnings from tourism in India stood at US$27.7 billion in 2018-19 compared to US$28.7 billion in 2017-18. Many of the high frequency indicators, such as bank credit to services sector, decelerated in 2018-19. However, the IT-BPM industry grew by 8.4 per cent in 2017-18 to US$167 billion and is estimated to have reached US$181 billion in 2018-19.

SERVICES SECTOR PERFORMANCE IN INDIA: AN OVERVIEW

India's Gross Value Added in the Services Sector

9.1 As per the provisional estimates for gross value added (GVA), services sector growth moderated in 2018-19 to 7.5 per cent rate from 8.1 per cent in 2017-18 (Table 1). This was due to a deceleration in the sub-sectors 'trade, hotels, transport, communication & broadcasting services' to 6.9 per cent and 'public administration and defence & others services' to 8.6 per cent in 2018-19. On the bright side, growth in the sub-sector 'financial services, real estate & professional services' picked up to 7.4 per cent in 2018-19 from 6.2 per cent in 2017-18. Despite the recent growth moderation, services sector growth continues to outperform agriculture and manufacturing sector growth, contributing more than 60 per cent to total GVA growth.

9.2 This moderation in the growth of the services sector was also reflected in some of the key high frequency indicators (Figure 1). Bank credit growth y-o-y to services sector moderated significantly between September 2018 and February 2019 although it has partly recovered. The Nikkei

Table 1: Services Sector Performance in India's GVA

Sector	Share in GVA (per cent)	Growth (per cent YoY)						
	2018-19 (P)	2016-17	2017-18	2018- 19 (P)	2018- 19 (P)			
					Q1	Q2	Q3	Q4
Total Services (Excluding Construction)	54.3	8.4	8.1	7.5	7.1	7.3	7.2	8.4
Trade, hotels, transport, communication and services related to broadcasting	18.3	7.7	7.8	6.9	7.8	6.9	6.9	6
Financial, real estate & professional services	21.3	8.7	6.2	7.4	6.5	7	7.2	9.5
Public administration, defence & other services	14.7	9.2	11.9	8.6	7.5	8.6	7.5	10.7

Source: Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation.
Note: Shares are in current prices and growth in constant 2011-12 prices; P= Provisional Estimates

Figure 1(a): Bank Credit Growth (y-o-y) to Services Sector (in per cent)

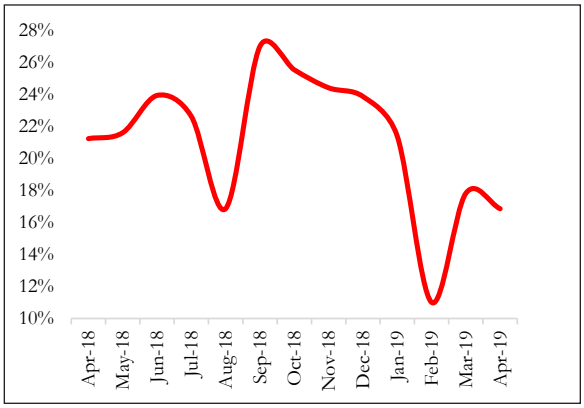


Figure 1(b): Nikkei India Services Purchasing Managers' Index

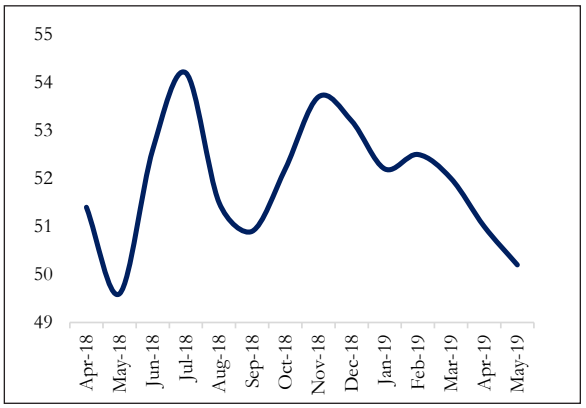


Figure 1(c): CPI Services Inflation (in per cent)

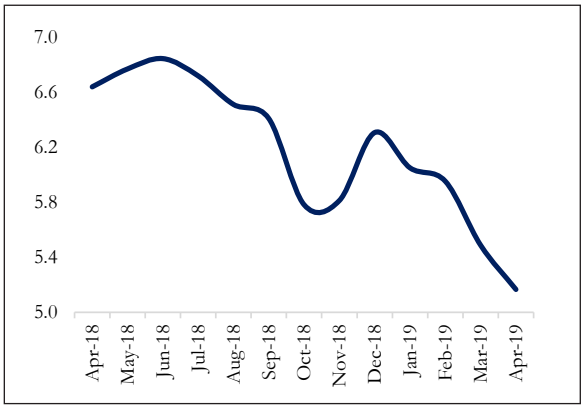
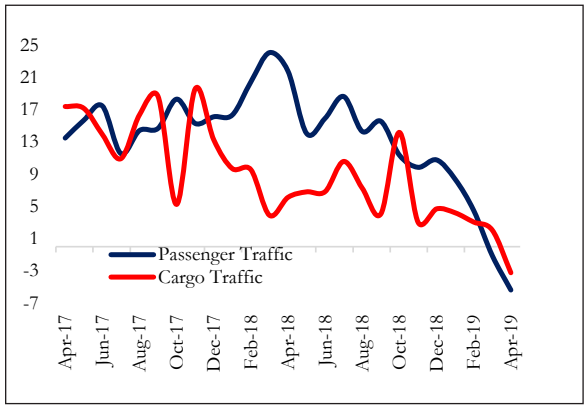


Figure 1(d): Growth in Airport Traffic (y-o-y) (in per cent)



Source: RBI, IHS Markit Economics, Labour Bureau, Ministry of Civil Aviation

India Services Purchasing Managers' Index, which has been on a declining trend since November 2018, fell to a one-year low of 50.2 in May 2019. CPI Services inflation also started to cool down since December 2018.

9.3 Performance of the states shows that the share of services in total gross state value added (GSVA) was more than 50 per cent in 14 out of the 33 states and UTs (Table 2). The share of services is particularly high in Chandigarh and Delhi with over 80 per cent share while Sikkim was at the bottom with 30.2 per cent share. In contrast, services sector accounts for less than 40 per cent of share of services in GSVA in states such as Gujarat, Uttarakhand, Madhya Pradesh and Chhattisgarh. Even states with relatively low share of services, such as Haryana, Jharkhand, Odisha, Andhra Pradesh and Uttarakhand, have witnessed strong services sector growth in the recent years. (Note: In some States and UTs such as Kerala, J&K, Haryana, Assam, Nagaland, Goa, Gujarat, Andaman and Nicobar Islands, Chandigarh, data is available only up to 2016-17).

Table 2: State-Level Services Sector Performance

State	Services Sector Share in GSVA in 2017-18 (per cent)	Services Sector Growth (per cent YoY, 2013-17 average)
Chandigarh*	88.9	7.2
Delhi	84.3	8.4
Andaman and Nicobar Islands*	68.5	7
Karnataka	65.9	10.5
Manipur	65.5	5.9
Telangana	63.2	10.7
Kerala*	62.6	6.7
Bihar	62.2	8.4
Maharashtra	58.5	8.9
Jammu & Kashmir*	57.5	5.7
Meghalaya	57.2	6.3
Nagaland*	56.3	5.7
West Bengal	54.0	6.7
Tamil Nadu	53.4	6.5
Haryana*	49.8	10.5
Jharkhand	49.3	9.8
Puducherry	48.2	4.7
Uttar Pradesh	48.0	7.5
Assam*	47.5	5.7
Punjab	46.1	7.1
Odisha	45.2	9.4
Rajasthan	44.2	7.0
Himachal Pradesh	43.3	8.1
Mizoram	43.0	4.5
Andhra Pradesh	42.7	9.2
Arunachal Pradesh	40.1	9.1
Tripura	39.7	3.0
Uttarakhand	39.7	9.2
Chhattisgarh	36.4	6.3
Goa*	35.9	5.5
Gujarat*	35.5	8.9
Madhya Pradesh	35.4	6.3
Sikkim	30.2	5.1

Source: CSO, Ministry of Statistics and Programme Implementation.
Note: *Based on data available up to 2016-17.

Trade in Services Sector

9.4 Services exports have slowed somewhat during April-December 2018 after witnessing strong performance in 2017-18 (April-December) (Table 3). By sub-sector, exports of transport services have maintained strong momentum during 2017-18 (April-December) and April-December, 2018, supported by strengthening merchandise trade activity, while exports of Computer & ICT services have continued to recover steadily. On the other hand, travel receipts have slowed somewhat during April-December, 2018 after posting strong growth in 2017-18 (April-December), which is in line with the moderation in foreign tourist arrivals during this period. Exports of business services have witnessed a similar trend. Meanwhile, services imports have slowed during April-December, 2018 from the previous year led by a deceleration in imports across all sectors. The rising services trade surplus has helped finance nearly 50 per cent of India's trade deficit as of 2017-18 (April-December). However, the service trade surplus is largely driven by Computer & ICT services, and to some extent, travel services. Meanwhile, India runs a very small trade surplus in business services and insurance & pensions and a small trade deficit in financial services.

9.5 Computer & ICT services, business services and travel services account for about 75 per cent of the total services exports. Trends in the shares of sub-sectors in total services exports, however, have been mixed in the recent years. While the share of traditional services such as transport has fallen, the share of value-added services, such as Computer & ICT services, financial services and insurance & pensions has also experienced a decline. Meanwhile, the share of travel services has risen somewhat during this period.

Table 3: Services Trade Performance by Sub-Sector

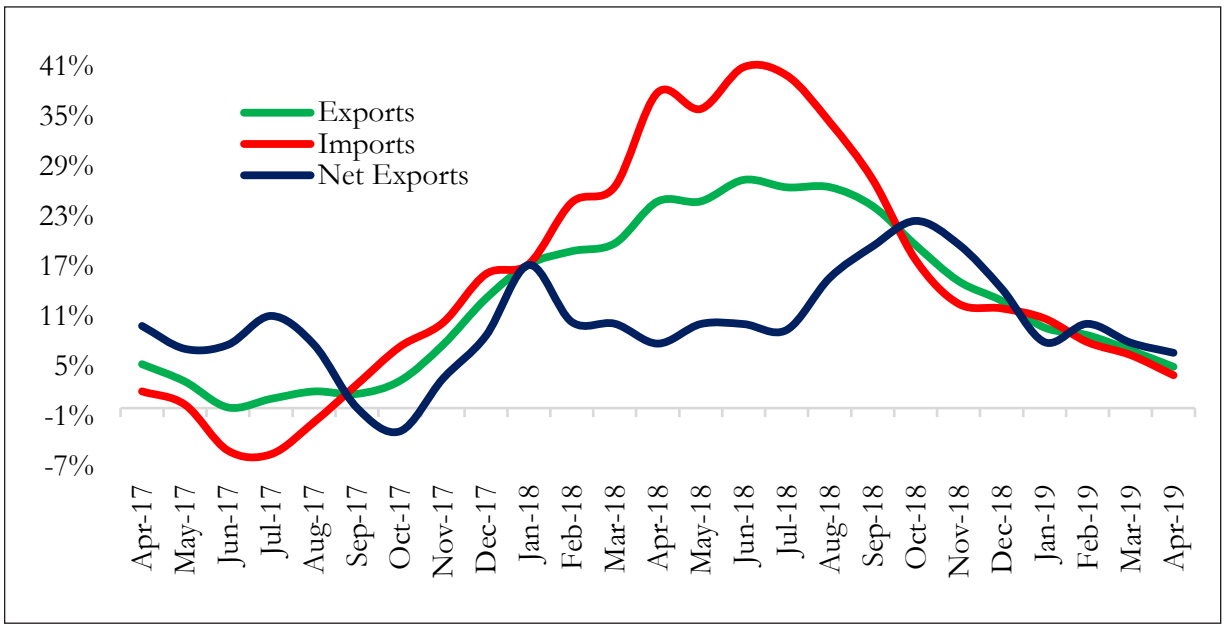
By Sub-Sector	Share in per cent		Value (in US$ billion)			YoY Growth (in per cent)		
	2012-13	2017-18	Apr-Dec 2016-17 (P)	Apr-Dec 2017-18 (P)	Apr-Dec 2018-19 (P)	Apr-Dec 2016-17 (P)	Apr-Dec 2017-18 (P)	Apr-Dec 2018-19 (P)
Services Exports	100	100	122.4	143.5	153.5	6.5	17.2	7.0
Transport	12	9	11.6	12.8	14.3	11.2	9.7	12.2
Travel	12	15	16.5	20.6	20.9	7.5	24.9	1.0
Insurance & Pensions	2	1	1.61	1.87	1.94	8.9	15.7	3.9
Financial Services	3	3	4.1	3.5	3.7	3.3	-15.0	7.7
Computer & ICT	47	41	57.8	59.3	63.8	0.0	2.6	7.7
Business services	20	19	24.6	27.4	28.8	13.5	11.3	5.2
Other	5	13	6.1	18.1	20.0			

Services Imports	100	100	72.6	86.1	93.3	18.4	18.6	8.4
Transport	18	15	10.4	12.7	15.1	-8.6	21.3	19.2
Travel	15	17	12.8	14.8	16.6	14.1	15.6	12.1
Insurance & Pensions	2	1	1.1	1.3	1.2	17.2	25.8	-10.7
Financial Services	6	5	4.42	4.36	2.9	74.1	-1.3	-34.3
Computer & ICT	4	6	3.6	4.8	5.4	23.5	34.5	13.0
Business services	38	31	24.1	27.2	29.3	7.3	13.0	7.7
Other	18	26	16.2	21.0	22.9			
Services Trade Balance			49.8	57.4	60.3			
Goods Trade Balance			-82.7	-118.4	-145.3			

Source: Reserve Bank of India (RBI).

9.6 Monthly data on services trade suggests that exports and imports of services started recovering from second quarter of 2017-18 (Figure 2). The trend continued till first quarter of 2018-19. However, both exports and imports of services, started slowing down since the beginning of second quarter of 2018-19.

Figure 2: Growth in Services Trade (3mma*)

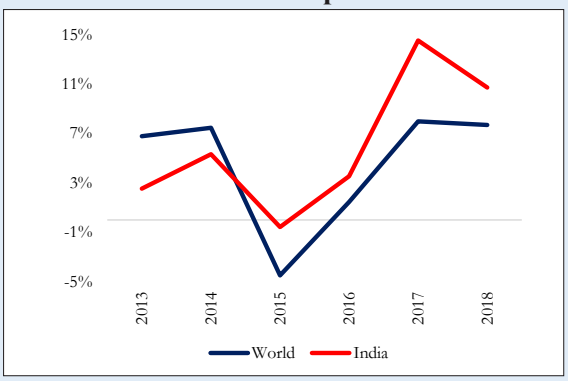


Source: RBI
Note - 3mma = 3 months moving average, Data is provisional.

Box 1: India in World Commercial Services Exports and Imports

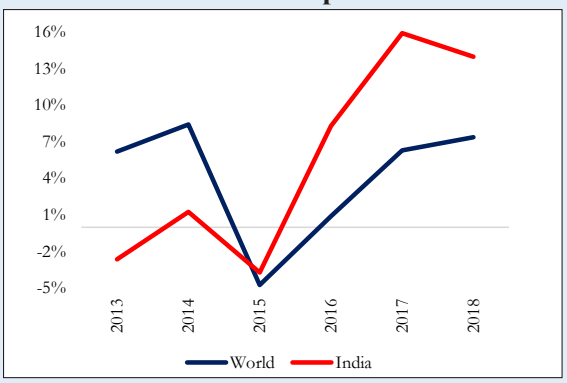
India's trade in commercial services, both in exports and imports, moderated in 2018 (Figure 1). India experienced a recovery in growth of exports and imports of commercial services during 2015-17, in line with global recovery in commercial services trade. However, in 2018, world trade in commercial services stagnated. India's growth rate decelerated but remains above world growth rate

Figure 1(a): Growth in Commercial Services Exports



Source: World Trade Organization (WTO).

Figure 1(b): Growth in Commercial Services Imports



Source: World Trade Organization (WTO).

According to the WTO data, India is among the world's top 10 exporters and importers of commercial services[1], ranking eighth in exports and tenth in imports in 2017, with the ranking staying unchanged from 2016 (Table 1). India's share in world's commercial services exports has risen steadily over the past decade to reach 3.5 per cent in 2017.

Table 1: Performance of World's Top 10 Exporters and Importers of Commercial Services

Country	Rank in Commercial Services Exports	Share in World's Commercial Services Exports (per cent)		Rank in Commercial Services Imports	Share in World's Commercial Services Imports (per cent)	
	2017	2007	2017	2017	2007	2017
U.S.A	1	13.9	14.4	1	10.9	10.2
UK	2	8.3	6.6	6	6.3	4.1
Germany	3	6.3	5.7	3	8.1	6.3
France	4	4.2	4.7	4	4.0	4.7
China	5	3.7	4.3	2	4.2	9.1
Netherlands	6	2.7	4.1	5	2.8	4.2
Ireland	7	2.7	3.5	7	3.1	3.9
India	**8**	**2.7**	**3.5**	**10**	**2.5**	**3**
Japan	9	3.9	3.4	8	4.8	3.7
Singapore	10	2.0	3.1	9	2.3	3.4

Source: World Trade Organization (WTO).

[1] Commercial services refer to all services excluding government services.

World commercial services export growth eased marginally to 7.7 per cent in 2018. Commercial services export growth in India also moderated slightly to 10.7 per cent in 2018 following the strong growth witnessed in 2017 (Table 2). Nonetheless, India remains one of the strongest performers among the major service-exporting countries.

Government has taken many initiatives that included measures such as Start-up India, Insolvency and Bankruptcy Code, National Intellectual Property Rights (IPR) policy, implementing GST regime and improving the ease of doing business, which have helped increase India's ranking in the World Bank's Ease of Doing Business Index from 100 in 2017 to 77 in 2018, Digital India, e-visas, infrastructure status to Logistics, schemes for the housing sector etc., which could give a further fillip to the growth of services sector. The Government has implemented FDI reforms in a number of sectors, including defence, construction development, insurance/pension/other financial services, asset reconstruction companies, broadcasting, civil aviation, pharmaceuticals and trading etc. An investor-friendly FDI policy has been put in place under which up to 100 per cent FDI is permitted via automatic route in most sectors, including single-brand retail trading, construction development and regulated financial sector activity.

Table 2: Commercial Services Export Growth in Major Exporting Countries

	Commercial Services Export Growth (per cent)		
Country	**2017**	**2018**	**CAGR (2010-18)**
World	8.0	7.7	5.2
U.S.A	5.2	3.8	5.1
UK	2.4	5.6	3.9
Germany	8.0	7.3	5.0
France	5.7	6.2	4.7
China	8.7	17.1	5.2
Netherlands	14.3	11.4	5.2
Ireland	20.5	14.3	10.6
India	14.5	10.7	7.3
Japan	6.4	3.1	4.5
Singapore	10.0	6.6	7.8

Source: World Trade Organization (WTO). Note: Data is on calendar year basis.

Further, in order to boost services exports, the Service Exports from India Scheme (SEIS) covers business services, education services, health services, tourism and travel related services, transport services etc. Government has also created a dedicated fund of ₹5,000 crore for financing sectoral initiatives under the Champion Services Sector Scheme. The Screening Committee has so far recommended the proposals of seven nodal Ministries/departments totalling ₹4,344.75 crore, including the Ministry of Corporate Affairs, Ministry of Human Resource Development, Department of Telecommunication, Ministry of AYUSH, Ministry of Housing and Urban Affairs, Ministry of Tourism, and Ministry of Electronics and Information Technology. Under this scheme, various domestic policy reforms critical to enhance the competitiveness of services exports, including on data privacy/security and e-commerce, would be pursued through the Ministries concerned.

FDI into Services Sector

9.7 FDI equity inflows into the services sector[1] accounted for more than 60 per cent of the total FDI equity inflows into India (Table 4). During 2018-19, FDI equity inflows into services sector fell by US$696 million or 1.3 per cent from the previous year to about US$28.26 billion, which is in line with the small decline witnessed in overall FDI inflows into India. This was driven by weaker FDI inflows into sub-sectors such as telecom, consultancy services, air and sea transport, which offset the strong inflows witnessed in education, retail trading and information & broadcasting.

Table 4: FDI Equity Inflows into Services Sector (US$ million)

Services Sectors	2016-17	2017-18	2018-19
Financial, Business, Outsourcing, R&D, Courier, Tech. Testing & Analysis	8,684	6,709	9,158
Computer Software & Hardware	3,652	6,153	6,415
Trading	2,338	4,348	4,462
Telecommunications	5,564	6,212	2,668
Information & Broadcasting	1,517	639	1,252
Hotel & Tourism	916	1,132	1,076
Hospitals & Diagnostic Centers	747	708	1,045
Education	160	286	777
Retail Trading	451	224	443
Consultancy Services	261	760	411
Sea Transport	735	1,051	279
Air Transport	83	629	191
Agriculture Services	76	110	88
Total FDI Equity Inflows into Services	25,185	28,960	28,264
Total FDI Equity Inflows into India	43,478	44,857	44,366
Share of Services in Total FDI Inflows	57.9	64.6	63.7

Source: Estimated using data from Department for Promotion of Industry and Internal Trade on FDI equity inflows into major service sectors.

SERVICES SECTOR GROSS VALUE ADDED VERSUS EMPLOYMENT

9.8 As per the UN National Accounts Statistics data, India ranked 7th in terms of GDP size and 9th in terms of services sector size in 2017. Note that India's rank has since risen to 6th in terms of GDP but the 2017 numbers have been used here for purposes of comparison (Table 5). Notably, among these 15 countries, India has the second

[2] Estimated as FDI equity inflows into financial services, business services, outsourcing, R&D, technology testing & analysis, courier, telecommunications, trading, computer hardware & software, hotels & tourism, hospital & diagnostic centres, consultancy services, sea transport, information & broadcasting, retail trading, agriculture services, education, ports and air transport.

fastest growing services sector after China, registering a growth of 7.9 per cent both in 2017 and during 2007-17 in CAGR terms. India also ranks second after the UK in terms of services share in exports, with the shares as high as seen in developed countries, such as U.S.A, France and Spain.

9.9 In contrast, among top 15 economies in terms of GDP and Services GVA in 2017, India ranks the second lowest after China in terms of services share in Gross Value Added (GVA) and ranks the lowest in terms of services share in employment. In addition, compared to the experience of other countries, services share in India's employment at 34 per cent is significantly lower than services share in GVA at 54 per cent.

9.10 This divergence in the performance of the services sector in India has been witnessed as the sector has not been able to generate jobs in proportion to its size. The share of services in employment is roughly the share of services GVA for other countries such as USA (79 per cent), China (56 per cent), Japan (71 per cent), Germany (72 per cent), UK (81 per cent), Brazil (69 per cent), Mexico (61 per cent) in 2017 implying that the services sector expansion in the recent decades has been unable to generate proportionate employment, especially in the formal sector. This also suggests that there lies immense potential for employment generation in the services sector in the coming years in line with other countries.

Table 5: Services Sector Performance among Top 15 Countries

Country	Rank in GDP	GDP (US$ trillion)	Services GVA (US$ trillion)	Services Sector Growth (per cent)			Share of Services Sector (per cent)					
							GVA		Employment		Exports	
	2017	2017	2017	2016	2017	CAGR (2007-17)	2007	2017	2007	2017	2007	2017
World		80.5	51.7	2.4	2.9	2.3	67	68	44	51	20	23
USA	1	19.5	15.7	2.0	2.2	1.6	77	81	78	79	29	33
China	2	12.2	6.1	7.7	8.3	8.7	42	50	39	56	9	9
Japan	3	4.9	3.4	0.4	0.9	0.3	69	71	68	71	14	21
Germany	4	3.7	2.3	1.3	2.1	1.0	69	68	68	72	14	17
UK	5	2.6	1.9	1.9	1.7	1.4	78	79	76	81	42	44
France	6	2.6	1.8	1.6	2.1	1.2	77	79	73	77	26	32
India	7	2.6	1.3	7.5	7.9	7.9	48	54	26	34	37	38
Brazil	8	2.1	1.3	-2.6	-1.4	1.5	68	72	60	69	12	13
Italy	9	1.9	1.3	1.0	1.1	-0.1	71	74	66	70	19	18
Canada	10	1.6	1.1	2.2	2.9	2.1	67	71	76	78	14	17
Russia	11	1.6	0.9	-0.6	2.2	1.6	59	62	62	66	11	14
S. Korea	12	1.5	0.8	2.5	2.2	2.9	60	58	67	70	16	13
Australia	13	1.4	1.0	2.9	3.1	2.7	70	73	75	78	23	22
Spain	14	1.3	0.9	2.2	2.5	1.0	68	73	66	76	32	30
Mexico	15	1.2	0.7	3.9	3.1	2.8	62	64	61	61	6	6

Source: UN National Accounts Statistics database for GDP and GVA, World Bank database for employment, and WTO database for exports.

MAJOR SERVICES: SECTOR-WISE PERFORMANCE AND SOME RECENT POLICIES

9.11 While sub-sectors within the services sector slowed down in 2018-19, some others accelerated (Table 6). IT-BPM and cargo traffic continued to recover in terms of absolute numbers but the growth rate declined. Growth of aviation sector declined mainly on account of slowdown in international airline passenger traffic. The tourism sector also experienced a sharp slowdown in 2018. The Telecom Sector, however, continued to grow at a rapid pace led by wireless internet subscriptions.

9.12 This section covers some of the important services for India based on their significance in terms of GDP/GVA, exports and future prospects. Some important services covered in other chapters have been excluded to avoid duplication.

Table 6: Performance of Key Sub-Sectors in India's Services Sector

Sub-Sector	Indicator	Unit	Year				
			2014-15	2015-16	2016-17	2017-18	2018-19
IT –BPM*	IT-BPM service revenues:	US$ billion	132.4	143.0	154.0	167.0	181.0(E)
	Exports	US$ billion	98.5	108.0	117.0	126.0	136.0(E)
	Domestic	US$ billion	34.0	34.8	38.0	41.0	45.0(E)
Aviation**	Airline passengers:	million	115.8	135.0	158.4	183.9	204.2(P)
	Domestic	million	70.1	85.2	103.7	123.3	140.3
	International	million	45.7	49.8	54.7	60.6	63.9
Telecom	Wireless phone subscriptions[a]	million	969.5	1034.1	1170.5	1188.9	1161.7
	Wireless internet subscriptions[a]	million	283.3	322.2	400.6	472.7	615.05
Tourism	Foreign tourist arrivals	million	7.8	8.2	9.1	10.4	10.6 (P)
	Foreign exchange earnings from tourism	US$ billion	20.4	21.4	23.8	28.7	27.7 (P)
Shipping	Gross tonnage of shipping[a]	million	10.5	10.9	11.6	12.6	12.7^
	Number of ships[a]	numbers	1210.0	1273.0	1316.0	1384.0	1400^
Ports	Cargo traffic	million tonnes	1052.2	1071.8	1133.7	1208.6	1276.8(P)
	Cargo capacity	million tonnes	1560.5	1703.1	2147.6	2307.4	2405.9(P)

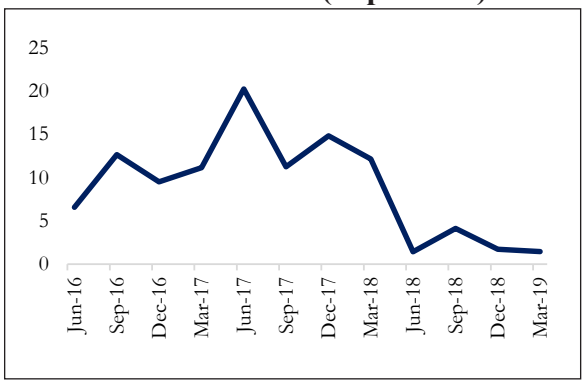
Sources: Telecom Regulatory Authority of India (TRAI), Department of Telecom, Ministry of Tourism, Ministry of Shipping, Ministry of Civil Aviation, Ministry of Electronics and Information Technology, NASSCOM.
Note: *Including Hardware and excluding e-commerce; **Domestic passengers carried by scheduled Indian carriers on scheduled domestic services and international passengers carried by scheduled Indian and foreign carriers to and from the Indian territory; [a] As of March of ensuing financial year ^As of December 2018. P=(Provisional). E= Expected with current pace.

Tourism

9.13 Tourism sector is a major engine of economic growth that contributes significantly in terms of GDP, foreign exchange earnings and employment. As per the World Tourism Barometer of the United Nation's World Tourism Organization (June, 2018 edition) International Tourist Arrivals (ITA) reached a total of 1.3 billion in 2017, 84 million more than in the previous year, with a growth rate of 6.7 per cent higher than the growth rate of 3.7 per cent in 2016.

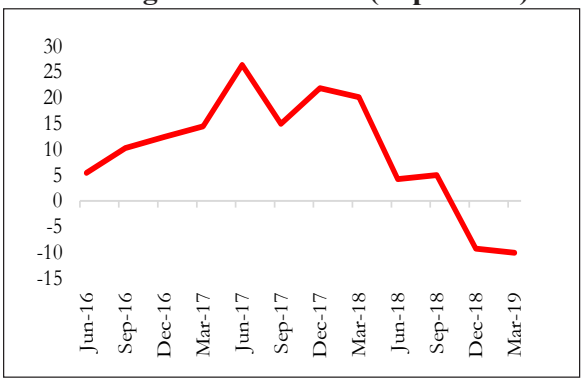
9.14 In India, the Tourism sector had been performing well with Foreign Tourist Arrivals (FTAs) growing at 14 per cent to 10.4 million and Foreign Exchange Earnings (FEEs) at 20.6 per cent to US$28.7 billion in 2017-18. However, the sector witnessed a slowdown in 2018-19. The Foreign Tourist Arrivals (FTAs) in 2018-19 stood at 10.6 million compared to 10.4 million in 2017-18. In terms of growth, the growth rate of FTAs declined from 14.2 per cent in 2017-18 to 2.1 per cent in 2018-19. Foreign exchange earnings (FEEs) from tourism stood at US$27.7 billion in 2018-19 as compared to US$28.7 billion in 2017-18. In terms of growth, the FEEs declined from 20.6 per cent in 2017-18 to -3.3 per cent in 2018-19.

Figure 3(a): Growth in Foreign Tourist Arrival in India (in per cent)



Source: Ministry of Tourism

Figure 3(b): Growth in Foreign Exchange Earnings from Tourism (in per cent)



Source: Ministry of Tourism

9.15 Outbound tourism increased in recent years, with the number of departures of Indian nationals from India, that stood at 23.94 million in 2017 from 21.87 million in 2016, with a growth rate of 9.5 per cent in 2017. This was more than double the foreign tourist arrivals in India.

9.16 Growth in domestic tourist visits slowed down from 12.7 per cent in 2016 to 2.4 per cent in 2017. In absolute numbers, there were 1,652.5 million domestic tourists in 2017 compared to 1,615.4 million in 2016. Tamil Nadu (345.1 million), Uttar Pradesh (234 million), Karnataka (180 million), Andhra Pradesh (165.4 million) and Maharashtra (119.2 million) were the top 5 destination States, accounting for 63.2 per cent of total number of domestic tourist visits in 2017. Amongst centrally protected ticketed monuments, Taj Mahal, Agra (5.66 million) was the most visited monument in 2017-18 for domestic visitors followed by Sun Temple, Konark (3.22 million) and Red Fort, Delhi (3.04 million).

9.17 The Ministry of Tourism launched the 'National Mission on Pilgrimage Rejuvenation and Spiritual, Heritage Augmentation Drive' (PRASHAD) in January 2015 with the objective of pilgrimage infrastructure at selected

important pilgrimage destinations. The total number of sites identified for development under the scheme at present is 41 in 25 states. Till date 28 projects in 17 states have been approved under the scheme since January 2015.

9.18 Under the Swadesh Darshan Scheme, the Ministry of Tourism has identified 15 thematic circuits for development namely: Himalayan Circuit, North East Circuit, Krishna Circuit, Buddhist Circuit, Coastal Circuit, Desert Circuit, Tribal Circuit, Eco Circuit, Wildlife Circuit, Rural Circuit, Spiritual Circuit, Ramayana Circuit, Heritage Circuit, Tirthankar Circuit and Sufi Circuit. These circuits cover religious, spiritual, cultural, natural, tribal sites in the country. Under the scheme the Ministry is developing these thematic circuits on the principles of high tourist value, competitiveness and sustainability in an integrated manner with an objective of enriching tourist experience and enhance employment opportunities.

Box 2: HEALTH AND MEDICAL TOURISM IN INDIA

Government has taken various Policy initiatives and measures to promote Health and Medical Tourism in India along with the Public Private Initiatives in the Tourism sector. India has emerged as a major Medical Tourism destination. The Ministry of Tourism has recognized Medical and Wellness Tourism including Ayurveda as a Niche product in order to overcome the aspect of 'seasonality' and to promote India as a 365 days' destination and attract tourists with specific interests.

INDIAN HEALTHCARE INDUSTRY: The market size of medical tourism in India is estimated at ₹195 billion (US$ 3 billion) in 2017. The value of medical tourism is forecasted to reach US$ 9 billion by 2020. India currently has around 18 per cent of the global medical tourism market. In an estimate, it can be a US$ 9 billion-worth medical tourism destination by having 20 per cent global market share by 2020. *(Source: Services Export Promotion Council, Ministry of Commerce)*. Share of Medical Tourists to India is 4.9 per cent out of total FTAs in 2017. The arrival in India on Medical visa during 2014 to 2017 are given in (Table 1)

Table 1: ARRIVALS IN INDIA ON MEDICAL VISA

2014	2015	2016	2017
1,39,447	2,33,918	4,27,014	4,95,056

Source: Ministry of Tourism.

Government offers financial support as Marketing Development Assistance, for Publicity and for organising Wellness and Medical Tourism Promotion shows. Medical Tourism is regularly highlighted for promotion as part of the Incredible India Campaign in the print, electronic, online and outdoor media in India and abroad as well as at the various travel trade exhibitions overseas. 'Medical Visa' has been introduced, which can be given for specific purpose to foreign travellers coming to India for medical treatment. 'E- Medical Visa' has also been introduced for 166 countries.

Hospitality Services

9.19 As per the Ministry of Tourism statistics, there has been a growth rate of 75.71 per cent in number of approved Hotels to 1961 as on December 2018 from 1116 as on December 2014. Similarly there was a growth rate of 43.85 per cent in number of approved Hotel Rooms in India to 102490 as on December 2018 from 71244 as on December 2014

(Table 7). Of course, this is only a subset of the hotel market which has grown sharply due to entry of online-based service providers (data for this is being collected and will be a subject of a future Economic Survey).

Table 7: Number of Approved Hotels and Hotel Rooms for Major categories, 2014 to 2018

S. No.	Category of Hotels	as on 31.12.2014		as on 31.12.2015		as on 31.12.2016		as on 31.12.2017		as on 31.12.2018	
		No. of Hotels	No. of Rooms	No. of Hotels	No. of Rooms	No. of Hotels	No. of Rooms	No. of Hotels	No. of Rooms	No. of Hotels	No. of Rooms
1	One Star	41	1193	26	785	12	398	8	286	9	348
2	Two Star	80	1902	68	1922	53	1190	43	1028	37	990
3	Three Star	554	22724	531	22793	428	17604	481	17428	535	18889
4	Four Star	134	7969	197	9972	210	9892	256	13184	322	16451
5	Five Star	92	11744	125	15230	136	16214	162	19431	181	22673
6	Five Star Deluxe	113	23907	127	27775	146	31037	152	34376	170	37955
7	Apartment Hotels	3	249	-	-	-	-	1	126	3	252
8	Guest House	5	77	7	110	118	690	6	88	7	106
9	Heritage Hotels	42	1237	30	1065	40	1258	46	1403	58	1843
10	B&B Estt	52	242	283	1359	316	1596	664	3268	639	2983
	Total	1116	71244	1394	81011	1459	79879	1819	90618	1961	102490

Source: Ministry of Tourism

9.20 Some of the issues relating to tourism sector are briefly stated below:

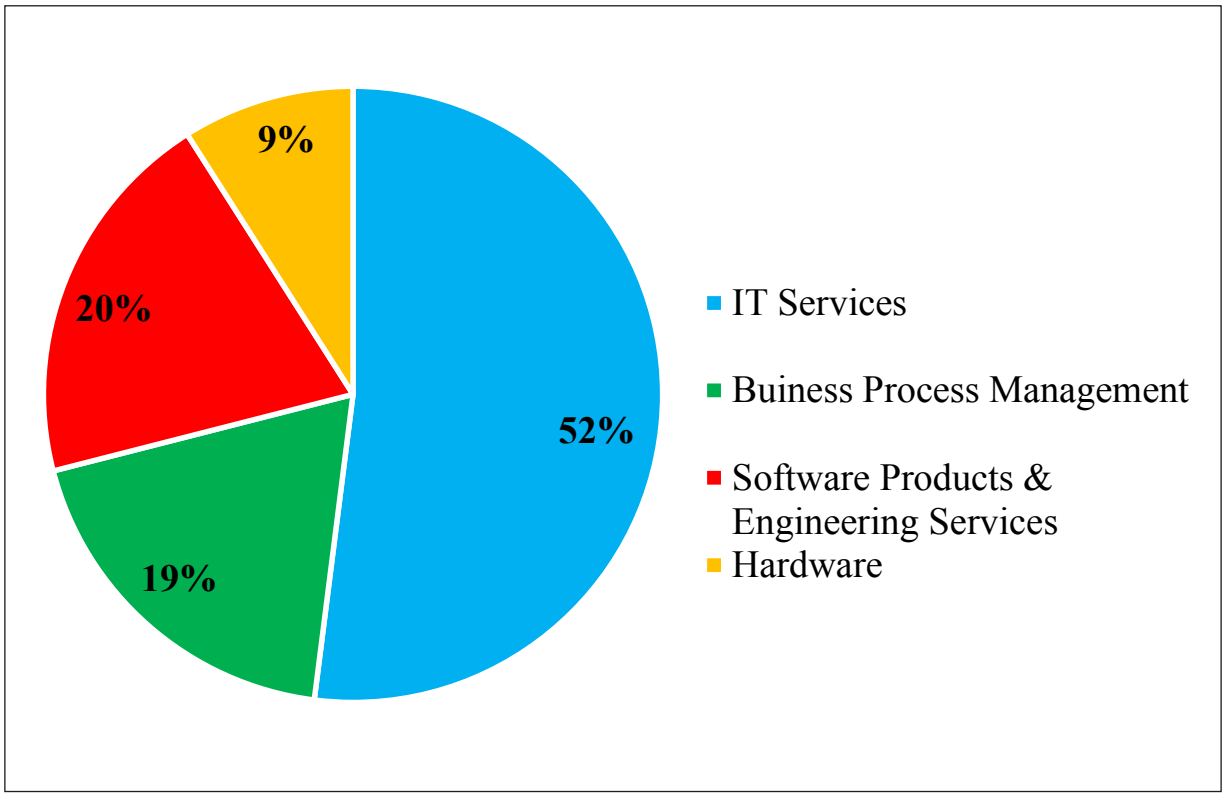
- The co-ordination mechanism of various like-minded Ministries and Stakeholders to resolve issues for promotion of tourism in the country needs to be strengthened.
- State/UT Government need sensitization about tourism as a major driver of employment and poverty alleviation.
- Budgetary allocation for development of tourism infrastructure should be increased.
- Land should be made available for hotels and reserve land for hotels in all new townships under planning.
- Fast-track clearances for hotel projects.
- Increase skill development efforts to train more persons.
- Make the Taxation regime on Hospitality Industry globally competitive.

IT –BPM Services

9.21 The Indian IT-BPM industry grew by 8.4 per cent in 2017-18 to US$167 billion (excluding e-commerce but including hardware) from US$154 billion in 2016-17, as per NASSCOM data (Table 8). It is estimated to have reached US$181 billion in 2018-

19. IT-BPM exports grew by 7.7 per cent to US$126 billion in 2017-18 and is estimated at US$136 billion for 2018-19. E-commerce market is estimated at US$43 billion for FY 2018-19, at the growth rate of 12 per cent. The IT services constitute the largest segment with a share of around 52 per cent, followed by BPM with share of around 20 per cent. Software products and engineering services together accounted for around 19 per cent share whereas hardware accounts for 10 per cent (Figure 4).

Figure 4: Indian IT BPM Industry Marketshare (2017-18)



Source: NASSCOM, 2018

Table 8: Performance of India's IT-BPM Services : Some Indicators

(In US$ billion)

Indicators	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
IT-BPM * Revenue	83.5	100.72	109.0	119.3	132.4	143.0	154.0	167.0	181#
Exports*	59.4	69.1	77.0	87.7	98.5	108.0	117.0	126.0	136#
Domestic*	29.02	31.7	32.0	31.6	34.0	34.8	38.0	41.0	45#

Source :Ministry of Electronics and Information Technology, *NASSCOM Strategic Review (Yearly)*
Notes : *(*): Including Hardware and Excluding e-Commerce*
(#):Expected with Current Pace.

9.22 The Indian Information Technology / Information Technology enabled Services (IT/ ITeS) industry has contributed immensely in positioning the country as a preferred investment destination amongst global investors and creating huge job opportunities in India, as well as in the USA, Europe and other parts of the world. USA, UK and EU account for ~ 90 per cent of the total IT-ITeS exports. However, there are new challenges surfacing in these traditional geographies. Demand from APAC, Latin America and Middle East Asia is growing and new opportunities are emerging for expanding in continental Europe, Japan, China and Africa. Efforts are being made to further strengthen existing markets, and simultaneously diversify and increase presence in the new and emerging markets in Europe (besides UK which is a mature market), Africa, South America, Israel, Australia, China and Japan through market development and industry repositioning initiative.

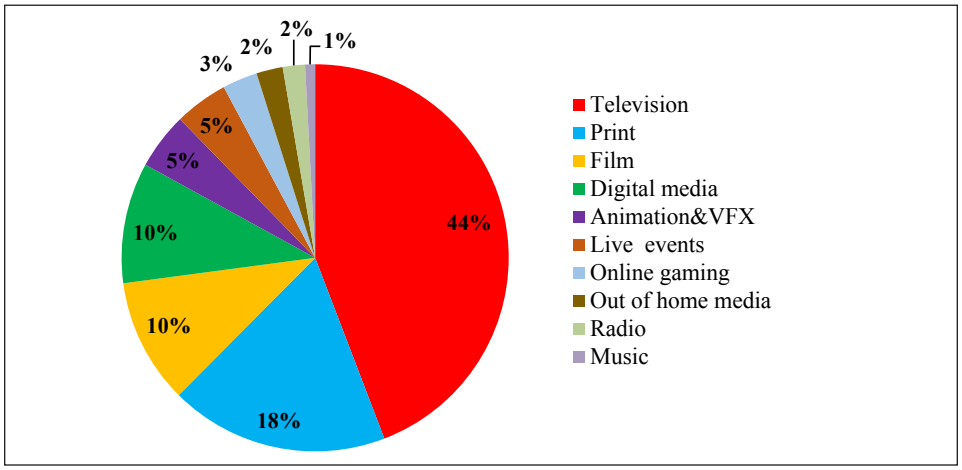
9.23 India's digital economy has received a tremendous boost through various Government initiatives such as Digital India covering e-Government services, common service centres, BPO promotion schemes, digital payments, electronic manufacturing, Digital Saksharta Abhiyaan, e-commerce, GST network, Make in India, Start-up India, e-health, Smart Cities, and e-agriculture market place/ digital mandis. These initiatives coupled with new and emerging technologies are enhancing the digital economy of the country and are creating IT and electronics led new opportunities for revenue and job creation in both traditional as well as new sectors of the economy such as transport, health, power, agriculture, and tourism.

9.24 The National Policy on Electronics 2019 (NPE 2019) has been notified on February 2019 by the Ministry of Electronics and Information Technology (MeitY) inter-alia include creating eco-system for globally competitive ESDM sector; promotion of electronic components manufacturing ecosystem; special package of incentives for mega projects; encouraging industry-led R&D and innovation and promoting start-up eco-system in all sub-sectors of electronics, including emerging technology areas such as 5G, IoT/ Sensors, artificial intelligence (AI), machine learning, augmented reality (AR) and virtual reality (VR), drones, robotics, additive manufacturing, gaming and entertainment, photonics, nano-based devices, medical electronics, defence and strategic electronics, automotive electronics, cyber security, power electronics and automation; providing incentives and support for skill development including re-skilling, in the ESDM sector; promoting research, innovation and support to industry for green processes and sustainable e-waste management, emphasis on cyber security and promoting trusted electronics value chain initiatives to improve India's national cyber security profile etc.

Media & Entertainment Services

9.25 The Media and Entertainment sector comprises mainly of television, print, radio, films, music, digital advertising, over the top (OTT-film and television content delivered over internet), visual effects (VFX) and gaming. Technology has rapidly changed the profile of this sector especially in the area of content and carriage. As per the FICCI-EY Media and Entertainment Report 2019, the size of the Industry has increased from ₹91,810 crore in 2013 to ₹1,67,500 crore in 2018, a growth of 82.44 per cent in the last 5 years. The size composition of the various components of the Industry can be seen in the Figure 5. Audio–visual services have been identified by the Government (2018) as one among the 12 Champion Service sectors for focused development so as to reap its full potential.

Figure 5: Composition of Media and Entertainment Industry in India 2018 (percentage of Revenue)

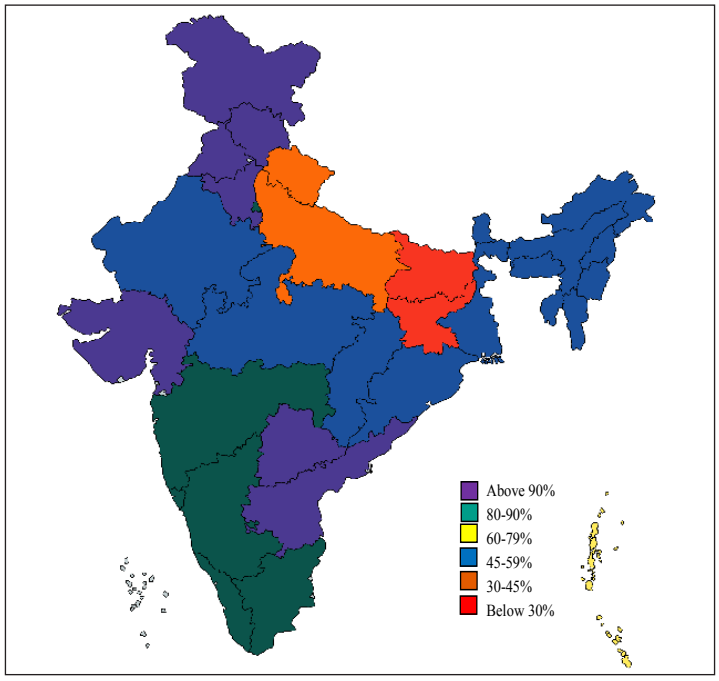


Source: FICCI-EY Media and Entertainment Report 2019

Private Television Sector

9.26 India is the second largest pay-TV market in the world after China. As per Broadcasting Audience Research Council of India (BARC)/EY estimates, out of the estimated 29.8 crore households in India, TV penetration reached 66 per cent in the country with 19.7 crore TV households in 2018, which is 7.7 per cent increase over the previous Broadcast India Survey 2016 (Figure 6). Of the 19.7 crore TV households, 10.3 crore households were covered by Cable services, 5.6 crore households by Direct to Home (DTH) services and 3.6 crore households were covered by Doordarshan Free Dish in 2018.

Figure 6: TV Penetration in India (2018)



Source: BARC, 2018

9.27 As per FICCI-EY Media & Entertainment Report (2019), TV sector grew at 12.1 per cent to reach ₹74,000 crore in 2018 with advertising comprising 41 per cent of the revenue while distribution accounted for the balance. India has at present a large broadcasting and distribution sector in the world comprising 906 satellite TV channels, 1469 Multi System Operators (MSO), 60,000 Local Cable Operators (LCO), 6 DTH operators and several IBTV service providers. 43 per cent of all private satellite channels are news channels (April 2019). The growth drivers for TV sector include digitisation of cable services, higher uptake of High Definition channels, growth of OTT platform aided by rising smart phone penetration and high speed data adoption.

9.28 In the distribution sector, Cable TV still dominates the distribution of TV channels in the country through MSOs and LCOs. DTH sector is rapidly becoming a key player in the distribution sector. Apart from Doordarshan's DD Free Dish, DTH services are provided by six other private players.

Public Service TV Broadcasting

9.29 Prasar Bharati is the country's public service broadcaster with All India Radio and Doordarshan as its two constituents. It came into existence in 1997 with a mandate to organise and conduct public broadcasting services to inform, educate and entertain the public and to ensure a balanced development of broadcasting in the country.

9.30 Doordarshan has the world's largest terrestrial broadcast facility with over 1400 terrestrial TV transmitters and also provides free to air DTH services. The terrestrial network of Doordarshan reaches out to every nook and corner with transmitters set up throughout the country. Currently, Doordarshan has 24 Satellite channels, including a channel for farmers, News and Current Affairs, Art and Culture and Sports etc. 67 Studio Centres of Doordarshan spread across the country provide extensive coverage of News and Current Affairs to DD network channels.

9.31 Doordarshan also operates its own Direct to Home platform viz., DD Free Dish. DD Free Dish has a bouquet of 104 television channels including 24 Satellite channels of DD which operate 24X7 and 11 regional channels which operate for a few specified hours. The bouquet also has 44 audio channels of AIR. Activities of All India Radio are discussed in the section under Radio sector.

Print Media

9.32 Print accounted for the second largest share of the Indian M&E industry with revenue of ₹30,550 crore in 2018 with a growth of 0.7 per cent (FICCI & EY Report 2019). Print Industry is declining all over the world primarily due to huge in roads of internet and TV channels in media industry. India is also no exception to this phenomenon. The share of advertising revenue in Print Media is 71 per cent of the total revenue income while the balance is accounted for subscription revenue. While newspapers accounted for about 96 per cent of the revenue, the rest was through the magazines.

9.33 As per the Registrar of Newspapers for India (RNI), the number of registered publications in the country as on 31st March 2018 stood at 1,18,239, registering a growth of 3 per cent in 2017-18 over the previous year. However, growth of circulation of publications contracted by 11.9 per cent in 2017-18 over the previous year. The total circulation of publications in the country during 2017-18 was 43 crore of which Hindi, English and Urdu publications were 19.56

crore, 5.34 crore and 2.52 crore respectively. In terms of circulation of daily newspapers, there was a contraction by 11.9 per cent in 2017-18 with total circulation of daily newspapers falling to 24.26 crore. Hindi dailies continue to be the largest in terms of circulation followed by English and Urdu. (As on March 31, 2018).

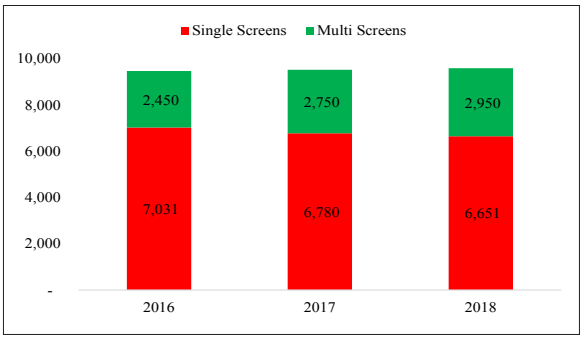
Films

9.34 As per FICCI-EY Media & Entertainment Report (2019), India is the world's biggest producer of films with 1,776 domestic film releases in 2018. Indian film industry grew at 12 per cent in 2018 with revenue of ₹17,450 thousand crore. The highest number of films were released in Kannada (243) followed by Hindi (238) and Telugu (237).

9.35 Despite producing the most number of movies in the world, India has less than 25 per cent of the number of screens as compared to China or USA. India has 9601 screens, of which 47 per cent are in the five southern states. China has been adding cinema screens at a CAGR of over 16 per cent over the last two years. India's screens per million of population is also the very low, primarily due to lack of cinema penetration in tier-II, tier-III and tier-IV markets in India. This presents a large untapped potential for the Indian film segment (Figure 7, 8 and 9).

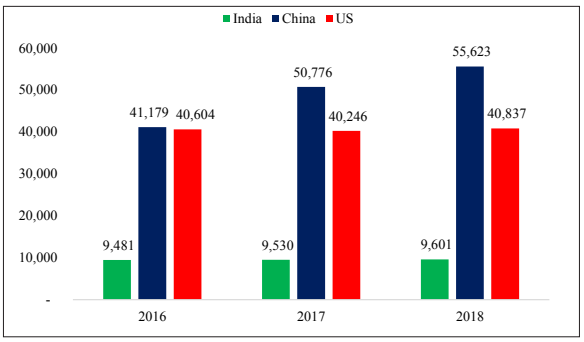
9.36 In the Overseas Theatre Performances, the highest number of film exports were made to the Gulf region (50) followed by Australia (48) and USA/Canada (46). In terms of value, however, China became the largest international market for Indian film content, accounting for highest collection of US$272.3 million. While the number of screens (both single and multi-screen) have been steadily increasing, the screen count is still lower than large international markets.

Figure 7: Number of screens in India



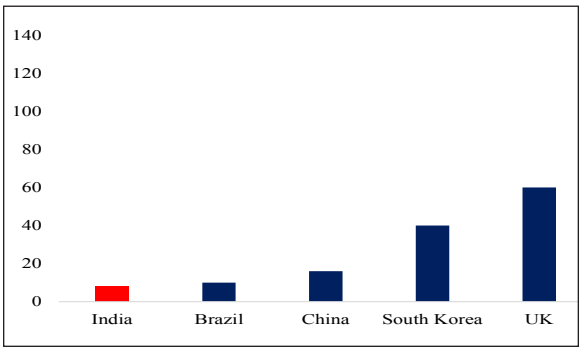
Source: FICCI-EY Media & Entertainment Report (2019)

Figure 8: Screen count in India, China and USA



Source: FICCI-EY Media & Entertainment Report (2019)

Figure 9: Screens per million population, 2018



Source: FICCI-EY Media & Entertainment Report (2019)

Digital Media

9.37 The various segments of digital media include- online video viewing, audios, news through OTT platforms and social media etc. As per FICCI-EY Media & Entertainment

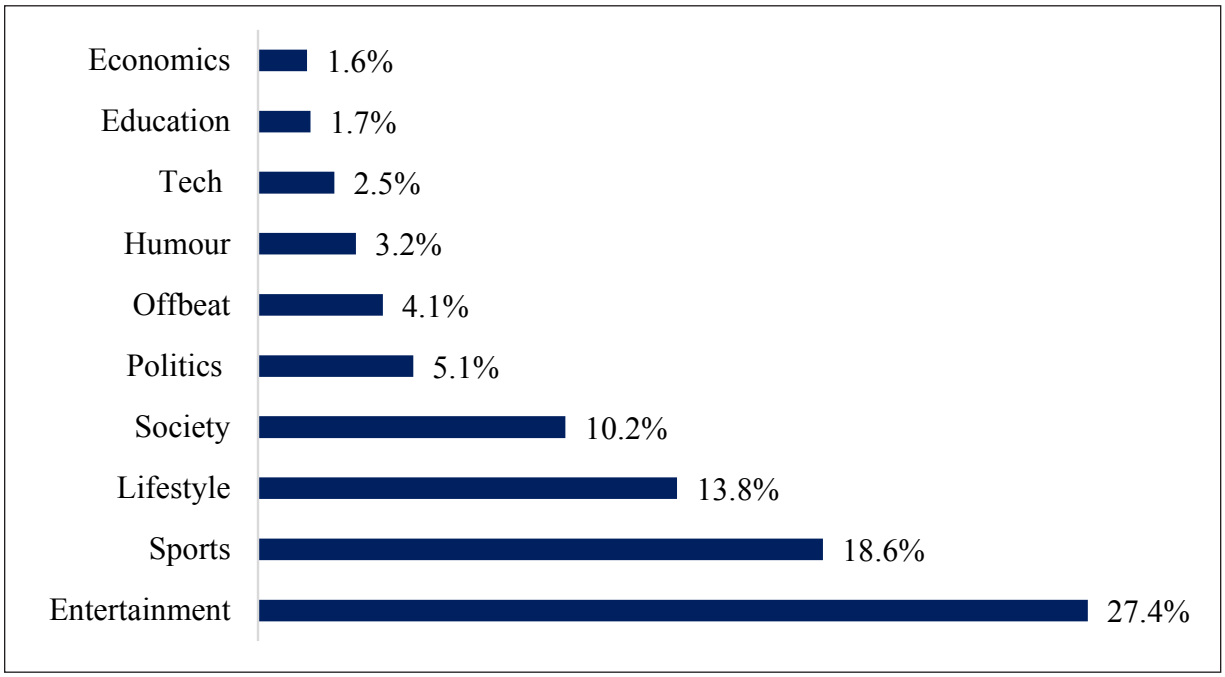
Report (2019), total number of mobile subscribers stood at 1.17 billion in 2018. Smartphone users increased by 39 per cent to reach 340 million in 2018. Average data consumption doubled from 4 GB to 8 GB per month between 2017 and 2018. Moreover, digital media market grew 42 per cent to reach ₹169 billion in 2018. Internet subscribers grew 28 per cent from 446 million in December 2017 to 570 million in November 2018, driven by rural internet subscriber growth of 49 per cent. Given that there are around 4 billion internet users in the world, one in eight is Indian (Table 9).

Table 9: Internet Penetration in India (2018)

	Dec-17 (Million)	Nov-18 (Million)	Growth (per cent)
Total internet subscribers	446	570	28
Urban internet subscribers	314	373	19
Rural internet subscribers	132	197	49

Source: FICCI-EY Media & Entertainment Report (2019)

Figure 10: Category wise consumption of mobile content (Jan - Sept 2018)

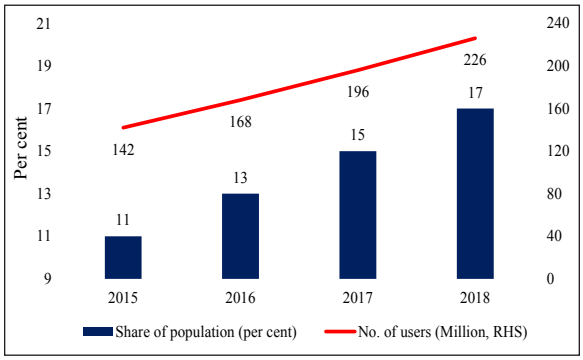


Source: FICCI-EY Media & Entertainment Report (2019)

9.38 According to the total rate of content consumption on UC News Feed platform in India, Entertainment was the largest category in mobile content consumption for Indian users, accounting for 27.4 per cent, followed by sports (18.6 per cent) and lifestyle (13.8 per cent) (Figure 10).

9.39 Social Media penetration reached 17 per cent in 2018, up from 11 per cent in 2015. The most active social media platforms were YouTube, Facebook, WhatsApp and Instagram. (Figure 11)

Figure 11: Social media users and penetration in India (2018)



Source: FICCI-EY Media & Entertainment Report (2019)

Radio Sector

9.40 All India Radio (AIR) broadcasts are functional at 479 locations covering nearly 92 per cent of the geographical area and 99.2 per cent of the population of the country. Presently, FM Service of AIR is being provided from 495 transmitters functional at 458 locations across the country reaching nearly 39 per cent of the area and 52 per cent of the total population of the country. Further expansion of AIR FM is being carried out in a phased manner under forthcoming schemes of AIR. In addition, 37 radio channels of AIR are available on Doordarshan's DTH platform (DD Free Dish) which can be received through a set top box all over the country.

9.41 The opening of private FM radio since 1999 has not only resulted in providing good quality of reception to radio listeners, but also helped encouraging local talent and generating employment to large number of people in various cities. As on May 2019, 380 Private FM channels are operational in 107 cities spread across 27 States and 3 Union Territories. The Government has announced policy guidelines on expansion of private FM Radio broadcasting (Phase-III) wherein the Ministry of Information and Broadcasting will auction 683 channels in 236 cities in subsequent batches. Community Radio Stations are set up with the involvement of various educational institutions and civil society organizations. At present, 250 Community Radio stations have been operationalized. It is proposed to establish at least one CRS in each district with priority to coastal districts and aspirational districts.

Emerging Media

9.42 As compared to the traditional media, it is the non-linear media comprising of digital media including OTT, animation & VFX, live events, online gaming, etc. that has been witnessing double digit growth in the media & entertainment sector in recent years. The spread of broadband connectivity, fall in data prices, demand for regional language content have triggered the growth of digital media. The Animation, VFX, gaming and comics sector in India is also a thriving business with even Hollywood movies being outsourced to India for work related to post-production which includes video editing, visual effects, animation, 2D-3D conversion, etc. It is one of the sunrise sectors for India and given the rapid expansion of the sector the requirement of skilled professionals is also immense.

Policy initiatives

9.43 The Media and Entertainment sector needs to be holistically reviewed in the light of technological interventions that have redefined entertainment today. The following initiatives have been taken in the recent years to facilitate Media and Entertainment industry.

- In view of increasing piracy of films by unauthorized recording of films in cinema halls, a Bill has been introduced in the Rajya Sabha in February 2019 to amend the Indian Cinematograph

Act 1952. The Bill has since then referred to the Standing Committee on Information Technology for detailed examination.

- Audio–visual service has been identified by the Government as one among the 12 Champion Service sectors identified for focused development so as to reap its full potential. Ministry of Information & Broadcasting is proposing various incentives to promote audio-visual services. These include: Audio-visual co-production with foreign countries, incentives for shooting of foreign films in India, organization of global film summit and promotion of single screens in Tier II and Tier III cities.
- With the objective of imparting world class education in animation, gaming, visual effects and employment generation in the sector, Government of India is in the process of setting up National Centre of Excellence (NCOE) for Animation, Visual Effects, Gaming and Comics. Government of India has taken over the possession of land from Government of Maharashtra in March, 2018 at Goregaon, Mumbai. The project is being executed through Indian Institute of Mass Communication, New Delhi.
- As part of the initiative to encourage talent among youngsters of the North East in the sector of film and television, the Government of India has decided to establish a Film and Television Institute in Arunachal Pradesh. The project has been sanctioned at an estimated cost of ₹204.32 crore. Foundation stone for FTI, Arunachal Pradesh was laid in February 2019. A temporary campus has been set up in Itanagar where short courses have been conducted.

Space Services

9.44 Indian Space Programme contributes to National Development, through the application of space technology, comprising of earth observation, communication and navigation to address issues related to socio-economic development from macro to micro levels. Over the last three decades, space technology has matured from providing simple mapping applications to development of complex models, decision support and early warning systems, incorporating space and derived inputs. Satellite launch services and satellite database mapping and Geospatial services are areas in which India is making a mark and has huge potential for the future. India has achieved significant milestones in space transportation capability through the operationalization of Polar Satellite Launch Vehicle (PSLV), Geosynchronous Satellite Launch Vehicle (GSLV) and Geosynchronous Satellite Launch Vehicle Mark III (GSLV Mk-III) for launching satellites for earth observation, communication, navigation and space exploration. India became the sixth nation to develop this highly coveted complex cryogenic rocket propulsion technology and also paved the way for the development of a high thrust Cryogenic engine & stage for the next generation launch vehicle i.e. GSLV Mk-III.

9.45 In the case of Satellite Launching, as on March 2019, PSLV had cumulatively launched 324 satellites that include 45 National Satellites, 10 student satellites built by Universities/Academic institutions and 269 International customer satellites from 32 Countries. PSLV also holds the distinction of launching the highest number of satellites, 104, in a single launch. GSLV Mk-III has successfully completed a sub-orbital experimental flight followed by two developmental flights. In its second

developmental flight on November 14, 2018, GSLV Mk- III launched the heaviest satellite from Indian soil, GSAT-29, and has entered the operational phase. The first operational flight is slated to launch Chandrayaan-2 in 2019, which is India's second lunar mission and the first landing mission to the moon.

Bhuvan Services

9.46 ISRO's Bhuvan Geo-portal provides multi sensor, multi-platform and multi temporal Satellite Imagery, thematic maps and satellite data-derived information related to Earth Observation & Disaster Management Support. Since its launch in 2009, it has grown horizontally in diverse areas of applications, and vertically, in terms of number of images and thematic & disaster services including high-resolution satellite data. Presently, more than 6500 map services offered by Bhuvan are being used under various applications. Bhuvan has enriched portals of more than 20 Central Ministries/Departments and 30 States, and is also providing Geospatial support for many flagship programmes of the Government.

Mapping and Geospatial Services

9.47 Satellite data, synchronous with ground data, are used to estimate crop acreage in-season forecasting of production for 8 major crops in the country viz. wheat, rice (kharif & rabi), mustard, rabi sorghum, jute, winter potato, sugarcane, cotton in the country. Using the techniques developed by ISRO, the Mahalanobis National Crop Forecast Centre (under Ministry of Agriculture & Farmers Welfare) regularly generates crop forecasts at District/State/National level and provides to the Government for planning and decision making. Some of the major satellite data based mapping/Geospatial services developed include Horticulture Crop Inventory, Hydro-informatic products under National Hydrology Project (NHP), Village level Ground Water Prospects, Telegana and Andhra Pradesh Water Resources Information & Management Systems (TWRIS/APWRIMS), Watershed Monitoring under Integrated Watershed Management Programme (IWMP), Monitoring of progress of road construction under PMGSY, GIS implementation of MGNREGA (GeoMGNREGA), Inventory & site Management plans for heritage sites & monuments, Monitoring of stage of construction of benefeciary houses under Housing for All-Urban (PMAY), Geospatial database for Urban Master Plan formulation under AMRUT, etc.

9.48 Periodic assessment of state of natural resources like vegetation, land cover, snow & glaciar and wetland is also being carried out, in addition to national level assessment of status of wastelands and land degradation.

CHAPTER AT A GLANCE	
➢	Services sector (excluding construction) has a share of 54.3 per cent in India's GVA and contributed more than half of GVA growth in 2018-19.
➢	The services sector growth declined marginally to 7.5 per cent in 2018-19 from 8.1 per cent in 2017-18 due to deceleration in the growth of sub sectors such as trade, hotels, transport, communication and broadcasting services. However, growth of financial services, real estate and professional services accelerated.

- India's services sector does not generate jobs in proportion to its share in GVA. Services share in employment is 34 per cent in 2017 which is significantly lesser that its share of 54 per cent in GVA
- The moderation in services growth are reflected in various other high frequency indicators such as bank credit to services sector, Nikkei India Services PMI, air passenger traffic etc.
- During 2018-19, FDI equity inflows into service sector fell by US$696 million or 1.3 per cent from the previous year to about US$28.26 billion.
- India received 10.6 million foreign tourists in 2018-19 compared to 10.4 million in 2017-18. The foreign exchange earnings from tourism stood at US$27.7 billion in 2018-19 compared to US$28.7 billion in 2017-18.
- The IT-BPM industry grew by 8.4 per cent in 2017-18 to US$167 billion and is estimated to reach US$181 billion in 2018-19.

Social Infrastructure, Employment and Human Development

10
CHAPTER

"More than ever before, there is a global understanding that long-term social, economic, and environmental development would be impossible without healthy families, communities and countries."

Gro Harlem Brundtland[1]

Inclusiveness has been the cornerstone of India's development agenda. Over the last few years, efforts in this direction have been accelerated by the Government through the mantra of inclusiveness 'Sabka Sath, Sabka Vikas', further elaborated by ensuring 'Sabka Vishwas'. As India is a developing economy with resource constraints, we have to prioritize and optimize the expenditure on social infrastructure to promote sustainable and inclusive growth. It is critical at this juncture to focus on public investments in human capital and strengthen the delivery mechanisms of government interventions to ensure transparency and accountability. With India having the demographic advantage, improving educational standards, skilling the youth, enhancing job opportunities, reducing disease burden and empowering women will help in realizing the potential of a buoyant economy in the future.

INTRODUCTION

10.1 The 2030 Agenda for Sustainable Development as reflected in the 17 Sustainable Development Goals (SDGs) and 169 targets, calls for global partnership to ensure peace and prosperity for people and the planet, now and into the future. It is recognized that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality and spur economic growth in a sustainable manner. India is committed to achieve these SDGs and a strong social infrastructure is key to achieve them. The Government has been focusing on provisioning of assets such as schools, institutes of higher learning, hospitals, access to sanitation, water supply, road connectivity, affordable housing, skills and livelihood opportunities. This gains significance given the fact that India is home to the world's youngest population as half of its population is below the age of 25. It has also been estimated that demographic advantage in India is available for five decades from 2005-06 to 2055-56, longer than any other country in the world (UNFPA, 2018). This demographic advantage can be reaped only if education, skilling and employment opportunities are provided to the young population.

[1] First female Prime Minister of Norway. Brundtland Commission submitted its report 'Our Common Future' which brought the concept of Sustainable Development in the global agenda.

HUMAN DEVELOPMENT INDEX

10.2 India's HDI (Human Development Index) has improved significantly over the years between 1990 and 2017. The country's HDI value increased from 0.427 to 0.640, but its position is still lowest among its peer countries (Asian and developing economies). As per the UNDP Human Development Index (HDI), India is ranked 130 among 189 countries. Moreover, India also reflects inter-State disparities in regional and human development which are reflected by State level HDIs.

10.3 The Subnational Human Development Index (SHDI) for different States for the period 1990 and 2017, released by UNDP show that all States have shown significant improvement in levels of human development. The minimum SHDI for year 2017 is more than maximum SHDI for year 1990 across all States (Figure 1).

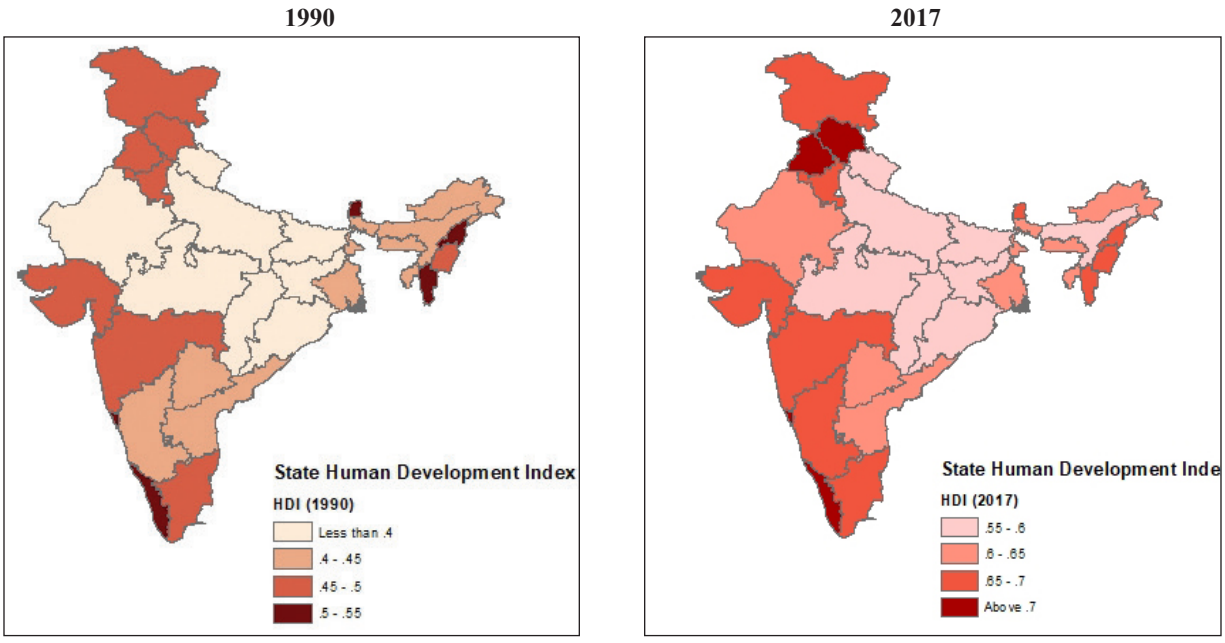
10.4 The 2017 HDI scores indicate that the States like Kerala, Goa, Himachal Pradesh and Punjab occupy the top four positions while the States like Bihar, UP and MP are at the bottom of the rankings. The States which were the worst-performing ones in HDI during 1990s are presently doing well in the social parameters. The region-wise trend of HDI scores suggests that most Southern and Northern States have performed much better as compared to their Eastern counterparts who have registered poor performance in SHDIs.

Sustainable Development Goals (SDGs)

10.5 As mentioned earlier, the SDG's are a collection of 17 global goals and 169 targets set to be achieved by 2030, aimed at addressing global challenges. To measure India's performance in SDG's, NITI Aayog has developed the SDG India Index for all States and UTs. Based on this index, States are classified into four categories, for each of the SDGs (except Goals 12, 13, 14 and 17):

a. Achiever – when SDG India Index score is equal to 100.

Figure 1: Subnational Human Develoment Index 1990 vs 2017



Source: SBI Research and UNDP Global Data Lab

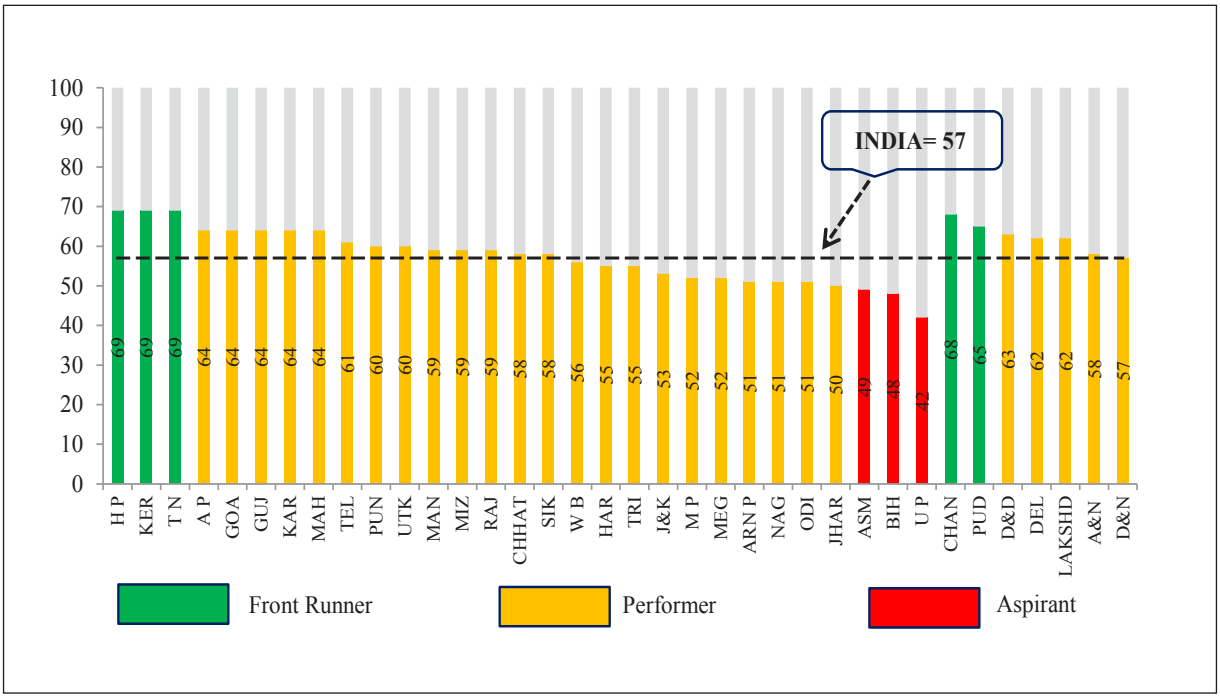
b. Front Runner – when SDG India Index score is less than 100 but greater than or equal to 65.

c. Performer – when SDG India Index score is less than 65 but greater than or equal to 50.

d. Aspirant – when SDG India Index score is less than 50.

10.6 The 2018 SDG India index indicates that States like Kerala, Himachal Pradesh and Tamil Nadu are occupying top three positions and are in the front runner category while UP, Bihar and Assam are ranked at the lowest in the aspirant category. Figure 2 shows the ranks of different States along with their categories. Chapter 5 on Sustainable Development and Climate Change may be referred for more details.

Figure 2: States Rank and categories in SDG India Index (2018)



Source: SDG India Index by NITI Aayog

Table 1: SDGs targets and achievements in Health - Goal 3: Good Health & Well-Being

	Global Targets	India's Achievements
1	By 2030, reduce the global MMR to less than 70 per 100,000 live births.	India's MMR during 2014-16 was 130.
2	To reduce neonatal mortality to at least as low as 12 per 1,000 live births by 2030.	In 2016, Neo-natal mortality rate of India was 24.
3	To reduce under-5 mortality to at least as low as 25 per 1,000 live births by 2030.	In 2016, under-5 mortality rate of India was 39.

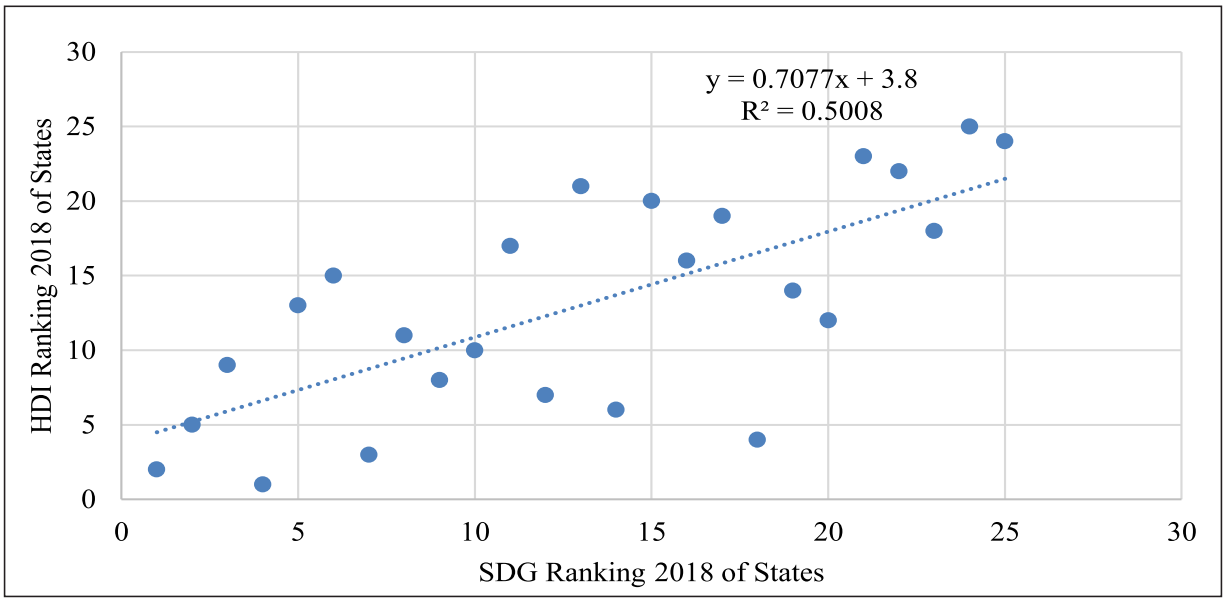
Table 2: SDGs target and achievements in Education - Goal 4: Quality Education

Global Targets	India's Achievements
1. By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.	U-DISE provisional data shows that the all India gross enrolment ratio (GER) under elementary education is 93.55 per cent during 2016-17, while it is 79.35 per cent in secondary education.
2. By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including higher educaton.	India's GER is significantly lower in higher education. The MHRD provisional data for the year 2017-18 indicates that the GER in higher education is 25.8 per cent (18-23 years).
3. By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.	India's gender parity index (GPI) shows an improvement in girls' education at all levels of education, except higher education. In the case of Scheduled Tribe (ST) students, the GPI value is <1 indicating disparity between girls and boys in primary education.
4. By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.	The total literacy rate is 73.0 per cent in 2011 for the age group 7 and above having 80.9 per cent and 64.6 per cent for male and female respectively.

Source: Reports of GoI

10.7 The underlying dimensions of SDG targets are closely related to education and health aspects as evident in the positive correlation between HDI and SDG rankings of Indian States (Figure 3). Hence, it is imperative that the government policies give necessary focus on investments in education and health to achieve equitable and inclusive development in the country.

Figure 3: Correlation between HDI and SDG rankings of Indian States for year 2018



Source: Calculation based on SDG India Index - Baseline Report, 2018 and UNDP-SBI Research (SBI-ECOWRAP), March 2019.

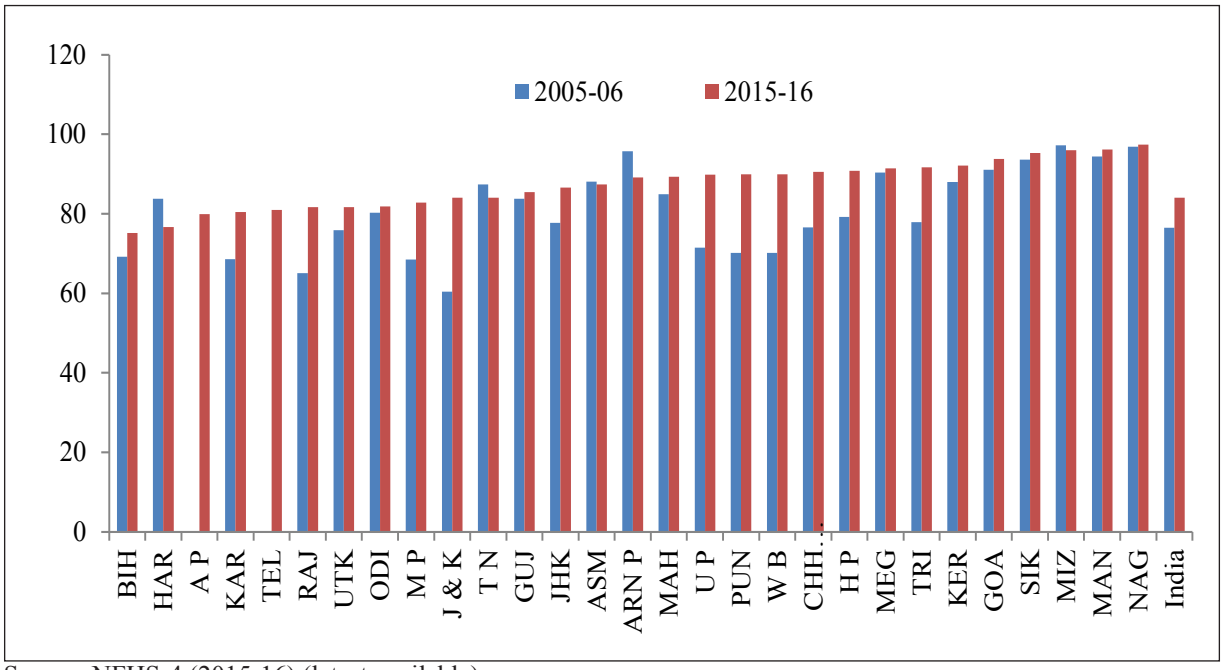
GENDER ISSUES

10.8 As the World aspires to achieve the SDGs by 2030, one of the most important factors which will determine whether countries achieve their targets set under SDGs will be 'gender equality' (SDG-5). The role of women is critical not only across agriculture and industrial sectors but also in governance, education and health services. Societies with patriarchal norms and gender stereotyping will continuously move backwards without making progress. The Government of India has initiated several programmes like *Beti Bachao, Beti Padhao (BBBP), Ujjwala Scheme, Poshan Abhiyaan, Pradhan Mantri Matra Vandana Yojana etc.,* to mainstream women and make women active agents of change in the society.

Financial Inclusion and level of household autonomy of women

10.9 Financial inclusion of women is considered as an essential tool for empowerment of women as it enhances their self-confidence and enables financial decision-making to a certain extent. As far as financial inclusion in India is concerned, significant progress has been made during the last decade (Figure 4). At all India level, the proportion of women having a bank or saving account that they themselves use have increased from 15.5 per cent in 2005-06 to 53 per cent in 2015-16.

Figure 4 : Percentage of women having bank account-State wise

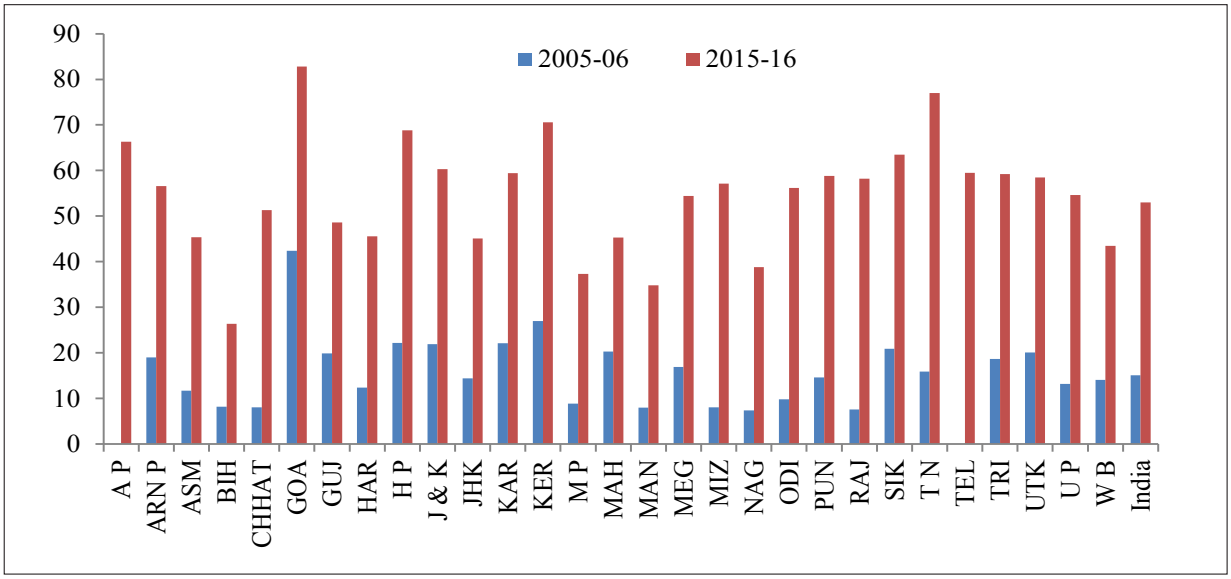


Source: NFHS-4 (2015-16) (latest available).

Note: Data for newly created states Andhra Pradesh & Telangana have not been reported for 2005-06.

10.10 As far as women's participation in household decision making is concerned, it has also improved significantly. As per NFHS-4, participation of currently married women in household decision making has increased from 76.5 per cent in 2005-06 to 84 per cent in 2015-16 at all India level. States like Chhattisgarh, Goa, Himachal Pradesh, Kerala, West Bengal and North Eastern States are front runners in terms of women's participation in household decision making compared to other States (Figure 5).

Figure 5 : Percentage of Currently Married Women (15-59 years) involved in Household Decision Making- State wise



Source: NFHS 4 (2015-16) (latest available).

Note: Data for newly created states Andhra Pradesh & Telangana have not been reported for 2005-06.

Box 1: Gender Budgeting

"Gender Budgeting is a tool for gender mainstreaming. It uses the Budget as an entry point to apply a gender lens to the entire policy process (MoWCD, 2015)". The Ministry of Women and Child Development (MoWCD) as the Nodal agency has adopted the mission strategy of 'Budgeting for Gender Equity' to ensure that government budgets are planned according to the differential needs of women and men and accordingly prioritized. Gender Budgeting is concerned with gender-sensitive formulation of legislation, policies, plans, programmes and schemes; allocation and collection of resources; implementation and execution; monitoring, review, audit and impact assessment of programmes and schemes; and follow-up corrective action to address gender disparities. It is undertaken through several institutional mechanisms such as Gender Budget Statement, Gender Budget Cells, as well as various schemes/programmes for women and girls.

Gender budgeting was referred for the first time by the then Finance Minister of India in his budget speech in 2001. Subsequently, it was recommended to have a separate chapter in annual reports of Ministries/Departments. Department of Expenditure has been issuing a note on Gender Budgeting as a part of budget circular since 2005-06. Further, Chief Secretaries of all States/UTs were instructed to set up gender budget cells on the lines of the Charter for Gender Budget cells issued by the Ministry of Finance in 2012. A guideline was also issued to provide a road map towards institutionalising Gender Budgeting at State level in 2013. In order to implement Gender Budgeting at State level, MoWCD has been conducting number of trainings, workshops, one to one interactions and development of resource material.

In the Gender Budget Statement of 2019-20, 30 Ministries/Departments reported having schemes with women's component, amounting to approximately 5 per cent (₹1,31,699.52 Crore) of the total Union Budget. Furthermore, 57 Ministries/Departments have formed Gender Budget Cells to institutionalise and strengthen gender budgeting processes. During the last 3 financial years, over 4500 Government officials have been trained under the GB Scheme.

TRENDS IN SOCIAL SECTOR EXPENDITURE

10.11 The expenditure on social infrastructure like health and education is a critical indicator of the commitment of the government towards these sectors. Public investment in social infrastructure has a critical role in providing access to social services for the people, especially the marginal and vulnerable sections of the society.

10.12 The expenditure on social services by the Centre and States as a proportion of GDP has registered an increase of more than 1 percentage points during the period 2014-15 to 2018-19 (BE), from 6.2 per cent in 2014-15 to 7.3 per cent in 2018-19 (BE) (Table 3). The increase was witnessed across all social sectors especially education where the public expenditure as a per cent of GDP increased from 2.8 per cent in 2014-15 to 3 per cent in 2018-19. The share of expenditure on social services out of total budgetary expenditure increased from 24.9 per cent in 2013-14 to 26 per cent in 2018-19.

Table 3: Trends in Social Services Expenditure by General Government (Combined Centre and States)

Item	2013-14	2014-15	2015-16	2016-17	2017-18 RE	2018-19 BE
			(₹ in crore)			
Total Budgetary Expenditure	30,00,299	32,85,210	37,60,611	42,65,969	48,57,990	53,61,181
Expenditure on Social Services *of which:*	7,46,391	7,67,622	9,15,500	10,40620	12,52,943	13,93,643
i) Education	3,48,267	3,53,589	3,91,881	4,34,974	4,92,544	5,66,770
ii) Health	1,39,280	1,48,791	1,75,272	2,13,119	2,54,365	2,76,083
iii) Others	2,58,844	2,65,243	3,48,348	3,92,527	5,06,034	5,50,790
			As percentage to GDP			
Expenditure on Social Services *of which:*	6.6	6.2	6.6	6.8	7.3	7.3
i) Education	3.1	2.8	2.8	2.8	2.9	3.0
ii) Health	1.2	1.2	1.3	1.4	1.5	1.5
iii) Others	2.3	2.1	2.5	2.6	3.0	2.9
			As percentage to total expenditure			
Expenditure on Social Services *of which:*	24.9	23.4	24.3	24.4	25.8	26.0
i) Education	11.6	10.8	10.4	10.2	10.1	10.6

ii) Health	4.6	4.5	4.7	5.0	5.2	5.1
iii) Others	8.6	8.1	9.3	9.2	10.4	10.3
As percentage to social services						
i) Education	46.7	46.1	42.8	41.8	39.3	40.7
ii) Health	18.7	19.4	19.1	20.5	20.3	19.8
iii) Others	34.7	34.6	38.0	37.7	40.4	39.5

Source: Budget Documents of Union and State Governments, Reserve Bank of India.

Note:

1. Social services include, education, sports, art and culture; medical and public health, family welfare; water supply and sanitation; housing; urban development; welfare of SCs, STs and OBCs, labour and labour welfare; social security and welfare, nutrition, relief on account of natural calamities etc.
2. Expenditure on 'Education' pertains to expenditure on 'Education, Sports, Arts and Culture'.
3. Expenditure on 'Health' includes expenditure on 'Medical and Public Health', 'Family Welfare' and 'Water Supply and Sanitation'.
4. The ratios to GDP at current market prices are based on 2011-12 base.

10.13 The Government has been committed to provision of social security which is evident in the initiation of major social sector schemes by the Government of India during the last five years as shown in Table 4.

Table 4: Major Social Protection Schemes and Achievements during 2014-2019

Scheme	Features	Status
Pradhan Mantri Suraksha Bima Yojana, 2015	Accident insurance scheme, offers a one-year accidental death and disability cover. Annual premium is ₹12. Available to people in the age group 18 to 70 years	As on 31/10/2018, gross enrolment is 14.27 crore. Amount of claims raised: ₹449.82 crore
Pradhan Mantri Jeevan Jyoti Bima Yojana, 2015	Government-backed life insurance scheme. Annual premium is ₹330. Available to people between 18 and 50 years of age	As on 31/10/2018, gross enrolment is 5.57 crore, Amount of claims raised: ₹2422.54 crore
Atal Pension Yojana, 2015	Pension scheme targeted at the unorganized sector.	In 2017-18, total subscribers enrolled were 97.05 lakh
Pradhan Mantri Fasal Bima Yojana, 2016	A Crop Insurance Scheme. Replaces the existing two schemes National Agricultural Insurance Scheme as well as the Modified NAIS.	Kharif 2017: 13.7 million farmers received compensation of ₹17209.94 crore.
Pradhan Mantri Vaya Vandana Yojana, 2018	Pension Scheme exclusively for the senior citizens aged 60 years and above.	As on 30/11/2018, 3.31 lakh subscribers, corpus of ₹22,812.75 crore
Atal Bimit Vyakti Kalyan Yojana, 2018	For Insured Persons (IP) covered under the Employees' State Insurance Act, 1948. Relief payable in cash in case of unemployment and while they search for new engagement.	To benefit 3 crore insured persons under ESIC coverage

Pradhan Mantri Rojgar Protsahan Yojana	12 per cent of employer contribution to EPFO of the new employees' drawing salary upto ₹15000 pm is given by government for the initial three years.	Number of establishments benefitted between 2016-17 & 15th January, 2019 was 1.24 lakh.
PM Shram-Yogi Mandhan Yojana, 2019	Offers every individual with a regular pension after they attain 60 years. Beneficiaries in unorganized sector workers.	As on 20th June, 2019 30.67 lakh subscribers
PM-KISAN, 2019	Offers income support of ₹6000/- per annum in three equal instalments to all eligible farmers irrespective of land holdings.	As on 23rd April, 2019, around 3.10 crore small farmers have received the first tranche of ₹2,000 and 2.10 crore farmers have got the second instalment.
Ayushman Bharat, 2018	Umbrella scheme of two major health initiatives:. (i) Health & Wellness Centres to provide to comprehensive primary health care. (ii) PMJAY aims to cover 10.74 crore poor & vulnerable families providing health coverage upto ₹5 lakh per family per year for secondary & tertiary hospitalization.	As on 11th January, 2019, 4503 HWCs operationalized. PMJAY: as on 30th December, 2018, no. of hospitals empaneled: 16,112, beneficiaries admitted: 6.81 lakh, e-cards issued: 39.48 lakh.
National Nutrition Mission or POSHAN Abhiyaan	Ensure attainment of malnutrition free India by 2022. Targeted intervention in areas with high malnutrition burden.	Scheme rolled out in all districts of 36 States/UTs. Mass media campaign and information dissemination at grassroots level being undertaken. September 2018 observed as Rashtriya Poshan Maah (month).
Mission Indradhanush (MI) and Intensified Mission Indradhanush (IMI)	To vaccinate unreached/partially reached pregnant women and children so as to reduce vaccine preventable under-5 mortality rate. The drive is foucused on pockets of low immunization average and hard to reach areas where proportion of unvaccinated and partially vaccinated children and pregnent women is high.	As of 12th April, 2019, 3.39 crore children immunized of which 81.79 lakh fully immunized. Under IMI, full immunization coverage in 190 districts increased from 50.5 per cent to 69 per cent as per Coverage Evaluation Survey, 2018 conducted by WHO and UNDP.
Pradhan Mantri Awas Yojana-Rural & Urban	Housing for All by 2022	PMAY - Urban: 80.96 lakh houses sanctioned and 25.69 lakh houses completed as on 27th May, 2019. 90 lakh houses completed in PMAY-Gramin during 2017-19.
Swachh Bharat Mission-Urban +Rural	100 per cent open defecation free by 2019	Urban areas of 21 States/UTs declared ODF 5.33 lakh villages in 25 States/UTs declared ODF

Source: Year-end achievements of various Central Ministries.

EDUCATION FOR ALL

10.14 Goal 4 of Sustainable Development Goals (SDGs) on education requires ensuring equitable, inclusive and quality education along with promotion of lifelong learning opportunities for all by 2030.

Status of Education in India

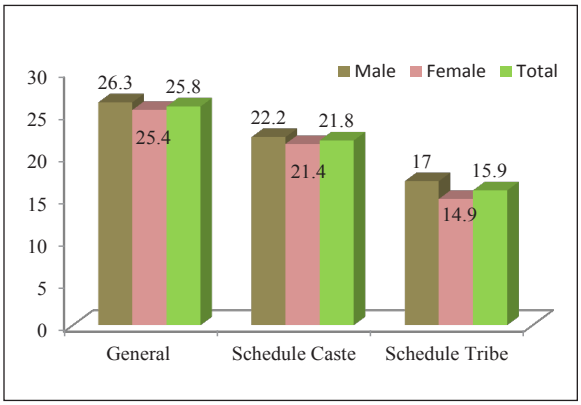
10.15 As per Educational Statistics at a Glance (ESAG), 2018, the thrust on providing primary education has yielded results across social categories and gender in Gross Enrolment Rate (GER). Over the years, remarkable progress has been made in respect of female participation up-to secondary level and GER for girls has exceeded that of boys (Table 5). But girls' enrolment rate is lower than that of boys at the higher education level. At this level, the gap is visible across the social categories too (Figure 6).

Table 5: GER (per cent), Drop-out Rate (per cent) and Pupil Teacher Ratio at levels of schooling

Level	GER (2016-17)	Drop-Out Rate (2016-17)	Pupil Teacher Ratio (Norm) 2015-16
Primary	Male: 94.02 Female: 96.35	Male: 6.3 Female: 6.4	23 (30 - RTE)
Upper Primary	Male: 86.90 Female: 95.19	Male: 4.97 Female: 6.42	17 (35 - RTE)
Secondary	Male: 78.51 Female: 80.29	Male: 19.97 Female: 19.81	27 (30 – Secondary level laid down in the relevant Scheme)
Senior Secondary	Male: 54.93 Female: 55.91	Male: .6.37 Female: 5.49	37
Higher Education	Male: 26.3 Female: 25.4	NA NA	30

Source: Educational Statistics at a Glance 2018, U-DISE 2016-17 and AISHE 2017-18 (latest available).

Figure 6: GER at Higher Education Level (per cent) 2017-18



Source: AISHE, 2017-18 (Ministry of Human Resource Development)

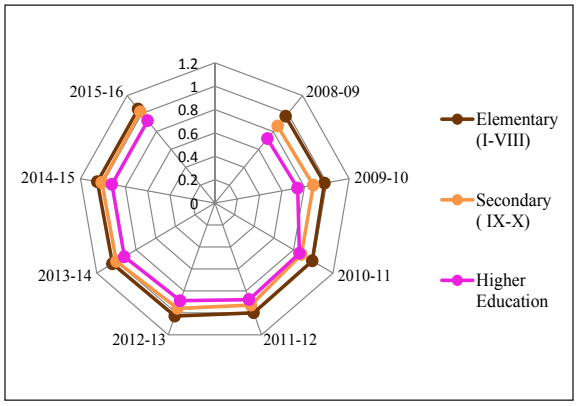
10.16 The drop-out rates are very high for boys at the secondary school level. According to NSSO 71st round[2] (2014), the reasons for male students dropping out are economic activities, lack of interest in education and financial constraints. The transition rate from secondary school to senior secondary and further to higher education is also very low. The Pupil Teacher Ratio (PTR) at national level for primary schools is 23, 17 for upper primary, 27 for secondary and 37 for senior secondary schools. While the PTR appears to be satisfactory, it is clear that while there are sufficient teachers, the main issue is their balanced deployment based on student strength.

[2] Key Indicators of Social Consumption in India: Education, 2014.

Gender Parity Index (GPI) based on GER

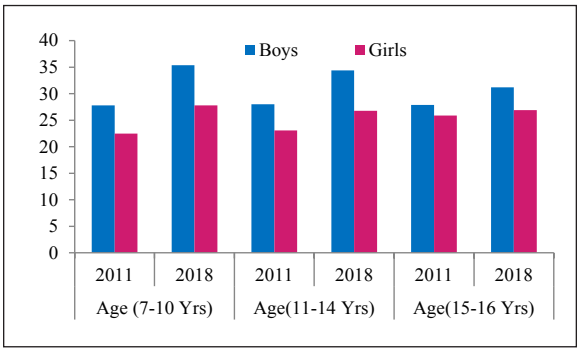
10.17 GPI based on GER indicates increasing trend of female participation at all levels (Figure 7). At the higher education level the GPI is low (0.92 in 2015-16 for higher education level and for all other levels it was above 1) (Figure 7). Although, enrolment of girls is higher than that of boys in government schools, the pattern gets reversed in private schools. The gender gap in enrolment in private schools has consistently increased across age groups (Figure 8).

Figure 7: Gender Parity Index (2015-16)



Source: Educational Statistics at a Glance, 2018

Figure 8: Gender gap in GER in Private schools (per cent)



Source: ASER, 2018.

Learning Outcomes: Improving quality of education

10.18 As per Annual Status of Education Report (ASER, 2018), from 2014 to 2018, there is a gradual improvement in both basic literacy and numeracy for Class III students but still only a quarter of them are at grade level (ability to read and do basic operations like subtraction of Class II level). The report also shows that 1 out of 4 children leaving Class VIII are without basic reading skills (ability to read at least at Class II level).

10.19 The Rules of the RTE Act were amended in February, 2017 to include, for the first time, the class wise, subject wise Learning Outcomes till Class VIII, thereby emphasising the importance of quality education. In this regard, Learning Outcomes for each class in Languages (Hindi, English and Urdu), Mathematics, Environmental Studies, Science and Social Science up to the elementary stage have been developed. These are the basic levels of learning that students should achieve at the end of each class.

National Achievement Survey

10.20 National Achievement Survey (NAS) which was earlier based on textbook content, has been made a competency-based evaluation from 2017. As compared to only 4.43 lakh students who were earlier tested across Classes 3, 5 and 8, in 2017 over 22 lakh students from around 1,10,000 schools across 701 districts of India (including rural and urban) were assessed. In the case of Class X, over 15 lakh students from around 44000 schools across 609 districts were assessed in 2018 compared to 2.77 lakh students assessed in the previous cycle at the State level only. The NAS, 2017 was therefore one of the world's largest sample surveys of student learning achievement. The District wise report cards, generated under NAS, show the learning levels of students in every district against the expected learning

outcomes of a particular grade. In the case of Class X, over 15 lakhs students from around 44000 schools across 609 districts were assessed in 2018 compared to 2.77 lakh students assessed in the previous cycle at the State level only.

Shortfall of teachers

10.21 The shortage of teachers is a perennial problem with 9.08 lakh vacancies of teachers at elementary level in government schools as on 31st March 2016. This is despite the high number of pass-outs in D.Ed./B.Ed. programme and the number of surplus teachers in zero enrolment schools (Table 6).

Table 6: Available manpower for teaching job, pass out in D.Ed. /B.Ed. and number of surplus teachers during 2015-16

No. of candidates	Male	Female	Total
D.Ed. or equivalent pass out	39011	49501	88512
B.Ed. pass-out	197793	348440	546233
Teachers in schools with zero enrolment	-	-	24921
Total availability of school teachers	-	-	636861
Demand for teachers at elementary level	-	-	400000 (approx.)

Source: Education Statistics at a Glance, 2018

Box 2: Recent Initiatives in School Education Sector

Samagra Shiksha: A comprehensive programme subsuming Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE). For first time, it also includes provisions for support at pre-school level, library grants and grants for sports and physical equipment. The vision of the Scheme is to ensure inclusive and equitable quality education from pre-school to senior secondary stage in accordance with the Sustainable Development Goal (SDG) for Education (SDG-4).

Swayam platform offers 10 courses of Diploma in Elementary Education (D.El.Ed) and more than 13 lakh unqualified teachers have enrolled for this diploma.

UDISE+, an updated online real time version of UDISE (Unified District Information on School Education) has been launched with three additional features – GIS mapping, data verification through third-party mobile application and data analytics.

PGI, Ministry of Human Resource Development has launched a 70-point Performance Grading Index (PGI) to assess areas of deficiency in each state's school education system so that targeted interventions can be made at every level from pedagogy to teacher training.

ICT driven initiatives: Shaala Sidhi (to enable all schools to self-evaluate their performance), e-Pathshala (providing digital resources such as textbooks, audio, video, periodicals etc.) and Saransh (an initiative of CBSE for schools to conduct self-review exercises).

10.22 The shortage of teachers and principals and administrative staff, lack of regular supervision and inspection, inadequate training of the teachers, timely availability of finances are some of the factors plaguing the education system in the country as captured by PGI (Performance Grading Index, 2017-18) in the Governance and Management Domain for the first time. As per PGI report, 2017-18 in this domain, the top score (279, Gujarat) is only 78 per cent of the maximum points (360) and at the other end of the spectrum,

the minimum score obtained in this Domain is below 40 per cent (36.1 per cent). This clearly implies that 'Governance' is the domain which all States and UTs must focus upon. The PGI accords the highest importance to the Domain relating to Governance and Management because compliance with the indicators here will lead to critical structural reforms in areas ranging from monitoring the attendance of teachers to ensuring a transparent recruitment of teachers and principals.

SKILL DEVELOPMENT

10.23 The schooling system improves the educational level of the population. It is skill training that equip the youth to enter the labour market and improves their employability. According to NSSO Report 2011-12, only 2.3 per cent of the total workforce in India had formal sector skill training. Keeping in view the predominance of young population, the Government had formulated the National Policy on Skill Development & Entrepreneurship, 2015 under which the Skill India Mission by 2022 was formulated. The government had launched a comprehensive skill development programme in the last five years with the setting up of a Ministry for Skill Development & Entrepreneurship. Some of the major skill development programmes are listed in Table 7.

Table 7: Skilling in India: Recent Government Initiatives

Initiatives	Objectives	Achievements
Pradhan Mantri Kaushal Vikas Yojana (PMKVY) (1.0), 2015	Mobilize youth to take up industry relevant skill training. Targets to train 1 crore youth by 2020. Recognizes and certifies prior learning.	During 2015-16, 19.8 lakh youth were trained as against the target of 24 lakh.
Pradhan Mantri Kaushal Vikas Yojana (2.0), 2016-20	PMKVY version 2 has mandatory provisions for placement tracking.	Short term training: 30 lakh candidates enrolled, 27.9 lakh trained, 12.05 lakhs placed. Placement percentage: 54 per cent. Recognition of Prior Learning: 22.65 lakh enrolled, 22.08 lakh trained and 17.84 lakh assessed out of which 16.60 lakh passed as on 13th May, 2019
Pradhan Mantri Kaushal Kendra, 2015	Aspirational Model Training Centers to be opened in every district.	Till June 2019, 851 PMKKs have been allocated, 601 PMKKs have already been established.
National Apprenticeship Promotion Scheme, 2016	To promote apprenticeship. Consists of Basic Training and On-the-Job Training/ Practical Training at workplace.	Till June 2019, 11.87 lakhs candidate registered. 76,860 establishments registered under the scheme.
SANKALP, 2017	Creating convergence among all skill training activities, improving quality of skill development programmes, Creating industry led and demand driven skill training capacity.	As on December 2018, the process of disbursements of funds to States/ UTs is underway. Regional workshops with States/ UTs are also being held to facilitate roll out.
STRIVE, 2017	Creating awareness through industry clusters, integrating and enhancing delivery quality of ITIs.	As on December 2018, the operations manual of the project has been prepared.

Source: Ministry of Skill Development & Entrepreneurship.

Bridging the disconnect in the Skilling Ecosystem

10.24 The various government initiatives in the skilling ecosystem require further coordinated and concerted efforts between various Departments/Ministries and State governments for improving quality, relevance, quantity, aspirations, mobility and financing of skill development. Some recommendations towards improving the skill development programmes are stated below:

- Approximately 30 per cent of the surveyed STT participants in PMKVY were not looking for employment currently. At implementation level, proper pre-screening on the candidates should be done and ensure that only eligible candidates are enrolled for the programme. Moreover, stronger facilitation support to avail MUDRA loan should be provided to PMKVY certified candidates.
- Skill Voucher can be introduced as a financing instrument given to a beneficiary that enables them to sign up for vocational education course at any accredited training institute. Once training is completed, the accredited

Box 3: Impact of PMKVY.2 on Employability and Income- An Evaluation

The key question which the evaluation of PMKVY.2 aimed to answer is: *What is the impact of PMKVY training and certification on the employability and income of its participants?*

For evaluation of STT (Short Term Training) component, a three-arm design has been adopted. Arm 1 consists of individuals who have completed their training and have been certified under PMKVY. Arm 2 consists of individuals who have completed their training but have not been certified (did not appear or pass the assessment test) under PMKVY. Arm 3 consists of individuals who are similar to the PMKVY trained/certified respondents in terms of eligibility criteria but have not attended the PMKVY training. Through this design, the study aims to essentially assess the impact of PMKVY training and certification on employment and salary premium, based on survey conducted during Deccember, 2018 to January, 2019 of PMKVY trained candidates.

Employment impact: Impact analysis of STT on the employability shows that PMKVY training and certification has led to a nine-percentage point increase in proportion of employed individuals, as the proportion of employed individuals was 32 per cent in Arm 1 as compared to 23 per cent in Arm 3. PMKVY training alone was found to have an impact of eight percentage points on employability, as Arm 2 employment rate was 31 per cent as compared to 23 per cent in Arm 3. However, PMKVY certification alone, was found to have a non-significant impact of two percentage points when the employment rate of Arm1 was compared with employment rate of Arm 2 respondents.

Income impact: On assessment of impact of STT on the income, PMKVY training and certification was observed to have an impact of 15 per cent on the mean monthly income (₹8629/- in Arm 1 as compared to ₹7474/- in Arm3). PMKVY training alone was observed to have an impact of nine per cent, as mean monthly income of PMKVY trained individuals was observed to be ₹8283 as compared to ₹7584 of the comparison group. Also, PMKVY certification alone was found to have an impact of nine per cent on the mean monthly income (₹8588 in Arm 1 as compared to ₹7907 in Arm 2).

While assessing the impact of RPL (Recognition of Prior Learning) programme on income, a significant difference of 19 per cent was observed in the mean monthly income of RPL certified candidates (₹10997/-) when compared to that of the comparison group (₹9275/-). The analysis of the before RPL and current monthly income of RPL certified individuals suggest a 25 per cent increase in their mean monthly income (₹11006/- currently as compared to ₹8836/- before RPL programme). Further, 35 per cent of PMKVY certified respondents who had an increase in their current income, have acknowledged the contribution of RPL programme in the same.

Source: Ministry of Skill Development & Entrepreneurship.

institution can redeem the voucher from the government.

- Industry should be incentivized to set up training institutions in PPP mode. Local Industry must be involved for curriculum development, training modules, provision of equipment, training of trainers etc. Industry can help in developing a database of instructors for selection of Training providers.
- The personnel of Railways and other para-military forces could be used for skill training or lending institutional support in imparting training in hilly, inaccessible and difficult terrains. Local bodies can be used for skill mapping and creating a data base of youth at local level to assess demand supply gaps.

EMPLOYMENT SCENARIO

Findings of Periodic Labour Force Survey

10.25 The Periodic Labour Force Survey (PLFS) has been designed to yield annual estimates of the labour force on employment and unemployment along with quarterly estimates for the urban areas. The first annual PLFS (2017-18) provides quarterly employment statistics for urban areas on Current Weekly Status (CWS) basis and annual estimates of employment indicators both in rural and urban areas on CWS and usual status basis[3]. However, labour market estimates by PLFS is not strictly comparable with NSSO-EUS. For comparability, the result of the PLFS with earlier rounds of NSSO surveys need to be understood in the context with which the survey methodology and sample solution has been designed.

10.26 As per PLFS estimates, Labour Force Participation Rate (LFPR) in India has declined to 36.9 per cent in 2017-18 from 39.5 per cent in 2011-12 (NSSO) as per usual status. In rural areas, it has declined by 3.6 percentage points while it has declined by 0.1 percentage points in urban areas. The Worker Population Ratio (WPR) has also shown similar trend. As per usual status, WPR in India has declined to 34.7 per cent in 2017-18 from 38.6 per cent in 2011-12 (NSSO). The WPR has declined by 4.9 percentage points in rural areas while it has declined by 1.6 percentage points in urban areas (Table 8).

Table 8: Key Labour Market indicators for all age group in 2017-18 (in per cent)

Indicators	Rural	Urban	Total
Usual Status			
LFPR	37.0	36.8	36.9
WPR	35.0	33.9	34.7
UR	5.3	7.8	6.1
CWS			
LFPR	35.7	36.4	35.9
WPR	32.6	32.9	32.7
UR	8.5	9.6	8.9

Source: Annual Report, PLFS (2017-18)

10.27 The unemployment rate (UR) in India stood at 6.1 per cent with 5.3 per cent in rural areas and 7.8 per cent in urban areas as per usual status. As per CWS, the UR was 8.9 per cent with 8.5 per cent in rural areas and 9.6 per cent in urban areas (Table 8).

10.28 General education of youth has improved to 65.4 per cent for urban females and 65.8 per cent for urban males. However, 94.3 per cent of those aged 15 or over in urban areas do not have technical education. The proportion of urban youth who received formal vocational training has improved to 4.4 per cent in 2017-18. PLFS found on average, a male employee earned nearly 1.2-1.3 times the earnings of female regular

[3] A person who is unable to get work for even for an hour in the last seven days of reference week despite available and seeking for work is considered as unemployed under CWS while under usual status activity of a person is determined on the basis of reference period of 365 days preceding the date of survey.

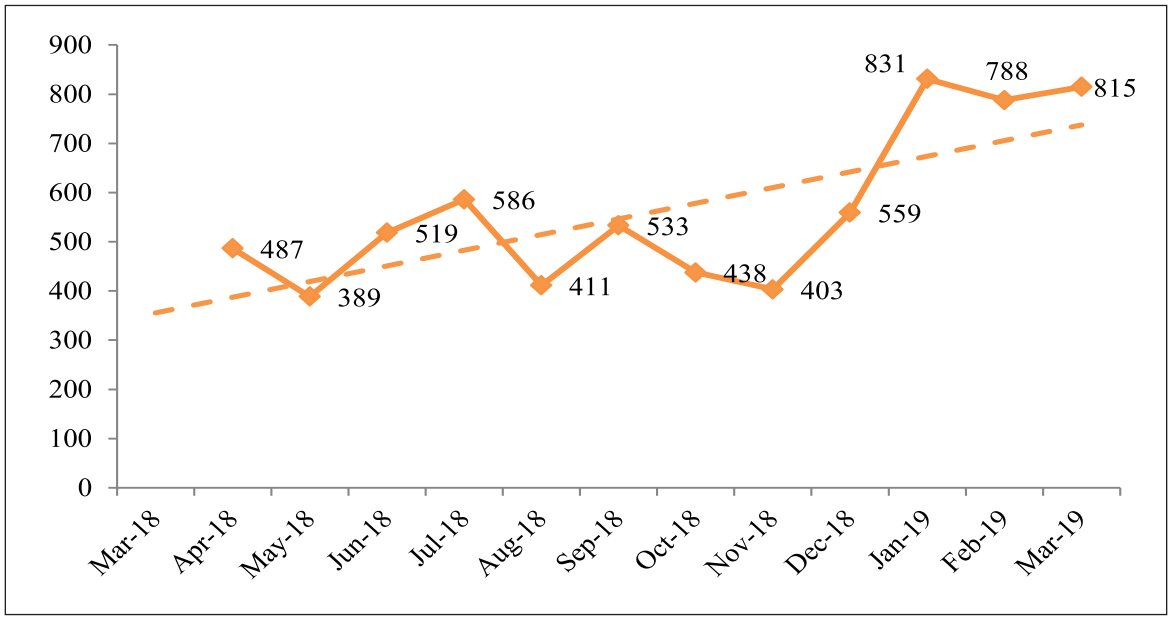
salaried worker in 2018. However, self-employed male workers earned 2 times more than the earnings of self-employed female workers in urban areas in 2018.

10.29 Keeping in view India's demographic advantage and with almost 93 per cent of the informal workforce, it is important to improve measures of employment through administrative statistics, which should be complemented by periodic surveys. In this direction, the Ministry of Statistics and Programme Implementation has started bringing out estimates of new subscribers/members enrolling in large social security schemes like the Employees' Provident Fund (EPF), Employees' State Insurance (ESI) Scheme and the National Pension Scheme (NPS). The next section examines the indicator for employment in formal sector based on the payroll data of EPFO.

Indicators for Employment in Formal Sector

10.30 The Government has been bringing out the employment related statistics in the formal sector (since April 2018) covering the period September 2017 onwards, using information on the number of subscribers who have subscribed under three major schemes, namely, the Employees' Provident Fund (EPF) Scheme, the Employees' State Insurance (ESI) Scheme and the National Pension Scheme (NPS). There are elements of overlap and the estimates are not additive. However, the payroll data released by EPFO based on the number of members subscribing to the scheme gives an idea of the level of employment in the formal sector (Figure 9).

Figure 9: Indicator for Employment in Formal Sector (in thousands)



Source: EPFO data

10.31 The net employment generation in the formal sector was higher at 8.15 lakh in March 2019 against 4.87 lakh in February, 2018. The trend line reflects a positive trend in terms of employment in the formal sector.

HEALTH FOR ALL

10.32 Human health and wellbeing are interrelated with sustainable development in a complex, bidirectional way, in that investment

Figure 10: MMR: Global Comparison

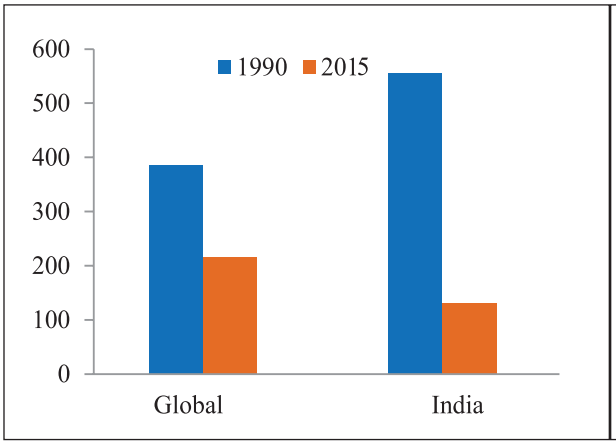
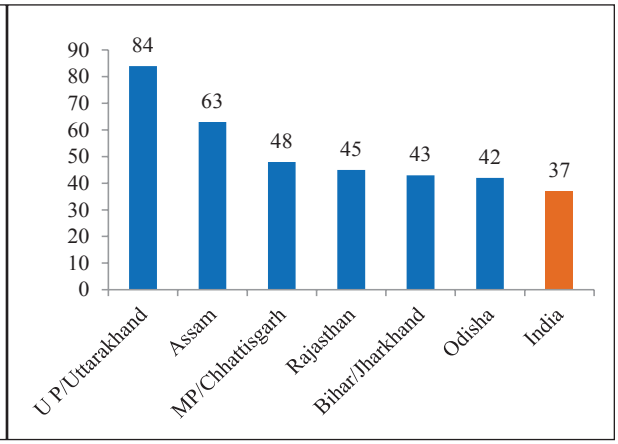


Figure 11: Decline in MMR (in points) for EAG States (2011-13 to 2014-16)



Source: MMEIG Report 2015 and SRS Report for India (2018) & EAG States (latest available).

in health for all supports social, economic and environmental sustainability (WHO, 2017). A healthy productive population is an enabler for sustainable development and hence it is critical that the Government remains committed to improve public health delivery, reduce health inequities and ensure affordable health care for all. Though India has made substantial progress, there are areas which require policy interventions to attain the goals of accessible, affordable and quality health care.

Status of Health

10.33 The National Health Mission (NHM), with its two sub-missions National Urban Health Mission (NUHM) and National Rural Health Mission (NRHM) envisages achievement of universal access to equitable, affordable and quality healthcare services that are accountable and responsive to peoples' needs. Under this Mission, support is provided to States/UTs to provide accessible, affordable, accountable and effective healthcare up to District Hospital level. Major programme components under NRHM are Reproductive-Maternal-Neonatal-Child and Adolescent Health and Communicable and Non-Communicable diseases.

Maternal Health

10.34 Maternal Mortality Ratio (MMR) of India has declined by 37 points from 167 per lakh live births in 2011-13 to 130 per lakh live births in 2014-16, in a span of three years. Between 1990 and 2015, MMR in India has declined by 77 per cent as compared to 44 per cent decline in global average (Figure 10).

10.35 Between 2011-13 and 2014-16, all Empowered Action Group (EAG) States have shown MMR decline which is higher than that of National Average (SRS 2014-16) (Figure 11). New intiatives of the Government to improve Maternal and New-born Health are given in Box 4.

Child Health

10.36 As per the latest Sample Registration System, 2016 report, the Under Five Mortality Rate in India is 39 per 1000 live births, Infant Mortality Rate is 34 per 1000 live births and Neonatal Mortality Rate is 24 per 1000 live births. The U5MR has declined at a faster pace in the period 2008-2016, registering a compound annual decline of 6.7 per cent per year, compared to 3.3 per cent compound annual decline observed over 1990-2007.

Box 4: New Initiatives for Maternal & New born Health

LaQshya: 'LaQshya - Quality Improvement Initiative' was launched in December, 2017 with the objectives of reducing preventable maternal and new born mortality, morbidity and stillbirths associated with the care around delivery in Labour room and Maternity OT (Operation Theatre) and to ensure respectful maternity care. LaQshya initiative is a focused and targeted approach to strengthen key processes related to the labour rooms and maternity operation theatres in order to achieve time bound targets and to ensure desired outcome within a short period.

Midwifery initiative: The revision of Nurse Practitioner in Midwifery curriculum is being undertaken by the Indian Nursing Council to include core competence. The Govenent has initiated midwifery services throughtout the country in 2018, with an objective to provide access to quality maternal and new born health services, promote natural birthing, ensure respectful care and reduce over medicalization. The Midwifery Services Initiative aims to create a cadre for Nurse Practitioners in Midwifery who are skilled in accordance to ICM competencies, knowledgeable and capable of providing compassionate women-centric pregnancy care.

Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA): Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) was launched in 2016 to provide comprehensive and quality Ante-Natal Care (ANC) to pregnant women on the 9th of every month. Under PMSMA, doctors from both the public and private sector examine pregnant women on 9th of every month at Government health facilities. So far, more than 1.8 Crore antenatal check-ups (in addition to routine four ANC check-ups) have been conducted across the country under this program.

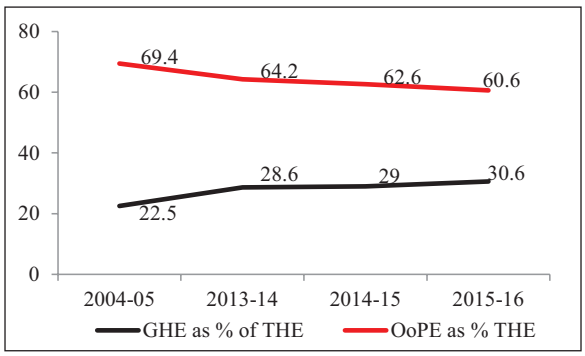
Expenditure on health

10.37 As per the National Health Accounts Estimates during 2013-14 to 2015-16, there is an encouraging trend of decreasing Out of Pocket Expenditure (OOPE) and an increase in public health expenditure out of Total Health Expenditure (THE). Public health expenditure (Centre, States and Local Bodies), as a percentage of Total Health Expenditure (THE) increased from 22.5 per cent in 2004-05 to 30.6 per cent in 2015-16 (Figure 12).

10.38 The Out-of-Pocket expenditure still remains the major component of healthcare expenditure, as evidenced from the cross-country analysis (Figure 13).

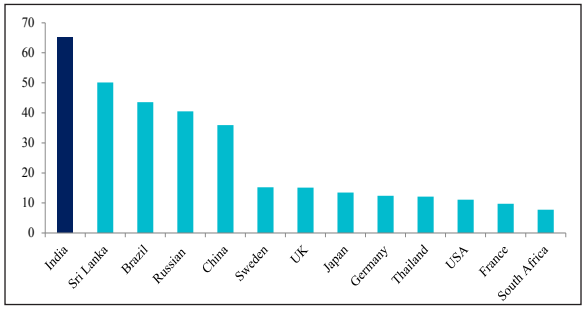
10.39 One major component of OOPE is expenditure on medicines. Government has made various provisions to provide medicines free of cost in Government facilities, but in reality, a majority (more than 60 per cent) of the patients are still forced to pay for some of the medicines they receive. The Government has taken several steps to reduce Out of Pocket

Figure 12: Government Health Expenditure & OOPE (in per cent)



Source: National Health Accounts Estimates for India, MoHFW (latest available).

Figure 13: OOPE as a percentage of Current Health Expenditure (in per cent)



Source: Global Health Expenditure Database, WHO, OOPE India figure calculated by WHO (extracted on May 31, 2019).

Box 5: Ayushman Bharat – a major step towards achieving Universal Health Coverage

Ayushman Bharat is a flagship programme of the Government, which comprises of two inter-related components, viz. establishment of "Health and Wellness Centres" (HWCs) for delivering Comprehensive Primary Health Care and "Pradhan Mantri Jan Arogya Yojana" (PMJAY), a health assurance scheme for preventing the financial hardships in availing in-patient care. This is the strategy adopted by India to achieve the vision of Universal Health Coverage (UHC) with its underlying commitment of "leaving no one behind".

The National Health Policy, 2017 recommends strengthening the delivery of primary health care, through establishment of Health and Wellness Centres and calls for a commitment of two third of the health budget for Comprehensive Primary Health care. Government of India announced upgradation of 1,50,000 Sub Centres and Primary Health Centres to Health and Wellness Centres by 2022 under Ayushman Bharat. This initiative is an attempt to move from selective and segmented approach to a comprehensive need-based health care service delivery.

The HWCs provide preventive, promotive, rehabilitative and curative care for Reproductive, Maternal, New Born, Child plus Adoloscent Health (RMNCH+A), Communicable diseases, non-communicable diseases, Ophthalmology, ENT, trauma services etc. The HWCs would undertake population based screening, prevention and control for Common NCDs- Hypertension, Diabetes, and the three common cancers (Oral, Cervix and Breast cancer), building on the already existing National Programme for the Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS). The HWC would be the first point of contact with the PHC/ CHC serving as the first referral point. This would, over time, reduce the burden on secondary and tertiary centres having to provide care for primary health as well, and also reduce out of pocket expenditures.

The second component of Ayushman Bharat, PMJAY, the largest public health insurance scheme in the world aims at providing financial protection (Swasthya Suraksha) to 10.74 crore poor and vulnerable families (approx. 50 crore beneficiaries) as per the latest Socio-Economic Caste Census (SECC) data, and existing RSBY beneficiaries. The scheme offers a benefit cover of ₹5 lakh per family per year (on a family floater basis). PMJAY covers medical and hospitalization expenses for most of the secondary and tertiary care procedures. PMJAY has defined 1,350 medical packages covering surgery, medical and certain day care treatments including medicines, diagnostics and transport.

To ensure that nobody is left out (especially the girl child, women, children and elderly), there is no cap on family size and age in the scheme. The scheme is cashless and paperless at public hospitals and empanelled private hospitals. The benefits also include pre and post-hospitalization expenses. The scheme is entitlement based.

Expenditure (OOPE) and burden of diseases in the country. One of the major steps taken by the Government to move towards Universal Health Coverage has been the launch of Ayushman Bharat (Box 5). Free Drugs and Diagnostics Service initiatives is another key initiative to bring down OOPE.

10.40 Affordability is a key issue in healthcare. In terms of the costs to the Government and for the individuals who seek healthcare in a country like India, the potential of AYUSH in reducing health expenses is immense. This aspect has been rightly recognised by the National Ayush Mission (NAM)[4]. There are several scalable

[4] Recognising the scope of alternative systems of medicine, the Mission was launched by Hon'ble PM in September 2014 to address the gaps in health services through supporting the efforts of State/UT Governments for providing AYUSH health services/education in the country, particularly in vulnerable and far-flung areas. Under NAM special focus will be given for specific needs of such areas and for allocation of higher resources in their Annual Plans.

projects in the areas of infertility treatments, NCDs etc. which can be adopted across India by co-locating AYUSH healthcare services under single roof so that people are free to choose, what is appropriate for them, thus making healthcare more accessible, accountable, affordable and customised (Box 6).

Box 6: Promoting AYUSH: An Affordable Healthcare Option for All

The role of AYUSH in preventive and promotive healthcare has not received the attention which is due to it, owing to the market driven supply systems that have emerged in health sector. As per NSSO, 71st round, only 5 to 7 per cent usage of 'other' including AYUSH (Ayurveda, Yoga or Naturopathy Unani, Siddha and homoeopathy) has been reported both in rural and urban areas. In terms of costs, the average out of pocket expenditure on AYUSH medicines per treated person is lower compared to non-AYUSH medicine as can be seen below:

Average out of pocket expenditure on AYUSH medicines and other (non-AYUSH) medicines per treated person in the last 15 days by sex and place of residence, 2014

System of medicine	OOP expenditure (in ₹)					
	Rural			Urban		
	Male	Female	All	Male	Female	All
AYUSH medicine	322	228	270	462	311	378
Other (non-AYUSH) medicine	381	402	392	485	430	454

Source: NSSO 71st Round on Social Consumption: Health (2014).

Further, there are scalable projects which can be replicated in other States depending on the local traditional preference/acceptability for the systems, like Unani in Uttar Pradesh, Sidhha in Tamil Nadu and Ayurveda across India, since it is India's own system of medicine.

'JANANI'[5] scheme of Government of Kerala is an exemplar which has popularised the system of homeopathy treatment for infertility in public health facilities[6]. In July to December 2012, the launch year of the pilot project *JANANI*, the number of cases at Kannur district was less than 100. However, over time there has been exponential growth in the number of infertility cases being registered and treated (see Figure) at Kannur District Homeopathy Hospital.

There is immense scope and potential in expanding the AYUSH systems of treatment for attaining the universal healthcare goals set by India. Recognising the significance of alternative systems, government has approved the continuation of National Ayush Mission (NAM) from 01.04.2017 to 31.03.2020 with an outlay of ₹2400 crore over the 3 year period.

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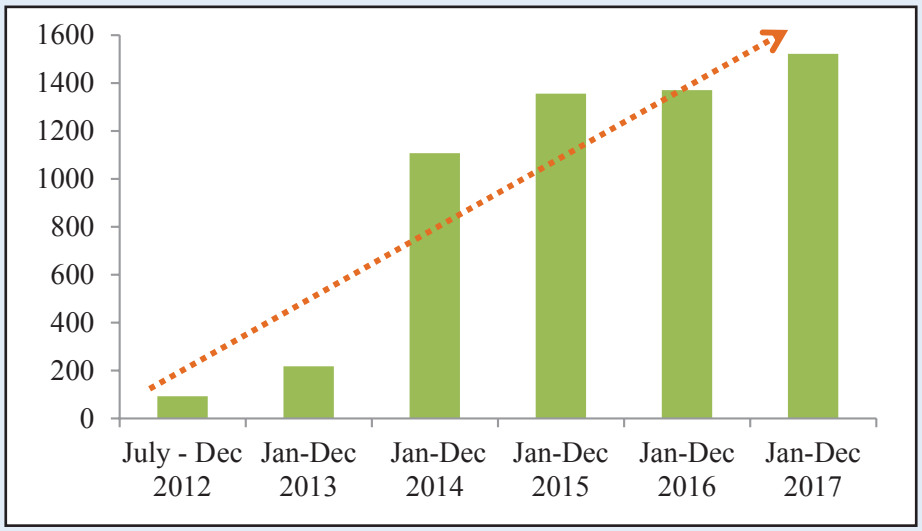
[5] Mother and child' Pilot project for Homeopathic Intervention in infertility launched in Kannur District Homeopathy Hospital in 2012; Newsletter, Dept. of Homeopathy, Government of Kerala, February 2019.

[6] Government of Kerala, Survey data show, in Kerala 10.25% of women face the problem of infertility but more than 60% of couples in Kerala resort to modern system of treatment, which entails huge costs for infertility treatment and hospitalization charges.

Cases at Janani Kannur District Homeopathy Hospital

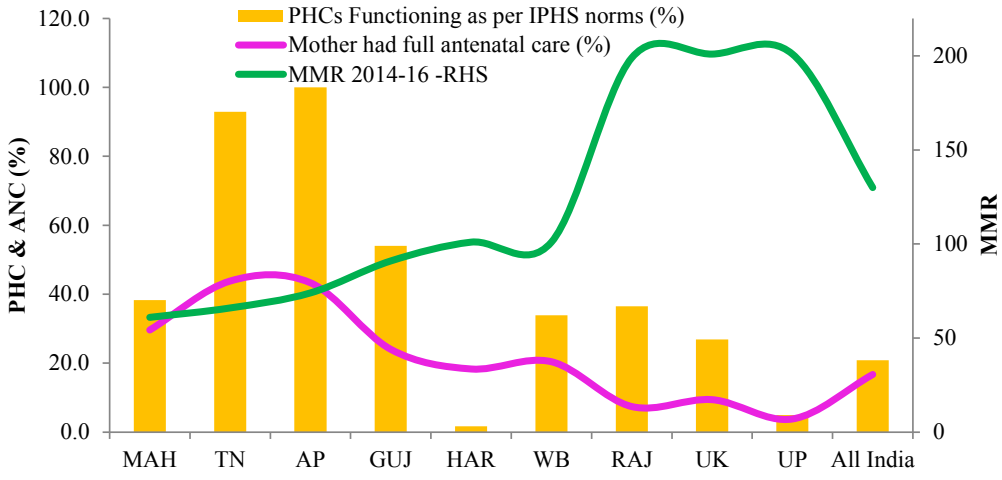


Source: Kannur District Homeopathy Hospital, Government of Kerala, February 2019.

Health Infrastructure in Rural Areas

10.41 Health infrastructure is an important indicator of the quality of health care delivery systems. IPHS (Indian Public Health Standards) are a set of uniform standards envisaged to improve the quality of health care delivery in the country. The upgradation of facilities to IPHS norms can lead to reduction in maternal mortality. MMR in the States where PHCs were functioning according to IPHS norms ranged between 1.7 per cent (Haryana) to 100 per cent (Andhra Pradesh) (Figure 14).

Figure 14: State-wise status of antenatal care (per cent) and Maternal Mortality Ratio with PHCs functioning as per IPHS norms (per cent)



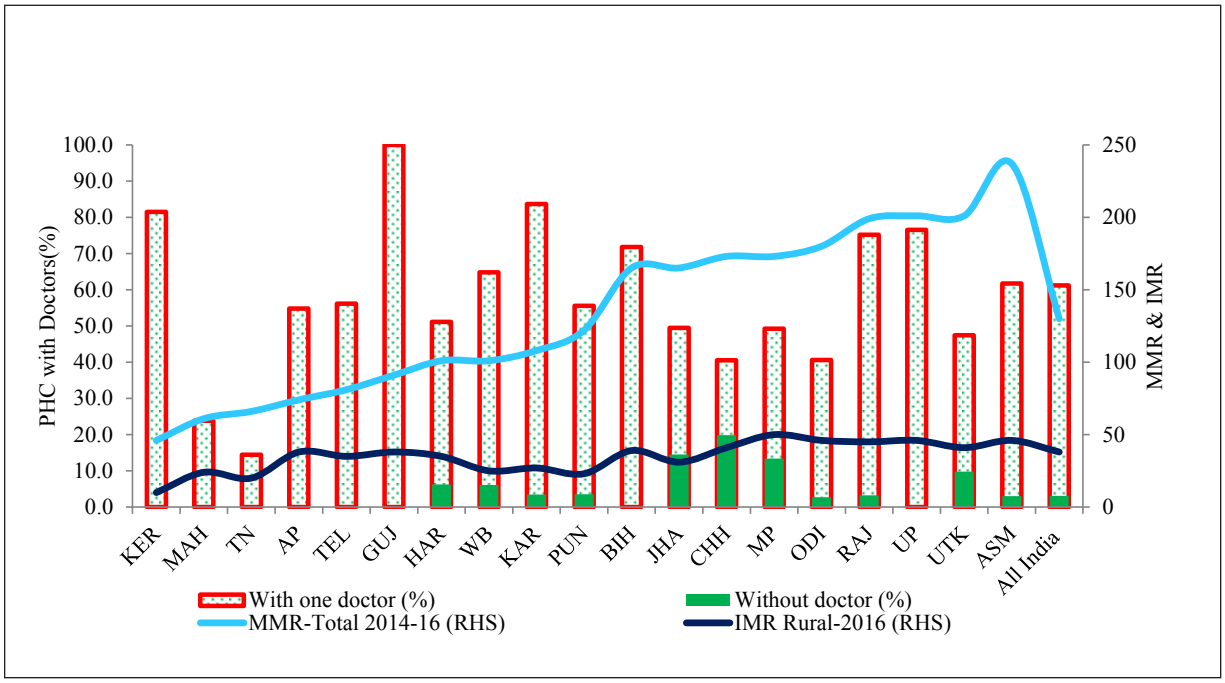
Source: Rural Health Statistis 2016, NFHS-4 and Census SRS Bulletin on MMR 2014-16

10.42 Andhra Pradesh, Tamil Nadu are the States where higher percentage of PHCs are following IPHS norms, indicating higher level of antenatal care, thereby reflecting low MMR. Haryana and UP had very low percentage of PHCs functioning as per IPHS norms and they reflect very high MMR.

Human Resource in health sector

10.43 The rural public health facilities across the country have difficulty in attracting, retaining, and ensuring regular presence of highly trained medical professionals. There exists shortfall across all cadres in the posts of doctors and specialists. There are large number of PHCs which are functioning with one doctor or without doctor. The States where large number of PHCs are functioning with 'one doctor and without doctor' indicate relatively higher level of rural IMR and MMR compared to other States (Figure 15).

Figure 15: State-wise PHCs with Doctors and without doctors (per cent), IMR-Rural and MMR



Source: Rural Health Statistis 2017, and Census SRS Bulletin on MMR 2014-16 (latest available).

10.44 Moreover, what this data do not reveal is that even if the personnel are present, their level of participation in providing health services, may not be at desirable levels due to lack of supplies, inadequate infrastructure facilities, poor monitoring of the staff, and so on. Public health services delivery in rural areas warrants better governance mechanisms through adoption of technologies, community and Local Self Government (LSG) participation and social audit.

National Quality Assurance Programme

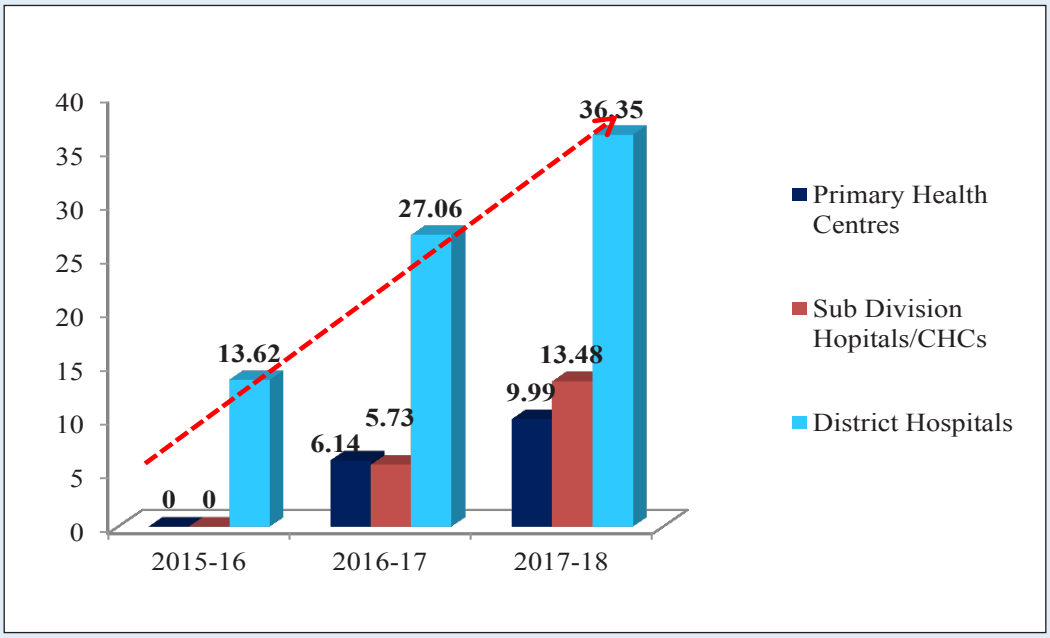
10.45 In order to improve healthcare delivery through the public health facilities and to improve beneficiary satisfaction, 'Kayakalp' initiative was introduced. This initiative rewards public health facilities to maintain cleanliness, hygiene and infection control in the facilities (Box 7).

Box. 7 : 'Kayakalp': Assuring Quality across Health Systems for Improving Outcomes

The lack of sanitation and hygiene protocols in health care facilities in India could cause for spreading infections and other diseases. Keeping in view, the urgency of the situation, under the ambit of NQAP, Kayakalp: Clean Hospital Initiative was launched in 2015. It is the ramification of Swachh Bharat Abhiyan in public health system. Kayakalp aims to promote sanitation and hygiene in public healthcare institutions. Facilities are assessed using objective checklist covering seven domains (a) Hospital Upkeep, (b)Sanitation & Hygiene, (c) Waste Management, (d) Infection control, (e) Support Services (f) Hygiene Promotion, and (g) Beyond the hospital boundary.

The programme made modest beginning in 2015-16 involving District Hospitals only and later included SDH/ CHC, PHC, UPHC and UCHC. The number of facilities participating in Kayakalp has risen from 712 in 2015-16 to 23975 in 2017-18. The number of facilities achieving Kayakalp awards has also increased from 97 facilities in 2015-16 to 1459 facilities in 2016-17 and 2959 in 2017-18.

Percentage of facilities scoring more than 70 per cent in external assessment



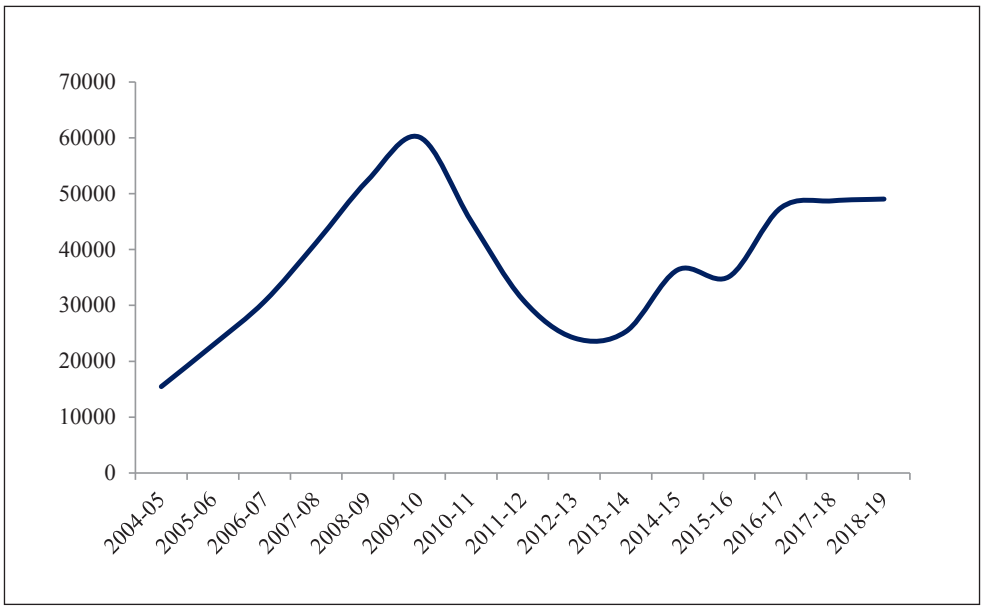
The major achievement with the advent of Kayakalp is the improvement of many of the components of basic amenities related to availability of water, sanitation, hand hygiene, biomedical waste management and basic environmental cleaning in public health facilities.

RURAL DEVELOPMENT

Rural Connectivity

10.46 The quality of life of people can be substantially improved by improving connectivity which will enhance their access to medical services, schools, markets and many other social services. The Pradhan Mantri Gram Sadak Yojana launched in 2000, aims to provide funds to States to construct rural roads to connect villages by all-weather roads. The rigor with which the scheme has been pursued has been reflected in the numbers.

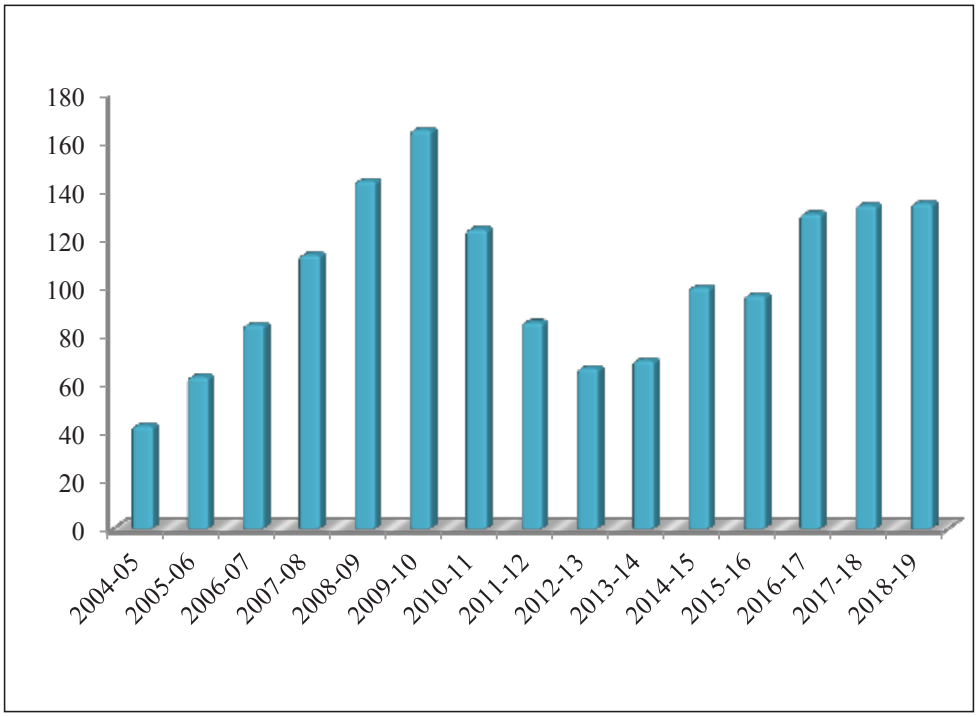
Figure 16: Length of rural roads constructed under PMGSY in India (in K.m.)



Source: Ministry of Rural Development

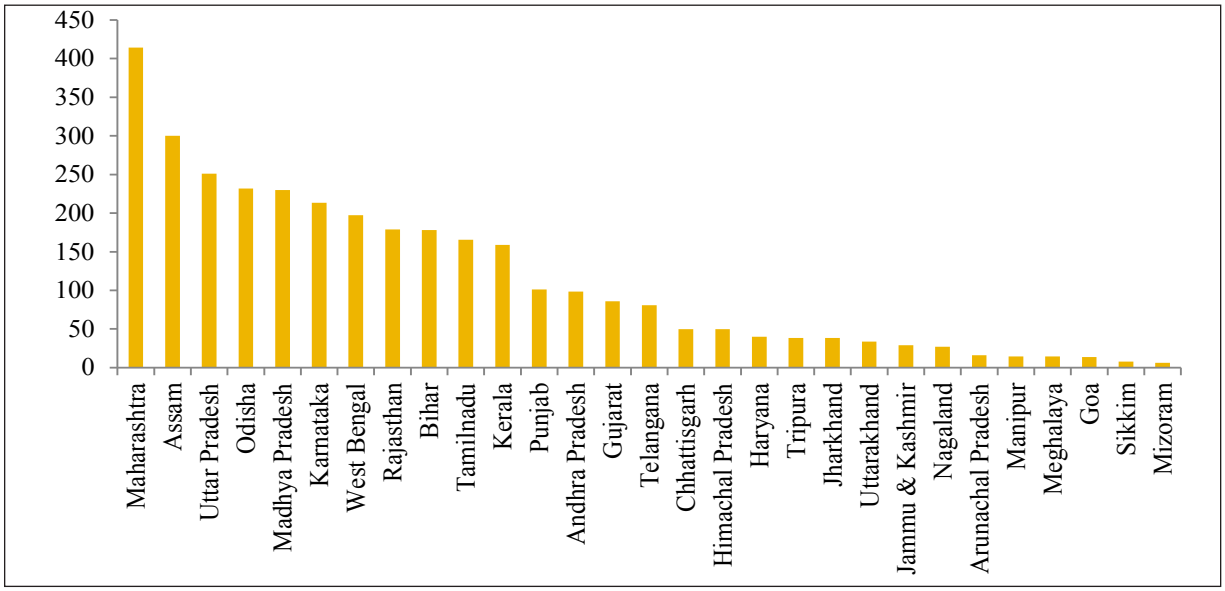
10.47 Figure 16 shows the length of rural roads constructed in each year. Since 2014, around 190,000 km of rural roads has been constructed. The rate of rural road construction, i.e. kms of rural road constructed per day, there is an increased momentum from 2015-16 onwards (Figure 17).

Figure 17: Rate of rural road construction under PMGSY (Km per day)



Source: Ministry of Rural Development

Figure 18: Length of rural roads by States (in thousand Km)



Source: Basic Road Statistics of India, 2016-17 (M/o Road, Transport & Highways)
Note: The Rural Roads comprise of PMGSY, rural roads built by State PWD/RWD & those constructed by Panchayati Raj Roads.

10.48 Some of the better performing states are Maharasthra, Assam, Uttar Pradesh & Odisha. Whereas on the other end, we have Mizoram, Sikkim, Goa & Meghalaya where the length of rural roads is very less. Total length in North Eastern areas (except Assam) is quite poor, due to the hilly terrain (Figure 18).

10.49 PMGSY is aggressively encouraging use of "Green Technologies" and non-conventional materials like waste plastic, cold mix, geo-textiles, fly-ash, iron and copper slag etc. in rural roads (Box 8). This is to reduce the "Carbon Footprint" of rural roads, reduce environmental pollution, increase the working season and bring cost effectiveness. Using "Green Technologies", 28,619 km of roads have been constructed and a record road length of 14,756 km was constructed in 2018-19.

Rural housing (PMAY-G): Shelter for the Poorest of the Poor

10.50 Pradhan Mantri Awas Yojana (Gramin) (PMAY-G) was launched in 2016 with a target to complete one crore pucca houses with basic amenities by March 31, 2019.

Box 8: PMGSY – WAYS TO RECYCLE

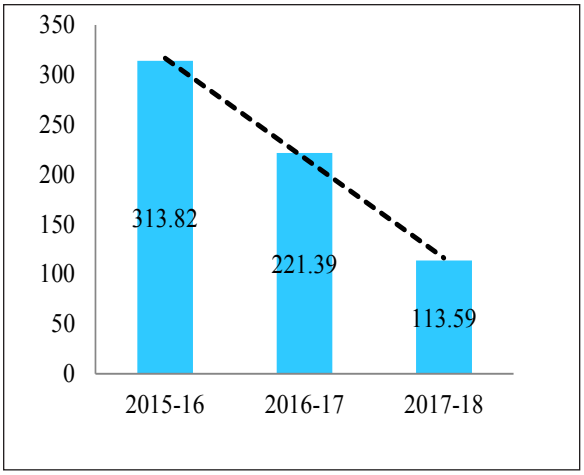
62 million tonnes of solid waste is generated daily in India and 8 per cent of this is plastic waste. Recycling is the best way to manage plastic waste. PMGSY is recycling waste plastics in a novel way by constructing roads out of recycled plastics. Plastic waste material is shredded to a fine size and mixed with hot aggregates in a mixing chamber where it uniformly coats the aggregates. The plastic coated aggregate is then mixed with hot bitumen and the resultant mixture is used for road construction.

Besides solving the problem of plastic disposal, bitumen usage is also reduced by one tonne per kilometer. Plastic as construction material also increases the strength of roads by reducing road fatigue and these roads have better resistance towards rainwater and cold weather. 12,666.52 kms of roads have been constructed across the country using waste plastic.

During 2014-2019, 1.54 crore houses were completed including those carried over from Indira Awas Yojana through convergence of government initiatives like piped drinking water, toilets under Swachh Bharat Mission/ MGNREGS, electricity connection under Saubhagya programme, LPG connection under Ujjwala programme.

10.51 On account of DBT, geo tagging, fair beneficiary selection, effective transaction based MIS, monitoring through "AwaasSoft" and mobile based application "AwaasApp etc, misutilization of funds was substantially brought down leading to faster completion of houses. The average number of days taken for completion of a house under IAY was 314 days (more than 10 months) against 221 days (seven months) under first year of PMAY in 2016-17 and around 114 days (three months) during the second year of PMAY in 2017-18 (Figure 19).

Figure 19: Average construction completion time (in days)

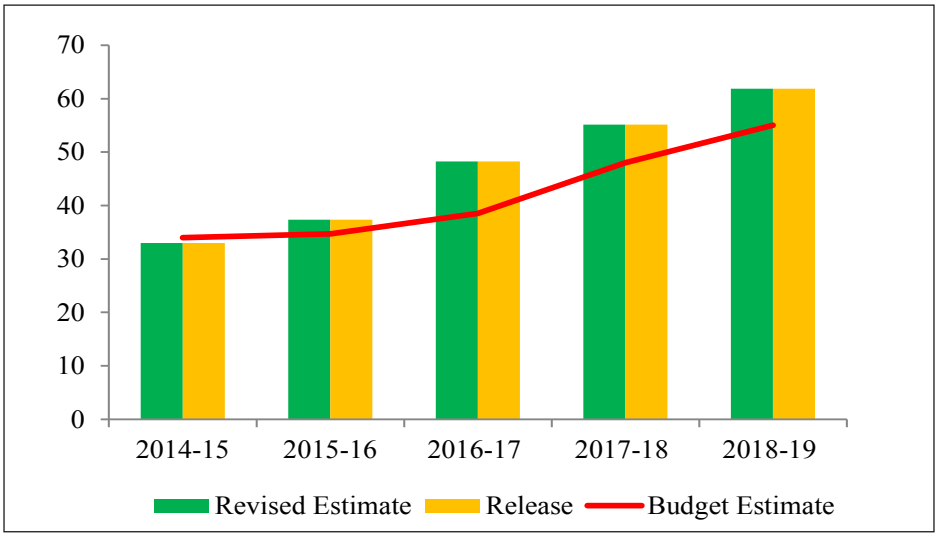


Source: NIPFP Study (2018) findings on PMAY-G

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)

10.52 Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), 2005 aims at enhancing livelihood security of households in rural areas of the country by providing at least one hundred days of guaranteed wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work. Chapter 10 in Volume-1 examines MGNREGS in detail, especially the role of technology in welfare programmes. Creation of productive assets of prescribed quality & durability, social inclusion, gender parity, social security and equitable growth are the foundational pillars of Mahatma Gandhi NREGA. The Government has accorded

Figure 20: Budgetary Support to MGNREGA (in thousand crore)



Source: Ministry of Rural Development.

priority for providing adequate budgetary support to MGNREGS which is reflected in the upward trend in budget allocation and release of funds to the States in the last four years (Figure 20).

10.53 MGNREGS has been instrumental and a guiding factor for tackling rural poverty and unemployment by providing employment to the rural poor and unskilled people. It has generated 267.96 crore persondays during 2018-19. Out of the total persondays, persondays for women was 54.6 per cent, SC was 20.7 per cent and ST was 17.4 per cent which are well above the norms (Table 9). During 2018-19, 66 per cent of total works taken up pertained to individual beneficiary schemes and 63 per cent of the total expenditure was on agriculture and allied works. Around 85,000 km of road length was constructed under MGNREGA during 2018-19.

Table 9: Key performance indicators/ Achievements under MGNREGA

Indicators	2014-15	2015-16	2016-17	2017-18	2018-19
Persondays Generated so far [In Cr]	166.2	235.1	235.6	233.7	267.9
SC persondays per cent as of total persondays	22.4	22.2	21.3	21.6	20.7
ST persondays per cent as of total persondays	16.9	17.8	17.6	17.5	17.4
Women Persondays out of Total (per cent)	54.8	55.3	56.2	53.5	54.6
Total Households Worked [In Cr]	4.1	4.8	5.1	5.1	5.3
Average days of employment provided per Household	40.1	48.85	46	45.7	50.9
Total No of HHs completed 100 Days of Wage Employment	24,92,654	48,47,975	39,91,202	29,55,152	52,05,443

Source: Ministry of Rural Development

THE WAY FORWARD

10.54 India's development trajectory is critically intertwined with the investments in social infrastructure. To reap the benefits of demographic dividend, the government is committed to improve the outcomes in education and skilling, and to provide employment and affordable healthcare to all. Scaling up development programmes for improving connectivity, providing housing, and bridging gender gaps in socio-economic indicators is of paramount importance for sustainable development. India's march towards achieving SDGs is firmly anchored in investing in human capital and inclusive growth.

CHAPTER AT A GLANCE

- The public investments in social infrastructure like education, health, housing and connectivity have a critical role in ensuring inclusive development in a developing country like India.
- The 17 SDGs (Sustainable Development Goals) and 169 targets envisaged in the Agenda 2030, are closely interrelated with social infrastructure. With the underlying dimensions of education and health embedded in SDGs, the improvement in HDI is also interlinked to SDGs as evidenced in the correlation between SDG rankings and HDI rankings of the States.
- India being a developing economy, the percentage of GDP expended on education has remained stagnant at around 3 per cent while that on health has hovered around 1 per cent during the past few years.
- With the available resources, India has made substantial progress in both quantitative and qualitative indicators of education. This is reflected in the improvements in Gross Enrolment Ratios, Gender Parity Indices and learning outcomes at primary school levels. The rural urban disparities in access to quality schooling and drop out rates at senior secondary levels are areas of concern.
- The Skilling ecosystem in India is equipping the youth to meet the challenges of a dynamic labour market by providing various short term and long term skilling under programmes like Pradhan Mantri Kaushal Vikas Yojana. PMKVY has had positive impact on employment and incomes of the youth as per evaluation studies.
- The PLFS has reported declining LFPR along with increasing unemployment rate.
- For a healthy India, accessible, affordable and quality healthcare are being provided by the Government under the National Health Mission and through new schemes like Ayushman Bharat. The select health indicators like MMR, IMR, U5MR have shown tremendous improvement over the past few years.
- Household autonomy of women is the first step towards achieving empowerment and becoming agents of change in patriarchal socieities like India. Financial inclusion has improved the household autonomy of women as reflected by the NFHS data.
- Connectivity is critical for rural areas to improve quality of lives of the poor by enhancing access to various social services, education, health and access to markets. PMGSY has played a crucial role in connecting the unconnected in rural India and enhanced their livelihood opportunities.
- Government has accorded highest priority to rural housing, by providing dwelling with all basic facilities to the most needy under PMAY-G.
- Government has also prioritized employment programmes like MGNREGS which is reflected in the upward trend in budget allocation and release of funds to the States in the last four years.

ECONOMIC SURVEY 2018-19
STATISTICAL APPENDIX

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Table 1.1. Gross National Income and Net National Income

Year	Gross national income (₹ crore)		Net national income (₹ crore)		Per capita net national income (₹)	
	Current prices	Constant prices	Current prices	Constant prices	Current prices	Constant prices
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2004-05 Series						
1950-51	10360	292996	9829	269724	274	7513
1951-52	11019	302010	10443	279256	286	7651
1952-53	10825	310068	10241	287818	275	7737
1953-54	11791	329250	11235	307397	296	8111
1954-55	11141	344902	10635	326057	276	8447
1955-56	11361	356460	10819	337156	275	8579
1956-57	13530	376234	12944	356008	323	8878
1957-58	13931	374503	13277	353525	325	8644
1958-59	15516	402020	14802	379855	354	9087
1959-60	16327	412031	15564	389080	365	9133
1960-61	17870	434497	17062	411519	393	9482
1961-62	18912	450212	18016	426103	406	9597
1962-63	20321	463161	19350	437686	426	9641
1963-64	23350	491049	22266	464130	480	10003
1964-65	27222	527153	25982	498287	548	10512
1965-66	28693	512985	27300	482480	563	9948
1966-67	32439	512781	30806	480102	622	9699
1967-68	38003	552429	36136	517516	714	10228
1968-69	40257	571460	38259	534677	739	10322
1969-70	44334	608809	42035	569591	795	10767
1970-71	47354	640275	44550	596470	823	11025
1971-72	50708	650938	47630	605211	860	10924
1972-73	55912	647647	52487	600195	926	10585
1973-74	68095	669444	63983	619883	1103	10688
1974-75	80479	678151	75182	625455	1268	10547
1975-76	86452	740806	80189	685230	1321	11289
1976-77	93189	753348	86382	694149	1393	11196
1977-78	105615	808500	98287	746719	1550	11778
1978-79	114491	854867	106380	790566	1642	12200
1979-80	125882	811357	115995	743925	1747	11204
1980-81	149987	866338	138565	795193	2041	11711
1981-82	175845	917272	161924	842429	2340	12174
1982-83	196010	946491	179895	867337	2541	12251
1983-84	228077	1015342	210108	932241	2906	12894
1984-85	255187	1052643	234211	963767	3169	13041
1985-86	288095	1108266	262958	1013410	3483	13423
1986-87	322144	1160809	293806	1060195	3811	13751

Contd....

Table 1.1. Gross National Income and Net National Income

Year	Gross national income (₹ crore)		Net national income (₹ crore)		Per capita net national income (₹)	
	Current prices	Constant prices	Current prices	Constant prices	Current prices	Constant prices
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2004-05 Series						
1987-88	365592	1204856	332400	1097111	4218	13923
1988-89	432397	1317940	393546	1204380	4889	14961
1989-90	496197	1396154	450949	1275833	5486	15521
1990-91	578667	1470766	526017	1342031	6270	15996
1991-92	663798	1485707	599171	1348043	7000	15748
1992-93	762900	1567944	688762	1422097	7899	16308
1993-94	879275	1644886	796418	1492864	8928	16736
1994-95	1032507	1755272	935759	1592980	10283	17505
1995-96	1213241	1888228	1100655	1715639	11861	18487
1996-97	1406195	2032837	1276347	1849226	13492	19548
1997-98	1559189	2118975	1411922	1920927	14646	19927
1998-99	1788410	2250012	1624669	2038124	16528	20734
1999-00	2007699	2448654	1821227	2220003	18194	22178
2000-01	2154680	2535911	1947788	2291795	19115	22491
2001-02	2335777	2661819	2106928	2401875	20259	23095
2002-03	2519637	2766298	2273456	2492931	21529	23607
2003-04	2820795	2983497	2548640	2692470	23775	25116
2004-05	3219835	3219835	2899944	2899944	26629	26629
2005-06	3667253	3518348	3303532	3167455	29869	28639
2006-07	4261472	3841974	3842743	3456274	34249	30805
2007-08	4966578	4233768	4481882	3806140	39384	33446
2008-09	5597140	4390966	5031943	3922062	43604	33987
2009-10	6439827	4763090	5780028	4241183	49402	36249
2010-11	7702308	5227739	6942089	4657438	58534	39270
2011-12	8932892	5586683	8052996	4958849	66997	41255
2011-12 Series						
2011-12	8659505	8659505	7742330	7742330	63462	63462
2012-13	9827250	9104662	8766345	8094001	70983	65538
2013-14	11093638	9679027	9897663	8578417	79118	68572
2014-15	12320529	10402987	10978238	9224343	86647	72805
2015-16	13612095	11234571	12162398	9963681	94797	77659
2016-17 (2nd RE)	15185986	12153754	13595261	10772800	104659	82931
2017-18 (1st RE)	16910192	13034121	15128474	11531159	114958	87623
2018-19 (PE)	18816538	13932287	16837219	12329646	126406	92565

Source : Central Statistics Office
Notes :
PE : Provisional Estimates, RE: Revised Estimates

Table 1.2. Annual Growth Rates of Gross National Income and Net National Income

(per cent)

Year	Gross national income		Net national income		Per capita net national income	
	Current prices	Constant prices	Current prices	Constant prices	Current prices	Constant prices
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			2004-05 Series			
1951-52	6.4	3.1	6.2	3.5	4.5	1.8
1952-53	-1.8	2.7	-1.9	3.1	-3.8	1.1
1953-54	8.9	6.2	9.7	6.8	7.7	4.8
1954-55	-5.5	4.8	-5.3	6.1	-7.1	4.1
1955-56	2.0	3.4	1.7	3.4	-0.1	1.6
1956-57	19.1	5.5	19.6	5.6	17.3	3.5
1957-58	3.0	-0.5	2.6	-0.7	0.6	-2.6
1958-59	11.4	7.3	11.5	7.4	9.1	5.1
1959-60	5.2	2.5	5.1	2.4	3.2	0.5
1960-61	9.5	5.5	9.6	5.8	7.6	3.8
1961-62	5.8	3.6	5.6	3.5	3.2	1.2
1962-63	7.5	2.9	7.4	2.7	5.0	0.5
1963-64	14.9	6.0	15.1	6.0	12.6	3.8
1964-65	16.6	7.4	16.7	7.4	14.2	5.1
1965-66	5.4	-2.7	5.1	-3.2	2.7	-5.4
1966-67	13.1	0.0	12.8	-0.5	10.6	-2.5
1967-68	17.2	7.7	17.3	7.8	14.8	5.4
1968-69	5.9	3.4	5.9	3.3	3.4	0.9
1969-70	10.1	6.5	9.9	6.5	7.6	4.3
1970-71	6.8	5.2	6.0	4.7	3.6	2.4
1971-72	7.1	1.7	6.9	1.5	4.4	-0.9
1972-73	10.3	-0.5	10.2	-0.8	7.7	-3.1
1973-74	21.8	3.4	21.9	3.3	19.2	1.0
1974-75	18.2	1.3	17.5	0.9	14.9	-1.3
1975-76	7.4	9.2	6.7	9.6	4.2	7.0
1976-77	7.8	1.7	7.7	1.3	5.5	-0.8
1977-78	13.3	7.3	13.8	7.6	11.3	5.2
1978-79	8.4	5.7	8.2	5.9	5.9	3.6
1979-80	9.9	-5.1	9.0	-5.9	6.4	-8.2
1980-81	19.1	6.8	19.5	6.9	16.8	4.5
1981-82	17.2	5.9	16.9	5.9	14.7	3.9
1982-83	11.5	3.2	11.1	3.0	8.6	0.6
1983-84	16.4	7.3	16.8	7.5	14.4	5.3
1984-85	11.9	3.7	11.5	3.4	9.1	1.1
1985-86	12.9	5.3	12.3	5.2	9.9	2.9
1986-87	11.8	4.7	11.7	4.6	9.4	2.4
1987-88	13.5	3.8	13.1	3.5	10.7	1.2
1988-89	18.3	9.4	18.4	9.8	15.9	7.5

Contd....

Table 1.2. Annual Growth Rates of Gross National Income and Net National Income

(per cent)

Year	Gross national income		Net national income		Per capita net national income	
	Current prices	Constant prices	Current prices	Constant prices	Current prices	Constant prices
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2004-05 Series						
1989-90	14.8	5.9	14.6	5.9	12.2	3.7
1990-91	16.6	5.3	16.6	5.2	14.3	3.1
1991-92	14.7	1.0	13.9	0.4	11.6	-1.5
1992-93	14.9	5.5	15.0	5.5	12.8	3.6
1993-94	15.3	4.9	15.6	5.0	13.0	2.6
1994-95	17.4	6.7	17.5	6.7	15.2	4.6
1995-96	17.5	7.6	17.6	7.7	15.3	5.6
1996-97	15.9	7.7	16.0	7.8	13.8	5.7
1997-98	10.9	4.2	10.6	3.9	8.6	1.9
1998-99	14.7	6.2	15.1	6.1	12.8	4.1
1999-00	12.3	8.8	12.1	8.9	10.1	7.0
2000-01	7.3	3.6	6.9	3.2	5.1	1.4
2001-02	8.4	5.0	8.2	4.8	6.0	2.7
2002-03	7.9	3.9	7.9	3.8	6.3	2.2
2003-04	12.0	7.9	12.1	8.0	10.4	6.4
2004-05	14.1	7.9	13.8	7.7	12.0	6.0
2005-06	13.9	9.3	13.9	9.2	12.2	7.5
2006-07	16.2	9.2	16.3	9.1	14.7	7.6
2007-08	16.5	10.2	16.6	10.1	15.0	8.6
2008-09	12.7	3.7	12.3	3.0	10.7	1.6
2009-10	15.1	8.5	14.9	8.1	13.3	6.7
2010-11	19.6	9.8	20.1	9.8	18.5	8.3
2011-12	16.0	6.9	16.0	6.5	14.5	5.1
2011-12 Series						
2012-13	13.5	5.1	13.2	4.5	11.9	3.3
2013-14	12.9	6.3	12.9	6.0	11.5	4.6
2014-15	11.1	7.5	10.9	7.5	9.5	6.2
2015-16	10.5	8.0	10.8	8.0	9.4	6.7
2016-17 (2nd RE)	11.6	8.2	11.8	8.1	10.4	6.8
2017-18 (1st RE)	11.4	7.2	11.3	7.0	9.8	5.7
2018-19 (PE)	11.3	6.9	11.3	6.9	10.0	5.6

Source : Central Statistics Office,

Notes :

PE : Provisional Estimates, RE: Revised Estimates

Table 1.3 A. Real Gross Value Added at Factor Cost by Industry of Origin

(₹ crore)

At constant prices						
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at factor cost (2 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2004-05 Series						
1950-51	150191	40138	30792	23325	28474	279618
1951-52	152987	41996	31608	23863	29329	286147
1952-53	157764	41834	32641	24863	29934	294267
1953-54	169547	44416	33861	25219	30860	312177
1954-55	174611	48325	36065	26140	31967	325431
1955-56	173255	53962	38700	27190	32955	333766
1956-57	182651	58809	41537	27635	34219	352766
1957-58	175180	57737	42831	28679	35765	348500
1958-59	192337	62009	44965	29492	37233	374948
1959-60	190851	66378	47779	30619	38834	383153
1960-61	204340	73555	51879	31252	40741	410279
1961-62	205014	78638	55259	32596	42656	423011
1962-63	202234	83517	58503	33693	45686	431960
1963-64	207030	92432	62650	34735	48684	453829
1964-65	225287	99250	66890	35688	51894	488247
1965-66	202906	102475	68079	36766	53950	470402
1966-67	200481	106304	69862	37412	56438	475190
1967-68	228813	109856	72852	38431	58659	513860
1968-69	228836	115422	76155	40305	61272	527270
1969-70	243347	124372	80275	41980	64655	561630
1970-71	258665	126356	84205	43735	68218	589787
1971-72	254395	129506	86121	45989	71264	595741
1972-73	243082	133917	87991	47767	73594	593843
1973-74	259751	134649	91686	48936	75541	620872
1974-75	256719	136045	97176	48779	79120	628079
1975-76	289695	144928	105980	52142	81914	684634
1976-77	274522	158354	110697	56277	84190	693191
1977-78	300873	170123	118084	59032	86450	744972
1978-79	307874	182590	127772	63203	90186	785965
1979-80	271096	176035	126751	63818	96779	745083
1980-81	305906	183970	133906	65041	101666	798506
1981-82	321876	197519	142057	70326	103842	843426
1982-83	323862	197833	149903	77029	111849	868092

Contd....

Table 1.3 A. Real Gross Value Added at Factor Cost by Industry of Origin

(₹ crore)

	At constant prices					
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at factor cost (2 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			2004-05 series			
1983-84	354720	214737	157545	84585	116027	936270
1984-85	360230	224284	165037	90907	124065	973357
1985-86	362783	233818	178195	99783	131184	1013866
1986-87	364989	245385	188888	110295	141043	1057612
1987-88	360949	259641	198578	118383	151240	1094993
1988-89	417581	280863	210405	129934	160385	1206243
1989-90	425075	304461	226074	146088	173022	1280228
1990-91	444880	325450	237736	155165	180564	1347889
1991-92	438685	325150	243178	171956	185232	1367171
1992-93	465084	336716	256897	181320	196332	1440504
1993-94	479592	357237	274682	201568	205101	1522344
1994-95	504477	389903	301997	209401	209742	1619694
1995-96	504527	436863	342536	226348	225157	1737741
1996-97	549202	468146	370200	240354	243288	1876319
1997-98	542313	483585	398109	268495	263486	1957032
1998-99	574374	504485	428613	289440	289085	2087828
1999-00	590696	535730	477605	327111	323800	2254942
2000-01	592227	570571	508299	338661	338723	2348481
2001-02	624923	585971	552118	359684	352267	2474962
2002-03	594280	627374	597896	385661	365724	2570935
2003-04	643183	676833	664637	406098	384998	2775749
2004-05	650454	744755	727720	437174	411361	2971464
2005-06	680628	824272	815407	492340	440426	3253073
2006-07	711768	928626	910084	561063	452823	3564364
2007-08	751077	1023998	1009520	628124	483917	3896636
2008-09	753744	1071681	1085125	703629	544497	4158676
2009-10	764817	1173089	1197891	771905	608369	4516071
2010-11	828431	1262722	1344024	849189	634167	4918533
2011-12	864557	1369932	1402261	945534	665246	5247530

Source: Central Statistics Office

Notes :

1. For the years prior to 1999-2000 totals under col. 7 may not add up to totals of individual item under col. 2 to col. 6 due to splicing technique applied independently at the level of each industry and at the total level.
2. Estimates for the years 2011-12 onwards (at base 2011-12) are available at basic prices only and are given in table 1.3B.

Table 1.3 B. Real Gross Value Added at Basic Prices by Industry of Origin

(₹ crore)

At constant prices						
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at basic prices (2 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2011-12 series						
2011-12	1762983	2373988	1413116	1530877	1025982	8106946
2012-13	1786897	2458558	1551143	1680031	1069646	8546275
2013-14	1872305	2561081	1652062	1867407	1110794	9063649
2014-15	1894401	2733213	1807689	2073714	1203115	9712133
2015-16	1934120	2993343	1992825	2294787	1276797	10491870
2016-17 (2nd RE)	2065555	3219288	2145415	2494444	1394269	11318972
2017-18 (1st RE)	2168716	3413837	2312214	2649146	1560252	12104165
2018-19 (PE)	2226196	3668368	2471128	2846393	1694851	12906936

Source : Central Statistics Office

Notes :

PE : Provisional Estimates, RE: Revised Estimates

Table 1.4 A. Nominal Gross Value Added at Factor Cost by Industry of Origin

(₹ crore)

At current prices						
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at factor cost (2 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2004-05 Series						
1950-51	5274	1346	968	1254	1115	10036
1951-52	5453	1505	1048	1349	1162	10596
1952-53	5316	1416	1055	1425	1201	10449
1953-54	5850	1559	1121	1537	1250	11378
1954-55	4993	1640	1151	1647	1283	10689
1955-56	4847	1760	1192	1768	1361	10861
1956-57	6152	2071	1378	1917	1430	12965
1957-58	6045	2148	1525	2054	1503	13255
1958-59	7002	2334	1667	2203	1597	14827
1959-60	7043	2616	1801	2364	1760	15574
1960-61	7434	3113	1985	2547	1989	17049
1961-62	7704	3398	2145	2602	2154	17992
1962-63	7899	3740	2348	2987	2343	19238
1963-64	9274	4274	2628	3231	2599	21986
1964-65	11291	4788	3084	3512	2945	25686
1965-66	11301	5199	3345	3796	3276	26895
1966-67	13123	5819	3890	4063	3665	30613
1967-68	16393	6380	4445	4458	4105	35976
1968-69	16912	6940	4732	4772	4422	37938
1969-70	18505	7944	5107	5120	4822	41722
1970-71	19086	8622	5627	5579	5315	44382
1971-72	19510	9538	6102	6117	5901	47221
1972-73	21448	10534	6730	6694	6456	51943
1973-74	28171	12230	8057	7465	7261	63658
1974-75	31062	15232	10642	8390	9142	74930
1975-76	31028	16571	12067	9511	10290	79582
1976-77	31833	18811	13066	10579	11311	85545
1977-78	37592	21270	14702	11540	12296	97633
1978-79	38717	23951	16119	12448	13529	104930
1979-80	40373	26774	18604	13576	15149	114500
1980-81	50760	30900	21968	15120	17537	136838
1981-82	58745	36090	26946	17835	19927	160214
1982-83	63985	39953	30749	20453	23134	178985

Contd....

Table 1.4 A. Nominal Gross Value Added at Factor Cost by Industry of Origin

(₹ crore)

	At current prices					
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at factor cost (2 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			2004-05 Series			
1983-84	75982	47053	35716	23388	26345	209356
1984-85	82204	53656	41125	26907	30311	235113
1985-86	88083	60593	48022	30819	34284	262717
1986-87	95182	67754	54272	35337	39428	292924
1987-88	105358	77630	61963	40387	45700	332068
1988-89	130731	91163	73159	46926	52994	396295
1989-90	144461	108908	85630	55297	60741	456540
1990-91	168166	127079	100318	64598	70019	531814
1991-92	195454	140700	115570	78904	81366	613528
1992-93	219680	163887	136250	87495	94507	703723
1993-94	254876	188251	160990	105686	106090	817961
1994-95	293013	229365	192142	119442	118663	955386
1995-96	319243	280971	231175	143791	140190	1118586
1996-97	381142	318260	273135	158637	166469	1301788
1997-98	408521	348543	313093	180642	193188	1447613
1998-99	466446	393491	358538	210593	236123	1668739
1999-00	497027	426993	400650	260522	273013	1858205
2000-01	506476	474323	443169	282316	294459	2000743
2001-02	546674	497578	491952	321543	317513	2175260
2002-03	548062	550421	543691	360194	341496	2343864
2003-04	608788	618840	624394	402510	371288	2625819
2004-05	650454	744755	727720	437174	411361	2971464
2005-06	732234	859410	846606	493102	459151	3390503
2006-07	829771	1033410	998379	586595	505121	3953276
2007-08	961330	1205458	1150044	691464	573790	4582086
2008-09	1083032	1360426	1310845	845369	703895	5303567
2009-10	1242818	1536492	1481623	964937	883033	6108903
2010-11	1524552	1763584	1779630	1165243	1015850	7248860
2011-12	1721814	2061650	2072272	1381524	1154431	8391691

Source: Central Statistics Office

Notes :

1. For the years prior to 1999-2000 totals under col. 7 may not add up to totals of individual item under col. 2 to col. 6 due to splicing technique applied independently at the level of each industry and at the total level.
2. Estimates for the years 2011-12 onwards (at base 2011-12) are available at basic prices only and are given in table 1.4 B.

Table 1.4 B. Nominal Gross Value Added at Basic Prices by Industry of Origin

(₹crore)

At current prices						
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at basic prices (2 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2011-12 Series						
2011-12	1762983	2373988	1413116	1530877	1025982	8106946
2012-13	1960949	2637551	1663986	1776632	1163574	9202692
2013-14	2222166	2895076	1874467	2069508	1301935	10363153
2014-15	2402088	3139713	2107597	2363347	1491536	11504279
2015-16	2521544	3472237	2294513	2626138	1660067	12574499
2016-17 (2nd RE)	2818230	3771001	2538268	2911901	1896516	13935917
2017-18 (1st RE)	3021204	4178806	2823263	3252789	2206652	15482715
2018-19 (PE)	3186003	4674382	3151709	3666326	2521395	17199815

Source: Central Statistics Office
Notes:

PE : Provisional Estimates RE: Revised Estimates

Table 1.5 A. Annual Growth Rates of Real Gross Value Added at Factor Cost by Industry of Origin

(per cent)

	At Constant Prices					
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at factor cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			2004-05 Series			
1951-52	1.9	4.6	2.6	2.3	3.0	2.3
1952-53	3.1	-0.4	3.3	4.2	2.1	2.8
1953-54	7.5	6.2	3.7	1.4	3.1	6.1
1954-55	3.0	8.8	6.5	3.7	3.6	4.2
1955-56	-0.8	11.7	7.3	4.0	3.1	2.6
1956-57	5.4	9.0	7.3	1.6	3.8	5.7
1957-58	-4.1	-1.8	3.1	3.8	4.5	-1.2
1958-59	9.8	7.4	5.0	2.8	4.1	7.6
1959-60	-0.8	7.0	6.3	3.8	4.3	2.2
1960-61	7.1	10.8	8.6	2.1	4.9	7.1
1961-62	0.3	6.9	6.5	4.3	4.7	3.1
1962-63	-1.4	6.2	5.9	3.4	7.1	2.1
1963-64	2.4	10.7	7.1	3.1	6.6	5.1
1964-65	8.8	7.4	6.8	2.7	6.6	7.6
1965-66	-9.9	3.2	1.8	3.0	4.0	-3.7
1966-67	-1.2	3.7	2.6	1.8	4.6	1.0
1967-68	14.1	3.3	4.3	2.7	3.9	8.1
1968-69	0.0	5.1	4.5	4.9	4.5	2.6
1969-70	6.3	7.8	5.4	4.2	5.5	6.5
1970-71	6.3	1.6	4.9	4.2	5.5	5.0
1971-72	-1.7	2.5	2.3	5.2	4.5	1.0
1972-73	-4.4	3.4	2.2	3.9	3.3	-0.3
1973-74	6.9	0.5	4.2	2.4	2.6	4.6
1974-75	-1.2	1.0	6.0	-0.3	4.7	1.2
1975-76	12.8	6.5	9.1	6.9	3.5	9.0
1976-77	-5.2	9.3	4.5	7.9	2.8	1.2
1977-78	9.6	7.4	6.7	4.9	2.7	7.5
1978-79	2.3	7.3	8.2	7.1	4.3	5.5
1979-80	-11.9	-3.6	-0.8	1.0	7.3	-5.2
1980-81	12.8	4.5	5.6	1.9	5.0	7.2
1981-82	5.2	7.4	6.1	8.1	2.1	5.6
1982-83	0.6	0.2	5.5	9.5	7.7	2.9

Contd....

Table 1.5 A. Annual Growth Rates of Real Gross Value Added at Factor Cost by Industry of Origin

(per cent)

	At Constant Prices					
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at factor cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			2004-05 Series			
1983-84	9.5	8.5	5.1	9.8	3.7	7.9
1984-85	1.6	4.4	4.8	7.5	6.9	4.0
1985-86	0.7	4.3	8.0	9.8	5.7	4.2
1986-87	0.6	4.9	6.0	10.5	7.5	4.3
1987-88	-1.1	5.8	5.1	7.3	7.2	3.5
1988-89	15.7	8.2	6.0	9.8	6.0	10.2
1989-90	1.8	8.4	7.4	12.4	7.9	6.1
1990-91	4.7	6.9	5.2	6.2	4.4	5.3
1991-92	-1.4	-0.1	2.3	10.8	2.6	1.4
1992-93	6.0	3.6	5.6	5.4	6.0	5.4
1993-94	3.1	6.1	6.9	11.2	4.5	5.7
1994-95	5.2	9.1	9.9	3.9	2.3	6.4
1995-96	0.0	12.0	13.4	8.1	7.3	7.3
1996-97	8.9	7.2	8.1	6.2	8.1	8.0
1997-98	-1.3	3.3	7.5	11.7	8.3	4.3
1998-99	5.9	4.3	7.7	7.8	9.7	6.7
1999-00	2.8	6.2	11.4	13.0	12.0	8.0
2000-01	0.3	6.5	6.4	3.5	4.6	4.1
2001-02	5.5	2.7	8.6	6.2	4.0	5.4
2002-03	-4.9	7.1	8.3	7.2	3.8	3.9
2003-04	8.2	7.9	11.2	5.3	5.3	8.0
2004-05	1.1	10.0	9.5	7.7	6.8	7.1
2005-06	4.6	10.7	12.0	12.6	7.1	9.5
2006-07	4.6	12.7	11.6	14.0	2.8	9.6
2007-08	5.5	10.3	10.9	12.0	6.9	9.3
2008-09	0.4	4.7	7.5	12.0	12.5	6.7
2009-10	1.5	9.5	10.4	9.7	11.7	8.6
2010-11	8.3	7.6	12.2	10.0	4.2	8.9
2011-12	4.4	8.5	4.3	11.3	4.9	6.7

Source: Central Statistics Office

Table 1.5 B. Annual Growth Rates of Real Gross Value Added at Basic Prices by Industry of Origin

(per cent)

	At Constant Prices					
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at basic prices
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			2011-12 Series			
2012-13	1.4	3.6	9.8	9.7	4.3	5.4
2013-14	4.8	4.2	6.5	11.2	3.8	6.1
2014-15	1.2	6.7	9.4	11.0	8.3	7.2
2015-16	2.1	9.5	10.2	10.7	6.1	8.0
2016-17 (2nd RE)	6.8	7.5	7.7	8.7	9.2	7.9
2017-18 (1st RE)	5.0	6.0	7.8	6.2	11.9	6.9
2018-19 (PE)	2.7	7.5	6.9	7.4	8.6	6.6

Source: Central Statistics Office

Notes:

PE : Provisional Estimates, RE: Revised Estimates

Table 1.6. Components of Gross Domestic Product at Current Prices

(₹ crore)

Year	PFCE	GFCE	GFCF	CIS	Valu-ables	Export of goods and services	Import of goods and services	Discrepan-cies	GDP
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2004-05 Series									
1950-51	9394	608	968	165	na	736	711	-759	10401
1951-52	10307	638	1045	173	na	846	1038	-917	11054
1952-53	10284	661	974	40	na	715	702	-1122	10850
1953-54	11190	698	968	-67	na	644	652	-970	11810
1954-55	10414	728	1112	36	na	705	750	-1076	11170
1955-56	10417	780	1384	53	na	757	839	-1180	11371
1956-57	12286	860	1771	235	na	767	1174	-1198	13547
1957-58	12462	1005	1803	242	na	800	1304	-1057	13951
1958-59	14148	1078	1782	2	na	719	1104	-1074	15551
1959-60	14707	1136	2003	209	na	779	1010	-1440	16384
1960-61	15891	1240	2290	328	na	787	1205	-1389	17942
1961-62	16617	1377	2554	276	na	804	1113	-1506	19010
1962-63	17501	1670	2842	357	na	837	1211	-1567	20429
1963-64	19430	2146	3374	275	na	987	1362	-1387	23462
1964-65	22873	2313	3972	363	na	1002	1529	-1627	27367
1965-66	24144	2665	4420	316	na	938	1478	-2147	28857
1966-67	28119	2921	4866	514	na	1330	2142	-2939	32669
1967-68	33509	3265	5395	432	na	1517	2236	-3621	38261
1968-69	33524	3576	5672	96	na	1608	1968	-1996	40512
1969-70	36265	4008	6192	554	na	1628	1767	-2275	44605
1970-71	38474	4479	6488	809	na	1771	1816	-2568	47638
1971-72	41496	5185	7479	1066	na	1838	2006	-4059	50999
1972-73	45736	5514	8480	411	na	2225	2049	-4102	56214
1973-74	55135	6045	9675	1639	na	2830	3176	-3728	68420
1974-75	66799	7334	12080	2929	na	3835	4779	-7429	80770
1975-76	68314	8645	13895	2123	na	4812	5664	-5419	86707
1976-77	71024	9602	15546	1393	na	6139	5614	-4669	93422
1977-78	81788	10245	17835	1387	na	6640	6517	-5529	105848
1978-79	88950	11373	19719	3218	na	7115	7423	-8305	114647
1979-80	96590	13074	22564	3791	na	8340	10094	-8536	125729
1980-81	118068	15179	26815	188	na	9029	13596	-6041	149642
1981-82	135676	17785	32650	5753	na	10256	14809	-11506	175805
1982-83	149773	21022	38905	4451	na	11563	15736	-13334	196644
1983-84	175357	24288	44005	1787	na	13139	17675	-11880	229021
1984-85	194037	27927	50449	4820	na	15846	19484	-16984	256611
1985-86	214154	33257	59640	8314	na	14951	21754	-19038	289524
1986-87	240209	39322	69476	6532	na	16543	22359	-25774	323949
1987-88	266649	46160	81204	2019	na	20281	25259	-22843	368211
1988-89	310497	53280	95617	8543	na	25913	32010	-24947	436893
1989-90	346807	60997	113993	6014	na	34609	40212	-20279	501928
1990-91	398529	69525	139663	6355	na	40635	48698	-19797	586212
1991-92	457735	78458	152466	-903	na	56254	56249	-13887	673875
1992-93	516118	88846	177929	9839	na	67312	73000	-12499	774545
1993-94	591308	103066	191456	-1719	na	86147	85999	7095	891355

Contd....

Table 1.6. Components of Gross Domestic Product at Current Prices

(₹ crore)

Year	PFCE	GFCE	GFCF	CIS	Valu-ables	Export of goods and services	Import of goods and services	Discrepan-cies	GDP
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2004-05 Series									
1994-95	687154	114672	228442	14072	na	101607	104710	4354	1045590
1995-96	792015	135883	295046	24557	na	130733	144953	-6556	1226725
1996-97	928629	154089	328046	-14991	na	144854	161022	39672	1419277
1997-98	1018559	182245	372401	13044	na	165203	184333	5275	1572394
1998-99	1166300	225716	427069	-3023	na	195280	224745	16780	1803378
1999-2000	1312537	258868	484666	42497	15519	227697	265702	-52952	2023130
2000-01	1406661	273400	495196	15158	14724	278126	297523	-8329	2177413
2001-02	1531672	291189	590240	-1971	14187	290757	311050	-49179	2355845
2002-03	1620293	301573	601120	18200	13957	355556	379981	5608	2536327
2003-04	1771305	324783	697478	20667	24572	417425	436878	22151	2841503
2004-05	1917508	354518	931028	80150	41054	569051	625945	-25154	3242209
2005-06	2152702	401619	1120292	104389	41392	712087	813466	-25647	3693369
2006-07	2476667	443477	1343774	147101	49709	904872	1040535	-30359	4294706
2007-08	2840727	513021	1641673	201534	53592	1018907	1219109	-63255	4987090
2008-09	3249284	615333	1821099	106791	72213	1328765	1614040	50618	5630063
2009-10	3707566	771151	2055772	179171	116312	1298780	1647139	-3786	6477827
2010-11	4360323	890136	2407069	273509	162836	1710193	2050182	30230	7784115
2011-12	5141896	1025895	2861062	170596	246673	2150326	2721947	135220	9009722
2011-12 Series									
2011-12	4910447	968375	2997733	207983	253033	2143931	2715554	-29620	8736329
2012-13	5614484	1062404	3324973	214524	273775	2439707	3108428	122574	9944013
2013-14	6475649	1156509	3515621	144621	161761	2856781	3191811	114389	11233522
2014-15	7247340	1301762	3750392	312698	209407	2863636	3235962	18687	12467959
2015-16	8126408	1436171	3957092	262477	203506	2728647	3044923	102495	13771874
2016-17 (2nd RE)	9115769	1583312	4335014	139714	166559	2948772	3220591	293838	15362386
2017-18 (1st RE)	10083121	1885613	4896813	173890	218706	3210547	3758519	384835	17095005
2018-19 (PE)	11290029	2134615	5569998	187671	193992	3752230	4493933	375562	19010164

Source: Central Statistics Office

Notes:

PE : Provisional Estimates, RE: Revised Estimates

1. PFCE: Private Final Consumption Expenditure
2. GFCE: Government Final Consumption Expenditure
3. GFCF: Gross Fixed Capital Formation
4. CIS: Change in Stocks
5. na: not available
6. GDP: Gross Domestic Product

Table 1.7. Components of Gross Domestic Product at Constant Prices

(₹ crore)

Year	PFCE	GFCE	GFCF	CIS	Valuables	Export of goods and services	Import of goods and services	Discrep-ancies	GDP
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2004-05 Series									
1950-51	244888	17979	40701	4205	na	20455	23085	-11206	293937
1951-52	260454	18166	39772	3949	na	22790	32667	-9865	302599
1952-53	270964	18187	37131	1046	na	20085	23038	-13831	310544
1953-54	287254	18415	38705	-2382	na	17625	20846	-9127	329643
1954-55	296678	18523	43546	1156	na	21411	26611	-9201	345503
1955-56	299514	19036	50947	1457	na	23206	30047	-7429	356684
1956-57	312764	20361	62224	4449	na	20817	37224	-6808	376582
1957-58	306585	22929	57579	7128	na	20981	39954	-215	375033
1958-59	334730	23742	56784	-480	na	18136	32533	2371	402749
1959-60	338538	24168	61613	4479	na	19117	28957	-5638	413320
1960-61	357795	25473	66760	6128	na	18891	33792	-5218	436037
1961-62	363895	27415	73110	5204	na	18856	30495	-5715	452270
1962-63	368636	33078	80082	4508	na	18747	31687	-7836	465527
1963-64	382349	40647	90736	3680	na	20322	32762	-11540	493432
1964-65	405190	42464	98565	6218	na	18999	33869	-7358	530207
1965-66	405548	46580	101821	4695	na	16365	30125	-28652	516232
1966-67	410819	47380	102257	6621	na	20593	38747	-32976	515947
1967-68	434061	48658	107340	5590	na	21614	37219	-23719	556324
1968-69	445463	51211	111372	1435	na	22292	31874	-24727	575172
1969-70	462008	56050	111724	7245	na	21860	27719	-18381	612787
1970-71	477697	61370	107541	8631	na	28759	32685	-6923	644390
1971-72	486992	67386	118995	11455	na	29062	38578	-20336	654976
1972-73	490254	68031	124912	3242	na	31456	37849	-28694	651352
1973-74	502285	67936	123058	11795	na	33017	40906	-24368	672818
1974-75	501907	65398	128951	14863	na	35724	35687	-30362	680793
1975-76	530409	71715	128683	2170	na	41600	36143	4652	743085
1976-77	540985	77084	141513	7607	na	49845	36829	-24763	755443
1977-78	585099	79719	158620	11260	na	48067	46918	-25597	810249
1978-79	620859	85618	165842	21755	na	51818	46941	-42416	856535
1979-80	606933	90975	165092	15528	na	57597	56011	-68448	811668

Contd....

Table 1.7. Components of Gross Domestic Product at Constant Prices

(₹ crore)

Year	PFCE	GFCE	GFCF	CIS	Valuables	Export of goods and services	Import of goods and services	Discrep-ancies	GDP
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2004-05 Series									
1980-81	661562	95196	178287	1004	na	60614	64051	-66273	866340
1981-82	690331	99203	185401	23590	na	60119	70474	-69795	918374
1982-83	697235	108747	197159	17857	na	63738	72909	-61533	950295
1983-84	751352	113612	209780	7483	na	63155	88937	-36884	1019561
1984-85	773009	122059	217283	17374	na	67764	76192	-62780	1058515
1985-86	805271	134924	229215	27276	na	63485	86761	-59276	1114133
1986-87	830682	147610	251020	21203	na	66934	101583	-48516	1167350
1987-88	859153	159705	266072	6009	na	75452	99889	-52862	1213640
1988-89	912779	168458	284466	24171	na	81091	109073	-31406	1330486
1989-90	958075	177460	306311	16060	na	90805	111346	-27749	1409615
1990-91	1000867	183488	347966	15063	na	100888	115094	-45562	1487615
1991-92	1022458	183180	328594	-1791	na	110637	115111	-24629	1503337
1992-93	1048825	189503	358162	18331	na	116050	139432	-5683	1585756
1993-94	1094417	200751	354848	-3816	na	132041	166297	49147	1661092
1994-95	1147607	203529	388410	21529	na	149265	203883	65246	1771702
1995-96	1217472	219412	451596	34275	na	196128	261227	48244	1905900
1996-97	1312114	229594	465355	-22555	na	208464	254853	111667	2049786
1997-98	1351342	255429	506706	16929	na	203610	288495	87279	2132799
1998-99	1439195	286572	555913	-5221	na	231880	348634	104995	2264700
1999-2000	1526689	320320	599973	52890	na	273617	373012	64553	2465029
2000-01	1579201	324727	591610	17320	na	323288	390132	113697	2559711
2001-02	1673209	332369	682143	-3481	na	337221	401619	63348	2683190
2002-03	1721238	331753	679170	20049	na	408324	449800	74525	2785258
2003-04	1823227	340962	750940	21668	na	447450	512250	132194	3004190
2004-05	1917508	354518	931028	80150	41054	569051	625945	-25154	3242209
2005-06	2083309	386007	1081792	101511	40414	717424	829926	-37288	3543244
2006-07	2259892	400579	1231265	133556	45933	863459	1008198	-54998	3871489
2007-08	2471397	438919	1430764	175411	47263	914628	1110963	-116472	4250947
2008-09	2649610	484459	1480943	85290	59987	1048140	1363302	-28778	4416350
2009-10	2845303	551702	1594475	143052	94524	999030	1334180	-103059	4790847
2010-11	3092373	583544	1769792	206953	125191	1195003	1542428	-148042	5282386
2011-12	3378506	623574	1986645	117111	133454	1381129	1867249	-120120	5633050

Contd....

Table 1.7. Components of Gross Domestic Product at Constant Prices

(₹ crore)

Year	PFCE	GFCE	GFCF	CIS	Valuables	Export of goods and services	Import of goods and services	Discrep-ancies	GDP
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2011-12 Series									
2011-12	4910447	968375	2997733	207983	253033	2143931	2715554	-29620	8736329
2012-13	5179091	974263	3145793	201528	259949	2289836	2879079	41635	9213017
2013-14	5557329	979825	3194924	129758	148879	2468269	2644555	-33060	9801370
2014-15	5912657	1054151	3278096	274751	187957	2512145	2667595	-24487	10527674
2015-16	6381419	1132802	3492183	239557	185986	2370282	2511540	78804	11369493
2016-17 (2nd RE)	6904085	1199041	3783778	124087	150784	2490437	2621586	267700	12298327
2017-18 (1st RE)	7417489	1378563	4136572	150417	192120	2607310	3083560	380947	13179857
2018-19 (PE)	8016674	1506035	4548452	157637	174780	2933969	3557901	297939	14077586

Source: Central Statistics Office

Notes:

PE : Provisional Estimates, RE: Revised Estimates

1. PFCE: Private Final Consumption Expenditure
2. GFCE: Government Final Consumption Expenditure
3. GFCF: Gross Fixed Capital Formation
4. CIS: Change in Stocks
5. na: not available
6. GDP: Gross Domestic Product

Table 1.8. Gross Domestic Saving and Gross Capital Formation (at current prices)

(₹ crore)

Year	Gross domestic saving				Gross fixed capital formation			Change in stocks			Gross capital formation						Gross domestic product
	House-hold sector	Private corpo-rate sector	Public sector	Total (2+3+4)	Public sector	Private sector	Total (6+7)	Public sector	Private sector	Total (9+10)	Public sector	Private sector	Valu-ables	Total (12+13+14)	Errors & omis-sions	Adjust-ed total (15+16)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
2004-05 series																	
1950-51	681	93	215	989	264	704	968	26	140	165	290	844	na	1133	-165	968	10401
1951-52	634	136	309	1079	304	741	1045	30	143	173	334	884	na	1218	44	1262	11054
1952-53	695	64	195	954	324	650	974	-18	59	40	306	709	na	1014	-95	920	10850
1953-54	672	90	181	943	381	587	968	-26	-42	-67	355	545	na	901	29	930	11810
1954-55	774	118	213	1105	453	659	1112	45	-9	36	498	650	na	1148	-28	1121	11170
1955-56	1041	134	247	1422	619	765	1384	-25	77	53	594	842	na	1437	24	1461	11371
1956-57	1222	155	318	1696	721	1050	1771	37	198	235	758	1248	na	2006	49	2056	13547
1957-58	1028	121	336	1485	752	1051	1803	139	103	242	891	1154	na	2045	-87	1958	13951
1958-59	986	140	325	1450	817	965	1782	83	-81	2	900	884	na	1784	42	1826	15551
1959-60	1267	185	351	1803	1045	958	2003	12	198	209	1057	1156	na	2212	-178	2034	16384
1960-61	1226	281	572	2079	1215	1075	2290	63	265	328	1278	1340	na	2618	-58	2560	17942
1961-62	1237	320	654	2211	1269	1285	2554	29	247	276	1298	1532	na	2830	-274	2556	19010
1962-63	1519	344	750	2613	1510	1332	2842	97	260	357	1607	1592	na	3199	-146	3053	20429
1963-64	1589	394	929	2912	1794	1580	3374	87	188	275	1881	1768	na	3649	-297	3352	23462
1964-65	1897	389	1072	3358	2106	1866	3972	90	272	363	2196	2138	na	4335	-377	3958	27367
1965-66	2596	405	1085	4086	2348	2072	4420	124	192	316	2472	2264	na	4736	-51	4685	28857
1966-67	3161	424	941	4526	2360	2506	4866	64	450	514	2424	2956	na	5380	69	5449	32669
1967-68	3275	410	944	4629	2320	3075	5395	233	199	432	2553	3274	na	5827	-361	5466	38261
1968-69	3277	439	1165	4881	2431	3241	5672	41	55	96	2472	3296	na	5768	-471	5297	40512

Contd....

Table 1.8. Gross Domestic Saving and Gross Capital Formation (at current prices)

(₹ crore)

Year	Gross domestic saving				Gross fixed capital formation			Change in stocks			Gross capital formation						Gross domestic product
	House-hold sector	Private corpo-rate sector	Public sector	Total (2+3+4)	Public sector	Private sector	Total (6+7)	Public sector	Private sector	Total (9+10)	Public sector	Private sector	Valu-ables	Total (12+13+14)	Errors & omis-sions	Adjust-ed total (15+16)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
2004-05 Series																	
1969-70	4375	549	1361	6285	2525	3667	6192	50	504	554	2575	4171	na	6746	-220	6526	44605
1970-71	4531	672	1618	6821	2742	3746	6488	302	507	809	3044	4253	na	7297	-82	7215	47638
1971-72	5229	769	1689	7687	3245	4234	7479	356	710	1066	3601	4944	na	8545	-380	8165	50999
1972-73	5330	806	1816	7952	4185	4295	8480	88	322	411	4273	4617	na	8891	-641	8249	56214
1973-74	8020	1083	2363	11466	4631	5044	9675	541	1097	1639	5172	6141	na	11314	545	11858	68420
1974-75	8677	1465	3340	13482	4948	7132	12080	938	1992	2929	5886	9124	na	15009	-874	14135	80770
1975-76	9790	1083	4192	15066	6401	7494	13895	1447	676	2123	7848	8170	na	16018	-1070	14949	86707
1976-77	11206	1181	5195	17582	8051	7495	15546	1121	272	1393	9172	7767	na	16939	-666	16273	93422
1977-78	13679	1413	5253	20345	8792	9043	17835	109	1278	1387	8901	10321	na	19222	-341	18880	105848
1978-79	16482	1652	5976	24110	9638	10081	19719	1100	2118	3218	10738	12199	na	22937	1301	24238	114647
1979-80	16338	2398	6331	25068	11532	11032	22564	1346	2445	3791	12878	13477	na	26355	-707	25648	125729
1980-81	18116	2339	6135	26590	13656	13159	26815	71	116	188	13727	13275	na	27003	1682	28684	149642
1981-82	19013	2560	9120	30692	17376	15274	32650	2006	3747	5753	19382	19021	na	38403	-5100	33303	175805
1982-83	21972	2980	10004	34956	22276	16629	38905	1136	3315	4451	23412	19944	na	43356	-5833	37522	196644
1983-84	26955	3254	9030	39239	24225	19780	44005	337	1450	1787	24562	21230	na	45792	-4037	41756	229021
1984-85	32796	4040	8950	45786	27823	22626	50449	1676	3144	4820	29499	25770	na	55269	-6191	49078	256611
1985-86	36666	5426	11322	53414	32590	27050	59640	1932	6383	8314	34522	33433	na	67954	-8306	59648	289524
1986-87	42111	5336	11246	58693	39723	29753	69476	896	5636	6532	40619	35389	na	76008	-10960	65048	323949
1987-88	57304	5932	10471	73707	41211	39993	81204	-1515	3534	2019	39696	43527	na	83223	-2691	80532	368211
1988-89	67063	8486	11943	87492	47566	48051	95617	-493	9036	8543	47073	57087	na	104160	-4364	99796	436893
1989-90	82985	11845	11900	106730	52517	61476	113993	1690	4324	6014	54207	65800	na	120007	-998	119009	501928

Contd....

Table 1.8. Gross Domestic Saving and Gross Capital Formation (at current prices)

(₹ crore)

Year	Gross domestic saving				Gross fixed capital formation			Change in stocks			Gross capital formation						Gross domestic product
	House-hold sector	Private corpo-rate sector	Public sector	Total (2+3+4)	Public sector	Private sector	Total (6+7)	Public sector	Private sector	Total (9+10)	Public sector	Private sector	Valu-ables	Total (12+13+14)	Errors & omis-sions	Adjust-ed total (15+16)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
2004-05 Series																	
1990-91	108603	15164	10641	134408	60013	79650	139663	1987	4368	6355	62000	84018	na	146018	6586	152604	586212
1991-92	105632	20304	17594	143530	70701	81765	152466	-2207	1304	-903	68494	83069	na	151563	-4656	146907	673875
1992-93	127943	19968	16709	164621	71197	106732	177929	2657	7182	9839	73854	113914	na	187768	-9331	178437	774545
1993-94	151454	29866	11674	192994	79309	112147	191456	1974	-3693	-1719	81283	108454	na	189737	8048	197785	891355
1994-95	187142	35260	24266	246668	102134	126308	228442	-604	14676	14072	101530	140984	na	242514	16047	258561	1045590
1995-96	198585	59153	31527	289265	105704	189342	295046	-613	25170	24557	105091	214512	na	319603	-9558	310045	1226725
1996-97	224653	62540	31194	318387	108750	219296	328046	1883	-16873	-14991	110633	202423	na	313055	23069	336125	1419277
1997-98	284127	66080	29583	379790	112814	259587	372401	3553	9491	13044	116367	269078	na	385445	16647	402092	1572394
1998-99	352114	69191	-3146	418159	128621	298448	427069	2277	-5300	-3023	130898	293148	na	424046	12475	436521	1803378
1999-00	438851	87234	-9238	516847	138611	346055	484666	15553	26944	42497	154164	372999	15519	542682	-3848	538834	2023130
2000-01	463750	81062	-29266	515545	145973	349223	495196	9326	5831	15158	155299	355054	14724	525078	3222	528299	2177413
2001-02	545288	76906	-36820	585374	160190	430050	590240	9079	-11050	-1971	169269	419000	14187	602456	-31310	571146	2355845
2002-03	564161	99217	-7148	656230	168143	432977	601120	-4740	22940	18200	163403	455917	13957	633277	-5534	627743	2536327
2003-04	657587	129816	36372	823775	190806	506672	697478	-3076	23743	20667	187730	530415	24572	742717	19699	762416	2841503
2004-05	763685	212519	74499	1050703	224108	706920	931028	16472	63678	80150	240580	770598	41054	1052231	11809	1064041	3242209
2005-06	868988	277208	88955	1235151	271342	848950	1120292	22008	82381	104389	293350	931331	41392	1266073	13681	1279754	3693369
2006-07	994396	338584	152929	1485909	339617	1004157	1343774	16939	130162	147101	356556	1134319	49709	1540583	-9151	1531433	4294706
2007-08	1118347	469023	248962	1836332	401326	1240347	1641673	40597	160937	201534	441923	1401284	53592	1896799	3963	1900762	4987090
2008-09	1330873	417467	54280	1802620	480698	1340401	1821099	51032	55759	106791	531730	1396160	72213	2000103	-68723	1931380	5630063

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Table 1.8. Gross Domestic Saving and Gross Capital Formation (at current prices)

(₹ crore)

Year	Gross domestic saving				Gross fixed capital formation			Change in stocks			Gross capital formation						Gross domestic product
	House-hold sector	Private corpo-rate sector	Public sector	Total (2+3+4)	Public sector	Private sector	Total (6+7)	Public sector	Private sector	Total (9+10)	Public sector	Private sector	Valu-ables	Total (12+13+14)	Errors & omis-sions	Adjust-ed total (15+16)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
2004-05 Series																	
2009-10	1630799	540955	10585	2182338	543883	1511889	2055772	48905	130266	179171	592788	1642155	116312	2351255	11878	2363132	6477827
2010-11	1800174	620300	201268	2621742	609189	1797881	2407069	47259	226250	273509	656448	2024131	162836	2843415	-1957	2841457	7784115
2011-12	2054737	658428	111295	2824459	639157	2221905	2861062	56678	113918	170596	695835	2335823	246673	3278331	-77698	3200633	9009722
2011-12 Series																	
2011-12	2065566	826805	134466	3026837	641260	2356472	2997733	17098	190885	207983	658358	2547358	253033	3458749	-55741	3403008	8736329
2012-13	2235280	994005	139917	3369202	698031	2626943	3324973	20617	193907	214524	718648	2820849	273775	3813272	33850	3847122	9944013
2013-14	2285301	1207187	115705	3608193	796950	2718671	3515621	-2019	146640	144621	794931	2865311	161761	3822003	-27868	3794135	11233522
2014-15	2439104	1457064	123789	4019957	872482	2877910	3750392	11988	300710	312698	884470	3178620	209407	4272496	-92718	4179779	12467959
2015-16	2474913	1638296	169050	4282259	1026741	2930351	3957092	16955	245522	262477	1043696	3175873	203506	4423075	-417	4422659	13771874
2016-17	2622927	1770143	255351	4648421	1049204	3285810	4335014	37800	101913	139714	1087005	3387723	166559	4641287	100098	4741385	15362386
2017-18	2938203	1986318	291501	5216022	1223453	3673360	4896813	11545	162345	173890	1234998	3835705	218706	5289409	237444	5526853	17095005

Source: Central Statistics Office

Notes:

na: not available

Table 1.9. Gross Domestic Saving and Gross Capital Formation

(As per cent of GDP at current market prices)

Year	Gross domestic saving				Gross fixed capital formation			Change in stocks			Gross capital formation					
	House-hold sector	Private corporate sector	Public sector	Total (2+3+4)	Public sector	Private sector	Total (6+7)	Public sector	Private sector	Total (9+10)	Public sector	Private sector	valuables	Total (12+13+14)	Errors & omissions	Adjusted Total (15+16)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
							2004-05 Series									
1950-51	6.5	0.9	2.1	9.5	2.5	6.8	9.3	0.2	1.3	1.6	2.8	8.1	na	10.9	-1.6	9.3
1951-52	5.7	1.2	2.8	9.8	2.8	6.7	9.5	0.3	1.3	1.6	3.0	8.0	na	11.0	0.4	11.4
1952-53	6.4	0.6	1.8	8.8	3.0	6.0	9.0	-0.2	0.5	0.4	2.8	6.5	na	9.3	-0.9	8.5
1953-54	5.7	0.8	1.5	8.0	3.2	5.0	8.2	-0.2	-0.4	-0.6	3.0	4.6	na	7.6	0.2	7.9
1954-55	6.9	1.1	1.9	9.9	4.1	5.9	10.0	0.4	-0.1	0.3	4.5	5.8	na	10.3	-0.2	10.0
1955-56	9.2	1.2	2.2	12.5	5.4	6.7	12.2	-0.2	0.7	0.5	5.2	7.4	na	12.6	0.2	12.8
1956-57	9.0	1.1	2.4	12.5	5.3	7.8	13.1	0.3	1.5	1.7	5.6	9.2	na	14.8	0.4	15.2
1957-58	7.4	0.9	2.4	10.6	5.4	7.5	12.9	1.0	0.7	1.7	6.4	8.3	na	14.7	-0.6	14.0
1958-59	6.3	0.9	2.1	9.3	5.3	6.2	11.5	0.5	-0.5	0.0	5.8	5.7	na	11.5	0.3	11.7
1959-60	7.7	1.1	2.1	11.0	6.4	5.8	12.2	0.1	1.2	1.3	6.4	7.1	na	13.5	-1.1	12.4
1960-61	6.8	1.6	3.2	11.6	6.8	6.0	12.8	0.4	1.5	1.8	7.1	7.5	na	14.6	-0.3	14.3
1961-62	6.5	1.7	3.4	11.6	6.7	6.8	13.4	0.2	1.3	1.5	6.8	8.1	na	14.9	-1.4	13.4
1962-63	7.4	1.7	3.7	12.8	7.4	6.5	13.9	0.5	1.3	1.7	7.9	7.8	na	15.7	-0.7	14.9
1963-64	6.8	1.7	4.0	12.4	7.6	6.7	14.4	0.4	0.8	1.2	8.0	7.5	na	15.6	-1.3	14.3
1964-65	6.9	1.4	3.9	12.3	7.7	6.8	14.5	0.3	1.0	1.3	8.0	7.8	na	15.8	-1.4	14.5
1965-66	9.0	1.4	3.8	14.2	8.1	7.2	15.3	0.4	0.7	1.1	8.6	7.8	na	16.4	-0.2	16.2
1966-67	9.7	1.3	2.9	13.9	7.2	7.7	14.9	0.2	1.4	1.6	7.4	9.0	na	16.5	0.2	16.7
1967-68	8.6	1.1	2.5	12.1	6.1	8.0	14.1	0.6	0.5	1.1	6.7	8.6	na	15.2	-0.9	14.3
1968-69	8.1	1.1	2.9	12.0	6.0	8.0	14.0	0.1	0.1	0.2	6.1	8.1	na	14.2	-1.2	13.1
1969-70	9.8	1.2	3.1	14.1	5.7	8.2	13.9	0.1	1.1	1.2	5.8	9.4	na	15.1	-0.5	14.6

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Table 1.9. Gross Domestic Saving and Gross Capital Formation

(As per cent of GDP at current market prices)

Year	Gross domestic saving				Gross fixed capital formation			Change in stocks			Gross capital formation					
	House-hold sector	Private corporate sector	Public sector	Total (2+3+4)	Public sector	Private sector	Total (6+7)	Public sector	Private sector	Total (9+10)	Public sector	Private sector	valuables	Total (12+13+14)	Errors & omissions	Adjusted Total (15+16)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
							2004-05 Series									
1970-71	9.5	1.4	3.4	14.3	5.8	7.9	13.6	0.6	1.1	1.7	6.4	8.9	na	15.3	-0.2	15.1
1971-72	10.3	1.5	3.3	15.1	6.4	8.3	14.7	0.7	1.4	2.1	7.1	9.7	na	16.8	-0.7	16.0
1972-73	9.5	1.4	3.2	14.1	7.4	7.6	15.1	0.2	0.6	0.7	7.6	8.2	na	15.8	-1.1	14.7
1973-74	11.7	1.6	3.5	16.8	6.8	7.4	14.1	0.8	1.6	2.4	7.6	9.0	na	16.5	0.8	17.3
1974-75	10.7	1.8	4.1	16.7	6.1	8.8	15.0	1.2	2.5	3.6	7.3	11.3	na	18.6	-1.1	17.5
1975-76	11.3	1.2	4.8	17.4	7.4	8.6	16.0	1.7	0.8	2.4	9.1	9.4	na	18.5	-1.2	17.2
1976-77	12.0	1.3	5.6	18.8	8.6	8.0	16.6	1.2	0.3	1.5	9.8	8.3	na	18.1	-0.7	17.4
1977-78	12.9	1.3	5.0	19.2	8.3	8.5	16.8	0.1	1.2	1.3	8.4	9.8	na	18.2	-0.3	17.8
1978-79	14.4	1.4	5.2	21.0	8.4	8.8	17.2	1.0	1.8	2.8	9.4	10.6	na	20.0	1.1	21.1
1979-80	13.0	1.9	5.0	19.9	9.2	8.8	17.9	1.1	1.9	3.0	10.2	10.7	na	21.0	-0.6	20.4
1980-81	12.1	1.6	4.1	17.8	9.1	8.8	17.9	0.0	0.1	0.1	9.2	8.9	na	18.0	1.1	19.2
1981-82	10.8	1.5	5.2	17.5	9.9	8.7	18.6	1.1	2.1	3.3	11.0	10.8	na	21.8	-2.9	18.9
1982-83	11.2	1.5	5.1	17.8	11.3	8.5	19.8	0.6	1.7	2.3	11.9	10.1	na	22.0	-3.0	19.1
1983-84	11.8	1.4	3.9	17.1	10.6	8.6	19.2	0.1	0.6	0.8	10.7	9.3	na	20.0	-1.8	18.2
1984-85	12.8	1.6	3.5	17.8	10.8	8.8	19.7	0.7	1.2	1.9	11.5	10.0	na	21.5	-2.4	19.1
1985-86	12.7	1.9	3.9	18.4	11.3	9.3	20.6	0.7	2.2	2.9	11.9	11.5	na	23.5	-2.9	20.6
1986-87	13.0	1.6	3.5	18.1	12.3	9.2	21.4	0.3	1.7	2.0	12.5	10.9	na	23.5	-3.4	20.1
1987-88	15.6	1.6	2.8	20.0	11.2	10.9	22.1	-0.4	1.0	0.5	10.8	11.8	na	22.6	-0.7	21.9
1988-89	15.3	1.9	2.7	20.0	10.9	11.0	21.9	-0.1	2.1	2.0	10.8	13.1	na	23.8	-1.0	22.8
1989-90	16.5	2.4	2.4	21.3	10.5	12.2	22.7	0.3	0.9	1.2	10.8	13.1	na	23.9	-0.2	23.7

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Table 1.9. Gross Domestic Saving and Gross Capital Formation

(As per cent of GDP at current market prices)

Year	Gross domestic saving				Gross fixed capital formation			Change in stocks			Gross capital formation					
	House-hold sector	Private corporate sector	Public sector	Total (2+3+4)	Public sector	Private sector	Total (6+7)	Public sector	Private sector	Total (9+10)	Public sector	Private sector	valuables	Total (12+13+14)	Errors & omissions	Adjusted Total (15+16)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
2004-05 Series																
1990-91	18.5	2.6	1.8	22.9	10.2	13.6	23.8	0.3	0.7	1.1	10.6	14.3	na	24.9	1.1	26.0
1991-92	15.7	3.0	2.6	21.3	10.5	12.1	22.6	-0.3	0.2	-0.1	10.2	12.3	na	22.5	-0.7	21.8
1992-93	16.5	2.6	2.2	21.3	9.2	13.8	23.0	0.3	0.9	1.3	9.5	14.7	na	24.2	-1.2	23.0
1993-94	17.0	3.4	1.3	21.7	8.9	12.6	21.5	0.2	-0.4	-0.2	9.1	12.2	na	21.3	0.9	22.2
1994-95	17.9	3.4	2.3	23.6	9.8	12.1	21.8	-0.1	1.4	1.3	9.7	13.5	na	23.2	1.5	24.7
1995-96	16.2	4.8	2.6	23.6	8.6	15.4	24.1	-0.1	2.1	2.0	8.6	17.5	na	26.1	-0.8	25.3
1996-97	15.8	4.4	2.2	22.4	7.7	15.5	23.1	0.1	-1.2	-1.1	7.8	14.3	na	22.1	1.6	23.7
1997-98	18.1	4.2	1.9	24.2	7.2	16.5	23.7	0.2	0.6	0.8	7.4	17.1	na	24.5	1.1	25.6
1998-99	19.5	3.8	-0.2	23.2	7.1	16.5	23.7	0.1	-0.3	-0.2	7.3	16.3	na	23.5	0.7	24.2
1999-00	21.7	4.3	-0.5	25.5	6.9	17.1	24.0	0.8	1.3	2.1	7.6	18.4	0.8	26.8	-0.2	26.6
2000-01	21.3	3.7	-1.3	23.7	6.7	16.0	22.7	0.4	0.3	0.7	7.1	16.3	0.7	24.1	0.1	24.3
2001-02	23.1	3.3	-1.6	24.8	6.8	18.3	25.1	0.4	-0.5	-0.1	7.2	17.8	0.6	25.6	-1.3	24.2
2002-03	22.2	3.9	-0.3	25.9	6.6	17.1	23.7	-0.2	0.9	0.7	6.4	18.0	0.6	25.0	-0.2	24.8
2003-04	23.1	4.6	1.3	29.0	6.7	17.8	24.5	-0.1	0.8	0.7	6.6	18.7	0.9	26.1	0.7	26.8
2004-05	23.6	6.6	2.3	32.4	6.9	21.8	28.7	0.5	2.0	2.5	7.4	23.8	1.3	32.5	0.4	32.8
2005-06	23.5	7.5	2.4	33.4	7.3	23.0	30.3	0.6	2.2	2.8	7.9	25.2	1.1	34.3	0.4	34.7
2006-07	23.2	7.9	3.6	34.6	7.9	23.4	31.3	0.4	3.0	3.4	8.3	26.4	1.2	35.9	-0.2	35.7
2007-08	22.4	9.4	5.0	36.8	8.0	24.9	32.9	0.8	3.2	4.0	8.9	28.1	1.1	38.0	0.1	38.1
2008-09	23.6	7.4	1.0	32.0	8.5	23.8	32.3	0.9	1.0	1.9	9.4	24.8	1.3	35.5	-1.2	34.3
2009-10	25.2	8.4	0.2	33.7	8.4	23.3	31.7	0.8	2.0	2.8	9.2	25.4	1.8	36.3	0.2	36.5

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Table 1.9. Gross Domestic Saving and Gross Capital Formation

(As per cent of GDP at current market prices)

Year	Gross domestic saving				Gross fixed capital formation			Change in stocks			Gross capital formation					
	House-hold sector	Private corporate sector	Public sector	Total (2+3+4)	Public sector	Private sector	Total (6+7)	Public sector	Private sector	Total (9+10)	Public sector	Private sector	valuables	Total (12+13+14)	Errors & omissions	Adjusted Total (15+16)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
2004-05 Series																
2010-11	23.1	8.0	2.6	33.7	7.8	23.1	30.9	0.6	2.9	3.5	8.4	26.0	2.1	36.5	0.0	36.5
2011-12	22.8	7.3	1.2	31.3	7.1	24.7	31.8	0.6	1.3	1.9	7.7	25.9	2.7	36.4	-0.9	35.5
2011-12 Series																
2011-12	23.6	9.5	1.5	34.6	7.3	27.0	34.3	0.2	2.2	2.4	7.5	29.2	2.9	39.6	-0.6	39.0
2012-13	22.5	10.0	1.4	33.9	7.0	26.4	33.4	0.2	1.9	2.2	7.2	28.4	2.8	38.3	0.3	38.7
2013-14	20.3	10.7	1.0	32.1	7.1	24.2	31.3	0.0	1.3	1.3	7.1	25.5	1.4	34.0	-0.2	33.8
2014-15	19.6	11.7	1.0	32.2	7.0	23.1	30.1	0.1	2.4	2.5	7.1	25.5	1.7	34.3	-0.7	33.5
2015-16	18.0	11.9	1.2	31.1	7.5	21.3	28.7	0.1	1.8	1.9	7.6	23.1	1.5	32.1	0.0	32.1
2016-17	17.1	11.5	1.7	30.3	6.8	21.4	28.2	0.2	0.7	0.9	7.1	22.1	1.1	30.2	0.7	30.9
2017-18	17.2	11.6	1.7	30.5	7.2	21.5	28.6	0.1	0.9	1.0	7.2	22.4	1.3	30.9	1.4	32.3

Source: Central Statistics Office

Notes:

na: not available

Table 1.10A. Net State Domestic Product at Current Prices (2011-12 Series)
As on 28.02.2019

(₹ crore)

State/UT	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Andhra Pradesh	339996	370196	413164	470934	544827	631249	734659	na
Arunachal Pradesh	10229	11617	13377	16495	17011	18433	21343	na
Assam	129354	142039	160442	172849	201309	225660	na	na
Bihar	228497	261327	292143	315732	337987	391014	448584	na
Chhattisgarh	142273	159431	186050	197314	202299	228514	254925	279441
Goa	38009	34567	32043	43233	50354	56933	na	na
Gujarat	532809	634572	707456	804764	893997	1018190	na	na
Haryana	271152	314353	363590	395890	438140	494090	na	na
Himachal Pradesh	60536	69432	80129	87345	96851	107585	117191	130349
Jammu & Kashmir	67274	72996	79692	81040	98427	106661	na	na
Jharkhand	137383	160304	172030	200357	187479	216000	234052	na
Karnataka	554952	635924	746569	825782	950880	1050874	1205426	1373218
Kerala	328021	371384	417265	460614	505496	561080	na	na
Madhya Pradesh	282371	333937	393115	429027	486155	589168	663000	738076
Maharashtra	1126595	1282180	1448768	1554800	1751276	1986806	2193973	na
Manipur	11501	12188	14440	16275	17493	18663	20635	na
Meghalaya	18028	19653	20415	20697	22516	24346	26954	29852
Mizoram	6404	7375	8989	12067	13595	15568	15668	na
Nagaland	10554	12318	14545	16104	17128	18926	na	na
Odisha	204226	233312	260977	274941	288619	329674	363335	na
Punjab	239227	267116	297908	316745	350011	385810	427828	468672
Rajasthan	395331	446382	494236	551517	610934	665949	738849	830654
Sikkim	9742	10817	12203	13556	15743	17506	19444	na
Tamil Nadu	674478	768295	858870	957350	1057084	1139790	1279932	1440736
Telangana	325139	364030	408282	456280	522994	600313	686034	788566
Tripura	17419	19631	23329	26643	32476	35840	41755	na
Uttar Pradesh	645132	732995	833825	891798	1008179	1108017	1224672	1375600
Uttarakhand	101960	117041	131814	143789	158277	171342	191480	na
West Bengal	473205	539618	617470	651492	725992	802089	931313	na
Andaman & Nicobar Islands	3404	3793	4288	4915	5336	5897	na	na
Chandigarh	16930	19283	21825	22992	25122	27181	na	na
Delhi	314650	357400	404841	448487	500524	557740	625795	708615
Puducherry	15160	16984	19778	20143	24303	26714	29383	32449
All-India NDP	**7819154**	**8883108**	**10037547**	**11125668**	**12322177**	**13771661**	**15313286**	**17030846**

Source: For States - Directorate of Economics & Statistics of respective State Governments, and for All-India - Central Statistics Office

Note: na: not available

Table 1.10B. Growth of Net State Domestic Product at Current Prices (2011-12 Series)
As on 28.02.2019

(per cent)

State/UT	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pradesh	8.9	11.6	14.0	15.7	15.9	16.4	na
Arunachal Pradesh	13.6	15.1	23.3	3.1	8.4	15.8	na
Assam	9.8	13.0	7.7	16.5	12.1	na	na
Bihar	14.4	11.8	8.1	7.0	15.7	14.7	na
Chhattisgarh	12.1	16.7	6.1	2.5	13.0	11.6	9.6
Goa	-9.1	-7.3	34.9	16.5	13.1	na	na
Gujarat	19.1	11.5	13.8	11.1	13.9	na	na
Haryana	15.9	15.7	8.9	10.7	12.8	na	na
Himachal Pradesh	14.7	15.4	9.0	10.9	11.1	8.9	11.2
Jammu & Kashmir	8.5	9.2	1.7	21.5	8.4	na	na
Jharkhand	16.7	7.3	16.5	-6.4	15.2	8.4	na
Karnataka	14.6	17.4	10.6	15.1	10.5	14.7	13.9
Kerala	13.2	12.4	10.4	9.7	11.0	na	na
Madhya Pradesh	18.3	17.7	9.1	13.3	21.2	12.5	11.3
Maharashtra	13.8	13.0	7.3	12.6	13.4	10.4	na
Manipur	6.0	18.5	12.7	7.5	6.7	10.6	na
Meghalaya	9.0	3.9	1.4	8.8	8.1	10.7	10.7
Mizoram	15.2	21.9	34.2	12.7	14.5	0.6	na
Nagaland	16.7	18.1	10.7	6.4	10.5	na	na
Odisha	14.2	11.9	5.4	5.0	14.2	10.2	na
Punjab	11.7	11.5	6.3	10.5	10.2	10.9	9.5
Rajasthan	12.9	10.7	11.6	10.8	9.0	10.9	12.4
Sikkim	11.0	12.8	11.1	16.1	11.2	11.1	na
Tamil Nadu	13.9	11.8	11.5	10.4	7.8	12.3	12.6
Telangana	12.0	12.2	11.8	14.6	14.8	14.3	14.9
Tripura	12.7	18.8	14.2	21.9	10.4	16.5	na
Uttar Pradesh	13.6	13.8	7.0	13.1	9.9	10.5	12.3
Uttarakhand	14.8	12.6	9.1	10.1	8.3	11.8	na
West Bengal	14.0	14.4	5.5	11.4	10.5	16.1	na
Andaman & Nicobar Islands	11.4	13.0	14.6	8.6	10.5	na	na
Chandigarh	13.9	13.2	5.3	9.3	8.2	na	na
Delhi	13.6	13.3	10.8	11.6	11.4	12.2	13.2
Puducherry	12.0	16.4	1.8	20.7	9.9	10.0	10.4
All-India NDP	**13.6**	**13.0**	**10.8**	**10.8**	**11.8**	**11.2**	**11.2**

Source: For States - Directorate of Economics & Statistics of respective State Governments, and for All-India - Central Statistics Office

Note: na: not available

Table 1.11A. Per Capita Net State Domestic Product at Current Prices (2011-12 Series)
As on 28.02.2019

(₹)

State/UT	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Andhra Pradesh	69000	74687	82870	93903	108002	124401	143935	na
Arunachal Pradesh	73068	81353	91809	110929	112212	119150	135165	na
Assam	41142	44599	49734	52895	60817	67303	na	na
Bihar	21750	24487	26948	28671	30213	34409	38860	na
Chhattisgarh	55177	60849	69880	72936	73590	81808	89813	96887
Goa	259444	234354	215776	289185	334576	375550	na	na
Gujarat	87481	102826	113139	127017	139254	156527	na	na
Haryana	106085	121269	138300	148485	162034	180174	na	na
Himachal Pradesh	87721	99730	114095	123299	135512	149028	160712	176967
Jammu & Kashmir	53173	56828	61108	61213	73229	78163	na	na
Jharkhand	41254	47360	50006	57301	52754	59799	63754	na
Karnataka	90263	102319	118829	130024	148110	161922	183737	207062
Kerala	97912	110314	123388	135537	148011	163475	na	na
Madhya Pradesh	38551	44931	52129	56069	62616	74787	82941	90998
Maharashtra	99564	111980	125039	132611	147610	165491	180596	na
Manipur	39762	41230	47798	52717	55447	57888	62640	na
Meghalaya	60013	64036	65118	64638	68836	72870	78976	85609
Mizoram	57654	65013	77581	103049	114055	128241	129057	na
Nagaland	53010	61225	71510	78367	82466	90168	na	na
Odisha	48370	54703	60574	63173	65650	74234	80991	na
Punjab	85577	94318	103831	108970	118858	129321	141552	153061
Rajasthan	57192	63658	69480	76429	83456	89678	98078	108696
Sikkim	158667	174183	194624	214148	245987	270572	297765	na
Tamil nadu	92984	104943	116236	128372	140441	150036	166934	186178
Telangana	91121	101007	112162	124104	140840	160062	181102	206107
Tripura	47079	52434	61570	69474	83680	91266	105044	na
Uttar Pradesh	32002	35812	40124	42267	47062	50942	55456	61351
Uttarakhand	100305	113610	126247	135881	147592	157643	173820	na
West Bengal	51543	58195	65932	68876	75992	83126	95562	na
Andaman & Nicobar Islands	88177	96027	106401	119291	126445	136824	na	na
Chandigarh	159116	178549	199135	206760	222710	237599	na	na
Delhi	185361	206590	229619	249589	273301	298832	328985	365529
Puducherry	119649	130548	148147	146921	172727	184869	197999	212922
All-India Per Capita NNI	**63462**	**70983**	**79118**	**86647**	**94797**	**104659**	**114958**	**126406**

Source: For States - Directorate of Economics & Statistics of respective State Governments, and for All-India - Central Statistics Office

Note: na: not available

Table 1.11B. Growth of Per Capita Net State Domestic Product at Current Prices (2011-12 Series) as on 28.02.2019

(per cent)

State/UT	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pradesh	8.2	11.0	13.3	15.0	15.2	15.7	na
Arunachal Pradesh	11.3	12.9	20.8	1.2	6.2	13.4	na
Assam	8.4	11.5	6.4	15.0	10.7	na	na
Bihar	12.6	10.1	6.4	5.4	13.9	12.9	na
Chhattisgarh	10.3	14.8	4.4	0.9	11.2	9.8	7.9
Goa	-9.7	-7.9	34.0	15.7	12.2	na	na
Gujarat	17.5	10.0	12.3	9.6	12.4	na	na
Haryana	14.3	14.0	7.4	9.1	11.2	na	na
Himachal Pradesh	13.7	14.4	8.1	9.9	10.0	7.8	10.1
Jammu & Kashmir	6.9	7.5	0.2	19.6	6.7	na	na
Jharkhand	14.8	5.6	14.6	-7.9	13.4	6.6	na
Karnataka	13.4	16.1	9.4	13.9	9.3	13.5	12.7
Kerala	12.7	11.9	9.8	9.2	10.4	na	na
Madhya Pradesh	16.6	16.0	7.6	11.7	19.4	10.9	9.7
Maharashtra	12.5	11.7	6.1	11.3	12.1	9.1	na
Manipur	3.7	15.9	10.3	5.2	4.4	8.2	na
Meghalaya	6.7	1.7	-0.7	6.5	5.9	8.4	8.4
Mizoram	12.8	19.3	32.8	10.7	12.4	0.6	na
Nagaland	15.5	16.8	9.6	5.2	9.3	na	na
Odisha	13.1	10.7	4.3	3.9	13.1	9.1	na
Punjab	10.2	10.1	4.9	9.1	8.8	9.5	8.1
Rajasthan	11.3	9.1	10.0	9.2	7.5	9.4	10.8
Sikkim	9.8	11.7	10.0	14.9	10.0	10.0	na
Tamil Nadu	12.9	10.8	10.4	9.4	6.8	11.3	11.5
Telangana	10.8	11.0	10.6	13.5	13.6	13.1	13.8
Tripura	11.4	17.4	12.8	20.4	9.1	15.1	na
Uttar Pradesh	11.9	12.0	5.3	11.3	8.2	8.9	10.6
Uttarakhand	13.3	11.1	7.6	8.6	6.8	10.3	na
West Bengal	12.9	13.3	4.5	10.3	9.4	15.0	na
Andaman & Nicobar Islands	8.9	10.8	12.1	6.0	8.2	na	na
Chandigarh	12.2	11.5	3.8	7.7	6.7	na	na
Delhi	11.5	11.1	8.7	9.5	9.3	10.1	11.1
Puducherry	9.1	13.5	-0.8	17.6	7.0	7.1	7.5
All-India Per Capita NNI	**11.9**	**11.5**	**9.5**	**9.4**	**10.4**	**9.8**	**10.0**

Source: For States - Directorate of Economics & Statistics of respective State Governments, and for All-India - Central Statistics Office

Note:

na: not available

Table 1.12. Index Numbers of Agricultural Production

(Base : Triennium ending 2007-08= 100)

	Weight	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18*	2018-19**
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
A. Foodgrains	50.7	100.6	114.3	119.5	119.4	123.3	115.9	115.7	131.1	136.6	134.2
(a) Cereals	41.7	100.2	111.1	119.1	117.3	120.7	114.6	115.5	123.7	127.2	126.0
Rice	16.9	94.8	102.2	112.1	112.0	113.5	112.3	111.1	116.8	120.2	123.0
Wheat	18.0	108.3	116.5	127.2	125.4	128.5	116.0	123.7	132.1	133.7	132.9
(b) Coarse Cereals[a]	6.9	92.3	118.9	114.8	109.2	118.0	116.7	104.6	118.8	127.4	115.3
Maize	2.9	102.9	133.7	133.9	136.9	149.3	148.7	138.8	159.3	176.7	171.0
(c) Pulses[b]	8.9	102.3	129.4	121.6	129.4	135.6	122.0	116.7	165.5	180.6	172.7
Gram	1.7	91.0	105.6	98.0	111.6	117.2	103.6	94.5	179.9	157.0	135.9
Tur	3.5	126.8	139.5	130.7	149.9	161.6	124.4	119.7	159.1	190.5	175.1
B. Non-foodgrains	49.3	105.0	128.0	129.6	129.0	136.4	132.2	126.1	132.5	136.9	131.2
(a) Oilseeds[c]	13.2	88.9	116.8	106.5	107.4	119.0	99.7	92.5	111.2	114.1	111.4
Groundnut	4.1	73.9	112.5	94.8	63.9	132.2	100.8	91.7	101.6	124.9	94.9
Rapeseed and Mustard	3.6	92.6	114.6	92.6	112.5	110.4	88.1	95.3	111.0	116.6	117.7
(b) Fibres											
Cotton	4.4	107.5	147.7	157.6	153.2	160.7	155.8	134.3	145.8	156.2	134.7
Jute	0.7	110.4	98.4	105.6	101.7	109.0	104.4	97.8	102.6	94.7	94.0
Mesta	0.0	62.5	65.1	70.6	62.8	64.6	54.1	62.1	56.5	54.2	54.6
(c) Plantation Crops											
Tea	0.3	101.0	101.0	101.0	101.0	124.4	123.2	126.9	na	na	na
Coffee	0.6	105.4	110.0	110.0	110.0	110.9	119.1	126.7	na	na	na
Rubber^	1.9	100.5	104.1	109.2	110.4	93.6	78.0	68.0	83.6	83.9	na
(d) Others											
Sugarcane	9.9	89.0	104.3	110.0	103.9	107.3	110.4	106.1	93.2	114.8	116.0
Tobacco	0.4	147.4	170.6	160.0	139.8	156.4	182.0	170.8	171.4	na	na
Potato	3.6	147.2	170.4	187.4	182.5	167.2	193.2	174.7	195.6	195.3	211.6
C. All Commodities	100.0	102.8	121.1	124.5	124.2	129.8	124.0	120.8	131.8	136.7	132.7

Source: Directorate of Economics & Statistics, Department of Agriculture, Cooperation and Farmers Welfare

Notes:

a Includes maize, jowar, ragi, bajra, small millets and barley
b Includes tur, urad, moong, gram, lentils and other pulses
c Includes groundnut, rapeseed & mustard, sesamum, linseed, castorseed, nigerseed, safflower, sunflower and soyabean.
na - not available, ^ 2017-18 - Provisional

* Agricultural and Commercial Crops As per 4th Advance Estimate 2017-18

** Agricultural Crops as per 2nd Advance estimates and Horticultural Crops as per 1st Advance Estimates

Table 1.13. Index Numbers of Area under Principal Crops

(Base : Triennium ending 2007-08= 100)

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18*	2018-19 **
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
A. Foodgrains	100.0	104.4	104.1	102.0	105.6	105.4	103.9	109.0	107.4	104.1
(a) Cereals	99.5	101.8	103.3	101.6	104.0	105.7	102.9	104.5	102.1	99.8
Rice	95.7	97.9	100.5	97.6	100.8	100.7	99.3	100.5	100.0	99.0
Wheat	103.5	105.7	108.6	109.1	110.8	114.4	110.6	111.9	107.5	105.7
(b) Coarse Cereals[a]	98.5	101.2	96.4	92.1	94.4	95.0	91.3	95.3	93.0	86.1
Maize	105.0	108.7	111.6	110.2	115.3	116.8	111.9	122.5	120.4	116.0
(c) Pulses[b]	102.2	116.4	107.6	103.9	112.8	104.2	109.0	129.7	132.5	124.3
Gram	95.7	120.5	110.6	107.5	107.8	106.4	109.4	147.3	122.3	118.0
Tur	111.6	125.5	113.4	116.4	135.6	112.7	114.7	131.5	144.2	132.1
B. Non-foodgrains	104.2	113.9	116.0	116.0	119.2	118.5	119.5	114.2	113.8	110.5
(a) Oilseeds[c]	94.8	101.0	97.5	97.5	104.1	94.3	95.4	97.1	91.6	94.7
Groundnut	88.1	94.2	84.7	76.0	88.6	76.7	74.0	85.9	79.1	78.1
Rapeseed and Mustard	84.3	104.1	88.9	96.0	100.2	87.5	86.7	91.6	89.9	94.1
(b) Fibres										
Cotton	111.6	123.8	134.1	131.9	131.7	141.2	135.4	119.3	136.9	136.0
Jute	102.8	98.1	102.5	98.4	95.8	95.0	92.3	89.5	86.0	86.5
Mesta	66.3	69.4	67.3	60.4	57.4	42.2	38.0	40.4	40.3	35.7
(c) Plantation Crops										
Tea	102.0	102.0	102.0	99.9	99.9	99.9	99.9	na	na	na
Coffee	103.7	105.1	105.1	107.5	111.2	112.6	115.8	0.0	na	na
Rubber^	111.4	115.5	119.3	123.0	126.3	129.1	131.6	132.8	133.2	na
(d) Others										
Sugarcane	86.9	101.7	104.9	104.1	104.0	105.5	102.6	92.4	98.5	105.4
Tobacco	122.4	135.3	128.3	117.3	125.5	128.7	124.1	110.1	na	na
Potato	124.0	125.9	127.6	134.6	133.3	140.3	143.1	147.3	145.4	147.6
C. All Commodities	102.1	109.1	110.0	108.9	112.3	111.9	111.6	111.5	110.6	107.3

Source: Directorate of Economics & Statistics, Department of Agriculture, Cooperation and Farmers Welfare

Notes:

a Includes maize, jowar, ragi, bajra, small millets and barley

b Includes tur, urad, moong, gram, lentils and other pulses

c Includes groundnut, rapeseed & mustard, sesamum, linseed, castorseed, nigerseed, safflower, sunflower and soyabean.

na - not available, ^ 2017-18 Provisional

* Agricultural and Commercial Crops as per 4th Advance Estimate 2017-18

** Agricultural Crops as per 2nd Advance estimates and Horticultural Crops as per 1st Advance Estimates

Table 1.14. Index Numbers of Yield of Principal Crops

(Base : Triennium ending 2007-08= 100)

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18*	2018-19 **
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
A. Foodgrains	100.6	109.5	114.9	117.1	116.8	110.0	111.3	120.3	127.1	128.9
(a) Cereals	100.7	109.1	115.3	115.4	116.0	108.5	112.3	118.3	124.6	126.3
Rice	99.1	104.4	111.5	114.8	112.6	111.5	111.9	116.2	120.2	124.2
Wheat	104.7	110.2	117.2	115.0	116.0	101.4	111.9	118.0	124.3	125.7
(b) Coarse Cereals[a]	93.8	117.5	119.1	118.6	125.0	122.9	114.5	124.7	137.0	133.9
Maize	97.9	122.9	119.9	124.2	129.5	127.4	124.0	130.1	146.7	147.4
(c) Pulses[b]	100.1	111.2	113.1	124.6	120.2	117.0	107.0	127.6	136.3	138.9
Gram	95.1	87.6	88.6	103.8	108.7	97.4	86.4	122.1	128.4	115.2
Tur	113.7	111.2	115.3	128.7	119.2	110.4	104.4	121.0	132.1	132.5
B. Non-foodgrains	100.7	112.4	111.7	111.2	114.4	111.6	105.5	116.1	120.2	118.7
(a) Oilseeds[c]	93.8	115.7	109.3	110.1	114.3	105.7	97.0	114.5	124.5	117.6
Groundnut	83.8	119.4	111.9	84.1	149.3	131.3	123.9	118.2	158.0	121.5
Rapeseed and Mustard	109.9	110.2	104.1	117.3	110.2	100.7	109.9	121.1	129.8	125.1
(b) Fibres										
Cotton	96.4	119.4	117.5	116.1	122.0	110.3	99.2	122.3	114.1	99.0
Jute	107.4	100.4	103.0	103.3	113.7	109.9	105.9	114.6	110.1	108.7
Mesta	94.3	93.8	105.0	104.0	112.6	128.1	163.5	139.9	134.5	152.7
(c) Plantation Crops										
Tea	99.0	99.0	99.0	101.1	124.6	123.4	127.1	na	na	na
Coffee	101.7	104.6	104.6	102.3	99.7	105.7	109.4	na	na	na
Rubber^	90.2	90.2	91.6	89.8	74.1	60.4	51.6	62.9	63.0	na
(d) Others										
Sugarcane	102.4	102.5	104.8	99.8	103.2	104.6	103.5	100.9	116.5	110.1
Tobacco	120.4	126.1	124.6	119.2	124.6	141.4	137.6	155.7	na	na
Potato	118.7	135.3	146.8	135.5	125.4	137.7	122.1	132.8	134.3	143.4
C. All Commodities	100.7	111.0	113.2	114.0	115.5	110.8	108.3	118.1	123.6	123.7

Source: Directorate of Economics & Statistics, Department of Agriculture, Cooperation and Farmers Welfare

Notes:

a Includes maize, jowar, ragi, bajra, small millets and barley

b Includes tur, urad, moong, gram, lentils and other pulses

c Includes groundnut, rapeseed & mustard, sesamum, linseed, castorseed, nigerseed, safflower, sunflower and soyabean.

na - not available, ^ 2017-18 Provisional

* Agricultural and Commercial Crops as per 4th Advance Estimate 2017-18

** Agricultural Crops as per 2nd Advance estimates and Horticultural Crops as per 1st Advance Estimates

Table 1.15. Production of Major Crops

(Million Tonnes)

Group/Commodity	1990-91	2000-01	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18*	2018-19**
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Foodgrains[a]	176.4	196.8	244.5	259.3	257.1	265.0	252.0	251.6	275.1	284.8	281.4
Kharif	99.4	102.1	120.9	131.3	128.1	128.7	128.1	125.1	138.3	140.7	142.3
Rabi	77.0	94.7	123.6	128.0	129.1	136.4	124.0	126.5	136.8	144.1	139.1
Cereals[b]	162.1	185.7	226.3	242.2	238.8	245.8	234.8	235.2	252.0	259.6	257.4
Kharif	94.0	97.6	113.8	125.2	122.2	122.7	122.3	119.6	128.7	131.4	133.3
Rabi	68.1	88.1	112.5	117.0	116.6	123.1	112.5	115.7	123.2	128.2	124.1
Coarse Cereals[c]	32.7	31.1	43.4	42.0	40.0	43.3	42.9	38.5	43.8	47.0	42.6
Kharif	27.7	24.9	33.1	32.4	29.8	31.2	30.9	28.2	32.4	33.9	31.3
Rabi	5.0	6.2	10.3	9.6	10.3	12.1	11.9	10.4	11.3	13.1	11.3
Pulses[d]	14.3	11.0	18.2	17.1	18.3	19.3	17.2	16.4	23.1	25.2	24.0
Kharif	5.4	4.4	7.1	6.1	5.9	6.0	5.7	5.5	9.6	9.3	9.0
Rabi	8.9	6.6	11.1	11.0	12.4	13.3	11.4	10.8	13.6	15.9	15.0
Rice	74.3	85.0	96.0	105.3	105.2	106.6	105.5	104.4	109.7	112.9	115.6
Kharif	66.3	72.8	80.7	92.8	92.4	91.5	91.4	91.4	96.3	97.5	102.0
Rabi	8.0	12.2	15.3	12.5	12.9	15.1	14.1	13.0	13.4	15.4	13.6
Wheat	55.1	69.7	86.9	93.5	93.5	95.8	86.5	92.3	98.5	99.7	99.1
Jowar	11.7	7.5	7.0	6.0	5.3	5.5	5.5	4.2	4.6	5.0	3.8
Kharif	8.3	4.5	3.4	3.3	2.8	2.4	2.3	1.8	2.0	2.1	1.9
Rabi	3.4	3.0	3.6	2.7	2.4	3.1	3.2	2.4	2.6	2.9	1.8
Maize	6.9	6.8	10.4	10.3	8.7	9.3	9.2	8.1	9.7	9.1	7.5
Bajra	9.0	12.0	21.7	21.8	22.3	24.3	24.2	22.6	25.9	28.7	27.8
Gram	2.4	2.2	2.9	2.7	3.0	3.2	2.8	2.6	4.9	4.3	3.7
Tur	5.4	3.9	8.2	7.7	8.8	9.5	7.3	7.1	9.4	11.2	10.3
Oilseeds[e]	18.6	18.4	32.5	29.8	30.9	32.7	27.5	25.3	31.3	31.3	31.5
Kharif	9.8	11.9	21.9	20.7	20.8	22.6	19.2	16.8	21.5	21.0	21.3
Rabi	8.8	6.5	10.6	9.1	10.2	10.1	8.3	8.6	9.8	10.3	10.2
Groundnut	7.5	6.4	8.3	7.0	4.7	9.7	7.4	6.7	7.5	9.2	7.0
Kharif	5.1	4.9	6.6	5.1	3.2	8.1	5.9	5.4	6.0	7.5	5.4
Rabi	2.4	1.5	1.6	1.8	1.5	1.7	1.5	1.4	1.4	1.6	1.5
Rapeseed and Mustard	5.2	4.2	8.2	6.6	8.0	7.9	6.3	6.8	7.9	8.3	8.4
Sugarcan[e]	241.0	296.0	342.4	361.0	341.2	352.1	362.3	348.4	306.1	376.9	380.8
Cotton[f]	9.8	9.5	33.0	35.2	34.2	35.9	34.8	30.0	32.6	34.9	30.1
Jute and Mesta[g]	9.2	10.5	10.6	11.4	10.9	11.7	11.1	10.5	11.0	10.1	10.1
Jute	7.9	9.3	10.0	10.7	10.3	11.1	10.6	9.9	10.4	9.6	9.6
Mesta	1.3	1.2	0.6	0.7	0.6	0.6	0.5	0.6	0.5	0.5	0.5
Plantation Crops											
Tea	0.7	0.8	1.0	1.0	1.0	1.2	1.2	1.2	na	na	na
Coffee	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	na	na	na
Rubber^	0.3	0.6	0.8	0.9	0.9	0.8	0.6	0.6	0.7	0.7	na
Potato	15.2	22.5	42.3	46.6	45.3	41.6	48.0	43.4	48.6	51.3	52.6

Source: Directorate of Economics & Statistics, Department of Agriculture, Cooperation and Farmers Welfare

Notes:

a Includes cereals, coarse cereals and pulses

b Includes rice and wheat

c Includes maize, jowar, ragi, bajra, small millets and barley

d Includes tur, urad, moong, gram, lentils and other pulses

e Includes groundnut, rapeseed & mustard, sesamum, linseed, castorseed, nigerseed, safflower, sunflower and soyabean.

f Bales of 170 Kgs. g Bales of 180 Kgs.

na - not available, ^ 2017-18 - Provisional

* Agricultural Crops as per 4th Advance Estimates 2017-18

** As per 2nd Advance Estimate 2018-19 & Horticultural Crops as per 1st Advance Estimate 2018-19

Table 1.16. Gross Area Under Major Crops

(Million Hectares)

Group/Commodity	1990-91	2000-01	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Foodgrains[a]	127.8	121.0	126.7	124.8	120.8	125.0	124.3	123.2	129.2	127.6	122.7
Kharif	80.8	75.2	72.4	72.1	67.7	69.1	68.8	69.2	73.2	72.1	69.9
Rabi	47.0	45.8	54.3	52.7	53.1	56.0	55.5	54.0	56.0	55.5	52.9
Cereals[b]	103.2	100.7	100.3	100.3	97.5	99.8	100.7	98.3	99.8	97.6	94.5
Kharif	69.3	64.6	60.1	60.9	57.7	58.7	58.8	57.9	58.8	58.0	56.7
Rabi	33.9	36.1	40.2	39.4	39.8	41.1	42.0	40.4	40.9	39.6	37.8
Coarse Cereals[c]	36.3	30.3	28.3	26.4	24.8	25.2	25.2	24.4	25.0	24.2	22.0
Kharif	29.6	23.9	22.1	20.8	18.8	19.3	18.9	18.2	19.0	18.6	17.2
Rabi	6.7	6.4	6.3	5.7	5.9	5.9	6.2	6.2	6.0	5.6	4.8
Pulses[d]	24.7	20.3	26.4	24.5	23.3	25.2	23.6	24.9	29.4	30.0	28.3
Kharif	11.5	10.6	12.3	11.2	10.0	10.3	10.0	11.3	14.4	14.1	13.2
Rabi	13.2	9.7	14.1	13.3	13.3	14.9	13.6	13.6	15.1	15.9	15.1
Rice	42.7	44.7	42.9	44.0	42.8	44.1	44.1	43.5	44.0	43.8	43.4
Kharif	39.7	40.7	38.0	40.1	38.9	39.4	39.8	39.7	39.8	39.4	39.4
Rabi	3.0	4.0	4.8	3.9	3.8	4.7	4.3	3.8	4.1	4.4	4.0
Wheat	24.2	25.7	29.1	29.9	30.0	30.5	31.5	30.4	30.8	29.6	29.1
Jowar	14.4	9.9	7.4	6.2	6.2	5.8	6.2	6.1	5.6	5.0	4.0
Kharif	8.6	4.9	3.1	2.6	2.4	2.3	2.3	2.1	2.1	1.9	1.6
Rabi	5.8	5.0	4.3	3.6	3.8	3.5	3.9	3.9	3.6	3.1	2.5
Maize	10.5	9.8	9.6	8.8	7.3	7.8	7.3	7.1	7.5	7.4	6.7
Bajra	5.9	6.6	8.6	8.8	8.7	9.1	9.2	8.8	9.6	9.5	9.1
Gram	3.6	3.6	4.4	4.0	3.9	3.9	3.9	4.0	5.3	4.4	4.3
Tur	7.5	5.2	9.2	8.3	8.5	9.9	8.3	8.4	9.6	10.6	9.7
Oilseeds[e]	24.1	22.8	27.2	26.3	26.5	28.1	25.6	26.1	26.2	24.6	25.5
Kharif	14.0	15.8	18.2	18.4	18.3	19.7	18.2	18.9	18.7	17.3	18.0
Rabi	10.1	7.0	9.0	7.9	8.2	8.4	7.4	7.2	7.5	7.3	7.5
Groundnut	8.3	6.6	5.9	5.3	4.7	5.5	4.8	4.6	5.3	4.9	4.9
Kharif	6.8	5.7	5.0	4.3	3.9	4.6	4.0	3.8	4.6	4.1	4.1
Rabi	1.5	0.9	0.9	0.9	0.8	0.9	0.8	0.8	0.8	0.8	0.8
Rapeseed and Mustard	5.8	4.5	6.9	5.9	6.4	6.6	5.8	5.7	6.1	6.0	6.2
Sugarcane	3.7	4.3	4.9	5.0	5.0	5.0	5.1	4.9	4.4	4.7	5.1
Cotton	7.4	8.6	11.2	12.2	12.0	12.0	12.8	12.3	10.8	12.4	12.3
Jute and Mesta	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.7
Jute	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7
Mesta	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Plantation crops											
Tea	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.6	na	na	na
Coffee (Plucked area)	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	na	na	na
Rubber^	0.5	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	na
Potato	0.9	1.2	1.9	1.9	1.9	2.0	2.1	2.1	2.2	2.1	2.2

Source: Directorate of Economics & Statistics, Department of Agriculture, Cooperation & Farmers Welfare

Notes: na - not available, ^ 2017-18 - Provisional

a Includes cereals, coarse cereals and pulses
b Includes rice and wheat
c Includes maize, jowar, ragi, bajra, small millets and barley
d Includes tur, urad, moong, gram, lentils and other pulses
e Includes groundnut, rapeseed & mustard, sesamum, linseed, castorseed, nigerseed, safflower, sunflower and soyabean.

Table 1.17. Yield Per Hectare of Major Crops

(Kg. / Hectare)

Group/Commodity	1990-91	2000-01	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18*	2018-19**
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Foodgrains[a]	1380	1626	1930	2078	2079	2120	2028	2042	2129	2233	2292
Kharif	1231	1357	1669	1822	1892	1864	1862	1808	1890	1953	2037
Rabi	1635	2067	2278	2430	2431	2435	2232	2342	2441	2596	2631
Cereals[b]	1571	1844	2256	2415	2449	2462	2331	2393	2525	2661	2725
Kharif	1357	1512	1893	2057	2116	2089	2081	2065	2188	2266	2352
Rabi	2010	2438	2800	2968	2932	2995	2681	2862	3010	3239	3282
Coarse Cereals[c]	900	1027	1531	1590	1617	1717	1703	1579	1750	1941	1938
Kharif	937	5298	1500	1563	1583	1619	1633	1544	1708	1819	1816
Rabi	741	973	1641	1689	1725	2034	1915	1686	1885	2350	2380
Pulses[d]	578	544	691	699	789	764	728	656	786	841	849
Kharif	471	417	578	541	594	580	573	489	667	664	682
Rabi	672	604	790	831	934	891	843	796	902	999	996
Rice	1740	1901	2239	2393	2462	2416	2391	2400	2494	2578	2665
Kharif	1670	1788	2121	2312	2374	2319	2295	2305	2417	2477	2587
Rabi	2671	3042	3184	3238	3353	3232	3291	3382	3230	3474	3445
Wheat	2281	2708	2989	3178	3117	3145	2750	3034	3200	3371	3408
Jowar	814	764	949	957	850	957	884	697	812	998	935
Kharif	969	938	1119	1257	1171	1050	1014	850	954	1106	1228
Rabi	582	594	827	741	644	896	808	615	730	931	748
Maize	658	688	1079	1171	1198	1184	1255	1132	1305	1237	1114
Bajra	1518	1822	2540	2478	2566	2676	2632	2563	2689	3032	3046
Gram	673	618	655	662	776	813	729	646	913	960	861
Tur	712	744	895	928	1036	960	889	840	974	1063	1067
Oilseeds[e]	771	810	1193	1133	1168	1168	1075	968	1195	1270	1234
Kharif	698	757	1203	1123	1135	1151	1055	884	1153	1212	1182
Rabi	872	929	1174	1155	1240	1207	1125	1186	1300	1408	1358
Groundnut	904	977	1411	1323	995	1764	1552	1465	1398	1868	1436
Kharif	751	861	1335	1188	811	1735	1478	1399	1321	1838	1339
Rabi	1611	1756	1846	1938	1910	1919	1948	1801	1861	2016	1934
Rapeseed and Mustard	904	935	1185	1121	1262	1185	1083	1183	1304	1397	1346
Sugarcane (tonnes/hect.)	65	69	70	72	68	71	71	71	69	80	75
Cotton	225	190	499	491	486	510	462	415	512	477	414
Jute and Mesta	1634	1867	2192	2268	2281	2512	2473	2421	2585	2481	2473
Jute	1833	2026	2329	2389	2396	2639	2549	2457	2660	2556	2522
Mesta	988	1078	1115	1248	1237	1338	1525	1945	1664	1601	1816
Plantation Crops											
Tea	1794	1673	1712	1967	2037	2170	2170	2170	na	na	na
Coffee	759	959	746	766	766	727	766	766	na	na	na
Rubber	1076	1576	1210	1229	1205	994	811	693	845	845	na
Potato	16	18	23	22	23	21	22	21	22	24	24

Source: Directorate of Economics & Statistics, Department of Agriculture, Cooperation & Farmers Welfare

Notes: na - not available

a Includes cereals, coarse cereals and pulses
b Includes rice and wheat
c Includes maize, jowar, ragi, bajra, small millets and barley
d Includes tur, urad, moong, gram, lentils and other pulses
e Includes groundnut, rapeseed & mustard, sesamum, linseed, castorseed, nigerseed, safflower, sunflower and soyabean.
* Agricultural Crops as per 4th Advance Estimates 2017-18
** As per 2nd Advance Estimate 2018-19 & Horticultural Crops as per 1st Advance Estimate 2018-19

Table 1.18. Production of Important Crops in Three Largest Producing States in 2017-18*

(Production in Million Tonnes)

Crops/Groups of Crops	States	Production	Per cent Share of Production to All India	Cumulative per cent Share of Production
(1)	(2)	(3)	(4)	(5)
I. **Foodgrains**				
Rice	West Bengal	14.97	13.26	13.26
	Punjab	13.38	11.85	25.11
	Uttar Pradesh	13.27	11.75	36.86
Wheat	Uttar Pradesh	31.88	31.98	31.98
	Punjab	17.85	17.90	49.88
	Madhya Pradesh	15.91	15.96	65.84
Maize	Karnataka	3.55	12.36	12.36
	Maharashtra	3.54	12.33	24.69
	Madhya Pradesh	3.54	12.32	37.00
Total Nutri/Coarse Cereals	Rajasthan	6.57	13.99	13.99
	Karnataka	6.27	13.35	27.34
	Maharashtra	6.09	12.96	40.31
Tur	Maharashtra	1.07	25.24	25.24
	Madhya Pradesh	0.84	19.74	44.98
	Karnataka	0.77	18.08	63.06
Gram	Madhya Pradesh	4.60	40.92	40.92
	Maharashtra	1.78	15.89	56.81
	Rajasthan	1.67	14.87	71.68
Total Pulses	Madhya Pradesh	8.11	32.15	32.15
	Rajasthan	3.39	13.42	45.57
	Maharashtra	3.30	13.09	58.67
Total Foodgrains	Uttar Pradesh	51.3	17.99	17.99
	Madhya Pradesh	33.5	11.74	29.74
	Punjab	31.7	11.13	40.87
II. **Oilseeds**				
Groundnut	Gujarat	3.94	42.88	42.88
	Rajasthan	1.26	13.72	56.59
	Andhra Pradesh	1.04	11.34	67.93
Rapeseed & Mustard	Rajasthan	3.40	40.88	40.88
	Haryana	1.11	13.32	54.20
	Madhya Pradesh	0.98	11.73	65.93
Soyabean	Madhya Pradesh	5.32	48.46	48.46
	Maharashtra	3.89	35.41	83.87
	Rajasthan	1.07	9.74	93.62
Sunflower	Karnataka	0.10	47.35	47.35
	Bihar	0.02	10.47	57.82
	Odisha	0.02	7.35	65.17
Total Oilseeds	Madhya Pradesh	6.95	22.20	22.20
	Rajasthan	5.97	19.07	41.27
	Gujarat	5.86	18.71	59.98
III. **Other Cash Crops**				
Sugarcane	Uttar Pradesh	177.06	46.98	46.98
	Maharashtra	83.13	22.06	69.03
	Karnataka	28.26	7.50	76.53
Cotton[a]	Gujarat	12.64	36.22	36.22
	Maharashtra	6.55	18.76	54.98
	Telangana	4.75	13.63	68.61
Jute & Mesta[b]	West Bengal	7.64	75.32	75.32
	Bihar	1.45	14.32	89.64
	Assam	0.84	8.25	97.90

Source: Directorate of Economics & Statistics, Department of Agriculture, Cooperation & Farmers Welfare

Notes:

a : Production in million bales of 170 kgs. b : Production in million bales of 180 kgs.

* : 4th Advance Estimates

1.19. Per Capita Net Availability of Foodgrains*

(000 TONNES UNLESS OTHERWISE STATED) (As on 19.11.2018)

Year	Population in thousand persons	Production		Net Imports	Change of Stocks	Net availability	Per capita net availability#	
		Gross	Net				Kg. per year	Grams per day
				RICE				
2015	1259108	105480	97464	-11032	946	85486	67.9	186.0
2016	1273986	104410	96475	-10043	786	85646	67.2	184.2
2017	1288522	109700	101363	-12581	2731	86051	66.8	183.0
2018(P)	1302896	112910	104329	-12683	1792	89854	69.0	188.9
				WHEAT				
2015	1259108	86530	76060	-176	-1325	77209	61.3	168.0
2016	1273986	92290	81123	1693	-10041	92857	72.9	199.7
2017	1288522	98510	86590	5134	5815	85909	66.7	182.7
2018(P)	1302896	99700	87636	1420	5172	83884	64.4	176.4
				OTHER CEREALS				
2015	1259108	42860	36753	-1189	-156	35720	28.4	77.7
2016	1273986	38520	33705	-349	45	33311	26.1	71.6
2017	1288522	43770	38299	-373	18	37908	29.4	80.6
2018(P)	1302896	46990	41116	-555	-48	40609	31.2	85.4
				CEREALS				
2015	1259108	234870	205511	-12397	-535	193649	153.8	421.4
2016	1273986	235220	205818	-8699	-9210	206329	162.0	443.7
2017	1288522	251980	220483	-7820	8564	204099	158.4	434.0
2018(P)	1302896	259590	227141	-11818	6916	208407	160.0	438.2
				PULSES				
2015	1259108	17150	15006	5115	0	20121	16.0	43.8
2016	1273986	16350	14306	5951	241	20016	15.7	43.0
2017	1288522	23130	20239	6811	1314	25736	20.0	54.7
2018(P)	1302896	25230	22076	5428	939	26565	20.4	55.9
				FOODGRAINS				
2015	1259108	252020	220518	-7282	-535	213771	169.8	465.1
2016	1273986	251570	220124	-2748	-8969	226345	177.7	486.8
2017	1288522	275110	240721	-1009	9878	229834	178.4	488.7
2018(P)	1302896	284820	249218	-6390	7855	234973	180.3	494.1

P - Provisional figures is based on 4th Advance Estimates of production for 2017-18, Net Import for April 2017 to March 2018 and stock position as on 01.04.2018.

* The net availability of foodgrains is estimated to be Gross Production (-) seed, feed & wastage, (-) exports (+) imports, (+/-) change in stocks. The net availability of foodgrains divided by the population estimates for a particular year indicate per capita availability of foodgrains in terms of kg/year. Net availability, thus worked out is further divided by the number of days in a year i.e., 365 days which is taken as net availaility of foodgrains in terms of grams/day.

\# Figures in respect of per capita net availability given above are not strictly representative of actual level of consumption in the country especially as they do not take in to account any change in stocks in possession of traders, producers and consumers.

Table 1.20. Net Availability, Procurement and Public Distribution of Foodgrains

(Million tonnes)

Year	Net production of foodgrains	Net imports	Net availability of foodgrains[a]	Procurement	Public distribution[b]	Col. 3 as per cent of Col. 4	Col. 5 as per cent of Col. 2	Col. 6 as per cent of Col. 4
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1951	48.1	4.8	52.4	3.8	8.0	9.2	7.9	15.3
1961	72.0	3.5	75.7	0.5	4.0	4.6	0.7	5.3
1971	94.9	2.0	94.3	8.9	7.8	2.1	9.3	8.3
1981	113.4	0.7	114.3	13.0	13.0	0.6	11.4	11.4
1991	154.3	(-)0.1	158.6	19.6	20.8	…	12.7	13.1
2001	172.2	(-)2.9	156.9	42.6	13.2	(-)1.8	24.7	8.4
2002	186.2	(-)6.7	189.5	40.3	18.2	(-)3.5	21.7	9.6
2003	152.9	(-)5.5	170.6	34.5	23.2	(-)2.8	22.6	13.2
2004	186.5	(-)6.5	183.3	41.1	28.3	(-) 3.5	22.0	15.5
2005	173.6	(-)6.0	170.0	41.5	31.0	(-) 3.5	23.9	18.2
2006	182.5	(-)2.3	181.9	37.0	31.8	(-) 1.3	20.3	17.5
2007	190.1	(-)4.7	183.7	35.8	32.8	(-) 2.6	18.8	17.8
2008	210.2	(-) 9.7	183.5	54.2	34.7	(-) 5.3	25.8	18.9
2009	205.2	(-) 4.1	189.5	60.5	41.3	(-) 2.2	29.5	21.8
2010	190.8	(-) 2.2	189.2	56.1	43.7	(-) 1.2	29.4	23.1
2011	213.9	(-) 2.9	203.1	64.5	47.9	(-) 1.4	30.1	23.6
2012	232.9	(-)16.3	205.4	73.4	44.9	(-)7.9	31.5	21.9
2013	231.9	(-)19.2	220.6	58.9	44.5	(-)8.7	25.4	20.2
2014	231.9	(-)15.8	222.2	59.8	43.5	(-)7.1	25.8	19.6
2015	220.5	(-)0.3	213.8	65.0	na	(-)0.1	29.5	na
2016	220.1	(-)2.7	226.6	60.8	na	(-)1.2	27.6	na
2017	241.2	2	238	71.4	na	0.8	29.6	na
2018	na	na	na	74.8	na	na	na	na

Source: 1. Department of Food and Public Distribution
2. Directorate of Economics & Statistics, Department of Agriculture, Cooperation & Farmers Welfare.

Notes:

na: not available

a : Net availability =Net production +Net Imports - changes in Government stocks.

b : Includes quantities released under the Food for Work Programme during the year 1978 to 1990.

1. Figures for procurement and public distribution relate to calender years.
2. For calculation of per capita net availability, the figure of net imports from 1981 to 1994 are based on imports and exports on Government of India account only.
   Net import from 1995 are, however, based on the total exports and imports (both Government as well as Private accounts).
3. Net Imports are total Imports minus Exports of the Country.

Table 1.21. Per Capita Availability of Certain Important Articles of Consumption

Year	Edible oil [a]	Vanaspati[b]	Sugar [c] (Nov.-Oct.)	Cloth[d]			Tea (Gram.)	Coffee [f] (Gram.)	Electricity Domestic (KWH)
				Cotton [e] (metres)	Man-made (metres)	Total (metres)			
	(Kg.)	(Kg.)	(Kg.)						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1960-61	3.2	0.8	4.8	13.8	1.2	15.0	296.0	80.0	3.4
1970-71	3.5	1.0	7.4	13.6	2.0	15.6	401.0	65.0	7.0
1980-81	3.8	1.2	7.3	12.9	4.4	17.3	511.0	79.0	13.5
1990-91	5.5	1.0	12.7	15.1	9.0	24.1	612.0	59.0	38.2
2000-01	8.2	1.3	15.8	14.2	16.5	30.7	631.0	58.0	75.2
2001-02	8.8	1.4	16.0	14.8	17.2	32.0	650.0	67.0	76.8
2002-03	7.2	1.4	16.3	14.4	17.0	31.4	623.0	67.0	79.0
2003-04	9.9	1.2	16.1	13.4	17.6	31.0	662.0	70.0	83.6
2004-05	10.2	1.1	15.5	14.1	19.4	33.5	663.0	72.0	87.8
2005-06	10.6	1.1	16.3	16.4	19.7	36.1	687.0	75.0	90.4
2006-07	11.1	1.2	16.8	18.0	21.6	39.6	687.0	77.0	98.8
2007-08	11.4	1.3	17.8	19.0	22.8	41.9	701.0	80.0	106.0
2008-09	12.7	1.2	18.8	17.9	21.1	39.0	704.0	82.0	112.7
2009-10	13.1	1.1	18.6	19.7	23.4	43.1	709.0	86.0	121.2
2010-11	13.0	1.0	17.0	21.4	22.6	44.0	715.0	90.0	130.9
2011-12	13.8	1.0	18.7	19.8	20.7	40.5	728.0	95.0	142.4
2012-13	15.8	0.7	18.7	19.9	18.6	38.5	779.0	97.0	150.9
2013-14	16.8	0.8	19.5	19.9	16.4	36.2	744.0	100.0	162.0
2014-15	18.3	0.8	20.3	23.6	17.0	40.6	752.0	100.0	174.2
2015-16	17.7	0.8	19.4	24.6	15.9	40.5	758.0	100.0	189.1(P)
2016-17	18.2	0.7	18.9	na	na	na	na	na	na
2017-18	19.5	0.7	19.5	na	na	na	na	na	na

Source: 1. Directorate of Sugar & Vegetable Oils, Ministry of Consumer Affairs, Food & Public Distribution
2. Tea Board 3. Coffee Board
4. Ministry of Textiles 5. Central Electricity Authority, Ministry of Power

Notes:

na : not available P : Provisional

a : Includes groundnut oils, rapeseed and mustard oil, sesamum oil, nigerseed oil, soyabean oil and sunflower oil but excludes oil for manufacture of vanaspati.

b : Relates to calendar year.

c : Relates to actual releases for domestic consumption, sugar season/year commencing from November to October of following year as opposed to financial year.

d : The data of cloth; prior to 1980-81 is calender year wise; in meters upto 1984-85; in square meter from 1985-86 onwards.

e : Figures for blended/mixed fabrics were not separately available prior to 1969. These have been included under man-made fibre fabrics after 1969.

f : Figures up to 1971-72 relate to coffee season and are thereafter on calendar year basis.

Table 1.22. Production, Imports and Consumption of Fertilizers

(Thousand tonnes of nutrients)

		1980-81	1990-91	2000-01	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
A.	**Nitrogenous fertilizers**															
	Production	2164	6993	11004	10900	10870	11900	12157	12259	12194	12378	12394	13416	13354	13386	13883
	Imports	1510	414	154	3707	3751	3447	4493	5240	4801	3920	4766	5068	3385	3588	4474
	Consumption	3678	7997	10920	14419	15090	15580	16558	17300	16821	16750	16946	17372	16735	16958	na
B.	**Phosphatic fertilizers**															
	Production	842	2052	3748	3807	3464	4321	4223	4368	3830	3960	4121	4394	4595	4723	4723
	Imports	452	1311	396	1391	3067	2756	3802	4427	2797	1588	1832	2888	2130	2047	2973
	Consumption	1214	3221	4215	5515	6506	7274	8050	7914	6653	5633	6098	6979	6705	6854	na
C.	**Potassic fertilizers**															
	Imports	797	1328	1541	2653	3403	2945	4069	3335	1559	1926	2537	2053	2325	2895	2373
	Consumption	624	1328	1567	2636	3313	3632	3514	2576	2062	2099	2532	2402	2508	2779	na
D.	**All fertilizers (NPK)**															
	Production	3006	9045	14752	14707	14334	16221	16380	16627	16024	16338	16515	17810	17949	18109	18106
	Imports	2759	2758	2090	7750	10221	9148	12364	13002	9157	7434	9135	10009	7840	8530	9820
	Consumption	5516	12546	19702	22570	24909	26486	28122	27790	25534	24482	25576	26753	25948	26591	na

Source: Department of Fertilizers, Ministry of Chemicals & Fertilizers

na : not available

Table 1.23. Production of Major Livestock Products and Fish

Year	Milk (Million tonnes)	Eggs (Million Nos.)	Fish (Thousand tonnes)
(1)	(2)	(3)	(4)
1950-51	17.0	1832	752
1960-61	20.0	2881	1160
1970-71	22.0	6172	1756
1980-81	31.6	10060	2442
1990-91	53.9	21101	3836
2000-01	80.6	36632	5656
2006-07	102.6	50653	6869
2007-08	107.9	53583	7127
2008-09	112.2	55562	7620
2009-10	116.4	60267	7914
2010-11	121.8	63024	8400
2011-12	127.9	66450	8700
2012-13	132.4	69731	9040
2013-14	137.7	74752	9572
2014-15	146.3	78484	10164
2015-16	155.5	82929	10795
2016-17	165.4	88137	11420
2017-18	176.3	95217	12610

Source: Department of Animal Husbandry, Dairying & Fisheries

Table 1.24. Production of Coal and Lignite

(Million tonnes)

Year	Coal				Lignite	Total coal and lignite (5)+(6)
	Coking		Non-coking	Total		
	Metallurgical	Non-Metallurgical				
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1950-51	na	na	na	32.3	na	na
1960-61	17.0	na	38.2	na	na	na
1970-71	17.8	na	55.1	na	3.4	na
1980-81	24.6	8.0	81.3	113.9	5.1	119.0
1981-82	26.9	9.2	88.1	124.2	6.3	130.5
1982-83	30.1	7.5	92.9	130.5	6.9	137.4
1983-84	30.1	6.2	101.9	138.2	7.3	145.5
1984-85	30.6	6.0	110.8	147.4	7.8	155.2
1985-86	29.1	6.6	118.6	154.2	8.1	162.3
1986-87	27.9	11.6	126.2	165.8	9.4	175.2
1987-88	26.3	14.7	138.7	179.7	11.2	190.9
1988-89	25.2	17.6	151.9	194.6	12.4	207.0
1989-90	24.5	19.9	156.5	200.9	12.8	213.7
1990-91	24.1	21.2	166.4	211.7	13.8	225.5
1991-92	26.3	20.0	183.0	229.3	14.6	243.8
1992-93	25.7	19.6	192.9	238.3	16.6	254.9
1993-94	26.0	19.1	201.0	246.0	18.1	264.1
1994-95	24.5	19.7	209.6	253.8	19.3	273.1
1995-96	23.5	16.6	230.0	270.1	22.1	292.3
1996-97	22.6	17.9	245.1	285.7	22.5	308.2
1997-98	24.2	19.3	252.4	295.9	23.1	319.0
1998-99	23.8	15.4	253.1	292.3	23.4	315.7
1999-2000	21.2	12.0	266.7	300.0	22.1	322.1
2000-01	19.3	11.8	278.6	309.6	23.0	332.6
2001-02 [a]	18.0	10.7	299.1	327.8	24.8	352.6
2002-03 [a]	18.4	11.8	311.1	341.3	26.0	367.3
2003-2004	18.3	11.1	331.9	361.3	28.0	389.3
2004-2005	18.2	12.0	352.4	382.6	30.3	413.0
2005-2006	17.0	14.5	375.5	407.0	30.1	437.1
2006-2007	17.2	14.9	398.7	430.8	31.3	462.1
2007-08	18.1	16.4	422.6	457.1	34.0	491.0
2008-09	17.3	17.5	458.0	492.8	32.4	525.2
2009-10	17.7	26.7	487.6	532.0	34.0	566.1
2010-11	17.7	31.9	483.2	532.7	37.7	570.4
2011-12	16.2	35.4	488.3	540.0	42.3	582.3
2012-13	14.6	37.0	504.8	556.4	46.5	602.9
2013-14	15.1	41.7	509.0	565.8	44.3	610.0
2014-15	13.8	43.7	551.7	609.2	48.3	657.4
2015-16	14.3	46.5	578.3	639.2	43.8	683.0
2016-17	15.2	46.4	596.2	657.8	45.2	703.1
2017-18 (P)	12.9	27.9	635.5	676.4	46.2	722.7

Source : Ministry of Coal

Notes:

na: not available

[a] Including Meghalaya Coal.

P : Provisional

Table 1.25. Progress of Electricity Supply (Utilities & Non-Utilities)
A : Installed Plant Capacity

(Thousand MW)

Year	Utilities				Non-Utilities	Total [5+6]
	Hydro	Thermal +RES	Nuclear	Total		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1950-51*	0.6	1.1	0	1.7	0.6	2.3
1960-61	1.9	2.7	0	4.6	1.0	5.6
1970-71	6.4	7.9	0.4	14.7	1 . 6	16.3
1980-81	11.8	17.6	0.9	30.3	3 . 1	33.4
1981-82	12.2	19.3	0.9	32.4	3 . 4	35.8
1982-83	13.1	21.4	0.9	35.4	3 . 9	39.3
1983-84	13.9	24.4	1.1	39.4	4 . 4	43.8
1984-85	14.5	27	1.1	42.6	5 . 1	47.7
1985-86	15.5	30	1.3	46.8	5 . 5	52.3
1986-87	16.2	31.8	1.3	49.3	5 . 7	55.0
1987-88	17.3	35.6	1.3	54.2	6 . 3	60.5
1988-89	17.8	39.7	1.5	59	7 . 5	66.5
1989-90	18.3	43.8	1.5	63.6	8 . 2	71.8
1990-91	18.8	45.8	1.5	66.1	8 . 6	74.7
1991-92	19.2	48.1	1.8	69.1	9 . 3	78.4
1992-93	19.6	50.7	2.0	72.3	10.1	82.4
1993-94	20.4	54.4	2.0	76.8	10.7	87.5
1994-95	20.8	58.1	2.2	81.1	11.2	92.3
1995-96	21	60.1	2.2	83.3	11.8	95.1
1996-97	21.7	61.9	2.2	85.8	12.1	97.9
1997-98	21.9	65	2.2	89.1	13.2	102.3
1998-99	22.4	68.7	2.2	93.3	14.1	107.4
1999-00	23.9	71.3	2.7	97.9	14.7	112.6
2000-01	25.1	73.6	2.9	101.6	16.2	117.8
2001-02	26.3	76	2.7	105	17.1	122.1
2002-03	26.8	78.4	2.7	107.9	18.3	126.2
2003-04	29.5	80.5	2.7	112.7	18.7	131.4
2004-05	30.9	84.7	2.8	118.4	19.1	137.5
2005-06	32.3	88.6	3.4	124.3	21.3	145.6
2006-07	34.7	93.7	3.9	132.3	22.3	154.6
2007-08	35.9	103	4.1	143	25	168
2008-09	36.9	107	4.1	148	27	175
2009-10	36.9	118	4.6	159.4	31.5	190.9
2010-11	37.6	131.3	4.8	173.7	34.4	208.1
2011-12	39.0	156.1	4.8	199.9	36.5	236.4
2012-13	39.5	179.1	4.8	223.4	40.7	264.1
2013-14	40.5	203.2	4.8	248.5	42.3	290.8
2014-15	41.3	227.9	5.8	275.0	44.7	319.6
2015-16	42.8	256.6	5.8	305.2	48.3	353.4
2016-17	44.5	275.6	6.8	326.8	51.5	378.4
2017-18	45.3	291.9	6.8	344.0	55.0($)	399.0

Source : Ministry of Power

Notes:

$: Provisional RES : Renewable Energy Source a : Calender Year

Table 1.25. Progress of Electricity Supply (Utilities & Non-Utilities)
B : Energy Generated

(Billion KWH)

Year	Utilities				Non-Utilities	Total (5+6)
	Hydro	Thermal +RES	Nuclear	Total		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1950-51*	2.5	2.6	....	5.1	1.5	6.6
1960-61	7.8	9.1	....	16.9	3 . 2	20.1
1970-71	25.2	28.2	2 . 4	55.8	5 . 4	61.2
1975-76	33.3	43.3	2 . 6	79.2	6 . 7	85.9
1977-78	38.0	51.1	2 . 3	91.4	7 . 6	99.0
1978-79	47.1	52.6	2 . 8	102.5	7 . 6	110.1
1979-80	45.5	56.3	2 . 9	104.7	8 . 2	112.9
1980-81	56.5	61.3	3 . 0	120.8	8 . 4	129.2
1981-82	49.6	69.5	3 . 0	122.1	9 . 0	131.1
1982-83	48.4	79.9	2 . 0	130.3	10.0	140.3
1983-84	50.0	86.7	3 . 5	140.2	10.8	151.0
1984-85	53.9	98.8	4 . 1	156.8	12.3	169.1
1985-86	51.0	114.4	5 . 0	170.4	13.0	183.4
1986-87	53.8	128.9	5 . 0	187.7	13.6	201.3
1987-88	47.5	149.6	5 . 0	202.1	16.9	219.0
1988-89	57.9	157.7	5 . 8	221.4	19.9	241.3
1989-90	62.1	178.7	4 . 6	245.4	23.0	268.4
1990-91	71.7	186.5	6 . 1	264.3	25.1	289.4
1991-92	72.8	208.7	5 . 5	287.0	28.6	315.6
1992-93	69.9	224.8	6 . 7	301.4	31.3	332.7
1993-94	70.4	248.2	5 . 4	324.0	32.3	356.3
1994-95	82.7	262.1	5 . 6	350.4	35.1	385.5
1995-96	72.6	299.3	8 . 0	380.0	38.2	418.1
1996-97	68.9	317.9	9 . 1	395.9	40.8	436.7
1997-98	74.6	337.0	10.1	421.7	44.1	465.8
1998-99	82.9	353.7	11.9	448.5	48.4	496.9
1999-00	80.6	386.8	13.3	480.7	51.5	532.2
2000-01	74.5	408.1	16.9	499.5	55.0	554.5
2001-02	73.5	424.4	19.5	517.4	61.7	579.1
2002-03	64.0	449.3	19.4	532.7	63.8	596.5
2003-04	75.2	472.1	17.8	565.1	68.2	633.3
2004-05	84.6	492.8	17.0	594.4	71.4	665.8
2005-06	101.5	506.0	17.3	623.8	73.6	697.4
2006-07	113.5	538.4	18.8	670.7	81.8	752.5
2007-08	120.4	585.3	16.9	723.0	90.5	813.1
2008-09	110.1	616.2	14.9	741.2	99.7	840.9
2009-10	104.1	677.1	18.6	799.8	106.1	906.0
2010-11	114.4	704.3	26.3	844.8	120.9	965.7
2011-12	130.5	759.4	32.3	922.5	134.4	1056.8
2012-13	113.7	817.9	32.9	964.5	144.0	1108.5
2013-14	134.9	857.6	34.2	1026.6	149.0	1175.6
2014-15	129.2	939.7	36.1	1105.1	162.1	1267.1
2015-16	121.4	1008.8	37.4	1167.6	168.4	1336.0
2016-17	122.4	1075.1	37.9	1235.4	172.0	1407.4
2017-18	126.1	1139.0	38.3	1303.5	179.8($)	1483.2

Source : Ministry of Power

Notes:

$: Provisional * : Calender Year RES : Renewable Energy Resource

Figures at decimal may not tally due to rounding off

Table 1.26. Operations of Indian Railways

	1950-51	1960-61	1970-71	1980-81	1990-91	2000-01	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1. Route Kilometres (000's)														
Electrified	0.4	0.8	3.7	5.4	10.0	14.9	20.3[b]	20.9[b]	21.6[b]	22.2[b]	23.6[b]	25.40[b]	29.40[b]	na
Total	53.6	56.2	59.8	61.2	62.4	63.0	64.6[b]	65.4[b]	65.8[b]	66.0[b]	66.7[b]	67.40[b]	68.40[b]	na
2. Originating traffic (million tonnes)														
Revenue Earning	73.2	119.8	167.9	195.9	318.4	473.5	969.1[a]	1008.1[a]	1051.6[a]	1095.3[a]	1101.5[a]	1106.15[a]	1159.55[a]	1221.39
Total Traffic	93.0	156.2	196.5	220.0	341.4	504.2	975.2[a]	1014.2[a]	1058.8[a]	1101.1[a]	1108.6[a]	1110.95[a]	1162.64[a]	na
3. Goods carried (billion tonne km.)														
Revenue Earning	37.6	72.3	110.7	147.7	235.8	312.4	667.6	691.7[a]	665.8[a]	681.7[a]	654.5[a]	620.18[a]	692.90[a]	700.60
Total Traffic	44.1	87.7	127.4	158.5	242.7	315.5	668.6	692.6[a]	666.7[a]	682.6[a]	655.6[a]	620.86[a]	693.30[a]	na
4. Earnings from goods carried (₹ Crore)	139.3	280.5	600.7	1550.9	8247.0	23045.4	67761.4[a]	83478.8[a]	91570.9[a]	103015.2[a]	106940.6[a]	102028.00[a]	113524.00[a]	125248.68 @
5. Average Lead: all goods traffic (Km)	470	561	648	720	711	626	686	683	630	620	591	559.0	596.00	574.00
6. Average rate/tonne km. (paise)	3.2	3.9	5.4	10.5	35.0	73.8	101.5	120.7	137.5	151.2	163.4	164.51	163.83	178.78
7. Passengers Originating (million)	1284	1594	2431	3613	3858	4833	8224.4[b]	8420.7[b]	8397.1[b]	8224.1[b]	8107.3[b]	8116.1[b]	8285.80[b]	8438.46[b]
8. Passengers kilometres (billion)	66.5	77.7	118.1	208.6	295.6	457	1046.5[b]	1098.1[b]	1158.7[b]	1147.2[b]	1143.0[b]	1149.83[b]	1177.70[b]	1184.70[b]
9. Passengers Earnings (₹ Crore)	98.2	131.6	295.5	827.5	3144.7	10515.1[b]	28246.4[b]	31322.8[b]	36532.3[b]	42189.6[b]	44283.3[b]	46280.4[b]	48643.10[b]	51016.89[b]
10. Average lead : passenger traffic (km)	51.8	48.7	48.6	57.7	76.6	94.6	127.2[b]	130.4[b]	135.8[b]	139.5[b]	141.0[b]	141.7[b]	142.10[b]	140.40[b]
11. Average rate per passenger - kilometre (paise)	1.5	1.7	2.5	4.0	10.6	22.9	27.0[b]	28.5[b]	31.5[b]	36.8[b]	38.7[b]	40.3[b]	41.30[b]	43.10[b]

Source : Ministry of Railways

Notes:

P: Provisional a: Excluding Konkan Railways Corporation Limited Loading b: Includes Metro Railway/Kolkata. @: Including NTPC

na: not available

Figures for 2018-19 based on monthly statement 7A

Table 1.27. Revenue Earning Goods Traffic on Indian Railways

A : Traffic Originating

(Million tonnes)

Commodity	1950-51	1960-61	1970-71	1980-81	1990-91	2000-01	2011-12[a]	2012-13[a]	2013-14[a]	2014-15 P[a]	2015-16a	2016-17	2017-18	2018-19 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1. Coal	20.2	30.9	47.9	64.1	135.2	223.7	455.8	496.4	508.1	545.8	551.8	532.8	555.2	605.7
2. Raw materials for Steel Plant except iron ore	na	10.5	16.1	20.2	25.9	38.8	14.5	15.6	17.3	18.3	20.3	22.7	23.7	24.9
3. Pig iron & finished steel														
i) steel plants	na	3.8	6.2	7.5	10.0	11.8	25.7	26.0	27.8	28.3	29.6	38.4	35.4	32.6
ii) from other points	na	na	na	na	na	na	9.5	9.4	11.1	14.6	15.2	13.9	18.8	20.6
iii) Total	na	na	na	na	na	na	35.2	35.3	39.0	42.9	44.8	52.4	54.3	53.3
4. Iron ore														
i) for export	na	2.6	9.8	11.1	13.1	14.6	8.4	5.5	6.6	2.5	2.1	10.5	8.1	5.6
ii) for steel plants	na	na	na	na	na	na	54.7	61.6	66.8	69.4	78.6	83.7	86.6	89.0
iii) for other domestic users	na	na	na	na	na	na	40.3	44.4	50.9	40.9	36.2	43.3	45.0	42.7
iv) Total	na	na	na	na	na	na	103.4	111.4	124.3	112.8	116.9	137.5	139.8	137.3
5. Cement	2.5	6.5	11.0	9.6	28.9	42.9	107.7	105.9	109.8	109.8	105.4	103.3	112.9	117.7
6. Foodgrains	7.8	12.7	15.1	18.3	25.4	26.7	46.3	49.0	55.1	55.5	45.7	44.9	43.7	39.3
7. Fertilizers	na	1.4	4.7	8.1	18.4	27.1	52.7	46.2	44.7	47.4	52.2	48.3	48.5	51.8
8. POL	2.7	4.7	8.9	15.0	25.0	36.3	39.8	40.6	41.2	41.1	43.2	42.4	43.1	43.0
9. Container Service -														
i) Domestic container	na	na	na	na	na	na	9.5	9.4	10.9	10.5	9.0	10.3	11.1	11.7
ii) EXIM containers	na	na	na	na	na	na	28.5	31.7	32.6	37.9	36.8	37.0	42.8	48.4
iii) Total	na	na	na	na	na	na	38.0	41.0	43.5	48.4	45.8	47.3	53.9	60.1
10. Balance (other goods)	40.0	46.7	48.2	42.1	36.6	51.8	75.7	66.6	68.8	73.4	75.3	74.3	84.0	87.9
11.Total revenue earning freight traffic	73.2	119.8	167.9	195.9	318.4	473.5	969.1	1008.1	1051.6	1095.3	1101.5	1106.1	1159.5	1221.3

Source :Ministry of Railway

Notes:

na: not available a: Excluding Konkan Railways Corporation Limited loading

P: Provisional POL: Petroleum, Oil & Lubricants

Figures for 2018-19 are provisional and based on monthly statement-7A

Table 1.27. Revenue Earning Goods Traffic on Indian Railways
B : Goods Carried

(NTKM in Billion)

Commodity	1950-51	1960-61	1970-71	1980-81	1990-91	2011-12 [a]	2012-13[a]	2013-14[a]	2014-15 P[a]	2015-16[a]	2016-17	2017-18	2018-19 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(10)	(11)	(12)	(13)	(14)	(15)
1. Coal	11.3	20.5	27.8	36.4	85.9	291.5	303.4	271.9	301.5	280.7	250.0	277.0	297.0
2. Raw materials for Steel Plant except iron ore	na	2.0	2.7	4.3	7.5	10.3	10.2	10.1	11.0	11.7	12.0	14.0	14.0
3. Pig iron & finished steel													
i) steel plants	na	3.3	6.2	8.6	11.6	26.3	27.2	27.9	29.0	30.5	34.0	36.0	34.0
ii) from other points	na	na	na	na	na	7.6	6.9	7.0	8.4	9.9	10.0	13.0	12.0
iii) Total	na	na	na	na	na	33.9	34.1	34.9	37.4	40.4	44.0	49.0	46.0
4. Iron ore													
i) for export	na	na	5.5	7.3	7.5	2.0	3.1	2.7	1.3	0.9	5.0	4.0	2.0
ii) for steel plants	na	na	na	na	na	14.3	15.4	16.4	19.2	19.1	21.0	24.0	25.0
iii) for other domestic users	na	na	na	na	na	19.7	19.6	18.1	16.2	12.3	14.0	16.0	15.0
iv) Total	na	na	na	na	na	36.0	38.1	37.2	36.7	32.4	40.0	44.0	42.0
5. Cement	na	2.5	7.0	7.2	18.9	62.0	62.7	59.3	59.1	56.0	55.0	64.0	63.0
6. Foodgrains	4.0	9.6	14.5	24.3	35.6	57.9	71.3	70.5	67.0	60.1	58.0	62.0	56.0
7. Fertilizers	na	na	3.8	8.9	17.3	43.9	39.0	34.5	38.8	43.7	39.0	42.0	45.0
8. POL	na	2.6	5.3	11.7	15.1	26.1	28.5	29.3	27.2	29.3	28.0	29.0	28.0
9. Container Service -													
i) Domestic container	na	na	na	na	na	13.6	13.8	15.9	15.0	12.4	14.0	16.0	15.0
ii) EXIM containers	na	na	na	na	na	31.6	36.2	36.3	32.9	33.0	30.0	38.0	38.0
iii) Total	na	na	na	na	na	45.2	50.0	52.2	47.9	45.4	44.0	54.0	53.0
10. Balance (other goods)	22.3	31.9	37.9	39.1	36.4	60.8	54.4	66.0	55.1	54.7	50.0	58.0	57.0
11.Total revenue earning freight traffic	37.6	72.3	110.7	147.7	235.8	667.6	691.7	665.8	681.7	654.5	620.0	693.0	701.0

na: not available a: Excluding Konkan Railways Corporation Limited loading

P: Provisional POL: Petroleum, Oil & Lubricants

Figures for 2018-19 are provisional and based on Monthly Statement-7A.

Table 1.28. Operations of Road Transport

	Unit	1950-51	1960-61	1970-71	1980-81	1990-91	2000-01	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1. Length of roads@													
Total[a]	Thousand Km	399.9	524.5	914.9	1485.4	2327.4	3373.5	4865.4	5231.9	5402.5	5472.1	5603.3	5897.7
Surfaced		157.0	263.0	398.0	684.0	1090.2	1601.7	2698.6	3171.0	3220.5	3341.0	3501.9	3729.8
2. Length of national Highways@													
Total[a]	Thousand Km.	19.8	23.8	23.8	31.7	33.7	57.7	76.8	79.1	91.3	98.0	101.0	114.2
Surfaced		na	21.0	23.3	31.5	33.4	57.7	76.8	79.1	91.3	98.0	101.0	114.2
3. Length of State Highways@													
Total[a]	Thousand Km.	na	na	56.8	94.4	127.3	132.1	164.4	169.2	170.8	167.1	176.1	175.0
Surfaced		na	na	51.7	90.3	124.8	129.9	163.0	167.2	169.0	165.3	170.2	169.1
4. No. of Registered vehicles$													
All vehicles	Thousand	306.0	665.0	1865.0	5391.0	21374.0	54991.0	159491.0	176044.0	190704	210023	230031	253311
Goods vehicles		82.0	168.0	343.0	554.0	1356.0	2948.0	7658.0	8307.0	8698	9344	10516	12256
Buses*		34.0	57.0	94.0	162.0	331.0	634.0	1677.0	1814.0	1887	1971	1757	1864
5. Revenue realised from Road Transport#													
Central	(Crore)	34.8	111.7	451.8	930.9	4596.0	23861.0	75572.5	90931.2	89084.1	109941	199659.7	280132.1
States		12.6	55.2	231.4	750.4	3259.6	12901.7	55161.1	50602.7	56749.8	62630.7	70003.3	79962.2

Source: Ministry of Road Transport & Highways

@ : Source Basic Road Statistics of India 2016-17

$: Source Road Transport Year Book 2016-17 (Provisional) as publication is under finalization.

: Source State Finance of- A study of Budgets, RBI

Notes:

a : Includes rural roads constructed under Jawahar Rojgar Yojna as on 31st March, 1996. na : not available

*: Included omni buses.

P: Provisional

Table 1.29. Growth of Civil Aviation

	1960-61	1970-71	1980-81	1990-91	1999-00	2005-06	2007-08	2009-10	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1. Total fleet strenght (number)																
(i) Air India	13	11	18	24	26	38	-	-	-	-	-	-	-	-	-	-
(ii) Indian Airlines	88	73	45	56	44	55	-	-	-	-	-	-	-	-	-	-
(iii) Air India Ltd. (Erstwhile national Aviation Company of India Ltd)	-	-	-	-	-	-	108	109	94	93	96	101	107	111	114	126
(iv) Alliance Air	-	-	-	-	12	15	20	17	11	11	8	10	11	10	15	20
(v) Air India Express	-	-	-	-	-	4	18	25	21	21	21	17	18	23	23	25
(vi) Other Pvt Scheduled Airlines	-	-	-	-	37	131	235	232	229	253	273	279	312	349	378	520
2. Revenue tonne-Kilometers (million)																
(i) Air India	109.4	275.2	980.1	1342.7	1456.5	2364.0	-	-	-	-	-	-	-	-	-	-
(ii) Indian Airlines	82.4	202.1	400.3	697.6	738.0	1589.0	-	-	-	-	-	-	-	-	-	-
(iii) Air India Ltd. (Erstwhile national Aviation Company of India Ltd)	-	-	-	-	-	-	3460.0	3535.0	3704.4	3346.3	3910.0	4196.0	4363.7	4739.0	2586.3	5782.1
(iv) Alliance Air	-	-	-	-	131.0	73.0	40.0	38.0	30.2	26.6	22.7	18.0	20.2	29.4	19.5	62.0
(v) Air India Express	-	-	-	-	-	113.0	435.0	576.0	538.0	507.9	620.5	541.4	672.2	836.2	422.5	1029.4
(vi) Other Pvt Scheduled Airlines	-	-	-	-	441.9	1789.0	4173.6	5338.6	7673.0	7020.8	7280.8	8267.2	9607.2	11404.6	6415.3	15779.6
(vii) Dedicated Private Freighter	-	-	-	-	-	-	-	-	-	-	114314.5	113865.0	123876.0	131155.5	66042.5	125.2
(viii) Total (Other Pvt Scheduled Airlines+ Dedicated Private Freighter	-	-	-	-	-	-	-	-	-	-	121595.3	122132.2	133483.2	142560.1	72457.8	15904.8
3. Number of passengers carried (lakh)																
(i) Air India	1.3	4.9	14.2	21.6	31.9	43.6	-	-	-	-	-	-	-	-	-	-
(ii) Indian Airlines	7.9	21.3	54.3	78.7	58.9	78.2	-	-	-	-	-	-	-	-	-	-

Contd....

Table 1.29. Growth of Civil Aviation

(Contd.....)

	1960-61	1970-71	1980-81	1990-91	1999-00	2005-06	2007-08	2009-10	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
(iii) Air India Ltd. (Erstwhile national Aviation Company of India Ltd)	-	-	-	-	-	-	132.1	117.7	136.1	141.8	154.1	172.6	184.8	196.0	100.4	222.8
(iv) Alliance Air	-	-	-	-	18.6	10.1	5.4	4.6	4.7	3.9	3.6	3.1	4.0	6.3	4.9	16.0
(v) Air India Express	-	-	-	-		4.9	17.1	25.0	23.0	21.6	26.7	25.8	27.8	34.2	19	43.4
(vi) Other Pvt Scheduled Airlines	-	-	-	-	54.2	180.7	380.3	422.2	588.3	548.5	580.0	672.6	821.6	1009.2	565.2	1380.1
4. Passengers handled at (lakh)																
AAI Airports	na	na	107.4	177.2	390.4	733.4	-	508.7	684.0	683.9	716.5	1112.4	931.5	1132.8	1371.3	1587.9
Joint venture Interntl.Airports	-	-	-	-	-	-	-	728.8	939.1	910.1	972.7	788.9	1307.9	1516.8	1716.1	1859.0
Total at Indian Airports	na	na	107.4	177.2	390.4	733.4	-	1237.6	1623.1	1594.0	1689.2	1901.3	2239.5	2649.6	3087.5	3447.0
5.Cargo handled (thousand tonnes)																
AAI Airports	na	na	178.7	377.33	797.41	1397.3	493.6	593.0	703.4	650.4	636.5	681.6	724.5	808.7	921.0	943.0
Joint venture Interntl.Airports			-	-	-	-	1220.8	1366.8	1576.6	1540.1	1641.4	1846.0	1980.0	2169.6	2436.0	2617.0
Total at Indian Airports	na	na	178.7	377.33	797.41	1397.3	1714.5	1959.7	2280.0	2190.6	2277.9	2527.6	2704.5	2978.3	3357.0	3560.0

Source : Directorate General of Civil aviation : Airport Authority of India
Notes:
*: Fleet figure for the year 2018-19 are provisional
na : not available
P: Provisional

Table 1.30. Commodity Balance of Petroleum and Petroleum Products

(Million Tonnes)

Item	1950-51[a]	1960-61[a]	1970-71[a]	1980-81	1990-91	2000-01	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
I. Crude Oil														
1. Refinery throughput	0.3	6.6	18.4	25.8	51.8	103.4	204.1	219.2	222.5	223.2	232.9	245.3	251.9	257.2
2. Domestic production	0.3	0.5	6.8	10.5	32.2	32.4	38.1	37.9	37.8	37.4	36.9	36.0	35.6	34.2
(a) On-shore	0.3	0.5	6.8	5.5	11.8	11.8	18.0	19.4	19.6	18.5	17.8	17.6	17.5	17.3
(b) Off-shore	...	...	...	5.0	20.4	20.6	20.1	18.4	18.2	18.9	19.0	18.4	18.1	16.8
3. Imports	na	6.0	11.7	16.2	20.7	74.1	171.7	184.8	189.2	189.4	202.8	213.9	220.4	226.6
4. Exports	na	na	na	na	na	na	-	-	-	-	-	-	-	-
5. Net Imports (3-4)	na	na	na	na	na	na	171.7	184.8	189.2	189.4	202.8	213.9	220.4	226.6
II. Petroleum Products														
1. Domestic consumption[b]	3.3	7.7	17.9	30.9	55.0	100.1	148.1	157.1	158.4	165.5	184.7	194.6	206.1	211.6
of which														
(a) Naphtha	...	...	0.9	2.3	3.4	11.7	11.2	12.3	11.3	11.0	13.3	13.2	12.8	14.0
(b) Kerosene	0.9	2.0	3.3	4.2	8.4	11.3	8.2	7.5	7.2	7.0	6.8	5.4	3.8	3.4
(c) High speed diesel oil	0.2	1.2	3.8	10.3	21.1	37.9	64.8	69.1	68.4	69.4	74.6	76.0	81.0	83.5
(d) Fuel oils	0.9	1.7	4.7	7.5	9.0	12.7	9.3	7.7	6.2	6.0	6.6	7.2	6.7	6.5
2. Domestic productionc	0.2	5.7	17.1	24.1	48.6	95.6	203.2	217.7	220.8	221.1	231.9	243.5	254.4	262.3
of which														
(a) Naphtha	na	...	1.2	2.1	4.9	9.9	18.8	19.0	18.5	17.3	17.9	19.9	20.0	19.7
(b) Kerosene	na	0.9	2.9	2.4	5.5	8.7	7.9	8.0	7.4	7.5	7.5	6.0	4.4	4.0
(c) High speed diesel oil	na	1.1	3.8	7.4	17.2	39.1	82.9	91.1	93.8	94.4	98.6	102.4	107.9	110.5
(d) Fuel oils	na	1.6	4.1	6.1	9.4	11.4	18.4	15.1	13.4	11.9	9.7	9.9	9.4	10.0
3. Imports[a]	3.1	2.5	1.1	7.3	8.7	9.3	15.8	16.4	16.7	21.3	29.4	36.3	35.4	32.5
4. Exports	na	na	0.3	…	2.7	8.4	60.8	63.4	67.9	63.9	60.5	65.5	66.8	61.1
5. Net Imports (3-4)	na	na	0.8	7.3	6.0	0.9	-45.0	-47.6	-51.1	-42.6	-31.0	-29.2	-31.3	-28.5

Source: Ministry of Petroleum and Natural Gas.

Notes:

*: Provisional na: not available

a: Excluding Import of LNG

b: Excluding refinery fuel consumption. Including import by private parties.

c: Including Production of Petroleum Products from Fractionators

Table 1.31. Two Digit Level Indices of Industrial Production (Base 2011-12)

Industry Group (NIC 2008)	Industry	Weight	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
	General Index	100.00	103.3	106.7	111.0	114.7	120.0	125.3	129.8
	Mining	14.37	94.7	94.6	93.3	97.3	102.5	104.9	107.9
	Manufacturing	77.63	104.8	108.6	112.7	115.9	121.0	126.6	131.0
10	Manufacture of food products	5.30	103.3	104.6	110.9	104.7	98.9	108.1	121.1
11	Manufacture of beverages	1.04	106.7	104.8	108.2	109.7	106.3	105.4	108.7
12	Manufacture of tobacco products	0.80	107.5	116.4	131.1	136.3	115.9	95.1	93.9
13	Manufacture of textiles	3.29	108.0	112.6	116.9	119.4	117.4	117.1	118.4
14	Manufacture of wearing apparel	1.32	99.0	114.8	114.4	131.0	151.7	137.5	152.3
15	Manufacture of leather and related products	0.50	110.6	113.0	123.0	123.6	122.3	123.9	124.7
16	Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	0.19	97.0	94.6	95.3	97.5	93.1	92.4	104.0
17	Manufacture of paper and paper products	0.87	103.3	114.2	115.1	116.5	114.0	108.9	104.2
18	Printing and reproduction of recorded media	0.68	96.8	105.8	100.0	103.8	106.0	99.7	97.7
19	Manufacture of coke and refined petroleum products	11.77	105.9	108.0	108.6	113.7	119.1	123.5	126.7
20	Manufacture of chemicals and chemical products	7.87	103.9	108.8	109.2	113.7	116.5	116.1	118.8
21	Manufacture of pharmaceuticals, medicinal chemical and botanical products	4.98	108.1	114.3	116.9	132.1	172.3	212.1	215.0
22	Manufacture of rubber and plastics products	2.42	101.0	112.4	117.7	118.3	120.5	110.6	108.0
23	Manufacture of other non-metallic mineral products	4.09	102.9	103.1	108.2	110.4	109.9	113.9	123.6
24	Manufacture of basic metals	12.80	107.8	112.5	123.5	124.3	130.6	138.0	141.3
25	Manufacture of fabricated metal products, except machinery and equipment	2.65	97.0	101.5	105.9	103.4	105.5	107.9	106.4
26	Manufacture of computer, electronic and optical products	1.57	100.6	115.2	117.6	123.6	126.7	148.5	168.5
27	Manufacture of electrical equipment	3.00	113.0	117.4	122.0	128.4	122.6	107.4	110.0
28	Manufacture of machinery and equipment n.e.c.	4.77	102.9	103.3	102.6	105.9	114.1	120.5	123.4
29	Manufacture of motor vehicles, trailers and semi-trailers	4.86	100.1	99.1	102.6	101.1	101.7	114.5	122.8
30	Manufacture of other transport equipment	1.78	99.2	103.5	110.0	112.5	117.5	133.9	145.7
31	Manufacture of furniture	0.13	112.9	125.4	115.6	163.9	176.2	196.6	211.4
32	Other manufacturing	0.94	113.1	105.2	105.7	119.9	125.6	106.2	92.9
	Electricity	7.99	104.0	110.3	126.6	133.8	141.6	149.2	156.9

Source: Central Statistics Office, MOSPI

Table 2.1. Budgetary Transactions of the Central and State Governments and Union Territories (Including internal and extra-budgetary resources of public sector undertakings for their plans)

(₹ crore)

	1980-81	1990-91	2000-01	2011-12	2012-13	2013-14	2014-15	2015-16 (BE)	2015-16 (RE)	2016-17 (BE)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
I. TOTAL OUTLAY	36845	176548	615658	2725009	3021229	3372982	3480304	3838558	3851961	4306241
A. DEVELOPMENT[1]	24426	105922	317464	1605787	1782915	1935977	2043299	2018434	2189596	2486117
B. NON-DEVELOPMENT	12419	70626	298194	1119222	1238314	1437005	1437005	1820124	1662365	1820124
1. Defence (net)	3600	15427	49622	170913	181776	203499	218694	246727	224636	249099
2. Interest payments	2957	25006	122792	403235	457550	537468	585714	670904	655143	742792
3. Tax collection charges	504	1973	6570	22971	26489	29995	32563	37292	36092	40682
4. Police	1163	5657	21343	89815	101881	115217	128527	146244	145922	163817
5. Others[2]	4195	22563	97867	432288	470618	550826	471507	718957	600572	623734
II. CURRENT REVENUE	24563	110607	393284	1842477	2116869	2393750	2543960	2947996	2927445	3332388
A. TAX REVENUE	19844	87723	305320	1467890	1716117	1879143	2040027	2419085	2384421	2684384
1. Income and corporation tax	2817	10712	67460	487341	553170	632548	687299	791467	744623	839700
2. Customs	3409	20644	47542	149328	165346	172085	188016	208336	209500	230000
3. Union excise duties	6500	24514	68526	144901	175845	169455	189038	229054	283353	317860
4. Sales tax	4018	18228	72874	361332	422578	475131	506106	622856	585925	670875
5. Others	3100	13625	48918	324988	399178	429924	469568	567372	561020	625949
B. NON-TAX REVENUE[3]	4719	22884	87964	374587	400752	514607	503933	528911	543024	648004
(Internal resources of public sector undertakings for the Plan)	(1374)	(11183)	(39415)	(202717)	(196771)	(237848)	(211014)	(176778)	na	na
III. GAP (I-II)	12282	65941	222374	882533	904360	979232	936344	890562	924516	973853
FINANCED BY:										
IV NET CAPITAL RECEIPTS										
(A+B)	8831	54455	223283	785377	927020	973545	961258	855414	1042996	1082642
A. INTERNAL (net)	7161	50192	214965	769967	917508	962635	946725	842467	1028574	1060686
1. Net market loans[4]	3163	11308	85341	603608	673820	701972	721447	456405	401929	425181
2. Net small savings	1121	8309	8192	19078	11934	33283	15555	23836	42502	25375
3. Net State and public provident funds	558	3887	23661	17894	26303	17559	33828	36540	34659	37138
4. Special deposits of non-Government provident funds	604	6721	7177	0	0	0	0	0	0	0
5. Special borrowings from RBI against compulsory deposits	-70	-105	na	na	na	na	na	na	na	na
6. Net misc. capital receipts[5]	1785	20072	90594	129387	205451	209821	175895	325686	549484	572992
B. EXTERNAL[6]	1670	4263	8318	15410	9512	10910	14533	12947	14422	21956
1. Net loans	749	3181	7505	12448	7201	7292	12933	11173	11485	19094
(i) Gross	1141	5339	17328	26034	23309	25416	33534	34373	34580	44789
(ii) Less repayments	392	2158	9823	13586	16108	18124	20601	23200	23095	25695
2. Grants	436	586	813	2962	2311	3618	1600	1774	2937	2862
3. Net special credit	-53	-76	0							
V. OVERALL BUDGETARY DEFICIT	3451	11486	-909	97153	-22658	5689	105626	35147	91239	27402

Source : Economic Division, Department of Economic Affairs, Ministry of Finance

Notes: na Not available RE : Revised Estimates BE : Budget Estimates

1. Includes plan expenditure of Railways, Communications and non-departmental commercial undertakings financed out of their internal and extra budgetary resources, including market borrowings and term loans from financial institutions to State Governments public enterprises. Also includes developmental loans given by the Central and State Governments to non-departmental undertakings, local bodies and other parties. However, it excludes a notional amount of ₹45 crore in 1980-81 on account of conversion of loan capital given to non-departmental commercial undertakings into equity capital.
2. Includes general administration, pensions and ex-gratia payments to famine relief (only non-plan portion), subsidies on food and controlled cloth, grants and loans to foreign countries and loans for non-developmental purpose to other parties, but excludes Contingency Fund transactions. It also excludes notional transactions in respect of subscriptions to International Monetary Fund of ₹559 crore in 1980-81, ₹550 crore in 1990-1991, ₹629 crore in 2000-2001, ₹1613 crore in 2011-12, ₹4323 crore in 2012-13, ₹367 crore in 2013-14 , ₹4619 crore in 2014-15 and ₹52920 crore in 2015-16(RE).
3. Includes internal resources of Railways, Communications and non-departmental commercial undertakings for the plan.
4. Includes market borrowings of State Government public enterprises.
5. Excludes the notional receipts on account of repayments of loans by non-departmental commercial undertakings due to their conversion into equity capital. It also excludes notional transactions in respect of International Monetary Fund and Contingency Fund transactions.
6. ₹538 crore for loans from IMF Trust Fund are included in 1980-81 under external loans and an amount of ₹572 crores for revolving fund is included in External loans for 1990-91.

Table 2.2. Total Expenditure of the Central Government

(₹ crore)

	Final outlays			Transfer payments to the rest of the economy			Financial investments & loans to the rest of the economy (gross)	Total expenditure (4+7+8)
	Governmen consumption expenditure	Gross capital formation	Total (2+3)	Current	Capital	Total (5+6)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
First Plan (1951-52 to 1955-56)	1241	612	1854	809	123	932	966	3751
Second Plan (1956-57 to 1960-61)	1962	1445	3406	1567	249	1816	2600	7823
Third Plan (1960-61 to 1965-66)	4256	2445	6701	2983	501	3484	5076	15261
Annual Plan (1966-67 to 1968-69)	3878	1243	5121	3214	407	3621	4740	13481
Fourth Plan (1969-70 to 1973-74)	9775	2969	12745	8036	1454	9490	10760	32994
Fifth Plan (1974-75 to 1978-79)	17576	5951	23527	19773	3230	23003	21145	67674
Sixth Plan (1980-81 to 1984-85)	35885	14823	50708	50604	9910	60514	47034	158256
Seventh Plan (1985-86 to 1989-90)	81974	31616	113590	134246	26292	160538	89764	363892
Eighth Plan (1992-93 to 1996-97)	179676	73599	253275	387746	66433	454179	127752	835206
Ninth Plan (1997-98 to 2001-02)	331143	100568	431711	795621	106925	902546	150754	1485011
Tenth Plan (2002-03 to 2006-07)	516165	144027	660192	1390293	185704	1575997	123921	2360110
Eleventh Plan (2007-08 to 2011-12)	1002126	284215	1286341	2946106	529055	3475161	212323	4973825
1950-51	235	80	315	111	6	117	72	504
1955-56	269	153	422	203	49	251	301	975
1960-61	433	307	740	427	69	495	570	1806
1965-66a	1109	520	1630	754	132	886	1425a	3940a
1970-71	1669	519	2189	1239	193	1432	1956	5577
1975-76	3449	1204	4654	3018	536	3553	3830	12037
1980-81	5174	1908	7082	6912	1302	8214	7200	22495
1985-86	11210	4558	15768	18347	3825	22173	15172	53112
1990-91	22359	8602	30961	45134	7117	52251	21760	104973
1993-94b	31815	12765	44580	66750	11811	78560	22648	145788
1995-96	41881	16685	58566	85304	15263	100566	26101	185233
1997-98c	53090	18955	72046	111577	17360	128937	23884	224866

Contd....

Table 2.2. Total Expenditure of the Central Government *(Contd....)*

(₹ crore)

	Final outlays			Transfer payments to the rest of the economy			Financial investments & loans to the rest of the economy (gross)	Total expenditure (4+7+8)
	Governmen consumption expenditure	Gross capital formation	Total (2+3)	Current	Capital	Total (5+6)		
2000-01	71977	22258	94235	183696	22404	206100	27929	328265
2005-06	116305	34450	150755	297267	41681	338948	11380	501083
2010-11	230262	65059	295321	656300	150312	806612	62795	1164728
2011-12	255498	65041	320539	756885	141353	898238	44439	1263216
2012-13	271119	74747	345866	851208	130771	981979	46902	1374747
2013-14	306898	74940	381838	940445	144129	1084574	44552	1510964
2014-15	335428	81392	416819	1022900	146053	1168953	46331	1632103
2015-16	361284	76466	437750	1126844	83080	1209924	127382	1775056
2016-17 (RE)	442125	114308	556433	1180748	140416	1321165	74091	1951689
2017-18 (BE)	437209	139623	576832	1206018	212969	1418986	65067	2060885

Source : Ministry of Finance, Economic & Functional Classification of the Central Government Budget-various issues

Notes:

RE : Revised Estimates BE : Budget Estimates

a : For 1965-66, includes ₹ 53 crore as additional payments to IMF, IBRD, IDA & ADB following the change in the par value of the rupee. This is a nominal outlay as it is met by the issue of non-negotiable Government of India securities.

b : From 1993-94 onwards, Delhi is not included.

c : From 1997-98 onwards loans to States/UTs are exclusive of loans against States/UTs shares in small saving collections.

Tab 2.3 Financial Performance of Indian Railways

(₹ crore)

	Particulars	1980-81	1990-91	2001-02	2013-14	2014-15	2015-16	2016-17	2017-18
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Gross Traffic Receipts	2624	12096	37837	139558	156711	164334	165292	178725
	(i) Passenger Coaching	827	3147	11197	36532	42190	44283	46280	48643
	(ii) Other Coaching	116	336	872	3679	3998	4371	4312	4314
	(iii) Goods	1618	8408	24845	93906	105791	109208	104339	117055
	(iv) Other Earnings	82	242	944	5721	5093	5929	10368	8688
	(v) Suspense Account	-19	-37	-21	-280	-361	543	-7	24
2	Working Expenses	2537	11154	36293	130321	142996	147836	159030	175834
	(i) Ordinary Working Expenses	2233	8234	28703	97571	105996	107736	118830	128497
	(ii) Appropriation to depreciation reserve fund	220	1950	2000	7900	7775	5600	5200	1540
	(iii) Appropriation to Pension Fund	84	970	5590	24850	29225	34500	35000	45798
3	Net Traffic Receipts (1-2)	87	942	1544	9237	13715	16498	6263	2891
4	Net Miscellaneous Receipts	40	171	793	2512	3124	2731	-1350	-1225
5	Net Revenue (3+4)	127	1113	2337	11749	16838	19228	4913	1666
6	Dividend								
	(i) Payable to general revenues	325	938	2337	8009	9174	8723	***	***
	(ii) Payment of deferred dividend					0	0	0	0
	(iii) Deferred dividend	0	0	1000		0	0	0	0
	(iv) Net dividend payable	325	938	1337	8009	9174	8723	0	0
7	Surplus (+) or Deficit(-)	-198	175	1000	3740	7665	10506	4913	1666
8	(i) Capital at charge	6096	16126	37757	170168	197992	224685	249008	271276
	(ii) Investment from capital fund	0	0	10390	38676	44125	50450	53450	53450
	(iii) Total 8(i)+8(ii)	6096	16126	48147	208844	242117	275135	302458	324726
9	Item 5 as % of Item 8(iii)	2.1	6.9	4.9	5.6	7	7	2	1
10	item 7 as % of item 8(iii)	-3.2	1.1	2.1	1.8	3	4	2	1

Source : Ministry of Railways

Notes : *** Dividend Payment has been done away with as per Budget merger conditions and hence no dividend payment from 2016-17.

Table 2.4 Financial Performance of Department of Posts

(₹ crore)

	1980-81	1990-91	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Gross Receipt	278	840	3298	9367	10730	11636	12940	11511	12833
2. Net Working Expenses	346	1033	4848	14792	16204	17895	18947	23481	25249
3. Net Receipts (1-2)	-68	-193	-1550	-5425	-5474	-6259	-6007	-11970	-12416
4. Dividend to general revenues	4	0	0	0	0	0	0	0	0
5. Surplus(+)/deficit(-) (3-4)	-72	-193	-1550	-5425	-5474	-6259	-6007	-11970	-12416

Source: Department of Posts, Ministry of Communications

Table 2.5. Receipts and Expenditure of the Central Government

(₹ crore)

		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (BE)	2018-19* (RE)	2018-19 (PA)
1	Revenue Receipts (a+b)	788471	751437	879232	1014724	1101473	1195025	1374203	1435233	1725738	1729682	1563170
(a)	Tax Revenue (net of States' share)	569869	629765	741877	815854	903615	943765	1101372	1242488	1480649	1484406	1316951
(b)	Non-tax Revenue	218602	121672	137355	198870	197858	251260	272831	192745	245089	245276	246219
2	Revenue Expenditure	1040723	1145785	1243514	1371772	1466992	1537761	1690584	1878835	2141772	2140612	2008463
	of which:											
(a)	Interest Payments	234022	273150	313170	374254	402444	441659	480714	528952	575795	587570	582675
(b)	Major Subsidies	164516	211319	247493	244717	249016	241833	204025	191183	264336	266206	197066
(c)	Defence Expenditure	92061	103011	111277	124374	136807	145937	165410	186129	188723	191431	195935
3	Revenue Deficit (2-1)	252252	394348	364282	357048	365519	342736	316381	443602	416034	410930	445293
4	Capital Receipts	408857	552928	531140	544723	562201	595758	600991	706742	716475	727553	748252
	of which:											
(a)	Recovery of loans	12420	18850	15060	12497	13738	20835	17630	15633	12199	13155	17840
(b)	Other receipt (mainly PSU disinvestment)	22846	18088	25890	29368	37737	42132	47743	100045	80000	80000	85045
(c)	Borrowings and other liabilities $	373591	515991	490190	502858	510725	532791	535618	591064	624276	634398	645367
5	Capital expenditure	156605	158580	166858	187675	196681	253022	284610	263140	300441	316623	302959
6	Non-Debt Receipts [1+4(a)+4(b)]	823737	788375	920182	1056589	1152948	1257992	1439576	1550911	1817937	1822837	1666055
7	Total Expenditure [2+5=7(a)+7(b)]	1197328	1304365	1410372	1559447	1663673	1790783	1975194	2141975	2442213	2457235	2311422
	of which:											
(a)	Plan Expenditure	379029	412357	413625	453327	462644	471083	568599	n.a	n.a	n.a	n.a
(b)	Non-plan Expenditure	818299	891990	996747	1106120	1201029	1319700	1410669	n.a	n.a	n.a	n.a
8	Fiscal Deficit [7-1-4(a)-4(b)]	373591	515990	490190	502858	510725	532791	535618	591064	624276	634398	645361
9	Primary Deficit [8-2(a)]	139569	242840	177020	128604	108281	91132	54904	62112	48481	46828	62692

Source: Union Budget documents and Controller General of Accounts

Notes:

BE:Budget Estimates RE: Revised Estimates PA: Provisional Actuals * As per Interim Budget 2019-20

$: Does not include receipts in respect of Market Stablization Scheme, which will remain in the cash balance of the Central Government and will not be used for expenditure

Table 2.6. Receipts and Expenditure of the Central Government as a percentage of GDP

(As per cent to GDP)

		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (BE)	2018-19* (RE)	2018-19 (PA)
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Revenue Receipts (a+b)	10.1	8.6	8.8	9.0	8.9	8.7	9.0	8.4	9.2	9.2	8.2
(a)	Tax Revenue (net of States' share)	7.3	7.2	7.5	7.3	7.3	6.9	7.2	7.3	7.9	7.9	6.9
(b)	Non-tax Revenue	2.8	1.4	1.4	1.8	1.6	1.8	1.8	1.1	1.3	1.3	1.3
2	Revenue Expenditure	13.4	13.1	12.5	12.2	11.8	11.2	11.1	11.0	11.4	11.4	10.6
	of which:											
(a)	Interest Payments	3.0	3.1	3.1	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.1
(b)	Major Subsidies	2.1	2.4	2.5	2.2	2.0	1.8	1.3	1.1	1.4	1.4	1.0
(c)	Defence Expenditure	1.2	1.2	1.1	1.1	2.1	1.1	1.1	1.1	1.0	1.0	1.0
3	Revenue Deficit (2-1)	3.2	4.5	3.7	3.2	2.9	2.5	2.1	2.6	2.2	2.2	2.3
4	Capital Receipts	5.3	6.3	5.3	4.8	4.5	4.4	3.9	4.1	3.8	3.9	3.9
	of which:											
(a)	Recovery of loans	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1
(b)	Other receipt (mainly PSU disinvestment)	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.6	0.4	0.4	0.4
(c)	Borrowings and other liabilities $	4.8	5.9	4.9	4.5	4.1	3.9	3.5	3.5	3.3	3.4	3.4
5	Capital expenditure	2.0	1.8	1.7	1.7	1.6	1.8	1.9	1.5	1.6	1.7	1.6
6	Non-Debt Receipts [1+4(a)+4(b)]	10.6	9.0	9.3	9.4	9.3	9.2	9.4	9.1	9.7	9.7	8.8
7	Total Expenditure [2+5=7(a)+7(b)]	15.4	14.9	14.2	13.9	13.4	13.1	12.9	12.5	13.0	13.0	12.2
	of which:											
(a)	Plan Expenditure	5.9	4.7	4.2	4.0	3.7	3.4	3.7	0	0	0	0
(b)	Non-plan Expenditure	10.5	10.2	10.0	9.8	9.7	9.6	9.2	0	0	0	0
8	Fiscal Deficit [7-1-4(a)-4(b)]	4.8	5.9	4.9	4.5	4.1	3.9	3.5	3.5	3.3	3.4	3.4
9	Primary Deficit [8-2(a)]	1.8	2.8	1.8	1.1	0.9	0.7	0.4	0.4	0.3	0.2	0.3

Source: Union Budget documents and Controller General of Accounts

Notes:

BE:Budget Estimates RE: Revised Estimates PA: Provisional Actuals * As per Interim Budget 2019-20

$: Does not include receipts in respect of Market Stablization Scheme, which will remain in the cash balance of the Central Government and will not be used for expenditure

Table 2.7. Outstanding Liabilities of the Central Government

(₹ crore)

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (RE)	2018-19 (BE)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1. Internal liabilities#	3395877	3781135	4347164	4893303	5484848	6045007	6691709	7207802	7989545	8703657
(a) Internal debt	2328339	2667115	3230622	3764566	4240767	4738291	5304835	5741709	6424917	6996220
i) Market borrowings	1746619	2072033	2516953	2984309	3441641	3891734	4298784	4649487	5062881	5459131
ii) Others	581720	595082	713669	780257	799126	846557	1006051	1092222	1362037	1537089
(b) Other Internal liabilities	1067538	1114020	1116542	1128737	1244081	1306716	1386874	1466093	1564628	1707437
2. External debt(outstanding)*	134083	157639	170088	177289	184581	197514	210262	228258	250090	261516
3. Total outstanding liabilities (1+2)	3529960	3938774	4517252	5070592	5669429	6242521	6901971	7436060	8239635	8965173
4. Amount due from Pakistan on account of share of pre-partition debt	300	300	300	300	300	300	300	300	300	300
5. Net liabilities (3-4)	3529660	3938474	4516952	5070292	5669129	6242221	6901671	7435760	8239335	8964873
Memorandum items										
(a) External debt@	249306	278877	322897	332004	374483	366191	406586	408069	445289	456715
(b) Total outstanding liabilities(adjusted)	3645183	4060012	4670061	5225307	5859331	641198	7098295	7615871	8434834	9160372
(c) Internal liabilities (Non-RBI) ##	3087360	3464858	3904022	4396810	4984590	5540570	6139580	6651613	7286885	7925128
(d) Outstanding liabilities (Non-RBI) ##	3336666	3743735	4226919	4728814	5359073	5906761	6546166	7059682	7732174	8381843
(e) Contingent liabilities of Central Government	137460	151292	190519	233769	249503	294700	343762	366189	380173	n.a.
(f) Total assets	1607544	1794504	1927143	2080649	2253627	2464424	2773756	3069862	3381121	3736840
(As per cent of GDP)										
1. Internal liabilities#	52.4	48.6	49.8	49.2	48.8	48.6	48.9	46.9	47.6	46.5
a) Internal debt	35.9	34.3	37.0	37.9	37.8	38.1	38.8	37.4	38.3	37.4
i) Market borrowings	27.0	26.6	28.8	30.0	30.6	31.3	31.4	30.3	30.2	29.2
ii) Others	9.0	7.6	8.2	7.8	7.1	6.8	7.4	7.1	8.1	8.2
b) Other Internal liabilities	16.5	14.3	12.8	11.4	11.1	10.5	10.1	9.5	9.3	9.1
2. External debt(outstanding)*	2.1	2.0	1.9	1.8	1.6	1.6	1.5	1.5	1.5	1.4
3. Total outstanding liabilities (1+2)	54.5	50.6	51.7	51.0	50.5	50.2	50.4	48.4	49.1	47.8

Source: Union Budget documents and CAA&A

Notes:

* : External debt figures represent borrowings by Central Government from external sources and are based upon historical rates of exchange

@ : The external debt figures at current exchange rates are taken from Controller of Aid, Account and Audit Division, Ministry of Finance.

: Internal debt includes net borrowing of , ₹ 2,737 crore for 2009-10

: This includes marketable dated securties held by the RBI

RE: Revised Estimates BE: Budget Estimates

Table 2.8. Total Expenditure and Capital Formation by the Central Government and its Financing (As per economic and functional classification of the Central Government budget)

(₹ crore)

		2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17 (RE)	2017-18 (BE)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
I.	Total expenditure	992440	1164727	1263216	1374747	1510964	1632103	1775056	1951689	2060885
II.	Gross capital formation out of budgetary resources of Central Government	184501	256368	234969	230792	242877	261915	197990	290347	381174
	(i) Gross capital formation by the Central Government	58999	65059	65041	74747	74940	81392	76466	114308	139623
	(ii) Financial assistance for capital formation in the rest of the economy	125502	191309	169928	156045	167937	180523	121524	176039	241551
III.	Gross saving of the Central Government	-232452	-103270	-267428	-241090	-238268	-259468	-290204	-204778	-129106
IV.	Gap(II-III)	416953	359638	502397	471882	481145	521383	488194	495125	510280
	Financed by									
a.	Draft on other sectors of domestic economy	402774	333409	486987	462370	470235	506850	473565	477370	491431
	(i) Domestic capital receipts	404160	326979	502977	513382	489406	429098	460395	437143	478587
	(ii) Budgetary deficit/draw down of cash balance	-1386	6430	-15990	-51012	-19171	77752	13170	40227	12844
b.	Draft on foreign savings	14179	26229	15410	9512	10910	14533	14629	17755	18849
	(percentage increase over previous year)									
II.	Gross capital formation out of budgetary resources of Central Government	34.7	39.0	-8.3	-1.8	5.2	7.8	-24.4	46.6	31.3
	Memorandum items									
	(₹ crore)									
1	Total expenditure	992440	1164727	1263216	1374747	1510964	1632103	1775056	1951689	2060885
2	Gross capital formation out of budgetary resources of Central Government	184501	256368	234969	230792	242877	261915	197990	290347	381174
3	Consumption expenditure	210625	230262	255498	271119	306898	335428	361284	442125	437209
4	Current transfers	580898	656300	756885	851208	940445	1022900	1126844	1180748	1206018
5	Others	16417	21798	15864	21628	20744	11860	88938	38468	36485
	(Growth rate in per cent)									
1	Total expenditure	14.8	17.4	8.5	8.8	9.9	8.0	8.8	10.0	5.6
2	Gross capital formation out of budgetary resources of Central Government	34.7	39.0	-8.3	-1.8	5.2	7.8	-24.4	46.6	31.3
3	Consumption expenditure	20.8	9.3	11.0	6.1	13.2	9.3	7.7	22.4	-1.1
4	Current transfers	6.9	13.0	15.3	12.5	10.5	8.8	10.2	4.8	2.1
5	Others	65.8	32.8	-27.2	36.3	-4.1	-42.8	649.9	-56.7	-5.2
	(Point contribution in per cent)									
1	Total expenditure	14.8	17.4	8.5	8.8	9.9	8.0	8.8	10.0	5.6
2	Gross capital formation out of budgetary resources of Central Government	5.5	7.2	-1.8	-0.3	0.9	1.3	-3.9	5.2	4.7
3	Consumption expenditure	4.2	2.0	2.2	1.2	2.6	1.9	1.6	4.6	-0.3
4	Current transfers	4.3	7.6	8.6	7.5	6.5	5.5	6.4	3.0	1.3
5	Others	0.8	0.5	-0.5	0.5	-0.1	-0.6	4.7	-2.8	-0.1

Source: Ministry of Finance, An Economic and Functional classification of the Central Government Budget-various issues

Notes:

RE: Revised Estimates BE: Budget Estimates

1. Gross capital formation in this table includes loans given for capital formation on a gross basis. Consequently domestic capital receipts include loan repayments to the Central Government.
2. Consumption expenditure is the expenditure on wages and salaries and commodities and services for current use.
3. Interest payments, subsidies, pension etc. are treated as current transfers.
4. Gross capital formation & total expenditure are exclusive of loans to States'/UTs' against States'/UTs' share in the small savings collection.
5. The figures of total expenditure of the Central Government as per economic and functional classification do not tally with figures given in the Budget documents. In the economic and functional classification, interest transfered to DCUs, loans written off etc, are excluded from the current account. In the capital account, expenditure financed out of Railways, Posts &Telecommunications' own funds etc, are included.
6. Point contribution refers to contribution of individual component to total growth.

Table 2.9. Receipts and Disbursements of States and consolidated General Government

(₹ crore)

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE	2018-19 BE
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
State Governments									
Total Receipts (A+B)	1173575	1367917	1557338	1688047	2008065	2390845	2721784	3051897	3519646
A. Revenue Receipts (1+2)	935347	1098531	1252024	1369187	1591583	1832885	2046401	2457718	2812994
1. Tax Receipts	680198	812987	946081	1030692	1117113	1353336	1520773	1743769	2013453
of which									
States' Own Tax Revenue	460709	557396	654551	712419	779278	847145	912912	1050350	1198796
2. Non-tax Receipts	255149	285544	305943	338495	474471	479549	525628	713949	799540
of which									
Interest Receipts	15625	18582	24118	27215	24135	18216	24560	25012	27773
B. Capital Receipts	238228	269385	305314	318860	416482	557960	675383	594179	706652
of which									
Recovery of Loans and Advances	4995	17157	7265	6896	18916	7180	15835	56174	58518
II. Total Disbursements (a+b+c)	1158730	1351612	1534255	1706145	2025783	2360229	2708215	3177407	3559726
a) Revenue	932297	1074571	1231702	1379750	1637288	1838267	2086892	2518797	2783775
b) Capital	207617	238150	272576	302402	358856	431743	503458	619610	738304
c. Loans and Advances	18816	38891	29977	23992	29638	90219	117866	39000	37647
III. Revenue Deficit	-3051	-23960	-20322	10563	45704	5382	40491	61079	-29219
IV. Gross Fiscal Deficit	161461	168353	195470	247852	327191	420670	534332	514316	486513
General Government									
I. Total Receipts (A + B)	2153561	2454062	2769029	3001372	3189737	3778049	4288432	4771859	5278035
A. Revenue Receipts (1+2)	1578820	1692679	1971619	2211475	2387693	2748374	3132201	3592382	4118541
1. Tax Receipts	1250067	1442752	1687959	1846545	2020728	2297101	2622145	3013223	3494102
2. Non-Tax Receipts	328753	249927	283660	364930	366965	451272	510056	579159	624438
of which									
Interest Receipts	25078	28870	35543	40162	39622	35779	33220	31610	36835
B. Capital Receipts	574742	761383	797410	789897	802044	1029675	1156231	1179477	1159494
of which									
a) Disinvestment proceeds	24087	18753	25991	29728	38883	43266	48122	100303	81193
b) Recovery of Loans & Advances	8206	25370	12929	9385	22072	16561	20942	64880	61650
II. Total Disbursements (a+b+c)	2145145	2421768	2694934	3000299	3285210	3760611	4265969	4857990	5361181
a) Revenue	1828020	2063068	2315578	2579086	2798917	3096491	3489073	4092338	4505357
b) Capital	268328	291818	328324	377545	426949	539375	616988	670218	765487
c) Loans and advances	48797	66883	51031	43668	59345	124745	159907	95434	90338
III. Revenue Deficit	249200	370388	343959	367611	411224	348117	356872	499956	386816
IV. Gross Fiscal Deficit	534032	684966	684395	749711	836563	952410	1064704	1100425	1099797

Source: Reserve Bank of India

Notes: RE: Revised Estimates BE: Budget Estimates

(1) Negative (-) sign indicates surplus in deficit indicators.

(2) The ratios to GDP at current market prices are based on CSO's National Accounts 2004-05 series and data from 2011-12 onwards are based on new base 2011-12.

(3) Capital Receipts include public account on a net basis.

(4) Capital disbursements are exclusive of public accounts.

(5) Data pertains to budgets of 29 States.

Table 2.10. Receipts and Disbursements of States and consolidated General Government

(As per cent of GDP)

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE	2018-19 BE
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
State Governments									
Total Receipts (A+B)	15.1	15.7	15.7	15.0	16.1	17.4	17.7	17.9	18.5
A. Revenue Receipts (1+2)	12.0	12.6	12.6	12.2	12.8	13.3	13.3	14.4	14.8
1.Tax Receipts	8.7	9.3	9.5	9.2	9.0	9.8	9.9	10.2	10.6
of which									
States' Own Tax Revenue	5.9	6.4	6.6	6.3	6.3	6.2	5.9	6.1	6.3
2. Non-tax Receipts	3.3	3.3	3.1	3.0	3.8	3.5	3.4	4.2	4.2
of which									
Interest Receipts	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1
B. Capital Receipts	3.1	3.1	3.1	2.8	3.3	4.1	4.4	3.5	3.7
of which									
Recovery of Loans and Advances	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.3	0.3
II. Total Disbursements (a+b+c)	14.9	15.5	15.4	15.2	16.2	17.1	17.6	18.6	18.7
a) Revenue	12.0	12.3	12.4	12.3	13.1	13.3	13.6	14.7	14.6
b) Capital	2.7	2.7	2.7	2.7	2.9	3.1	3.3	3.6	3.9
c. Loans and Advances	0.2	0.4	0.3	0.2	0.2	0.7	0.8	0.2	0.2
III. Revenue Deficit	0.0	-0.3	-0.2	0.1	0.4	0.0	0.3	0.4	-0.2
IV. Gross Fiscal Deficit	2.1	1.9	2.0	2.2	2.6	3.1	3.5	3.0	2.6
General Government									
I. Total Receipts (A + B)	27.7	28.1	27.8	26.7	25.6	27.4	27.9	27.9	27.7
A. Revenue Receipts (1+2)	20.3	19.4	19.8	19.7	19.2	20.0	20.4	21.0	21.6
1. Tax Receipts	16.1	16.5	17.0	16.4	16.2	16.7	17.1	17.6	18.3
2. Non-Tax Receipts	4.2	2.9	2.9	3.2	2.9	3.3	3.3	3.4	3.3
of which									
Interest Receipts	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.2
B. Capital Receipts	7.4	8.7	8.0	7.0	6.4	7.5	7.5	6.9	6.1
of which									
a) Disinvestment Proceeds	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.6	0.4
b) Recovery of Loans & Advances	0.1	0.3	0.1	0.1	0.2	0.1	0.1	0.4	0.3
II. Total Disbursements (a+b+c)	27.6	27.7	27.1	26.7	26.3	27.3	27.8	28.4	28.1
a) Revenue	23.5	23.6	23.3	23.0	22.4	22.5	22.7	23.9	23.6
b) Capital	3.4	3.3	3.3	3.4	3.4	3.9	4.0	3.9	4.0
c) Loans and advances	0.6	0.8	0.5	0.4	0.5	0.9	1.0	0.6	0.5
III. Revenue Deficit	3.2	4.2	3.5	3.3	3.3	2.5	2.3	2.9	2.0
IV. Gross Fiscal Deficit	6.9	7.8	6.9	6.7	6.7	6.9	6.9	6.4	5.8

Source: Reserve Bank of India

Notes: RE: Revised Estimates BE: Budget Estimates

(1) Negative (-) sign indicates surplus in deficit indicators.

(2) The ratios to GDP at current market prices are based on CSO's National Accounts 2004-05 series and data from 2011-12 onwards are based on new base 2011-12.

(3) Capital Receipts include public account on a net basis.

(4) Capital disbursements are exclusive of public accounts.

(5) Data pertains to budgets of 29 States.

Table 3.1. Employment in Organised Sectors—Public and Private (as on March 31, 2012)

(Lakh persons)

	2006	2007	2008	2009	2010	2011	2012
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Public Sector							
By branch							
Central Government	28.6	28.0	27.4	26.6	25.5	24.6	25.2
State Governments	73.0	72.1	71.7	72.4	73.5	72.2	71.8
Quasi-Governments	59.1	58.6	58.0	58.4	58.7	58.1	58.0
Local bodies	21.2	21.3	19.7	20.7	20.9	20.5	21.1
Total	**181.9**	**180.0**	**176.7**	**178.0**	**178.6**	**175.5**	**176.1**
By industry							
Agriculture, hunting etc.	4.7	4.8	4.7	4.8	4.8	4.8	4.7
Mining and quarrying	11.5	11.4	11.2	11.1	11.0	10.9	10.8
Manufacturing	10.9	10.9	10.4	10.6	10.7	10.2	10.7
Electricity, gas and water	8.5	8.5	8.0	8.4	8.4	8.3	8.2
Construction	8.9	8.7	8.5	8.5	8.6	8.5	8.3
Wholesale and retail trade	1.8	1.8	1.7	1.7	1.7	1.7	1.7
Transport, storage & communications	26.8	26.4	26.3	26.0	25.3	23.8	24.9
Finance, insurance, real estate etc.	13.9	13.7	13.5	13.6	14.1	13.6	13.6
Community, social & personal services	91.8	90.9	88.5	90.1	90.5	91.0	90.4
Total	**178.7**	**176.9**	**172.8**	**174.8**	**175.1**	**172.7**	**173.3**
2. Private Sector							
Agriculture, hunting etc.	10.3	9.5	9.9	9.0	9.2	9.2	9.2
Mining and quarrying	1.0	1.0	1.1	1.2	1.6	1.3	1.4
Manufacturing	45.5	47.5	49.7	52.0	51.8	54.0	55.3
Electricity, gas and water	0.4	0.5	0.5	0.6	0.6	0.7	0.6
Construction	0.6	0.7	0.7	0.8	0.9	1.0	1.2
Wholesale and retail trade	3.9	4.1	2.7	4.7	5.1	5.5	6.0
Transport, storage & communications	0.9	1.0	1.0	1.3	1.7	1.9	2.1
Finance, insurance, real estate etc.	6.5	8.8	11.0	13.1	15.5	17.2	19.1
Community, social & personal services	18.8	19.5	21.7	20.2	21.4	23.5	24.5
Total	**87.7**	**92.4**	**98.4**	**102.9**	**107.9**	**114.2**	**119.4**
3. Public Sector							
Male	151.9	149.8	146.3	147.0	146.7	143.8	144.6
Female	30.0	30.2	30.4	30.9	32.0	31.7	31.5
Total	181.9	180.0	176.7	178.0	178.6	175.5	176.1
4. Private Sector							
Male	66.9	69.8	74.0	78.9	81.8	86.7	90.7
Female	21.2	22.9	24.7	25.0	26.6	27.8	29.0
Total	88.1	92.7	98.8	103.8	108.5	114.5	119.7
5. Public and Private Sector							
Male	218.7	219.6	220.4	225.9	228.5	230.5	235.3
Female	51.2	53.1	55.1	55.8	58.6	59.5	60.5
Total	**269.9**	**272.8**	**275.5**	**281.7**	**287.1**	**290.0**	**295.8**

Source: Directorate General of Employment, Ministry of Labour & Employment

Notes:

1. Excludes Sikkim, Arunachal Pradesh, Dadra & Nagar Haveli and Lakshadweep as these are not yet covered under the programme.
2. Industry-wise break-up may not tally with public sector, private sector and grand total due to non-inclusion of data as per NIC 1998, in respect of J&K , Manipur and Daman & Diu in 2012.

Table 3.2. Performance of Central Public Sector Enterprises

(₹ crore)

Particulars	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
(1)	(2)	(3)	(4)	(5)	(6)	(9)	(7)	(8)	(9)	(10)
No. of Operating CPSEs	213	217	220	225	230	234	236	244	257	257
Capital Employed	792232	908007	1153833	1337821	1508177	1710453	1833274	2037318	2138069	2273969
Total Gross Turnover	1271536	1244805	1498018	1822049	1945814	2066057	1995176	1834635	1955675	2155948
Total Net Income/Revenue	1309639	1272219	1470569	1804614	1931186	2056336	1965638	1764113	1821971	2033545
Net Worth	583144	652993	709498	776162	850921	926663	962518	1079953	1066885	1108595
Profit before dep., Impairment, Int., Exc. Items, & Taxes (PB-DIEET)	186836	211184	216602	250654	255936	289361	270400	275457	299028	317512
Depreciation, Depletion & Amortization	44441	51168	57118	63591	66109	69817	77500	67764	73739	81864
(DRE)/Impairment	7661	9565	187	154	436	851	554	347	277	(22)
Profit before Interest, Exc. Items, Ex. Ord. Items & Taxes (PBIEET)	142395	160017	159298	186910	189390	218693	192346	207346	225012	235670
Interest	39300	36060	26521	36152	38184	51638	44942	51449	47229	53302
Profit before Exp. Items Ex. Or.Items & Taxes (PBEET)	103095	123957	132777	150758	151207	167055	147412	155897	177784	182368
Exceptional Items	-	-	(1479)	(3957)	(13525)	(14618)	(1335)	7766	(889)	(4357)
Profit before Ex. Or. Items & Tax. (PBET)	115011	123942	134256	146801	164732	181673	148747	148131	178673	186725
Extra-Ordinary Items	(2684)	(8280)	(2695)	(428)	(1276)	(1550)	(1394)	(9553)	(34)	(934)
Profit Before Tax (PBT)	117695	132222	136951	147230	166008	183223	150141	157684	178707	187659
Tax Provisions	33828	40018	44871	48985	51025	55178	47230	43653	53183	59661
Net Profit/Loss after Tax from Continuing Operations	83867	92203	92079	98245	114982	128045	102911	114031	125523	127997
Net Profit/Loss after Tax from Discontinuing Operations	-	-	49	1	(1)	250	(45)	208	(25)	377
Overall Net Profit/Loss	83867	92203	92129	98246	114981	128295	102866	114239	125498	128374
Profit of Profit-making CPSEs	98488	108434	113944	125929	143543	149636	130364	144991	152978	159635
Loss of Loss incurring CPSEs	(14621)	(16231)	(21816)	(27683)	(28562)	(21341)	(27498)	(30756)	(27480)	(31261)
Profit - making CPSEs (No.)	158	157	158	161	151	164	159	164	175	184
Loss - making CPSEs (No.)	55	60	62	64	78	70	76	79	81	71
CPSEs making no Profit/Loss (No.)	0	0	0	0	1	0	1	1	1	2
Dividend	25501	33223	35700	42627	49703	65115	56527	68583	78129	76578
Dividend Tax	4132	5151	5372	5877	6704	8709	8642	10598	14419	12935

Source: Department of Public Enterprises

Table 4.1. Scheduled Commercial Banks : Seasonal Flow of Funds

(₹ Crore)

	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19	
Items	**H1**	**H2**	**H1**	**H2**	**H1**	**H2**	**H1**	**H2**	**H1**	**H2**	**H1**	**H2 (P)**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**
Sources												
1. Increase in aggregate deposits	399921	555186	347996	479730	375101	418903	766357	664010	159886	508507	373806	772698
2. Increase in borrowings from RBI	20640	-615	43092	73497	-94166	168431	-198100	-12557	18720	233448	-94362	1072
3. Increase in other borrowings@	32942	-33569	-33371	38205	15126	57980	-4124	21468	-7400	56788	9318	3028
4. Increase in other demand and time liabilities	-2597	29294	2635	16235	-4457	51297	-45890	5564	23288	71866	-56323	40957
5. Residual (Net)	36709	-58102	-62017	-20456	19919	-142805	-12192	-61977	207411	-185447	245214	-34941
Total	487615	492194	298334	587210	311523	553807	506051	616507	401905	685162	477654	782813
Uses												
1. Increase in bank credit	341562	392075	123970	418354	149471	563723	245253	346598	141972	641987	356239	787521
2. Increase in investments	105416	101300	150982	128023	150061	-16378	231321	174133	294834	-7344	129533	-67635
3. Increase in cash in hand	2256	3123	3392	4093	5075	-991	4512	-590	20466	-21761	12441	2347
4. Increase in balances with RBI	38380	-4304	19989	36740	6916	7452	24964	96367	-55367	72280	-20559	60580
Total	**487615**	**492194**	**298334**	**587210**	**311523**	**553807**	**506051**	**616507**	**401905**	**685162**	**477654**	**782813**

Source: Reserve Bank of India

Notes :

H1 : April to September H2 : October to March

(P): Provisional.

@: Excludes borrowings from RBI, EXIM Bank and NABARD.

1. Data also reflect redemption of Resurgent India Bonds of ₹ 226.93 billion, since October 2003; and the redemption of India Millennium Deposits (IMDs) of ₹ 319.59 billion on December 29, 2005.
2. Residual (net) is the balance of Uses of Funds over Sources of Funds and includes borrowings from RBI, EXIM Bank and NABARD.
3. The data relate to last reporting Fridays.
4. Figures may not add up to totals due to rounding off.

Table 4.2. Scheduled Commercial Banks: Variation in Selected Items

(₹ Crore)

Items	2013-14 Mar 22 to Mar 21	2014-15 Mar 21 to Mar 20	2015-16 Mar 20 to Mar 18	2016-17 Mar 18 to Mar 31	2017-18 Mar 31 to Mar 30	2018-19 Mar 30 to Mar 29	Outstanding as on June 7, 2019 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.Demand deposits	51622	80108	94967	392443	88843	141005	1292801
2.Time deposits* @	903484	747617	699038	1037923	579550	1006717	11247440
3.Aggregate deposits @	955106	827725	794005	1430366	668393	1147722	12540241
4 Borrowings from RBI	20026	116589	74265	-210657	252168	-93290	26544
5. Cash in hand & balances with RBI	39456	64215	18452	125252	15618	54833	586919
6. Investments in Govt. securities	207541	278557	134182	405815	287658	61595	3495208
7. Bank credit	733637	542325	713194	591851	783959	1146298	9651922

Source: Reserve Bank of India

Notes:

(P): Provisional

* : Revised in line with the new accounting standards and are consistent with the methodology suggested by the Working Group on Money Supply : Analytics and Methodology of Compilation (June 1998) from 1998-99 onwards.
The revision is in respect of pension and provident funds with commercial banks which are classified as other demand and time liabilities and includes those banks which have reported such changes so far.

@: Data also reflect redemption of Resurgent India Bonds of ₹226.93 billion, since October 2003; and the redemption of India Millennium Deposits (IMDs) of ₹319.59 billion on December 29, 2005.

Table 4.3. Number of Functioning Branches of Commercial Banks - Bank Group-wise

Branches as on End March

	2014	2015	2016	2017	2018	Rural	% of Rural Branches to Total
	Total	Total	Total	Total	Total		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Public Sector Banks	83201	88612	91638	94113	93137	28784	30.9
Regional Rural Banks	19292	20387	21254	21743	22082	15218	68.9
Private Sector Banks	20076	22333	27452	29799	31420	6557	20.9
Foreign Banks	322	329	332	301	299	10	3.3
Local Area Banks	89	104	115	76	87	11	12.6
Small Finance Banks	--	--	--	410	1733	354	20.4
Payments Banks	--	--	--	3	156	14	9.0
Total	**122980**	**131765**	**140791**	**146445**	**148914**	**50948**	**34.2**

Source: RBI, Master Office File (MOF) System

Notes:

1. Data include 'Administrative Offices'

2. Population groups are defined as follows: 'Rural' includes centres with population of less than 10,000, 'Semi-Urban' includes centres with population of 10,000 and above but less than of one lakh, 'Urban' includes centres with population of one lakh and above but less than of ten lakhs, and 'Metropolitan' includes centres with population of 10 lakhs and above. All population figures are as per census 2011.

3. 'Public Sector banks' comprises of State Bank of India (and its' erstwhile associates and Bhartiya Mahila Bank prior to April 1, 2017), IDBI bank and nationalized banks, excluding Regional Rural Banks.

4. MOF data are dynamic in nature. It is updated based on information as received from banks.

Table 4.4. Advances to Agriculture and Other Priority Sectors by Public Sector Banks

Sectors	Number of Accounts (in thousand)					Amount Outstanding (₹ crore)				
	March 2014	March 2015	March 2016	March 2017	March 2018	March 2014	March 2015	March 2016	March 2017	March 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.Agriculture	48336	51231	51363	52594	54846	702541	743577	902331	946850	961076
1 (a) Direct Finance [a]	47581	50535	na	na	na	525652	580164	na	na	na
1 (b) Indirect Finance [a]	755	696	na	na	na	176889	163413	na	na	na
2. Small Scale Industries [b]										
3.Micro & Small Enterprises	8358	8329	10592	11123	11026	593410	647855	733164	741958	755317
4. Setting up of Industrial Estates										
5. Small road & water transport Operators										
6. Retail Trade										
7. Small Business										
8. Professional &self employed persons										
9. Micro Credit										
10. Education	2555	2536	2435	2384	2293	55112	56997	59306	60010	59563
11.Consumption										
12. State sponsored Corpns/Organisations for on lending to Other Priority Sector										
13. State sponsored organisation for SC/ST purchase & supply of inputs & marketing of outputs										
14. Housing Loans	4009	4082	4187	4221	4152	235484	247887	273835	294149	298721
15. Funds provided to RRBs										
16. Advances to Self Help Groups										
17. Advances to Software Industries										
18.Advances to Food & Agro Processing Sector										
19. Investment in Venture Capital										
20. Total Priority Sector Advances [c]	64346	67151	69305	70806	72911	1602907	1707489	1981256	2043474	2199201
21. ANBC [d]						4110591	4584973	5056594	5329716	5350290
Percentage to ANBC										
1.Agriculture						17.09	16.22	17.84	17.77	17.96
1 (a) Direct Finance [a]						12.79	12.65	na	na	na
1 (b) Indirect Finance [a]						4.30	3.56	na	na	na

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Table 4.4. Advances to Agriculture and Other Priority Sectors by Public Sector Banks

Sectors	Number of Accounts (in thousand)					Amount Outstanding (₹ crore)				
	March 2014	March 2015	March 2016	March 2017	March 2018	March 2014	March 2015	March 2016	March 2017	March 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2. Small Scale Industries [b]										
3.Micro & Small Enterprises					14.44	14.13	14.50	13.92	14.12	
4. Setting up of Industrial Estates										
5. Small road & water transport Operators										
6. Retail Trade										
7. Small Business										
8. Professional &self employed persons										
9. Micro Credit										
10. Education						1.34	1.24	1.17	1.13	1.11
11.Consumption										
12. State sponsored corpns/Organisations										
for on lending to Other Priority Sector										
13. State sponsored organisation for SC/ST										
purchase &supply of inputs &marketing of outputs										
14. Housing Loans						5.73	5.41	5.42	5.52	5.58
15. Funds provided to RRBs										
16. Advances to Self Help Groups										
17. Advances to Software Industries										
18.Advances to Food & Agro Processing Sector										
19. Investment in Venture Capital										
20. Total Priority Sector Advances						38.99	37.24	39.18	38.34	41.10

Source: Reserve Bank of India
Notes:
na: not available
a: Excludes advances to plantations other than development finance
b: Includes small business
c: Total priority sector advances is the total of items 1 to 12 & 14 to 17 and half of item 13
d: ANBC stands for Adjusted Net Bank Credit

Table 4.5. State-wise Number of Reporting Bank-offices, Deposit and Bank Credit of SCBs and Percentage Share of Advances to Priority Sector in Total bank Credit of PSBs

States or UTs	Number of Reporting Bank Offices		Deposit (₹ Crore)		Credit (₹ Crore)		Percentage share of advances to priority sector in total bank credit of PSBs (P)	
	March 2018	December 2018	March 2018	December 2018	March 2018	December 2018	March 2018	December 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Andaman & Nicobar Islands	67	68	4722	5117	1846	2072	39	na
Andhra Pradesh	6892	6896	276527	294976	310457	346736	56	na
Arunachal Pradesh	153	155	13317	13786	3322	3634	28	na
Assam	2326	2355	134643	135243	57307	62095	51	na
Bihar	6681	6798	317131	331934	101511	110131	63	na
Chandigarh	411	402	62287	66981	67384	76605	18	na
Chhattisgarh	2492	2529	133067	137255	83352	85196	42	na
Dadra & Nagar Haveli	60	60	3886	4091	1724	2149	73	na
Daman & Diu	47	45	4683	4917	1306	1438	65	na
Goa	678	668	66090	69371	17631	19349	44	na
Gujarat	7835	7906	643747	654308	482779	520939	43	na
Haryana	4808	4842	367362	400143	218336	245477	53	na
Himachal Pradesh	1532	1604	85753	93099	26479	28578	63	na
Jammu & Kashmir	1782	1772	104458	111651	44819	51323	39	na
Jharkhand	2947	2967	199475	212039	54639	57749	58	na
Karnataka	9933	10002	840424	890863	586740	627755	41	na
Kerala	6281	6421	440361	479447	281384	309649	54	na
Lakshadweep	13	13	998	1058	82	84	27	na
Madhya Pradesh	6511	6589	340117	359400	221512	242710	57	na
Maharashtra	12317	12454	2289301	2377728	2404766	2583258	30	na
Manipur	174	181	8972	8361	3998	4736	37	na
Meghalaya	343	340	21669	22558	5841	6103	32	na
Mizoram	189	190	8473	8458	3027	3279	49	na
Nagaland	160	162	10047	10267	3468	3835	31	na
NCT of Delhi	3549	3559	1145718	1211528	1069998	1183746	10	na
Odisha	4801	4818	271019	295003	100653	111599	52	na
Puducherry	239	239	16771	17272	10319	11369	61	na
Punjab	6436	6415	350459	377658	221388	230177	46	na
Rajasthan	7198	7237	336820	368366	254382	287761	67	na
Sikkim	137	140	8610	9354	2319	2759	47	na
Tamil Nadu	10710	10781	725810	765760	784172	835950	48	na
Telangana	5091	5086	420422	439662	445635	471779	26	na
Tripura	454	456	22178	23249	8981	9262	60	na
Uttar Pradesh	16913	17034	957832	998867	391892	419469	61	na
Uttarakhand	2041	2065	123440	133524	44669	49647	67	na
West Bengal	7932	7951	722699	748598	364454	366721	40	na
All India	**140133**	**141200**	**11479288**	**12081892**	**8682573**	**9375117**	**39**	**na**

Source: RBI, Quarterly Statistics on Deposits and Credit of Scheduled Commercial Banks (Basic Statistical Return (BSR)-7)

Notes:

P: Provisional na: not available

SCBs: Scheduled Commercial Banks

PSBs: Public Sector Banks

1. The number of reporting of branches / offices, which reported data in BSR-7 is shown.
2. Data are as per the latest geographical boundaries as updated in the MOF system.

Table 5.1. Index Numbers of Wholesale Prices

	Primary articles					Fuel & power	Manufactured products						All Commodities
	Total	Food articles		Non-Food articles	Minerals		Total	Food products	Textiles	Chemicals & chemical products	Basic metals, alloys & metal products	Machinery & machine tools	
		Total	Food grains										
Weight-Base: (2004-05=100)	**20.1**	**14.3**	**4.1**	**4.3**	**1.5**	**14.9**	**65.0**	**10.0**	**7.3**	**12.0**	**10.7**	**8.9**	**100.0**
Weight-Base: (2011-12=100)	**22.6**	**15.3**	**3.5**	**4.1**	**0.8**	**13.2**	**64.2**	**9.1**	**4.9**	**6.5**	**9.6**	**4.8**	**100.0**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**
Last month of (2004-05 = 100)													
2005-06	104	105	113	97	119	117	104	102	100	105	103	105	105.7
2006-07	118	119	126	107	135	119	110	107	101	110	116	112	112.8
2007-08	129	126	137	124	173	127	118	116	101	116	138	115	121.5
2008-09	136	136	152	125	168	123	120	123	103	116	130	118	123.5
2009-10	166	164	172	150	232	140	126	142	112	120	133	120	136.3
2010-11	188	179	176	191	267	158	136	145	132	129	148	123	149.5
2011-12	208	197	186	190	359	178	143	154	128	139	163	126	161.0
2012-13	223	214	216	208	352	192	149	166	133	146	165	129	170.1
2013-14	239	235	231	218	346	214	154	169	143	153	168	133	180.3
2014-15	239	249	236	203	243	188	154	170	140	151	162	135	176.1
2015-16	246	260	260	220	193	172	154	180	140	150	153	135	175.3
2016-17	259	269	270	231	247	204	159	192	143	152	161	135	185.3
Last month of (2011-12 = 100)													
2012-13	115	114	120	120	122	110	106	109	107	110	103	105	108.6
2013-14	121	123	127	118	115	119	111	116	114	116	105	108	114.3
2014-15	120	129	129	112	112	92	110	113	110	114	100	109	109.9
2015-16	123	133	141	117	116	77	109	117	109	111	89	109	107.7
2016-17	127	138	147	122	115	94	112	127	113	112	96	108	113.2
2017-18	128	137	141	120	138	98	116	128	114	116	110	110	116.3
2018-19 (P)	135	145	153	124	137	103	118	129	119	120	111	112	120.0
Average of months (2004-05 = 100)													
2005-06	104	105	107	97	115	114	102	101	99	104	102	104	104.5
2006-07	114	116	122	102	137	121	108	107	101	109	112	110	111.4

Contd....

Table 5.1. Index Numbers of Wholesale Prices

(Contd.....)

	Primary articles					Fuel & power	Manufactured products						All Commodities
	Total	Food articles		Non-Food articles	Minerals		Total	Food products	Textiles	Chemicals & chemical products	Basic metals, alloys & metal products	Machinery & machine tools	
		Total	Food grains										
Weight-Base: (2004-05=100)	**20.1**	**14.3**	**4.1**	**4.3**	**1.5**	**14.9**	**65.0**	**10.0**	**7.3**	**12.0**	**10.7**	**8.9**	**100.0**
Weight-Base: (2011-12=100)	**22.6**	**15.3**	**3.5**	**4.1**	**0.8**	**13.2**	**64.2**	**9.1**	**4.9**	**6.5**	**9.6**	**4.8**	**100.0**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**
2007-08	124	124	131	114	153	121	113	110	102	113	123	114	116.6
2008-09	138	135	145	129	187	135	120	120	103	118	138	117	126.0
2009-10	155	155	166	136	203	132	123	136	107	118	130	118	130.8
2010-11	182	180	174	167	253	148	130	141	120	124	141	121	143.3
2011-12	200	193	181	183	321	169	140	151	129	135	156	125	156.1
2012-13	220	212	207	202	347	186	147	163	131	144	166	128	167.6
2013-14	242	239	226	213	346	205	151	169	139	149	165	132	177.6
2014-15	249	253	235	212	309	203	155	173	143	153	166	135	181.2
2015-16	250	262	253	220	216	180	153	174	140	151	155	135	176.7
2016-17	262	275	281	230	220	190	157	191	142	151	156	135	183.2
Average of months (2011-12 = 100)													
2012-13	111	111	115	113	118	107	105	109	104	108	105	104	106.9
2013-14	122	125	125	118	114	115	109	114	112	113	103	106	112.5
2014-15	125	132	128	115	119	108	111	116	113	116	104	108	113.9
2015-16	125	135	137	118	106	87	109	115	109	113	92	109	109.7
2016-17	129	140	152	122	113	86	111	125	111	111	91	108	111.6
2017-18	131	143	143	120	123	93	114	127	113	113	101	109	114.9
2018-19(P)	134	144	147	123	136	104	118	129	118	119	112	111	119.8
2015-16													
April	122	131	130	112	107	91	110	113	109	114	99	109	110.2
May	123	132	132	116	103	96	111	113	110	115	98	110	111.4
June	125	134	133	117	108	96	110	113	110	115	97	111	111.8
July	124	134	134	116	105	94	110	113	110	114	95	110	111.1
August	125	136	135	118	105	88	109	114	110	113	92	110	110.0
September	126	136	137	119	108	86	109	114	109	113	92	108	109.9

Contd....

Table 5.1. Index Numbers of Wholesale Prices *(Contd.....)*

	Primary articles					Fuel & power	Manufactured products						All Commodities
	Total	Food articles		Non-Food articles	Minerals		Total	Food products	Textiles	Chemicals & chemical products	Basic metals, alloys & metal products	Machinery & machine tools	
		Total	Food grains										
Weight-Base: (2004-05=100)	**20.1**	**14.3**	**4.1**	**4.3**	**1.5**	**14.9**	**65.0**	**10.0**	**7.3**	**12.0**	**10.7**	**8.9**	**100.0**
Weight-Base: (2011-12=100)	**22.6**	**15.3**	**3.5**	**4.1**	**0.8**	**13.2**	**64.2**	**9.1**	**4.9**	**6.5**	**9.6**	**4.8**	**100.0**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**
October	126	138	140	120	95	86	109	115	109	113	92	109	110.1
November	127	139	141	121	100	86	109	115	108	112	89	109	109.9
December	127	138	142	122	120	85	108	115	109	111	87	109	109.4
January	124	136	142	121	99	80	108	116	108	111	87	108	108.0
February	122	133	141	118	102	76	108	116	109	111	87	108	107.1
March	123	133	141	117	116	77	109	117	109	111	89	109	107.7
2016-17													
April	126	138	144	121	104	78	109	120	110	112	90	108	109.0
May	129	141	147	121	111	81	110	121	110	112	90	108	110.4
June	132	144	151	124	119	85	110	123	110	111	90	108	111.7
July	132	145	155	127	96	85	110	124	111	112	89	108	111.8
August	131	143	154	125	128	81	110	125	112	111	88	108	111.2
September	131	142	153	123	129	83	110	126	112	110	89	107	111.4
October	129	142	155	120	105	85	111	127	111	110	91	108	111.5
November	129	142	158	118	111	87	111	127	111	111	92	108	111.9
December	127	138	158	119	114	88	111	128	111	110	93	108	111.7
January	127	137	153	122	113	93	112	128	111	111	94	108	112.6
February	127	137	150	124	113	95	112	128	112	111	94	108	113.0
March	127	138	147	122	115	94	112	127	113	112	96	108	113.2
2017-18													
April	127	139	147	121	116	92	113	127	114	112	97	108	113.2
May	127	138	145	120	120	91	113	127	114	112	97	108	112.9
June	127	139	144	118	118	90	113	127	114	112	96	109	112.7
July	133	148	143	119	120	88	113	127	113	111	97	108	113.9
August	135	151	143	121	121	89	113	127	114	111	99	109	114.8

Contd....

Table 5.1. Index Numbers of Wholesale Prices

	Primary articles					Fuel & power	Manufactured products						All Commodities
	Total	Food articles		Non-Food articles	Minerals		Total	Food products	Textiles	Chemicals & chemical products	Basic metals, alloys & metal products	Machinery & machine tools	
		Total	Food grains										
Weight-Base: (2004-05=100)	**20.1**	**14.3**	**4.1**	**4.3**	**1.5**	**14.9**	**65.0**	**10.0**	**7.3**	**12.0**	**10.7**	**8.9**	**100.0**
Weight-Base: (2011-12=100)	**22.6**	**15.3**	**3.5**	**4.1**	**0.8**	**13.2**	**64.2**	**9.1**	**4.9**	**6.5**	**9.6**	**4.8**	**100.0**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**
September	132	145	144	120	129	92	114	128	113	111	101	109	114.9
October	134	148	143	119	122	94	114	128	113	112	101	109	115.6
November	136	151	142	117	122	95	114	128	113	112	101	109	116.4
December	132	144	141	119	122	96	114	127	113	113	103	109	115.7
January	130	141	140	121	120	98	115	127	113	114	106	110	116.0
February	128	138	140	121	122	99	116	127	114	115	109	110	116.1
March	128	137	141	120	138	98	116	128	114	116	110	110	116.3
2018-19													
April	131	140	140	120	140	99	116	128	115	116	110	110	117.3
May	131	140	141	120	130	102	117	127	116	117	112	110	118.3
June	133	142	141	123	123	104	117	129	116	118	113	111	119.1
July	135	145	143	124	135	104	118	129	118	118	112	111	119.9
August	135	145	145	124	129	105	118	130	118	119	112	111	120.1
September	136	145	145	124	130	108	118	130	119	120	114	112	120.9
October	137	146	147	123	140	111	119	130	119	121	115	112	122.0
November	137	146	149	125	151	109	119	129	119	121	114	112	121.6
December	134	144	150	124	139	103	118	128	119	120	112	112	119.7
January	134	144	152	123	137	99	118	128	119	120	110	112	119.2
February	134	144	154	123	144	101	118	129	119	120	111	112	119.5
March(P)	135	145	153	124	137	103	118	129	119	120	111	112	120.0
April(P)	139	150	154	127	144	103	118	129	119	120	111	112	120.9

Source : Office of the Economic Adviser, Ministry of Commerce & Industry.

Note:

P: Provisional

Table 5.2. Index Numbers of Wholesale Prices – Selected Commodities and Commodity Groups

	Rice	Wheat	Pulses	Tea	Raw cotton	Raw jute	Ground-nut seed	Coal	Mineral oils	Sugar, khandsari & gur	Edible oils	Cotton yarn	Cotton fabric	Jute,hemp & mesta textiles	Fertili-zers	Cement & lime	Iron,steel & ferro alloys a
Weight-Base: (2004-05=100)	**1.79**	**1.12**	**0.72**	**0.11**	**0.70**	**0.06**	**0.40**	**2.09**	**9.36**	**2.09**	**3.04**	**1.38**	**1.23**	**0.26**	**2.66**	**1.39**	**6.88**
Weight-Base: (2011-12=100)	1.43	1.03	0.64	0.12	0.66	0.05	0.27	2.14	7.95	1.16	2.64	1.34	0.95	0.32	1.48	1.64	6.55
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**	**(15)**	**(16)**	**(17)**	**(18)**
Last month of (Base: 2004-05=100)																	
2005-06	105	117	126	92	91	159	94	118	122	112	93	98	98	114	103	106	97
2006-07	115	129	147	97	99	118	132	118	123	97	107	98	97	120	105	130	111
2007-08	131	140	148	110	122	130	147	136	133	93	127	100	98	110	107	138	138
2008-09	151	151	159	156	124	142	141	151	124	126	114	102	105	125	108	148	126
2009-10	163	173	199	129	149	173	153	163	147	178	114	123	109	157	110	151	127
2010-11	167	173	191	138	303	240	171	185	168	164	129	179	128	182	121	154	143
2011-12	175	172	210	145	196	227	231	210	193	169	142	150	131	171	141	163	158
2012-13	206	205	233	212	214	273	266	190	214	184	147	164	134	182	152	172	158
2013-14	232	218	228	170	234	270	197	190	237	178	147	185	142	187	153	164	161
2014-15	234	216	258	156	178	310	223	190	194	171	145	169	145	202	156	178	153
2015-16	239	228	347	182	180	505	256	190	169	183	150	165	146	238	159	176	140
2016-17	257	245	325	203	242	397	262	226	210	218	156	175	150	235	155	172	150
Last month of (Base: 2011-12=100)																	
2012-13	119	123	115	141	100	124	121	103	116	112	100	109	106	107	116	105	102
2013-14	133	128	115	113	107	125	99	107	128	109	107	120	112	108	118	108	104
2014-15	132	126	131	103	84	142	115	107	82	98	99	108	114	121	120	112	97
2015-16	135	134	167	121	86	226	129	106	58	110	100	105	112	153	121	109	84
2016-17	148	143	154	133	114	188	138	116	84	133	108	114	114	147	117	109	91
2017-18	153	141	122	120	103	166	114	123	89	115	117	113	118	145	119	114	109
2018-19(P)	157	156	135	133	117	203	127	124	95	112	114	117	124	155	123	117	109
Average of months (Base: 2004-05=100)																	
2005-06	105	105	113	89	90	135	97	118	117	109	94	95	99	112	102	102	100
2006-07	110	125	149	104	97	136	110	118	127	107	102	98	97	115	104	119	105
2007-08	122	134	145	104	112	122	140	122	126	91	116	101	99	111	106	138	119
2008-09	141	148	156	153	141	138	144	151	142	107	122	103	103	117	107	139	137
2009-10	158	166	191	174	139	160	148	156	136	162	114	111	107	146	108	149	124

Contd....

Table 5.2. Index Numbers of Wholesale Prices – Selected Commodities and Commodity Groups *(Contd....)*

	Rice	Wheat	Pulses	Tea	Raw cotton	Raw jute	Ground-nut seed	Coal	Mineral oils	Sugar, khandsari & gur	Edible oils	Cotton yarn	Cotton fabric	Jute,hemp & mesta textiles	Fertili-zers	Cement & lime	Iron,steel & ferro alloys a
Weight-Base: (2004-05=100)	**1.79**	**1.12**	**0.72**	**0.11**	**0.70**	**0.06**	**0.40**	**2.09**	**9.36**	**2.09**	**3.04**	**1.38**	**1.23**	**0.26**	**2.66**	**1.39**	**6.88**
Weight-Base: (2011-12=100)	1.43	1.03	0.64	0.12	0.66	0.05	0.27	2.14	7.95	1.16	2.64	1.34	0.95	0.32	1.48	1.64	6.55
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**	**(15)**	**(16)**	**(17)**	**(18)**
2010-11	167	171	197	148	199	211	165	165	157	161	121	142	115	165	117	151	136
2011-12	172	168	202	151	225	223	200	191	184	168	136	155	132	176	133	157	150
2012-13	194	194	241	199	206	242	247	209	202	186	148	157	134	178	149	169	160
2013-14	226	212	228	196	237	262	219	191	226	183	147	175	139	184	152	167	158
2014-15	241	212	241	179	206	288	210	190	220	183	145	179	144	193	155	170	158
2015-16	237	219	337	183	190	404	246	190	179	167	149	166	146	219	158	174	142
2016-17	252	242	406	210	224	448	265	199	194	208	156	172	148	238	157	175	143
Average of months (Base: 2011-12=100)																	
2012-13	113	115	120	132	95	110	121	102	111	112	106	105	103	103	114	108	105
2013-14	129	125	115	131	109	121	108	105	122	109	104	117	110	106	117	106	102
2014-15	137	123	122	118	96	133	107	107	109	108	102	115	115	113	119	111	102
2015-16	135	128	164	121	90	182	128	107	74	99	99	107	113	137	121	110	87
2016-17	144	142	193	140	107	208	138	109	73	125	107	110	114	151	119	111	86
2017-18	149	139	141	131	108	160	123	119	83	128	109	113	117	144	117	114	98
2018-19 (P)	155	149	127	141	117	182	118	123	97	111	118	117	123	149	121	114	112
2015-16																	
April	133	125	134	115	90	141	120	107	81	99	99	108	113	120	121	110	97
May	134	124	144	119	93	142	127	107	88	98	99	109	112	120	121	108	95
June	134	122	155	117	92	160	136	107	90	94	100	110	113	123	121	108	93
July	133	125	157	120	92	162	133	107	85	90	100	109	114	129	121	110	91
August	134	126	162	118	91	160	135	106	76	92	98	109	114	132	122	111	87
September	135	126	167	116	91	167	136	106	72	94	98	107	114	135	122	112	88
October	136	129	178	119	87	181	122	106	73	96	99	106	113	141	122	112	86
November	136	130	180	123	86	196	122	106	73	97	99	105	113	144	121	112	84
December	**135**	**132**	**179**	**126**	**89**	**205**	**126**	**106**	**71**	**100**	**98**	**104**	**113**	**148**	**121**	**110**	**81**
January	136	134	175	130	90	217	123	106	63	105	97	103	111	149	122	109	81
February	135	134	169	129	88	222	125	106	56	108	98	106	113	149	122	108	82

Contd....

Table 5.2. Index Numbers of Wholesale Prices – Selected Commodities and Commodity Groups *(Contd.....)*

	Rice	Wheat	Pulses	Tea	Raw cotton	Raw jute	Ground-nut seed	Coal	Mineral oils	Sugar, khandsari & gur	Edible oils	Cotton yarn	Cotton fabric	Jute,hemp & mesta textiles	Fertili-zers	Cement & lime	Iron,steel & ferro alloys a
Weight-Base: (2004-05=100)	**1.79**	**1.12**	**0.72**	**0.11**	**0.70**	**0.06**	**0.40**	**2.09**	**9.36**	**2.09**	**3.04**	**1.38**	**1.23**	**0.26**	**2.66**	**1.39**	**6.88**
Weight-Base: (2011-12=100)	1.43	1.03	0.64	0.12	0.66	0.05	0.27	2.14	7.95	1.16	2.64	1.34	0.95	0.32	1.48	1.64	6.55
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**	**(15)**	**(16)**	**(17)**	**(18)**
March	135	134	167	121	86	226	129	106	58	110	100	105	112	153	121	109	84
2016-17																	
April	136	133	180	141	90	229	139	106	62	117	103	105	113	156	121	109	85
May	139	135	189	141	94	232	143	106	67	118	105	107	114	155	121	110	85
June	142	137	198	146	105	251	146	107	73	119	104	108	113	155	121	112	84
July	144	138	212	142	116	243	150	107	72	122	104	110	113	158	120	112	82
August	145	139	204	137	116	197	146	107	66	123	106	113	114	155	119	111	81
September	145	140	199	141	111	194	140	107	69	124	108	112	117	150	118	113	83
October	145	141	211	141	106	194	132	107	71	126	108	110	114	148	118	113	86
November	145	148	215	142	102	197	126	107	75	127	108	110	115	147	118	111	87
December	144	152	205	143	104	190	132	107	77	126	110	110	115	144	117	110	87
January	144	151	183	140	111	190	134	114	82	130	111	111	114	145	117	109	88
February	146	149	164	134	114	191	132	116	84	133	110	112	113	146	117	109	88
March	148	143	154	133	114	188	138	116	84	133	108	114	113	147	117	109	91
2017-18																	
April	148	141	156	147	112	169	140	118	80	133	107	117	114	146	117	113	93
May	148	138	152	140	109	164	136	118	79	133	106	116	115	144	117	115	93
June	148	136	147	137	111	163	133	118	77	132	106	115	115	145	116	115	92
July	149	136	146	130	111	158	128	118	75	133	106	115	115	144	116	114	93
August	149	137	145	127	110	155	124	118	77	133	106	114	119	142	117	113	95
September	149	138	151	125	107	160	118	118	80	133	108	113	118	143	117	114	97
October	150	138	145	130	101	158	117	118	82	132	109	111	117	145	117	113	97
November	149	139	138	131	102	152	117	118	85	130	111	110	118	145	117	113	97
December	149	139	133	129	108	154	114	117	87	124	112	111	117	144	117	114	99
January	150	141	127	128	111	160	113	121	88	120	113	113	116	143	117	114	104
February	151	140	124	124	107	167	115	123	90	117	114	113	117	145	119	115	107

Contd....

Table 5.2. Index Numbers of Wholesale Prices – Selected Commodities and Commodity Groups

	Rice	Wheat	Pulses	Tea	Raw cotton	Raw jute	Ground-nut seed	Coal	Mineral oils	Sugar, khandsari & gur	Edible oils	Cotton yarn	Cotton fabric	Jute,hemp & mesta textiles	Fertili-zers	Cement & lime	Iron,steel & ferro alloys a
Weight-Base: (2004-05=100)	**1.79**	**1.12**	**0.72**	**0.11**	**0.70**	**0.06**	**0.40**	**2.09**	**9.36**	**2.09**	**3.04**	**1.38**	**1.23**	**0.26**	**2.66**	**1.39**	**6.88**
Weight-Base: (2011-12=100)	1.43	1.03	0.64	0.12	0.66	0.05	0.27	2.14	7.95	1.16	2.64	1.34	0.95	0.32	1.48	1.64	6.55
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**	**(15)**	**(16)**	**(17)**	**(18)**
March	153	141	122	120	103	166	114	123	89	115	117	113	118	145	119	114	109
2018-19																	
April	153	141	121	141	103	166	110	123	90	109	119	113	120	146	118	115	110
May	154	142	120	137	105	166	108	123	94	104	120	114	121	146	119	114	112
June	154	143	118	137	117	167	110	123	97	111	121	115	120	146	119	114	113
July	155	145	121	138	122	170	112	123	98	114	120	117	123	147	119	114	112
August	156	149	125	142	123	173	120	123	98	114	119	118	122	147	120	113	111
September	156	150	123	148	121	182	118	123	102	112	119	118	122	147	121	113	115
October	156	151	126	145	121	183	119	123	108	113	119	117	124	147	122	113	115
November	156	152	131	149	123	185	125	123	106	113	116	118	124	148	123	113	114
December	156	153	136	149	119	189	123	123	94	110	114	117	124	150	124	113	111
January	156	155	137	139	116	199	124	124	88	111	115	119	124	151	123	115	108
February	157	157	138	133	113	201	125	124	91	112	116	118	124	155	123	118	109
March(P)	157	156	135	133	117	203	127	124	95	112	114	117	124	155	123	117	109
April(P)	157	152	138	153	125	197	130	124	95	113	113	118	125	157	123	119	108

Source : Office of the Economic Adviser, Ministry of Commerce & Industry.

Notes:

P: Provisional

a: composite index of Iron & semis, steel long, steel flat, stainless steel & alloys and ferro alloys for base 2004-05 and inputs into steel making, metallic iron, mild steel-semi finished steel, mild steel-long products, mild steel-flat products, alloy steel other than stainless steel-shapes and stainless steel-semi finished for base 2011-12.

Table 5.3. All India Consumer Price Index Numbers

	Industrial Workers (CPI-IW)			New Series (CPI-NS)			Agricultural Labourers (CPI-AL)	Rural Labourers (CPI-RL)
Base	(1982=100 & 2001=100)			(2010=100 & 2012=100)			(1986-87=100)	(1986-87=100)
Description	Food	Non-Food	General	Rural	Urban	Combined	General	General
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Average of Months								
1995-96	337	280	313	…	…	…	237	238[b]
1996-97	369	307	342	…	…	…	256	256
1997-98	388	336	366	…	…	…	264	266
1998-99	445	372	414	…	…	…	293	294
1999-00	446	404	428	…	…	…	306	307
2000-01	453	433	444	…	…	…	305	307
2001-02	466	460	463	…	…	…	309	311
2002-03	477	488	482	…	…	…	319	321
2003-04	495	507	500	…	…	…	331	333
2004-05	506	538	520	…	…	…	340	342
2005-06	527[a]	563[a]	542[a]	…	…	…	353	355
2006-07	126	124	125	…	…	…	380	382
2007-08	136	130	133	…	…	…	409	409
2008-09	153	138	145	…	…	…	450	451
2009-10	176	151	163	…	…	…	513	513
2010-11	194	168	180	…	…	…	564	564
2011-12	206	185	195	113.1	110.4	111.9	611	611
2012-13	230	202	215	124.5	121.8	123.3	672	673
2013-14	259	216	236	112.6	111.8	112.2	750	751
2014-15	276	230	251	119.5	118.1	118.9	800	802
2015-16	293	241	265	126.1	123.0	124.7	835	839
2016-17	305	251	276	132.4	127.9	130.3	870	875
2017-18	310	263	284	137.2	132.5	135.0	889	895
2018-19	312	290	300	141.3	137.7	139.6	907	915
Last Month of								
1995-96	339	292	319	…	…	…	237	238
1996-97	373	322	351	…	…	…	262	262
1997-98	401	352	380	…	…	…	272	273
1998-99	431	391	414	…	…	…	296	296
1999-00	446	418	434	…	…	…	306	307
2000-01	446	444	445	…	…	…	300	302
2001-02	462	476	468	…	…	…	309	311
2002-03	479	498	487	…	…	…	324	326
2003-04	494	517	504	…	…	…	332	334
2004-05	502	555	525	…	…	…	340	342
2005-06	115[a]	122[a]	119[a]	…	…	…	358	360
2006-07	129	125	127	…	…	…	392	393
2007-08	141	134	137	…	…	…	423	423
2008-09	156	141	148	…	…	…	463	464
2009-10	181	161	170	…	…	…	536	536
2010-11	196	176	185	106.9	103.9	105.6	585	584
2011-12	212	192	201	116.2	114.6	115.5	625	626
2012-13	240	210	224	128.3	126.5	127.5	704	705
2013-14	258	223	239	114.6	113.7	114.2	763	765

Contd....

Table 5.3. All India Consumer Price Index Numbers *(Contd....)*

	Industrial Workers (CPI-IW)			New Series (CPI-NS)			Agricultural Labourers (CPI-AL)	Rural Labourers (CPI-RL)
Base	**(1982=100 & 2001=100)**			**(2010=100 & 2012=100)**			**(1986-87=100)**	**(1986-87=100)**
Description	**Food**	**Non-Food**	**General**	**Rural**	**Urban**	**Combined**	**General**	**General**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
2014-15	276	235	254	121.1	119.1	120.2	803	807
2015-16	293	247	268	128.0	123.8	126.0	843	848
2016-17	298	255	275	132.8	128.7	130.9	866	872
2017-18	303	273	287	138.7	134.0	136.5	887	894
2018-19	315	304	309	141.2	139.5	140.4	924	932
2015-16								
April	278	237	256	121.5	119.7	120.7	805	809
May	283	237	258	122.4	120.7	121.6	811	816
June	288	238	261	124.1	121.7	123.0	820	824
July	289	241	263	124.7	122.4	123.6	822	827
August	292	240	264	126.1	123.2	124.8	832	836
September	296	240	266	127.0	123.5	125.4	839	843
October	301	242	269	127.7	124.2	126.1	849	853
November	302	243	270	128.3	124.6	126.6	853	857
December	299	243	269	127.9	124.0	126.1	853	857
January	297	245	269	128.1	124.2	126.3	849	854
February	292	246	267	127.9	123.8	126.0	843	849
March	293	247	268	128.0	123.8	126.0	843	848
2016-17								
April	299	247	271	129.0	125.3	127.3	848	854
May	307	248	275	130.3	126.6	128.6	860	866
June	312	247	277	131.9	128.1	130.1	869	874
July	316	249	280	133.0	129.0	131.1	877	881
August	310	251	278	133.5	128.4	131.1	876	881
September	308	250	277	133.4	128.0	130.9	873	877
October	310	251	278	133.8	128.6	131.4	876	881
November	307	251	277	133.6	128.5	131.2	878	883
December	301	253	275	132.8	127.6	130.4	876	881
January	298	253	274	132.4	127.8	130.3	870	876
February	297	254	274	132.6	128.2	130.6	869	874
March	298	255	275	132.8	128.7	130.9	866	872
2017-18								
April	301	256	277	132.9	129.1	131.1	870	876
May	302	257	278	133.3	129.3	131.4	872	878
June	308	256	280	133.9	129.9	132.0	877	884
July	315	259	285	136.2	131.8	134.2	884	890
August	315	259	285	137.8	132.7	135.4	894	900
September	312	262	285	137.6	132.4	135.2	893	899
October	317	261	287	138.3	133.5	136.1	901	907
November	319	261	288	140.0	134.8	137.6	905	910
December	314	262	286	139.8	134.1	137.2	900	906
January	308	271	288	139.3	134.1	136.9	895	901
February	304	272	287	138.5	134.0	136.4	889	896
March	303	273	287	138.7	134.0	136.5	887	894
2018-19								

Contd....

Table 5.3. All India Consumer Price Index Numbers

	Industrial Workers (CPI-IW)			New Series (CPI-NS)			Agricultural Labourers (CPI-AL)	Rural Labourers (CPI-RL)
Base	(1982=100 & 2001=100)			(2010=100 & 2012=100)			(1986-87=100)	(1986-87=100)
Description	Food	Non-Food	General	Rural	Urban	Combined	General	General
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
April	305	273	288	139.1	134.8	137.1	888	896
May	307	274	289	139.8	135.4	137.8	891	899
June	311	274	291	140.5	136.2	138.5	894	902
July	314	290	301	141.8	137.5	139.8	902	910
August	314	290	301	142.5	138.0	140.4	907	915
September	312	292	301	142.1	138.1	140.2	910	917
October	314	292	302	142.2	138.9	140.7	913	920
November	314	292	302	142.4	139.0	140.8	914	921
December	311	292	301	141.9	138.0	140.1	913	921
January	311	304	307	141.0	138.0	139.6	915	923
February	312	303	307	141.0	138.6	139.9	917	925
March	315	304	309	141.2	139.5	140.4	924	932

Source: 1. Labour Bureau for consumer price indices for Industrial Workers (IW), Agricultural Labourers (AL) and Rural Labourers (RL),

2. CSO for consumer price indices- new series (CPI-NS).

Notes:

1. Weights of CPI-IW for food & non-food with base 1982=100 are 57% & 43% respectively and with base 2001=100 are 46.20% & 53.80% respectively.
2. CPI- New Series (Rural, Urban & Combined) with base 2010=100 was introduced w.e.f. January 2011. The CPI-UNME has since been totally discontinued.
3. CPI- New Series figures for 2013-14, 2014-15 and 2015-16 is based on new base 2012=100.

a: The current series of CPI for Industrial Workers with 2001 base was introduced w.e.f. January, 2006 and the figures from 2005-06 (last month) are based on new base. The earlier series on base 1982=100 was simultaneously discontinued. The conversion factor from the current to the old series is 4.63 in case of the General Index, and 4.58 for Food Index.

b: Average index from November, 1995 to March 1996.

Table 5.4. Index Numbers of Wholesale Prices – Relative Prices of Manufactured and Agricultural Products

Year/Months	General Index of Wholesale Price	Price Index of Manufactured Products	Price Index of Agricultural Products [a]	Manufactured price Index as percent of Agricultural Price Index
Weight (Base: 2004-05)	100.00	64.97	18.59	(col.3/Col.4)*100
Weight (Base: 2011-12)	100.00	64.23	19.37	
(1)	**(2)**	**(3)**	**(4)**	**(5)**
(Base : 2004-05 = 100)				
2005-06	104.5	102.4	103.4	99.1
2006-07	111.4	108.2	112.5	96.3
2007-08	116.6	113.4	121.5	93.4
2008-09	126.0	120.4	133.5	90.2
2009-10	130.8	123.1	151.0	81.7
2010-11	143.3	130.1	176.6	73.7
2011-12	156.1	139.5	190.4	73.3
2012-13	167.6	147.1	209.6	70.2
2013-14	177.6	151.5	233.0	65.0
2014-15	181.2	155.1	243.9	63.6
2015-16	176.7	153.4	252.3	60.8
2016-17	183.2	157.4	265.0	59.4
(Base : 2011-12 = 100)				
2012-13	106.9	105.3	111.4	94.5
2013-14	112.5	108.5	123.2	88.1
2014-15	113.9	111.2	128.0	86.9
2015-16	109.7	109.2	131.4	83.1
2016-17	111.6	110.7	136.3	81.1
2017-18	114.9	113.8	138.2	82.4
2018-19	119.8	117.9	139.3	84.6
2015-16				
April	110.2	110.1	126.8	86.9
May	111.4	110.5	128.6	86.0
June	111.8	110.3	130.1	84.8
July	111.1	109.9	130.0	84.5
August	110.0	109.2	132.1	82.6
September	109.9	109.2	132.5	82.4
October	110.1	109.4	134.1	81.6
November	109.9	108.8	134.9	80.7
December	109.4	108.4	134.2	80.7
January	108.0	108.0	133.0	81.2
February	107.1	108.3	130.1	83.3
March	107.7	108.8	130.0	83.7
2016-17				
April	109.0	109.2	134.3	81.3
May	110.4	109.8	136.6	80.4
June	111.7	110.0	139.8	78.7
July	111.8	110.3	140.7	78.4
August	111.2	110.2	138.9	79.3
September	111.4	110.4	137.9	80.1
October	111.5	110.8	137.2	80.7

Contd....

Table 5.4. Index Numbers of Wholesale Prices – Relative Prices of Manufactured and Agricultural Products

Year/Months	General Index of Wholesale Price	Price Index of Manufactured Products	Price Index of Agricultural Products [a]	Manufactured price Index as percent of Agricultural Price Index
Weight (Base: 2004-05)	100.00	64.97	18.59	(col.3/Col.4)*100
Weight (Base: 2011-12)	100.00	64.23	19.37	
(1)	**(2)**	**(3)**	**(4)**	**(5)**
November	111.9	111.0	136.8	81.1
December	111.7	111.1	133.7	83.1
January	112.6	111.6	133.5	83.6
February	113.0	111.8	133.9	83.5
March	113.2	112.3	134.3	83.6
2017-18				
April	113.2	112.6	134.9	83.5
May	112.9	112.6	134.1	84.0
June	112.7	112.6	134.7	83.6
July	113.9	112.6	141.7	79.5
August	114.8	112.8	144.5	78.1
September	114.9	113.7	139.5	81.5
October	115.6	113.7	141.7	80.2
November	116.4	114.0	143.9	79.2
December	115.7	114.2	138.8	82.3
January	116.0	114.9	136.5	84.2
February	116.1	115.5	134.2	86.0
March	116.3	115.8	133.6	86.6
2018-19				
April	117.3	116.3	135.7	85.7
May	118.3	116.9	136.0	85.9
June	119.1	117.3	137.7	85.2
July	119.9	117.7	140.3	83.9
August	120.1	117.8	140.4	83.9
September	120.9	118.4	140.1	84.5
October	122.0	118.9	141.1	84.3
November	121.6	118.8	141.6	83.9
December	119.7	118.3	139.4	84.8
January	119.2	118.1	139.8	84.5
February	119.5	118.2	139.3	84.8
March(P)	120.0	118.3	140.5	84.2
April(P)	120.9	118.3	145.1	81.5

Source: Office of the Economic Adviser, Ministry of Commerce & Industry
Notes:
a : Composite Index of the sub-groups - (Food Articles and Non-food Articles)

Table 5.5. Minimum Support Price/Procurement Price for Crops

(Crop Year Basis)(Rs./quintal)

Commodities	2002-03[b]	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Paddy (Common)	550	560	570	580[c]	645[h]	850[k]	950[k]	1000	1080	1250	1310	1360	1410	1470	1550	1750
Paddy (Grade 'A')	580	590	600	610[c]	675[h]	880[k]	980[k]	1030	1110	1280	1345	1400	1450	1510	1590	1770
Wheat	630	640	650[g]	750[h]	1000	1080	1100	1120	1285	1350	1400	1450	1525	1625	1735	1840
Jowar (Hybrid)	490	515	525	540	600	840	840	880	980	1500	1500	1530	1570	1625	1700	2430
Jowar (Maldandi)	...	...	...	555	620	860	860	900	1000	1520	1520	1550	1590	1650	1725	2450
Bajra	495	515	525	540	600	840	840	880	980	1175	1250	1250	1275	1330	1425	1950
Ragi	490	515	525	540	600	915	915	965	1050	1500	1500	1550	1650	1725	1900	2897
Maize	490	525	540	540	620	840	840	880	980	1175	1310	1310	1325	1365	1425	1700
Barley	505	540	550	565	650	680	750	780	980	980	1100	1150	1225	1325	1410	1440
Gram	1225	1425	1435	1445	1600	1730	1760	2100	2800	3000	3100	3175	3425[n]	3800[q]	4400#	4620
Masur	...	1525	1535	1545	1700	1870	1870	2250	2800	2900	2950	3075	3325[n]	3800[r]	4250*	4475
Arhar	1325	1390	1400	1410	1550[d]	2000	2300	3000[l]	3200[l]	3850	4300	4350	4425[o]	4625[s]	5450**	5675
Moong	1335	1410	1520	1520	1700[d]	2520	2760	3170[l]	3500[l]	4400	4500	4600	4650[o]	4800[s]	5575**	6975
Urad	1335	1410	1520	1520	1700[d]	2520	2520	2900[l]	3300[l]	4300	4300	4350	4425[o]	4575[s]	5400**	5600
Sugarcane [a]	69.50	74.50	79.50	80.25	81.18	81.18	129.84	139.12	145.00[m]	170.0	210.0	220.0	230.0	230.0	255	275
Cotton F-414/H-777	1695	1760	1760	1770[e]	1800[e]	2500[i]	2500[i]	2500[i]	2800[i]	3600	3700	3750	3800	3860	4020	5150
Cotton H-4 750	1895	1960	1980	1990[f]	2030[f]	3000[j]	3000[j]	3000[j]	3300[j]	3900	4000	4050	4100	4160	4320	5450
Groundnut	1375	1500	1520	1520	1550	2100	2100	2300	2700	3700	4000	4000	4030	4120[t]	4450**	4890
Jute(TD-5)	850	890	910	1000	1055	1250	1375	1575	1675	2200	2300	2400	2700	3200	3500	3700
Rapeseed/ mustard	1340	1700	1715	1715	1800	1830	1830	1850	2500	3000	3050	3100	3350	3600[t]	4000*	4200
Sunflower	1210	1340	1500	1500	1510	2215	2215	2350	2800	3700	3700	3750	3800	3850[t]	4100*	5388
Soyabean (Black)	805	900	900	900	910	1350	1350	1400	1650	2200	2500	2500	...	...	3050**	3399
Soyabean (Yellow)	895	1000	1010	1020	1050	1390	1390	1440	1690	2240	2560	2560	2600[p]	2675[t]		
Safflower	1305	1550	1565	1565	1650	1650	1680	1800	2500	2800	3000	3050	3300	3600[t]	4100*	4945

Contd....

Table 5.5. Minimum Support Price/Procurement Price for Crops *(Contd....)*

(Crop Year Basis)(Rs./quintal)

Commodities	2002-03[b]	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Toria	1305	1665	1680	1680	1735	1735	1735	1780	2425	2970	3020	3020	3290	3560		4190
Copra (milling)	3300	3500	3570	3590	3620	3660	4450	4450	4525	5100	5250	5250	5550	5950	6500	7511
Copra balls	3550	3750	3820	3840	3870	3910	4700	4700	4775	5350	5500	5500	5830	6240	6785	7750
Sesamum	1455	1500	1550	1560	1580	2750	2850	2900	3400	4200	4500	4600	4700	4800[q]	5300*	6249
Niger seed	1120	1180	1200	1220	1240	2405	2405	2450	2900	3500	3500	3600	3650	3725[t]	4050*	5877

Source: Deapartment of Agriculture, Cooperation and Farmers Welfare

Notes:

a: Statutory Minimum Price (SMP) upto 2008-09. Fair and Remunerative Price (FRP) from 2009-10 onwards.
b: Including Special onetime drought relief (SDR) price announced for 2002-03.
c: An additional incentive bonus of Rs. 40 per quintal was payable on procurement between January 10, 2006 to March 31, 2007.
d: A bonus of Rs. 40 per quintal was payable over and above the MSP.
e: Medium staple.
f: Long staple.
g: An incentive bonus of Rs. 50 per quintal is payable on wheat over the Minimum Support Price (MSP).
h: An additional incentive bonus of Rs. 100 per quintal was payable over the MSP.
i: Staple length (mm) of 24.5-25.5 and micronaire value of 4.3-5.1
j: Staple length (mm) of 29.5-30.5 and micronaire value of 3.5-4.3
k: An additional incentive bonus of Rs. 50 per quintal was payble over the MSP.
l: Additional incentive at the rate of Rs. 500 per quintal of tur, urad and moong sold to procurement agencies.
m: At 9.5 percent recovery, subject to a premium of Rs.1.53 for every 0.1 percent increase in the recovery above 9.5 percent.
n: Bonus of Rs. 75 per quintal is payable over and above the MSP.
o: Bonus of Rs. 200 per quintal is payable over and above the MSP.
p: Single MSP has been fixed irrespective of the variety.
q: Bonus of Rs. 200 per quintal is payable over and above the MSP.
r: Bonus of Rs. 150 per quintal is payable over and above the MSP.
s: Bonus of Rs. 425 per quintal is payable over and above the MSP.
t: Bonus of Rs. 100 per quintal is payable over and above the MSP.
*: Including Bonus of Rs. 100 per quintal
**: Including Bonus of Rs. 200 per quintal.
#: Including Bonus of Rs. 150 per quintal

Table 6.1 A. Foreign Exchange Reserves

(₹ crore)

End of Fiscal	Reserves							Transactions with IMF		
	Gold		RTP	SDRs		Foreign Currency Assets	Total	Drawals	Repurchases g	Outstanding repurchase obligations
	Tonnes	₹ crore	₹ crore	SDRs in Million	₹ crore	₹ crore	₹ crore (3+4+6+7)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1950-51	220	40	...	...	...	911	951	...	...	48
1951-52	220	40	...	...	...	747	787	...	...	48
1952-53	220	40	...	...	...	763	803	...	...	48
1953-54	220	40	...	...	...	792	832	...	17	30
1954-55	220	40	...	...	...	774	814	...	17	13
1955-56	220	40	...	...	...	785	825	...	7	6
1956-57	220	118	...	...	...	563	681	61	6	61
1957-58	220	118	...	...	...	303	421	35	...	95
1958-59	220	118	...	...	...	261	379	...	...	95
1959-60	220	118	...	...	...	245	363	...	24	71
1960-61	220	118	...	...	...	186	304	...	11	61
1961-62	220	118	...	...	...	180	298	119	61	119
1962-63	220	118	...	...	...	177	295	12	...	131
1963-64	220	118	...	...	...	188	306	...	24	107
1964-65	250	134	...	...	...	116	250	48	48	107
1965-66	216	116	...	...	...	182	298	65	36	137
1966-67	216	183	...	...	...	296	479	89	43	313
1967-68	216	183	...	...	...	356	539	68	43	338
1968-69	216	183	...	...	...	394	577	...	59	279
1969-70	217	183	...	123	92	546	821	...	125	154
1970-71	216	183	...	149	112	438	733	...	154	...
1971-72	216	183	...	248	194	480	857	...	...	...
1972-73	216	183	...	247	226	479	888	...	...	...
1973-74	216	183	...	245	230	581	994	62	...	59
1974-75	216	183	...	235	229	610	1022	485	...	557
1975-76	216	183	...	203	211	1492	1886	207	...	804
1976-77	223	188	...	187	192	2863	3243	...	303	492
1977-78	229	193	...	162	170	4500	4863	...	249	210
1978-79	260	220	...	365	381	5220	5821	...	207	...
1979-80	266	225	...	529	545	5164	5934	...	55 [e]	...
1980-81	267	226	...	491	497	4822	5545	274[a]	5[f]	268
1981-82	267	226	...	425	444	3355	4025	637[b]	...	901
1982-83	267	226	...	270	291	4265	4782	1893[b]	...	2867
1983-84	267	226	...	216	248	5498	5972	1414[b]	72[h]	4444

Contd....

Table 6.1 A. Foreign Exchange Reserves *(Contd....)*

(₹ crore)

End of Fiscal	Reserves							Transactions with IMF		
	Gold		RTP	SDRs		Foreign Currency Assets	Total	Drawals	Repurchases g	Outstanding repurchase obligations
	Tonnes	₹ crore	₹ crore	SDRs in Million	₹ crore	₹ crore	₹ crore (3+4+6+7)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1984-85	291	246	...	147	181	6817	7243	219[b]	156 [i]	4888
1985-86	325	274	...	115	161	7384	7819	...	253 [j]	5285
1986-87	325	274	...	139	232	7645	8151	...	672[k]	5548
1987-88	325	274	...	70	125	7287	7686	...	1209[l]	4732
1988-89	325	274	...	80	161	6605	7040	...	1547[m]	3696
1989-90	333	281	...	82	184	5787	6252	3334[c]	1460[n]	2572
1990-91	333	6828	...	76	200	4388	11416	3205[d]	1156[o]	5132
1991-92	351	9039	...	66	233	14578	23850	4231	1127[p]	8934
1992-93	354	10549	...	13	55	20140	30744	1007	868[q]	14986
1993-94	367	12794	...	77	339	47287	60420	...	420[r]	15812
1994-95	396	13752	...	5	23	66005	79780	...	3585[s]	13545
1995-96	398	15658	...	56	280	58446	74384	...	5749[t]	8152
1996-97	398	14557	...	1	7	80368	94932	...	3461[u]	4714
1997-98	396	13394	...	1	4	102507	115905	...	2286[v]	2624
1998-99	357	12559	...	6	34	125412	138005	...	1652[w]	1220
1999-2000	358	12973	...	3	16	152924	165913	...	...	...
2000-01	358	12711	...	2	11	184482	197204	...	...	...
2001-02	358	14868	...	8	50	249118	264036	...	...	...
2002-03	358	16785	3190	3	19	341476	361470	...	...	...
2003-04	358	18216	5688	2	10	466215	490129	...	2598.2	...
2004-05	358	19686	6289	3	20	593121	619116	...	414.9	...
2005-06	358	25674	3374	2	12	647327	676387	3024.6	220.5	...
2006-07	358	29573	2044	1	8	836597	868222	1360.3	...	...
2007-08	358	40124	1744	11	74	1196023	1237965	301.5	...	...
2008-09	358	48793	5000	1	6	1230066	1283865	371.1	2940.1	...
2009-10	558	81188	6231	3297	22596	1149650	1259665	...	2220.8	...
2010-11	558	102572	13158	2882	20401	1224883	1361013	161.3	1594.0	...
2011-12	558	138250	14511	2885	22866	1330511	1506139	…	1392.1	...
2012-13	558	139737	12513	2887	23538	1412631	1588418	48.9	1677.8	...
2013-14	558	129616	11019	2888	26826	1660914	1828375	4713.5	1821.5	...
2014-15	558	119160	8085	2889	24944	1985458	2137647	10573.0	635.7	...
2015-16	558	133429	16290	1066	9960	2219061	2378740	1484.3	…	...
2016-17	558	128828	15047	1066	9379	2244939	2398193	2018.5	…	...

Contd....

Table 6.1 A. Foreign Exchange Reserves *(Contd....)*

(₹ crore)

End of Fiscal	Reserves							Transactions with IMF		
	Gold		RTP	SDRs		Foreign Currency Assets	Total	Drawals	Repurchases g	Outstanding repurchase obligations
	Tonnes	₹ crore	₹ crore	SDRs in Million	₹ crore	₹ crore	₹ crore (3+4+6+7)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2017-18	560	139742	13520	1059	10017	2597569	2760849	3494.0	…	...
2018-19	613	159585	20657	1049	10076	2665564	2855882	1252.7	7069.3	...

Source: Reserve Bank of India

Notes:

SDRs: Special Drawing Rights,

RTP : Reserve Tranche Position in IMF

--- : Nil or Negligible.

a : Excludes ₹544.53 crore drawn under Trust Fund.

b : Drawals under Extended Fund Facility (EFF).

c : Drawals of ₹ 1883.6 crore under Compensatory and Contingency Financing Facility and ₹ 1450.2 crore under First Credit Tranche of Stand-by Arrangement.

d : Drawals of ₹ 2217.2 crore under Compensatory and Contingency Financing Facility and ₹ 987.5 crore under First Credit Tranche of Stand-by Arrangement.

e : Includes voluntary repurchases of Rupees (₹ 199 crore) and sales of Rupees (₹ 35.2 crore) by IMF under its General Resources Account.

f : Sales of Rupees by IMF.

g : Additionally, SDR 59.9 million in May 1979, SDR 7.3 million in July 1980 and SDR 34.5 million in March 1982 were used for voluntary repurchases of Rupees.

h : SDR 66.50 million were used for repurchases of drawals under Compensatory Financing Facility.

i. SDR 33.25 million and Rs. 117.85 crore in foreign currencies were used for repurchases of drawals under CFF.

j : SDR 66.5 million and SDRs 131.25 million were used for repurchases of drawals under CFF and EFF, respectively.

k : SDR 431.25 million were used for repurchases of drawals under EFF.

l : SDR 704.17 million were used for repurchases of drawals under EFF.

m : SDR 804.18 million were used for repurchases of drawals under EFF.

n : SDR 681.25 million were used for repurchases of drawals under EFF.

o : SDR 468.75 million were used for repurchases of drawals under EFF

p : SDR 337.49 million were used for repurchases of drawals under EFF.

q : SDR 237.49 million were used for repurchases of drawals under EFF.

r : SDR 95.84 million were used for repurchases of drawals under EFF.

s : SDR 812.77 million were used for repurchases of drawals under EFF.

t : SDR 1130.48 million were used for repurchases of drawals under EFF.

u : SDR 678.38 million were used for repurchases of drawals under EFF.

v : SDR 449.29 million were used for repurchases of drawals under EFF.

w : SDR 212.46 million were used for repurchases of drawals under EFF.

1. Figures after 1965-66 are not comparable with those of the earlier years owing to devaluation of the Rupee in June 1966.
2. Also figures for July 1991 onwards are not comparable with those of earlier periods due to the downward adjustment of the Rupee effected on July 1, 1991 and July 3, 1991.
3. Drawals, Repurchase and outstanding repurchase obligations are calculated at the ruling rates of exchange.
4. While reserves pertain to end period, repurchases are for the relevant periods.
5. Gold is valued at Rs. 53.58 per 10 grams up to May 1966 and at Rs. 84.39 per 10 grams up to September 1990 and closer to international market price w.e.f. October 17, 1990.
6. Foreign exchange includes (a) foreign assets of the Reserve Bank of India and (b) Government balances held abroad up to 1955-56.
7. i) FCA excludes US $ 250.00 millon invested in foreign currency denominated bonds issued by IIFC (UK) since March 20, 2009, excludes US $ 380.00 million since September 16, 2011, excludes US$ 550 million since February 27, 2012, excludes US $ 673 million since 30th March 2012 and US $ 790 million since July 5, 2012 as also its equavalent value in Indian rupee in respective months.

   ii.) SDRs 530.73 million since March 24, 2014 (Transferred by Government of India to RBI), SDR 530.80 million since June 2014, SDR 530.92 million since September 2014, SDR 1104.74 million since January 2015, SDR 1104.96 million since June 2015. SDRs 1105.24 million since December 2015 (as also its equivalent value in Indian Rupee).

   iii.) US$ 100 million under SAARC swap arrangement with Royal Monetary Authority of Bhutan during the period from March 2013 to June 2013, US$ 400 million under SAARC swap arrangement with Central Bank of Sri Lanka during period April to October 2015 and US$ 1100 million with Central Bank of Sri Lanka since September 2015 (as also its equivalent value in Indian Rupee).
8. FCA excludes US $ 250.00 millon invested in foreign currency denominated bonds issued by IIFC (UK) since March 20, 2009, excludes US $ 380.00 million since September 16, 2011, excludes US$ 550 million since February 27, 2012, excludes US $ 673 million since 30th March 2012 and US $ 790 million since July 5, 2012 as also its equavalent value in Indian rupee in respective months.
9. Totals may not tally due to rounding off.

Table 6.1 B. Foreign Exchange Reserves

(US$ million)

End of Fiscal	Reserves					Transactions with IMF		
	Gold	RTP	SDRs	Foreign Currency Assets	Total (2+3+4+5)	Drawals	Repurchases	Outstanding repurchase obligations
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1950-51	247	...	...	1914	2161	...	...	100
1951-52	247	...	...	1568	1815	...	...	100
1952-53	247	...	...	1603	1850	...	...	100
1953-54	247	...	...	1664	1911	...	36	64
1954-55	247	...	...	1626	1873	...	36	28
1955-56	247	...	...	1648	1895	...	15	13
1956-57	247	...	...	1184	1431	126	12	128
1957-58	247	...	...	637	884	72	...	200
1958-59	247	...	...	548	795	...	...	200
1959-60	247	...	...	515	762	...	50	150
1960-61	247	...	...	390	637	...	23	128
1961-62	247	...	...	377	624	249	127	250
1962-63	247	...	...	372	619	25	...	275
1963-64	247	...	...	395	642	...	50	225
1964-65	281	...	...	243	524	99	100	225
1965-66	243	...	...	383	626	137	75	288
1966-67	243	...	...	395	638	126	57	418
1967-68	243	...	...	475	718	89	58	450
1968-69	243	...	...	526	769	...	78	372
1969-70	243	...	123	728	1094	...	167	205
1970-71	243	...	148	584	975	...	205	...
1971-72	264	...	269	661	1194	...	...	...
1972-73	293	...	297	629	1219	...	...	...
1973-74	293	...	296	736	1325	79	...	75
1974-75	304	...	293	782	1379	608	...	715
1975-76	281	...	234	1657	2172	239	...	896
1976-77	290	...	217	3240	3747	...	336	559
1977-78	319	...	200	5305	5824	...	333	249
1978-79	377	...	470	6421	7268	...	256	...
1979-80	375	...	662	6324	7361	...	145	...
1980-81	370	...	603	5850	6823	342	16	327
1981-82	335	...	473	3582	4390	692	40	964
1982-83	324	...	291	4281	4896	1968	...	2876
1983-84	320	...	230	5099	5649	1376	70	4150
1984-85	325	...	145	5482	5952	201	134	3932
1985-86	417	...	131	5972	6520	...	209	4290
1986-87	471	...	179	5924	6574	...	521	4291
1987-88	508	...	97	5618	6223	...	930	3653
1988-89	473	...	103	4226	4802	...	1070	2365
1989-90	487	...	107	3368	3962	...	873	1493
1990-91	3496	...	102	2236	5834	1858	644	2623
1991-92	3499	...	90	5631	9220	1240	460	3451
1992-93	3380	...	18	6434	9832	1623	335	4799
1993-94	4078	...	108	15068	19254	325	134	5040

Contd....

Table 6.1 B. Foreign Exchange Reserves *(Contd....)*

(US$ million)

End of Fiscal	Reserves					Transactions with IMF		
	Gold	RTP	SDRs	Foreign Currency Assets	Total (2+3+4+5)	Drawals	Repurchases	Outstanding repurchase obligations
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1994-95	4370	...	7	20809	25186	...	1146	4300
1995-96	4561	...	82	17044	21687	...	1710	2374
1996-97	4054	...	2	22367	26423	...	977	1313
1997-98	3391	...	1	25975	29367	...	615	664
1998-99	2960	...	8	29522	32490	...	102	287
1999-2000	2974	...	4	35058	38036	...	...	...
2000-01	2725	...	2	39554	42281	...	...	...
2001-02	3047	...	10	51049	54106	...	...	...
2002-03	3534	672	4	71890	76100	...	...	...
2003-04	4198	1311	2	107448	112959	...	561.3	...
2004-05	4500	1438	5	135571	141514	...	93.5	...
2005-06	5755	756	3	145108	151622	670.0	50.7	...
2006-07	6784	469	2	191924	199179	302.7	...	...
2007-08	10039	436	18	299230	309723	74.2	...	...
2008-09	9577	981	1	241426	251985	86.3	611.9	...
2009-10	17986	1380	5006	254685	279057	...	461.3	...
2010-11	22972	2947	4569	274330	304818	36.2	353.2	...
2011-12	27023	2836	4469	260069	294397	…	275.1	...
2012-13	25692	2301	4328	259726	292046	9.0	309.7	
2013-14	21567	1834	4464	276359	304223	766.7	297.8	
2014-15	19038	1292	3985	317324	341638	1705.4	104.5	
2015-16	20115	2456	1502	336104	360176	229.4	…	
2016-17	19869	2321	1446	346319	369955	298.6	…	
2017-18	21484	2079	1540	399442	424545	543.7	…	
2018-19	23071	2986	1457	385357	412871	177.1	1005.9	

Source: Reserve Bank of India

Notes:

SDRs: Special Drawing Rights RTP: Reserve Tranche Position in IMF -----: Nil or Negligible

1. For compiling figures in US dollars, gold is valued at SDR 35 per troy ounce as in the International Financial Statistics of the IMF upto October 16, 1990. Thereafter gold has been valued at international market price.
2. Conversion of foreign currency assets and SDR in US dollars is done at exchange rates of the IMF.
3. Transactions with IMF are converted at respective SDR/$ rate.
4. While reserves pertain to end period, repurchases are for the relevant periods.
5. i) FCA excludes US $ 250.00 millon invested in foreign currency denominated bonds issued by IIFC (UK) since March 20, 2009, excludes US $ 380.00 million since excludes US $ 673 million since 30th March 2012 and US $ 790 million since July 5, 2012 (as also its equivalent value in Indian Rupee).September 16, 2011, excludes US $ 550 million since February 27, 2012.

   ii.) SDRs 530.73 million since March 24, 2014 (Transferred by Government of India to RBI), SDR 530.80 million since June 2014, SDR 530.92 million since September 2014, SDR 1104.74 million since January 2015, SDR 1104.96 million since June 2015. SDRs 1105.24 million since December 2015 (as also its equivalent value in Indian Rupee).

   iii.) US$ 100 million under SAARC swap arrangement with Royal Monetary Authority of Bhutan during the period from March 2013 to June 2013, US$ 400 million under SAARC swap arrangement with Central Bank of Sri Lanka during period April to October 2015 and US$ 1100 million with Central Bank of Sri Lanka since September 2015 (as also its equivalent value in Indian Rupee).
6. Includes Rs. 31,463 crore (US$ 6,699 million) reflecting the purchase of 200 metric tonnes of gold from IMF on November 3, 2009. by the IMF done on August 28, 2009 and September 9, 2009, respectively.
7. Includes SDRs 3,082.5 million allocated under general allocation and SDRs 214.6 million allocated under special allocation
8. Totals may not tally due to rounding off.

Table 6.2. Balance of Payments as per IMF Balance of Payments Manual 5

	Items	2000-01		2012-13		2013-14		2014-15	
		₹ crore	US$ million	₹ crore	US$ million	₹ crore	US$ million	₹ crore	US$ million
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Imports (c.i.f.)	264589	57912	2732146	502237	2815918	466216	2820072	461484
2	Exports (f.o.b.)	207852	45452	1667690	306581	1931074	318607	1934210	316545
3	Trade Balance (2-1)	-56737	-12460	-1064456	-195656	-884845	-147609	-885862	-144940
4	Invisibles								
	a) Receipts	147778	32267	1218893	224044	1413843	233569	1478048	241645
	b) Payments	102639	22473	634047	116551	716134	118256	755499	123564
	(of which: Interest & Service Payments on Loans and Credits)	21948	4801	59546	10944	67747	11176	77376	12650
	c) Net	45139	9794	584846	107493	697709	115313	722549	118081
5	Current Account Balance	-11598	-2666	-479610	-88163	-187136	-32296	-163313	-26859
6	Capital Account								
	I Foreign Investment	26744	5862	254653	46711	159650	26386	449072	73456
	i) Foreign Direct Investment								
	a) Inward FDI	18404	4031	146954	26953	186830	30763	215893	35283
	b) Outward FDI	-3480	-759	-38768	-7134	-56860	-9199	-24675	-4031
	c) Net	14924	3272	108186	19819	129969	21564	191219	31251
	ii) Portfolio Investment (net)	11820	2590	146467	26891	29680	4822	257853	42205
	II Loans (net)	24459	5264	169073	31124	45901	7765	19733	3184
	i) External Assistance								
	a) Inflow	13521	2941	25747	4735	28239	4659	35408	5780
	b) Out flow	11519	2531	20421	3752	22043	3627	24787	4054
	c) Net	2002	410	5326	982	6197	1032	10622	1725
	ii) Commercial Borrowingsa								
	a) Inflow	95750	20865	817606	150351	785202	130177	718760	117575
	b) Out flow	73293	16011	653858	120209	745498	123444	709649	116116
	c) Net	22457	4854	163747	30142	39704	6733	9112	1459
	III) Banking								
	a) Receipts	44448	9744	455407	83727	654482	108049	550976	90094
	b) Payments	53592	11705	365140	67157	502818	82601	478893	78476
	c) Net	-9144	-1961	90268	16570	151664	25449	72083	11618
	IV) Rupee Debt Service (net)	-2760	-617	-313	-58	-304	-52	-489	-81
	V) Other Capital								
	a) Receipts	12948	2856	97073	17861	133801	22171	176562	28914
	b) Payments	11637	2564	125020	22908	200892	32932	169411	27806
	c) Net	1311	292	-27946	-5047	-67091	-10761	7151	1109
	VI) Errors & omissions (net)	-1369	-305	14578	2689	-6629	-983	-6312	-1021
7	Total Capital (I to VI of 6)	39241	8535	500313	91989	283190	47804	541238	88265
8	Overall Balance (5 + 7)	27643	5868	20702	3826	96054	15508	377925	61406
9	Monetary Movement								
	a) IMF Transactions								
	i) Purchases								
	ii) Repurchases	115	26						
	iii) Net	-115	-26						
	b) Increase (-)/decrease (+) in Reserves	-27258	-5842	-20702	-3826	-96054	-15508	-377925	-61406
10	Total Reserve movement (9a(iii)+9b) [(-) Increase/ (+) decrease]	-27643	-5868	-20702	-3826	-96054	-15508	-377925	-61406

Contd....

Table 6.2. Balance of Payments as per IMF Balance of Payments Manual 5 *(Contd....)*

	Items	2015-16		2016-17		2017-18		2018-19 (Apr-Dec) (P)	
		₹ crore	US$ million	₹ crore	US$ million	₹ crore	US$ million	₹ crore	US$ million
	(1)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	Imports (c.i.f.)	2592820	396444	2633395	392580	3023163	469006	2756614	395142
2	Exports (f.o.b.)	1743289	266365	1878943	280138	1991436	308970	1742466	249869
3	Trade Balance (2-1)	-849531	-130079	-754452	-112442	-1031727	-160036	-1014148	-145272
4	Invisibles								
	a) Receipts	1538693	235044	1623552	242051	1826720	283406	1608334	230298
	b) Payments	832924	127116	966016	144025	1109119	172087	956257	136890
	(*of which*: Interest & Service Payments on Loans and Credits)	88044	13443	89552	13351	93531	14510	87812	12589
	c) Net	705769	107928	657536	98026	717601	111319	652077	93407
5	Current Account Balance	-143762	-22151	-96916	-14417	-314126	-48717	-362071	-51865
6	Capital Account								
	I Foreign Investment	208579	31891	289394	43224	337684	52401	104120	14766
	i) Foreign Direct Investment (FDI)								
	a) Inward FDI	294258	44907	283292	42215	253977	39431	233821	33640
	b) Outward FDI	-58476	-8886	-44379	-6603	-58925	-9144	-61342	-8820
	c) Net	235782	36021	238913	35612	195052	30286	172479	24820
	ii) Portfolio Investment (net)	-27203	-4130	50482	7612	142632	22115	-68359	-10054
	II) Loans (net)	-29767	-4634	16038	2379	107422	16660	40478	5498
	i) External Assistance								
	a) Inflow	40244	6123	43561	6495	49750	7718	42430	6052
	b) Out flow	30229	4619	30056	4482	30773	4774	27121	3892
	c) Net	10015	1505	13505	2013	18977	2944	15309	2160
	ii) Commercial Borrowings [a]								
	a) Inflow	748159	114200	764967	114037	898500	139393	395146	56612
	b) Out flow	787941	120339	762434	113672	810055	125676	369978	53274
	c) Net	-39781	-6139	2533	366	88445	13717	25168	3338
	III) Banking								
	a) Receipts	579805	88884	561610	83669	616727	95673	494388	71192
	b) Payments	514547	78254	672787	100285	512300	79483	387916	55696
	c) Net	65257	10630	-111177	-16616	104427	16190	106472	15496
	IV) Rupee Debt Service	-476	-73	-665	-99	-482	-75	-163	-24
	V) Other Capital								
	a) Receipts	160653	24419	240945	35925	266106	41282	149905	21427
	b) Payments	137909	21103	190199	28366	226037	35069	152304	21887
	c) Net	22744	3315	50747	7559	40069	6213	-2399	-461
	VI) Errors & Omissions	-6746	-1073	-3187	-480	5823	902	-6455	-912
7	Total Capital (I to VI of 6)	259592	40055	241150	35967	594942	92292	242053	34363
8	Overall Balance (5 + 7)	115830	17905	144234	21550	280816	43574	-120018	-17502
9	Monetary Movement								
	a) IMF Transactions								
	i) Purchases								
	ii) Repurchases								
	iii) Net								
	b) Increase (-)/decrease (+) in Reserves	-115830	-17905	-144234	-21550	-280816	-43574	120018	17502
10	Total Reserve movement (9a(iii)+9b) [(-) Increase/ (+) decrease]	-115830	-17905	-144234	-21550	-280816	-43574	120018	17502

Source: Reserve Bank of India

Notes:

P: Preliminary, PR : Partially Revised, a: Commercial borrowings include short term credit.

1. Grants received are covered under item 4(a).
2. Estimated interest accrued and credited to NRI deposits during the year has been treated as notional outflow under invisible payments and added as reinvestment in NRI deposits under banking capital.
3. In accordance with the provision of IMF's Balance of Payments Manual (5th Edition), gold purchased from the Government of India by the RBI has been excluded from the BOP statistics. Data for the earlier years has, therefore, been amended by making suitable adjustments in "Other Capital-Receipts and Foreign Exchange Reserves".
   Similarly, item "SDR Allocation" has been deleted from the table.
4. With effect from 1996-97, private transfer receipts include redemption in rupees of both principal and interest under Non-Resident External (Rupee) Account [NRE(R)A] and Non-Resident Non-Repatriable Rupee Deposit [NR(NR)RD] schemes. This marks an improvement in data reporting.
5. Totals may not tally due to rounding off.

Table 6.3 A. Balance of Payments as per Balance of Payments Manual 6

(₹ crore)

	Items	2015-16			2016-17			2017-18			2018-19 Apr-Dec (P)		
		Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Current Account (1.A+1.B+1.C)	3281796	3425146	-143350	3502402	3598871	-96469	3818016	4131780	-313765	3350748	3712424	-361676
1.A	Goods and Services (1.A.a+1.A.b)	2753734	3147437	-393703	2980310	3276311	-296002	3248907	3780666	-531759	2814798	3408069	-593271
1.A.a	Goods	1743289	2592820	-849531	1878943	2633395	-754452	1991436	3023163	-1031727	1742466	2756614	-1014148
1.A.b	Services (1.A.b.1 to 1.A.b.13)	1010446	554617	455828	1101366	642916	458450	1257472	757503	499968	1072333	651456	420877
1.A.b.1	Manufacturing services on physical inputs owned by others	1200	302	898	768	256	512	949	282	668	1289	214	1074
1.A.b.2	Maintenance and repair services n.i.e.	995	2119	-1124	1221	2372	-1151	1363	3528	-2165	1034	5916	-4882
1.A.b.3	Transport	91660	98618	-6958	106312	94773	11539	112418	113488	-1071	99777	105379	-5602
1.A.b.4	Travel	139542	96756	42786	155929	110318	45611	182768	125778	56990	145702	115398	30304
1.A.b.5	Construction	10256	6268	3987	14383	5911	8473	14541	10081	4460	18375	13256	5119
1.A.b.6	Insurance and pension services	13113	7530	5583	14795	10033	4761	16154	10957	5197	13561	8293	5268
1.A.b.7	Financial services	32271	20487	11784	34193	39262	-5069	33271	35691	-2420	26187	20074	6112
1.A.b.8	Charges for the use of intellectual property n.i.e.	3191	31952	-28761	3807	38368	-34561	4720	44339	-39618	3979	43265	-39286
1.A.b.9	Telecommunications, computer, and information services	501263	26732	474531	516771	32457	484314	514603	41887	472717	445568	37458	408110
1.A.b.10	Other business services	189693	203860	-14167	220981	216754	4227	240722	236096	4626	201124	204372	-3248
1.A.b.11	Personal, cultural, and recreational services	8658	7913	746	9338	14731	-5394	10430	14862	-4432	9765	13422	-3656
1.A.b.12	Government goods and services n.i.e.	3788	5677	-1890	3946	4021	-75	4280	5119	-839	3159	5786	-2627
1.A.b.13	Others n.i.e.	14816	46401	-31585	18921	73660	-54739	121252	115396	5856	102812	78620	24192
1.B	Primary Income	96324	256104	-159779	109268	285668	-176400	121579	306391	-184813	128019	270797	-142778
1.C	Secondary Income	431737	21605	410132	412825	36892	375933	447530	44723	402807	407930	33557	374373
2	Capital Account (2.1+2.2)	1987	1719	268	2910	1909	1001	2515	2700	-186	1781	2364	-583
2.1	Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	336	242	94	680	416	264	946	674	273	498	432	66
2.2	Capital transfers	1651	1477	174	2230	1493	737	1568	2027	-458	1283	1932	-649
3	Financial Account (3.1 to 3.5)	3339775	3189946	149829	3698957	3600303	98655	4146357	3838230	308128	2789725	2421011	368714
3.1	Direct Investment (3.1A+3.1B)	392422	156640	235782	474811	235898	238913	415421	220369	195052	336609	164129	172479

Contd....

Table 6.3 A. Balance of Payments as per Balance of Payments Manual 6 *(Contd.....)*

(₹ crore)

	Items	2015-16			2016-17			2017-18			2018-19 Apr-Dec (P)		
		Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
3.1.A	Direct Investment in India	364146	69888	294258	404057	120765	283292	392944	138968	253977	324989	91168	233821
3.1.B	Direct Investment by India	28276	86752	-58476	70753	115133	-44379	22477	81402	-58925	11620	72962	-61342
3.2	Portfolio Investment	1412345	1441933	-29588	1607507	1557026	50482	1902228	1759597	142632	1240190	1321317	-81127
3.2.A	Portfolio Invesment in India	1406792	1432998	-26207	1592617	1541095	51522	1892201	1749253	142948	1220461	1314064	-93603
3.2.B	Portfolio Invesment by India	5553	8935	-3381	14890	15931	-1040	10027	10344	-317	19729	7253	12476
3.3	Financial derivatives (other than reserves) and employee stock options	95295	90417	4878	155252	89346	65906	127419	145913	-18494	105994	103372	2622
3.4	Other investment	1434150	1379563	54587	1453014	1565426	-112412	1701289	1431535	269754	986913	832192	154721
3.4.1	Other equity (ADRs/GDRs)	2385	0	2385	0	0	0	0	0	0	12768	0	12768
3.4.2	Currency and deposits	392397	289262	103136	321269	403019	-81750	386460	324073	62387	308243	265170	43073
3.4.3	Loans (External Assistance, ECBs and Banking Capital)	386224	444261	-58037	435424	492278	-56854	530621	470765	59856	397345	298308	99037
3.4.4	Insurance, pension, and standardized guarantee schemes	2674	7972	-5298	2976	4941	-1965	762	11597	-10835	1142	6745	-5604
3.4.5	Trade credit and advances	589587	599194	-9607	613446	569981	43465	647895	558289	89606	226376	221537	4840
3.4.6	Other accounts receivable/payable—other	60883	38874	22009	79900	95207	-15307	135550	66810	68739	41040	40433	607
3.4.7	Special drawing rights	0	0	0	0	0	0	0	0	0	0	0	0
3.5	Reserve assets	5563	121393	-115830	8373	152607	-144234	0	280816	-280816	120018	0	120018
4	Total assets/liabilities	3339775	3189946	149829	3698957	3600303	98655	4146357	3838230	308128	2789725	2421011	368714
5	Net errors and omissions	2796	9542	-6746	5715	8903	-3187	12249	6426	5823	3521	9976	-6455

Source: Reserve Bank of India

Notes:

P: Preliminary, PR: Partially Revised

1. Totals may not tally due to rounding off.

Table 6.3 B. Balance of Payments as per Balance of Payments Manual 6

(US$ million)

	Items	2015-16			2016-17			2017-18			2018-19 Apr-Dec (P)		
		Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Current Account (1.A+1.B+1.C)	501381	523469	-22088	522175	536525	-14350	592354	641015	-48661	480160	531968	-51808
1.A	Goods and Services (1.A.a+1.A.b)	420676	481079	-60402	444335	488432	-44098	504059	586533	-82474	403387	488406	-85019
1.A.a	Goods	266365	396444	-130079	280138	392580	-112442	308970	469006	-160036	249869	395142	-145272
1.A.b	Services (1.A.b.1 to 1.A.b.13)	154311	84635	69676	164197	95852	68345	195089	117527	77562	153518	93264	60254
1.A.b.1	Manufacturing services on physical inputs owned by others	183	45	138	115	38	76	147	44	104	182	31	151
1.A.b.2	Maintenance and repair services n.i.e.	152	324	-171	182	354	-172	211	547	-336	147	842	-695
1.A.b.3	Transport	14004	15080	-1076	15851	14132	1719	17441	17608	-166	14311	15094	-783
1.A.b.4	Travel	21268	14792	6476	23244	16451	6792	28355	19516	8839	20858	16583	4275
1.A.b.5	Construction	1562	955	607	2144	881	1263	2256	1565	691	2641	1902	739
1.A.b.6	Insurance and pension services	2002	1151	852	2206	1496	710	2506	1700	806	1942	1188	754
1.A.b.7	Financial services	4944	3135	1809	5099	5852	-754	5164	5537	-373	3747	2868	879
1.A.b.8	Charges for the use of intellectual property n.i.e.	489	4891	-4402	568	5720	-5152	732	6877	-6145	572	6202	-5629
1.A.b.9	Telecommunications, computer, and information services	76563	4076	72487	77044	4839	72206	79840	6499	73341	63843	5380	58463
1.A.b.10	Other business services	28994	31095	-2101	32946	32317	629	37346	36630	715	28822	29282	-460
1.A.b.11	Personal, cultural, and recreational services	1325	1221	104	1392	2197	-805	1618	2307	-688	1402	1923	-521
1.A.b.12	Government goods and services n.i.e.	579	869	-291	588	600	-11	664	794	-130	454	829	-375
1.A.b.13	Others n.i.e.	2245	7000	-4755	2818	10976	-8158	18807	17904	903	14597	11141	3456
1.B	Primary Income	14703	39078	-24375	16291	42593	-26302	18862	47542	-28681	18290	38742	-20452
1.C	Secondary Income	66002	3312	62690	61550	5500	56050	69433	6940	62494	58483	4820	53662
2	Capital Account (2.1+2.2)	304	263	41	434	285	150	390	419	-29	257	337	-80
2.1	Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	51	37	13	101	62	40	147	105	42	74	61	13
2.2	Capital transfers	253	226	27	333	223	110	243	314	-71	183	276	-93
3	Financial Account (3.1 to 3.5)	510639	487519	23120	551471	536790	14680	643243	595455	47788	400623	347822	52800
3.1	Direct Investment (3.1A+3.1B)	59878	23857	36021	70784	35172	35612	64461	34175	30286	48320	23500	24820
3.1.A	Direct Investment in India	55559	10652	44907	60220	18005	42215	60974	21544	39431	46668	13028	33640

Contd....

Table 6.3 B. Balance of Payments as per Balance of Payments Manual 6 *(Contd.....)*

(US$ million)

	Items	2015-16			2016-17			2017-18			2018-19 Apr-Dec (P)		
		Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
3.1.B	Direct Investment by India	4320	13205	-8886	10564	17167	-6603	3487	12632	-9144	1652	10472	-8820
3.2	Portfolio Investment	216181	220685	-4503	239738	232127	7612	295084	272969	22115	177948	189822	-11874
3.2A	Portfolio Invesment in India	215334	219349	-4016	237514	229748	7766	293529	271364	22165	175087	188780	-13693
3.2.B	Portfolio Invesment by India	848	1335	-487	2224	2378	-154	1556	1605	-50	2861	1042	1820
3.3	Financial derivatives (other than reserves) and employee stock options	14522	13891	631	23148	13327	9822	19766	22636	-2870	15113	14819	293
3.4	Other investment	219202	210326	8876	216558	233373	-16815	263932	222100	41832	141740	119681	22059
3.4.1	Other equity (ADRs/GDRs)	373		373	0	0	0	0	0	0	1820	0	1820
3.4.2	Currency and deposits	60024	44216	15808	47928	60009	-12081	59961	50286	9675	44278	38001	6276
3.4.3	Loans (External Assistance, ECBs and Banking Capital)	59140	67343	-8203	64821	73444	-8623	82309	73033	9276	56954	42790	14165
3.4.4	Insurance, pension, and standardized guarantee schemes	407	1194	-787	443	737	-294	118	1801	-1683	167	984	-818
3.4.5	Trade credit and advances	90043	91653	-1610	91453	84986	6467	100514	86614	13900	32624	32071	553
3.4.6	Other accounts receivable/payable—other	9215	5920	3294	11914	14198	-2285	21029	10365	10664	5898	5835	63
3.4.7	Special drawing rights				0	0	0				0	0	0
3.5	Reserve assets	856	18761	-17905	1242	22792	-21550	0	43574	-43574	17502	0	17502
4	Total assets/liabilities	510639	487519	23120	551471	536790	14680	643243	595455	47788	400623	347822	52800
5	Net errors and omissions	420	1493.415769	-1073	849	1329	-480	1900	998	902	502	1414	-912

Notes:

P: Preliminary, PR: Partially Revised

1. Totals may not tally due to rounding off

Table 6.4. Exchange Rate of Rupee vis-a-vis Selected Currencies of the World

(₹ per unit of foreign currency)

Year /Months	US dollar	Pound sterling	Euroa	Yen	Canadian dollar	Turkish lira	Indonesian rupiah	Brazillian real	Mexican peso	Korean won	Pakistan rupee	Thailand baht	SDR
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1992-93							**(Official Rate)**						
April	25.890	45.461		0.194	21.800	0.004	0.013	0.012	0.009	0.033	1.049	1.021	35.485
May	25.890	46.838		0.198	21.586	0.004	0.013	0.010	0.009	0.033	1.056	1.014	35.931
June	25.890	47.788		0.204	21.651	0.004	0.013	0.008	0.009	0.033	1.085	1.020	36.551
July	25.890	49.721		0.206	21.764	0.004	0.013	0.007	0.009	0.033	1.119	1.025	37.385
August	25.890	50.384		0.205	21.734	0.004	0.013	0.006	0.009	0.033	1.035	1.027	37.709
September	25.890	47.567		0.211	21.161	0.004	0.013	0.005	0.009	0.034	1.035	1.028	37.695
October	25.890	42.862		0.214	20.805	0.003	0.013	0.004	0.009	0.033	1.054	1.026	37.162
November	25.890	39.535		0.209	20.413	0.003	0.013	0.003	0.008	0.033	1.021	1.019	35.910
December	26.154	40.578		0.211	20.574	0.003	0.013	0.002	0.008	0.033	1.028	1.026	36.329
January	26.199	40.141		0.210	20.500	0.003	0.013	0.002	8.435b	0.033	1.025	1.028	36.082
February	26.199	37.704		0.217	20.788	0.003	0.013	0.002	8.460	0.033	1.010	1.029	35.939
							(Market Rate) [c]						
March 1993	31.526	45.952		0.270	25.279	0.003	0.015	0.001	10.151	0.040	1.198	1.242	43.521
1993-94	31.366	47.206		0.291	23.956	0.002	0.015	0.122	10.009	0.039	1.083	1.240	43.886
2000-01	45.684	67.552	41.483	0.414	30.383	0.007d	0.005	24.153	4.788	0.039	0.820	1.100	59.546
2001-02	47.692	68.319	42.181	0.382	30.473	0.004d	0.005	19.549	5.183	0.037	0.772	1.069	60.215
2002-03	48.395	74.819	48.090	0.397	31.253	0.003d	0.005	15.489	4.806	0.040	0.819	1.132	64.126
2003-04	45.952	77.739	53.990	0.407	33.991	0.003d	0.005	15.713	4.248	0.039	0.798	1.132	65.690
2004-05	44.932	82.864	56.555	0.418	35.205	8.269e	0.005	15.707	3.964	0.041	0.763	1.121	66.928
2005-06	44.273	79.047	53.912	0.391	37.137	32.843	0.045	19.170	4.122	0.044	0.741	1.096	64.490
2006-07	45.250	85.643	58.051	0.387	39.765	31.156	0.005	21.044	4.113	0.048	0.748	1.236	67.254
2007-08	40.261	80.841	57.060	0.353	39.042	32.155	0.004	21.762	3.703	0.043	0.658	1.194	62.651
2008-09	45.993	78.316	65.058	0.462	40.875	32.678	0.004	23.569	3.853	0.038	0.613	1.346	71.277
2009-10	47.443	75.781	67.051	0.511	43.567	31.266	0.005	25.455	3.616	0.039	0.572	1.409	73.733
2010-11	45.563	70.881	60.232	0.533	44.840	29.888	0.005	26.385	3.663	0.040	0.534	1.464	69.723
2011-12	47.923	76.391	65.894	0.607	48.222	27.682	0.005	28.222	3.788	0.043	0.547	1.564	75.313
2012-13	54.410	85.971	70.069	0.658	54.347	30.291	0.006	27.092	4.171	0.049	0.572	1.768	83.026
2013-14	60.502	96.306	81.175	0.604	57.437	30.100	0.006	26.907	4.679	0.056	0.587	1.924	92.260
2014-15	61.144	98.573	77.521	0.558	53.780	27.223	0.005	24.840	4.457	0.058	0.609	1.882	90.796

Contd....

Table 6.4. Exchange Rate of Rupee vis-a-vis Selected Currencies of the World *(Contd.....)*

(₹ per unit of foreign currency)

Year /Months	US dollar	Pound sterling	Euroa	Yen	Canadian dollar	Turkish lira	Indonesian rupiah	Brazillian real	Mexican peso	Korean won	Pakistan rupee	Thailand baht	SDR
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**
2015-16	65.468	98.726	72.289	0.546	49.945	23.060	0.005	18.378	3.944	0.057	0.632	1.872	91.345
2016-17	67.072	87.690	73.609	0.620	51.113	21.067	0.005	20.382	3.489	0.058	0.641	1.908	92.616
2017-18	64.455	85.513	75.438	0.582	50.261	17.558	0.004	20.037	3.483	0.058	0.604	1.953	90.899
2018-19	69.923	91.786	80.958	0.630	53.300	13.547	0.005	18.490	3.617	0.063	0.548	2.164	98.026
2018-19						**(Market Rate)c**							
April	65.636	92.569	80.661	0.610	51.575	16.155	0.005	19.257	3.572	0.062	0.568	2.097	95.242
May	67.539	90.973	79.825	0.615	52.490	15.281	0.005	18.602	3.456	0.063	0.585	2.113	96.164
June	67.793	90.067	79.162	0.616	51.646	14.645	0.005	17.919	3.340	0.062	0.572	2.087	95.858
July	68.693	90.496	80.299	0.617	52.323	14.386	0.005	17.967	3.619	0.061	0.553	2.065	96.540
August	69.547	89.693	80.439	0.626	53.331	11.745	0.005	17.697	3.692	0.062	0.568	2.107	97.110
September	72.215	94.189	84.216	0.645	55.389	11.453	0.005	17.578	3.801	0.065	0.589	2.216	101.226
October	73.632	95.870	84.610	0.653	56.583	12.681	0.005	19.564	3.833	0.065	0.568	2.247	102.260
November	71.854	92.622	81.616	0.634	54.441	13.443	0.005	18.973	3.550	0.064	0.538	2.181	99.372
December	70.731	89.583	80.479	0.630	52.730	13.315	0.005	18.192	3.522	0.063	0.511	2.164	98.168
January	70.733	91.158	80.831	0.650	53.169	13.222	0.005	18.911	3.689	0.063	0.510	2.225	98.629
February	71.222	92.668	80.848	0.646	53.933	13.507	0.005	19.128	3.712	0.064	0.515	2.276	99.094
March	69.479	91.549	78.512	0.625	51.987	12.733	0.005	18.097	3.613	0.061	0.499	2.190	96.654
2019-20						**(Market Rate)c**							
April	69.427	90.527	78.031	0.622	51.913	12.057	0.005	17.817	3.664	0.061	0.492	2.180	96.318

Source: Reserve Bank of India

Notes:

a : The Euro came into existence on January 1, 1999.

b : Peso revalued in January 1993, 1000 old Peso = 1 New Peso.

c : Indicative rates announced by Foreign Exchange Dealers Association of India (FEDAI).

d: 100 Turkish Lira

e : Turkish Lira has been replaced by New Lira w.e.f. 1.1.2005.

1. Annual/monthly averages. During March 1992 to February 1993, a dual exchange rate system was prevalent, in which the official rate was fixed by the RBI and the market rate was determined in the Inter-Bank market for the US dollar.
2. The data for 2001-02 in respect of Deutsche Mark, French Franc and Italian Lira pertain to 11 months only as Germany, France and Italy accepted the Euro as their national currency w.e.f. March 1, 2002.
3. Figures of US dollar, Pound sterling, Euro and Japanese yen from May 2012 onwards are RBI's reference rates.
4. Financial Benchmarks India Private Limited (FBIL) commenced dissemination of reference rates w.e.f. July 10, 2018.

Table 6.5. Trends in Nominal and Real Effective Exchange Rate of Rupee

(Tarde Based Weights)

Year/month (Average)	Nominal effective exchange rate (NEER) 6-currency Index	Real effective exchange rate (REER) 6-Currency Index	Nominal effective exchange rate (NEER) 36-currency Index	Real effective exchange rate (REER) 36-Currency Index
(1)	(2)	(3)	(4)	(5)
Base Year: 1993-94=100				
1994-95	96.86	105.71	99.21	104.59
1995-96	88.45	101.14	91.65	98.42
1996-97	86.73	100.97	89.08	96.64
1997-98	87.80	104.24	92.17	100.95
1998-99	77.37	95.99	88.76	92.84
1999-00	77.03	97.52	90.90	95.75
2000-01	77.30	102.65	92.11	100.04
2001-02	75.89	102.49	91.52	100.87
2002-03	71.09	97.43	89.22	98.19
2003-04	69.75	98.85	87.15	99.50
2004-05	69.26	101.35	87.28	100.05
Base Year: 2004-05=100				
2005-06	103.04	104.45	102.24	102.38
2006-07	98.09	103.82	97.63	100.76
2007-08	104.62	113.44	104.75	109.20
2008-09	90.42	103.94	93.34	99.65
2009-10	87.07	110.73	90.94	103.88
2010-11	91.83	124.50	93.54	112.68
2011-12	84.44	121.17	87.38	110.27
2012-13	75.59	117.15	78.32	105.57
2013-14	67.76	112.80	72.32	103.27
2014-15	68.60	119.92	74.07	108.96
2015-16	67.52	122.71	74.75	112.09
2016-17	66.86	125.17	74.65	114.52
2017-18	67.91	129.19	76.94	119.71
2018-19 (P)	63.07	121.70	72.63	113.99
2018-19 (P)				
April	64.53	123.47	74.44	116.26
May	63.84	123.06	73.57	115.15
June	64.10	123.18	73.94	115.94
July	64.03	123.37	73.68	115.84
August	63.84	123.63	73.43	115.71
September	61.35	118.69	70.94	111.31
October	60.64	117.29	69.87	109.78
November	62.40	121.25	71.64	113.05
December	63.23	122.74	72.72	114.51
January	62.76	120.67	72.23	113.27
February	62.29	119.72	71.64	112.06
March	63.88	123.30	73.52	115.00
2019-20 (P)				
April	64.07	123.33	73.75	115.37

Source: Reserve Bank of India P: Provisional

Notes:

1. REER figures for the period 1994-95 to 2004-05 are based on Wholesale Price Index (WPI).
2. REER figures for the period 2005-06 to 2014-15 are based on Consumer Price Index (CPI).

Table 7.1 A. Exports, Imports and Trade Balance

Year	Exports (including re-exports) (₹crore)	Imports (₹ crore)	Trade Balance (₹ crore)	Rate of Change	
				Export	Import
				(per cent)	
(1)	(2)	(3)	(4)	(5)	(6)
1949-50	485	617	-132	--	--
1950-51	606	608	-2	24.9	-1.5
1951-52	716	890	-174	18.2	46.4
1952-53	578	702	-124	-19.3	-21.1
1953-54	531	610	-79	-8.1	-13.1
1954-55	593	700	-107	11.7	14.8
1955-56	609	774	-165	2.7	10.6
1956-57	605	841	-236	-0.7	8.7
1957-58	561	1035	-474	-7.3	23.1
1958-59	581	906	-325	3.6	-12.5
1959-60	640	961	-321	10.2	6.1
1960-61	642	1122	-480	0.3	16.8
1961-62	660	1090	-430	2.8	-2.9
1962-63	685	1131	-446	3.8	3.8
1963-64	793	1223	-430	15.8	8.1
1964-65	816	1349	-533	2.9	10.3
1965-66	810	1409	-599	-0.7	4.4
1966-67	1157	2078	-921	42.8	47.5
1967-68	1199	2008	-809	3.6	-3.4
1968-69	1358	1909	-551	13.3	-4.9
1969-70	1413	1582	-169	4.1	-17.1
1970-71	1535	1634	-99	8.6	3.3
1971-72	1608	1825	-217	4.8	11.7
1972-73	1971	1867	104	22.6	2.3
1973-74	2523	2955	-432	28.0	58.3
1974-75	3329	4519	-1190	31.9	52.9
1975-76	4036	5265	-1229	21.2	16.5
1976-77	5142	5074	68	27.4	-3.6
1977-78	5408	6020	-612	5.2	18.6
1978-79	5726	6811	-1085	5.9	13.1
1979-80	6418	9143	-2725	12.1	34.2
1980-81	6711	12549	-5838	4.6	37.3
1981-82	7806	13608	-5802	16.3	8.4
1982-83	8803	14293	-5490	12.8	5.0
1983-84	9771	15831	-6060	11.0	10.8
1984-85	11744	17134	-5390	20.2	8.2
1985-86	10895	19658	-8763	-7.2	14.7
1986-87	12452	20096	-7644	14.3	2.2
1987-88	15674	22244	-6570	25.9	10.7
1988-89	20232	28235	-8003	29.1	26.9
1989-90	27658	35328	-7670	36.7	25.1

Contd....

Table 7.1 A. Exports, Imports and Trade Balance *(Contd....)*

Year	Exports (including re-exports) (₹crore)	Imports (₹ crore)	Trade Balance (₹ crore)	Rate of Change	
				Export	Import
				(per cent)	
(1)	(2)	(3)	(4)	(5)	(6)
1990-91	32553	43198	-10645	17.7	22.3
1991-92	44041	47851	-3810	35.3	10.8
1992-93	53688	63375	-9687	21.9	32.4
1993-94	69751	73101	-3350	29.9	15.3
1994-95	82674	89971	-7297	18.5	23.1
1995-96	106353	122678	-16325	28.6	36.4
1996-97	118817	138920	-20103	11.7	13.2
1997-98	130100	154176	-24076	9.5	11.0
1998-99	139752	178332	-38580	7.4	15.7
1999-00	159095	215529	-56434	13.8	20.9
2000-01	201356	228307	-26950	26.6	5.9
2001-02	209018	245200	-36182	3.8	7.4
2002-03	255137	297206	-42069	22.1	21.2
2003-04	293367	359108	-65741	15.0	20.8
2004-05	375340	501065	-125725	27.9	39.5
2005-06	456418	660409	-203991	21.6	31.8
2006-07	571779	840506	-268727	25.3	27.3
2007-08	655864	1012312	-356448	14.7	20.4
2008-09	840755	1374436	-533681	28.2	35.8
2009-10	845534	1363736	-518202	0.6	-0.8
2010-11	1142922	1683467	-540545	35.2	23.4
2011-12	1465959	2345463	-879504	28.3	39.3
2012-13	1634319	2669162	-1034843	11.5	13.8
2013-14	1905011	2715434	-810423	16.6	1.7
2014-15	1896348	2737087	-840738	-0.5	0.8
2015-16	1716384	2490306	-773921	-9.5	-9.0
2016-17	1849434	2577675	-728242	7.8	3.5
2017-18	1956515	3001033	-1044519	5.8	16.4
2018-19 (P)	2307663	3594373	-1286710	18.0	19.8

Source : Directorate General of Commercial Intelligence & Statistics (DGCI&S), Kolkata

Notes: P: Provisional.

1. For the years 1956-57, 1957-58, 1958-59 and 1959-60, the data are as per the Fourteenth Report of the Estimates Committee (1971-72) of the erstwhile Ministry of Foreign Trade.

Table 7.1 B. Exports, Imports and Trade Balance

Year	Exports (including re-exports) (US $ million)	Imports (US $ million)	Trade Balance (US $ million)	Rate of Change	
				Export	Import
				(per cent)	
(1)	(2)	(3)	(4)	(5)	(6)
1949-50	1016	1292	-276	--	--
1950-51	1269	1273	-4	24.9	-1.5
1951-52	1490	1852	-362	17.4	45.5
1952-53	1212	1472	-260	-18.7	-20.5
1953-54	1114	1279	-165	-8.1	-13.1
1954-55	1233	1456	-223	10.7	13.8
1955-56	1275	1620	-345	3.4	11.3
1956-57	1259	1750	-491	-1.3	8.0
1957-58	1171	2160	-989	-7.0	23.4
1958-59	1219	1901	-682	4.1	-12.0
1959-60	1343	2016	-673	10.2	6.0
1960-61	1346	2353	-1007	0.2	16.7
1961-62	1381	2281	-900	2.6	-3.1
1962-63	1437	2372	-935	4.1	4.0
1963-64	1659	2558	-899	15.4	7.8
1964-65	1701	2813	-1112	2.5	10.0
1965-66	1693	2944	-1251	-0.5	4.7
1966-67	1628	2923	-1295	-3.8	-0.7
1967-68	1586	2656	-1070	-2.6	-9.1
1968-69	1788	2513	-725	12.7	-5.4
1969-70	1866	2089	-223	4.4	-16.9
1970-71	2031	2162	-131	8.8	3.5
1971-72	2153	2443	-290	6.0	13.0
1972-73	2550	2415	135	18.4	-1.1
1973-74	3209	3759	-550	25.8	55.7
1974-75	4174	5666	-1492	30.1	50.7
1975-76	4665	6084	-1419	11.8	7.4
1976-77	5753	5677	76	23.3	-6.7
1977-78	6316	7031	-715	9.8	23.9
1978-79	6978	8300	-1322	10.5	18.0
1979-80	7947	11321	-3374	13.9	36.4
1980-81	8486	15869	-7383	6.8	40.2
1981-82	8704	15174	-6470	2.6	-4.4
1982-83	9107	14787	-5680	4.6	-2.6
1983-84	9449	15311	-5862	3.8	3.5
1984-85	9878	14412	-4534	4.5	-5.9
1985-86	8904	16067	-7163	-9.9	11.5
1986-87	9745	15727	-5982	9.4	-2.1
1987-88	12089	17156	-5067	24.1	9.1
1988-89	13970	19497	-5527	15.6	13.6
1989-90	16612	21219	-4607	18.9	8.8

Contd....

Table 7.1 B. Exports, Imports and Trade Balance *(Contd....)*

Year	Exports (including re-exports) (US $ million)	Imports (US $ million)	Trade Balance (US $ million)	Rate of Change	
				Export	Import
				(per cent)	
(1)	(2)	(3)	(4)	(5)	(6)
1990-91	18143	24075	-5932	9.2	13.5
1991-92	17865	19411	-1546	-1.5	-19.4
1992-93	18537	21882	-3345	3.8	12.7
1993-94	22238	23306	-1068	20.0	6.5
1994-95	26330	28654	-2324	18.4	22.9
1995-96	31797	36678	-4881	20.8	28.0
1996-97	33470	39133	-5663	5.3	6.7
1997-98	35006	41484	-6478	4.6	6.0
1998-99	33218	42389	-9171	-5.1	2.2
1999-2000	36715	49738	-13023	10.5	17.3
2000-01	44076	49975	-5899	20.0	0.5
2001-02	43827	51413	-7587	-0.6	2.9
2002-03	52719	61412	-8693	20.3	19.4
2003-04	63843	78149	-14307	21.1	27.3
2004-05	83536	111517	-27981	30.8	42.7
2005-06	103091	149166	-46075	23.4	33.8
2006-07	126414	185735	-59321	22.6	24.5
2007-08	163132	251654	-88522	29.0	35.5
2008-09	185295	303696	-118401	13.6	20.7
2009-10	178751	288373	-109621	-3.5	-5.0
2010-11	251136	369769	-118633	40.5	28.2
2011-12	305964	489319	-183356	21.8	32.3
2012-13	300401	490737	-190336	-1.8	0.3
2013-14	314405	450200	-135794	4.7	-8.3
2014-15	310338	448033	-137695	-1.3	-0.5
2015-16	262291	381008	-118717	-15.5	-15.0
2016-17	275852	384357	-108505	5.2	0.9
2017-18	303526	465581	-162055	10.0	21.1
2018-19 (P)	329536	514034	-184498	8.8	10.4

Source : DGCI&S, Kolkata

Notes: P: Provisional.

1. For the years 1956-57, 1957-58, 1958-59 and 1959-60, the data are as per the Fourteenth Report of the Estimates Committee (1971-72) of the erstwhile Ministry of Foreign Trade.

Table 7.2 A. Principal Imports

Quantity : Thousand tonnes

		Value : ₹ crore & US $ million								
		1960-61			1970-71			1980-81		
		Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
I.	**Food and live animals chiefly for food (excl. cashew raw)**	...	214	449	...	242	321	...	380	481
	of which:									
I.1	Cereals and cereal preparations	3747.7	181	380	3343.2	213	282	400.8	100	127
II.	**Raw materials and intermediate manufactures**	...	527	1105	...	889	1176	...	9760	12341
II.1	Cashewnuts (unprocessed)	na	...	...	169.4	29	39	25	9	11
II.2	Crude rubber (including synthetic and reclaimed)	36.2	11	23	7.8	4	5	26.2	32	40
II.3	Fibres	...	101	212	...	127	168	...	164	208
	of which:									
II.3.1	Synthetic and regenerated fibres (man-made fibres)	0.2	...	...	15.8	9	12	68.8	97	122
II.3.2	Raw wool	1.9	1	2	19	15	20	18.8	43	55
II.3.3	Raw cotton	237.1	82	172	139.1	99	131	na	...	...
II.3.4	Raw jute	100.4	8	17	0.7	...	0	8	1	1
II.4	Petroleum, oil and lubricants	800	69	145	12767	136	180	23537	5264	6656
II.5	Animal and vegetable oils and fats	...	5	10	...	39	51	...	709	896
	of which:									
II.5.1	Edible oils	31.1	4	8	84.7	23	31	1633.3	677	857
II.6	Fertilizers and chemical products	...	88	185	...	217	286	...	1490	1884
	of which:									
II.6.1	Fertilizers and fertilizer mfg	307	13	27	2392.7	86	113	5560.2	818	1034
II.6.2	Chemical elements and compounds	...	39	82	...	68	90	...	358	453
II.6.3	Dyeing, tanning and colouring material	...	1	2	...	9	12	...	21	26
II.6.4	Medicinal and pharmaceutical products	...	10	21	...	24	32	...	85	107
II.6.5	Plastic material, regenerated cellulose and artificial resins	...	9	19	...	8	11	...	121	154
II.7	Pulp and waste paper	80.3	7	15	71.7	12	16	36.9	18	23
II.8	Paper, paper board and manufactures thereof	55.6	12	25	159	25	33	371.4	187	236
II.9	Non-metallic mineral manufactures	...	6	13	...	33	44	...	555	702
	of which:									
II.9.1	Pearls, precious and semiprecious stones, unworked or worked	...	1	2	...	25	33	...	417	527
II.10	Iron and steel	1325.2	123	258	683.4	147	194	2031.1	852	1078
II.11	Non-ferrous metals	...	47	99	...	119	158	...	477	604
III.	**Capital goods** [a]	...	356	747	...	404	534	...	1910	2416
III.1	Manufactures of metals	...	23	48	...	9	12	...	90	113
III.2	Non-electrical machinery apparatus and appliances including machine tools [b]	...	203	426	...	258	341	...	1089	1377
III.3	Electrical machinery, apparatus and appliances [b]	...	57	120	...	70	93	...	260	328
III.4	Transport equipment	...	72	151	...	67	88	...	472	597
	Total Imports	**...**	**1122**	**2353**	**...**	**1634**	**2162**	**...**	**12549**	**15869**

Contd....

Table 7.2(A) Principal Imports *(Contd....)*

Quantity : Thousand tonnes

		Value : ₹ crore & US $ million								
		1990-91			2000-01			2010-11		
		Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million
(1)		(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
I.	**Food and live animals chiefly for food (excl. cashew raw)**	...	...	...	...	...	...	...	...	...
	of which:									
I.1	Cereals and cereal preparations	308.3	182	102	69.9	90	20	251.5	545	119
II.	**Raw materials and intermediate manufactures**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
II.1	Cashewnuts (unprocessed)	82.6	134	75	249.7	962	211	501.0	2650	578
II.2	Crude rubber (including synthetic and reclaimed)	105.1	226	126	119.1	695	152	587.7	8074	1771
II.3	Fibres	...	...	...	...	...	...	...	...	...
	of which:									
II.3.1	Synthetic and regenerated fibres (man-made fibres)	21.2	56	31	42.6	275	60	81.5	957	210
II.3.2	Raw wool	29.4	182	102	53.7	458	100	94.4	1435	315
II.3.3	Raw cotton	0.2	1	0	212.3	1185	259	56.5	624	137
II.3.4	Raw jute	32.1	20	11	67.3	84	18	83.1	302	67
II.4	Petroleum, oil and lubricants	29359	10816	6028	...	71497	15650	...	482282	105964
II.5	Animal and vegetable oils and fats	...	...	...	...	...	...	...	...	...
	of which:									
II.5.1	Edible oils	525.8	326	182	4267.9	6093	1334	6677.6	29860	6551
II.6	Fertilizers and chemical products	...	...	...	...	...	...	...	...	...
	of which:									
II.6.1	Fertilizers and fertilizer mfg	7560.3	1766	984	7423.4	3034	664	20658.9	31533	6885
II.6.2	Chemical elements and compounds	...	2289	1276	...	1542	338	...	13278	2914
II.6.3	Dyeing, tanning and colouring material	...	168	94	...	874	191	...	5368	1178
II.6.4	Medicinal and pharmaceutical products	...	468	261	...	1723	377	...	11114	2436
II.6.5	Plastic material, regenerated cellulose and artificial resins	...	1095	610	...	2551	558	...	31304	6874
II.7	Pulp and waste paper	678.2	458	255	1050.9	1290	282	2634.5	5208	1145
II.8	Paper, paper board and manufactures thereof	286.4	456	254	585.6	2005	439	2145.0	9614	2111
II.9	Non-metallic mineral manufactures	...	...	...	...	797	174	...	...	...
	of which:									
II.9.1	Pearls, precious and semiprecious stones, unworked or worked	...	3738	2083	...	22101	4838	...	157596	34620
II.10	Iron and steel	1920.5	2113	1178	1613.6	3569	781	9843.9	47275	10376
II.11	Non-ferrous metals	...	1102	614	...	2462	539	...	212153	46677
III.	**Capital goods** [a]	...	10466	5833	...	25281	5534	...	231712	50907
III.1	Manufactures of metals	...	302	168	...	1786	391	...	15167	3332
III.2	Non-electrical machinery [b] apparatus and appliances including machine tools	...	4240	2363	...	16915	3703	...	118928	26111
III.3	Electrical machinery, apparatus and appliances [b]	...	1702	949	...	2227	487	...	17510	3845
III.4	Transport equipment	...	1670	931	...	4353	953	...	52112	11467
	Total Imports	**...**	**43198**	**24075**	**...**	**228307**	**51413**	**...**	**1683467**	**369769**

Contd....

Table 7.2(A) Principal Imports *(Contd....)*

Quantity : Thousand tonnes

Value : crore & US $ million

		2016-17			2017-18			2018-19 (P)		
		Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million
(1)		(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
I.	**Food and live animals chiefly for food (excl. cashew raw)**	...	...	...	...	...	...	...	...	...
	of which:									
I.1	Cereals and cereal preparations	6128	9589	1429	1988	3464	536	344	1476	211
II.	**Raw materials and intermediate manufactures**	...	...	...	...	...	...	...	...	...
II.1	Cashewnuts (unprocessed)	775	9027	1347	654	9134	1419	840	11162	1608
II.2	Crude rubber (including synthetic and reclaimed)	885	10030	1496	947	12034	1867	1082	14027	2002
II.3	Fibres	...	...	...	...	...	...	...	...	...
	of which:									
II.3.1	Synthetic and regenerated fibres (man-made fibres)	...	2454	366	...	2378	369		3275	467
II.3.2	Raw wool	87	1894	282	80	1885	292	77	2160	310
II.3.3	Raw cotton	500	6339	947	469	6307	979	299	4383	633
II.3.4	Raw jute	139	704	105	68	289	45	57	236	34
II.4	Petroleum, oil and lubricants	...	583217	86964	...	700321	108659	...	986260	140918
II.5	Animal and vegetable oils and fats									
	of which:									
II.5.1	Edible oils	14007	73039	10893	15361	74996	11637	15019	69024	9890
II.6	Fertilizers and chemical products									
	of which:									
II.6.1	Fertilizers and fertilizer mfr	23590	33706	5024	24769	34654	5376	27040	52095	7467
II.6.2	Chemical elements and compounds*	...	147356	21974	...	175944	27295	...	220476	31535
II.6.3	Dyeing, tanning and colouring material	...	15307	2283	...	18610	2888	...	22538	3222
II.6.4	Medicinal and pharmaceutical products	...	33502	4995	...	35330	5481	...	44429	6359
II.6.5	Plastic material, regenerated cellulose and artificial resins	...	80227	11964	...	93384	14488	...	109629	15681
II.7	Pulp and waste paper	...	6537	975	...	7442	1155	...	9186	1312
II.8	Paper, paper board and manufactures thereof	...	17456	2602	...	21285	3303	...	24886	3559
II.9	Non-metallic mineral manufactures									
	of which:									
II.9.1	Pearls, precious and semiprecious stones, unworked or worked	...	159464	23809	...	220966	34279	...	188881	27076
II.10	Iron and steel	13888	55278	8239	14246	67235	10432	15928	87984	12582
II.11	Non-ferrous metals	...	262961	39226	...	320381	49683	...	358671	51379
III.	**Capital goods** [a]	...	378724	56437	...	407051	63154	...	497160	71054
III.1	Manufactures of metals**	...	28028	4178	...	35022	5435	...	42460	6065
III.2	Non-electrical machinery [b] apparatus and appliances including machine tools	...	100318	14954	...	110681	17176	...	137630	19671
III.3	Electrical machinery, apparatus and appliances [b]	...	84126	12543	...	101447	15732	...	126931	18182
III.4	Transport equipment	...	152337	22688	...	146509	22733	...	173521	24760
	Total Imports	**...**	**2577675**	**384357**	**...**	**3001033**	**465581**	**...**	**3594373**	**514034**

Source : DGCI&S, Kolkata

Notes: P: Provisional.

... : not available.

a : From the year 1987-88 onwards, capital goods include project goods.

b : From the year 1991-92 onwards, Items III.2 & III.3 exclude electronic goods.

* : II.6.2 Chemical elements and compounds includes Organic & Inorganic Chemicals,Chemical material & Products

** : Items belonging to Manufactures of Metals (Except few ITCHS) already considered under other Groups of Table 4A.

Table 7.2 B : Share and Percentage Change of Major Imports

	Commodity Group	Percentage share			Percentage change[a]		
		2016-17	2017-18	2018-19 (P)	2016-17	2017-18	2018-19 (P)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
I.	**Food and allied products** [b]	**5.6**	**4.4**	**3.2**	**12.0**	**-5.1**	**-19.3**
	of which						
	1. Cereals [c]	0.4	0.1	0.0	417.7	-62.5	-60.6
	2. Pulses	1.1	0.6	0.2	8.8	-31.5	-60.8
	3. Cashew Nuts	0.4	0.3	0.3	0.5	5.4	13.3
	4. Edible Oils	2.8	2.5	1.9	3.8	6.8	-15.0
II.	**Fuel**	**26.7**	**28.3**	**32.5**	**6.3**	**28.1**	**27.0**
	5. Coal [d]	4.1	4.9	5.1	15.3	45.3	14.3
	6. POL	22.6	23.3	27.4	4.8	24.9	29.7
III.	**Fertilizers** [e]	**1.3**	**1.2**	**1.5**	**-37.8**	**7.0**	**38.9**
IV.	**Paper board manufactures & newsprint**	**0.9**	**0.9**	**0.9**	**7.4**	**18.2**	**11.2**
V.	**Capital goods** [f]	**14.7**	**13.6**	**13.8**	**4.7**	**11.9**	**12.5**
	of which						
	7. Machinery except elec & machine tool	3.9	3.7	3.8	-2.9	14.9	14.5
	8. Electrical machinery	3.3	3.4	3.5	-4.4	25.4	15.6
	9. Transport equipment	5.9	4.9	4.8	24.5	0.2	8.9
	10. Project goods	0.5	0.4	0.5	-24.9	0.2	14.3
VI.	**Others**	**37.0**	**39.1**	**36.6**	**-2.0**	**28.1**	**3.4**
	of which						
	11. Chemicals [g]	6.3	6.5	6.8	1.1	24.4	15.2
	12. Pearls precious semi precious stones	6.2	7.4	5.3	18.6	44.0	-21.0
	13. Iron & steel [h]	2.1	2.2	2.4	-26.8	26.6	20.6
	14. Non-ferrous metals [i]	2.6	2.8	2.9	1.5	29.8	15.0
	15. Gold & Silver	7.6	7.9	7.1	-17.3	25.6	-0.6
	16. Professional instruments, optical goods, etc.	1.0	1.0	1.0	6.5	23.3	9.1
	17. Electronic Goods	11.2	11.4	11.2	4.7	23.3	8.5
	Total Imports	**100.0**	**100.0**	**100.0**	**0.9**	**21.1**	**10.4**

Source: DGCI&S, Kolkata

Notes: P: Provisional.

a : In terms of US dollar

b : Including Tea, Sugar, Milk and Cream, Spices, Fruits & Nuts.

c : Including cereals preparations.

d : Including coke and briquettes.

e : Including fertilizers crude and fertilizers manufactured.

f : Including Manufactures of metals.

g : Including organic chemical, inorganic chemical, chemical materials & products and dyeing, tanning & colouring material.

h : Including primary steel and pig iron based items.

i : Excluding gold and silver

Table 7.3 A. Principal Exports

Quantity : Thousand tonnes
Value : ₹ crore & US $ million

		1960-61			1970-71			1980-81		
		Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
I.	Agricultural and allied products:	...	284	596	...	487	644	...	2057	2601
	of which									
I. 1	Coffee	19.7	7	15	32.2	25	33	87.3	214	271
I. 2	Tea and mate	199.2	124	260	199.1	148	196	229.2	426	538
I. 3	Oil cakes	433.8	14	29	878.5	55	73	886	125	158
I. 4	Tobacco	47.5	16	34	49.8	33	43	91.3	141	178
I. 5	Cashew kernels	43.6	19	40	60.6	57	76	32.3	140	177
I. 6	Spices	47.2	17	36	46.9	39	51	84.2	11	14
I. 7	Sugar and molasses	99.6	30	60	473	29	39	97	40	50
I. 8	Raw cotton	32.6	12	25	32.1	14	19	131.6	165	209
I. 9	Rice	...	...	...	32.8	5	7	726.7	224	283
I. 10	Fish and fish preparations	19.9	5	10	32.6	31	40	69.4	217	274
I. 11	Meat and meat preparations	...	1	2	...	3	4	...	56	70
I. 12	Fruits, vegetables and pulses									
	(excl.cashew kernels, processed	...	6	13	...	12	16	...	80	101
	fruits & juices)									
I. 13	Miscellaneous processed foods (incl.	...	1	2	...	4	6	...	36	45
	processed fruits and juices)									
II.	**Ores and minerals (excl. coal)**	...	52	109	...	164	217	...	414	523
	of which									
II.1	Mica	28.4	...	...	26.7	16	21	16.7	18	22
II.2	Iron ore (million tonne)	3.2	17	36	21.2	117	155	22.4	303	384
III.	**Manufactured goods**	...	291	610	...	772	1021	...	3747	4738
	of which									
III. 1	Textile fabrics & manufactures									
	(excl. carpets hand-made)	...	73	153	...	145	192	...	933	1179
	of which									
III.1.1	Cotton yarn,fabrics, made-ups etc.	...	65	136	...	142	188	...	408	516
III.1.2	Readymade garments of all									
	textile materials	...	1	2	...	29	39	...	550	696
III. 2	Coir yarn and manufactures	...	6	13	...	13	17	...	17	22
III. 3	Jute manufactures incl. twist & yarn	790.0	135	283	560.0	190	252	660.0	330	417
III. 4	Leather & leather manufactures incl.									
	leather footwear,leather travel	...	28	59	...	80	106	...	390	493
	goods & leather garments									
III. 5	Handicrafts (incl. carpets hand-made)[c]	...	11	23	...	73	96	...	952	1204
	of which:									
III. 5.1	Gems and jewellery	...	1	2	...	45	59	...	618	782
III. 6	Chemicals and allied products [a]	...	7	15	...	29	39	...	225	284
III. 7	Machinery, transport & metal manufactures									
	including iron and steel [b]	...	22	46	...	198	261	...	827	1045
IV.	**Mineral fuels and lubricants (incl. coal)** [d]	...	7	15	...	13	17	...	28	35
	Total Exports	**...**	**642**	**1346**	**...**	**1535**	**2031**	**...**	**6711**	**8486**

Contd....

Table 7.3 A: Principal Exports (Contd.) *(Contd....)*

Quantity : Thousand tonnes
Value : ₹ crore & US $ million

		1990-91			2000-01			2010-11		
		Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million
(1)		(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
I.	**Agricultural and allied products:**	...	6317	3521	...	28582	6256	...	111393	24448
	of which									
I. 1	Coffee	86.5	252	141	184.9	1185	259	232.6	3010	662
I. 2	Tea and mate	199.1	1070	596	202.4	1976	433	238.3	3354	736
I. 3	Oil cakes	2447.8	609	339	2417.8	2045	448	6936.9	11070	2438
I. 4	Tobacco	87.1	263	147	108.3	871	191	215.9	3985	875
I. 5	Cashew kernels	55.5	447	249	83.8	1883	412	12156.5	2853	627
I. 6	Spices	103.3	239	133	244.9	1619	354	762.7	8043	1768
I. 7	Sugar and molasses	191.0	38	21	769.0	511	112	2086.3	5633	1246
I. 8	Raw cotton	374.4	846	471	30.2	224	49	1885.8	13160	2910
I. 9	Rice	505.0	462	257	1534.4	2943	644	2471.4	11586	2545
I. 10	Fish and fish preparations	158.9	960	535	502.6	6367	1394	825.3	11917	2623
I. 11	Meat and meat preparations	...	140	78	...	1470	322	...	8960	1971
I. 12	Fruits, vegetables and pulses									
	(excl.cashew kernels, processed									
	fruits & juices)	...	216	120	...	1609	352	...	6350	1397
I. 13	Miscellaneous processed foods (incl.									
	processed fruits and juices)	...	213	119	...	1094	239	...	3669	806
II.	**Ores and minerals (excl. coal)**	...	1497	834	...	4139	906	...	39098	8581
	of which									
II.1	Mica	42.0	35	19	63.2	64	14	125.8	189	42
II.2	Iron ore (million tonne)	32.5	1049	585	20161.4	1634	358	46.9	21416	4715
III.	**Manufactured goods**	...	23736	13229	...	160723	35181		789433	173263
	of which									
III. 1	Textile fabrics & manufactures									
	(excl. carpets hand-made)	...	6832	3807	...	...	...			
	of which									
III.1.1	Cotton yarn,fabrics, made-ups etc.	...	2100	1170	...	16030	3509	...	13160	2910
III.1.2	Readymade garments of all									
	textile materials	...	4012	2236	...	25478	5577	...	52861	11614
III. 2	Coir yarn and manufactures	...	48	27	...	221	48	...	726	159
III. 3	Jute manufactures incl.twist & yarn	220.0	298	166	...	932	204	...	2092	459
III. 4	Leather & leather manufactures incl.									
	leather footwear,leather travel									
	goods & leather garments	...	2600	1449	...	8914	1951	...	17818	3909
III. 5	Handicrafts (incl. carpets hand-made) c	...	6167	3437	...	5097	1116	...	5877	1293
	of which									
III. 5.1	Gems and jewellery	...	5247	2924	...	33734	7384	...	184420	40509
III. 6	Chemicals and allied productsa	...	2111	1176	...	22851	5002	...	131544	28905
III. 7	Machinery, transport & metal manufactures									
	including iron and steel b	...	3872	2158	...	31870	6976	...	226805	49815
IV.	**Mineral fuels and lubricants (incl. coal) d**	...	948	528	...	8822	1931		192639	42280
	Total Exports	**...**	**32553**	**18143**	**...**	**201356**	**44076**		**1136964**	**251136**

Contd....

Table 7.3 A: Principal Exports (Concld.) *(Contd....)*

Quantity : Thousand tonnes
Value : ₹ crore & US $ million

		2016-17			2017-18			2018-19 (P)		
		Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million
(1)		(19)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
I.	**Agricultural and allied products:**	...	226775	33816	...	249182	38654	...	271358	38829
	of which									
I. 1	Coffee	288.6	5646	843	317.8	6245	969	282.9	5722	822
I. 2	Tea and mate	243.4	4906	731	272.9	5397	837	270.3	5828	831
I. 3	Oil cakes	2632.3	5410	805	3570.8	7043	1093	4486.1	10577	1512
I. 4	Tobacco	204.4	4250	634	185.4	3828	594	189.5	3984	570
I. 5	Cashew kernels	103.2	5323	793	98.4	5978	927	83.5	4606	658
I. 6	Spices	1014.5	19111	2852	1096.3	20085	3115	1091.8	23218	3323
I. 7	Sugar and molasses	2934.7	8974	1338	1881.9	5323	826	4829.1	10106	1444
I. 8	Raw cotton	996.1	10907	1621	1101.5	12200	1894	1143.1	14628	2104
I. 9	Rice	10756.0	38443	5734	12875.4	50308	7806	12014.4	53990	7753
I. 10	Fish and fish preparations	1185.3	39594	5903	1432.5	47646	7389	1436.7	47663	6802
I. 11	Meat and meat preparations		27036	4034	1374	26896	4171	1256	25987	3716
I. 12	Fruits, vegetables and pulses (excl.cashew kernels, processed fruits & juices)	...	12042.64105	1797.400611	...	11680.62824	1811.297326	...	12998.70051	1863.817852
I. 13	Miscellaneous processed foods (incl. processed fruits and juices)	...	5686.831025	848.364977	...	5992.484143	929.785554	...	6536.594702	933.596899
II.	**Ores and minerals (excl. coal)**	...	33018	4924	...	36381	5644	...	41446	5927
	of which									
II.1	Mica	134.4	374	56	153.986378	525	81	150.8	498	71
II.2	Iron ore (million tonne)	30.7	10291	1534	24202.422	9488	1471	16198.9	9265	1318
III.	**Manufactured goods**	...	1362095	203140	...	1393418	216122	...	1621779	231953
	of which									
III. 1	Textile fabrics & manufactures (excl. carpets hand-made)	...	150126.2629	22383.93167	...	175085.505	27169.09079	...	192745.8817	27592.25689
	of which									
III.1.1	Cotton yarn,fabrics, made-ups etc.	...	57358	8550	...	57422	8908	...	68786	9843
III.1.2	Readymade garments of all textile materials	...	116459.0236	17368.15338	...	107643.997	16706.94319	...	112700.5683	16138.18911
III. 2	Coir yarn and manufactures	...	1977	295	...	2100	326	...	2288	327
III. 3	Jute manufactures incl.twist & yarn	...	2080	310	...	2159	335	...	2274	325
III. 4	Leather & leather manufactures incl. leather footwear,leather travel goods & leather garments	...	34651.00658	5165.59914	...	34084.32879	5289.126297	...	35933.82667	5140.815886
III. 5	Handicrafts (incl. carpets hand-made) [c]	...	22909	3417	...	20969	3253	...	23227	3320
	of which	...			...					
III. 5.1	Gems and jewellery	...	290903	43413	...	267833	41544	...	281408	40251
III. 6	Chemicals and allied products [a]	...	167054	24911	...	198540	30800	...	264718	37840
III. 7	Machinery, transport & metal manufactures including iron and steel [b]	...	474106.0735	70723.46441	...	548535.5962	85088.80913	...	646000.0431	92450.91624
IV.	**Mineral fuels and lubricants (incl.coal)** [d]	...	217340	32415	...	247702	38438	...	335148	47874
	Total Exports	...	**1849434**	**275851.71**	**...**	**1956515**	303526	**...**	**2307663**	**330070**

Source: DGCI&S, Kolkata

Notes: P: Provisional.

... : Not available

a : Chemicals and allied products figrues relate to "Basic Chemicals" and "Plastic Linoleum products

b : Also includes electronic goods and computer software

c : Gems and Jewellery excluded from Handicarafts and reported as individual item since 1997-98

d : During 1990-91 and 2000-01 Crude oil exports amount to Nil

Table 7.3 B. Share and Percentage Change of Major Exports

	Commodity Group	Percentage share			Percentage change [a]		
		2016-17	2017-18	2018-19 (P)	2016-17	2017-18	2018-19 (P)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
I. Agricullture & allied		**12.3**	**12.7**	**11.8**	**2.3**	**14.3**	**0.4**
of which							
1	Tea	0.3	0.3	0.3	1.5	14.5	-0.4
2	Coffee	0.3	0.3	0.2	7.5	15.1	-15.5
3	Cereals	2.2	2.7	2.5	-3.9	35.6	-0.3
4	Unmanufactured Tobacco	0.2	0.2	0.2	-5.2	-6.3	-4.1
5	Spices	1.0	1.0	1.0	12.2	9.4	6.6
6	Cashewnuts	0.3	0.3	0.2	2.2	16.9	-29.0
7	Oil Meals	0.3	0.4	0.5	46.7	35.5	38.4
8	Fruits & Vegetables & Pulses	0.7	0.6	0.6	6.0	0.9	2.6
9	Marine Products	2.1	2.4	2.1	23.8	25.2	-7.8
10	Raw Cotton	0.6	0.6	0.6	-17.0	16.4	10.5
II. Ores and Minerals		1.8	1.9	1.8	34.9	14.7	5.0
of which							
11	Iron Ore	0.6	0.5	0.4	695.1	-4.1	-10.0
12	Processed minerals	0.3	0.3	0.4	2.7	8.1	21.6
13	Other ores & minerals	0.7	0.7	0.7	1.1	5.7	3.2
III. Manufactured goods		73.6	71.2	70.3	5.3	6.4	7.3
of which							
14	Leather & Manufactures	1.2	1.1	0.9	-6.5	2.2	-4.5
15	Leather footwear	0.8	0.7	0.7	-0.9	3.0	0.1
16	Gems & Jewellerly	15.7	13.7	12.2	10.3	-4.2	-3.1
17	Drugs, Pharmaceuticals & fine chemicals	1.2	1.2	1.2	-5.9	4.7	10.4
18	Dyes/intmdts. & Coaltar chemicals	0.8	0.8	0.9	2.6	14.1	16.9
19	Manufactures of metals	5.0	5.8	5.0	1.5	27.7	-6.9
20	Machinery & instruments	6.8	7.6	8.3	4.8	23.2	18.5
21	Transport equipments	7.7	7.0	7.3	3.0	0.1	13.4
22	Primary & semi-finished Iron & Steel	3.1	3.7	2.9	58.6	29.6	-13.4
23	Electronic Goods	2.0	1.9	2.4	1.3	5.9	40.5
24	Cotton yarn, fabrics, made-ups etc.	3.1	2.9	3.0	-3.6	4.2	10.4
25	Readymade Garments	6.3	5.5	4.9	2.4	-3.8	-3.5
26	Handicrafts	0.7	0.6	0.6	16.7	-5.3	0.8
IV. Crude & Petroleum Products (incl. Coal)		11.8	12.7	14.5	4.1	18.6	24.7
V. Other & unclassified items		0.6	1.5	1.6	1.0	204.1	17.2
Total Exports		**100.0**	**100.0**	**100.0**	**5.2**	**10.0**	**8.8**

Source: DGCI&S, Kolkata

Note: P: Provisional.

a : In terms of US dollar

Table 7.4 (A): Direction of Imports : Imports by Regions and Countries

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1) Europe	64,655	422,769	61,474	412,256	-4.9	16.0	69,898	450,625	78,746	549,990	12.7	15.3
1.1 EU Countries	43,934	287,369	42,385	284,275	-3.5	11.0	47,873	308,576	57,832	404,069	20.8	11.3
1) GERMANY	12,088	79,098	11,584	77,704	-4.2	3.0	13,296	85,700	15,027	105,179	13.0	2.9
2) BELGIUM	8,256	54,001	6,625	44,396	-19.8	1.7	5,993	38,646	10,469	73,002	74.7	2.0
3) U K	5,193	33,936	3,665	24,584	-29.4	1.0	4,807	30,989	7,562	52,746	57.3	1.5
4) FRANCE	3,730	24,420	5,708	38,264	53.0	1.5	6,524	42,032	6,211	43,391	-4.8	1.2
5) ITALY	4,072	26,645	3,895	26,128	-4.4	1.0	4,707	30,337	5,290	36,984	12.4	1.0
6) NETHERLAND	1,860	12,168	1,896	12,729	1.9	0.5	2,513	16,199	4,060	28,483	61.6	0.8
7) SPAIN	1,646	10,756	1,969	13,223	19.6	0.5	1,663	10,721	1,681	11,728	1.0	0.3
8) SWEDEN	1,485	9,693	1,161	7,788	-21.8	0.3	1,464	9,440	1,327	9,279	-9.4	0.3
9) FINLAND	1,002	6,550	1,012	6,792	0.9	0.3	1,401	9,023	1,124	7,795	-19.8	0.2
10) POLAND	570	3,731	691	4,637	21.3	0.2	767	4,944	793	5,540	3.4	0.2
11) AUSTRIA	827	5,422	908	6,085	9.8	0.2	973	6,274	716	5,004	-26.4	0.1
12) DENMARK	429	2,812	482	3,231	12.4	0.1	565	3,641	537	3,752	-4.8	0.1
13) IRELAND	552	3,613	526	3,528	-4.7	0.1	795	5,126	423	2,955	-46.9	0.1
14) CYPRUS	48	314	67	445	38.2	0.0	13	87	394	2,737	2,825.6	0.1
15) ROMANIA	309	2,024	317	2,128	2.6	0.1	412	2,656	315	2,197	-23.4	0.1
16) CZECH REPUBLIC	508	3,319	539	3,618	6.2	0.1	670	4,315	259	1,808	-61.3	0.1
17) SLOVENIA	89	579	102	682	14.8	0.0	112	722	249	1,748	122.4	0.0
18) HUNGARY	243	1,586	219	1,466	-9.8	0.1	271	1,746	241	1,684	-11.0	0.0
19) LITHUANIA	214	1,404	271	1,819	26.5	0.1	189	1,223	212	1,477	11.7	0.0
20) LATVIA	62	399	40	266	-35.6	0.0	53	339	158	1,111	201.0	0.0
21) GREECE	111	722	122	819	9.8	0.0	96	619	144	1,004	49.8	0.0
22) LUXEMBOURG	176	1,143	46	310	-73.8	0.0	53	343	132	931	147.7	0.0
23) PORTUGAL	103	671	141	946	37.7	0.0	190	1,225	133	926	-30.1	0.0
24) BULGARIA	94	616	182	1,220	94.4	0.0	142	916	126	876	-11.5	0.0

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Table 7.4 (A): Direction of Imports : Imports by Regions and Countries *(Contd....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
25) ESTONIA	142	913	102	687	-27.9	0.0	61	390	108	755	78.7	0.0
26) SLOVAK REP	65	423	69	460	6.0	0.0	95	614	57	402	-39.7	0.0
27) MALTA	26	174	22	150	-15.4	0.0	16	103	44	308	174.4	0.0
28) CROATIA	36	236	25	170	-29.6	0.0	32	206	39	268	21.4	0.0
1.2 European Free Trade Associatipn (EFTA)	19,890	129,967	17,821	119,473	-10.4	4.6	19,774	127,501	18,456	128,752	-6.7	3.6
1) SWITZERLAND	19,299	126,074	17,249	115,619	-10.6	4.5	18,923	122,018	18,077	126,098	-4.5	3.5
2) NORWAY	585	3,858	567	3,816	-3.2	0.1	842	5,425	366	2,569	-56.5	0.1
3) ICELAND	4	27	5	32	10.1	0.0	7	48	9	61	17.2	0.0
4) LIECHTENSTEIN	1	8	1	6	-27.1	0.0	2	10	4	25	125.0	0.0
1.3 Other European Countries	831	5,433	1,269	8,507	52.7	0.3	2,251	14,548	2,459	17,168	9.3	0.5
1) TURKEY	777	5,080	1,207	8,097	55.4	0.3	2,132	13,785	2,388	16,670	12.0	0.5
2) MACEDONIA	7	46	24	162	240.8	0.0	47	301	24	169	-48.3	0.0
3) ALBANIA	17	114	7	44	-62.2	0.0	39	251	23	160	-41.8	0.0
4) SERBIA	22	144	27	183	21.9	0.0	24	155	21	151	-11.1	0.0
5) BOSNIA-HRZGOVIN	4	29	3	22	-24.5	0.0	9	56	2	17	-72.0	0.0
6) MONTENEGRO	0	0	0	0	0.0	0.0	0	0	0	1	1,200.0	0.0
7) UNION OF SERBIA & MONTENEGRO	3	19	0	0	-98	0	0	0	0	0	#DIV/0!	0.0
2) Africa	31,667	206,498	28,845	193,456	-8.9	7.5	37,789	243,655	41,130	287,364	8.8	8.0
2.1 Southern African Customs Union (SACU)	6,547	42,692	7,256	48,652	10.8	1.9	8,634	55,654	7,558	52,793	-12.5	1.5
1) SOUTH AFRICA	5,948	38,785	5,834	39,117	-1.9	1.5	6,835	44,056	6,520	45,541	-4.6	1.3
2) BOTSWANA	542	3,539	1,307	8,766	141.1	0.3	1,638	10,561	974	6,810	-40.5	0.2
3) NAMIBIA	10	68	50	338	382.8	0.0	62	401	54	375	-13.9	0.0
4) SWAZILAND	41	268	39	264	-3.9	0.0	9	58	10	67	7.6	0.0
5) LESOTHO	5	32	25	167	404.3	0.0	90	578	0	0	-100.0	0.0

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Table 7.4 (A): Direction of Imports : Imports by Regions and Countries *(Contd.....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2.2 Other South African Countries	3,630	23,656	3,947	26,466	8.8	1.0	6,413	41,329	5,643	39,446	-12.0	1.1
1) ANGOLA	2,767	17,984	2,596	17,406	-6.2	0.7	4,324	27,863	4,027	28,147	-6.9	0.8
2) MOZAMBIQUE	363	2,375	546	3,662	50.5	0.1	932	6,009	1,097	7,677	17.8	0.2
3) ZAMBIA	475	3,134	744	4,991	56.5	0.2	1,095	7,056	511	3,567	-53.4	0.1
4) ZIMBABWE	24	162	60	406	147.3	0.0	62	401	8	55	-87.5	0.0
2.3 West Africa	16,741	109,124	13,025	87,367	-22.2	3.4	16,833	108,578	20,084	140,310	19.3	3.9
1) NIGERIA	9,949	64,923	7,659	51,375	-23.0	2.0	9,501	61,293	10,885	76,316	14.6	2.1
2) GHANA	2,981	19,405	1,939	13,015	-35.0	0.5	2,710	17,484	3,763	26,206	38.9	0.7
3) BURKINA FASO	238	1,550	256	1,715	7.7	0.1	633	4,081	881	6,149	39.3	0.2
4) SENEGAL	264	1,727	316	2,118	19.7	0.1	565	3,649	659	4,525	16.6	0.1
5) EQUTL GUINEA	457	3,012	798	5,353	74.5	0.2	756	4,869	634	4,426	-16.1	0.1
6) COTE D' IVOIRE	572	3,697	456	3,056	-20.4	0.1	442	2,847	603	4,196	36.5	0.1
7) GABON	106	691	69	466	-34.2	0.0	395	2,547	456	3,193	15.3	0.1
8) GUINEA	370	2,405	279	1,874	-24.6	0.1	515	3,317	414	2,870	-19.5	0.1
9) CONGO P REP	202	1,305	157	1,049	-22.4	0.0	199	1,283	406	2,863	104.0	0.1
10) BENIN	276	1,778	207	1,391	-24.8	0.1	223	1,437	376	2,604	68.5	0.1
11) CAMEROON	558	3,619	359	2,411	-35.6	0.1	213	1,373	343	2,356	61.3	0.1
12) TOGO	225	1,454	138	929	-38.5	0.0	164	1,055	304	2,126	85.5	0.1
13) LIBERIA	32	205	8	51	-76.2	0.0	37	237	141	931	284.1	0.0
14) GUINEA BISSAU	198	1,294	216	1,443	8.8	0.1	256	1,651	124	889	-51.7	0.0
15) GAMBIA	31	204	43	290	37.8	0.0	59	378	45	316	-23.2	0.0
16) MALI	243	1,606	99	662	-59.1	0.0	114	736	18	127	-84.0	0.0
17) MAURITANIA	19	122	11	73	-41.0	0.0	5	35	16	111	192.8	0.0
18) SIERRA LEONE	17	108	12	82	-26.1	0.0	24	156	12	82	-51.5	0.0
19) CAPE VERDE IS	3	18	2	13	-31.4	0.0	3	18	3	20	3.2	0.0
20) NIGER	0	2	0	0	-91	0.0	20	130	1	4	-96.8	0.0

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Table 7.4 (A): Direction of Imports : Imports by Regions and Countries *(Contd....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
21) ST HELENA	0	0	0	0	-100	0.0	0	0	0	1	133.3	0.0
22) SAO TOME	0	0	0	0	0.0	0.0	0	0	0	0	-80.0	0.0
2.4 Central Africa	531	3,438	369	2,475	-30.5	0.1	479	3,087	554	3,902	15.6	0.1
1) CHAD	321	2,077	169	1,138	-47.2	0.0	149	962	476	3,355	218.5	0.1
2) UGANDA	46	300	69	462	51.4	0.0	56	362	23	162	-59.0	0.0
3) MALAWI	64	422	41	278	-35.7	0.0	16	106	23	161	38.6	0.0
4) CONGO D. REP.	98	624	86	576	-12.1	0.0	225	1,453	19	133	-91.6	0.0
5) RWANDA	1	9	1	8	-12.6	0.0	5	34	7	47	25.1	0.0
6) BURUNDI	0	1	2	11	1,354.5	0.0	17	106	5	31	-72.5	0.0
7) C AFRI REP	1	5	0	3	-54.2	0.0	10	64	2	14	-79.6	0.0
2.5 East Africa	1,327	8,724	1,319	8,853	-0.6	0.3	1,404	9,044	1,563	10,892	11.4	0.3
1) TANZANIA REP	925	6,086	948	6,370	2.6	0.2	1,030	6,634	903	6,281	-12.3	0.2
2) MADAGASCAR	142	933	120	802	-15.5	0.0	168	1,079	297	2,074	76.8	0.1
3) KENYA	128	837	104	699	-18.2	0.0	73	468	137	961	88.9	0.0
4) MAURITIUS	20	133	18	123	-9.8	0.0	21	134	79	547	280.1	0.0
5) ETHIOPIA	61	399	67	449	10.0	0.0	47	306	55	378	15.9	0.0
6) COMOROS	15	100	26	173	69.9	0.0	37	240	35	247	-6.7	0.0
7) SOMALIA	16	101	18	119	13.6	0.0	4	23	18	130	416.3	0.0
8) REUNION	19	123	14	93	-26.0	0.0	18	116	18	127	0.6	0.0
9) DJIBOUTI	1	8	3	19	129.3	0.0	5	35	16	110	190.8	0.0
10) SEYCHELLES	1	4	1	6	38.8	0.0	1	9	5	37	284.7	0.0
2.6 North Africa	2,893	18,864	2,929	19,643	1.3	0.8	4,027	25,963	5,728	40,020	42.3	1.1
1) ALGERIA	299	1,972	605	4,055	102.1	0.2	1,261	8,132	1,697	11,900	34.6	0.3
2) EGYPT A RP	1,221	7,922	1,164	7,810	-4.7	0.3	1,293	8,333	1,678	11,698	29.8	0.3
3) MOROCCO	1,078	7,051	793	5,322	-26.4	0.2	780	5,025	1,327	9,267	70.2	0.3
4) SUDAN	149	964	245	1,637	64.3	0.1	452	2,917	743	5,195	64.3	0.1
5) LIBYA	9	56	7	50	-15.9	0.0	101	653	146	1,001	45.2	0.0

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Table 7.4 (A): Direction of Imports : Imports by Regions and Countries *(Contd.....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
6) TUNISIA	136	899	115	769	-15.9	0.0	140	903	138	959	-1.7	0.0
3) America	45,990	300,963	46,674	313,156	1.5	12.1	55,993	360,943	64,913	453,898	15.9	12.7
3.1 North America	28,299	185,376	29,383	197,158	3.8	7.6	35,270	227,373	44,366	310,272	25.8	8.6
1) U S A	21,781	142,678	22,307	149,655	2.4	5.8	26,611	171,564	35,299	246,798	32.6	6.9
2) MEXICO	2,283	14,905	2,945	19,776	29.0	0.8	3,930	25,330	5,577	38,999	41.9	1.1
3) CANADA	4,234	27,793	4,132	27,726	-2.4	1.1	4,729	30,479	3,490	24,475	-26.2	0.7
3.2 Latin America	17,692	115,587	17,291	115,998	-2.3	4.5	20,723	133,570	20,547	143,626	-0.9	4.0
1) VENEZUELA	5,702	37,150	5,512	36,964	-3.3	1.4	5,866	37,797	7,259	50,809	23.7	1.4
2) BRAZIL	4,040	26,392	4,115	27,653	1.8	1.1	5,498	35,429	4,406	30,840	-19.9	0.9
3) PERU	820	5,407	1,077	7,227	31.3	0.3	2,377	15,332	2,405	16,693	1.2	0.5
4) ARGENTINA	2,472	16,251	2,501	16,763	1.2	0.7	2,229	14,365	1,955	13,615	-12.3	0.4
5) CHILE	1,961	12,759	1,226	8,229	-37.5	0.3	2,092	13,478	1,238	8,642	-40.8	0.2
6) COLOMBIA	808	5,266	594	3,985	-26.5	0.2	593	3,823	1,055	7,394	78.0	0.2
7) BOLIVIA	240	1,580	174	1,167	-27.8	0.0	667	4,304	852	5,989	27.7	0.2
8) DOMINIC REP	479	3,146	675	4,515	41.0	0.2	646	4,172	567	4,000	-12.3	0.1
9) ECUADOR	564	3,652	356	2,384	-36.9	0.1	194	1,250	219	1,540	13.0	0.0
10) TRINIDAD	92	609	174	1,164	88.8	0.0	42	276	195	1,350	359.9	0.0
11) SURINAME	43	279	46	309	6.0	0.0	93	599	89	623	-3.6	0.0
12) COSTA RICA	62	403	59	394	-5.4	0.0	67	434	51	350	-24.9	0.0
13) URUGUAY	18	116	13	90	-24.1	0.0	25	161	43	301	72.0	0.0
14) BAHAMAS	77	511	259	1,728	235.1	0.1	40	261	39	275	-2.6	0.0
15) PANAMA REPUBLIC	72	473	202	1,353	178.4	0.1	43	279	39	266	-10.2	0.0
16) PARAGUAY	112	736	155	1,042	38.3	0.0	167	1,077	21	146	-87.4	0.0
17) HONDURAS	16	104	22	149	39.3	0.0	13	86	18	128	37.0	0.0
18) BR VIRGN IS	2	10	7	45	333.5	0.0	1	6	17	117	1,812.5	0.0
19) GUATEMALA	13	81	22	146	73.3	0.0	16	103	16	113	1.9	0.0

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Table 7.4 (A): Direction of Imports : Imports by Regions and Countries *(Contd....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
20) HAITI	3	21	4	24	10.1	0.0	8	53	14	97	66.5	0.0
21) NETHERLANDANTIL	59	395	67	446	12.6	0.0	8	53	10	68	17.7	0.0
22) BERMUDA	0	0	0	0	0.0	0.0	0	0	8	53	#DIV/0!	0.0
23) GUYANA	18	121	14	97	-21.6	0.0	7	43	6	45	-2.6	0.0
24) JAMAICA	2	10	1	8	-24.5	0.0	4	28	5	35	15.2	0.0
25) EL SALVADOR	6	40	6	39	-6.6	0.0	9	58	4	29	-53.4	0.0
26) CUBA	1	9	1	9	-1.5	0.0	2	13	4	27	84.5	0.0
27) NICARAGUA	4	25	3	18	-31.9	0.0	4	27	4	25	-13.7	0.0
28) FR GUIANA	1	8	1	10	25.0	0.0	1	6	2	13	114.1	0.0
29) BARBADOS	0	1	0	1	5.9	0.0	0	1	2	12	770.0	0.0
30) MARTINIQUE	0	0	0	0	0	0	0	0	1	6	1,520.0	0.0
31) VIRGIN IS US	1	7	5	30	319.4	0.0	0	2	1	5	171.4	0.0
32) BELIZE	1	7	1	3	-48.5	0.0	1	9	1	5	-52.2	0.0
33) ST LUCIA	0	3	0	2	-46.7	0.0	0	2	1	4	78.1	0.0
34) GRENADA	0	0	0	0	20.0	0.0	0	2	0	3	77.8	0.0
35) GUADELOUPE	0	0	0	0	-17	0	0	0	0	3	3,600.0	0.0
36) DOMINICA	0	1	1	5	670.0	0.0	0	2	0	2	10.7	0.0
37) CAYMAN IS	0	0	0	0	-60.0	0.0	6	42	0	2	-96.4	0.0
38) ANTIGUA	0	0	0	0	-100.0	0.0	0	0	0	1	650.0	0.0
39) MONTSERRAT	0	0	0	0	0	0	0	0	0	0	20.0	0.0
40) ST VINCENT	0	0	0	0	0	0	0	0	0	0	-60.0	0.0
41) ST KITT N A	0	1	0	0	-93.8	0.0	0	0	0	0	#DIV/0!	0.0
42) TURKS C IS	0	0	0	0	50.0	0.0	0	0	0	0	150.0	0
43) FALKLAND IS	2	11	0	0	-97	0	0	0	0	0	0.0	0
4) Asia	222,629	1,455,063	230,571	1,546,334	3.6	60.0	279,667	1,802,415	318,655	2,229,149	13.9	62.1
4.1 East Asia (Oceania)	9,703	63,430	11,828	79,387	21.9	3.1	14,902	96,058	13,914	97,108	-6.6	2.7

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Table 7.4 (A): Direction of Imports : Imports by Regions and Countries *(Contd.....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1) AUSTRALIA	8,899	58,181	11,154	74,864	25.3	2.9	13,994	90,197	13,131	91,638	-6.2	2.6
2) NEW ZEALAND	548	3,585	504	3,385	-7.9	0.1	644	4,152	631	4,403	-2.0	0.1
3) PAPUA N GNA	180	1,161	108	726	-39.8	0.0	196	1,266	89	626	-54.7	0.0
4) SOLOMON IS	68	444	54	364	-20.3	0.0	68	437	59	413	-13.2	0.0
5) SAMOA	2	16	6	42	156	0.0	0	2	3	19	957.7	0.0
6) FIJI IS	0	2	1	4	62.2	0.0	0	3	1	5	44.9	0.0
7) KIRIBATI REP	0	0	0	0	0	0	0	0	0	2	340.0	0.0
8) NAURU RP	6	38	0	0	-99	0.0	0	0	0	1	1,500.0	0.0
9) TONGA	0	0	0	0	0	0.0	0	0	0	0	0.0	0.0
10) TUVALU	0	0	0	1	1,200.0	0.0	0	0	0	0	#DIV/0!	0.0
11) VANUATU REP	0	2		0	-100	0.0	0	0	0	0	#DIV/0!	0
12) TIMOR LESTE	0	0	0	1	466.7	0.0	0	1	0	0	-50.0	0
4.2 ASEAN	39,910	260,744	40,617	272,397	1.8	10.6	47,134	303,820	59,293	414,791	25.8	11.6
1) SINGAPORE	7,308	47,735	7,087	47,542	-3.0	1.8	7,467	48,133	16,282	113,918	118.0	3.2
2) INDONESIA	13,132	85,800	13,428	90,082	2.3	3.5	16,439	105,961	15,849	111,140	-3.6	3.1
3) MALAYSIA	9,084	59,373	8,934	59,881	-1.7	2.3	9,012	58,081	10,792	75,302	19.8	2.1
4) THAILAND	5,510	36,011	5,415	36,313	-1.7	1.4	7,134	45,988	7,442	51,980	4.3	1.5
5) VIETNAM SOC REP	2,560	16,763	3,321	22,263	29.7	0.9	5,019	32,357	7,192	50,286	43.3	1.4
6) BRUNEI	554	3,610	628	4,208	13.3	0.2	435	2,805	591	4,122	35.9	0.1
7) PHILIPPINES	542	3,532	495	3,318	-8.8	0.1	764	4,928	581	4,063	-24.0	0.1
8) MYANMAR	984	6,378	1,067	7,156	8.4	0.3	640	4,120	521	3,674	-18.5	0.1
9) CAMBODIA	54	360	36	242	-33.7	0.0	56	360	43	298	-23.7	0.0
10) LAO PD RP	180	1,182	207	1,391	15.2	0.1	169	1,088	1	7	-99.4	0.0
4.3 West Asia- GCC	55,790	364,147	55,172	369,966	-1.1	14.4	64,079	413,051	79,697	557,909	24.4	15.5
1) U ARAB EMTS	19,446	126,981	21,510	144,237	10.6	5.6	21,739	140,096	29,768	208,425	36.9	5.8
2) SAUDI ARAB	20,321	132,580	19,972	133,946	-1.7	5.2	22,070	142,241	28,479	199,395	29.0	5.6
3) QATAR	9,022	58,912	7,646	51,276	-15.3	2.0	8,409	54,211	10,722	75,167	27.5	2.1

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Table 7.4 (A): Direction of Imports : Imports by Regions and Countries *(Contd.....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
4) KUWAIT	4,970	32,379	4,462	29,899	-10.2	1.2	7,166	46,221	7,431	51,949	3.7	1.4
5) OMAN	1,675	10,957	1,291	8,657	-22.9	0.3	4,264	27,500	2,758	19,199	-35.3	0.5
6) BAHARAIN IS	357	2,339	291	1,951	-18.6	0.1	431	2,783	540	3,775	25.2	0.1
4.4 Other West Asia	20,140	131,170	25,071	168,147	24.5	6.5	31,996	206,136	39,016	272,491	21.9	7.6
1) IRAQ	10,838	70,564	11,708	78,515	8.0	3.0	17,616	113,453	22,372	156,601	27.0	4.4
2) IRAN	6,279	40,823	10,507	70,478	67.3	2.7	11,112	71,620	13,526	94,113	21.7	2.6
3) ISRAEL	2,095	13,713	1,961	13,147	-6.4	0.5	2,067	13,321	1,932	13,470	-6.5	0.4
4) JORDAN	853	5,580	828	5,556	-2.9	0.2	985	6,349	1,116	7,822	13.3	0.2
5) LEBANON	28	180	30	203	9.4	0.0	38	248	44	305	14.2	0.0
6) SYRIA	41	266	32	216	-20.4	0.0	26	165	14	99	-44.8	0.0
7) YEMEN REPUBLC	7	44	5	32	-30.1	0.0	153	980	12	81	-92.3	0.0
4.5 NE Asia	94,112	616,112	95,069	637,563	1.0	24.7	118,353	762,710	122,424	856,646	3.4	23.9
1) CHINA P RP	61,708	404,051	61,283	411,103	-0.7	15.9	76,381	492,236	70,318	492,068	-7.9	13.7
2) HONG KONG	6,052	39,636	8,204	54,906	35.6	2.1	10,676	68,777	17,987	125,972	68.5	3.5
3) KOREA RP	13,047	85,363	12,585	84,404	-3.5	3.3	16,362	105,423	16,759	117,254	2.4	3.3
4) JAPAN	9,850	64,493	9,755	65,415	-1.0	2.5	10,973	70,745	12,773	89,278	16.4	2.5
5) TAIWAN	3,354	21,921	3,143	21,076	-6.3	0.8	3,926	25,303	4,577	32,000	16.6	0.9
6) MACAO	8	54	8	53	-4.6	0.0	8	54	6	44	-24.2	0.0
7) KOREA DP RP	88	567	89	592	0.8	0.0	25	162	3	23	-86.8	0.0
8) MONGOLIA	4	27	2	13	-51.9	0.0	2	11	1	7	-41.3	0.0
4.6 South Asia	2,975	19,459	2,813	18,873	-5.4	0.7	3,203	20,640	4,311	30,205	34.6	0.8
1) SRI LANKA DSR	743	4,854	602	4,040	-18.9	0.2	773	4,977	1,473	10,274	90.7	0.3
2) BANGLADESH PR	727	4,767	702	4,708	-3.5	0.2	686	4,420	1,043	7,326	52.1	0.2
3) PAKISTAN IR	441	2,885	454	3,049	3.1	0.1	489	3,150	495	3,476	1.3	0.1
4) NEPAL	471	3,069	445	2,985	-5.4	0.1	438	2,825	475	3,326	8.4	0.1
5) AFGHANISTAN TIS	308	2,029	293	1,967	-4.9	0.1	434	2,797	435	3,078	0.4	0.1
6) BHUTAN	281	1,827	308	2,063	9.4	0.1	378	2,436	369	2,576	-2.4	0.1

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Table 7.4 (A): Direction of Imports : Imports by Regions and Countries

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
7) MALDIVES	4	28	9	62	113.8	0.0	6	37	20	147	259.3	0.0
5) CIS & Baltics	7,078	46,269	9,323	62,467	31.7	2.4	12,876	83,043	9,443	65,904	-26.7	1.8
5.1 CARs Countries	457	2,980	612	4,085	34.0	0.2	1,116	7,208	863	6,030	-22.7	0.2
1) KAZAKHSTAN	353	2,295	521	3,474	47.7	0.1	907	5,857	709	4,953	-21.9	0.1
2) UZBEKISTAN	45	298	47	312	2.8	0.0	102	658	127	885	24.6	0.0
3) TURKMENISTAN	47	310	21	143	-54.6	0.0	26	169	21	143	-21.1	0.0
4) TAJIKISTAN	10	65	22	146	118.6	0.0	50	324	4	30	-91.6	0.0
5) KYRGHYZSTAN	2	12	1	10	-17.3	0.0	31	199	3	18	-91.6	0.0
5.2 Other CIS Countries	6,621	43,289	8,710	58,382	31.5	2.3	11,759	75,835	8,580	59,873	-27.0	1.7
1) RUSSIA	4,585	29,986	5,552	37,180	21.1	1.4	8,573	55,287	5,840	40,817	-31.9	1.1
2) UKRAINE	1,751	11,465	2,481	16,657	41.7	0.6	2,356	15,194	2,341	16,280	-0.6	0.5
3) BELARUS	165	1,066	171	1,143	3.4	0.0	208	1,338	227	1,582	9.3	0.0
4) AZERBAIJAN	77	487	462	3,105	498.9	0.1	593	3,828	148	1,029	-75.0	0.0
5) GEORGIA	24	160	32	211	28.8	0.0	27	174	22	156	-18.0	0.0
6) ARMENIA	14	93	1	7	-92.5	0.0	1	4	1	6	40.0	0.0
7) MOLDOVA	5	32	12	79	139.9	0.0	2	10	0	3	-75.2	0.0
6) Unspecified Region	8,987	58,744	7,471	50,007	-16.9	1.9437006	9357.88	60352.83	197.98	1380.16	-97.9	0.0
Total	**381,008**	**2,490,306**	**384,357**	**2,577,675**	**0.9**	**100.0**	**465581**	**3001033**	**514034**	**3594373**	**10.4**	**100.0**

Source: Department of Commerce based on DGCI&S data.
P : Provisional.

Table 7.4 (B): Direction of Exports : Exports by Regions and Countries

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1) Europe	50,413	330,132	53,327	357,519	5.8	19.3	60,346	388,924	64,381	449,874	6.7	19.5
1.1 EU Countries	44,607	292,119	47,319	317,239	6.1	17.2	53,630	345,630	57,208	399,794	6.7	17.4
1) U K	8,858	57,961	8,551	57,323	-3.5	3.1	9,713	62,572	9,333	65,268	-3.9	2.8
2) GERMANY	7,095	46,467	7,184	48,169	1.3	2.6	8,689	56,003	8,905	62,216	2.5	2.7
3) NETHERLAND	4,727	30,957	5,071	34,027	7.3	1.8	6,263	40,358	8,814	61,574	40.7	2.7
4) BELGIUM	5,028	32,959	5,657	37,915	12.5	2.1	6,207	40,008	6,730	47,010	8.4	2.0
5) ITALY	4,218	27,638	4,903	32,861	16.2	1.8	5,710	36,809	5,594	39,089	-2.0	1.7
6) FRANCE	4,634	30,328	5,250	35,180	13.3	1.9	4,902	31,594	5,236	36,600	6.8	1.6
7) SPAIN	3,237	21,215	3,426	22,972	5.8	1.2	3,996	25,760	4,183	29,218	4.7	1.3
8) POLAND	1,025	6,718	1,198	8,030	16.8	0.4	1,541	9,934	1,573	11,004	2.0	0.5
9) SWEDEN	684	4,476	709	4,754	3.7	0.3	772	4,972	792	5,535	2.7	0.2
10) DENMARK	689	4,515	693	4,647	0.6	0.3	784	5,053	746	5,225	-4.8	0.2
11) PORTUGAL	590	3,866	670	4,490	13.6	0.2	747	4,818	744	5,199	-0.5	0.2
12) IRELAND	526	3,445	485	3,256	-7.7	0.2	536	3,457	531	3,717	-1.0	0.2
13) GREECE	336	2,204	381	2,550	13.5	0.1	434	2,795	503	3,503	16.0	0.2
14) AUSTRIA	340	2,228	383	2,569	12.8	0.1	460	2,965	483	3,374	5.0	0.1
15) HUNGARY	345	2,258	406	2,725	17.7	0.1	403	2,595	458	3,205	13.8	0.1
16) ROMANIA	256	1,676	258	1,726	0.7	0.1	399	2,572	430	3,008	7.9	0.1
17) CZECH REPUBLIC	489	3,182	533	3,577	9.1	0.2	405	2,613	429	3,003	5.9	0.1
18) SLOVENIA	264	1,736	252	1,687	-4.6	0.1	287	1,850	317	2,216	10.4	0.1
19) FINLAND	249	1,629	270	1,810	8.6	0.1	283	1,823	256	1,792	-9.3	0.1
20) MALTA	325	2,117	137	922	-57.8	0.0	196	1,262	230	1,606	17.2	0.1
21) BULGARIA	146	949	240	1,605	64.6	0.1	173	1,117	213	1,485	23.2	0.1
22) CROATIA	112	737	124	831	10.4	0.0	169	1,087	154	1,074	-8.8	0.0
23) SLOVAK REP	138	899	146	980	6.3	0.1	152	983	146	1,020	-4.3	0.0
24) LITHUANIA	88	579	96	644	9.0	0.0	104	669	127	890	22.7	0.0

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Table 7.4 (B): Direction of Exports : Exports by Regions and Countries *(Contd....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
25) LATVIA	80	519	116	776	45.4	0.0	112	723	116	810	2.9	0.0
26) CYPRUS	60	391	72	480	20.0	0.0	100	646	71	495	-29.3	0.0
27) ESTONIA	64	417	98	654	53.1	0.0	80	518	64	450	-19.9	0.0
28) LUXEMBOURG	8	53	11	77	42.3	0.0	11	73	30	209	164.0	0.0
1.2 European Free Trade Associatipn (EFTA)	1,538	10,042	1,241	8,304	-19.3	0.4	1,453	9,366	1,534	10,720	5.6	0.5
1) SWITZERLAND	977	6,422	978	6,545	0.1	0.4	1,084	6,987	1,187	8,292	9.5	0.4
2) NORWAY	542	3,493	245	1,642	-54.8	0.1	360	2,323	313	2,186	-13.0	0.1
3) ICELAND	19	122	17	112	-9.9	0.0	6	38	31	218	421.9	0.0
4) LIECHTENSTEIN	1	5	1	5	-11.0	0.0	3	18	3	24	21.4	0.0
1.3 Other European Countries	4,268	27,971	4,768	31,976	11.7	1.7	5,263	33,928	5,639	39,359	7.1	1.7
1) TURKEY	4,140	27,136	4,627	31,031	11.8	1.7	5,091	32,815	5,452	38,058	7.1	1.7
2) SERBIA	43	283	50	336	15.5	0.0	59	381	74	516	24.8	0.0
3) MONTENEGRO	26	172	36	244	38.9	0.0	52	333	39	271	-24.6	0.0
4) ALBANIA	24	158	26	177	10.0	0.0	29	189	37	258	26.4	0.0
5) MACEDONIA	13	84	15	100	15.6	0.0	17	112	20	137	12.4	0.0
6) BOSNIA-HRZGOVIN	20	129	13	88	-33.5	0.0	15	99	17	119	11.1	0.0
7) UNION OF SERBIA & MONTENEGRO	1	9	0	1	-89.1	0.0	0	0	0	0	0.0	0.0
2) Africa	25,039	163,622	23,129	155,085	-7.6	8.4	24,904	160,534	28,542	199,543	14.6	8.7
2.1 Southern African Customs Union (SACU)	3,804	24,816	3,786	25,385	-0.5	1.4	4,042	26,055	4,378	30,513	8.3	1.3
1) SOUTH AFRICA	3,588	23,407	3,546	23,778	-1.2	1.3	3,825	24,660	4,067	28,334	6.3	1.2
2) BOTSWANA	52	341	77	517	47.2	0.0	109	698	178	1,254	64.2	0.1
3) NAMIBIA	74	484	90	603	22.1	0.0	44	283	82	578	87.8	0.0
4) LESOTHO	30	196	33	222	10.4	0.0	32	203	30	213	-3.6	0.0
5) SWAZILAND	60	387	40	265	-34.0	0.0	33	211	19	133	-41.3	0.0

Contd....

Table 7.4 (B): Direction of Exports : Exports by Regions and Countries *(Contd.....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2.2 Other South African Countries	1,968	12,822	1,511	10,136	-23.2	0.5	1,593	10,272	1,856	13,019	16.5	0.6
1) MOZAMBIQUE	1,242	8,087	1,010	6,778	-18.7	0.4	901	5,806	1,073	7,538	19.2	0.3
2) ZAMBIA	298	1,947	237	1,589	-20.4	0.1	294	1,898	319	2,238	8.4	0.1
3) ANGOLA	223	1,454	155	1,037	-30.7	0.1	235	1,514	282	1,974	20.2	0.1
4) ZIMBABWE	205	1,333	109	731	-46.8	0.0	164	1,055	182	1,269	11.1	0.1
2.3 West Africa	6,108	39,996	5,652	37,886	-7.5	2.0	6,719	43,310	7,698	53,876	14.6	2.3
1) NIGERIA	2,222	14,523	1,764	11,826	-20.6	0.6	2,255	14,535	3,005	21,040	33.3	0.9
2) GHANA	624	4,091	681	4,566	9.2	0.2	636	4,098	717	5,007	12.8	0.2
3) TOGO	532	3,504	316	2,116	-40.7	0.1	409	2,639	694	4,871	69.8	0.2
4) SENEGAL	559	3,661	634	4,246	13.5	0.2	724	4,668	639	4,461	-11.7	0.2
5) COTE D' IVOIRE	397	2,602	419	2,812	5.4	0.2	512	3,298	449	3,148	-12.3	0.1
6) BENIN	427	2,798	448	3,001	4.8	0.2	480	3,089	427	2,987	-11.0	0.1
7) GUINEA	278	1,818	355	2,379	27.5	0.1	378	2,436	405	2,828	7.1	0.1
8) BURKINA FASO	109	716	115	771	5.7	0.0	148	957	181	1,272	22.3	0.1
9) CAMEROON	191	1,246	149	998	-22.1	0.1	194	1,250	178	1,249	-8.1	0.1
10) LIBERIA	134	874	146	979	9.3	0.1	257	1,658	179	1,249	-30.5	0.1
11) GAMBIA	60	391	62	418	4.8	0.0	120	775	157	1,097	30.3	0.0
12) CONGO P REP	167	1,089	136	910	-18.5	0.0	117	752	133	933	13.9	0.0
13) MALI	108	708	108	723	-0.2	0.0	124	796	131	915	5.7	0.0
14) MAURITANIA	58	382	66	442	13.1	0.0	83	537	116	805	39.0	0.0
15) SIERRA LEONE	91	595	94	628	2.8	0.0	94	602	112	783	20.1	0.0
16) NIGER	80	528	81	545	1.3	0.0	120	775	95	665	-21.1	0.0
17) GABON	37	242	43	290	17.8	0.0	45	291	55	386	22.4	0.0
18) EQUTL GUINEA	18	116	11	75	-35.9	0.0	11	69	12	84	10.4	0.0
19) GUINEA BISSAU	14	95	22	145	49.7	0.0	11	69	11	76	0.7	0.0
20) CAPE VERDE IS	1	9	1	8	-12.6	0.0	1	10	2	11	8.1	0.0

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Table 7.4 (B): Direction of Exports : Exports by Regions and Countries *(Contd....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
21) SAO TOME	1	6	1	6	-1.1	0.0	1	6	1	8	32.6	0.0
22) ST HELENA	0	1	0	0	-87.5	0.0	0	0	0	0	100.0	0.0
2.4 Central Africa	1,252	8,194	1,045	7,004	-16.5	0.4	1,143	7,366	1,342	9,413	17.4	0.4
1) UGANDA	570	3,731	494	3,315	-13.2	0.2	532	3,431	580	4,058	9.0	0.2
2) CONGO D. REP.	318	2,085	199	1,335	-37.3	0.1	225	1,451	303	2,123	34.6	0.1
3) MALAWI	176	1,154	178	1,195	1.3	0.1	200	1,287	202	1,418	1.0	0.1
4) RWANDA	106	690	88	590	-17.0	0.0	91	584	145	1,019	59.9	0.0
5) BURUNDI	29	190	36	240	23.8	0.0	38	245	48	341	26.9	0.0
6) CHAD	43	284	39	258	-11.4	0.0	27	176	37	263	37.3	0.0
7) C AFRI REP	9	61	10	69	12.1	0.0	30	193	27	191	-10.4	0.0
2.5 East Africa	7,312	47,772	6,729	45,131	-8.0	2.4	6,533	42,108	7,378	51,573	12.9	2.2
1) KENYA	3,026	19,778	2,194	14,715	-27.5	0.8	1,975	12,724	2,072	14,441	4.9	0.6
2) TANZANIA REP	1,655	10,800	1,784	11,967	7.8	0.6	1,619	10,440	1,704	11,925	5.3	0.5
3) MAURITIUS	856	5,572	881	5,920	3.0	0.3	1,077	6,947	1,161	8,091	7.8	0.4
4) DJIBOUTI	205	1,334	280	1,880	37.1	0.1	376	2,422	791	5,549	110.0	0.2
5) ETHIOPIA	794	5,198	774	5,186	-2.5	0.3	684	4,409	766	5,364	12.0	0.2
6) SOMALIA	487	3,190	504	3,379	3.6	0.2	456	2,935	537	3,768	17.8	0.2
7) MADAGASCAR	197	1,284	214	1,428	8.4	0.1	228	1,469	196	1,384	-13.9	0.1
8) SEYCHELLES	34	224	36	241	5.3	0.0	42	271	84	586	100.9	0.0
9) REUNION	43	279	41	276	-3.6	0.0	46	299	47	329	1.9	0.0
10) COMOROS	17	112	21	139	22.2	0.0	30	192	19	135	-34.9	0.0
2.6 North Africa	4,595	30,022	4,407	29,544	-4.1	1.6	4,874	31,423	5,890	41,150	20.8	1.8
1) EGYPT A RP	2,338	15,272	2,067	13,855	-11.6	0.7	2,392	15,421	2,887	20,154	20.7	0.9
2) ALGERIA	788	5,135	842	5,643	6.9	0.3	823	5,307	940	6,575	14.2	0.3
3) SUDAN	782	5,110	749	5,021	-4.3	0.3	823	5,303	922	6,442	12.1	0.3
4) MOROCCO	342	2,246	374	2,507	9.3	0.1	432	2,789	680	4,752	57.3	0.2

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Table 7.4 (B): Direction of Exports : Exports by Regions and Countries *(Contd.....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
5) TUNISIA	222	1,459	255	1,712	14.9	0	282	1,817	304	2,127	8.0	0
6) LIBYA	123	801	120	805	-2.1	0.0	122	787	157	1,100	28.5	0.0
3) America	52,753	345,061	54,913	368,165	4.1	19.9	62,783	404,676	68,855	481,427	9.7	20.9
3.1 North America	45,224	295,887	47,682	319,678	5.4	17.3	54,171	349,166	59,114	413,306	9.1	17.9
1) U S A	**40,340**	**263,887**	**42,216**	**283,036**	**4.7**	**15.3**	**47,882**	**308,628**	**52,422**	**366,588**	**9.5**	**15.9**
2) MEXICO	2,865	18,793	3,461	23,206	20.8	1.3	3,783	24,384	3,842	26,786	1.6	1.2
3) CANADA	2,018	13,207	2,004	13,436	-0.7	0.7	2,506	16,154	2,851	19,932	13.8	0.9
3.2 Latin America	**7,529**	**49,174**	**7,231**	**48,487**	**-4.0**	**2.6**	**8,612**	**55,510**	**9,741**	**68,121**	**13.1**	**3.0**
1) BRAZIL	2,650	17,261	2,400	16,098	-9.4	0.9	3,063	19,747	3,800	26,617	24.1	1.2
2) COLOMBIA	887	5,795	785	5,260	-11.5	0.3	939	6,054	1,117	7,811	18.9	0.3
3) CHILE	679	4,451	674	4,522	-0.7	0.2	764	4,922	990	6,912	29.6	0.3
4) PERU	703	4,596	696	4,668	-1.0	0.3	761	4,904	721	5,041	-5.2	0.2
5) ARGENTINA	537	3,510	511	3,424	-4.8	0.2	709	4,567	563	3,910	-20.6	0.2
6) GUATEMALA	256	1,676	241	1,617	-5.8	0.1	292	1,882	305	2,137	4.6	0.1
7) ECUADOR	153	1,000	198	1,326	29.1	0.1	280	1,804	298	2,079	6.5	0.1
8) PANAMA REPUBLIC	201	1,319	220	1,476	9.3	0.1	227	1,463	227	1,593	0.1	0.1
9) DOMINIC REP	175	1,149	225	1,509	28.6	0.1	197	1,269	216	1,507	9.6	0.1
10) URUGUAY	153	996	188	1,263	22.8	0.1	159	1,028	181	1,268	13.5	0.1
11) HONDURAS	155	1,014	135	904	-13.0	0.0	146	943	167	1,169	14.1	0.1
12) VENEZUELA	131	852	62	416	-52.4	0.0	79	511	165	1,154	108.0	0.1
13) PARAGUAY	98	643	125	839	27.4	0.0	168	1,086	161	1,119	-4.6	0.0
14) COSTA RICA	135	884	159	1,069	18.2	0.1	134	861	136	953	1.9	0.0
15) BOLIVIA	74	487	80	533	6.8	0.0	105	679	105	735	-0.5	0.0
16) TRINIDAD	93	607	85	567	-9.0	0.0	89	572	84	585	-5.6	0.0
17) HAITI	62	406	71	479	14.7	0.0	94	606	79	555	-15.6	0.0
18) EL SALVADOR	69	448	60	405	-11.8	0.0	69	448	79	549	13.3	0.0

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Table 7.4 (B): Direction of Exports : Exports by Regions and Countries *(Contd....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
19) JAMAICA	40	263	43	288	7.0	0.0	52	337	55	388	6.1	0.0
20) NICARAGUA	83	541	86	578	4.6	0.0	87	563	54	374	-38.3	0.0
21) VIRGIN IS US	4	28	5	36	26.0	0.0	3	19	43	300	1,375.7	0.0
22) CUBA	54	353	42	280	-23.1	0.0	42	270	35	244	-16.3	0.0
23) NETHERLANDANTIL	37	243	38	255	2.4	0.0	39	248	31	214	-20.8	0.0
24) GUYANA	22	143	20	135	-8.2	0.0	26	168	30	207	13.9	0.0
25) SURINAME	13	84	11	70	-18.4	0.0	17	112	23	157	29.9	0.0
26) BELIZE	15	95	15	102	5.0	0.0	13	87	17	119	26.0	0.0
27) BARBADOS	11	69	12	83	17.6	0.0	13	82	12	87	-2.4	0.0
28) BR VIRGN IS	1	6	0	3	-51.2	0.0	1	5	11	73	1,306.6	0.0
29) BAHAMAS	12	79	6	40	-50.4	0.0	8	52	6	43	-24.9	0.0
30) CAYMAN IS	4	23	5	32	33.9	0.0	4	26	4	30	8.7	0.0
31) ST LUCIA	3	18	4	29	61.8	0.0	4	26	4	28	-1.2	0.0
32) GRENADA	2	12	3	20	61.5	0.0	3	17	4	26	42.8	0.0
33) MARTINIQUE	4	29	4	28	-7.0	0.0	4	29	4	25	-19.0	0.0
34) GUADELOUPE	3	19	4	29	53.0	0.0	5	34	3	24	-36.1	0.0
35) BERMUDA	3	17	4	28	62.2	0.0	3	20	3	22	1.0	0.0
36) ANTIGUA	3	17	2	13	-23.0	0.0	2	14	3	19	24.9	0.0
37) ST KITT N A	2	14	3	21	40.5	0.0	3	19	2	17	-17.4	0.0
38) FR GUIANA	1	8	1	10	25.6	0.0	2	14	2	13	-12.8	0.0
39) DOMINICA	1	10	2	16	68.5	0.0	2	14	1	9	-38.1	0.0
40) ST VINCENT	1	4	1	5	41.8	0.0	1	4	1	5	5.8	0.0
41) TURKS C IS	0	1	1	5	387.5	0.0	1	7	0	2	-77.4	0.0
42) MONTSERRAT	1	6	1	4	-35.4	0	0	0	0	0	200.0	0
43) FALKLAND IS	0	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0
4) Asia	127,815	836,486	137,748	923,518	7.8	49.9	149,635	964,614	160,724	1,123,832	7.4	48.8
4.1 East Asia (Oceania)	3,667	23,972	3,369	22,585	-8.1	1.2	4,474	28,832	4,026	28,099	-10.0	1.2

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Table 7.4 (B): Direction of Exports : Exports by Regions and Countries *(Contd.....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1) AUSTRALIA	3,263	21,331	2,958	19,828	-9.4	1.1	4,012	25,857	3,522	24,571	-12.2	1.1
2) NEW ZEALAND	308	2,015	310	2,077	0.5	0.1	353	2,275	380	2,661	7.6	0.1
3) FIJI IS	44	288	53	352	19.0	0.0	54	350	61	424	12.1	0.0
4) PAPUA N GNA	39	257	36	243	-8.0	0.0	42	270	50	347	18.6	0.0
5) TIMOR LESTE	3	22	2	16	-32.5	0.0	3	21	5	37	58.4	0.0
6) SAMOA	2	15	2	12	-20.3	0.0	2	15	3	18	7.9	0.0
7) SOLOMON IS	3	18	2	15	-14.8	0.0	1	8	3	18	100.8	0.0
8) VANUATU REP	2	13	2	14	3.5	0.0	2	15	2	14	-13.2	0.0
9) NAURU RP	0	0	3	17	25,200.0	0.0	1	9	1	4	-61.0	0.0
10) KIRIBATI REP	1	6	0	3	-50.0	0.0	1	4	0	3	-32.7	0.0
11) TONGA	1	7	1	8	8.0	0.0	1	8	0	2	-72.2	0.0
12) TUVALU	0	0	0	1	33.3	0.0	0	0	0	0	-100.0	0.0
4.2 ASEAN	25,134	164,605	30,962	207,620	23.2	11.2	34,206	220,530	37,460	262,025	9.5	11.4
1) SINGAPORE	7,720	50,532	9,565	64,116	23.9	3.5	10,203	65,790	11,569	80,916	13.4	3.5
2) VIETNAM SOC REP	5,266	34,589	6,787	45,509	28.9	2.5	7,813	50,388	6,507	45,410	-16.7	2.0
3) MALAYSIA	3,707	24,160	5,225	35,050	41.0	1.9	5,702	36,738	6,432	45,072	12.8	2.0
4) INDONESIA	2,819	18,446	3,488	23,401	23.7	1.3	3,966	25,573	5,278	36,891	33.1	1.6
5) THAILAND	2,988	19,557	3,133	21,012	4.9	1.1	3,654	23,551	4,434	31,050	21.3	1.3
6) PHILIPPINES	1,353	8,872	1,483	9,933	9.5	0.5	1,693	10,910	1,744	12,189	3.0	0.5
7) MYANMAR	1,071	7,082	1,108	7,435	3.5	0.4	966	6,227	1,205	8,456	24.7	0.4
8) CAMBODIA	143	935	105	705	-26.5	0.0	121	783	196	1,371	61.4	0.1
9) BRUNEI	28	186	43	287	50.7	0.0	63	407	56	393	-11.1	0.0
10) LAO PD RP	38	246	26	172	-32.2	0.0	25	161	39	275	57.5	0.0
4.3 West Asia- GCC	41,693	272,748	41,768	279,926	0.2	15.1	39,391	253,925	41,553	290,033	5.5	12.6
1) U ARAB EMTS	30,317	198,306	31,176	208,940	2.8	11.3	28,146	181,457	30,088	209,943	6.9	9.1
2) SAUDI ARAB	6,382	41,714	5,110	34,254	-19.9	1.9	5,411	34,868	5,552	38,787	2.6	1.7
3) OMAN	2,191	14,409	2,728	18,262	24.5	1.0	2,439	15,719	2,241	15,635	-8.1	0.7

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Table 7.4 (B): Direction of Exports : Exports by Regions and Countries *(Contd....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
4) QATAR	902	5,899	785	5,262	-13.0	0.3	1,472	9,488	1,601	11,175	8.8	0.5
5) KUWAIT	1,248	8,161	1,498	10,047	20.1	0.5	1,366	8,804	1,330	9,294	-2.6	0.4
6) BAHARAIN IS	654	4,259	472	3,163	-27.9	0.2	557	3,589	740	5,199	32.9	0.2
4.4 Other West Asia	7,883	51,561	7,879	52,833	0.0	2.9	8,993	57,960	10,830	75,585	20.4	3.3
1) ISRAEL	2,821	18,467	3,087	20,698	9.4	1.1	3,364	21,687	3,787	26,432	12.6	1.1
2) IRAN	2,782	18,177	2,380	15,955	-14.4	0.9	2,652	17,094	3,511	24,461	32.4	1.1
3) IRAQ	1,004	6,550	1,111	7,456	10.7	0.4	1,462	9,423	1,789	12,507	22.3	0.5
4) YEMEN REPUBLC	400	2,635	446	2,990	11.6	0.2	563	3,632	741	5,169	31.6	0.2
5) JORDAN	500	3,265	522	3,504	4.5	0.2	541	3,478	579	4,058	7.0	0.2
6) LEBANON	240	1,571	211	1,412	-12.1	0.1	257	1,657	269	1,878	4.5	0.1
7) SYRIA	137	896	122	817	-11.0	0.0	153	989	155	1,081	0.8	0.0
4.5 NE Asia	30,845	201,898	34,548	231,643	12.0	12.5	39,471	254,443	41,938	293,878	6.3	12.7
1) CHINA P RP	9,015	58,960	10,172	68,254	12.8	3.7	13,334	86,000	16,750	117,275	25.6	5.1
2) HONG KONG	12,092	79,307	14,047	94,115	16.2	5.1	14,690	94,677	12,963	90,838	-11.8	3.9
3) JAPAN	4,663	30,436	3,846	25,787	-17.5	1.4	4,735	30,509	4,861	34,006	2.7	1.5
4) KOREA RP	3,525	23,051	4,243	28,444	20.4	1.5	4,462	28,759	4,706	32,882	5.5	1.4
5) TAIWAN	1,429	9,347	2,184	14,667	52.8	0.8	2,157	13,903	2,608	18,520	20.9	0.8
6) KOREA DP RP	111	730	45	301	-59.6	0.0	58	372	27	191	-53.1	0.0
7) MONGOLIA	8	55	10	66	15.9	0.0	20	132	23	158	11.3	0.0
8) MACAO	2	13	2	10	-23.4	0.0	14	89	1	7	-92.4	0.0
4.6 South Asia	18,594	121,701	19,222	128,911	3.4	7.0	23,101	148,924	24,917	174,212	7.9	7.6
1) BANGLADESH PR	6,035	39,527	6,820	45,741	13.0	2.5	8,615	55,538	8,933	62,441	3.7	2.7
2) NEPAL	3,903	25,552	5,454	36,580	39.7	2.0	6,613	42,624	7,616	53,248	15.2	2.3
3) SRI LANKA DSR	5,311	34,660	3,913	26,233	-26.3	1.4	4,476	28,870	4,707	32,974	5.2	1.4
4) PAKISTAN IR	2,171	14,287	1,822	12,222	-16.1	0.7	1,924	12,397	2,067	14,427	7.4	0.6
5) AFGHANISTAN TIS	527	3,436	506	3,397	-3.8	0.2	710	4,577	715	4,992	0.8	0.2

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Table 7.4 (B): Direction of Exports : Exports by Regions and Countries

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
6) BHUTAN	469	3,068	509	3,414	8.6	0.2	546	3,520	656	4,584	20.2	0.2
7) MALDIVES	179	1,171	198	1,325	10.5	0.1	217	1,399	221	1,544	2.0	0.1
5) CIS & Baltics	2,392	15,670	2,794	18,729	16.8	1.0	3,007	19,386	3,467	24,283	15.3	1.1
5.1 CARs Countries	362	2,368	338	2,267	-6.7	0.1	365	2,353	442	3,107	21.3	0.1
1) UZBEKISTAN	95	618	109	729	15.1	0.0	133	856	201	1,417	51.8	0.1
2) KAZAKHSTAN	152	994	121	811	-20.4	0.0	125	808	143	1,004	14.2	0.0
3) TURKMENISTAN	69	447	58	387	-15.9	0.0	54	350	46	320	-16.0	0.0
4) KYRGHYZSTAN	25	164	30	204	21.2	0.0	29	184	30	210	5.0	0.0
5) TAJIKISTAN	22	145	20	137	-8.2	0.0	24	154	22	156	-6.9	0.0
5.2 Other CIS Countries	2,029	13,302	2,456	16,462	21.0	0.9	2,642	17,033	3,025	21,176	14.5	0.9
1) RUSSIA	1,588	10,409	1,937	12,985	22.0	0.7	2,113	13,622	2,390	16,729	13.1	0.7
2) UKRAINE	259	1,697	310	2,080	19.7	0.1	330	2,128	391	2,736	18.4	0.1
3) GEORGIA	83	542	91	609	10.1	0.0	77	498	110	774	42.9	0.0
4) BELARUS	36	235	40	269	12.4	0.0	48	307	56	390	17.1	0.0
5) AZERBAIJAN	33	218	40	271	20.6	0.0	34	217	43	306	29.0	0.0
6) ARMENIA	23	150	30	203	33.1	0.0	33	215	26	181	-22.0	0.0
7) MOLDOVA	8	51	7	45	-14.1	0.0	7	46	9	60	20.9	0.0
6) Unspecified Region	3,879	25,413	3,941	26,417	1.6	1.4	2,851	18,381	3,567	24,940	25.1	1.1
Total	**262291**	**1716384**	**275852**	**1849434**	**5.2**	**100.0**	**303526**	**1956515**	**329536**	**2307663**	**8.8**	**100.0**

Source: D/o Commerce based on DGCI&S data.
P : Provisional.

Table 7.5. India's Share in World Exports by Commodity Divisions and Groups

(US $ million)

Div. Sl. No.	Code Group	Commodity Division/Group	1980			1985		
			World	India	India's share (%)	World	India	India's share (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
01		Meat and meat preparations	17832	67	0.4	15755	61	0.4
03		Fish, crustaceans and molluscs & preparations	12258	242	2.0	14335	337	2.4
04		Cereals and cereal preparations	41989	201	0.5	32643	211	0.6
	042	Rice	4355	160	3.7	2916	162	5.6
05		Vegetables and fruits	24018	259	1.1	23606	332	1.4
06		Sugar, sugar preparations and honey	16183	46	0.3	10113	0	0.0
07		Coffee, tea, cocoa, spices and manufactures	22121	879	4.0	20779	971	4.7
	071	Coffee and coffee substitutes	12979	271	2.1	11676	226	1.9
	074	Tea and mate	1631	452	27.7	1973	517	26.2
	075	Spices	1072	156	14.5	1188	229	19.3
08		Feeding stuff for animals	10322	164	1.6	8515	127	1.5
12		Tobacco and tobacco manufactures	3423	151	4.4	7822	140	1.8
	121	Unmanufactured tobacco and refuse	3423	151	4.4	3798	113	3.0
	122	Manufactured tobacco	…	…	…	4024	27	0.7
22		Oilseeds and oleaginous fruit	9487	30	0.3	7896	20	0.3
28		Metalliferous ores and metal scrap	30239	465	1.5	23137	557	2.4
	281	Iron ore and concentrates	6515	411	6.3	6154	478	7.8
51		Organic chemicals	31841	17	0.1	36923	25	0.1
52		Inorganic chemicals	15491	26	0.2	16318	22	0.1
53		Dyeing, tanning and colouring materials	7986	65	0.8	8024	62	0.8
54	541	Medicinal and pharmaceutical products	13918	109	0.8	15920	130	0.8
55		Essential oils and perfume materials soap, cleansing etc.	7647	86	1.1	8136	56	0.7
58		Artificial resins, plastic materials, cellulose esters & ethers	27223	3	0.0	28456	5	0.0
59		Chemical materials and products n.e.s.	15960	8	0.0	16613	28	0.2
61		Leather, leather manufactures & dressed fur skins	5967	405	6.8	6444	534	8.3
	611	Leather	3415	342	10.0	4185	331	7.9
	612	Manufactures of leather or of composition leather	975	62	6.3	1233	202	16.4
	613	Fur skins,tanned or dressed etc.	1577	1	0.1	1026	0	0.0
65		Textile yarn, fabrics, made-up articles	48884	1145	2.3	48218	1037	2.1
	652	Woven cotton fabrics	6632	351	5.3	6804	327	4.8
	653	Woven fabrics of man made fibres	9325	44	0.5	9735	20	0.2
	654	Woven fabrics other than of cotton or man-made fibres	3188	204	6.4	3462	167	4.8
66	667	Pearls, precious and semi-precious stones	18563	579	3.1	12073	1165	9.6
67		Iron and steel	68231	87	0.1	61891	46	0.1
69		Manufactures of metals n.e.s.	36840	221	0.6	32884	125	0.4
71		Power-generating machinery & equipment	35722	88	0.2	38433	59	0.2
72		Machinery specialized for particular industries	58495	65	0.1	54707	97	0.2
73		Metal-working machinery	15671	32	0.2	12696	55	0.4
74		General industrial machinery & equipment & machine parts thereof	59443	67	0.1	53954	60	0.1
75		Office machinery and ADP equipment	24750	2	0.0	53604	30	0.1
76		Telecommunication and sound recording and reproducing apparatus and equipment	26799	11	0.0	47318	4	0.0
77		Electrical machinery, apparatus and appliances	60947	114	0.2	75739	121	0.2
78		Road vehicles (including air cushion vehicles)	127347	208	0.2	157446	126	0.1
79		Other transport equipment	41291	32	0.1	50709	27	0.1
84		Articles of apparel and clothing accessories	32365	590	1.8	38718	887	2.3
		Total Exports	**1997686**	**8486**	**0.4**	**1930849**	**8904**	**0.5**

Contd....

Table 7.5. India's Share in World Exports by Commodity Divisions and Groups *(Contd....)*

(US $ million)

Div. Sl. No.	Code Group	Commodity Division/Group	1990			2000		
			World	India	India's share (%)	World	India	India's share (%) share (%)
(1)	(2)	(3)	(10)	(11)	(12)	(13)	(14)	(15)
01		Meat and meat preparations	34118	77	0.2	44690	324	0.7
03		Fish, crustaceans and molluscs & preparations	32847	521	1.6	50875	1391	2.7
04		Cereals and cereal preparations	45314	285	0.6	53575	783	1.5
	042	Rice	3995	254	6.4	6411	654	10.2
05		Vegetables and fruits	50225	400	0.8	68355	856	1.3
06		Sugar, sugar preparations and honey	14236	21	0.1	13866	118	0.9
07		Coffee, tea, cocoa, spices and manufactures	21131	842	4.0	27953	956	3.4
	071	Coffee and coffee substitutes	8659	148	1.7	11559	264	2.3
	074	Tea and mate	2650	585	22.1	3087	431	14.0
	075	Spices	1415	109	7.7	2541	261	10.3
08		Feeding stuff for animals	15603	336	2.2	20295	469	2.3
12		Tobacco and tobacco manufactures	17860	145	0.8	21628	147	0.7
	121	Unmanufactured tobacco and refuse	5187	107	2.1	5525	147	2.7
	122	Manufactured tobacco	12674	39	0.3	16103	0	0.0
22		Oilseeds and oleaginous fruit	10477	83	0.8	14388	244	1.7
28		Metalliferous ores and metal scrap	35734	753	2.1	49515	510	1.0
	281	Iron ore and concentrates	7653	578	7.6	9229	363	3.9
51		Organic chemicals	70721	232	0.3	134109	1491	1.1
52		Inorganic chemicals	26079	59	0.2	33117	99	0.3
53		Dyeing, tanning and colouring materials	19952	233	1.2	34105	481	1.4
54	541	Medicinal and pharmaceutical products	37753	453	1.2	107482	1255	1.2
55		Essential oils and perfume materials soap, cleansing etc.	21027	240	1.1	44279	216	0.5
58		Artificial resins, plastic materials, cellulose esters & ethers	65712	29	0.0	123353	174	0.1
59		Chemical materials and products n.e.s.	33418	76	0.2	63411	437	0.7
61		Leather, leather manufactures & dressed fur skins	13226	832	6.3	24440	808	3.3
	611	Leather	9295	447	4.8	16551	388	2.3
	612	Manufactures of leather or of composition leather	2868	385	13.4	6831	421	6.2
	613	Fur skins,tanned or dressed etc.	1063	0	0.0	1058	0	0.0
65		Textile yarn, fabrics, made-up articles	105147	2180	2.1	167528	6000	3.6
	652	Woven cotton fabrics	15559	571	3.7	22387	1103	4.9
	653	Woven fabrics of man made fibres	22021	156	0.7	32151	506	1.6
	654	Woven fabrics other than of cotton or man-made fibres	8466	195	2.3	9432	370	3.9
66	667	Pearls, precious and semi-precious stones	27577	2710	9.8	54105	6477	12.0
67		Iron and steel	106342	283	0.3	146147	1481	1.0
69		Manufactures of metals n.e.s.	66088	341	0.5	125259	1167	0.9
71		Power-generating machinery & equipment	81675	126	0.2	158329	218	0.1
72		Machinery specialized for particular industries	118617	236	0.2	167582	346	0.2
73		Metal-working machinery	31051	58	0.2	41413	117	0.3
74		General industrial machinery & equipment & machine parts thereof	130836	132	0.1	225981	78	0.0
75		Office machinery and ADP equipment	126743	112	0.1	378980	0	0.0
76		Telecommunication and sound recording and reproducing apparatus and equipment	100965	31	0.0	299356	0	0.0
77		Electrical machinery, apparatus and appliances	185364	241	0.1	640575	92	0.0
78		Road vehicles (including air cushion vehicles)	312550	344	0.1	549596	370	0.1
79		Other transport equipment	96250	15	0.0	157654	53	0.0
84		Articles of apparel and clothing accessories	94577	2211	2.3	201379	7093	3.5
		Total Exports	**3303563**	**18143**	**0.5**	**6254511**	**41543**	**0.7**

Contd....

Table 7.5. India's Share in World Exports by Commodity Divisions and Groups *(Contd....)*

(US $ million)

Div. Sl. No.	Code Group	Commodity Division/Group	2005			2010		
			World	India	India's share (%)	World	India	India's share (%)
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)
01		Meat and meat preparations	73937	620	0.8	112000	1821	1.6
03		Fish, crustaceans and molluscs & preparations	71559	1590	2.2	101800	2403	2.4
04		Cereals and cereal preparations	72416	1753	2.4	94300	3136	3.3
	042	Rice	9841	1411	14.3	20300	2296	11.3
05		Vegetables and fruits	114274	1586	1.4	180700	2338	1.3
06		Sugar, sugar preparations and honey	24042	196	0.8	45500	1096	2.4
07		Coffee, tea, cocoa, spices and manufactures	44914	1042	2.3	80700	2233	2.8
	071	Coffee and coffee substitutes	15729	363	2.3	29600	558	1.9
	074	Tea and mate	4159	393	9.4	7200	720	10.0
	075	Spices	2995	281	9.4	6000	927	15.4
08		Feeding stuff for animals	30390	1127	3.7	57600	2067	3.6
12		Tobacco and tobacco manufactures	24759	232	0.9	35100	879	2.5
	121	Unmanufactured tobacco and refuse	6875	0	0.0	10800	713	6.6
	122	Manufactured tobacco	17884	0	0.0	24300	165	0.7
22		Oilseeds and oleaginous fruit	22888	319	1.4	56400	911	1.6
28		Metalliferous ores and metal scrap	124604	4899	3.9	299000	8475	2.8
	281	Iron ore and concentrates	27673	3816	13.8	105200	6147	5.8
51		Organic chemicals	217584	4536	2.1	335000	7735	2.3
52		Inorganic chemicals	55240	0	0.0	92200	972	1.1
53		Dyeing, tanning and colouring materials	50885	846	1.7	66300	1604	2.4
54	541	Medicinal and pharmaceutical products	67107	564	0.8	134700	1357	1.0
55		Essential oils and perfume materials soap, cleansing etc.	82162	511	0.6	122900	1159	0.9
58		Artificial resins, plastic materials, cellulose esters & ethers	72911	0	0.0	108400	910	0.8
59		Chemical materials and products n.e.s.	106894	1153	1.1	174100	2136	1.2
61		Leather, leather manufactures & dressed fur skins	25347	773	3.1	28200	915	3.2
	611	Leather	20500	638	3.1	23500	785	3.3
	612	Manufactures of leather or of composition leather	3125	0	0.0	3100	130	4.2
	613	Fur skins,tanned or dressed etc.	1722	0.0	0.0	1600	0.0	0.0
65		Textile yarn, fabrics, made-up articles	213619	8462	4.0	259700	12833	4.9
	652	Woven cotton fabrics	28814	861	3.0	28600	1050	3.7
	653	Woven fabrics of man made fibres	32121	981	3.1	36200	1987	5.5
	654	Woven fabrics other than of cotton or man-made fibres	11076	495	4.5	9900	518	5.2
66	667	Pearls, precious and semi-precious stones	91907	11929	13.0	129500	22589	17.4
67		Iron and steel	312975	4959	1.6	416400	10612	2.5
69		Manufactures of metals n.e.s.	215402	2774	1.3	301800	4169	1.4
71		Power-generating machinery & equipment	252199	926	0.4	330700	2335	0.7
72		Machinery specialized for particular industries	264538	1125	0.4	364800	2230	0.6
73		Metal-working machinery	63925	268	0.4	69400	381	0.5
74		General industrial machinery & equipment & machine parts thereof	375374	1825	0.5	527900	3886	0.7
75		Office machinery and ADP equipment	488065	470	0.1	572700	619	0.1
76		Telecommunication and sound recording and reproducing apparatus and equipment	492806	0	0.0	626200	2408	0.4
77		Electrical machinery, apparatus and appliances	852088	2126	0.2	1240100	5522	0.4
78		Road vehicles (including air cushion vehicles)	896733	3088	0.3	1063500	8746	0.8
79		Other transport equipment	214311	1023	0.5	333500	5804	1.7
84		Articles of apparel and clothing accessories	286840	9212	3.2	372000	11229	3.0
		Total Exports	**10355384**	**99618**	**1.0**	**15102605**	**226334**	**1.5**

Contd....

Table 7.5. India's Share in World Exports by Commodity Divisions and Groups *(Contd....)*

(US $ million)

Div. Sl. No.	Code Group	Commodity Division/Group	2014			2015		
			World	India	India's share (%)	World	India	India's share (%)
(1)	(2)	(3)	(22)	(23)	(24)	(25)	(26)	(27)
01		Meat and meat preparations	151600	5079	3.4	132000	4347	3.3
03		Fish, crustaceans and molluscs & preparations	138400	5500	4.0	124200	4778	3.8
04		Cereals and cereal preparations	130900	10598	8.1	119700	7380	6.2
	042	Rice	26400	7906	29.9	23200	6380	27.5
05		Vegetables and fruits	233900	3305	1.4	229800	3176	1.4
06		Sugar, sugar preparations and honey	49000	1386	2.8	42700	1529	3.6
07		Coffee, tea, cocoa, spices and manufactures	106000	3238	3.1	102500	3407	3.3
	071	Coffee and coffee substitutes	39200	843	2.2	37400	813	2.2
	074	Tea and mate	9100	694	7.6	8400	713	8.5
	075	Spices	9700	1575	16.2	10300	1701	16.5
08		Feeding stuff for animals	84800	2043	2.4	73900	1066	1.4
12		Tobacco and tobacco manufactures	45200	957	2.1	40100	935	2.3
	121	Unmanufactured tobacco and refuse	12000	688	5.7	11100	639	5.8
	122	Manufactured tobacco	33200	269	0.8	29000	296	1.0
22		Oilseeds and oleaginous fruit	85100	1837	2.2	72800	1408	1.9
28		Metalliferous ores and metal scrap	318300	2217	0.7	233700	1543	0.7
	281	Iron ore and concentrates	116900	874	0.7	68900	211	0.3
51		Organic chemicals	395200	10967	2.8	335600	10124	3.0
52		Inorganic chemicals	101400	908	0.9	90300	813	0.9
53		Dyeing, tanning and colouring materials	77300	2886	3.7	68600	2452	3.6
54	541	Medicinal and pharmaceutical products	189500	2243	1.2	186300	2339	1.3
55		Essential oils and perfume materials soap, cleansing etc.	161100	1905	1.2	149500	1833	1.2
58		Artificial resins, plastic materials, cellulose esters & ethers	135200	1272	0.9	123400	1223	1.0
59		Chemical materials and products n.e.s.	223600	3355	1.5	199100	3156	1.6
61		Leather, leather manufactures & dressed fur skins	34400	1603	4.7	29700	1312	4.4
	611	Leather	27400	1361	5.0	23000	1095	4.8
	612	Manufactures of leather or of composition leather	4600	243	5.3	4700	216	4.6
	613	Fur skins,tanned or dressed etc.	2400	0	0.0	2000	1	0.0
65		Textile yarn, fabrics, made-up articles	320200	18266	5.7	297400	17263	5.8
	652	Woven cotton fabrics	32300	1861	5.8	29700	1771	6.0
	653	Woven fabrics of man made fibres	47700	2152	4.5	45100	2091	4.6
	654	Woven fabrics other than of cotton or man-made fibres	10800	322	3.0	9700	301	3.1
66	667	Pearls, precious and semi-precious stones	161900	24402	15.1	139800	22395	16.0
67		Iron and steel	467100	11540	2.5	376400	8289	2.2
69		Manufactures of metals n.e.s.	402000	7953	2.0	371800	7113	1.9
71		Power-generating machinery & equipment	410900	3991	1.0	372600	3637	1.0
72		Machinery specialized for particular industries	428400	4233	1.0	378100	4101	1.1
73		Metal-working machinery	90500	512	0.6	78700	527	0.7
74		General industrial machinery & equipment & machine parts thereof	695100	6137	0.9	633300	6179	1.0
75		Office machinery and ADP equipment	604100	528	0.1	534300	590	0.1
76		Telecommunication and sound recording and reproducing apparatus and equipment	785600	2036	0.3	775500	1315	0.2
77		Electrical machinery, apparatus and appliances	1500800	6218	0.4	1449900	5975	0.4
78		Road vehicles (including air cushion vehicles)	1374300	13519	1.0	1300400	13079	1.0
79		Other transport equipment	378500	11405	3.0	372600	7923	2.1
84		Articles of apparel and clothing accessories	496100	17650	3.6	470200	18168	3.9
		Total Exports	**18671016.9**	**317544.6**	**1.7**	**16205368.1**	**264381.0**	**1.6**

Contd....

Table 7.5. India's Share in World Exports by Commodity Divisions and Groups *(Contd....)*

(US $ million)

Div. Sl. No.	Code Group	Commodity Division/Group	2016			2017		
			World	India	India's share (%)	World	India	India's share (%)
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)
01		Meat and meat preparations	131200	3975	3.0	143324	4310	3.0
03		Fish, crustaceans and molluscs & preparations	133300	5499	4.1	145034	7041	4.9
04		Cereals and cereal preparations	115900	6096	5.3	123631	7883	6.4
	042	Rice	20800	5316	25.6	24068	7076	29.4
05		Vegetables and fruits	238300	3269	1.4	253331	3873	1.5
06		Sugar, sugar preparations and honey	47100	1769	3.8	50037	1275	2.5
07		Coffee, tea, cocoa, spices and manufactures	102600	3493	3.4	108534	3863	3.6
	071	Coffee and coffee substitutes	37300	844	2.3	39607	968	2.4
	074	Tea and mate	8600	705	8.2	9257	819	8.8
	075	Spices	10400	1766	17.0	11296	1915	17.0
08		Feeding stuff for animals	70800	775	1.1	73156	1455	2.0
12		Tobacco and tobacco manufactures	40500	1012	2.5	41413	930	2.2
	121	Unmanufactured tobacco and refuse	11300	671	5.9	11244	613	5.4
	122	Manufactured tobacco	29200	341	1.2	30169	317	1.1
22		Oilseeds and oleaginous fruit	74300	1352	1.8	81696	1375	1.7
28		Metalliferous ores and metal scrap	225800	2095	0.9	285054	2890	1.0
	281	Iron ore and concentrates	71000	1005	1.4	92432	1651	1.8
51		Organic chemicals	315500	10083	3.2	352908	12320	3.5
52		Inorganic chemicals	81600	854	1.0	92080	1134	1.2
53		Dyeing, tanning and colouring materials	69400	2459	3.5	76443	2768	3.6
54	541	Medicinal and pharmaceutical products	187100	2427	1.3	196955	2229	1.1
55		Essential oils and perfume materials	155200	1951	1.3	170888	2266	1.3
		soap, cleansing etc.						
58		Artificial resins, plastic materials,	122100	1187	1.0	132385	1366	1.0
		cellulose esters & ethers						
59		Chemical materials and products n.e.s.	199000	3279	1.6	218106	3762	1.7
61		Leather, leather manufactures & dressed fur skins	26300	1118	4.3	30997	1095	3.5
	611	Leather	20300	908	4.5	24666	882	3.6
	612	Manufactures of leather or of composition leather	4900	210	4.3	4991	214	4.3
	613	Fur skins,tanned or dressed etc.	1100	0	0.0	1340	0	0.0
65		Textile yarn, fabrics, made-up articles	286700	16121	5.6	300104	17078	5.7
	652	Woven cotton fabrics	27800	1622	5.8	27644	1662	6.0
	653	Woven fabrics of man made fibres	42900	1740	4.1	43624	1794	4.1
	654	Woven fabrics other than of cotton or man-made fibres	9100	283	3.1	9026	260	2.9
66	667	Pearls, precious and semi-precious stones	144400	24566	17.0	141573	25328	17.9
67		Iron and steel	339400	8245	2.4	408993	13905	3.4
69		Manufactures of metals n.e.s.	358100	6546	1.8	386331	7065	1.8
71		Power-generating machinery & equipment	375200	4205	1.1	400246	5780	1.4
72		Machinery specialized for particular industries	371900	3866	1.0	442816	4428	1.0
73		Metal-working machinery	73600	561	0.8	74580	522	0.7
74		General industrial machinery & equipment & machine parts thereof	622900	6115	1.0	667079	7015	1.1
75		Office machinery and ADP equipment	498700	538	0.1	705947	1013	0.1
76		Telecommunication and sound recording and reproducing apparatus and equipment	753200	1475	0.2	641180	973	0.2
77		Electrical machinery, apparatus and appliances	1455400	6077	0.4	1631879	6631	0.4
78		Road vehicles (including air cushion vehicles)	1324200	14098	1.1	1423793	15302	1.1
79		Other transport equipment	358400	6422	1.8	365808	7216	2.0
84		Articles of apparel and clothing accessories	455100	17932	3.9	473772	18313	3.9
		Total Exports	**15628916.4**	**260326.9**	**1.7**	**17033133.5**	**294364.5**	**1.7**

Source: Various issues of United Nations' International Trade Statistics Year Book, and http://comtrade.un.org/

Table 7.6. Index Numbers of Foreign Trade

(Base : 1999-2000=100)

Year	Unit Value Index		Volume Index			Terms of Trade	
	Exports	Imports	Exports	Imports	Gross	Net	Income
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2000-01	102	109	125	99	79	94	117
2001-02	103	112	126	103	82	92	116
2002-03	106	128	150	109	73	83	124
2003-04	114	132	161	128	80	86	139
2004-05	131	157	179	150	84	83	149
2005-06	139	179	206	174	84	78	160
2006-07	158	206	227	191	84	77	174
2007-08	166	210	245	218	89	79	194
2008-09	194	239	267	262	98	81	217
2009-10	196	215	264	288	109	91	241
2010-11	223	243	304	311	102	92	279
2011-12	268	425	331	246	79	67	222
2012-13	284	459	357	261	73	62	221
2013-14	312	518	378	233	62	60	228
2014-15	300	518	397	235	59	58	230
2015-16	372	518	290	214	74	72	208
2016-17	372	523	313	220	70	71	223
2017-18	376	513	322	260	81	73	236
2018-19 (Q3)	402	600	364	289	79	67	244

Source: DGCI&S, Kolkata

Notes:

1. Net terms of trade, i.e., the ratio of overall export unit value index to similar Import index.
2. Gross terms of trade, i.e., the ratio of overall import quantum Index to similar export index.
3. Income terms of trade = (NTT x QIE)/100
4. QIE = Quantum Index of Exports.

Table 8.1(A). Overall External Assistance

(₹ crore)

Year	Loans	Grants	Total (2+3)
(1)	(2)	(3)	(4)
A. Authorization			
1985-86	5337.0	313.4	5650.4
1986-87	5730.0	429.5	6159.5
1987-88	8203.1	1062.2	9265.3
1988-89	12855.6	214.2	13069.8
1989-90	10105.8	720.2	10826.0
1990-91	7601.3	522.1	8123.4
1991-92	11805.8	901.8	12707.6
1992-93	13082.1	1011.7	14093.8
1993-94	11618.8	2415.1	14033.9
1994-95	12384.3	1075.8	13460.1
1995-96	10833.2	1330.0	12163.2
1996-97	14208.8	2932.6	17141.4
1997-98	14865.0	2101.0	16966.0
1998-99	8320.8	209.8	8530.6
1999-2000	17703.7	2615.3	20319.0
2000-01	16455.2	1963.5	18418.7
2001-02	21630.0	3465.0	25095.0
2002-03	19875.7	1296.1	21171.8
2003-04	14754.4	2350.7	17105.1
2004-05	22746.1	3071.1	25817.2
2005-06	17309.1	1628.8	18937.9
2006-07	28271.0	3518.9	31789.9
2007-08	28988.4	4294.4	33282.8
2008-09	28283.4	1242.5	29525.9
2009-10	48968.8	957.6	49926.4
2010-11	35895.1	1536.5	37431.6
2011-12	59035.3	1095.5	60130.8
2012-13	66891.6	1889.0	68780.6
2013-14	54372.6	140.2	54512.8
2014-15	48135.5	119.7	48255.2
2015-16	64208.0	3655.2	67863.2
2016-17	62650.4	249.5	62899.9
2017-18	61212.6	2531.4	63744.0
2018-19	83636.9	1587.6	85224.4
B. Utilization			
1985-86	2493.1	442.9	2936.0
1986-87	3175.7	429.3	3605.0
1987-88	4574.4	477.5	5051.9
1988-89	4738.6	565.8	5304.4
1989-90	5137.8	664.7	5802.5

Contd....

Table 8.1(A). Overall External Assistance

(₹ crore)

Year	Loans	Grants	Total (2+3)
(1)	(2)	(3)	(4)
1990-91	6170.0	534.3	6704.3
1991-92	10695.9	919.1	11615.0
1992-93	10102.2	879.6	10981.8
1993-94	10895.4	885.6	11781.0
1994-95	9964.5	916.0	10880.5
1995-96	9958.6	1063.6	11022.2
1996-97	10892.9	1085.6	11978.5
1997-98	10823.4	921.3	11744.7
1998-99	12343.4	895.5	13238.9
1999-2000	13330.7	1073.9	14404.6
2000-01	13527.2	727.2	14254.4
2001-02	16111.7	1447.6	17559.3
2002-03	13898.3	1835.8	15734.1
2003-04	15271.0	2073.4	17344.4
2004-05	14660.9	2490.7	17151.6
2005-06	16097.8	2790.6	18888.4
2006-07	16890.6	2528.4	19419.0
2007-08	17177.7	2673.7	19851.4
2008-09	24089.9	2803.8	26893.7
2009-10	27617.8	3121.2	30739.0
2010-11	35116.1	2789.5	37905.6
2011-12	29349.4	2926.2	32275.6
2012-13	25494.1	2373.6	27867.7
2013-14	31772.4	3415.8	35187.5
2014-15	35257.3	1491.7	36749.0
2015-16	40369.4	2197.0	42566.4
2016-17	47665.0	990.5	48655.5
2017-18	49969.1	1424.1	51393.2
2018-19	60434.4	816.0	61250.4

Source : Aid Accounts and Audit Division, Department of Economic Affairs, Ministry of Finance.

Notes :

1. Figures of authorization have been arrived at by applying the average exchange rate of the rupee with individual donor currencies.
2. Figures of utilization are at current rates applicable on the date of transaction.
3. Figures of authorization and utilization include loans and grants on both Government and Non-Government accounts.
4. Totals may not tally due to rounding off.

Table 8.1(B). Overall External Assistance

(US$ million)

Year	Loans	Grants	Total (2+3)
(1)	(2)	(3)	(4)
A. Authorization			
1985-86	4362.1	256.2	4618.3
1986-87	4484.2	336.1	4820.3
1987-88	6326.7	819.2	7145.9
1988-89	8877.0	147.9	9024.9
1989-90	6069.9	432.6	6502.5
1990-91	4236.4	291.0	4527.4
1991-92	4766.0	364.1	5130.1
1992-93	4275.7	330.7	4606.4
1993-94	3717.5	772.7	4490.2
1994-95	3958.2	343.8	4302.0
1995-96	3249.8	399.0	3648.8
1996-97	4000.4	825.6	4826.0
1997-98	4006.8	566.3	4573.1
1998-99	1979.2	49.9	2029.1
1999-2000	4091.4	604.4	4695.8
2000-01	3609.4	430.7	4040.1
2001-02	4438.7	711.1	5149.8
2002-03	4183.5	244.4	4427.9
2003-04	3300.8	525.9	3826.7
2004-05	5212.2	703.7	5915.9
2005-06	3912.2	368.1	4280.4
2006-07	6209.8	773.0	6982.8
2007-08	7182.2	1064.0	8246.1
2008-09	6183.2	271.6	6454.9
2009-10	10318.0	201.8	10519.8
2010-11	7881.0	337.4	8218.3
2011-12	12343.4	229.1	12572.5
2012-13	12301.0	347.4	12648.3
2013-14	9003.7	23.2	9027.0
2014-15	7881.8	19.6	7901.4
2015-16	9818.2	558.9	10377.1
2016-17	9324.9	37.1	9362.0
2017-18	9501.0	392.9	9893.9
2018-19	11987.5	227.5	12215.1
B. Utilization			
1985-86	2037.7	362.0	2399.7
1986-87	2485.3	336.0	2821.3
1987-88	3528.0	368.2	3896.2
1988-89	3272.1	390.7	3662.8
1989-90	3086.0	399.2	3485.2

Contd....

Table 8.1(B). Overall External Assistance

(US$ million)

Year	Loans	Grants	Total (2+3)
(1)	(2)	(3)	(4)
1990-91	3438.7	297.8	3736.5
1991-92	4317.9	371.0	4688.9
1992-93	3301.8	287.5	3589.3
1993-94	3486.0	283.4	3769.4
1994-95	3184.8	292.7	3477.5
1995-96	2987.4	319.1	3306.4
1996-97	3066.8	305.6	3372.4
1997-98	2917.4	248.3	3165.7
1998-99	2936.0	213.0	3149.0
1999-00	3080.8	248.2	3329.0
2000-01	2967.2	159.5	3126.7
2001-02	3306.3	297.1	3603.4
2002-03	2946.6	386.6	3333.2
2003-04	3416.3	463.8	3880.1
2004-05	3359.5	570.7	3930.2
2005-06	3607.0	625.3	4232.3
2006-07	3918.0	586.5	4265.5
2007-08	4280.5	666.3	4946.8
2008-09	4769.3	555.1	5324.4
2009-10	6130.5	692.8	6823.3
2010-11	7866.5	624.9	8491.4
2011-12	6060.2	590.1	6650.3
2012-13	4715.1	439.0	5154.1
2013-14	5282.9	567.8	5850.7
2014-15	5634.2	238.4	5872.6
2015-16	6068.0	330.2	6398.3
2016-17	7341.5	152.6	7494.1
2017-18	7752.8	220.8	7973.6
2018-19	8619.3	115.9	8735.2

Source : Aid Accounts and Audit Division, Department of Economic Affairs, Ministry of Finance.

Notes :

1. Figures in this table are converted from the preceding Table 8.1(A) based on the respective Rupee-US dollar rate.
2. Totals may not tally due to rounding off.

Table 8.2 (A). Authorization of External Assistance by Source

(₹ crore)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I. Consortium Members								
(a) Loans	11189.6	59893.3	35842.5	37464.7	52429.6	41070.1	44238.7	53871.9
(b) Grants	1912.3	813.0	93.3	98.0	3.1	215.9	475.5	52.6
Total	13101.9	60706.3	35935.9	37562.7	52432.7	41286.0	44714.2	53924.4
Country-wise Distribution								
(i) Austria								
Loans	...	...	...	...	...	...		
(ii) Belgium								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(iii) Canada								
(a) Loans	...	...	...	...	...	...		
(b) Grants	20.5	...	...	...	...	...		
Total	20.5	...	...	...	...	...		
(iv) Denmark								
Grants	15.6	...	...	...	...	...		
(v) France								
(a) Loans					1805.0	957.3	1846.2	1982.2
(b) Grants	9.3	769.8	1645.2	...			45.2	0.0
(vi) Germany								
(a) Loans	187.7	3240.2	1215.7	5659.1	1783.4	10487.7	1145.4	970.9
(b) Grants	5.7	38.5	...	21.3	...	...	54.3	52.6
Total	193.4	3278.7	1215.7	5680.4	1783.4	10487.7	1199.6	1023.5
(vii) Italy								
Loans	42.6	...	...	...	...			
(viii) Japan								
(a) Loans	784.1	23049.8	18818.6	6756.1	17337.0	10178.7	23163.0	30373.4
(b) Grants	2.2	...	90.3				204.4	0.0
Total	786.3	23049.8	18909.0	6756.1	17337.0	10178.7	23367.4	30373.4
(ix) Netherlands								
(a) Loans	...	...	...	...	...	...		
(b) Grants	6.7	...	...	...	...	...		
Total	6.7	...	...	...	...	...		
(x) Sweden								
Grants	...	...	...	...	...	...		
(xi) U.K.								
Grants	474.7	764.2	...	...	...	...		
(xii) U.S.A.								
(a) Loans	...	...	...	...	...	...		
(b) Grants	0.8	...	...	...	...	...		
Total			0.8	...	...	...	...	...

Contd....

Table 8.2 (A). Authorization of External Assistance by Source

(₹ crore)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(xiii) I.B.R.D.								
(a) Loans	6816.8	2619.5	2361.2	14657.3	17667.0	13819.6	15764.8	20545.4
(b) Grants	391.7	10.3	3.0	76.7	3.1	215.9	171.6	0.0
Total	7208.5	2629.8	2364.2	14733.9	17670.1	14035.5	15936.5	20545.4
(xiv) I.D.A.								
(a) Loans	3358.4	7374.7	11801.8	10392.3	13837.1	5626.9	2319.4	
(b) Grants	985.1	...	...	...	...	...	0.0	
Total	4343.5	7374.7	11801.8	10392.3	13837.1	5626.9	2319.4	
II. Russia Fed. & East European Countries								
Loans	...	22839.3	...	...	...	...		
Country-wise Distribution								
(i) Russia Fed.		22839.3						
Loans	...	22839.3	...	...	...	...		
III. Others								
(a) Loans	5265.6	6998.3	18530.1	10670.7	11778.4	21580.3	16973.8	29765.0
(b) Grants	51.2	1076.0	46.8	21.7	3652.1	33.6	2055.9	1535.0
Total	5316.8	8074.3	18576.9	10692.4	15430.5	21613.9	19029.7	31300.0
(i) Switzerland								
Grants	...	...	...	.....	.....	.....		
(ii) European Economic Community								
Grants	...	559.9	...	...	...	...		
(iii) O.P.E.C. Fund								
Loans	...	...	...	...	...	...		
(iv) Saudi Arab Fund for Development								
Loans	...	...	...	...	...	...		
(v) Kuwait Fund for Arabic Economic Development								
Grants	...	...	...	...	...	...		
(vi) IFAD (International Fund for Agricultural Development								
(a) Loans	...	...	400.1	383.2	475.7	...	973.2	
(b) Grants	...	...	...	...	...	...	6.4	
Total	...	...	400.1	383.2	475.7	...	979.6	
(vii) IMF Trust Fund								
Loans	...	...	...	...	...	...		
(viii) International Sugar Org.								
Loans	...	...	...	...	...	...		
(ix) ADB								
(a) Loans	5265.6	6998.3	18130.0	10287.6	9858.7	17387.8	11561.6	22020.5
(b) Grants		...	...	11.0	13.1	33.6	0.0	1081.4
Total	5265.6	6998.3	18130.0	10298.6	9871.8	17421.4	11561.6	23102.0

Contd....

Table 8.2 (A). Authorization of External Assistance by Source

(₹ crore)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(x) European Investment Bank								
(a) Loans	...	...	...	...	1444.0	1841.0		
(b) Grants	...	...	...	...		...		
Total	...	...	...	...	1444.0	1841.0		
(xi) Spain								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(xii) Norway								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(xiii) Australia								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(xiv) Other International Institutions[a]								
(a) Loans						2351.5	4439.1	7744.5
(b) Grants	51.2	516.2	46.8	10.7	3639.0	...	2049.5	453.6
Grand Total	18418.7	68780.6	54512.8	48255.1	67863.2	62899.9	63744.0	85224.4
(a) Loans	16455.2	66891.6	54372.6	48135.5	64208.0	62650.4	61212.6	83636.9
(b) Grants	1963.5	1889.0	140.2	119.7	3655.2	249.5	2531.4	1587.6

Source: Aid Accounts and Audit Division, Department of Economic Affairs, Ministry of Finance.

---- Nil or Negligible

a Other International Institutions include UNICEF, UNDP, ILO, WHO, UNFPA, UNESCO, UPU, WFP, Global Fund, IDF (WB), UN-FAO, NDB, AIIB and Ford Foundation.

Notes:

1. Figures of authorization of external assistance include agreements signed on Government and Non-Government accounts.
2. Totals may not tally due to rounding off.

Table 8.2(B). Authorization of External Assistance by Source

(US$ Million)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I. Consortium Members								
(a) Loans	2454.4	11014.00	5935.28	6134.53	8017.11	6112.86	6866.41	7721.35
(b) Grants	419.5	149.50	15.46	16.04	0.48	32.14	73.80	7.54
Total	2873.9	11163.50	5950.74	6150.57	8017.59	6145.00	6940.21	7728.89
Country-wise Distribution								
(i) Austria								
Loans	...	...	...	...	...	...		
(ii) Belgium								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(iii) Canada								
(a) Loans	...	...	...	...	...	...		
(b) Grants	4.5	...	...	...	...	...		
Total	4.5	...	...	...	...	...		
(iv) Denmark								
Grants	3.4	...	...	...	...	...		
(v) France								
(a) Loans					276.01	142.48	286.55	284.10
(b) Grants	2.1	141.57	272.44				7.02	0.00
(vi) Germany								
(a) Loans	41.2	595.86	201.31	926.62	272.70	1560.99	177.77	139.15
(b) Grants	1.3	7.07	...	3.49	…	…	8.42	7.54
Total	42.4	602.93	201.31	930.11	272.70	1560.99	186.19	146.69
(vii) Italy								
Loans	9.4	...	...	...	...	...		
(viii) Japan								
(a) Loans	172.0	4238.71	3116.24	1106.26	2651.04	1514.99	3595.19	4353.37
(b) Grants	0.5	...	14.95				31.73	0.00
Total	172.5	4238.71	3131.19	1106.26	2651.04	1514.99	3626.92	4353.37
(ix) Netherlands								
(a) Loans	...	...	...					
(b) Grants	1.5	...	...	...	...	...		
Total	1.5	...	...	...	...	...		
(x) Sweden								
Grants	...	...	...	...	...	...		
(xi) U.K.								
Grants	104.1	140.53	...	...	...	...		
(xii) U.S.A.				...	...	...	...	
(a) Loans	...	...	...	...	...	...		
(b) Grants	0.2	...	...	...	...	...		
Total	0.2	...	...	...	...	...		

Contd....

Table 8.2(B). Authorization of External Assistance by Source

(US$ Million)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(xiii) I.B.R.D.								
(a) Loans	1495.3	481.70	391.00	2400.00	2701.50	2056.90	2446.90	2944.73
(b) Grants	85.9	1.90	0.51	12.55	0.48	32.14	26.64	0.00
Total	1581.2	483.60	391.51	2412.55	2701.98	2089.04	2473.54	2944.73
(xiv) I.D.A.								
(a) Loans	736.7	1356.16	1954.29	1701.65	2115.86	837.50	360.00	
(b) Grants	216.1	...	...	...	….	….	0.00	
Total	952.8	1356.16	1954.29	1701.65	2115.86	837.50	360.00	
II. Russia Fed. & East European Countries								
Loans	...	4200.00	...	...	...	...		
Country-wise Distribution								
(i) Russia Fed.								
Loans	...	4200.00	...	...	...	...		
III. Others								
(a) Loans	1155.0	1286.94	3068.45	1747.24	1801.06	3212.01	2634.55	4266.16
(b) Grants	11.2	197.88	7.75	3.55	558.44	5.00	319.10	220.01
Total	1166.2	1484.82	3076.20	1750.79	2359.50	3217.01	2953.65	4486.17
(i) Switzerland								
Grants	...	...	...	...	...	...		
(ii) European Economic Community								
Grants	...	102.96	...	...	...	...		
(iii) O.P.E.C. Fund								
Loans	...	...	...	...	...	...		
(iv) Saudi Arab Fund for Development								
Loans	...	...	...	...	...	...		
(v) Kuwait Fund for Arabic								
Economic Development								
Grants	...	...	...	...	...	...		
(vi) IFAD (International Fund for								
Agricultural Development)								
(a) Loans	...	...	66.25	62.74	72.74	...	151.05	
(b) Grants	...	...	...	...	...	...	1.00	
Total	...	...	66.25	62.74	72.74	...	152.05	
(vii) IMF Trust Fund					...	...		
Loans	...	...	...	...	...	...		
(viii) International Sugar Org.					...	...		
Loans	...	...	...	...	...	...		
(ix) ADB								
(a) Loans	1155.0	1286.94	3002.20	1684.50	1507.51	2588.00	1794.50	3156.16
(b) Grants	...	...	...	1.80	2.00	5.00	0.00	155.00
Total	1155.0	1286.94	3002.20	1686.30	1509.51	2593.00		3311.16

Contd....

Table 8.2(B). Authorization of External Assistance by Source

(US$ Million)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(x) European Investment Bank								
(a) Loans					220.81	274.01		
(b) Grants								
Total					220.81	...		
(xi) Spain								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(xii) Norway								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(xiii) Australia								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(xiv) Other International Institutionsa								
(a) Loans						350.00	689.00	1110.00
(b) Grants	11.2	94.92	7.75	1.75	556.44	...	318.10	65.01
Grand Total	4040.1	12648.32	9026.94	7901.36	10377.09	9362.01	9893.87	12215.05
(a) Loans	3609.4	12300.94	9003.73	7881.77	9818.17	9324.87	9500.96	11987.51
(b) Grants	430.7	347.38	23.21	19.59	558.92	37.14	392.91	227.54

Source: Aid Accounts and Audit Division, Department of Economic Affairs, Ministry of Finance.

---- Nil or Negligible

a Other International Institutions include UNICEF, UNDP, ILO, WHO, UNFPA, UNESCO, UPU, WFP, Global Fund, IDF (WB), UN-FAO, NDB, AIIB and Ford Foundation.

Notes:

1. Figures in this table are converted from the preceding Table 8.2(A) based on the respective Rupee- US dollar rates.
2. Totals may not tally due to rounding off.

Table 8.3(A). Utilization of External Assistance by Source

(₹ crore)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I. Consortium Members								
(a) Loans	11168.6	18390.8	25164.7	26630.2	31364.6	35578.5	36439.04	42677.57
(b) Grants	634.0	1560.1	1043.4	749.6	405.1	135.8	99.14	130.08
Total	11802.6	19950.9	26208.1	27379.8	31769.7	35714.3	36538.18	42807.65
Country-wise Distribution								
(i) Austria								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(ii) Belgium								
Loans	...	...	...	...	...	...		
(iii) Canada								
(a) Loans	...	...	...	...	...	...		
(b) Grants	2.9	...	...	...	...	...		
Total	2.9	...	...	...	...	...		
(iv) Denmark								
(a) Loans	...	...	...	...	...	...		
(b) Grants	49.5	...	...	...	...	...		
Total	49.5	...	...	...	...	...		
(v) France								
(a) Loans	65.2	16.0	921.7	225.78	329.4	790.4	1045.15	977.66
(b) Grants	...	...	...	...	…	-0.16	0	6.49
Total	65.2	16.0	921.7	225.78	329.4	790.3	1045.15	984.15
(vi) Germany								
(a) Loans	318.9	1379.9	3122.0	1861.1	2111.3	2622.4	2080.82	4881.17
(b) Grants	67.8	62.1	65.6	56.0	80.1	34.7	21.18	5.76
Total	386.7	1442.0	3187.6	1917.1	2191.4	2657.1	2102	4886.93
(vii) Italy								
Loans	...	...	...	...	...	...		
(viii) Japan								
(a) Loans	2714.0	7260.0	8750.5	8825.9	10341.5	12506.1	14439.34	16769.86
(b) Grants	15.8	...	4.4	0.0	29.1	36.0	0	46.75
Total	2729.8	7260.0	8754.9	8825.9	10370.5	12542.1	14439.34	16816.61
(ix) Netherlands								
(a) Loans	...	...	...	...	...	...		
(b) Grants	70.3	...	...	...	...	...		
Total	70.3	...	...	...	...	...		
(x) Sweden								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		

Contd....

Table 8.3(A). Utilization of External Assistance by Source

(₹ crore)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(xi) U.K.								
(a) Loans	...	...	...	...	...	...		
(b) Grants	307.3	1293.4	855.0	601.8	224.3	-0.3		
Total	307.3	1293.4	855.0	601.8	224.3	-0.3		
(xii) U.S.A.								
(a) Loans	...	...	...	...	...	...		
(b) Grants	81.1	23.6	43.4	...	4.7	...		
Total	81.1	23.6	43.4	...	4.7	...		
(xiii) I.B.R.D.								
(a) Loans	3222.4	4894.8	5631.6	7703.5	9137.3	8794.1	8134.98	10595.34
(b) Grants	24.5	180.6	73.8	85.9	67.0	65.5	77.96	71.08
Total	3246.9	5075.4	5705.3	7789.4	9204.3	8859.6	8212.94	10666.42
(xiv) I.D.A.								
(a) Loans	4848.1	4840.1	6738.9	8013.9	9441.4	9247.4	8437.2	6004.64
(b) Grants	14.8	0.5	1.2	6.0	0.0	0.0	0	0
Total	4862.9	4840.6	6740.1	8019.8	9441.4	9247.4	8437.2	6004.64
(xv) IMF Trust Fund	...	...	...	...	...			
II. Russia Fed.& East European Countries								
Loans	130.1	26.4	8.2	16.9	3.7	1618.1		
Country-wise Distribution								
(i) Russia Federation.								
Loans	130.1	26.4	8.2	16.9	3.7	1618.1	2301.55	3448.9
(ii) Reps. of Czech & Slovak								
Loans	...	...	...	...	...			
III. Others								
(a) Loans	2228.5	7076.9	6599.5	8610.3	9004.8	12086.6	13530.08	17756.82
(b) Grants	93.2	813.52	2371.83	742.1	1791.99	854.7	1324.98	685.95
Total	2321.7	7890.5	8971.3	9352.3	10796.8	12941.2	14855.06	18442.77
Country-wise Distribution								
(i) Abu Dhabi Fund								
Loans	...	...	...	...	...	...		
(ii) Switzerland								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(iii) Other International Institutionsa								
Loan							511.34	2417.39
Grants	50.0	710.2	1746.0	739.68	1504.35	776.19	1130.25	669.87
Total							1641.59	3087.26
(iv) European Economic Community								

Contd....

Table 8.3(A). Utilization of External Assistance by Source

(₹ crore)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Grants	36.3	104.0	622.4	...	287.6	70.4	189.33	
(v) Oil Producing & Exporting Countries								
Loans	41.5	20.8	7.9	54.5	26.3	18.7		
(vi) Saudi Arab Fund for Development								
Loans	...	...	...	...	...			
(vii) Norway								
(a) Loans	...							
(b) Grants	6.9	...	...	...	...			
Total	6.9	...	...	...	...			
(viii) Spain								
Loans	...	...	...	...	...			
(ix) Kuwait Fund for Arabic								
Economic Development								
(a) Loans	...	...	...	...	...			
(b) Grants	...	...	...	...	...			
Total	...	...	...	...	...			
(x) IFAD (International Fund for								
Agricultural Development)								
(a) Loans	40.1	140.7	210.3	191.7	220.1	196.2	276.66	282.37
(b) Grants	...	-0.8	3.5			1.0		
Total	40.1	140.0	213.8	191.7	220.1	197.2	276.66	282.37
(xi) ADB								
(a) Loans	2146.9	6915.4	6381.2	8364.0	8758.4	11141.0	11980.69	14258.51
(b) Grants	...	...	...	2.41	…	7	5.35	16.08
Total	2146.9	6915.4	6381.2	8366.4	8758.4	11148.0	11986.04	14274.59
(xii) European Investment Bank								
(a) Loans	...	...	...	...	...	730.7	761.41	798.55
(b) Grants	...	...	...	...	...	...	0	0
Total	...	...	...	...	...	730.7	761.41	798.55
(xiii) Australia								
Loans	...	...	...	...	...	...		
Grand Total	14254.4	27867.7	35187.6	36749.0	42566.5	48655.5	51393.24	61250.42
(a) Loans	13527.2	25494.1	31772.4	35257.3	40369.4	47665.1	49969.12	60434.39
(b) Grants	727.2	2373.7	3415.2	1491.7	2197.1	990.5	1424.12	816.03

Source: Aid Accounts and Audit Division, Department of Economic Affairs, Ministry of Finance.

---- Nil or Negligible

a Other International Institutions include UNICEF, UNDP, ILO, WHO, UNFPA, UNESCO, UPU, WFP, Global Fund, IDF (WB), UN-FAO, NDB, AIIB and Ford Foundation.

Notes:

1. Utilization figures are exclusive of suppliers' credit and commercial borrowings.
2. Utilization of assistance is on Government and Non-Govt. accounts.
3. Totals may not tally due to rounding off.

Table 8.3(B). Utilization of External Assistance by Source

(US$ million)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I. Consortium Members								
(a) Loans	2449.8	3401.4	4184.2	4255.6	4714.5	5479.9	5650.87	6090.95
(b) Grants	139.1	288.5	173.5	119.8	60.9	21.0	15.32	18.65
Total	2588.9	3689.9	4357.7	4375.4	4775.4	5500.9	5666.19	6109.6
Country-wise Distribution								
(i) Austria								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(ii) Belgium								
Loans	...	...	...	...	...	...		
(iii) Canada								
(a) Loans	...	...	...	...	...	...		
(b) Grants	0.6	...	...	...	...	...		
Total	0.6	...	...	...	...	...		
(iv) Denmark								
(a) Loans	...	...	...	...	...	...		
(b) Grants	10.9	...	...	...	...	...		
Total	10.9	...	...	...	...	...		
(v) France								
(a) Loans	14.3	3.0	153.3	36.08	49.5	121.7	162.3	139.19
(b) Grants	...	...	...	...	...	0.0	0	0.91
Total	14.3	3.0	153.3	36.08	49.5	121.7	162.3	140.1
(vi) Germany								
(a) Loans	70.0	255.2	519.1	297.4	317.4	403.9	323.77	683.32
(b) Grants	14.9	11.5	10.9	8.9	12.0	5.3	3.27	0.83
Total	84.9	266.7	530.0	306.4	329.4	409.3	327.04	684.15
(vii) Italy								
Loans	...	...	...	...	...	...		
(viii) Japan								
(a) Loans	595.3	1342.7	1455.0	1410.4	1554.5	1926.2	2237.28	2389.33
(b) Grants	3.5	...	0.7	...	4.4	5.6		6.58
Total	598.8	1342.7	1455.7	1410.4	1558.8	1931.8	2237.28	2395.91
(ix) Netherlands								
(a) Loans	...	...	...	...	...	...		
(b) Grants	15.4	...	...	...	...	...		
Total	15.4	...	...	...	...	...		
(x) Sweden								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(xi) U.K.								

Contd....

Table 8.3(B). Utilization of External Assistance by Source

(US$ million)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(a) Loans	...	...	...	...	...	...		
(b) Grants	67.4	239.2	142.2	96.2	33.7	0.0		
Total	67.4	239.2	142.2	96.2	33.7	0.0		
(xii) U.S.A.								
(a) Loans	...	...	...	...				
(b) Grants	17.8	4.4	7.2	...	0.7			
Total	17.8	4.4	7.2	...	0.7			
(xiii) I.B.R.D.								
(a) Loans	706.8	905.3	936.4	1231.1	1373.5	1354.5	1260.22	1522.93
(b) Grants	5.4	33.4	12.3	13.7	10.1	10.1	12.05	10.33
Total	712.2	938.7	948.6	1244.8	1383.5	1364.6	1272.27	1533.26
(xiv) I.D.A.								
(a) Loans	1063.4	895.2	1120.5	1280.6	1419.2	1424.3	1310.57	866.42
(b) Grants	3.2	0.1	0.2	1.0	0.0	0.0		
Total	1066.6	895.3	1120.7	1281.6	1419.2	1424.3	1310.57	866.42
(xv) IMF Trust Fund	...	...	...	...	...	...		
II. Russia Fed.& East European Countries								
Loans	28.5	4.9	1.4	2.7	0.6	249.2		
Country-wise Distribution								
(i) Russia Federation.								
Loans	28.5	4.9	1.4	2.7	0.6	249.2	356.73	489.76
(ii) Reps. of Czech & Slovak								
Loans	...	...	...	...	...	...		
III. Others								
(a) Loans	488.8	1308.9	1097.3	1376.0	1353.5	1861.6	2101.89	2528.3
(b) Grants	20.5	150.5	394.4	118.6	269.4	131.6	205.5	97.29
Total	509.3	1459.3	1491.7	1494.5	1622.9	1993.3	2307.39	2625.59
Country-wise Distribution								
(i) Abu Dhabi Fund								
Loans	...	...	...	...	...	...		
(ii) Switzerland								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(iii) Other International Institutions [a]								
Loans							78.94	346.71
Grants	11.0	131.4	290.3	118.2	226.12	119.6	175.1	95.02
Total							254.04	441.73
(iv) European Economic Community								
Grants	8.0	19.2	103.5	...	43.2	10.9	29.57	
(v) Oil Producing & Exporting Countries								
Loans	9.1	3.9	1.3	8.7	4.0	2.9		

Contd....

Table 8.3(B). Utilization of External Assistance by Source

(US$ million)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(vi) Saudi Arab Fund for Development								
Loans	...	...	...	...	...	...		
(vii) Norway								
(a) Loans	...	...	...	...	...	...		
(b) Grants	1.5	...	...	...	...	...		
Total	1.5	...	...	...	...	...		
(viii) Spain								
Loans	...	...	...	...	...	...		
(ix) Kuwait Fund for Arabic								
Economic Development								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(x) IFAD (International Fund for								
Agricultural Development)								
(a) Loans	8.8	26.0	35.0	30.6	33.1	30.2	43	40.89
(b) Grants	...	-0.1	0.6	...	...	0.2		
Total	8.8	25.9	35.6	30.6	33.1	30.4	43	40.89
(xi) ADB								
(a) Loans	470.9	1279.0	1061.0	1336.6	1316.5	1716.0	1859.78	2027.41
(b) Grants	...	...	...	0.4	….	1.08	0.83	2.27
Total	470.9	1279.0	1061.0	1337.0	1316.5	1717.1	1860.61	2029.68
(xii) European Investment Bank								
(a) Loans	...	...	...	...	...	112.6	120.17	113.29
(b) Grants	...	...	...	...	...			
Total	...	...	...	...	...	112.6	120.17	113.29
(xiii) Australia								
Loans	...	...	...	...	...			
Grand Total	3126.7	5154.1	5850.7	5872.6	6398.3	7494.2	7973.58	8735.19
(a) Loans	2967.1	4715.1	5282.9	5634.2	6068.0	7341.5	7752.76	8619.25
(b) Grants	159.6	439.0	567.9	238.4	330.2	152.6	220.82	115.94

Source: Aid Accounts and Audit Division, Department of Economic Affairs, Ministry of Finance.

---- Nil or Negligible

a Other International Institutions include UNICEF, UNDP, ILO, WHO, UNFPA, UNESCO, UPU, WFP, Global Fund, IDF (WB), UN-FAO, NDB, AIIB and Ford Foundation.

Notes:

1. Figures in this table are converted from the preceding Table 8.3(A) based on the respective Rupee- US dollar rates.
2. Totals may not tally due to rounding off.

Table 8.4(A). India's External Debt Outstanding

(₹ crore)

Sl. No.	Components of External Debt	End-March											
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	End December 2018
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
I.	**Multilateral**	157901	201425	193436	216672	257089	279310	321560	328148	359490	354134	371930	401287
	A. Government Borrowing	144627	181997	170722	190326	222579	235670	268491	269431	294122	288246	304595	327140
	(i) Concessional	107395	127771	116046	120653	138691	143130	163589	154581	166506	156726	164002	164764
	a) IDA	105947	126127	114552	119068	136816	141119	161165	152171	163772	154050	160970	161524
	b) Others	1448	1644	1494	1585	1875	2011	2424	2410	2734	2676	3032	3241
	(ii) Non-concessional	37232	54226	54676	69673	83888	92540	104902	114850	127616	131519	140593	162375
	a) IBRD	22631	29948	28874	39218	45328	48239	53433	57107	61553	60667	61663	68758
	b) Others	14601	24278	25802	30455	38560	44301	51469	57743	66063	70852	78930	93617
	B. Non-Government Borrowing	13274	19428	22714	26346	34510	43640	53069	58717	65368	65888	67335	74147
	(i) Concessional	0	0	0	0	0	0	0	0	0	0	0	4
	(ii) Non-concessional	13274	19428	22714	26346	34510	43640	53069	58717	65368	65888	67335	74143
	a) Public Sector	10352	14298	14919	15802	19407	23414	28105	31385	35409	32123	33712	37968
	i) IBRD	4690	7105	8544	9193	11092	12749	14412	15674	17005	16625	16935	18393
	ii) Others	5662	7193	6375	6609	8315	10664	13693	15711	18404	15498	16777	19575
	b) Financial Institutions	2350	3721	5385	7511	10290	14370	18881	21859	25190	29883	30365	32367
	i) IBRD	593	744	1343	1899	2707	2973	3820	3709	5984	7276	7418	6475
	ii) Others	1757	2977	4042	5612	7583	11397	15061	18150	19206	22607	22947	25892
	c) Private Sector	572	1409	2410	3033	4813	5856	6083	5473	4769	3882	3258	3808
	i) IBRD	0	0	0	0	0	0	0	0	0	0	0	1723
	ii) Others	572	1409	2410	3033	4813	5856	6083	5473	4769	3882	3258	2086
II.	**Bilateral**	78802	104997	101976	114904	137086	136329	148813	136060	149483	150780	164579	173947
	A .Government borrowing	59391	74662	71584	80406	91641	88007	96918	88452	102925	109742	128945	137824
	(i) Concessional	59391	74662	71584	80406	91641	88007	96918	88452	102925	109742	128945	137824
	(ii) Non-concessional	0	0	0	0	0	0	0	0	0	0	0	0
	B.Non-Government borrowing	19411	30335	30392	34498	45445	48322	51895	47608	46558	41038	35635	36123
	(i) Concessional	1737	3262	3169	4101	7648	8435	10318	10080	11892	11988	12753	16520

Contd....

Table 8.4(A). India's External Debt Outstanding

(₹ crore)

Sl. No.	Components of External Debt	End-March											
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	End December 2018
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	a) Public Sector	1226	1156	1121	1621	4963	5916	7763	7546	9052	6758	7586	11107
	b) Financial Institutions	511	2106	2048	2480	2685	2519	2555	2534	2840	5230	5167	5413
	c) Private Sector	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Non-concessional	17674	27073	27223	30397	37797	39887	41577	37528	34666	29049	22881	19603
	a) Public Sector	10097	15076	13845	13789	14200	13010	13374	11561	10848	9472	8518	7975
	b) Financial Institutions	3735	4311	3436	3754	3886	4206	4361	3323	3119	3167	2507	2401
	c) Private Sector	3842	7686	9942	12854	19711	22671	23842	22644	20699	16410	11856	9227
III.	**IMFa**	4479	5188	27264	28163	31528	32439	36910	34350	37177	35129	37716	38719
IV.	**Export Credit**	41296	73772	76011	83112	97117	96556	93275	78915	70612	62324	61511	56784
	a) Buyers' credit	33134	64046	66849	73273	85896	84667	80069	66006	55574	46688	43533	37786
	b) Suppliers' credit	2998	3234	2937	2847	3252	4236	4779	5217	6088	6093	6766	7014
	c) Export credit component of bilateral credit	5164	6492	6225	6992	7969	7653	8427	7692	8950	9543	11213	11985
V.	**Commercial Borrowings**	249243	318209	319221	448448	614623	762128	897744	1128501	1199043	1117547	1315594	1360643
	a) Commercial bank loans [b]	160577	219925	202350	261678	373194	454450	582644	635246	647567	568987	551922	616496
	b) Securitized borrowings [c]	82641	91286	113177	183504	238849	306070	313416	490895	549076	546261	761439	741976
	c) Loans/securitized borrowings etc., with multilateral/bilateral guarantee + IFC(W)	6025	6998	3694	3266	2580	1608	1684	2360	2400	2299	2233	2171
VI.	**NRI Depositsd (Above one year Maturity)**	174623	210118	217062	230812	299840	385202	624101	720997	841955	757751	820737	880145
VII.	**Rupee Debt** [e]	8065	7760	7480	7147	6922	6839	8826	9426	8479	7962	7886	7590
	a) Defence	7172	6935	6709	6416	6220	6164	8179	8807	7887	7398	7350	7081
	b) Civilian	893	825	771	731	702	675	647	619	592	564	536	509
VIII.	**Total Long Term Debt (I TO VII)**	714409	921469	942450	1129258	1444205	1698803	2131229	2436397	2666239	2485626	2779954	2919116
IX.	**Short-Term Debt**	182881	220656	236188	290149	399962	525931	550985	535145	553044	571387	664575	724821
	a) Trade-Related Credits	167540	203345	214267	261006	333202	472026	491271	510938	530806	560781	652969	704495

Contd....

Table 8.4(A). India's External Debt Outstanding

(₹ crore)

Sl. No.	Components of External Debt	End-March											
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	End December 2018
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	1) Above 6 Months	91502	118936	126391	157806	200454	321010	330500	334267	339674	364104	431225	360576
	2) Upto 6 Months	76038	84409	87876	103200	132748	151016	160771	176671	191132	196677	221744	343919
	b) FII Investment in Govt. Treasury Bills and other instruments	2603	10522	15153	24214	48066	29671	33686	7307	132	260	580	8840
	c) Investment in Treasury Bills by foreign central banks and other international institutions etc.	620	534	467	225	326	447	572	714	714	1577	1791	1706
	d) External Debt Liabilities of:	12118	6255	6301	4704	18368	23787	25456	16186	21392	8768	9234	9780
	1) Central Bank	4458	3892	3139	693	871	985	892	939	1197	1575	1782	1559
	2) Commercial banks	7660	2363	3162	4011	17497	22802	24564	15247	20195	7194	7453	8221
X.	**Grand Total(VIII+IX)**	897290	1142125	1178638	1419407	1844167	2224734	2682214	2971542	3219283	3057013	3444529	3643937

Source: Ministry of Finance (Department of Economic Affairs), Ministry of Defence, Reserve Bank of India, Securities & Exchange Board of India .

Notes:

PR: Partially Revised; QE : Quick Estimates.

IFC(W): International Finance Corporation, Washington D.C.

FII: Foreign Institutional Investors

a: Relates to SDR allocations from March 2004 onwards.

b: Includes Financial Lease since 1996.

c: Also includes India Development Bonds (IDBs), Resurgent India Bonds (RIBs), India Millennium Deposits (IMDs), Foreign Currency Convertible Bonds (FCCBs) and net investment by 100% FII debt funds and securitized borrowings of commercial banks FCCB debt has been adjusted since end-March, 1998 after netting out conversion into equity and redemptions.

d: Figures include accrued interest.

e: Rupee denominated debt owed to Russia and payable through exports.

NRO Deposits are included under NRI Deposits from the quarter ended June 2005. Supplier's Credits upto 180 days and FII investment in short-term debt instruments are included under short-term debt from the quarter ended March 2005. Vostro balances / Nostro overdrafts of commercial banks, balances of foreign central banks/international institutions with RBI and investment in T-bills/securities by foreign central banks/ international institutions have been included in external debt from the quarter ended March 2007.

8.4(B). India's External Debt Outstanding

(US$ million)

Sl. No.	Components of External Debt	End-March											
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	End Dec 2018
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
I.	**Multilateral**	39490	39538	42857	48475	50452	51590	53418	52391	54000	54502	57272	57060
	A. Government Borrowing	36171	35724	37825	42579	43686	43539	44598	43015	44171	44356	46907	46497
	(i) Concessional	26859	25080	25711	26992	27221	26443	27173	24679	25006	24117	25256	23418
	a) IDA	26497	24757	25380	26637	26853	26071	26770	24294	24595	23705	24789	22958
	b) Others	362	323	331	355	368	372	403	385	411	412	467	461
	(ii) Non-concessional	9312	10644	12114	15587	16465	17096	17425	18336	19165	20238	21651	23079
	a) IBRD	5660	5878	6397	8774	8897	8912	8876	9117	9244	9335	9496	9773
	b) Others	3652	4766	5717	6813	7568	8184	8549	9219	9921	10903	12155	13306
	B. Non-Government Borrowing	3319	3814	5032	5896	6766	8051	8820	9376	9829	10146	10364	10563
	(i) Concessional	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Non-concessional	3319	3814	5032	5896	6766	8051	8820	9376	9829	10146	10364	10563
	a) Public Sector	2589	2807	3305	3536	3808	4324	4669	5010	5319	4944	5191	5399
	i) IBRD	1173	1395	1893	2057	2177	2355	2394	2502	2554	2558	2608	2614
	ii) Others	1416	1412	1412	1479	1631	1969	2275	2508	2765	2386	2583	2785
	b) Financial Institutions	587	730	1193	1681	2017	2650	3139	3492	3791	4603	4672	4620
	i) IBRD	148	146	298	425	531	549	635	592	899	1120	1142	920
	ii) Others	439	584	895	1256	1486	2101	2504	2900	2892	3484	3530	3700
	c) Private Sector	143	277	534	679	941	1077	1012	874	719	599	501	543
	i) IBRD	0	0	0	0	0	0	0	0	0	0	0	245
	ii) Others	143	277	534	679	941	1077	1012	874	719	599	501	298
II.	**Bilateral**	19708	20610	22593	25712	26884	25158	24727	21726	22464	23210	25341	24739
	A. Government borrowing	14853	14655	15860	17988	17987	16259	16099	14121	15457	16887	19857	19589
	(i) Concessional	14853	14655	15860	17988	17987	16259	16099	14121	15457	16887	19857	19589
	(ii) Non-concessional	0	0	0	0	0	0	0	0	0	0	0	0
	B. Non-Government borrowing	4855	5955	6733	7724	8897	8899	8628	7605	7007	6323	5484	5150
	(i) Concessional	435	641	702	918	1501	1558	1714	1610	1786	1845	1964	2348

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8.4(B). India's External Debt Outstanding

(US$ million)

Sl. No.	Components of External Debt	End-March											
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	End Dec 2018
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	a) Public Sector	307	227	248	363	974	1093	1290	1205	1359	1040	1168	1579
	b) Financial Institutions	128	414	454	555	527	465	424	405	427	805	796	769
	c) Private Sector	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Non-concessional	4420	5314	6031	6806	7396	7341	6914	5995	5221	4478	3520	2802
	a) Public Sector	2525	2959	3072	3087	2781	2397	2223	1846	1646	1459	1311	1137
	b) Financial Institutions	934	846	761	840	762	776	724	531	455	488	386	342
	c) Private Sector	961	1509	2198	2879	3853	4168	3967	3618	3120	2531	1823	1322
III.	**IMFa**	1120	1018	6041	6308	6163	5964	6149	5488	5605	5410	5784	5533
IV.	**Export Credit**	10328	14481	16841	18647	18990	17760	15518	12608	10640	9609	9460	8122
	a) Buyers' credit	8287	12572	14811	16437	16790	15567	13323	10547	8378	7201	6693	5414
	b) Suppliers' credit	750	635	651	646	636	779	795	833	918	940	1040	1005
	c) Export credit component of bilateral credit	1291	1274	1379	1564	1564	1414	1400	1228	1344	1468	1727	1703
V.	**Commercial Borrowings**	62334	62461	70726	100476	120136	140125	149375	180295	180761	172358	202262	194904
	a) Commercial bank loans [b]	40159	43169	44832	58643	72946	83555	96946	101492	97624	87754	84854	88333
	b) Securitized borrowings [c]	20668	17918	25075	41100	46686	56274	52149	78426	82775	84249	117065	106260
	c) Loans/securitized borrowings etc., with multilateral/bilateral guarantee + IFC(W)	1507	1374	819	733	504	296	280	377	362	355	343	311
VI.	**NRI Depositsd (Above one year Maturity)**	43672	41554	47890	51682	58608	70822	103845	115163	126929	116867	126182	125774
VII.	**Rupee Debte**	2017	1523	1658	1601	1354	1258	1468	1506	1278	1228	1213	1087
	a) Defence	1794	1361	1487	1437	1216	1133	1361	1407	1189	1141	1130	1015
	b) Civilian	223	162	171	164	138	125	107	99	89	87	83	72
VIII.	**Total Long Term Debt (I TO VII)**	178669	181185	208606	252901	282587	312677	354500	389177	401677	383184	427512	417219
IX.	**Short-Term Debt**	45738	43313	52329	64990	78179	96697	91678	85498	83375	88124	102173	103854
	a) Trade-Related Credits	41901	39915	47473	58463	65130	86787	81743	81631	80022	86489	100389	100942
	1) Above 6 Months	22884	23346	28003	35347	39182	59021	54992	53405	51208	56155	66297	51664

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8.4(B). India's External Debt Outstanding

(US$ million)

Sl. No.	Components of External Debt	End-March											
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	End Dec 2018
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	2) Upto 6 Months	19017	16569	19470	23116	25948	27766	26751	28226	28814	30333	34091	49278
	b) FII Investment in Govt. Treasury Bills and other instruments	651	2065	3357	5424	9395	5455	5605	1167	20	40	89	1267
	c) Investment in Treasury Bills by foreign central banks and other international institutions etc.	155	105	103	50	64	82	95	114	108	243	275	244
	d) External Debt Liabilities of:	3031	1228	1396	1053	3590	4373	4235	2586	3225	1352	1420	1401
	1) Central Bank	1115	764	695	155	170	181	148	150	180	243	274	223
	2) Commercial banks	1916	464	701	898	3420	4192	4087	2436	3045	1110	1146	1178
X.	**Grand Total (VIII+IX)**	224407	224498	260935	317891	360766	409374	446178	474675	485052	471308	529685	521073
	Memo Items :												
	Concessional Debtf	44164	41899	43931	47499	48063	45518	46454	41916	43526	44077	48290	46443
	Concessional Debt to total external debt (per cent)	19.7	18.7	16.8	14.9	13.3	11.1	10.4	8.8	9.0	9.4	9.1	8.9
	Short-term debt	45738	43313	52329	64990	78179	96697	91678	85498	83375	88124	102173	103854
	Short-term debt to total external debt (per cent)	20.4	19.3	20.1	20.4	21.7	23.6	20.6	18.0	17.2	18.7	19.3	19.9

Source: Ministry of Finance (Department of Economic Affairs), Ministry of Defence, Reserve Bank of India, Securities & Exchange Board of India.

Notes:

PR: Partially Revised; QE : Quick Estimates.

IFC(W): International Finance Corporation, Washington D.C.

FII: Foreign Institutional Investors

a: Relates to SDR allocations from March 2004 onwards.

b: Includes Financial Lease since 1996.

c: Also includes India Development Bonds (IDBs), Resurgent India Bonds (RIBs), India Millennium Deposits (IMDs),

Foreign Currency Convertible Bonds (FCCBs) and net investment by 100% FII debt funds and securitized borrowings of commercial banks

FCCB debt has been adjusted since end-March, 1998 after netting out conversion into equity and redemptions.

d: Figures include accrued interest.

e: Rupee denominated debt owed to Russia and payable through exports.

f: The definition of concessional debt here includes 'concessional' categoreis under multilateral and bilateral debt and rupee debt under item VII.

NRO Deposits are included under NRI Deposits from the quarter ended June 2005. Supplier's Credits upto 180 days and FII investment in short-term debt instruments are included under short-term debt from the quarter ended March 2005. Vostro balances / Nostro overdrafts of commercial banks, balances of foreign central banks/international institutions with RBI and investment in T-bills/securities by foreign central banks/ international institutions have been included in external debt from the quarter ended March 2007.

Table 9.1. Selected Indicators of Human Development for Major States

State	Life expectancy at birth (in years)						Infant mortality rate (per 1000 live births)						Birth rate (per 1000)		Death rate (per 1000)		Total fertility rate (TFR)	
	2008-12			2012-16			2007			2017			2007	2017	2007	2017	2005	2016
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Total	Total	Total	Total	Total	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Andhra Pradesh	64.7	69.4	67.0	68.0	71.4	69.6	54	55	54	31	33	32	18.7	16.2	7.4	7.2	2.0	1.7
Assam	61.2	64.8	62.7	64.4	66.8	65.5	64	67	56	41	46	44	24.3	21.2	8.6	6.5	2.9	2.3
Bihar	66.7	67.6	67.2	68.9	68.5	68.7	57	58	58	34	37	35	29.4	26.4	7.5	5.8	4.3	3.3
Gujarat	65.5	70.1	67.7	67.4	71.8	69.5	50	54	55	30	30	30	23.0	19.9	7.3	6.2	2.8	2.2
Haryana	65.4	70.1	67.6	67.2	72.0	69.4	55	56	55	28	31	30	23.4	20.5	6.6	5.8	2.8	2.3
Himachal Pradesh	68.3	72.7	70.5	69.4	75.5	72.3	45	49	47	22	23	22	17.4	15.8	7.1	6.6	2.2	1.7
Jammu & Kashmir	69.9	72.4	71.0	71.6	76.2	73.5	49	52	51	22	24	23	19.0	15.4	5.8	4.8	2.4	1.7
Karnataka	65.8	70.3	68.0	67.6	70.7	69.1	46	47	47	24	26	25	19.9	17.4	7.3	6.5	2.2	1.8
Kerala	71.6	77.7	74.7	72.2	77.9	75.1	12	13	13	9	10	10	14.7	14.2	6.8	6.8	1.7	1.8
Madhya Pradesh	61.9	65.0	63.3	63.7	67.2	65.4	72	72	72	48	45	47	28.5	24.8	8.7	6.8	3.6	2.8
Maharashtra	68.8	72.9	70.8	70.8	73.7	72.2	33	35	34	18	19	19	18.1	15.7	6.6	5.7	2.2	1.8
Odisha	63.4	65.3	64.3	66.2	69.1	67.6	70	72	71	40	41	41	21.5	18.3	9.2	7.4	2.6	2.0
Punjab	68.1	72.9	70.3	71.0	74.2	72.5	42	45	43	20	22	21	17.6	14.9	7.0	7.0	2.1	1.7
Rajasthan	65.2	69.4	67.2	66.1	70.7	68.3	63	67	65	37	40	38	27.9	24.1	6.8	6.0	3.7	2.7
Tamil Nadu	67.9	71.9	69.8	69.5	73.4	71.4	34	36	35	17	16	16	15.8	14.9	7.2	6.7	1.7	1.6
Uttar Pradesh	62.3	64.8	63.5	63.9	65.6	64.8	67	70	69	39	43	41	29.5	25.9	8.5	6.7	4.2	3.1
West Bengal	68.1	71.5	69.7	69.8	71.9	70.8	36	37	37	23	24	24	17.9	15.2	6.3	5.8	2.1	1.6
All India	**65.4**	**68.8**	**67.0**	**67.4**	**70.2**	**68.7**	**55**	**56**	**55**	**32**	**34**	**33**	**23.1**	**20.2**	**7.4**	**6.3**	**2.9**	**2.3**

Source : Office of the Registrar General of India, Ministry of Home Affairs
Note : Andhra Pradesh includes Telangana.

Table 9.2. Gross Enrolment Ratio 2016-17 (Provisional)

(per cent)

States/UTs	Classes I-V			Classes VI-VIII			Classes I-VIII		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Andhra Pradesh	84.76	80.69	82.79	82.21	82.06	82.14	83.80	81.21	82.54
Arunachal Pradesh	107.57	104.75	106.18	116.31	123.49	119.85	110.26	110.54	110.40
Assam	106.11	108.73	107.39	91.17	102.52	96.69	100.95	106.60	103.71
Bihar	94.68	101.78	98.08	94.26	115.27	103.86	94.55	105.82	99.87
Chhattisgarh	97.26	96.87	97.07	99.55	102.12	100.81	98.11	98.81	98.45
Gujarat	93.15	97.11	94.97	95.65	99.11	97.20	94.12	97.86	95.83
Haryana	93.06	94.93	93.90	89.67	100.88	94.40	91.77	97.06	94.08
Himachal Pradesh	97.14	98.77	97.91	102.18	103.90	102.99	99.04	100.69	99.82
Jammu & Kashmir	76.66	77.57	77.09	65.50	67.04	66.22	72.46	73.67	73.03
Jharkhand	97.09	96.16	96.64	87.84	96.17	91.81	94.00	96.16	95.04
Karnataka	104.17	103.21	103.71	92.83	92.98	92.90	99.89	99.42	99.66
Kerala	95.15	95.14	95.14	92.69	94.63	93.63	94.20	94.94	94.56
Madhya Pradesh	92.67	91.54	92.13	87.55	92.27	89.73	90.75	91.80	91.25
Maharashtra	97.77	97.20	97.50	96.71	101.03	98.69	97.37	98.60	97.94
Manipur	120.65	120.49	120.57	116.43	122.27	119.27	119.32	121.05	120.16
Meghalaya	128.28	129.89	129.07	119.13	137.31	128.04	125.52	132.12	128.76
Mizoram	117.73	113.54	115.68	128.11	126.85	127.50	120.89	117.53	119.25
Nagaland	80.82	82.59	81.67	87.54	93.64	90.44	82.94	86.02	84.42
Odisha	101.38	99.02	100.22	95.67	93.56	94.64	99.24	96.99	98.14
Punjab	97.09	102.10	99.31	93.69	103.14	97.72	95.78	102.48	98.71
Rajasthan	98.43	97.09	97.80	91.72	92.32	91.99	96.03	95.45	95.76
Sikkim	96.19	87.65	91.98	131.90	141.92	136.79	108.16	105.62	106.91
Tamil Nadu	101.98	102.03	102.01	91.82	95.16	93.42	97.87	99.30	98.56
Telangana	99.15	98.09	98.64	86.56	87.28	86.91	94.32	93.93	94.13
Tripura	101.94	102.85	102.38	124.00	128.95	126.40	108.98	111.12	110.02
Uttar Pradesh	83.91	90.85	87.16	66.30	80.66	72.74	77.58	87.37	82.09
Uttarakhand	96.27	96.57	96.41	85.90	87.67	86.73	92.34	93.18	92.74
West Bengal	96.47	96.06	96.27	89.72	103.47	96.34	93.97	98.76	96.30
A & N Islands	89.06	84.70	86.87	85.02	81.14	83.06	87.50	83.33	85.40
Chandigarh	76.27	84.92	80.07	90.46	102.51	95.60	81.62	91.33	85.84
D & N Haveli	85.36	80.21	82.87	93.91	89.04	91.57	88.48	83.41	86.03
Daman & Diu	80.50	88.26	83.96	77.42	85.87	81.13	79.38	87.41	82.94
Delhi	106.24	112.75	109.19	120.15	140.78	128.96	111.10	121.88	115.89
Goa	100.07	102.74	101.33	95.40	98.99	97.07	98.29	101.33	99.72
Lakshadweep	74.30	65.95	70.02	89.08	75.05	81.37	79.78	69.64	74.43
Puducherry	81.56	90.33	85.57	80.23	90.23	84.79	81.06	90.29	85.27
All India	**94.02**	**96.35**	**95.12**	**86.90**	**95.19**	**90.73**	**91.42**	**95.94**	**93.55**

Source: School Education in India, U-DISE 2016-17 (Provisional)

Table 9.3. Number of Recognised Educational Institutions in India

(in numbers)

States/UTs	2015-16[1]				2017-18[2]						
	Intermediate/ Sr. Sec. Schools	High/ Secondary Schools	Upper Primary Schools	Only Primary Schools	Universities / University level Institutes	Colleges	Technical Education (Polytech-nics)	PGDM	Nursing	Teacher Training	Institutes under Ministries
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Andhra Pradesh	2589	11234	10086	38793	34	2624	144	6	242	393	3
Arunachal Pradesh	155	263	1266	2363	9	30	6	na	na	5	na
Assam	2075	6987	13451	48529	21	512	18	1	24	27	1
Bihar	3926	3701	33204	43405	24	770	50	4	51	28	3
Chhattisgarh	3818	2465	14672	32826	24	741	2	3	40	25	1
Gujarat	6592	4350	29642	11840	65	2196	10	9	131	141	17
Haryana	4300	3363	4658	9994	40	964	132	11	18	29	12
Himachal Pradesh	2212	1570	2930	11327	25	327	29	1	26	18	1
Jammu & Kashmir	1061	3141	10286	14604	14	297	29	na	22	23	6
Jharkhand	1229	3372	15917	28010	21	309	31	5	23	5	1
Karnataka	4509	13627	30563	26790	60	3593	290	20	514	416	10
Kerala	2949	1733	4020	8428	22	1306	70	4	159	196	2
Madhya Pradesh	8100	6793	47276	88593	52	2124	59	12	117	122	4
Maharashtra	8738	16287	29448	53151	54	4314	628	60	289	959	14
Manipur	210	899	933	2951	5	87	na	na	na	10	1
Meghalaya	300	1255	3597	9362	8	60	3	na	7	8	2
Mizoram	138	615	1511	1561	3	30	2	na	4	9	na
Nagaland	175	561	825	1265	5	66	4	na	3	8	na
Odisha	1291	9454	22795	36760	25	1042	124	7	167	65	3
Punjab	4553	4618	5446	14371	31	1053	168	2	150	51	3
Rajasthan	16958	11237	37656	42577	79	2957	186	9	50	196	6
Sikkim	87	140	346	706	7	17	2	na	1	4	na
Tamil Nadu	6877	5594	9733	35379	58	2472	498	10	112	292	11
Telangana	2162	11333	7189	21948	24	2045	152	8	151	181	1
Tripura	411	603	1262	2568	4	52	na	na	3	4	na
Uttar Pradesh	15937	8632	75644	155756	76	6922	317	67	248	213	6

Contd....

Table 9.3. Number of Recognised Educational Institutions in India

(in numbers)

States/UTs	2015-16[1]				2017-18[2]						
	Intermediate/ Sr. Sec. Schools	High/ Secondary Schools	Upper Primary Schools	Only Primary Schools	Universities / University level Institutes	Colleges	Technical Education (Polytech-nics)	PGDM	Nursing	Teacher Training	Institutes under Ministries
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Uttarakhand	2218	1294	5017	15497	33	440	105	3	30	13	2
West Bengal	6898	3296	8839	76703	43	1341	143	13	69	205	13
A & N Islands	63	49	84	218	0	7	na	na	na	na	na
Chandigarh	90	70	29	12	3	25	3	1	na	3	na
D & N Haveli	21	20	129	177	0	8	na	na	1	na	1
Daman & Diu	24	18	44	59	0	9	na	na	na	2	na
Delhi	1684	377	939	2755	27	178	17	12	22	35	12
Goa	110	385	86	973	3	56	8	1	1	1	na
Lakshadweep	13	1	14	17	na	0	na	na	na	na	na
Puducherry	164	202	87	278	4	76	9	na	1	4	na
All India	**112637**	**139539**	**429624**	**840546**	**903**	**39050**	**3239**	**269**	**2676**	**3691**	**136**

Source: 1 : Educational Statistics at a Glance, 2018 Ministry of Human Resource Development
2 : AISHE 2017-18, Ministry of Human Resource Development

Note:
na: not available
1: Upper primary means primary schools/sections, secondary means secondary schools/sections and senior secondary means senior secondary schools/sections unless otherwise mentioned.

Table 9.4. State-Wise Literacy Rates (1951-2011)

(per cent)

States/UTs	1951	1961	1971	1981	1991	2001	2011
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pradesh	na	21.2	24.6	35.7	44.1	60.5	67.0
Arunachal Pradesh	na	7.1	11.3	25.6	41.6	54.3	65.4
Assam	18.5	33.0	33.9	na	52.9	63.3	72.2
Bihar	13.5	22.0	23.2	32.3	37.5	47.0	61.8
Chhattisgarh	9.4	18.1	24.1	32.6	42.9	64.7	70.3
Gujarat	21.8	31.5	37.0	44.9	61.3	69.1	78.0
Haryana	na	na	25.7	37.1	55.9	67.9	75.6
Himachal Pradesh	na	na	na	na	63.9	76.5	82.8
Jammu & Kashmir	na	13.0	21.7	30.6	na	55.5	67.2
Jharkhand	12.9	21.1	23.9	35.0	41.4	53.6	66.4
Karnataka	na	29.8	36.8	46.2	56.0	66.6	75.4
Kerala	47.2	55.1	69.8	78.9	89.8	90.9	94.0
Madhya Pradesh	13.2	21.4	27.3	38.6	44.7	63.7	69.3
Maharashtra	27.9	35.1	45.8	57.2	64.9	76.9	82.3
Manipur [a]	12.6	36.0	38.5	49.7	59.9	70.5	76.9
Meghalaya	na	26.9	29.5	42.1	49.1	62.6	74.4
Mizoram	31.1	44.0	53.8	59.9	82.3	88.8	91.3
Nagaland	10.5	22.0	33.8	50.3	61.7	66.6	79.6
Odisha	15.8	21.7	26.2	33.6	49.1	63.1	72.9
Punjab	na	na	34.1	43.4	58.5	69.7	75.8
Rajasthan	8.5	18.1	22.6	30.1	38.6	60.4	66.1
Sikkim	na	na	17.7	34.1	56.9	68.8	81.4
Tamil Nadu	na	36.4	45.4	54.4	62.7	73.5	80.1
Tripura	na	20.2	31.0	50.1	60.4	73.2	87.2
Uttar Pradesh	12.0	20.9	24.0	32.7	40.7	56.3	67.7
Uttarakhand	18.9	18.1	33.3	46.1	57.8	71.6	78.8
West Bengal	24.6	34.5	38.9	48.7	57.7	68.6	76.3
A & N Islands	30.3	40.1	51.2	63.2	73.0	81.3	86.6
Chandigarh	na	na	70.4	74.8	77.8	81.9	86.0
D & N Haveli	na	na	18.1	32.9	40.7	57.6	76.2
Daman & Diu	na	na	na	na	71.2	78.2	87.1
Delhi	na	62.0	65.1	71.9	75.3	81.7	86.2
Goa	23.5	35.4	52.0	65.7	75.5	82.0	88.7
Lakshadweep	15.2	27.2	51.8	68.4	81.8	86.7	91.8
Puducherry	na	43.7	53.4	65.1	74.7	81.2	85.8
All India [a]	**18.3**	**28.3**	**34.5**	**43.6**	**52.2**	**64.8**	**73.0**

Source: Office of the Registrar General of India, Ministry of Home Affairs

Notes:

a : India and Manipur figures exclude those of the three sub-divisions viz. Mao Maram, Paomata and Purul of Senapati district of Manipur as census results of 2001 in these three sub-divisions were cancelled due to technical and administrative reasons.

na : not available

1. Literacy rates for 1951, 1961 and 1971 Censuses relate to population aged five years and above and from 1981 onwards Literacy rates relate to the population aged seven years and above. The literacy rate for 1951 in case of West Bengal relates to total population including 0-4 age group. Literacy rate for 1951 in respect of Chhattisgarh, Madhya Pradesh and Manipur are based on sample population.

Table 9.5. Households with access to Safe Drinking Water in India

(per cent)

States/ UTs	Households with Tap/Handpump/Tubewell								
	1991			2001			2011		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Andhra Pradesh	55.1	49.0	73.8	80.1	76.9	90.2	90.5	88.6	94.5
Arunachal Pradesh	70.0	66.9	88.2	77.5	73.7	90.7	78.6	74.3	91.3
Assam	45.9	43.3	64.1	58.8	56.8	70.4	69.9	68.3	78.2
Bihar	58.8	56.5	73.4	86.6	86.1	91.2	94.0	93.9	94.7
Chhattisgarh	a	a	a	70.5	66.2	88.8	86.3	84.1	93.9
Gujarat	69.8	60.0	87.2	84.1	76.9	95.4	90.3	84.9	97.0
Haryana	74.3	67.1	93.2	86.1	81.1	97.3	93.8	92.0	96.7
Himachal Pradesh	77.3	75.5	91.9	88.6	87.5	97.0	93.7	93.2	97.8
Jammu & Kashmir	na	na	na	65.2	54.9	95.7	76.8	70.1	96.1
Jharkhand	a	a	a	42.6	35.5	68.2	60.1	54.3	78.4
Karnataka	71.7	67.3	81.4	84.6	80.5	92.1	87.5	84.4	92.3
Kerala	18.9	12.2	38.7	23.4	16.9	42.8	33.5	28.3	39.4
Madhya Pradesh	53.4	45.6	79.4	68.4	61.5	88.6	78.0	73.1	92.1
Maharashtra	68.5	54.0	90.5	79.8	68.4	95.4	83.4	73.2	95.7
Manipur	38.7	33.7	52.1	37.0	29.3	59.4	45.4	38.1	60.8
Meghalaya	36.2	26.8	75.4	39.0	29.5	73.5	44.7	35.1	79.5
Mizoram	16.2	12.9	19.9	36.0	23.8	47.8	60.4	43.4	75.8
Nagaland	53.4	55.6	45.5	46.5	47.5	42.3	53.8	54.6	51.8
Odisha	39.1	35.3	62.8	64.2	62.9	72.3	75.3	74.4	79.8
Punjab	92.7	92.1	94.2	97.6	96.9	98.9	97.6	96.7	98.9
Rajasthan	59.0	50.6	86.5	68.2	60.4	93.5	78.1	72.8	94.3
Sikkim	73.1	70.8	92.8	70.7	67.0	97.1	85.3	82.7	92.2
Tamil Nadu	67.4	64.3	74.2	85.6	85.3	85.9	92.5	92.2	92.9
Tripura	37.2	30.6	71.1	52.5	45.0	85.8	67.5	58.1	91.9
Uttar Pradesh	62.2	56.6	85.8	87.8	85.5	97.2	95.1	94.3	97.9
Uttarakhand	a	a	a	86.7	83.0	97.8	92.2	89.5	98.7
West Bengal	82.0	80.3	86.2	88.5	87.0	92.3	92.2	91.4	93.9
A & N Islands	67.9	59.4	90.9	76.7	66.8	97.8	85.5	78.2	98.1
Chandigarh	97.7	98.1	97.7	99.8	99.9	99.8	99.3	98.7	99.4
D& N Haveli	45.6	41.2	91.0	77.0	70.5	96.1	91.6	84.3	98.4
Daman & Diu	71.4	56.9	86.8	96.3	94.9	98.9	98.7	97.8	99.0
Delhi	95.8	91.0	96.2	97.2	90.1	97.7	95.0	87.9	95.2
Goa	43.4	30.5	61.7	70.1	58.3	82.1	85.7	78.4	90.4
Lakshadweep	11.9	3.4	18.8	4.6	4.6	4.6	22.8	31.2	20.2
Puducherry	88.8	92.9	86.1	95.9	96.6	95.5	97.8	99.6	97.0
All India	**62.3**	**55.5**	**81.4**	**77.9**	**73.2**	**90.0**	**85.5**	**82.7**	**91.4**

Source: Office of the Registrar General of India, Ministry of Home Affairs

Notes:

a : Created in 2001. Uttarakhand, Jharkhand and Chhattisgarh for 1991 are included under Uttar Pradesh, Bihar and Madhya Pradesh respectively.

na : not available as no census was carried out in Jammu & Kashmir during 1991.

Table 9.6. Population of India (1951-2011)

(in thousands)

States /UTs	1951	1961	1971	1981	1991	2001	2011
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pradesh	31115	35983	43503	53551	66508	76210	84581
Arunachal Pradesh [a]	na	337	468	632	865	1098	1384
Assam [b]	8029	10837	14625	18041	22414	26656	31206
Bihar	29085	34841	42126	52303	64531	82999	104099
Chhattisgarh	7457	9154	11637	14010	17615	20834	25545
Gujarat	16263	20633	26697	34086	41310	50671	60440
Haryana	5674	7591	10036	12922	16464	21145	25351
Himachal Pradesh	2386	2812	3460	4281	5171	6078	6865
Jammu & Kashmir [c]	3254	3561	4617	5987	7837	10144	12541
Jharkhand	9697	11606	14227	17612	21844	26946	32988
Karnataka	19402	23587	29299	37136	44977	52851	61095
Kerala	13549	16904	21347	25454	29099	31841	33406
Madhya Pradesh	18615	23218	30017	38169	48566	60348	72627
Maharashtra	32003	39554	50412	62783	78937	96879	112374
Manipur [d]	578	780	1073	1421	1837	2294	2856
Meghalaya	606	769	1012	1336	1775	2319	2967
Mizoram	196	266	332	494	690	889	1097
Nagaland	213	369	516	775	1210	1990	1979
Odisha	14646	17549	21945	26370	31660	36805	41974
Punjab	9161	11135	13551	16789	20282	24359	27743
Rajasthan	15971	20156	25766	34262	44006	56507	68548
Sikkim	138	162	210	316	406	541	611
Tamil Nadu	30119	33687	41199	48408	55859	62406	72147
Tripura	639	1142	1556	2053	2757	3199	3674
Uttar Pradesh	60274	70144	83849	105137	132062	166198	199812
Uttarakhand	2946	3611	4493	5726	7051	8489	10086
West Bengal	26300	34926	44312	54581	68078	80176	91276
A & N Islands	31	64	115	189	281	356	381
Chandigarh	24	120	257	452	642	901	1055
D & N Haveli	42	58	74	104	138	220	344
Daman & Diu	49	37	63	79	102	158	243
Delhi	1744	2659	4066	6220	9421	13851	16788
Goa	547	590	795	1008	1170	1348	1459
Lakshadweep	21	24	32	40	52	61	64
Puducherry	317	369	472	604	808	974	1248
All India [d]	**361088**	**439235**	**548160**	**683329**	**846421**	**1028737**	**1210855**

Source : Office of the Registrar General of India, Ministry of Home Affairs

Notes:

a : Census conducted for the first time in 1961.

b : The 1981 Census could not be held in Assam. Total population for 1981 has been worked out by interpolation.

c : The 1991 Census could not be held in Jammu & Kashmir. Total population for 1991 has been worked out by interpolation.

d: India and Manipur figures include estimated population for those of the three sub-divisions viz. Mao Maram, Paomata and Purul Senapatidistrict of Manipur as census results of 2001 in these three sub-divisions were cancelled due to technical and administrative reasons.

na: not available

Table 9.7. Population under different age groups and Child Sex Ratio in 2001 and 2011

States/UTs	Age Group 2001					Age Group 2011					Child Sex Ratio (0-6 years)	
	0-14	15-34	35-59	60 & above	Age not stated	0-14	15-34	35-59	60 & above	Age not stated	2001	2011
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Andhra Pradesh	24398125	26904637	18985717	5788078	133450	21790792	30609248	23131065	8278241	771431	961	939
Arunachal Pradesh	442825	366838	237279	49916	1110	493361	512549	312669	63639	1509	964	972
Assam	9970342	9220063	5875783	1560366	28974	10248899	11123193	7736116	2078544	18824	965	962
Bihar	34874151	24971476	17473783	5501274	177825	41721188	32264872	22002745	7707145	403502	942	935
Chhattisgarh	7692654	6782442	4826242	1504383	28082	8183836	8861697	6472641	2003909	23115	975	969
Gujarat	16624168	18233455	12267094	3499063	47237	17445613	21695832	16272844	4786559	238844	883	890
Haryana	7579980	7458045	4441951	1584089	80499	7529954	9370426	6225793	2193755	31534	819	834
Himachal Pradesh	1884390	2159835	1471395	547564	14716	1775385	2419844	1956201	703009	10163	896	909
Jammu & Kashmir	3617025	3523571	2282065	675324	45715	4240710	4411400	2951417	922656	15119	941	862
Jharkhand	10708694	8563383	6061782	1578662	33308	11891118	10992825	7630779	2356678	116734	965	948
Karnataka	16845601	18667321	13223774	4062022	51844	16024874	22349821	16883719	5791032	45851	946	948
Kerala	8296545	11271154	8911546	3335675	26454	7830974	10335954	11011254	4193393	34486	960	964
Madhya Pradesh	23252416	19871596	12783564	4280924	159523	24302242	25176834	17351555	5713316	82862	932	918
Maharashtra	31100375	34038392	23167117	8454660	118083	29917215	40661653	30280834	11106935	407696	913	894
Manipur	706705	813358	496722	145470	4533	861688	1060221	726088	200020	7777	957	930
Meghalaya	980877	776836	452223	105726	3160	1177942	1052138	592123	138902	5784	973	970
Mizoram	313736	331766	193272	49023	776	356002	412771	259172	68628	633	964	970
Nagaland	728409	762383	404177	90323	4744	679032	760810	434463	102726	1471	964	943
Odisha	12207872	12591532	8904094	3039100	62062	12076422	14385953	11408224	3984448	119171	953	941
Punjab	7617876	8609860	5845668	2191693	93902	7084950	10174719	7576330	2865817	41522	798	846
Rajasthan	22543231	18257954	11608147	3810272	287584	23725426	23811691	15629580	5112138	269602	909	888
Sikkim	188907	205320	115646	29040	1938	165937	251098	151614	40752	1176	963	957
Tamil Nadu	16710874	22392020	17366443	5507400	428942	17007503	25144641	22418323	7509758	66805	942	943
Tripura	1075552	1135652	750645	232549	4805	1017991	1362144	1002622	289544	1616	966	957
Uttar Pradesh	67923332	51963534	33924676	11649468	736911	71308266	68153539	43288570	15439904	1622062	916	902
Uttarakhand	3086976	2845406	1884841	654356	17770	3129008	3602662	2437205	900809	16608	908	890
West Bengal	26645405	27999332	19719644	5700099	111717	24737475	32655852	26027955	7742382	112451	960	956
A & N Islands	104044	142088	90375	17366	2279	92675	147586	114528	25424	368	957	968
Chandigarh	261188	364690	228545	44912	1300	266512	426702	294812	67078	346	845	880
D & N Haveli	77758	90151	43663	8814	104	107813	147931	73701	13892	372	979	926
Daman & Diu	43194	75924	30973	8042	71	54985	122110	54435	11361	356	926	904
Delhi	4492939	5368740	3248002	719650	21176	4565319	6534460	4524015	1147445	16702	868	871
Goa	331226	523205	373952	112273	7012	318160	503105	471691	163495	2094	938	942
Lakshadweep	20734	21382	14752	3729	53	16457	22857	19774	5270	115	959	911
Puducherry	262686	373118	256712	81016	813	298392	440449	387575	120436	1101	967	967
All India	**363610812**	**347676459**	**237962264**	**76622321**	**2738472**	**372444116**	**421959587**	**308112432**	**103849040**	**4489802**	**927**	**918**

Source: Office of the Registrar General of India, Ministry of Home Affairs

Table 9.8. Socio- Economic Profiles and								
Socio-economic Indicators/Items	**Andhra Pradesh**	**Assam**	**Bihar**	**Chhat-tisgarh**	**Guja-rat**	**Harya-na**	**Him-achal Pradesh**	**Jammu & Kash-mir**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
Demographic indicators*								
Population 2001 (in '000)	76210	26656	82999	20834	50671	21145	6078	10144
Population 2011 (in '000)	84581	31206	104099	25545	60439	25351	6865	12541
Percentage decadal growth rate of population (1991-2001)	14.6	18.9	28.6	18.3	22.7	28.4	17.5	29.4
Percentage decadal growth rate of population (2001- 2011)	11.0	17.1	25.4	22.6	19.3	19.9	12.9	23.6
Sex-ratio 2001 (Females per 1000 males)	978	935	919	989	920	861	968	892
Sex-ratio 2011 (Females per 1000 males)	993	958	918	991	919	879	972	889
Sex ratio at birth 2013-15 (Females per 1000 males)	918	900	916	961	854	831	924	899
Sex ratio at birth 2014-16 (Females per 1000 males)	913	896	908	963	848	832	917	906
States HDI and its components**								
HDI Ranking 1999-2000	15	17	19	21	10	7	4	11
HDI 1999-2000	0.368	0.336	0.292	0.278	0.466	0.501	0.581	0.465
Health Index 1999-2000	0.521	0.339	0.506	0.341	0.562	0.576	0.681	0.457
Income Index 1999-2000	0.197	0.152	0.100	0.127	0.323	0.417	0.426	0.431
Education Index 1999-2000	0.385	0.516	0.271	0.365	0.512	0.512	0.636	0.507
HDI Ranking 2007-08	15	16	21	23	11	9	3	10
HDI 2007-08	0.473	0.444	0.367	0.358	0.527	0.552	0.652	0.529
Health Index 2008	0.580	0.407	0.563	0.417	0.633	0.627	0.717	0.530
Income Index 2007-08	0.287	0.288	0.127	0.133	0.371	0.408	0.491	0.459
Education Index 2007-08	0.553	0.636	0.409	0.526	0.577	0.622	0.747	0.597
Growth in GSDP and Per capita Income at constant prices (2011-12)#								
GSDP 2015-16 (%)	12.2	15.7	5.8	2.8	10.2	9.0	8.1	17.7
GSDP 2016-17 (%)	10.4	5.1	9.9	8.5	10.1	8.7	7.0	5.4
Average GSDP 2014-15 to 2016-17 (%)	10.6	9.2	6.4	4.4	10.3	7.8	7.5	6.6
Per capita income (PCY) 2015-16 (%)	11.9	13.0	3.3	0.6	8.4	7.5	7.1	18.1
Per capita income (PCY) 2016-17 (%)	9.6	3.5	8.2	7.2	9.3	7.2	5.5	3.7
Poverty Headcount Ratio (HCR) * **								
2011-12 (Rural)	10.9	33.9	34.1	44.6	21.5	11.6	8.5	11.5
2011-12 (Urban)	5.8	20.5	31.2	24.8	10.1	10.3	4.3	7.2
2011-12 (Total)	9.20	31.9	33.7	39.9	16.6	11.2	8.1	10.4
2009-10 (Rural)	22.8	39.9	55.3	56.1	26.7	18.6	9.1	8.1
2009-10 (Urban)	17.7	26.1	39.4	23.8	17.9	23.0	12.6	12.8
2009-10 (Total)	21.1	37.9	53.5	48.7	23.0	20.1	9.5	9.4
Rural Urban Disparity ##								
Rural Average MPCE 2009-10 (in ₹)	1234	1003	780	784	1110	1510	1536	1344
Rural share of food expenditure 2009-10 (%)	58.0	64.4	64.7	58.2	57.7	54.0	51.6	57.8
Urban Average MPCE 2009-10 (in ₹)	2238	1755	1238	1647	1909	2321	2654	1759
Urban share of food expenditure 2009-10 (%)	44.8	52.9	52.9	43.7	46.2	43.1	41.5	51.3
Rural Average MPCE 2011-12 (in ₹)	1754	1219	1127	1027	1536	2176	2034	1743
Rural share of food expenditure 2011-12 (%)	51.4	61.3	59.3	52.7	54.9	52.1	47.3	55.3
Urban Average MPCE 2011-12 (in ₹)	2685	2189	1507	1868	2581	3817	3259	2485
Urban share of food expenditure 2011-12 (%)	42.3	47.7	50.5	42.2	45.2	39.2	42.4	47.8

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Inter-State Comparison of Selected Major States of India												
Jharkhand	Karna-taka	Kerala	Madhya Pradesh	Maha-rashtra	Odisha	Punjab	Rajast-han	Tamil Nadu	Uttar Pradesh	Uttara-khand	West Bengal	All India
(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
26946	52851	31841	60348	96879	36805	24359	56507	62406	166198	8489	80176	**1028737**
32988	61095	33406	72627	112374	41974	27743	68548	72147	199812	10086	91276	**1210855**
23.4	17.5	9.4	24.3	22.7	16.3	20.1	28.4	11.7	25.9	20.4	17.8	**21.5**
22.4	15.6	4.9	20.3	16.0	14.0	13.9	21.3	15.6	20.2	18.8	13.8	**17.7**
941	965	1058	919	922	972	876	921	987	898	962	934	**933**
948	973	1084	931	929	979	895	928	996	912	963	950	**943**
902	939	967	919	878	950	889	861	911	879	844	951	**900**
918	935	959	922	876	948	893	857	915	882	850	937	**898**
23	12	2	20	6	22	5	14	8	18	16	13	
0.268	0.432	0.677	0.285	0.501	0.275	0.543	0.387	0.480	0.316	0.339	0.422	**0.387**
0.434	0.567	0.782	0.363	0.601	0.376	0.632	0.520	0.586	0.398	0.465	0.600	**0.497**
0.100	0.260	0.458	0.127	0.297	0.076	0.455	0.293	0.285	0.179	0.179	0.210	**0.223**
0.271	0.468	0.789	0.365	0.606	0.372	0.542	0.348	0.570	0.371	0.371	0.455	**0.442**
19	12	1	20	7	22	5	17	8	18	14	13	
0.376	0.519	0.790	0.375	0.572	0.362	0.605	0.434	0.570	0.380	0.490	0.492	**0.467**
0.500	0.627	0.817	0.430	0.650	0.450	0.667	0.587	0.637	0.473	0.530	0.650	**0.563**
0.142	0.326	0.629	0.173	0.351	0.139	0.495	0.253	0.355	0.175	0.302	0.252	**0.271**
0.485	0.605	0.924	0.522	0.715	0.499	0.654	0.462	0.719	0.492	0.638	0.575	**0.568**
-6.2	11.1	6.8	9.1	7.6	8.2	5.7	8.1	8.2	8.8	8.1	6.1	**8.0**
11.2	7.6	7.4	12.5	10.0	10.4	7.2	5.5	4.3	7.3	6.0	7.9	**8.2**
5.8	8.3	6.2	8.9	8.0	6.8	5.7	6.9	5.8	6.7	6.5	5.6	**7.9**
-8.7	10.5	6.4	7.7	6.8	7.3	4.5	6.4	7.9	6.8	6.9	5.0	**6.7**
10.4	6.2	7.4	11.5	8.6	9.5	5.7	3.6	2.8	5.5	4.3	7.0	**6.8**
40.8	24.5	9.1	35.7	24.2	35.7	7.7	16.1	15.8	30.4	11.6	22.5	**25.7**
24.8	15.3	4.9	21.0	9.1	17.3	9.2	10.7	6.5	26.1	10.5	14.7	**13.7**
36.9	20.9	7.1	31.7	17.4	32.6	8.3	14.7	11.3	29.4	11.3	19.9	**21.9**
41.6	26.1	12.0	42.0	29.5	39.2	14.6	26.4	21.2	39.4	14.9	28.8	**33.8**
31.1	19.6	12.1	22.9	18.3	25.9	18.1	19.9	12.8	31.7	25.2	22.0	**20.9**
39.1	23.6	12.0	36.7	24.5	37.0	15.9	24.8	17.1	37.7	18.0	26.7	**29.8**
825	1020	1835	903	1153	818	1649	1179	1160	899	1747	952	**1054**
60.9	56.5	45.9	55.8	54.0	61.9	48.2	54.8	54.7	57.9	45.1	63.4	**57.0**
1584	2053	2413	1666	2437	1548	2109	1663	1948	1574	1745	1965	**1984**
51.5	42.3	40.2	41.7	41.0	48.4	44.3	48.0	45.0	46.3	48.5	46.2	**44.4**
1006	1561	2669	1152	1619	1003	2345	1598	1693	1156	1726	1291	**1430**
58.4	51.4	43.0	52.9	52.4	57.2	44.1	50.5	51.5	53.0	49.6	58.2	**52.9**
2018	3026	3408	2058	3189	1941	2794	2442	2622	2051	2339	2591	**2630**
46.5	40.1	37.0	42.2	41.6	45.4	41.0	44.8	42.7	44.0	46.3	44.2	**42.6**

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Table 9.8. Socio- Economic Profiles and								
Socio-economic Indicators/Items	**Andhra Pradesh**	**Assam**	**Bihar**	**Chhat-tisgarh**	**Guja-rat**	**Harya-na**	**Him-achal Pradesh**	**Jammu & Kash-mir**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
WPR 2017-18 (15 Years & above) @								
Rural (%)	61.0	43.8	35.6	65.5	49.1	41.3	60.2	53.2
Urban (%)	49.3	42.8	34.7	50.0	45.1	42.4	48.3	43.6
Total (%)	57.2	43.7	35.5	62.4	47.4	41.7	58.9	51.0
Unemployment Rate 2015-16 (15 Years & above) @								
Rural (%)	3.6	8.1	6.8	2.5	5.2	9.2	5.2	4.3
Urban (%)	6.6	6.3	9.0	7.5	4.2	6.9	8.7	9.9
Total (%)	4.5	7.9	7.0	3.3	4.8	8.4	5.5	5.4
Health related *								
Male Life expectancy at birth (2011-15)	67.1	63.5	68.5	63.6	66.9	66.9	69.1	71.2
Female Life expectancy at birth (2011-15)	71.2	66.2	68.3	66.8	71.6	71.9	75.2	76.1
Total Life expectancy at birth (2011-15)	69.0	64.7	68.4	65.2	69.1	69.1	72.0	73.2
Male Life expectancy at birth (2012-16)	68.0	64.4	68.9	63.6	67.4	67.2	69.4	71.6
Female Life expectancy at birth (2012-16)	71.4	66.8	68.5	66.8	71.8	72.0	75.5	76.2
Total Life expectancy at birth (2012-16)	69.6	65.5	68.7	65.2	69.5	69.4	72.3	73.5
Infant Mortality Rates (per 1000 live births) 2016	34	44	38	39	30	33	25	24
Infant Mortality Rates (per 1000 live births) 2017	32	44	35	38	30	30	22	23
Birth Rate (per 1000) 2016	16.4	21.7	26.8	22.8	20.1	20.7	16.0	15.7
Death Rate (per 1000) 2016	6.8	6.7	6.0	7.4	6.1	5.9	6.8	5.0
Birth Rate (per 1000) 2017	16.2	21.2	26.4	22.7	19.9	20.5	15.8	15.4
Death Rate (per 1000) 2017	7.2	6.5	5.8	7.5	6.2	5.8	6.6	4.8
Education related $								
GER (I-V Class) (2016-17)	82.79	107.39	98.08	97.07	94.97	93.90	97.91	77.09
GER(VI-VIII Class) (2016-17)	82.14	96.69	103.86	100.81	97.20	94.40	102.99	66.22
GER(IX-X Class) (2016-17)	76.30	78.56	76.71	87.65	74.54	86.34	103.86	61.65
Pupil-Teacher Ratio (2015-16) Primary School	21	21	36	20	19	20	12	9
Pupil-Teacher Ratio (2015-16) Upper Primary School	16	13	24	17	13	13	10	6
Pupil-Teacher Ratio (2015-16) High School	20	14	66	33	34	15	18	15
GER (I-V Class) (2015-16)	83.84	105.63	106.56	99.69	96.72	91.43	98.13	86.33
GER(VI-VIII Class) (2015-16)	80.21	90.95	104.84	101.45	95.35	91.69	103.01	70.72
GER(IX-X Class) (2015-16)	74.08	76.43	77.42	91.60	73.79	83.61	105.72	66.01
Pupil-Teacher Ratio (2014-15) Primary School	21	24	35	21	20	22	12	9
Pupil-Teacher Ratio (2014-15) Upper Primary School	15	14	23	18	13	14	10	6
Pupil-Teacher Ratio (2014-15) High School	19	13	59	33	34	14	19	16

Source:
* : Office of Registrar General of India(RGI). Andhra Pradesh excludes Telangana for Sex ratio at birth 2014-16,
** : India HDR 2011 & 1999-2000,
*** : NITI Aayog (Planning Commission),
$: School Education in India, U-DISE Flash Statistics 2016-17 (Provisional) and Educational Statisics at a Glance 2018,
: CSO,
National Statistical Office (NSO), Monthly per capita expenditure (MPCE) is based on mixed modified recall period,
@ : Periodic Labour Force Survey 2017-18 (NSO); WPR (Worker Participation Rate) and Unemployment Rate are based on Usual Principal & Subsidiary Status (UPSS).

Note:
na: not available.

Inter-State Comparison of Selected Major States of India												
Jharkhand	Karna-taka	Kerala	Madhya Pradesh	Maha-rashtra	Odisha	Punjab	Rajast-han	Tamil Nadu	Uttar Pradesh	Uttara-khand	West Bengal	All India
(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
43.2	51.9	41.9	57.3	55.0	45.6	41.1	50.3	53.7	42.5	41.5	48.5	**48.1**
36.0	44.9	40.2	45.3	44.7	41.1	45.8	41.5	47.9	39.3	38.5	46.1	**43.9**
41.7	49.1	41.2	54.3	50.5	44.9	42.9	48.2	51.0	41.8	40.6	47.8	**46.8**
6.8	3.9	10.0	3.4	3.2	6.9	7.6	4.4	7.9	5.4	6.9	3.8	**5.3**
10.4	6.5	13.2	7.6	7.4	8.4	7.7	7.2	6.9	9.5	9.5	6.4	**7.7**
7.5	4.8	11.4	4.3	4.8	7.1	7.7	5.0	7.5	6.2	7.6	4.6	**6.0**
67.0	67.2	72.2	63.2	70.3	65.6	70.3	65.7	69.1	63.4	68.9	69.4	**66.9**
67.5	70.9	78.2	66.5	73.9	68.3	74.2	70.4	73.0	65.6	74.9	71.8	**70.0**
67.2	69.0	75.2	64.8	72.0	66.9	72.1	67.9	71.0	64.5	71.8	70.5	**68.3**
67.8	67.6	72.2	63.7	70.8	66.2	71.0	66.1	69.5	63.9	68.5	69.8	**67.4**
68.0	70.7	77.9	67.2	73.7	69.1	74.2	70.7	73.4	65.6	74.8	71.9	**70.2**
67.9	69.1	75.1	65.4	72.2	67.6	72.5	68.3	71.4	64.8	71.5	70.8	**68.7**
29	24	10	47	19	44	21	41	17	43	38	25	**34**
29	25	10	47	19	41	21	38	16	41	32	24	**33**
22.9	17.6	14.3	25.1	15.9	18.6	14.9	24.3	15.0	26.2	16.6	15.4	**20.4**
5.5	6.7	7.6	7.1	5.9	7.8	6.0	6.1	6.4	6.9	6.7	5.8	**6.4**
22.7	17.4	14.2	24.8	15.7	18.3	14.9	24.1	14.9	25.9	17.3	15.2	**20.2**
5.5	6.5	6.8	6.8	5.7	7.4	7.0	6	6.7	6.7	6.7	5.8	**6.3**
96.64	103.71	95.14	92.13	97.50	100.22	99.31	97.80	102.01	87.16	96.41	96.27	**95.12**
91.81	92.90	93.63	89.73	98.69	94.64	97.72	91.99	93.42	72.74	86.73	96.34	**90.73**
63.50	84.44	99.36	80.15	91.74	79.91	87.08	76.63	93.87	67.82	84.40	78.56	**79.35**
27	19	18	20	24	17	18	17	18	39	18	25	**23**
19	13	14	18	17	14	12	10	15	31	17	27	**17**
62	16	17	39	23	20	16	21	21	56	16	39	**27**
108.16	102.47	95.17	94.48	97.98	102.72	101.86	100.25	103.05	93.03	99.86	101.94	**99.02**
99.55	92.00	94.55	94.00	98.34	92.39	98.12	89.79	94.23	75.38	87.41	101.58	**91.82**
72.47	82.10	102.00	80.49	89.48	78.28	85.96	75.48	93.15	67.62	85.37	81.72	**79.30**
29	18	17	22	25	19	19	17	18	39	19	25	**24**
20	13	14	19	17	14	12	10	15	33	17	28	**17**
61	16	17	40	23	20	17	23	21	57	18	37	**27**

ECONOMIC SURVEY 2018-19
STATISTICAL APPENDIX

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Table 1.1. Gross National Income and Net National Income

Year	Gross national income (₹ crore)		Net national income (₹ crore)		Per capita net national income (₹)	
	Current prices	Constant prices	Current prices	Constant prices	Current prices	Constant prices
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2004-05 Series						
1950-51	10360	292996	9829	269724	274	7513
1951-52	11019	302010	10443	279256	286	7651
1952-53	10825	310068	10241	287818	275	7737
1953-54	11791	329250	11235	307397	296	8111
1954-55	11141	344902	10635	326057	276	8447
1955-56	11361	356460	10819	337156	275	8579
1956-57	13530	376234	12944	356008	323	8878
1957-58	13931	374503	13277	353525	325	8644
1958-59	15516	402020	14802	379855	354	9087
1959-60	16327	412031	15564	389080	365	9133
1960-61	17870	434497	17062	411519	393	9482
1961-62	18912	450212	18016	426103	406	9597
1962-63	20321	463161	19350	437686	426	9641
1963-64	23350	491049	22266	464130	480	10003
1964-65	27222	527153	25982	498287	548	10512
1965-66	28693	512985	27300	482480	563	9948
1966-67	32439	512781	30806	480102	622	9699
1967-68	38003	552429	36136	517516	714	10228
1968-69	40257	571460	38259	534677	739	10322
1969-70	44334	608809	42035	569591	795	10767
1970-71	47354	640275	44550	596470	823	11025
1971-72	50708	650938	47630	605211	860	10924
1972-73	55912	647647	52487	600195	926	10585
1973-74	68095	669444	63983	619883	1103	10688
1974-75	80479	678151	75182	625455	1268	10547
1975-76	86452	740806	80189	685230	1321	11289
1976-77	93189	753348	86382	694149	1393	11196
1977-78	105615	808500	98287	746719	1550	11778
1978-79	114491	854867	106380	790566	1642	12200
1979-80	125882	811357	115995	743925	1747	11204
1980-81	149987	866338	138565	795193	2041	11711
1981-82	175845	917272	161924	842429	2340	12174
1982-83	196010	946491	179895	867337	2541	12251
1983-84	228077	1015342	210108	932241	2906	12894
1984-85	255187	1052643	234211	963767	3169	13041
1985-86	288095	1108266	262958	1013410	3483	13423
1986-87	322144	1160809	293806	1060195	3811	13751

Contd....

Table 1.1. Gross National Income and Net National Income

Year	Gross national income (₹ crore)		Net national income (₹ crore)		Per capita net national income (₹)	
	Current prices	Constant prices	Current prices	Constant prices	Current prices	Constant prices
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2004-05 Series						
1987-88	365592	1204856	332400	1097111	4218	13923
1988-89	432397	1317940	393546	1204380	4889	14961
1989-90	496197	1396154	450949	1275833	5486	15521
1990-91	578667	1470766	526017	1342031	6270	15996
1991-92	663798	1485707	599171	1348043	7000	15748
1992-93	762900	1567944	688762	1422097	7899	16308
1993-94	879275	1644886	796418	1492864	8928	16736
1994-95	1032507	1755272	935759	1592980	10283	17505
1995-96	1213241	1888228	1100655	1715639	11861	18487
1996-97	1406195	2032837	1276347	1849226	13492	19548
1997-98	1559189	2118975	1411922	1920927	14646	19927
1998-99	1788410	2250012	1624669	2038124	16528	20734
1999-00	2007699	2448654	1821227	2220003	18194	22178
2000-01	2154680	2535911	1947788	2291795	19115	22491
2001-02	2335777	2661819	2106928	2401875	20259	23095
2002-03	2519637	2766298	2273456	2492931	21529	23607
2003-04	2820795	2983497	2548640	2692470	23775	25116
2004-05	3219835	3219835	2899944	2899944	26629	26629
2005-06	3667253	3518348	3303532	3167455	29869	28639
2006-07	4261472	3841974	3842743	3456274	34249	30805
2007-08	4966578	4233768	4481882	3806140	39384	33446
2008-09	5597140	4390966	5031943	3922062	43604	33987
2009-10	6439827	4763090	5780028	4241183	49402	36249
2010-11	7702308	5227739	6942089	4657438	58534	39270
2011-12	8932892	5586683	8052996	4958849	66997	41255
2011-12 Series						
2011-12	8659505	8659505	7742330	7742330	63462	63462
2012-13	9827250	9104662	8766345	8094001	70983	65538
2013-14	11093638	9679027	9897663	8578417	79118	68572
2014-15	12320529	10402987	10978238	9224343	86647	72805
2015-16	13612095	11234571	12162398	9963681	94797	77659
2016-17 (2nd RE)	15185986	12153754	13595261	10772800	104659	82931
2017-18 (1st RE)	16910192	13034121	15128474	11531159	114958	87623
2018-19 (PE)	18816538	13932287	16837219	12329646	126406	92565

Source : Central Statistics Office
Notes :
PE : Provisional Estimates, RE: Revised Estimates

Table 1.2. Annual Growth Rates of Gross National Income and Net National Income

(per cent)

Year	Gross national income		Net national income		Per capita net national income	
	Current prices	Constant prices	Current prices	Constant prices	Current prices	Constant prices
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			2004-05 Series			
1951-52	6.4	3.1	6.2	3.5	4.5	1.8
1952-53	-1.8	2.7	-1.9	3.1	-3.8	1.1
1953-54	8.9	6.2	9.7	6.8	7.7	4.8
1954-55	-5.5	4.8	-5.3	6.1	-7.1	4.1
1955-56	2.0	3.4	1.7	3.4	-0.1	1.6
1956-57	19.1	5.5	19.6	5.6	17.3	3.5
1957-58	3.0	-0.5	2.6	-0.7	0.6	-2.6
1958-59	11.4	7.3	11.5	7.4	9.1	5.1
1959-60	5.2	2.5	5.1	2.4	3.2	0.5
1960-61	9.5	5.5	9.6	5.8	7.6	3.8
1961-62	5.8	3.6	5.6	3.5	3.2	1.2
1962-63	7.5	2.9	7.4	2.7	5.0	0.5
1963-64	14.9	6.0	15.1	6.0	12.6	3.8
1964-65	16.6	7.4	16.7	7.4	14.2	5.1
1965-66	5.4	-2.7	5.1	-3.2	2.7	-5.4
1966-67	13.1	0.0	12.8	-0.5	10.6	-2.5
1967-68	17.2	7.7	17.3	7.8	14.8	5.4
1968-69	5.9	3.4	5.9	3.3	3.4	0.9
1969-70	10.1	6.5	9.9	6.5	7.6	4.3
1970-71	6.8	5.2	6.0	4.7	3.6	2.4
1971-72	7.1	1.7	6.9	1.5	4.4	-0.9
1972-73	10.3	-0.5	10.2	-0.8	7.7	-3.1
1973-74	21.8	3.4	21.9	3.3	19.2	1.0
1974-75	18.2	1.3	17.5	0.9	14.9	-1.3
1975-76	7.4	9.2	6.7	9.6	4.2	7.0
1976-77	7.8	1.7	7.7	1.3	5.5	-0.8
1977-78	13.3	7.3	13.8	7.6	11.3	5.2
1978-79	8.4	5.7	8.2	5.9	5.9	3.6
1979-80	9.9	-5.1	9.0	-5.9	6.4	-8.2
1980-81	19.1	6.8	19.5	6.9	16.8	4.5
1981-82	17.2	5.9	16.9	5.9	14.7	3.9
1982-83	11.5	3.2	11.1	3.0	8.6	0.6
1983-84	16.4	7.3	16.8	7.5	14.4	5.3
1984-85	11.9	3.7	11.5	3.4	9.1	1.1
1985-86	12.9	5.3	12.3	5.2	9.9	2.9
1986-87	11.8	4.7	11.7	4.6	9.4	2.4
1987-88	13.5	3.8	13.1	3.5	10.7	1.2
1988-89	18.3	9.4	18.4	9.8	15.9	7.5

Contd....

Table 1.2. Annual Growth Rates of Gross National Income and Net National Income

(per cent)

Year	Gross national income		Net national income		Per capita net national income	
	Current prices	Constant prices	Current prices	Constant prices	Current prices	Constant prices
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2004-05 Series						
1989-90	14.8	5.9	14.6	5.9	12.2	3.7
1990-91	16.6	5.3	16.6	5.2	14.3	3.1
1991-92	14.7	1.0	13.9	0.4	11.6	-1.5
1992-93	14.9	5.5	15.0	5.5	12.8	3.6
1993-94	15.3	4.9	15.6	5.0	13.0	2.6
1994-95	17.4	6.7	17.5	6.7	15.2	4.6
1995-96	17.5	7.6	17.6	7.7	15.3	5.6
1996-97	15.9	7.7	16.0	7.8	13.8	5.7
1997-98	10.9	4.2	10.6	3.9	8.6	1.9
1998-99	14.7	6.2	15.1	6.1	12.8	4.1
1999-00	12.3	8.8	12.1	8.9	10.1	7.0
2000-01	7.3	3.6	6.9	3.2	5.1	1.4
2001-02	8.4	5.0	8.2	4.8	6.0	2.7
2002-03	7.9	3.9	7.9	3.8	6.3	2.2
2003-04	12.0	7.9	12.1	8.0	10.4	6.4
2004-05	14.1	7.9	13.8	7.7	12.0	6.0
2005-06	13.9	9.3	13.9	9.2	12.2	7.5
2006-07	16.2	9.2	16.3	9.1	14.7	7.6
2007-08	16.5	10.2	16.6	10.1	15.0	8.6
2008-09	12.7	3.7	12.3	3.0	10.7	1.6
2009-10	15.1	8.5	14.9	8.1	13.3	6.7
2010-11	19.6	9.8	20.1	9.8	18.5	8.3
2011-12	16.0	6.9	16.0	6.5	14.5	5.1
2011-12 Series						
2012-13	13.5	5.1	13.2	4.5	11.9	3.3
2013-14	12.9	6.3	12.9	6.0	11.5	4.6
2014-15	11.1	7.5	10.9	7.5	9.5	6.2
2015-16	10.5	8.0	10.8	8.0	9.4	6.7
2016-17 (2nd RE)	11.6	8.2	11.8	8.1	10.4	6.8
2017-18 (1st RE)	11.4	7.2	11.3	7.0	9.8	5.7
2018-19 (PE)	11.3	6.9	11.3	6.9	10.0	5.6

Source : Central Statistics Office,

Notes :

PE : Provisional Estimates, RE: Revised Estimates

Table 1.3 A. Real Gross Value Added at Factor Cost by Industry of Origin

(₹ crore)

At constant prices						
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at factor cost (2 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2004-05 Series						
1950-51	150191	40138	30792	23325	28474	279618
1951-52	152987	41996	31608	23863	29329	286147
1952-53	157764	41834	32641	24863	29934	294267
1953-54	169547	44416	33861	25219	30860	312177
1954-55	174611	48325	36065	26140	31967	325431
1955-56	173255	53962	38700	27190	32955	333766
1956-57	182651	58809	41537	27635	34219	352766
1957-58	175180	57737	42831	28679	35765	348500
1958-59	192337	62009	44965	29492	37233	374948
1959-60	190851	66378	47779	30619	38834	383153
1960-61	204340	73555	51879	31252	40741	410279
1961-62	205014	78638	55259	32596	42656	423011
1962-63	202234	83517	58503	33693	45686	431960
1963-64	207030	92432	62650	34735	48684	453829
1964-65	225287	99250	66890	35688	51894	488247
1965-66	202906	102475	68079	36766	53950	470402
1966-67	200481	106304	69862	37412	56438	475190
1967-68	228813	109856	72852	38431	58659	513860
1968-69	228836	115422	76155	40305	61272	527270
1969-70	243347	124372	80275	41980	64655	561630
1970-71	258665	126356	84205	43735	68218	589787
1971-72	254395	129506	86121	45989	71264	595741
1972-73	243082	133917	87991	47767	73594	593843
1973-74	259751	134649	91686	48936	75541	620872
1974-75	256719	136045	97176	48779	79120	628079
1975-76	289695	144928	105980	52142	81914	684634
1976-77	274522	158354	110697	56277	84190	693191
1977-78	300873	170123	118084	59032	86450	744972
1978-79	307874	182590	127772	63203	90186	785965
1979-80	271096	176035	126751	63818	96779	745083
1980-81	305906	183970	133906	65041	101666	798506
1981-82	321876	197519	142057	70326	103842	843426
1982-83	323862	197833	149903	77029	111849	868092

Contd....

Table 1.3 A. Real Gross Value Added at Factor Cost by Industry of Origin

(₹ crore)

	At constant prices					
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at factor cost (2 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			2004-05 series			
1983-84	354720	214737	157545	84585	116027	936270
1984-85	360230	224284	165037	90907	124065	973357
1985-86	362783	233818	178195	99783	131184	1013866
1986-87	364989	245385	188888	110295	141043	1057612
1987-88	360949	259641	198578	118383	151240	1094993
1988-89	417581	280863	210405	129934	160385	1206243
1989-90	425075	304461	226074	146088	173022	1280228
1990-91	444880	325450	237736	155165	180564	1347889
1991-92	438685	325150	243178	171956	185232	1367171
1992-93	465084	336716	256897	181320	196332	1440504
1993-94	479592	357237	274682	201568	205101	1522344
1994-95	504477	389903	301997	209401	209742	1619694
1995-96	504527	436863	342536	226348	225157	1737741
1996-97	549202	468146	370200	240354	243288	1876319
1997-98	542313	483585	398109	268495	263486	1957032
1998-99	574374	504485	428613	289440	289085	2087828
1999-00	590696	535730	477605	327111	323800	2254942
2000-01	592227	570571	508299	338661	338723	2348481
2001-02	624923	585971	552118	359684	352267	2474962
2002-03	594280	627374	597896	385661	365724	2570935
2003-04	643183	676833	664637	406098	384998	2775749
2004-05	650454	744755	727720	437174	411361	2971464
2005-06	680628	824272	815407	492340	440426	3253073
2006-07	711768	928626	910084	561063	452823	3564364
2007-08	751077	1023998	1009520	628124	483917	3896636
2008-09	753744	1071681	1085125	703629	544497	4158676
2009-10	764817	1173089	1197891	771905	608369	4516071
2010-11	828431	1262722	1344024	849189	634167	4918533
2011-12	864557	1369932	1402261	945534	665246	5247530

Source: Central Statistics Office

Notes :

1. For the years prior to 1999-2000 totals under col. 7 may not add up to totals of individual item under col. 2 to col. 6 due to splicing technique applied independently at the level of each industry and at the total level.
2. Estimates for the years 2011-12 onwards (at base 2011-12) are available at basic prices only and are given in table 1.3B.

Table 1.3 B. Real Gross Value Added at Basic Prices by Industry of Origin

(₹ crore)

At constant prices						
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at basic prices (2 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2011-12 series						
2011-12	1762983	2373988	1413116	1530877	1025982	8106946
2012-13	1786897	2458558	1551143	1680031	1069646	8546275
2013-14	1872305	2561081	1652062	1867407	1110794	9063649
2014-15	1894401	2733213	1807689	2073714	1203115	9712133
2015-16	1934120	2993343	1992825	2294787	1276797	10491870
2016-17 (2nd RE)	2065555	3219288	2145415	2494444	1394269	11318972
2017-18 (1st RE)	2168716	3413837	2312214	2649146	1560252	12104165
2018-19 (PE)	2226196	3668368	2471128	2846393	1694851	12906936

Source : Central Statistics Office

Notes :

PE : Provisional Estimates, RE: Revised Estimates

Table 1.4 A. Nominal Gross Value Added at Factor Cost by Industry of Origin

(₹ crore)

At current prices						
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at factor cost (2 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2004-05 Series						
1950-51	5274	1346	968	1254	1115	10036
1951-52	5453	1505	1048	1349	1162	10596
1952-53	5316	1416	1055	1425	1201	10449
1953-54	5850	1559	1121	1537	1250	11378
1954-55	4993	1640	1151	1647	1283	10689
1955-56	4847	1760	1192	1768	1361	10861
1956-57	6152	2071	1378	1917	1430	12965
1957-58	6045	2148	1525	2054	1503	13255
1958-59	7002	2334	1667	2203	1597	14827
1959-60	7043	2616	1801	2364	1760	15574
1960-61	7434	3113	1985	2547	1989	17049
1961-62	7704	3398	2145	2602	2154	17992
1962-63	7899	3740	2348	2987	2343	19238
1963-64	9274	4274	2628	3231	2599	21986
1964-65	11291	4788	3084	3512	2945	25686
1965-66	11301	5199	3345	3796	3276	26895
1966-67	13123	5819	3890	4063	3665	30613
1967-68	16393	6380	4445	4458	4105	35976
1968-69	16912	6940	4732	4772	4422	37938
1969-70	18505	7944	5107	5120	4822	41722
1970-71	19086	8622	5627	5579	5315	44382
1971-72	19510	9538	6102	6117	5901	47221
1972-73	21448	10534	6730	6694	6456	51943
1973-74	28171	12230	8057	7465	7261	63658
1974-75	31062	15232	10642	8390	9142	74930
1975-76	31028	16571	12067	9511	10290	79582
1976-77	31833	18811	13066	10579	11311	85545
1977-78	37592	21270	14702	11540	12296	97633
1978-79	38717	23951	16119	12448	13529	104930
1979-80	40373	26774	18604	13576	15149	114500
1980-81	50760	30900	21968	15120	17537	136838
1981-82	58745	36090	26946	17835	19927	160214
1982-83	63985	39953	30749	20453	23134	178985

Contd....

Table 1.4 A. Nominal Gross Value Added at Factor Cost by Industry of Origin

(₹ crore)

	At current prices					
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at factor cost (2 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			2004-05 Series			
1983-84	75982	47053	35716	23388	26345	209356
1984-85	82204	53656	41125	26907	30311	235113
1985-86	88083	60593	48022	30819	34284	262717
1986-87	95182	67754	54272	35337	39428	292924
1987-88	105358	77630	61963	40387	45700	332068
1988-89	130731	91163	73159	46926	52994	396295
1989-90	144461	108908	85630	55297	60741	456540
1990-91	168166	127079	100318	64598	70019	531814
1991-92	195454	140700	115570	78904	81366	613528
1992-93	219680	163887	136250	87495	94507	703723
1993-94	254876	188251	160990	105686	106090	817961
1994-95	293013	229365	192142	119442	118663	955386
1995-96	319243	280971	231175	143791	140190	1118586
1996-97	381142	318260	273135	158637	166469	1301788
1997-98	408521	348543	313093	180642	193188	1447613
1998-99	466446	393491	358538	210593	236123	1668739
1999-00	497027	426993	400650	260522	273013	1858205
2000-01	506476	474323	443169	282316	294459	2000743
2001-02	546674	497578	491952	321543	317513	2175260
2002-03	548062	550421	543691	360194	341496	2343864
2003-04	608788	618840	624394	402510	371288	2625819
2004-05	650454	744755	727720	437174	411361	2971464
2005-06	732234	859410	846606	493102	459151	3390503
2006-07	829771	1033410	998379	586595	505121	3953276
2007-08	961330	1205458	1150044	691464	573790	4582086
2008-09	1083032	1360426	1310845	845369	703895	5303567
2009-10	1242818	1536492	1481623	964937	883033	6108903
2010-11	1524552	1763584	1779630	1165243	1015850	7248860
2011-12	1721814	2061650	2072272	1381524	1154431	8391691

Source: Central Statistics Office

Notes :

1. For the years prior to 1999-2000 totals under col. 7 may not add up to totals of individual item under col. 2 to col. 6 due to splicing technique applied independently at the level of each industry and at the total level.
2. Estimates for the years 2011-12 onwards (at base 2011-12) are available at basic prices only and are given in table 1.4 B.

Table 1.4 B. Nominal Gross Value Added at Basic Prices by Industry of Origin

(₹crore)

At current prices						
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at basic prices (2 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2011-12 Series						
2011-12	1762983	2373988	1413116	1530877	1025982	8106946
2012-13	1960949	2637551	1663986	1776632	1163574	9202692
2013-14	2222166	2895076	1874467	2069508	1301935	10363153
2014-15	2402088	3139713	2107597	2363347	1491536	11504279
2015-16	2521544	3472237	2294513	2626138	1660067	12574499
2016-17 (2nd RE)	2818230	3771001	2538268	2911901	1896516	13935917
2017-18 (1st RE)	3021204	4178806	2823263	3252789	2206652	15482715
2018-19 (PE)	3186003	4674382	3151709	3666326	2521395	17199815

Source: Central Statistics Office
Notes:

PE : Provisional Estimates RE: Revised Estimates

Table 1.5 A. Annual Growth Rates of Real Gross Value Added at Factor Cost by Industry of Origin

(per cent)

	At Constant Prices					
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at factor cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			2004-05 Series			
1951-52	1.9	4.6	2.6	2.3	3.0	2.3
1952-53	3.1	-0.4	3.3	4.2	2.1	2.8
1953-54	7.5	6.2	3.7	1.4	3.1	6.1
1954-55	3.0	8.8	6.5	3.7	3.6	4.2
1955-56	-0.8	11.7	7.3	4.0	3.1	2.6
1956-57	5.4	9.0	7.3	1.6	3.8	5.7
1957-58	-4.1	-1.8	3.1	3.8	4.5	-1.2
1958-59	9.8	7.4	5.0	2.8	4.1	7.6
1959-60	-0.8	7.0	6.3	3.8	4.3	2.2
1960-61	7.1	10.8	8.6	2.1	4.9	7.1
1961-62	0.3	6.9	6.5	4.3	4.7	3.1
1962-63	-1.4	6.2	5.9	3.4	7.1	2.1
1963-64	2.4	10.7	7.1	3.1	6.6	5.1
1964-65	8.8	7.4	6.8	2.7	6.6	7.6
1965-66	-9.9	3.2	1.8	3.0	4.0	-3.7
1966-67	-1.2	3.7	2.6	1.8	4.6	1.0
1967-68	14.1	3.3	4.3	2.7	3.9	8.1
1968-69	0.0	5.1	4.5	4.9	4.5	2.6
1969-70	6.3	7.8	5.4	4.2	5.5	6.5
1970-71	6.3	1.6	4.9	4.2	5.5	5.0
1971-72	-1.7	2.5	2.3	5.2	4.5	1.0
1972-73	-4.4	3.4	2.2	3.9	3.3	-0.3
1973-74	6.9	0.5	4.2	2.4	2.6	4.6
1974-75	-1.2	1.0	6.0	-0.3	4.7	1.2
1975-76	12.8	6.5	9.1	6.9	3.5	9.0
1976-77	-5.2	9.3	4.5	7.9	2.8	1.2
1977-78	9.6	7.4	6.7	4.9	2.7	7.5
1978-79	2.3	7.3	8.2	7.1	4.3	5.5
1979-80	-11.9	-3.6	-0.8	1.0	7.3	-5.2
1980-81	12.8	4.5	5.6	1.9	5.0	7.2
1981-82	5.2	7.4	6.1	8.1	2.1	5.6
1982-83	0.6	0.2	5.5	9.5	7.7	2.9

Contd....

Table 1.5 A. Annual Growth Rates of Real Gross Value Added at Factor Cost by Industry of Origin

(per cent)

	At Constant Prices					
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at factor cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			2004-05 Series			
1983-84	9.5	8.5	5.1	9.8	3.7	7.9
1984-85	1.6	4.4	4.8	7.5	6.9	4.0
1985-86	0.7	4.3	8.0	9.8	5.7	4.2
1986-87	0.6	4.9	6.0	10.5	7.5	4.3
1987-88	-1.1	5.8	5.1	7.3	7.2	3.5
1988-89	15.7	8.2	6.0	9.8	6.0	10.2
1989-90	1.8	8.4	7.4	12.4	7.9	6.1
1990-91	4.7	6.9	5.2	6.2	4.4	5.3
1991-92	-1.4	-0.1	2.3	10.8	2.6	1.4
1992-93	6.0	3.6	5.6	5.4	6.0	5.4
1993-94	3.1	6.1	6.9	11.2	4.5	5.7
1994-95	5.2	9.1	9.9	3.9	2.3	6.4
1995-96	0.0	12.0	13.4	8.1	7.3	7.3
1996-97	8.9	7.2	8.1	6.2	8.1	8.0
1997-98	-1.3	3.3	7.5	11.7	8.3	4.3
1998-99	5.9	4.3	7.7	7.8	9.7	6.7
1999-00	2.8	6.2	11.4	13.0	12.0	8.0
2000-01	0.3	6.5	6.4	3.5	4.6	4.1
2001-02	5.5	2.7	8.6	6.2	4.0	5.4
2002-03	-4.9	7.1	8.3	7.2	3.8	3.9
2003-04	8.2	7.9	11.2	5.3	5.3	8.0
2004-05	1.1	10.0	9.5	7.7	6.8	7.1
2005-06	4.6	10.7	12.0	12.6	7.1	9.5
2006-07	4.6	12.7	11.6	14.0	2.8	9.6
2007-08	5.5	10.3	10.9	12.0	6.9	9.3
2008-09	0.4	4.7	7.5	12.0	12.5	6.7
2009-10	1.5	9.5	10.4	9.7	11.7	8.6
2010-11	8.3	7.6	12.2	10.0	4.2	8.9
2011-12	4.4	8.5	4.3	11.3	4.9	6.7

Source: Central Statistics Office

Table 1.5 B. Annual Growth Rates of Real Gross Value Added at Basic Prices by Industry of Origin

(per cent)

	At Constant Prices					
Year	Agriculture, forestry & fishing, mining and quarrying	Manufacturing, construction, electricity, gas and water supply	Trade, hotels, transport & communication	Financing, insurance, real estate and business services	Community social & personal services	Gross value added at basic prices
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			2011-12 Series			
2012-13	1.4	3.6	9.8	9.7	4.3	5.4
2013-14	4.8	4.2	6.5	11.2	3.8	6.1
2014-15	1.2	6.7	9.4	11.0	8.3	7.2
2015-16	2.1	9.5	10.2	10.7	6.1	8.0
2016-17 (2nd RE)	6.8	7.5	7.7	8.7	9.2	7.9
2017-18 (1st RE)	5.0	6.0	7.8	6.2	11.9	6.9
2018-19 (PE)	2.7	7.5	6.9	7.4	8.6	6.6

Source: Central Statistics Office

Notes:

PE : Provisional Estimates, RE: Revised Estimates

Table 1.6. Components of Gross Domestic Product at Current Prices

(₹ crore)

Year	PFCE	GFCE	GFCF	CIS	Valu-ables	Export of goods and services	Import of goods and services	Discrepan-cies	GDP
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2004-05 Series									
1950-51	9394	608	968	165	na	736	711	-759	10401
1951-52	10307	638	1045	173	na	846	1038	-917	11054
1952-53	10284	661	974	40	na	715	702	-1122	10850
1953-54	11190	698	968	-67	na	644	652	-970	11810
1954-55	10414	728	1112	36	na	705	750	-1076	11170
1955-56	10417	780	1384	53	na	757	839	-1180	11371
1956-57	12286	860	1771	235	na	767	1174	-1198	13547
1957-58	12462	1005	1803	242	na	800	1304	-1057	13951
1958-59	14148	1078	1782	2	na	719	1104	-1074	15551
1959-60	14707	1136	2003	209	na	779	1010	-1440	16384
1960-61	15891	1240	2290	328	na	787	1205	-1389	17942
1961-62	16617	1377	2554	276	na	804	1113	-1506	19010
1962-63	17501	1670	2842	357	na	837	1211	-1567	20429
1963-64	19430	2146	3374	275	na	987	1362	-1387	23462
1964-65	22873	2313	3972	363	na	1002	1529	-1627	27367
1965-66	24144	2665	4420	316	na	938	1478	-2147	28857
1966-67	28119	2921	4866	514	na	1330	2142	-2939	32669
1967-68	33509	3265	5395	432	na	1517	2236	-3621	38261
1968-69	33524	3576	5672	96	na	1608	1968	-1996	40512
1969-70	36265	4008	6192	554	na	1628	1767	-2275	44605
1970-71	38474	4479	6488	809	na	1771	1816	-2568	47638
1971-72	41496	5185	7479	1066	na	1838	2006	-4059	50999
1972-73	45736	5514	8480	411	na	2225	2049	-4102	56214
1973-74	55135	6045	9675	1639	na	2830	3176	-3728	68420
1974-75	66799	7334	12080	2929	na	3835	4779	-7429	80770
1975-76	68314	8645	13895	2123	na	4812	5664	-5419	86707
1976-77	71024	9602	15546	1393	na	6139	5614	-4669	93422
1977-78	81788	10245	17835	1387	na	6640	6517	-5529	105848
1978-79	88950	11373	19719	3218	na	7115	7423	-8305	114647
1979-80	96590	13074	22564	3791	na	8340	10094	-8536	125729
1980-81	118068	15179	26815	188	na	9029	13596	-6041	149642
1981-82	135676	17785	32650	5753	na	10256	14809	-11506	175805
1982-83	149773	21022	38905	4451	na	11563	15736	-13334	196644
1983-84	175357	24288	44005	1787	na	13139	17675	-11880	229021
1984-85	194037	27927	50449	4820	na	15846	19484	-16984	256611
1985-86	214154	33257	59640	8314	na	14951	21754	-19038	289524
1986-87	240209	39322	69476	6532	na	16543	22359	-25774	323949
1987-88	266649	46160	81204	2019	na	20281	25259	-22843	368211
1988-89	310497	53280	95617	8543	na	25913	32010	-24947	436893
1989-90	346807	60997	113993	6014	na	34609	40212	-20279	501928
1990-91	398529	69525	139663	6355	na	40635	48698	-19797	586212
1991-92	457735	78458	152466	-903	na	56254	56249	-13887	673875
1992-93	516118	88846	177929	9839	na	67312	73000	-12499	774545
1993-94	591308	103066	191456	-1719	na	86147	85999	7095	891355

Contd....

Table 1.6. Components of Gross Domestic Product at Current Prices

(₹ crore)

Year	PFCE	GFCE	GFCF	CIS	Valu-ables	Export of goods and services	Import of goods and services	Discrepan-cies	GDP
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2004-05 Series									
1994-95	687154	114672	228442	14072	na	101607	104710	4354	1045590
1995-96	792015	135883	295046	24557	na	130733	144953	-6556	1226725
1996-97	928629	154089	328046	-14991	na	144854	161022	39672	1419277
1997-98	1018559	182245	372401	13044	na	165203	184333	5275	1572394
1998-99	1166300	225716	427069	-3023	na	195280	224745	16780	1803378
1999-2000	1312537	258868	484666	42497	15519	227697	265702	-52952	2023130
2000-01	1406661	273400	495196	15158	14724	278126	297523	-8329	2177413
2001-02	1531672	291189	590240	-1971	14187	290757	311050	-49179	2355845
2002-03	1620293	301573	601120	18200	13957	355556	379981	5608	2536327
2003-04	1771305	324783	697478	20667	24572	417425	436878	22151	2841503
2004-05	1917508	354518	931028	80150	41054	569051	625945	-25154	3242209
2005-06	2152702	401619	1120292	104389	41392	712087	813466	-25647	3693369
2006-07	2476667	443477	1343774	147101	49709	904872	1040535	-30359	4294706
2007-08	2840727	513021	1641673	201534	53592	1018907	1219109	-63255	4987090
2008-09	3249284	615333	1821099	106791	72213	1328765	1614040	50618	5630063
2009-10	3707566	771151	2055772	179171	116312	1298780	1647139	-3786	6477827
2010-11	4360323	890136	2407069	273509	162836	1710193	2050182	30230	7784115
2011-12	5141896	1025895	2861062	170596	246673	2150326	2721947	135220	9009722
2011-12 Series									
2011-12	4910447	968375	2997733	207983	253033	2143931	2715554	-29620	8736329
2012-13	5614484	1062404	3324973	214524	273775	2439707	3108428	122574	9944013
2013-14	6475649	1156509	3515621	144621	161761	2856781	3191811	114389	11233522
2014-15	7247340	1301762	3750392	312698	209407	2863636	3235962	18687	12467959
2015-16	8126408	1436171	3957092	262477	203506	2728647	3044923	102495	13771874
2016-17 (2nd RE)	9115769	1583312	4335014	139714	166559	2948772	3220591	293838	15362386
2017-18 (1st RE)	10083121	1885613	4896813	173890	218706	3210547	3758519	384835	17095005
2018-19 (PE)	11290029	2134615	5569998	187671	193992	3752230	4493933	375562	19010164

Source: Central Statistics Office

Notes:

PE : Provisional Estimates, RE: Revised Estimates

1. PFCE: Private Final Consumption Expenditure
2. GFCE: Government Final Consumption Expenditure
3. GFCF: Gross Fixed Capital Formation
4. CIS: Change in Stocks
5. na: not available
6. GDP: Gross Domestic Product

Table 1.7. Components of Gross Domestic Product at Constant Prices

(₹ crore)

Year	PFCE	GFCE	GFCF	CIS	Valuables	Export of goods and services	Import of goods and services	Discrep-ancies	GDP
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2004-05 Series									
1950-51	244888	17979	40701	4205	na	20455	23085	-11206	293937
1951-52	260454	18166	39772	3949	na	22790	32667	-9865	302599
1952-53	270964	18187	37131	1046	na	20085	23038	-13831	310544
1953-54	287254	18415	38705	-2382	na	17625	20846	-9127	329643
1954-55	296678	18523	43546	1156	na	21411	26611	-9201	345503
1955-56	299514	19036	50947	1457	na	23206	30047	-7429	356684
1956-57	312764	20361	62224	4449	na	20817	37224	-6808	376582
1957-58	306585	22929	57579	7128	na	20981	39954	-215	375033
1958-59	334730	23742	56784	-480	na	18136	32533	2371	402749
1959-60	338538	24168	61613	4479	na	19117	28957	-5638	413320
1960-61	357795	25473	66760	6128	na	18891	33792	-5218	436037
1961-62	363895	27415	73110	5204	na	18856	30495	-5715	452270
1962-63	368636	33078	80082	4508	na	18747	31687	-7836	465527
1963-64	382349	40647	90736	3680	na	20322	32762	-11540	493432
1964-65	405190	42464	98565	6218	na	18999	33869	-7358	530207
1965-66	405548	46580	101821	4695	na	16365	30125	-28652	516232
1966-67	410819	47380	102257	6621	na	20593	38747	-32976	515947
1967-68	434061	48658	107340	5590	na	21614	37219	-23719	556324
1968-69	445463	51211	111372	1435	na	22292	31874	-24727	575172
1969-70	462008	56050	111724	7245	na	21860	27719	-18381	612787
1970-71	477697	61370	107541	8631	na	28759	32685	-6923	644390
1971-72	486992	67386	118995	11455	na	29062	38578	-20336	654976
1972-73	490254	68031	124912	3242	na	31456	37849	-28694	651352
1973-74	502285	67936	123058	11795	na	33017	40906	-24368	672818
1974-75	501907	65398	128951	14863	na	35724	35687	-30362	680793
1975-76	530409	71715	128683	2170	na	41600	36143	4652	743085
1976-77	540985	77084	141513	7607	na	49845	36829	-24763	755443
1977-78	585099	79719	158620	11260	na	48067	46918	-25597	810249
1978-79	620859	85618	165842	21755	na	51818	46941	-42416	856535
1979-80	606933	90975	165092	15528	na	57597	56011	-68448	811668

Contd....

Table 1.7. Components of Gross Domestic Product at Constant Prices

(₹ crore)

Year	PFCE	GFCE	GFCF	CIS	Valuables	Export of goods and services	Import of goods and services	Discrep-ancies	GDP
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2004-05 Series									
1980-81	661562	95196	178287	1004	na	60614	64051	-66273	866340
1981-82	690331	99203	185401	23590	na	60119	70474	-69795	918374
1982-83	697235	108747	197159	17857	na	63738	72909	-61533	950295
1983-84	751352	113612	209780	7483	na	63155	88937	-36884	1019561
1984-85	773009	122059	217283	17374	na	67764	76192	-62780	1058515
1985-86	805271	134924	229215	27276	na	63485	86761	-59276	1114133
1986-87	830682	147610	251020	21203	na	66934	101583	-48516	1167350
1987-88	859153	159705	266072	6009	na	75452	99889	-52862	1213640
1988-89	912779	168458	284466	24171	na	81091	109073	-31406	1330486
1989-90	958075	177460	306311	16060	na	90805	111346	-27749	1409615
1990-91	1000867	183488	347966	15063	na	100888	115094	-45562	1487615
1991-92	1022458	183180	328594	-1791	na	110637	115111	-24629	1503337
1992-93	1048825	189503	358162	18331	na	116050	139432	-5683	1585756
1993-94	1094417	200751	354848	-3816	na	132041	166297	49147	1661092
1994-95	1147607	203529	388410	21529	na	149265	203883	65246	1771702
1995-96	1217472	219412	451596	34275	na	196128	261227	48244	1905900
1996-97	1312114	229594	465355	-22555	na	208464	254853	111667	2049786
1997-98	1351342	255429	506706	16929	na	203610	288495	87279	2132799
1998-99	1439195	286572	555913	-5221	na	231880	348634	104995	2264700
1999-2000	1526689	320320	599973	52890	na	273617	373012	64553	2465029
2000-01	1579201	324727	591610	17320	na	323288	390132	113697	2559711
2001-02	1673209	332369	682143	-3481	na	337221	401619	63348	2683190
2002-03	1721238	331753	679170	20049	na	408324	449800	74525	2785258
2003-04	1823227	340962	750940	21668	na	447450	512250	132194	3004190
2004-05	1917508	354518	931028	80150	41054	569051	625945	-25154	3242209
2005-06	2083309	386007	1081792	101511	40414	717424	829926	-37288	3543244
2006-07	2259892	400579	1231265	133556	45933	863459	1008198	-54998	3871489
2007-08	2471397	438919	1430764	175411	47263	914628	1110963	-116472	4250947
2008-09	2649610	484459	1480943	85290	59987	1048140	1363302	-28778	4416350
2009-10	2845303	551702	1594475	143052	94524	999030	1334180	-103059	4790847
2010-11	3092373	583544	1769792	206953	125191	1195003	1542428	-148042	5282386
2011-12	3378506	623574	1986645	117111	133454	1381129	1867249	-120120	5633050

Contd....

Table 1.7. Components of Gross Domestic Product at Constant Prices

(₹ crore)

Year	PFCE	GFCE	GFCF	CIS	Valuables	Export of goods and services	Import of goods and services	Discrep-ancies	GDP
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2011-12 Series									
2011-12	4910447	968375	2997733	207983	253033	2143931	2715554	-29620	8736329
2012-13	5179091	974263	3145793	201528	259949	2289836	2879079	41635	9213017
2013-14	5557329	979825	3194924	129758	148879	2468269	2644555	-33060	9801370
2014-15	5912657	1054151	3278096	274751	187957	2512145	2667595	-24487	10527674
2015-16	6381419	1132802	3492183	239557	185986	2370282	2511540	78804	11369493
2016-17 (2nd RE)	6904085	1199041	3783778	124087	150784	2490437	2621586	267700	12298327
2017-18 (1st RE)	7417489	1378563	4136572	150417	192120	2607310	3083560	380947	13179857
2018-19 (PE)	8016674	1506035	4548452	157637	174780	2933969	3557901	297939	14077586

Source: Central Statistics Office

Notes:

PE : Provisional Estimates, RE: Revised Estimates

1. PFCE: Private Final Consumption Expenditure
2. GFCE: Government Final Consumption Expenditure
3. GFCF: Gross Fixed Capital Formation
4. CIS: Change in Stocks
5. na: not available
6. GDP: Gross Domestic Product

Table 1.8. Gross Domestic Saving and Gross Capital Formation (at current prices)

(₹ crore)

Year	Gross domestic saving				Gross fixed capital formation			Change in stocks			Gross capital formation						Gross domestic product
	House-hold sector	Private corpo-rate sector	Public sector	Total (2+3+4)	Public sector	Private sector	Total (6+7)	Public sector	Private sector	Total (9+10)	Public sector	Private sector	Valu-ables	Total (12+13+14)	Errors & omis-sions	Adjust-ed total (15+16)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
2004-05 series																	
1950-51	681	93	215	989	264	704	968	26	140	165	290	844	na	1133	-165	968	10401
1951-52	634	136	309	1079	304	741	1045	30	143	173	334	884	na	1218	44	1262	11054
1952-53	695	64	195	954	324	650	974	-18	59	40	306	709	na	1014	-95	920	10850
1953-54	672	90	181	943	381	587	968	-26	-42	-67	355	545	na	901	29	930	11810
1954-55	774	118	213	1105	453	659	1112	45	-9	36	498	650	na	1148	-28	1121	11170
1955-56	1041	134	247	1422	619	765	1384	-25	77	53	594	842	na	1437	24	1461	11371
1956-57	1222	155	318	1696	721	1050	1771	37	198	235	758	1248	na	2006	49	2056	13547
1957-58	1028	121	336	1485	752	1051	1803	139	103	242	891	1154	na	2045	-87	1958	13951
1958-59	986	140	325	1450	817	965	1782	83	-81	2	900	884	na	1784	42	1826	15551
1959-60	1267	185	351	1803	1045	958	2003	12	198	209	1057	1156	na	2212	-178	2034	16384
1960-61	1226	281	572	2079	1215	1075	2290	63	265	328	1278	1340	na	2618	-58	2560	17942
1961-62	1237	320	654	2211	1269	1285	2554	29	247	276	1298	1532	na	2830	-274	2556	19010
1962-63	1519	344	750	2613	1510	1332	2842	97	260	357	1607	1592	na	3199	-146	3053	20429
1963-64	1589	394	929	2912	1794	1580	3374	87	188	275	1881	1768	na	3649	-297	3352	23462
1964-65	1897	389	1072	3358	2106	1866	3972	90	272	363	2196	2138	na	4335	-377	3958	27367
1965-66	2596	405	1085	4086	2348	2072	4420	124	192	316	2472	2264	na	4736	-51	4685	28857
1966-67	3161	424	941	4526	2360	2506	4866	64	450	514	2424	2956	na	5380	69	5449	32669
1967-68	3275	410	944	4629	2320	3075	5395	233	199	432	2553	3274	na	5827	-361	5466	38261
1968-69	3277	439	1165	4881	2431	3241	5672	41	55	96	2472	3296	na	5768	-471	5297	40512

Contd....

Table 1.8. Gross Domestic Saving and Gross Capital Formation (at current prices)

(₹ crore)

Year	Gross domestic saving				Gross fixed capital formation			Change in stocks			Gross capital formation						Gross domestic product
	House-hold sector	Private corpo-rate sector	Public sector	Total (2+3+4)	Public sector	Private sector	Total (6+7)	Public sector	Private sector	Total (9+10)	Public sector	Private sector	Valu-ables	Total (12+13+14)	Errors & omis-sions	Adjust-ed total (15+16)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
2004-05 Series																	
1969-70	4375	549	1361	6285	2525	3667	6192	50	504	554	2575	4171	na	6746	-220	6526	44605
1970-71	4531	672	1618	6821	2742	3746	6488	302	507	809	3044	4253	na	7297	-82	7215	47638
1971-72	5229	769	1689	7687	3245	4234	7479	356	710	1066	3601	4944	na	8545	-380	8165	50999
1972-73	5330	806	1816	7952	4185	4295	8480	88	322	411	4273	4617	na	8891	-641	8249	56214
1973-74	8020	1083	2363	11466	4631	5044	9675	541	1097	1639	5172	6141	na	11314	545	11858	68420
1974-75	8677	1465	3340	13482	4948	7132	12080	938	1992	2929	5886	9124	na	15009	-874	14135	80770
1975-76	9790	1083	4192	15066	6401	7494	13895	1447	676	2123	7848	8170	na	16018	-1070	14949	86707
1976-77	11206	1181	5195	17582	8051	7495	15546	1121	272	1393	9172	7767	na	16939	-666	16273	93422
1977-78	13679	1413	5253	20345	8792	9043	17835	109	1278	1387	8901	10321	na	19222	-341	18880	105848
1978-79	16482	1652	5976	24110	9638	10081	19719	1100	2118	3218	10738	12199	na	22937	1301	24238	114647
1979-80	16338	2398	6331	25068	11532	11032	22564	1346	2445	3791	12878	13477	na	26355	-707	25648	125729
1980-81	18116	2339	6135	26590	13656	13159	26815	71	116	188	13727	13275	na	27003	1682	28684	149642
1981-82	19013	2560	9120	30692	17376	15274	32650	2006	3747	5753	19382	19021	na	38403	-5100	33303	175805
1982-83	21972	2980	10004	34956	22276	16629	38905	1136	3315	4451	23412	19944	na	43356	-5833	37522	196644
1983-84	26955	3254	9030	39239	24225	19780	44005	337	1450	1787	24562	21230	na	45792	-4037	41756	229021
1984-85	32796	4040	8950	45786	27823	22626	50449	1676	3144	4820	29499	25770	na	55269	-6191	49078	256611
1985-86	36666	5426	11322	53414	32590	27050	59640	1932	6383	8314	34522	33433	na	67954	-8306	59648	289524
1986-87	42111	5336	11246	58693	39723	29753	69476	896	5636	6532	40619	35389	na	76008	-10960	65048	323949
1987-88	57304	5932	10471	73707	41211	39993	81204	-1515	3534	2019	39696	43527	na	83223	-2691	80532	368211
1988-89	67063	8486	11943	87492	47566	48051	95617	-493	9036	8543	47073	57087	na	104160	-4364	99796	436893
1989-90	82985	11845	11900	106730	52517	61476	113993	1690	4324	6014	54207	65800	na	120007	-998	119009	501928

Contd....

Table 1.8. Gross Domestic Saving and Gross Capital Formation (at current prices)

(₹ crore)

Year	Gross domestic saving				Gross fixed capital formation			Change in stocks			Gross capital formation						Gross domestic product
	House-hold sector	Private corpo-rate sector	Public sector	Total (2+3+4)	Public sector	Private sector	Total (6+7)	Public sector	Private sector	Total (9+10)	Public sector	Private sector	Valu-ables	Total (12+13+14)	Errors & omis-sions	Adjust-ed total (15+16)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
2004-05 Series																	
1990-91	108603	15164	10641	134408	60013	79650	139663	1987	4368	6355	62000	84018	na	146018	6586	152604	586212
1991-92	105632	20304	17594	143530	70701	81765	152466	-2207	1304	-903	68494	83069	na	151563	-4656	146907	673875
1992-93	127943	19968	16709	164621	71197	106732	177929	2657	7182	9839	73854	113914	na	187768	-9331	178437	774545
1993-94	151454	29866	11674	192994	79309	112147	191456	1974	-3693	-1719	81283	108454	na	189737	8048	197785	891355
1994-95	187142	35260	24266	246668	102134	126308	228442	-604	14676	14072	101530	140984	na	242514	16047	258561	1045590
1995-96	198585	59153	31527	289265	105704	189342	295046	-613	25170	24557	105091	214512	na	319603	-9558	310045	1226725
1996-97	224653	62540	31194	318387	108750	219296	328046	1883	-16873	-14991	110633	202423	na	313055	23069	336125	1419277
1997-98	284127	66080	29583	379790	112814	259587	372401	3553	9491	13044	116367	269078	na	385445	16647	402092	1572394
1998-99	352114	69191	-3146	418159	128621	298448	427069	2277	-5300	-3023	130898	293148	na	424046	12475	436521	1803378
1999-00	438851	87234	-9238	516847	138611	346055	484666	15553	26944	42497	154164	372999	15519	542682	-3848	538834	2023130
2000-01	463750	81062	-29266	515545	145973	349223	495196	9326	5831	15158	155299	355054	14724	525078	3222	528299	2177413
2001-02	545288	76906	-36820	585374	160190	430050	590240	9079	-11050	-1971	169269	419000	14187	602456	-31310	571146	2355845
2002-03	564161	99217	-7148	656230	168143	432977	601120	-4740	22940	18200	163403	455917	13957	633277	-5534	627743	2536327
2003-04	657587	129816	36372	823775	190806	506672	697478	-3076	23743	20667	187730	530415	24572	742717	19699	762416	2841503
2004-05	763685	212519	74499	1050703	224108	706920	931028	16472	63678	80150	240580	770598	41054	1052231	11809	1064041	3242209
2005-06	868988	277208	88955	1235151	271342	848950	1120292	22008	82381	104389	293350	931331	41392	1266073	13681	1279754	3693369
2006-07	994396	338584	152929	1485909	339617	1004157	1343774	16939	130162	147101	356556	1134319	49709	1540583	-9151	1531433	4294706
2007-08	1118347	469023	248962	1836332	401326	1240347	1641673	40597	160937	201534	441923	1401284	53592	1896799	3963	1900762	4987090
2008-09	1330873	417467	54280	1802620	480698	1340401	1821099	51032	55759	106791	531730	1396160	72213	2000103	-68723	1931380	5630063

Contd....

Table 1.8. Gross Domestic Saving and Gross Capital Formation (at current prices)

(₹ crore)

Year	Gross domestic saving				Gross fixed capital formation			Change in stocks			Gross capital formation						Gross domestic product
	House-hold sector	Private corpo-rate sector	Public sector	Total (2+3+4)	Public sector	Private sector	Total (6+7)	Public sector	Private sector	Total (9+10)	Public sector	Private sector	Valu-ables	Total (12+13+14)	Errors & omis-sions	Adjust-ed total (15+16)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
2004-05 Series																	
2009-10	1630799	540955	10585	2182338	543883	1511889	2055772	48905	130266	179171	592788	1642155	116312	2351255	11878	2363132	6477827
2010-11	1800174	620300	201268	2621742	609189	1797881	2407069	47259	226250	273509	656448	2024131	162836	2843415	-1957	2841457	7784115
2011-12	2054737	658428	111295	2824459	639157	2221905	2861062	56678	113918	170596	695835	2335823	246673	3278331	-77698	3200633	9009722
2011-12 Series																	
2011-12	2065566	826805	134466	3026837	641260	2356472	2997733	17098	190885	207983	658358	2547358	253033	3458749	-55741	3403008	8736329
2012-13	2235280	994005	139917	3369202	698031	2626943	3324973	20617	193907	214524	718648	2820849	273775	3813272	33850	3847122	9944013
2013-14	2285301	1207187	115705	3608193	796950	2718671	3515621	-2019	146640	144621	794931	2865311	161761	3822003	-27868	3794135	11233522
2014-15	2439104	1457064	123789	4019957	872482	2877910	3750392	11988	300710	312698	884470	3178620	209407	4272496	-92718	4179779	12467959
2015-16	2474913	1638296	169050	4282259	1026741	2930351	3957092	16955	245522	262477	1043696	3175873	203506	4423075	-417	4422659	13771874
2016-17	2622927	1770143	255351	4648421	1049204	3285810	4335014	37800	101913	139714	1087005	3387723	166559	4641287	100098	4741385	15362386
2017-18	2938203	1986318	291501	5216022	1223453	3673360	4896813	11545	162345	173890	1234998	3835705	218706	5289409	237444	5526853	17095005

Source: Central Statistics Office

Notes:

na: not available

Table 1.9. Gross Domestic Saving and Gross Capital Formation

(As per cent of GDP at current market prices)

Year	Gross domestic saving				Gross fixed capital formation			Change in stocks			Gross capital formation					
	House-hold sector	Private corporate sector	Public sector	Total (2+3+4)	Public sector	Private sector	Total (6+7)	Public sector	Private sector	Total (9+10)	Public sector	Private sector	valuables	Total (12+13+14)	Errors & omissions	Adjusted Total (15+16)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
							2004-05 Series									
1950-51	6.5	0.9	2.1	9.5	2.5	6.8	9.3	0.2	1.3	1.6	2.8	8.1	na	10.9	-1.6	9.3
1951-52	5.7	1.2	2.8	9.8	2.8	6.7	9.5	0.3	1.3	1.6	3.0	8.0	na	11.0	0.4	11.4
1952-53	6.4	0.6	1.8	8.8	3.0	6.0	9.0	-0.2	0.5	0.4	2.8	6.5	na	9.3	-0.9	8.5
1953-54	5.7	0.8	1.5	8.0	3.2	5.0	8.2	-0.2	-0.4	-0.6	3.0	4.6	na	7.6	0.2	7.9
1954-55	6.9	1.1	1.9	9.9	4.1	5.9	10.0	0.4	-0.1	0.3	4.5	5.8	na	10.3	-0.2	10.0
1955-56	9.2	1.2	2.2	12.5	5.4	6.7	12.2	-0.2	0.7	0.5	5.2	7.4	na	12.6	0.2	12.8
1956-57	9.0	1.1	2.4	12.5	5.3	7.8	13.1	0.3	1.5	1.7	5.6	9.2	na	14.8	0.4	15.2
1957-58	7.4	0.9	2.4	10.6	5.4	7.5	12.9	1.0	0.7	1.7	6.4	8.3	na	14.7	-0.6	14.0
1958-59	6.3	0.9	2.1	9.3	5.3	6.2	11.5	0.5	-0.5	0.0	5.8	5.7	na	11.5	0.3	11.7
1959-60	7.7	1.1	2.1	11.0	6.4	5.8	12.2	0.1	1.2	1.3	6.4	7.1	na	13.5	-1.1	12.4
1960-61	6.8	1.6	3.2	11.6	6.8	6.0	12.8	0.4	1.5	1.8	7.1	7.5	na	14.6	-0.3	14.3
1961-62	6.5	1.7	3.4	11.6	6.7	6.8	13.4	0.2	1.3	1.5	6.8	8.1	na	14.9	-1.4	13.4
1962-63	7.4	1.7	3.7	12.8	7.4	6.5	13.9	0.5	1.3	1.7	7.9	7.8	na	15.7	-0.7	14.9
1963-64	6.8	1.7	4.0	12.4	7.6	6.7	14.4	0.4	0.8	1.2	8.0	7.5	na	15.6	-1.3	14.3
1964-65	6.9	1.4	3.9	12.3	7.7	6.8	14.5	0.3	1.0	1.3	8.0	7.8	na	15.8	-1.4	14.5
1965-66	9.0	1.4	3.8	14.2	8.1	7.2	15.3	0.4	0.7	1.1	8.6	7.8	na	16.4	-0.2	16.2
1966-67	9.7	1.3	2.9	13.9	7.2	7.7	14.9	0.2	1.4	1.6	7.4	9.0	na	16.5	0.2	16.7
1967-68	8.6	1.1	2.5	12.1	6.1	8.0	14.1	0.6	0.5	1.1	6.7	8.6	na	15.2	-0.9	14.3
1968-69	8.1	1.1	2.9	12.0	6.0	8.0	14.0	0.1	0.1	0.2	6.1	8.1	na	14.2	-1.2	13.1
1969-70	9.8	1.2	3.1	14.1	5.7	8.2	13.9	0.1	1.1	1.2	5.8	9.4	na	15.1	-0.5	14.6

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Table 1.9. Gross Domestic Saving and Gross Capital Formation

(As per cent of GDP at current market prices)

Year	Gross domestic saving				Gross fixed capital formation			Change in stocks			Gross capital formation					
	House-hold sector	Private corporate sector	Public sector	Total (2+3+4)	Public sector	Private sector	Total (6+7)	Public sector	Private sector	Total (9+10)	Public sector	Private sector	valuables	Total (12+13+14)	Errors & omissions	Adjusted Total (15+16)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
							2004-05 Series									
1970-71	9.5	1.4	3.4	14.3	5.8	7.9	13.6	0.6	1.1	1.7	6.4	8.9	na	15.3	-0.2	15.1
1971-72	10.3	1.5	3.3	15.1	6.4	8.3	14.7	0.7	1.4	2.1	7.1	9.7	na	16.8	-0.7	16.0
1972-73	9.5	1.4	3.2	14.1	7.4	7.6	15.1	0.2	0.6	0.7	7.6	8.2	na	15.8	-1.1	14.7
1973-74	11.7	1.6	3.5	16.8	6.8	7.4	14.1	0.8	1.6	2.4	7.6	9.0	na	16.5	0.8	17.3
1974-75	10.7	1.8	4.1	16.7	6.1	8.8	15.0	1.2	2.5	3.6	7.3	11.3	na	18.6	-1.1	17.5
1975-76	11.3	1.2	4.8	17.4	7.4	8.6	16.0	1.7	0.8	2.4	9.1	9.4	na	18.5	-1.2	17.2
1976-77	12.0	1.3	5.6	18.8	8.6	8.0	16.6	1.2	0.3	1.5	9.8	8.3	na	18.1	-0.7	17.4
1977-78	12.9	1.3	5.0	19.2	8.3	8.5	16.8	0.1	1.2	1.3	8.4	9.8	na	18.2	-0.3	17.8
1978-79	14.4	1.4	5.2	21.0	8.4	8.8	17.2	1.0	1.8	2.8	9.4	10.6	na	20.0	1.1	21.1
1979-80	13.0	1.9	5.0	19.9	9.2	8.8	17.9	1.1	1.9	3.0	10.2	10.7	na	21.0	-0.6	20.4
1980-81	12.1	1.6	4.1	17.8	9.1	8.8	17.9	0.0	0.1	0.1	9.2	8.9	na	18.0	1.1	19.2
1981-82	10.8	1.5	5.2	17.5	9.9	8.7	18.6	1.1	2.1	3.3	11.0	10.8	na	21.8	-2.9	18.9
1982-83	11.2	1.5	5.1	17.8	11.3	8.5	19.8	0.6	1.7	2.3	11.9	10.1	na	22.0	-3.0	19.1
1983-84	11.8	1.4	3.9	17.1	10.6	8.6	19.2	0.1	0.6	0.8	10.7	9.3	na	20.0	-1.8	18.2
1984-85	12.8	1.6	3.5	17.8	10.8	8.8	19.7	0.7	1.2	1.9	11.5	10.0	na	21.5	-2.4	19.1
1985-86	12.7	1.9	3.9	18.4	11.3	9.3	20.6	0.7	2.2	2.9	11.9	11.5	na	23.5	-2.9	20.6
1986-87	13.0	1.6	3.5	18.1	12.3	9.2	21.4	0.3	1.7	2.0	12.5	10.9	na	23.5	-3.4	20.1
1987-88	15.6	1.6	2.8	20.0	11.2	10.9	22.1	-0.4	1.0	0.5	10.8	11.8	na	22.6	-0.7	21.9
1988-89	15.3	1.9	2.7	20.0	10.9	11.0	21.9	-0.1	2.1	2.0	10.8	13.1	na	23.8	-1.0	22.8
1989-90	16.5	2.4	2.4	21.3	10.5	12.2	22.7	0.3	0.9	1.2	10.8	13.1	na	23.9	-0.2	23.7

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Table 1.9. Gross Domestic Saving and Gross Capital Formation

(As per cent of GDP at current market prices)

Year	Gross domestic saving				Gross fixed capital formation			Change in stocks			Gross capital formation					
	House-hold sector	Private corporate sector	Public sector	Total (2+3+4)	Public sector	Private sector	Total (6+7)	Public sector	Private sector	Total (9+10)	Public sector	Private sector	valuables	Total (12+13+14)	Errors & omissions	Adjusted Total (15+16)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
2004-05 Series																
1990-91	18.5	2.6	1.8	22.9	10.2	13.6	23.8	0.3	0.7	1.1	10.6	14.3	na	24.9	1.1	26.0
1991-92	15.7	3.0	2.6	21.3	10.5	12.1	22.6	-0.3	0.2	-0.1	10.2	12.3	na	22.5	-0.7	21.8
1992-93	16.5	2.6	2.2	21.3	9.2	13.8	23.0	0.3	0.9	1.3	9.5	14.7	na	24.2	-1.2	23.0
1993-94	17.0	3.4	1.3	21.7	8.9	12.6	21.5	0.2	-0.4	-0.2	9.1	12.2	na	21.3	0.9	22.2
1994-95	17.9	3.4	2.3	23.6	9.8	12.1	21.8	-0.1	1.4	1.3	9.7	13.5	na	23.2	1.5	24.7
1995-96	16.2	4.8	2.6	23.6	8.6	15.4	24.1	-0.1	2.1	2.0	8.6	17.5	na	26.1	-0.8	25.3
1996-97	15.8	4.4	2.2	22.4	7.7	15.5	23.1	0.1	-1.2	-1.1	7.8	14.3	na	22.1	1.6	23.7
1997-98	18.1	4.2	1.9	24.2	7.2	16.5	23.7	0.2	0.6	0.8	7.4	17.1	na	24.5	1.1	25.6
1998-99	19.5	3.8	-0.2	23.2	7.1	16.5	23.7	0.1	-0.3	-0.2	7.3	16.3	na	23.5	0.7	24.2
1999-00	21.7	4.3	-0.5	25.5	6.9	17.1	24.0	0.8	1.3	2.1	7.6	18.4	0.8	26.8	-0.2	26.6
2000-01	21.3	3.7	-1.3	23.7	6.7	16.0	22.7	0.4	0.3	0.7	7.1	16.3	0.7	24.1	0.1	24.3
2001-02	23.1	3.3	-1.6	24.8	6.8	18.3	25.1	0.4	-0.5	-0.1	7.2	17.8	0.6	25.6	-1.3	24.2
2002-03	22.2	3.9	-0.3	25.9	6.6	17.1	23.7	-0.2	0.9	0.7	6.4	18.0	0.6	25.0	-0.2	24.8
2003-04	23.1	4.6	1.3	29.0	6.7	17.8	24.5	-0.1	0.8	0.7	6.6	18.7	0.9	26.1	0.7	26.8
2004-05	23.6	6.6	2.3	32.4	6.9	21.8	28.7	0.5	2.0	2.5	7.4	23.8	1.3	32.5	0.4	32.8
2005-06	23.5	7.5	2.4	33.4	7.3	23.0	30.3	0.6	2.2	2.8	7.9	25.2	1.1	34.3	0.4	34.7
2006-07	23.2	7.9	3.6	34.6	7.9	23.4	31.3	0.4	3.0	3.4	8.3	26.4	1.2	35.9	-0.2	35.7
2007-08	22.4	9.4	5.0	36.8	8.0	24.9	32.9	0.8	3.2	4.0	8.9	28.1	1.1	38.0	0.1	38.1
2008-09	23.6	7.4	1.0	32.0	8.5	23.8	32.3	0.9	1.0	1.9	9.4	24.8	1.3	35.5	-1.2	34.3
2009-10	25.2	8.4	0.2	33.7	8.4	23.3	31.7	0.8	2.0	2.8	9.2	25.4	1.8	36.3	0.2	36.5

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Table 1.9. Gross Domestic Saving and Gross Capital Formation

(As per cent of GDP at current market prices)

Year	Gross domestic saving				Gross fixed capital formation			Change in stocks			Gross capital formation					
	House-hold sector	Private corporate sector	Public sector	Total (2+3+4)	Public sector	Private sector	Total (6+7)	Public sector	Private sector	Total (9+10)	Public sector	Private sector	valuables	Total (12+13+14)	Errors & omissions	Adjusted Total (15+16)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
2004-05 Series																
2010-11	23.1	8.0	2.6	33.7	7.8	23.1	30.9	0.6	2.9	3.5	8.4	26.0	2.1	36.5	0.0	36.5
2011-12	22.8	7.3	1.2	31.3	7.1	24.7	31.8	0.6	1.3	1.9	7.7	25.9	2.7	36.4	-0.9	35.5
2011-12 Series																
2011-12	23.6	9.5	1.5	34.6	7.3	27.0	34.3	0.2	2.2	2.4	7.5	29.2	2.9	39.6	-0.6	39.0
2012-13	22.5	10.0	1.4	33.9	7.0	26.4	33.4	0.2	1.9	2.2	7.2	28.4	2.8	38.3	0.3	38.7
2013-14	20.3	10.7	1.0	32.1	7.1	24.2	31.3	0.0	1.3	1.3	7.1	25.5	1.4	34.0	-0.2	33.8
2014-15	19.6	11.7	1.0	32.2	7.0	23.1	30.1	0.1	2.4	2.5	7.1	25.5	1.7	34.3	-0.7	33.5
2015-16	18.0	11.9	1.2	31.1	7.5	21.3	28.7	0.1	1.8	1.9	7.6	23.1	1.5	32.1	0.0	32.1
2016-17	17.1	11.5	1.7	30.3	6.8	21.4	28.2	0.2	0.7	0.9	7.1	22.1	1.1	30.2	0.7	30.9
2017-18	17.2	11.6	1.7	30.5	7.2	21.5	28.6	0.1	0.9	1.0	7.2	22.4	1.3	30.9	1.4	32.3

Source: Central Statistics Office

Notes:

na: not available

Table 1.10A. Net State Domestic Product at Current Prices (2011-12 Series)
As on 28.02.2019

(₹ crore)

State/UT	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Andhra Pradesh	339996	370196	413164	470934	544827	631249	734659	na
Arunachal Pradesh	10229	11617	13377	16495	17011	18433	21343	na
Assam	129354	142039	160442	172849	201309	225660	na	na
Bihar	228497	261327	292143	315732	337987	391014	448584	na
Chhattisgarh	142273	159431	186050	197314	202299	228514	254925	279441
Goa	38009	34567	32043	43233	50354	56933	na	na
Gujarat	532809	634572	707456	804764	893997	1018190	na	na
Haryana	271152	314353	363590	395890	438140	494090	na	na
Himachal Pradesh	60536	69432	80129	87345	96851	107585	117191	130349
Jammu & Kashmir	67274	72996	79692	81040	98427	106661	na	na
Jharkhand	137383	160304	172030	200357	187479	216000	234052	na
Karnataka	554952	635924	746569	825782	950880	1050874	1205426	1373218
Kerala	328021	371384	417265	460614	505496	561080	na	na
Madhya Pradesh	282371	333937	393115	429027	486155	589168	663000	738076
Maharashtra	1126595	1282180	1448768	1554800	1751276	1986806	2193973	na
Manipur	11501	12188	14440	16275	17493	18663	20635	na
Meghalaya	18028	19653	20415	20697	22516	24346	26954	29852
Mizoram	6404	7375	8989	12067	13595	15568	15668	na
Nagaland	10554	12318	14545	16104	17128	18926	na	na
Odisha	204226	233312	260977	274941	288619	329674	363335	na
Punjab	239227	267116	297908	316745	350011	385810	427828	468672
Rajasthan	395331	446382	494236	551517	610934	665949	738849	830654
Sikkim	9742	10817	12203	13556	15743	17506	19444	na
Tamil Nadu	674478	768295	858870	957350	1057084	1139790	1279932	1440736
Telangana	325139	364030	408282	456280	522994	600313	686034	788566
Tripura	17419	19631	23329	26643	32476	35840	41755	na
Uttar Pradesh	645132	732995	833825	891798	1008179	1108017	1224672	1375600
Uttarakhand	101960	117041	131814	143789	158277	171342	191480	na
West Bengal	473205	539618	617470	651492	725992	802089	931313	na
Andaman & Nicobar Islands	3404	3793	4288	4915	5336	5897	na	na
Chandigarh	16930	19283	21825	22992	25122	27181	na	na
Delhi	314650	357400	404841	448487	500524	557740	625795	708615
Puducherry	15160	16984	19778	20143	24303	26714	29383	32449
All-India NDP	**7819154**	**8883108**	**10037547**	**11125668**	**12322177**	**13771661**	**15313286**	**17030846**

Source: For States - Directorate of Economics & Statistics of respective State Governments, and for All-India - Central Statistics Office

Note: na: not available

Table 1.10B. Growth of Net State Domestic Product at Current Prices (2011-12 Series)
As on 28.02.2019

(per cent)

State/UT	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pradesh	8.9	11.6	14.0	15.7	15.9	16.4	na
Arunachal Pradesh	13.6	15.1	23.3	3.1	8.4	15.8	na
Assam	9.8	13.0	7.7	16.5	12.1	na	na
Bihar	14.4	11.8	8.1	7.0	15.7	14.7	na
Chhattisgarh	12.1	16.7	6.1	2.5	13.0	11.6	9.6
Goa	-9.1	-7.3	34.9	16.5	13.1	na	na
Gujarat	19.1	11.5	13.8	11.1	13.9	na	na
Haryana	15.9	15.7	8.9	10.7	12.8	na	na
Himachal Pradesh	14.7	15.4	9.0	10.9	11.1	8.9	11.2
Jammu & Kashmir	8.5	9.2	1.7	21.5	8.4	na	na
Jharkhand	16.7	7.3	16.5	-6.4	15.2	8.4	na
Karnataka	14.6	17.4	10.6	15.1	10.5	14.7	13.9
Kerala	13.2	12.4	10.4	9.7	11.0	na	na
Madhya Pradesh	18.3	17.7	9.1	13.3	21.2	12.5	11.3
Maharashtra	13.8	13.0	7.3	12.6	13.4	10.4	na
Manipur	6.0	18.5	12.7	7.5	6.7	10.6	na
Meghalaya	9.0	3.9	1.4	8.8	8.1	10.7	10.7
Mizoram	15.2	21.9	34.2	12.7	14.5	0.6	na
Nagaland	16.7	18.1	10.7	6.4	10.5	na	na
Odisha	14.2	11.9	5.4	5.0	14.2	10.2	na
Punjab	11.7	11.5	6.3	10.5	10.2	10.9	9.5
Rajasthan	12.9	10.7	11.6	10.8	9.0	10.9	12.4
Sikkim	11.0	12.8	11.1	16.1	11.2	11.1	na
Tamil Nadu	13.9	11.8	11.5	10.4	7.8	12.3	12.6
Telangana	12.0	12.2	11.8	14.6	14.8	14.3	14.9
Tripura	12.7	18.8	14.2	21.9	10.4	16.5	na
Uttar Pradesh	13.6	13.8	7.0	13.1	9.9	10.5	12.3
Uttarakhand	14.8	12.6	9.1	10.1	8.3	11.8	na
West Bengal	14.0	14.4	5.5	11.4	10.5	16.1	na
Andaman & Nicobar Islands	11.4	13.0	14.6	8.6	10.5	na	na
Chandigarh	13.9	13.2	5.3	9.3	8.2	na	na
Delhi	13.6	13.3	10.8	11.6	11.4	12.2	13.2
Puducherry	12.0	16.4	1.8	20.7	9.9	10.0	10.4
All-India NDP	**13.6**	**13.0**	**10.8**	**10.8**	**11.8**	**11.2**	**11.2**

Source: For States - Directorate of Economics & Statistics of respective State Governments, and for All-India - Central Statistics Office

Note: na: not available

Table 1.11A. Per Capita Net State Domestic Product at Current Prices (2011-12 Series)
As on 28.02.2019

(₹)

State/UT	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Andhra Pradesh	69000	74687	82870	93903	108002	124401	143935	na
Arunachal Pradesh	73068	81353	91809	110929	112212	119150	135165	na
Assam	41142	44599	49734	52895	60817	67303	na	na
Bihar	21750	24487	26948	28671	30213	34409	38860	na
Chhattisgarh	55177	60849	69880	72936	73590	81808	89813	96887
Goa	259444	234354	215776	289185	334576	375550	na	na
Gujarat	87481	102826	113139	127017	139254	156527	na	na
Haryana	106085	121269	138300	148485	162034	180174	na	na
Himachal Pradesh	87721	99730	114095	123299	135512	149028	160712	176967
Jammu & Kashmir	53173	56828	61108	61213	73229	78163	na	na
Jharkhand	41254	47360	50006	57301	52754	59799	63754	na
Karnataka	90263	102319	118829	130024	148110	161922	183737	207062
Kerala	97912	110314	123388	135537	148011	163475	na	na
Madhya Pradesh	38551	44931	52129	56069	62616	74787	82941	90998
Maharashtra	99564	111980	125039	132611	147610	165491	180596	na
Manipur	39762	41230	47798	52717	55447	57888	62640	na
Meghalaya	60013	64036	65118	64638	68836	72870	78976	85609
Mizoram	57654	65013	77581	103049	114055	128241	129057	na
Nagaland	53010	61225	71510	78367	82466	90168	na	na
Odisha	48370	54703	60574	63173	65650	74234	80991	na
Punjab	85577	94318	103831	108970	118858	129321	141552	153061
Rajasthan	57192	63658	69480	76429	83456	89678	98078	108696
Sikkim	158667	174183	194624	214148	245987	270572	297765	na
Tamil nadu	92984	104943	116236	128372	140441	150036	166934	186178
Telangana	91121	101007	112162	124104	140840	160062	181102	206107
Tripura	47079	52434	61570	69474	83680	91266	105044	na
Uttar Pradesh	32002	35812	40124	42267	47062	50942	55456	61351
Uttarakhand	100305	113610	126247	135881	147592	157643	173820	na
West Bengal	51543	58195	65932	68876	75992	83126	95562	na
Andaman & Nicobar Islands	88177	96027	106401	119291	126445	136824	na	na
Chandigarh	159116	178549	199135	206760	222710	237599	na	na
Delhi	185361	206590	229619	249589	273301	298832	328985	365529
Puducherry	119649	130548	148147	146921	172727	184869	197999	212922
All-India Per Capita NNI	**63462**	**70983**	**79118**	**86647**	**94797**	**104659**	**114958**	**126406**

Source: For States - Directorate of Economics & Statistics of respective State Governments, and for All-India - Central Statistics Office

Note: na: not available

Table 1.11B. Growth of Per Capita Net State Domestic Product at Current Prices (2011-12 Series) as on 28.02.2019

(per cent)

State/UT	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pradesh	8.2	11.0	13.3	15.0	15.2	15.7	na
Arunachal Pradesh	11.3	12.9	20.8	1.2	6.2	13.4	na
Assam	8.4	11.5	6.4	15.0	10.7	na	na
Bihar	12.6	10.1	6.4	5.4	13.9	12.9	na
Chhattisgarh	10.3	14.8	4.4	0.9	11.2	9.8	7.9
Goa	-9.7	-7.9	34.0	15.7	12.2	na	na
Gujarat	17.5	10.0	12.3	9.6	12.4	na	na
Haryana	14.3	14.0	7.4	9.1	11.2	na	na
Himachal Pradesh	13.7	14.4	8.1	9.9	10.0	7.8	10.1
Jammu & Kashmir	6.9	7.5	0.2	19.6	6.7	na	na
Jharkhand	14.8	5.6	14.6	-7.9	13.4	6.6	na
Karnataka	13.4	16.1	9.4	13.9	9.3	13.5	12.7
Kerala	12.7	11.9	9.8	9.2	10.4	na	na
Madhya Pradesh	16.6	16.0	7.6	11.7	19.4	10.9	9.7
Maharashtra	12.5	11.7	6.1	11.3	12.1	9.1	na
Manipur	3.7	15.9	10.3	5.2	4.4	8.2	na
Meghalaya	6.7	1.7	-0.7	6.5	5.9	8.4	8.4
Mizoram	12.8	19.3	32.8	10.7	12.4	0.6	na
Nagaland	15.5	16.8	9.6	5.2	9.3	na	na
Odisha	13.1	10.7	4.3	3.9	13.1	9.1	na
Punjab	10.2	10.1	4.9	9.1	8.8	9.5	8.1
Rajasthan	11.3	9.1	10.0	9.2	7.5	9.4	10.8
Sikkim	9.8	11.7	10.0	14.9	10.0	10.0	na
Tamil Nadu	12.9	10.8	10.4	9.4	6.8	11.3	11.5
Telangana	10.8	11.0	10.6	13.5	13.6	13.1	13.8
Tripura	11.4	17.4	12.8	20.4	9.1	15.1	na
Uttar Pradesh	11.9	12.0	5.3	11.3	8.2	8.9	10.6
Uttarakhand	13.3	11.1	7.6	8.6	6.8	10.3	na
West Bengal	12.9	13.3	4.5	10.3	9.4	15.0	na
Andaman & Nicobar Islands	8.9	10.8	12.1	6.0	8.2	na	na
Chandigarh	12.2	11.5	3.8	7.7	6.7	na	na
Delhi	11.5	11.1	8.7	9.5	9.3	10.1	11.1
Puducherry	9.1	13.5	-0.8	17.6	7.0	7.1	7.5
All-India Per Capita NNI	**11.9**	**11.5**	**9.5**	**9.4**	**10.4**	**9.8**	**10.0**

Source: For States - Directorate of Economics & Statistics of respective State Governments, and for All-India - Central Statistics Office

Note:

na: not available

Table 1.12. Index Numbers of Agricultural Production

(Base : Triennium ending 2007-08= 100)

	Weight	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18*	2018-19**
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
A. Foodgrains	50.7	100.6	114.3	119.5	119.4	123.3	115.9	115.7	131.1	136.6	134.2
(a) Cereals	41.7	100.2	111.1	119.1	117.3	120.7	114.6	115.5	123.7	127.2	126.0
Rice	16.9	94.8	102.2	112.1	112.0	113.5	112.3	111.1	116.8	120.2	123.0
Wheat	18.0	108.3	116.5	127.2	125.4	128.5	116.0	123.7	132.1	133.7	132.9
(b) Coarse Cereals[a]	6.9	92.3	118.9	114.8	109.2	118.0	116.7	104.6	118.8	127.4	115.3
Maize	2.9	102.9	133.7	133.9	136.9	149.3	148.7	138.8	159.3	176.7	171.0
(c) Pulses[b]	8.9	102.3	129.4	121.6	129.4	135.6	122.0	116.7	165.5	180.6	172.7
Gram	1.7	91.0	105.6	98.0	111.6	117.2	103.6	94.5	179.9	157.0	135.9
Tur	3.5	126.8	139.5	130.7	149.9	161.6	124.4	119.7	159.1	190.5	175.1
B. Non-foodgrains	49.3	105.0	128.0	129.6	129.0	136.4	132.2	126.1	132.5	136.9	131.2
(a) Oilseeds[c]	13.2	88.9	116.8	106.5	107.4	119.0	99.7	92.5	111.2	114.1	111.4
Groundnut	4.1	73.9	112.5	94.8	63.9	132.2	100.8	91.7	101.6	124.9	94.9
Rapeseed and Mustard	3.6	92.6	114.6	92.6	112.5	110.4	88.1	95.3	111.0	116.6	117.7
(b) Fibres											
Cotton	4.4	107.5	147.7	157.6	153.2	160.7	155.8	134.3	145.8	156.2	134.7
Jute	0.7	110.4	98.4	105.6	101.7	109.0	104.4	97.8	102.6	94.7	94.0
Mesta	0.0	62.5	65.1	70.6	62.8	64.6	54.1	62.1	56.5	54.2	54.6
(c) Plantation Crops											
Tea	0.3	101.0	101.0	101.0	101.0	124.4	123.2	126.9	na	na	na
Coffee	0.6	105.4	110.0	110.0	110.0	110.9	119.1	126.7	na	na	na
Rubber^	1.9	100.5	104.1	109.2	110.4	93.6	78.0	68.0	83.6	83.9	na
(d) Others											
Sugarcane	9.9	89.0	104.3	110.0	103.9	107.3	110.4	106.1	93.2	114.8	116.0
Tobacco	0.4	147.4	170.6	160.0	139.8	156.4	182.0	170.8	171.4	na	na
Potato	3.6	147.2	170.4	187.4	182.5	167.2	193.2	174.7	195.6	195.3	211.6
C. All Commodities	100.0	102.8	121.1	124.5	124.2	129.8	124.0	120.8	131.8	136.7	132.7

Source: Directorate of Economics & Statistics, Department of Agriculture, Cooperation and Farmers Welfare

Notes:

a Includes maize, jowar, ragi, bajra, small millets and barley
b Includes tur, urad, moong, gram, lentils and other pulses
c Includes groundnut, rapeseed & mustard, sesamum, linseed, castorseed, nigerseed, safflower, sunflower and soyabean.
na - not available, ^ 2017-18 - Provisional

* Agricultural and Commercial Crops As per 4th Advance Estimate 2017-18

** Agricultural Crops as per 2nd Advance estimates and Horticultural Crops as per 1st Advance Estimates

Table 1.13. Index Numbers of Area under Principal Crops

(Base : Triennium ending 2007-08= 100)

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18*	2018-19 **
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
A. Foodgrains	100.0	104.4	104.1	102.0	105.6	105.4	103.9	109.0	107.4	104.1
(a) Cereals	99.5	101.8	103.3	101.6	104.0	105.7	102.9	104.5	102.1	99.8
Rice	95.7	97.9	100.5	97.6	100.8	100.7	99.3	100.5	100.0	99.0
Wheat	103.5	105.7	108.6	109.1	110.8	114.4	110.6	111.9	107.5	105.7
(b) Coarse Cereals[a]	98.5	101.2	96.4	92.1	94.4	95.0	91.3	95.3	93.0	86.1
Maize	105.0	108.7	111.6	110.2	115.3	116.8	111.9	122.5	120.4	116.0
(c) Pulses[b]	102.2	116.4	107.6	103.9	112.8	104.2	109.0	129.7	132.5	124.3
Gram	95.7	120.5	110.6	107.5	107.8	106.4	109.4	147.3	122.3	118.0
Tur	111.6	125.5	113.4	116.4	135.6	112.7	114.7	131.5	144.2	132.1
B. Non-foodgrains	104.2	113.9	116.0	116.0	119.2	118.5	119.5	114.2	113.8	110.5
(a) Oilseeds[c]	94.8	101.0	97.5	97.5	104.1	94.3	95.4	97.1	91.6	94.7
Groundnut	88.1	94.2	84.7	76.0	88.6	76.7	74.0	85.9	79.1	78.1
Rapeseed and Mustard	84.3	104.1	88.9	96.0	100.2	87.5	86.7	91.6	89.9	94.1
(b) Fibres										
Cotton	111.6	123.8	134.1	131.9	131.7	141.2	135.4	119.3	136.9	136.0
Jute	102.8	98.1	102.5	98.4	95.8	95.0	92.3	89.5	86.0	86.5
Mesta	66.3	69.4	67.3	60.4	57.4	42.2	38.0	40.4	40.3	35.7
(c) Plantation Crops										
Tea	102.0	102.0	102.0	99.9	99.9	99.9	99.9	na	na	na
Coffee	103.7	105.1	105.1	107.5	111.2	112.6	115.8	0.0	na	na
Rubber^	111.4	115.5	119.3	123.0	126.3	129.1	131.6	132.8	133.2	na
(d) Others										
Sugarcane	86.9	101.7	104.9	104.1	104.0	105.5	102.6	92.4	98.5	105.4
Tobacco	122.4	135.3	128.3	117.3	125.5	128.7	124.1	110.1	na	na
Potato	124.0	125.9	127.6	134.6	133.3	140.3	143.1	147.3	145.4	147.6
C. All Commodities	102.1	109.1	110.0	108.9	112.3	111.9	111.6	111.5	110.6	107.3

Source: Directorate of Economics & Statistics, Department of Agriculture, Cooperation and Farmers Welfare

Notes:

a Includes maize, jowar, ragi, bajra, small millets and barley

b Includes tur, urad, moong, gram, lentils and other pulses

c Includes groundnut, rapeseed & mustard, sesamum, linseed, castorseed, nigerseed, safflower, sunflower and soyabean.

na - not available, ^ 2017-18 Provisional

* Agricultural and Commercial Crops as per 4th Advance Estimate 2017-18

** Agricultural Crops as per 2nd Advance estimates and Horticultural Crops as per 1st Advance Estimates

Table 1.14. Index Numbers of Yield of Principal Crops

(Base : Triennium ending 2007-08= 100)

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18*	2018-19 **
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
A. Foodgrains	100.6	109.5	114.9	117.1	116.8	110.0	111.3	120.3	127.1	128.9
(a) Cereals	100.7	109.1	115.3	115.4	116.0	108.5	112.3	118.3	124.6	126.3
Rice	99.1	104.4	111.5	114.8	112.6	111.5	111.9	116.2	120.2	124.2
Wheat	104.7	110.2	117.2	115.0	116.0	101.4	111.9	118.0	124.3	125.7
(b) Coarse Cereals[a]	93.8	117.5	119.1	118.6	125.0	122.9	114.5	124.7	137.0	133.9
Maize	97.9	122.9	119.9	124.2	129.5	127.4	124.0	130.1	146.7	147.4
(c) Pulses[b]	100.1	111.2	113.1	124.6	120.2	117.0	107.0	127.6	136.3	138.9
Gram	95.1	87.6	88.6	103.8	108.7	97.4	86.4	122.1	128.4	115.2
Tur	113.7	111.2	115.3	128.7	119.2	110.4	104.4	121.0	132.1	132.5
B. Non-foodgrains	100.7	112.4	111.7	111.2	114.4	111.6	105.5	116.1	120.2	118.7
(a) Oilseeds[c]	93.8	115.7	109.3	110.1	114.3	105.7	97.0	114.5	124.5	117.6
Groundnut	83.8	119.4	111.9	84.1	149.3	131.3	123.9	118.2	158.0	121.5
Rapeseed and Mustard	109.9	110.2	104.1	117.3	110.2	100.7	109.9	121.1	129.8	125.1
(b) Fibres										
Cotton	96.4	119.4	117.5	116.1	122.0	110.3	99.2	122.3	114.1	99.0
Jute	107.4	100.4	103.0	103.3	113.7	109.9	105.9	114.6	110.1	108.7
Mesta	94.3	93.8	105.0	104.0	112.6	128.1	163.5	139.9	134.5	152.7
(c) Plantation Crops										
Tea	99.0	99.0	99.0	101.1	124.6	123.4	127.1	na	na	na
Coffee	101.7	104.6	104.6	102.3	99.7	105.7	109.4	na	na	na
Rubber^	90.2	90.2	91.6	89.8	74.1	60.4	51.6	62.9	63.0	na
(d) Others										
Sugarcane	102.4	102.5	104.8	99.8	103.2	104.6	103.5	100.9	116.5	110.1
Tobacco	120.4	126.1	124.6	119.2	124.6	141.4	137.6	155.7	na	na
Potato	118.7	135.3	146.8	135.5	125.4	137.7	122.1	132.8	134.3	143.4
C. All Commodities	100.7	111.0	113.2	114.0	115.5	110.8	108.3	118.1	123.6	123.7

Source: Directorate of Economics & Statistics, Department of Agriculture, Cooperation and Farmers Welfare

Notes:

a Includes maize, jowar, ragi, bajra, small millets and barley

b Includes tur, urad, moong, gram, lentils and other pulses

c Includes groundnut, rapeseed & mustard, sesamum, linseed, castorseed, nigerseed, safflower, sunflower and soyabean.

na - not available, ^ 2017-18 Provisional

* Agricultural and Commercial Crops as per 4th Advance Estimate 2017-18

** Agricultural Crops as per 2nd Advance estimates and Horticultural Crops as per 1st Advance Estimates

Table 1.15. Production of Major Crops

(Million Tonnes)

Group/Commodity	1990-91	2000-01	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18*	2018-19**
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Foodgrains[a]	176.4	196.8	244.5	259.3	257.1	265.0	252.0	251.6	275.1	284.8	281.4
Kharif	99.4	102.1	120.9	131.3	128.1	128.7	128.1	125.1	138.3	140.7	142.3
Rabi	77.0	94.7	123.6	128.0	129.1	136.4	124.0	126.5	136.8	144.1	139.1
Cereals[b]	162.1	185.7	226.3	242.2	238.8	245.8	234.8	235.2	252.0	259.6	257.4
Kharif	94.0	97.6	113.8	125.2	122.2	122.7	122.3	119.6	128.7	131.4	133.3
Rabi	68.1	88.1	112.5	117.0	116.6	123.1	112.5	115.7	123.2	128.2	124.1
Coarse Cereals[c]	32.7	31.1	43.4	42.0	40.0	43.3	42.9	38.5	43.8	47.0	42.6
Kharif	27.7	24.9	33.1	32.4	29.8	31.2	30.9	28.2	32.4	33.9	31.3
Rabi	5.0	6.2	10.3	9.6	10.3	12.1	11.9	10.4	11.3	13.1	11.3
Pulses[d]	14.3	11.0	18.2	17.1	18.3	19.3	17.2	16.4	23.1	25.2	24.0
Kharif	5.4	4.4	7.1	6.1	5.9	6.0	5.7	5.5	9.6	9.3	9.0
Rabi	8.9	6.6	11.1	11.0	12.4	13.3	11.4	10.8	13.6	15.9	15.0
Rice	74.3	85.0	96.0	105.3	105.2	106.6	105.5	104.4	109.7	112.9	115.6
Kharif	66.3	72.8	80.7	92.8	92.4	91.5	91.4	91.4	96.3	97.5	102.0
Rabi	8.0	12.2	15.3	12.5	12.9	15.1	14.1	13.0	13.4	15.4	13.6
Wheat	55.1	69.7	86.9	93.5	93.5	95.8	86.5	92.3	98.5	99.7	99.1
Jowar	11.7	7.5	7.0	6.0	5.3	5.5	5.5	4.2	4.6	5.0	3.8
Kharif	8.3	4.5	3.4	3.3	2.8	2.4	2.3	1.8	2.0	2.1	1.9
Rabi	3.4	3.0	3.6	2.7	2.4	3.1	3.2	2.4	2.6	2.9	1.8
Maize	6.9	6.8	10.4	10.3	8.7	9.3	9.2	8.1	9.7	9.1	7.5
Bajra	9.0	12.0	21.7	21.8	22.3	24.3	24.2	22.6	25.9	28.7	27.8
Gram	2.4	2.2	2.9	2.7	3.0	3.2	2.8	2.6	4.9	4.3	3.7
Tur	5.4	3.9	8.2	7.7	8.8	9.5	7.3	7.1	9.4	11.2	10.3
Oilseeds[e]	18.6	18.4	32.5	29.8	30.9	32.7	27.5	25.3	31.3	31.3	31.5
Kharif	9.8	11.9	21.9	20.7	20.8	22.6	19.2	16.8	21.5	21.0	21.3
Rabi	8.8	6.5	10.6	9.1	10.2	10.1	8.3	8.6	9.8	10.3	10.2
Groundnut	7.5	6.4	8.3	7.0	4.7	9.7	7.4	6.7	7.5	9.2	7.0
Kharif	5.1	4.9	6.6	5.1	3.2	8.1	5.9	5.4	6.0	7.5	5.4
Rabi	2.4	1.5	1.6	1.8	1.5	1.7	1.5	1.4	1.4	1.6	1.5
Rapeseed and Mustard	5.2	4.2	8.2	6.6	8.0	7.9	6.3	6.8	7.9	8.3	8.4
Sugarcan[e]	241.0	296.0	342.4	361.0	341.2	352.1	362.3	348.4	306.1	376.9	380.8
Cotton[f]	9.8	9.5	33.0	35.2	34.2	35.9	34.8	30.0	32.6	34.9	30.1
Jute and Mesta[g]	9.2	10.5	10.6	11.4	10.9	11.7	11.1	10.5	11.0	10.1	10.1
Jute	7.9	9.3	10.0	10.7	10.3	11.1	10.6	9.9	10.4	9.6	9.6
Mesta	1.3	1.2	0.6	0.7	0.6	0.6	0.5	0.6	0.5	0.5	0.5
Plantation Crops											
Tea	0.7	0.8	1.0	1.0	1.0	1.2	1.2	1.2	na	na	na
Coffee	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	na	na	na
Rubber^	0.3	0.6	0.8	0.9	0.9	0.8	0.6	0.6	0.7	0.7	na
Potato	15.2	22.5	42.3	46.6	45.3	41.6	48.0	43.4	48.6	51.3	52.6

Source: Directorate of Economics & Statistics, Department of Agriculture, Cooperation and Farmers Welfare

Notes:

a Includes cereals, coarse cereals and pulses

b Includes rice and wheat

c Includes maize, jowar, ragi, bajra, small millets and barley

d Includes tur, urad, moong, gram, lentils and other pulses

e Includes groundnut, rapeseed & mustard, sesamum, linseed, castorseed, nigerseed, safflower, sunflower and soyabean.

f Bales of 170 Kgs. g Bales of 180 Kgs.

na - not available, ^ 2017-18 - Provisional

* Agricultural Crops as per 4th Advance Estimates 2017-18

** As per 2nd Advance Estimate 2018-19 & Horticultural Crops as per 1st Advance Estimate 2018-19

Table 1.16. Gross Area Under Major Crops

(Million Hectares)

Group/Commodity	1990-91	2000-01	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Foodgrains[a]	127.8	121.0	126.7	124.8	120.8	125.0	124.3	123.2	129.2	127.6	122.7
Kharif	80.8	75.2	72.4	72.1	67.7	69.1	68.8	69.2	73.2	72.1	69.9
Rabi	47.0	45.8	54.3	52.7	53.1	56.0	55.5	54.0	56.0	55.5	52.9
Cereals[b]	103.2	100.7	100.3	100.3	97.5	99.8	100.7	98.3	99.8	97.6	94.5
Kharif	69.3	64.6	60.1	60.9	57.7	58.7	58.8	57.9	58.8	58.0	56.7
Rabi	33.9	36.1	40.2	39.4	39.8	41.1	42.0	40.4	40.9	39.6	37.8
Coarse Cereals[c]	36.3	30.3	28.3	26.4	24.8	25.2	25.2	24.4	25.0	24.2	22.0
Kharif	29.6	23.9	22.1	20.8	18.8	19.3	18.9	18.2	19.0	18.6	17.2
Rabi	6.7	6.4	6.3	5.7	5.9	5.9	6.2	6.2	6.0	5.6	4.8
Pulses[d]	24.7	20.3	26.4	24.5	23.3	25.2	23.6	24.9	29.4	30.0	28.3
Kharif	11.5	10.6	12.3	11.2	10.0	10.3	10.0	11.3	14.4	14.1	13.2
Rabi	13.2	9.7	14.1	13.3	13.3	14.9	13.6	13.6	15.1	15.9	15.1
Rice	42.7	44.7	42.9	44.0	42.8	44.1	44.1	43.5	44.0	43.8	43.4
Kharif	39.7	40.7	38.0	40.1	38.9	39.4	39.8	39.7	39.8	39.4	39.4
Rabi	3.0	4.0	4.8	3.9	3.8	4.7	4.3	3.8	4.1	4.4	4.0
Wheat	24.2	25.7	29.1	29.9	30.0	30.5	31.5	30.4	30.8	29.6	29.1
Jowar	14.4	9.9	7.4	6.2	6.2	5.8	6.2	6.1	5.6	5.0	4.0
Kharif	8.6	4.9	3.1	2.6	2.4	2.3	2.3	2.1	2.1	1.9	1.6
Rabi	5.8	5.0	4.3	3.6	3.8	3.5	3.9	3.9	3.6	3.1	2.5
Maize	10.5	9.8	9.6	8.8	7.3	7.8	7.3	7.1	7.5	7.4	6.7
Bajra	5.9	6.6	8.6	8.8	8.7	9.1	9.2	8.8	9.6	9.5	9.1
Gram	3.6	3.6	4.4	4.0	3.9	3.9	3.9	4.0	5.3	4.4	4.3
Tur	7.5	5.2	9.2	8.3	8.5	9.9	8.3	8.4	9.6	10.6	9.7
Oilseeds[e]	24.1	22.8	27.2	26.3	26.5	28.1	25.6	26.1	26.2	24.6	25.5
Kharif	14.0	15.8	18.2	18.4	18.3	19.7	18.2	18.9	18.7	17.3	18.0
Rabi	10.1	7.0	9.0	7.9	8.2	8.4	7.4	7.2	7.5	7.3	7.5
Groundnut	8.3	6.6	5.9	5.3	4.7	5.5	4.8	4.6	5.3	4.9	4.9
Kharif	6.8	5.7	5.0	4.3	3.9	4.6	4.0	3.8	4.6	4.1	4.1
Rabi	1.5	0.9	0.9	0.9	0.8	0.9	0.8	0.8	0.8	0.8	0.8
Rapeseed and Mustard	5.8	4.5	6.9	5.9	6.4	6.6	5.8	5.7	6.1	6.0	6.2
Sugarcane	3.7	4.3	4.9	5.0	5.0	5.0	5.1	4.9	4.4	4.7	5.1
Cotton	7.4	8.6	11.2	12.2	12.0	12.0	12.8	12.3	10.8	12.4	12.3
Jute and Mesta	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.7
Jute	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7
Mesta	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Plantation crops											
Tea	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.6	na	na	na
Coffee (Plucked area)	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	na	na	na
Rubber^	0.5	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	na
Potato	0.9	1.2	1.9	1.9	1.9	2.0	2.1	2.1	2.2	2.1	2.2

Source: Directorate of Economics & Statistics, Department of Agriculture, Cooperation & Farmers Welfare

Notes: na - not available, ^ 2017-18 - Provisional

a Includes cereals, coarse cereals and pulses
b Includes rice and wheat
c Includes maize, jowar, ragi, bajra, small millets and barley
d Includes tur, urad, moong, gram, lentils and other pulses
e Includes groundnut, rapeseed & mustard, sesamum, linseed, castorseed, nigerseed, safflower, sunflower and soyabean.

Table 1.17. Yield Per Hectare of Major Crops

(Kg. / Hectare)

Group/Commodity	1990-91	2000-01	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18*	2018-19**
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Foodgrains[a]	1380	1626	1930	2078	2079	2120	2028	2042	2129	2233	2292
Kharif	1231	1357	1669	1822	1892	1864	1862	1808	1890	1953	2037
Rabi	1635	2067	2278	2430	2431	2435	2232	2342	2441	2596	2631
Cereals[b]	1571	1844	2256	2415	2449	2462	2331	2393	2525	2661	2725
Kharif	1357	1512	1893	2057	2116	2089	2081	2065	2188	2266	2352
Rabi	2010	2438	2800	2968	2932	2995	2681	2862	3010	3239	3282
Coarse Cereals[c]	900	1027	1531	1590	1617	1717	1703	1579	1750	1941	1938
Kharif	937	5298	1500	1563	1583	1619	1633	1544	1708	1819	1816
Rabi	741	973	1641	1689	1725	2034	1915	1686	1885	2350	2380
Pulses[d]	578	544	691	699	789	764	728	656	786	841	849
Kharif	471	417	578	541	594	580	573	489	667	664	682
Rabi	672	604	790	831	934	891	843	796	902	999	996
Rice	1740	1901	2239	2393	2462	2416	2391	2400	2494	2578	2665
Kharif	1670	1788	2121	2312	2374	2319	2295	2305	2417	2477	2587
Rabi	2671	3042	3184	3238	3353	3232	3291	3382	3230	3474	3445
Wheat	2281	2708	2989	3178	3117	3145	2750	3034	3200	3371	3408
Jowar	814	764	949	957	850	957	884	697	812	998	935
Kharif	969	938	1119	1257	1171	1050	1014	850	954	1106	1228
Rabi	582	594	827	741	644	896	808	615	730	931	748
Maize	658	688	1079	1171	1198	1184	1255	1132	1305	1237	1114
Bajra	1518	1822	2540	2478	2566	2676	2632	2563	2689	3032	3046
Gram	673	618	655	662	776	813	729	646	913	960	861
Tur	712	744	895	928	1036	960	889	840	974	1063	1067
Oilseeds[e]	771	810	1193	1133	1168	1168	1075	968	1195	1270	1234
Kharif	698	757	1203	1123	1135	1151	1055	884	1153	1212	1182
Rabi	872	929	1174	1155	1240	1207	1125	1186	1300	1408	1358
Groundnut	904	977	1411	1323	995	1764	1552	1465	1398	1868	1436
Kharif	751	861	1335	1188	811	1735	1478	1399	1321	1838	1339
Rabi	1611	1756	1846	1938	1910	1919	1948	1801	1861	2016	1934
Rapeseed and Mustard	904	935	1185	1121	1262	1185	1083	1183	1304	1397	1346
Sugarcane (tonnes/hect.)	65	69	70	72	68	71	71	71	69	80	75
Cotton	225	190	499	491	486	510	462	415	512	477	414
Jute and Mesta	1634	1867	2192	2268	2281	2512	2473	2421	2585	2481	2473
Jute	1833	2026	2329	2389	2396	2639	2549	2457	2660	2556	2522
Mesta	988	1078	1115	1248	1237	1338	1525	1945	1664	1601	1816
Plantation Crops											
Tea	1794	1673	1712	1967	2037	2170	2170	2170	na	na	na
Coffee	759	959	746	766	766	727	766	766	na	na	na
Rubber	1076	1576	1210	1229	1205	994	811	693	845	845	na
Potato	16	18	23	22	23	21	22	21	22	24	24

Source: Directorate of Economics & Statistics, Department of Agriculture, Cooperation & Farmers Welfare

Notes: na - not available

a Includes cereals, coarse cereals and pulses
b Includes rice and wheat
c Includes maize, jowar, ragi, bajra, small millets and barley
d Includes tur, urad, moong, gram, lentils and other pulses
e Includes groundnut, rapeseed & mustard, sesamum, linseed, castorseed, nigerseed, safflower, sunflower and soyabean.
* Agricultural Crops as per 4th Advance Estimates 2017-18
** As per 2nd Advance Estimate 2018-19 & Horticultural Crops as per 1st Advance Estimate 2018-19

Table 1.18. Production of Important Crops in Three Largest Producing States in 2017-18*

(Production in Million Tonnes)

Crops/Groups of Crops	States	Production	Per cent Share of Production to All India	Cumulative per cent Share of Production
(1)	(2)	(3)	(4)	(5)
I. **Foodgrains**				
Rice	West Bengal	14.97	13.26	13.26
	Punjab	13.38	11.85	25.11
	Uttar Pradesh	13.27	11.75	36.86
Wheat	Uttar Pradesh	31.88	31.98	31.98
	Punjab	17.85	17.90	49.88
	Madhya Pradesh	15.91	15.96	65.84
Maize	Karnataka	3.55	12.36	12.36
	Maharashtra	3.54	12.33	24.69
	Madhya Pradesh	3.54	12.32	37.00
Total Nutri/Coarse Cereals	Rajasthan	6.57	13.99	13.99
	Karnataka	6.27	13.35	27.34
	Maharashtra	6.09	12.96	40.31
Tur	Maharashtra	1.07	25.24	25.24
	Madhya Pradesh	0.84	19.74	44.98
	Karnataka	0.77	18.08	63.06
Gram	Madhya Pradesh	4.60	40.92	40.92
	Maharashtra	1.78	15.89	56.81
	Rajasthan	1.67	14.87	71.68
Total Pulses	Madhya Pradesh	8.11	32.15	32.15
	Rajasthan	3.39	13.42	45.57
	Maharashtra	3.30	13.09	58.67
Total Foodgrains	Uttar Pradesh	51.3	17.99	17.99
	Madhya Pradesh	33.5	11.74	29.74
	Punjab	31.7	11.13	40.87
II. **Oilseeds**				
Groundnut	Gujarat	3.94	42.88	42.88
	Rajasthan	1.26	13.72	56.59
	Andhra Pradesh	1.04	11.34	67.93
Rapeseed & Mustard	Rajasthan	3.40	40.88	40.88
	Haryana	1.11	13.32	54.20
	Madhya Pradesh	0.98	11.73	65.93
Soyabean	Madhya Pradesh	5.32	48.46	48.46
	Maharashtra	3.89	35.41	83.87
	Rajasthan	1.07	9.74	93.62
Sunflower	Karnataka	0.10	47.35	47.35
	Bihar	0.02	10.47	57.82
	Odisha	0.02	7.35	65.17
Total Oilseeds	Madhya Pradesh	6.95	22.20	22.20
	Rajasthan	5.97	19.07	41.27
	Gujarat	5.86	18.71	59.98
III. **Other Cash Crops**				
Sugarcane	Uttar Pradesh	177.06	46.98	46.98
	Maharashtra	83.13	22.06	69.03
	Karnataka	28.26	7.50	76.53
Cotton[a]	Gujarat	12.64	36.22	36.22
	Maharashtra	6.55	18.76	54.98
	Telangana	4.75	13.63	68.61
Jute & Mesta[b]	West Bengal	7.64	75.32	75.32
	Bihar	1.45	14.32	89.64
	Assam	0.84	8.25	97.90

Source: Directorate of Economics & Statistics, Department of Agriculture, Cooperation & Farmers Welfare

Notes:

a : Production in million bales of 170 kgs. b : Production in million bales of 180 kgs.

* : 4th Advance Estimates

1.19. Per Capita Net Availability of Foodgrains*

(000 TONNES UNLESS OTHERWISE STATED) (As on 19.11.2018)

Year	Population in thousand persons	Production		Net Imports	Change of Stocks	Net availability	Per capita net availability#	
		Gross	Net				Kg. per year	Grams per day
				RICE				
2015	1259108	105480	97464	-11032	946	85486	67.9	186.0
2016	1273986	104410	96475	-10043	786	85646	67.2	184.2
2017	1288522	109700	101363	-12581	2731	86051	66.8	183.0
2018(P)	1302896	112910	104329	-12683	1792	89854	69.0	188.9
				WHEAT				
2015	1259108	86530	76060	-176	-1325	77209	61.3	168.0
2016	1273986	92290	81123	1693	-10041	92857	72.9	199.7
2017	1288522	98510	86590	5134	5815	85909	66.7	182.7
2018(P)	1302896	99700	87636	1420	5172	83884	64.4	176.4
				OTHER CEREALS				
2015	1259108	42860	36753	-1189	-156	35720	28.4	77.7
2016	1273986	38520	33705	-349	45	33311	26.1	71.6
2017	1288522	43770	38299	-373	18	37908	29.4	80.6
2018(P)	1302896	46990	41116	-555	-48	40609	31.2	85.4
				CEREALS				
2015	1259108	234870	205511	-12397	-535	193649	153.8	421.4
2016	1273986	235220	205818	-8699	-9210	206329	162.0	443.7
2017	1288522	251980	220483	-7820	8564	204099	158.4	434.0
2018(P)	1302896	259590	227141	-11818	6916	208407	160.0	438.2
				PULSES				
2015	1259108	17150	15006	5115	0	20121	16.0	43.8
2016	1273986	16350	14306	5951	241	20016	15.7	43.0
2017	1288522	23130	20239	6811	1314	25736	20.0	54.7
2018(P)	1302896	25230	22076	5428	939	26565	20.4	55.9
				FOODGRAINS				
2015	1259108	252020	220518	-7282	-535	213771	169.8	465.1
2016	1273986	251570	220124	-2748	-8969	226345	177.7	486.8
2017	1288522	275110	240721	-1009	9878	229834	178.4	488.7
2018(P)	1302896	284820	249218	-6390	7855	234973	180.3	494.1

P - Provisional figures is based on 4th Advance Estimates of production for 2017-18, Net Import for April 2017 to March 2018 and stock position as on 01.04.2018.

* The net availability of foodgrains is estimated to be Gross Production (-) seed, feed & wastage, (-) exports (+) imports, (+/-) change in stocks. The net availability of foodgrains divided by the population estimates for a particular year indicate per capita availability of foodgrains in terms of kg/year. Net availability, thus worked out is further divided by the number of days in a year i.e., 365 days which is taken as net availaility of foodgrains in terms of grams/day.

\# Figures in respect of per capita net availability given above are not strictly representative of actual level of consumption in the country especially as they do not take in to account any change in stocks in possession of traders, producers and consumers.

Table 1.20. Net Availability, Procurement and Public Distribution of Foodgrains

(Million tonnes)

Year	Net production of foodgrains	Net imports	Net availability of foodgrains[a]	Procurement	Public distribution[b]	Col. 3 as per cent of Col. 4	Col. 5 as per cent of Col. 2	Col. 6 as per cent of Col. 4
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1951	48.1	4.8	52.4	3.8	8.0	9.2	7.9	15.3
1961	72.0	3.5	75.7	0.5	4.0	4.6	0.7	5.3
1971	94.9	2.0	94.3	8.9	7.8	2.1	9.3	8.3
1981	113.4	0.7	114.3	13.0	13.0	0.6	11.4	11.4
1991	154.3	(-)0.1	158.6	19.6	20.8	…	12.7	13.1
2001	172.2	(-)2.9	156.9	42.6	13.2	(-)1.8	24.7	8.4
2002	186.2	(-)6.7	189.5	40.3	18.2	(-)3.5	21.7	9.6
2003	152.9	(-)5.5	170.6	34.5	23.2	(-)2.8	22.6	13.2
2004	186.5	(-)6.5	183.3	41.1	28.3	(-) 3.5	22.0	15.5
2005	173.6	(-)6.0	170.0	41.5	31.0	(-) 3.5	23.9	18.2
2006	182.5	(-)2.3	181.9	37.0	31.8	(-) 1.3	20.3	17.5
2007	190.1	(-)4.7	183.7	35.8	32.8	(-) 2.6	18.8	17.8
2008	210.2	(-) 9.7	183.5	54.2	34.7	(-) 5.3	25.8	18.9
2009	205.2	(-) 4.1	189.5	60.5	41.3	(-) 2.2	29.5	21.8
2010	190.8	(-) 2.2	189.2	56.1	43.7	(-) 1.2	29.4	23.1
2011	213.9	(-) 2.9	203.1	64.5	47.9	(-) 1.4	30.1	23.6
2012	232.9	(-)16.3	205.4	73.4	44.9	(-)7.9	31.5	21.9
2013	231.9	(-)19.2	220.6	58.9	44.5	(-)8.7	25.4	20.2
2014	231.9	(-)15.8	222.2	59.8	43.5	(-)7.1	25.8	19.6
2015	220.5	(-)0.3	213.8	65.0	na	(-)0.1	29.5	na
2016	220.1	(-)2.7	226.6	60.8	na	(-)1.2	27.6	na
2017	241.2	2	238	71.4	na	0.8	29.6	na
2018	na	na	na	74.8	na	na	na	na

Source: 1. Department of Food and Public Distribution
2. Directorate of Economics & Statistics, Department of Agriculture, Cooperation & Farmers Welfare.

Notes:

na: not available

a : Net availability =Net production +Net Imports - changes in Government stocks.

b : Includes quantities released under the Food for Work Programme during the year 1978 to 1990.

1. Figures for procurement and public distribution relate to calender years.
2. For calculation of per capita net availability, the figure of net imports from 1981 to 1994 are based on imports and exports on Government of India account only.
   Net import from 1995 are, however, based on the total exports and imports (both Government as well as Private accounts).
3. Net Imports are total Imports minus Exports of the Country.

Table 1.21. Per Capita Availability of Certain Important Articles of Consumption

Year	Edible oil [a]	Vanaspati[b]	Sugar [c] (Nov.-Oct.)	Cloth[d]			Tea (Gram.)	Coffee [f] (Gram.)	Electricity Domestic (KWH)
				Cotton [e] (metres)	Man-made (metres)	Total (metres)			
	(Kg.)	(Kg.)	(Kg.)						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1960-61	3.2	0.8	4.8	13.8	1.2	15.0	296.0	80.0	3.4
1970-71	3.5	1.0	7.4	13.6	2.0	15.6	401.0	65.0	7.0
1980-81	3.8	1.2	7.3	12.9	4.4	17.3	511.0	79.0	13.5
1990-91	5.5	1.0	12.7	15.1	9.0	24.1	612.0	59.0	38.2
2000-01	8.2	1.3	15.8	14.2	16.5	30.7	631.0	58.0	75.2
2001-02	8.8	1.4	16.0	14.8	17.2	32.0	650.0	67.0	76.8
2002-03	7.2	1.4	16.3	14.4	17.0	31.4	623.0	67.0	79.0
2003-04	9.9	1.2	16.1	13.4	17.6	31.0	662.0	70.0	83.6
2004-05	10.2	1.1	15.5	14.1	19.4	33.5	663.0	72.0	87.8
2005-06	10.6	1.1	16.3	16.4	19.7	36.1	687.0	75.0	90.4
2006-07	11.1	1.2	16.8	18.0	21.6	39.6	687.0	77.0	98.8
2007-08	11.4	1.3	17.8	19.0	22.8	41.9	701.0	80.0	106.0
2008-09	12.7	1.2	18.8	17.9	21.1	39.0	704.0	82.0	112.7
2009-10	13.1	1.1	18.6	19.7	23.4	43.1	709.0	86.0	121.2
2010-11	13.0	1.0	17.0	21.4	22.6	44.0	715.0	90.0	130.9
2011-12	13.8	1.0	18.7	19.8	20.7	40.5	728.0	95.0	142.4
2012-13	15.8	0.7	18.7	19.9	18.6	38.5	779.0	97.0	150.9
2013-14	16.8	0.8	19.5	19.9	16.4	36.2	744.0	100.0	162.0
2014-15	18.3	0.8	20.3	23.6	17.0	40.6	752.0	100.0	174.2
2015-16	17.7	0.8	19.4	24.6	15.9	40.5	758.0	100.0	189.1(P)
2016-17	18.2	0.7	18.9	na	na	na	na	na	na
2017-18	19.5	0.7	19.5	na	na	na	na	na	na

Source: 1. Directorate of Sugar & Vegetable Oils, Ministry of Consumer Affairs, Food & Public Distribution
2. Tea Board 3. Coffee Board
4. Ministry of Textiles 5. Central Electricity Authority, Ministry of Power

Notes:

na : not available P : Provisional

a : Includes groundnut oils, rapeseed and mustard oil, sesamum oil, nigerseed oil, soyabean oil and sunflower oil but excludes oil for manufacture of vanaspati.

b : Relates to calendar year.

c : Relates to actual releases for domestic consumption, sugar season/year commencing from November to October of following year as opposed to financial year.

d : The data of cloth; prior to 1980-81 is calender year wise; in meters upto 1984-85; in square meter from 1985-86 onwards.

e : Figures for blended/mixed fabrics were not separately available prior to 1969. These have been included under man-made fibre fabrics after 1969.

f : Figures up to 1971-72 relate to coffee season and are thereafter on calendar year basis.

Table 1.22. Production, Imports and Consumption of Fertilizers

(Thousand tonnes of nutrients)

		1980-81	1990-91	2000-01	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
A.	**Nitrogenous fertilizers**															
	Production	2164	6993	11004	10900	10870	11900	12157	12259	12194	12378	12394	13416	13354	13386	13883
	Imports	1510	414	154	3707	3751	3447	4493	5240	4801	3920	4766	5068	3385	3588	4474
	Consumption	3678	7997	10920	14419	15090	15580	16558	17300	16821	16750	16946	17372	16735	16958	na
B.	**Phosphatic fertilizers**															
	Production	842	2052	3748	3807	3464	4321	4223	4368	3830	3960	4121	4394	4595	4723	4723
	Imports	452	1311	396	1391	3067	2756	3802	4427	2797	1588	1832	2888	2130	2047	2973
	Consumption	1214	3221	4215	5515	6506	7274	8050	7914	6653	5633	6098	6979	6705	6854	na
C.	**Potassic fertilizers**															
	Imports	797	1328	1541	2653	3403	2945	4069	3335	1559	1926	2537	2053	2325	2895	2373
	Consumption	624	1328	1567	2636	3313	3632	3514	2576	2062	2099	2532	2402	2508	2779	na
D.	**All fertilizers (NPK)**															
	Production	3006	9045	14752	14707	14334	16221	16380	16627	16024	16338	16515	17810	17949	18109	18106
	Imports	2759	2758	2090	7750	10221	9148	12364	13002	9157	7434	9135	10009	7840	8530	9820
	Consumption	5516	12546	19702	22570	24909	26486	28122	27790	25534	24482	25576	26753	25948	26591	na

Source: Department of Fertilizers, Ministry of Chemicals & Fertilizers

na : not available

Table 1.23. Production of Major Livestock Products and Fish

Year	Milk (Million tonnes)	Eggs (Million Nos.)	Fish (Thousand tonnes)
(1)	(2)	(3)	(4)
1950-51	17.0	1832	752
1960-61	20.0	2881	1160
1970-71	22.0	6172	1756
1980-81	31.6	10060	2442
1990-91	53.9	21101	3836
2000-01	80.6	36632	5656
2006-07	102.6	50653	6869
2007-08	107.9	53583	7127
2008-09	112.2	55562	7620
2009-10	116.4	60267	7914
2010-11	121.8	63024	8400
2011-12	127.9	66450	8700
2012-13	132.4	69731	9040
2013-14	137.7	74752	9572
2014-15	146.3	78484	10164
2015-16	155.5	82929	10795
2016-17	165.4	88137	11420
2017-18	176.3	95217	12610

Source: Department of Animal Husbandry, Dairying & Fisheries

Table 1.24. Production of Coal and Lignite

(Million tonnes)

Year	Coal				Lignite	Total coal and lignite (5)+(6)
	Coking		Non-coking	Total		
	Metallurgical	Non-Metallurgical				
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1950-51	na	na	na	32.3	na	na
1960-61	17.0	na	38.2	na	na	na
1970-71	17.8	na	55.1	na	3.4	na
1980-81	24.6	8.0	81.3	113.9	5.1	119.0
1981-82	26.9	9.2	88.1	124.2	6.3	130.5
1982-83	30.1	7.5	92.9	130.5	6.9	137.4
1983-84	30.1	6.2	101.9	138.2	7.3	145.5
1984-85	30.6	6.0	110.8	147.4	7.8	155.2
1985-86	29.1	6.6	118.6	154.2	8.1	162.3
1986-87	27.9	11.6	126.2	165.8	9.4	175.2
1987-88	26.3	14.7	138.7	179.7	11.2	190.9
1988-89	25.2	17.6	151.9	194.6	12.4	207.0
1989-90	24.5	19.9	156.5	200.9	12.8	213.7
1990-91	24.1	21.2	166.4	211.7	13.8	225.5
1991-92	26.3	20.0	183.0	229.3	14.6	243.8
1992-93	25.7	19.6	192.9	238.3	16.6	254.9
1993-94	26.0	19.1	201.0	246.0	18.1	264.1
1994-95	24.5	19.7	209.6	253.8	19.3	273.1
1995-96	23.5	16.6	230.0	270.1	22.1	292.3
1996-97	22.6	17.9	245.1	285.7	22.5	308.2
1997-98	24.2	19.3	252.4	295.9	23.1	319.0
1998-99	23.8	15.4	253.1	292.3	23.4	315.7
1999-2000	21.2	12.0	266.7	300.0	22.1	322.1
2000-01	19.3	11.8	278.6	309.6	23.0	332.6
2001-02 [a]	18.0	10.7	299.1	327.8	24.8	352.6
2002-03 [a]	18.4	11.8	311.1	341.3	26.0	367.3
2003-2004	18.3	11.1	331.9	361.3	28.0	389.3
2004-2005	18.2	12.0	352.4	382.6	30.3	413.0
2005-2006	17.0	14.5	375.5	407.0	30.1	437.1
2006-2007	17.2	14.9	398.7	430.8	31.3	462.1
2007-08	18.1	16.4	422.6	457.1	34.0	491.0
2008-09	17.3	17.5	458.0	492.8	32.4	525.2
2009-10	17.7	26.7	487.6	532.0	34.0	566.1
2010-11	17.7	31.9	483.2	532.7	37.7	570.4
2011-12	16.2	35.4	488.3	540.0	42.3	582.3
2012-13	14.6	37.0	504.8	556.4	46.5	602.9
2013-14	15.1	41.7	509.0	565.8	44.3	610.0
2014-15	13.8	43.7	551.7	609.2	48.3	657.4
2015-16	14.3	46.5	578.3	639.2	43.8	683.0
2016-17	15.2	46.4	596.2	657.8	45.2	703.1
2017-18 (P)	12.9	27.9	635.5	676.4	46.2	722.7

Source : Ministry of Coal

Notes:

na: not available

[a] Including Meghalaya Coal.

P : Provisional

Table 1.25. Progress of Electricity Supply (Utilities & Non-Utilities)
A : Installed Plant Capacity

(Thousand MW)

Year	Utilities				Non-Utilities	Total [5+6]
	Hydro	Thermal +RES	Nuclear	Total		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1950-51*	0.6	1.1	0	1.7	0.6	2.3
1960-61	1.9	2.7	0	4.6	1.0	5.6
1970-71	6.4	7.9	0.4	14.7	1 . 6	16.3
1980-81	11.8	17.6	0.9	30.3	3 . 1	33.4
1981-82	12.2	19.3	0.9	32.4	3 . 4	35.8
1982-83	13.1	21.4	0.9	35.4	3 . 9	39.3
1983-84	13.9	24.4	1.1	39.4	4 . 4	43.8
1984-85	14.5	27	1.1	42.6	5 . 1	47.7
1985-86	15.5	30	1.3	46.8	5 . 5	52.3
1986-87	16.2	31.8	1.3	49.3	5 . 7	55.0
1987-88	17.3	35.6	1.3	54.2	6 . 3	60.5
1988-89	17.8	39.7	1.5	59	7 . 5	66.5
1989-90	18.3	43.8	1.5	63.6	8 . 2	71.8
1990-91	18.8	45.8	1.5	66.1	8 . 6	74.7
1991-92	19.2	48.1	1.8	69.1	9 . 3	78.4
1992-93	19.6	50.7	2.0	72.3	10.1	82.4
1993-94	20.4	54.4	2.0	76.8	10.7	87.5
1994-95	20.8	58.1	2.2	81.1	11.2	92.3
1995-96	21	60.1	2.2	83.3	11.8	95.1
1996-97	21.7	61.9	2.2	85.8	12.1	97.9
1997-98	21.9	65	2.2	89.1	13.2	102.3
1998-99	22.4	68.7	2.2	93.3	14.1	107.4
1999-00	23.9	71.3	2.7	97.9	14.7	112.6
2000-01	25.1	73.6	2.9	101.6	16.2	117.8
2001-02	26.3	76	2.7	105	17.1	122.1
2002-03	26.8	78.4	2.7	107.9	18.3	126.2
2003-04	29.5	80.5	2.7	112.7	18.7	131.4
2004-05	30.9	84.7	2.8	118.4	19.1	137.5
2005-06	32.3	88.6	3.4	124.3	21.3	145.6
2006-07	34.7	93.7	3.9	132.3	22.3	154.6
2007-08	35.9	103	4.1	143	25	168
2008-09	36.9	107	4.1	148	27	175
2009-10	36.9	118	4.6	159.4	31.5	190.9
2010-11	37.6	131.3	4.8	173.7	34.4	208.1
2011-12	39.0	156.1	4.8	199.9	36.5	236.4
2012-13	39.5	179.1	4.8	223.4	40.7	264.1
2013-14	40.5	203.2	4.8	248.5	42.3	290.8
2014-15	41.3	227.9	5.8	275.0	44.7	319.6
2015-16	42.8	256.6	5.8	305.2	48.3	353.4
2016-17	44.5	275.6	6.8	326.8	51.5	378.4
2017-18	45.3	291.9	6.8	344.0	55.0($)	399.0

Source : Ministry of Power

Notes:

$: Provisional RES : Renewable Energy Source a : Calender Year

Table 1.25. Progress of Electricity Supply (Utilities & Non-Utilities)
B : Energy Generated

(Billion KWH)

Year	Utilities				Non-Utilities	Total (5+6)
	Hydro	Thermal +RES	Nuclear	Total		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1950-51*	2.5	2.6	....	5.1	1.5	6.6
1960-61	7.8	9.1	....	16.9	3 . 2	20.1
1970-71	25.2	28.2	2 . 4	55.8	5 . 4	61.2
1975-76	33.3	43.3	2 . 6	79.2	6 . 7	85.9
1977-78	38.0	51.1	2 . 3	91.4	7 . 6	99.0
1978-79	47.1	52.6	2 . 8	102.5	7 . 6	110.1
1979-80	45.5	56.3	2 . 9	104.7	8 . 2	112.9
1980-81	56.5	61.3	3 . 0	120.8	8 . 4	129.2
1981-82	49.6	69.5	3 . 0	122.1	9 . 0	131.1
1982-83	48.4	79.9	2 . 0	130.3	10.0	140.3
1983-84	50.0	86.7	3 . 5	140.2	10.8	151.0
1984-85	53.9	98.8	4 . 1	156.8	12.3	169.1
1985-86	51.0	114.4	5 . 0	170.4	13.0	183.4
1986-87	53.8	128.9	5 . 0	187.7	13.6	201.3
1987-88	47.5	149.6	5 . 0	202.1	16.9	219.0
1988-89	57.9	157.7	5 . 8	221.4	19.9	241.3
1989-90	62.1	178.7	4 . 6	245.4	23.0	268.4
1990-91	71.7	186.5	6 . 1	264.3	25.1	289.4
1991-92	72.8	208.7	5 . 5	287.0	28.6	315.6
1992-93	69.9	224.8	6 . 7	301.4	31.3	332.7
1993-94	70.4	248.2	5 . 4	324.0	32.3	356.3
1994-95	82.7	262.1	5 . 6	350.4	35.1	385.5
1995-96	72.6	299.3	8 . 0	380.0	38.2	418.1
1996-97	68.9	317.9	9 . 1	395.9	40.8	436.7
1997-98	74.6	337.0	10.1	421.7	44.1	465.8
1998-99	82.9	353.7	11.9	448.5	48.4	496.9
1999-00	80.6	386.8	13.3	480.7	51.5	532.2
2000-01	74.5	408.1	16.9	499.5	55.0	554.5
2001-02	73.5	424.4	19.5	517.4	61.7	579.1
2002-03	64.0	449.3	19.4	532.7	63.8	596.5
2003-04	75.2	472.1	17.8	565.1	68.2	633.3
2004-05	84.6	492.8	17.0	594.4	71.4	665.8
2005-06	101.5	506.0	17.3	623.8	73.6	697.4
2006-07	113.5	538.4	18.8	670.7	81.8	752.5
2007-08	120.4	585.3	16.9	723.0	90.5	813.1
2008-09	110.1	616.2	14.9	741.2	99.7	840.9
2009-10	104.1	677.1	18.6	799.8	106.1	906.0
2010-11	114.4	704.3	26.3	844.8	120.9	965.7
2011-12	130.5	759.4	32.3	922.5	134.4	1056.8
2012-13	113.7	817.9	32.9	964.5	144.0	1108.5
2013-14	134.9	857.6	34.2	1026.6	149.0	1175.6
2014-15	129.2	939.7	36.1	1105.1	162.1	1267.1
2015-16	121.4	1008.8	37.4	1167.6	168.4	1336.0
2016-17	122.4	1075.1	37.9	1235.4	172.0	1407.4
2017-18	126.1	1139.0	38.3	1303.5	179.8($)	1483.2

Source : Ministry of Power

Notes:

$: Provisional * : Calender Year RES : Renewable Energy Resource

Figures at decimal may not tally due to rounding off

Table 1.26. Operations of Indian Railways

	1950-51	1960-61	1970-71	1980-81	1990-91	2000-01	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1. Route Kilometres (000's)														
Electrified	0.4	0.8	3.7	5.4	10.0	14.9	20.3[b]	20.9[b]	21.6[b]	22.2[b]	23.6[b]	25.40[b]	29.40[b]	na
Total	53.6	56.2	59.8	61.2	62.4	63.0	64.6[b]	65.4[b]	65.8[b]	66.0[b]	66.7[b]	67.40[b]	68.40[b]	na
2. Originating traffic (million tonnes)														
Revenue Earning	73.2	119.8	167.9	195.9	318.4	473.5	969.1[a]	1008.1[a]	1051.6[a]	1095.3[a]	1101.5[a]	1106.15[a]	1159.55[a]	1221.39
Total Traffic	93.0	156.2	196.5	220.0	341.4	504.2	975.2[a]	1014.2[a]	1058.8[a]	1101.1[a]	1108.6[a]	1110.95[a]	1162.64[a]	na
3. Goods carried (billion tonne km.)														
Revenue Earning	37.6	72.3	110.7	147.7	235.8	312.4	667.6	691.7[a]	665.8[a]	681.7[a]	654.5[a]	620.18[a]	692.90[a]	700.60
Total Traffic	44.1	87.7	127.4	158.5	242.7	315.5	668.6	692.6[a]	666.7[a]	682.6[a]	655.6[a]	620.86[a]	693.30[a]	na
4. Earnings from goods carried (₹ Crore)	139.3	280.5	600.7	1550.9	8247.0	23045.4	67761.4[a]	83478.8[a]	91570.9[a]	103015.2[a]	106940.6[a]	102028.00[a]	113524.00[a]	125248.68 @
5. Average Lead: all goods traffic (Km)	470	561	648	720	711	626	686	683	630	620	591	559.0	596.00	574.00
6. Average rate/tonne km. (paise)	3.2	3.9	5.4	10.5	35.0	73.8	101.5	120.7	137.5	151.2	163.4	164.51	163.83	178.78
7. Passengers Originating (million)	1284	1594	2431	3613	3858	4833	8224.4[b]	8420.7[b]	8397.1[b]	8224.1[b]	8107.3[b]	8116.1[b]	8285.80[b]	8438.46[b]
8. Passengers kilometres (billion)	66.5	77.7	118.1	208.6	295.6	457	1046.5[b]	1098.1[b]	1158.7[b]	1147.2[b]	1143.0[b]	1149.83[b]	1177.70[b]	1184.70[b]
9. Passengers Earnings (₹ Crore)	98.2	131.6	295.5	827.5	3144.7	10515.1[b]	28246.4[b]	31322.8[b]	36532.3[b]	42189.6[b]	44283.3[b]	46280.4[b]	48643.10[b]	51016.89[b]
10. Average lead : passenger traffic (km)	51.8	48.7	48.6	57.7	76.6	94.6	127.2[b]	130.4[b]	135.8[b]	139.5[b]	141.0[b]	141.7[b]	142.10[b]	140.40[b]
11. Average rate per passenger - kilometre (paise)	1.5	1.7	2.5	4.0	10.6	22.9	27.0[b]	28.5[b]	31.5[b]	36.8[b]	38.7[b]	40.3[b]	41.30[b]	43.10[b]

Source : Ministry of Railways

Notes:

P: Provisional a: Excluding Konkan Railways Corporation Limited Loading b: Includes Metro Railway/Kolkata. @: Including NTPC

na: not available

Figures for 2018-19 based on monthly statement 7A

Table 1.27. Revenue Earning Goods Traffic on Indian Railways

A : Traffic Originating

(Million tonnes)

Commodity	1950-51	1960-61	1970-71	1980-81	1990-91	2000-01	2011-12[a]	2012-13[a]	2013-14[a]	2014-15 P[a]	2015-16a	2016-17	2017-18	2018-19 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1. Coal	20.2	30.9	47.9	64.1	135.2	223.7	455.8	496.4	508.1	545.8	551.8	532.8	555.2	605.7
2. Raw materials for Steel Plant except iron ore	na	10.5	16.1	20.2	25.9	38.8	14.5	15.6	17.3	18.3	20.3	22.7	23.7	24.9
3. Pig iron & finished steel														
i) steel plants	na	3.8	6.2	7.5	10.0	11.8	25.7	26.0	27.8	28.3	29.6	38.4	35.4	32.6
ii) from other points	na	na	na	na	na	na	9.5	9.4	11.1	14.6	15.2	13.9	18.8	20.6
iii) Total	na	na	na	na	na	na	35.2	35.3	39.0	42.9	44.8	52.4	54.3	53.3
4. Iron ore														
i) for export	na	2.6	9.8	11.1	13.1	14.6	8.4	5.5	6.6	2.5	2.1	10.5	8.1	5.6
ii) for steel plants	na	na	na	na	na	na	54.7	61.6	66.8	69.4	78.6	83.7	86.6	89.0
iii) for other domestic users	na	na	na	na	na	na	40.3	44.4	50.9	40.9	36.2	43.3	45.0	42.7
iv) Total	na	na	na	na	na	na	103.4	111.4	124.3	112.8	116.9	137.5	139.8	137.3
5. Cement	2.5	6.5	11.0	9.6	28.9	42.9	107.7	105.9	109.8	109.8	105.4	103.3	112.9	117.7
6. Foodgrains	7.8	12.7	15.1	18.3	25.4	26.7	46.3	49.0	55.1	55.5	45.7	44.9	43.7	39.3
7. Fertilizers	na	1.4	4.7	8.1	18.4	27.1	52.7	46.2	44.7	47.4	52.2	48.3	48.5	51.8
8. POL	2.7	4.7	8.9	15.0	25.0	36.3	39.8	40.6	41.2	41.1	43.2	42.4	43.1	43.0
9. Container Service -														
i) Domestic container	na	na	na	na	na	na	9.5	9.4	10.9	10.5	9.0	10.3	11.1	11.7
ii) EXIM containers	na	na	na	na	na	na	28.5	31.7	32.6	37.9	36.8	37.0	42.8	48.4
iii) Total	na	na	na	na	na	na	38.0	41.0	43.5	48.4	45.8	47.3	53.9	60.1
10. Balance (other goods)	40.0	46.7	48.2	42.1	36.6	51.8	75.7	66.6	68.8	73.4	75.3	74.3	84.0	87.9
11.Total revenue earning freight traffic	73.2	119.8	167.9	195.9	318.4	473.5	969.1	1008.1	1051.6	1095.3	1101.5	1106.1	1159.5	1221.3

Source :Ministry of Railway

Notes:

na: not available a: Excluding Konkan Railways Corporation Limited loading

P: Provisional POL: Petroleum, Oil & Lubricants

Figures for 2018-19 are provisional and based on monthly statement-7A

Table 1.27. Revenue Earning Goods Traffic on Indian Railways
B : Goods Carried

(NTKM in Billion)

Commodity	1950-51	1960-61	1970-71	1980-81	1990-91	2011-12 [a]	2012-13[a]	2013-14[a]	2014-15 P[a]	2015-16[a]	2016-17	2017-18	2018-19 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(10)	(11)	(12)	(13)	(14)	(15)
1. Coal	11.3	20.5	27.8	36.4	85.9	291.5	303.4	271.9	301.5	280.7	250.0	277.0	297.0
2. Raw materials for Steel Plant except iron ore	na	2.0	2.7	4.3	7.5	10.3	10.2	10.1	11.0	11.7	12.0	14.0	14.0
3. Pig iron & finished steel													
i) steel plants	na	3.3	6.2	8.6	11.6	26.3	27.2	27.9	29.0	30.5	34.0	36.0	34.0
ii) from other points	na	na	na	na	na	7.6	6.9	7.0	8.4	9.9	10.0	13.0	12.0
iii) Total	na	na	na	na	na	33.9	34.1	34.9	37.4	40.4	44.0	49.0	46.0
4. Iron ore													
i) for export	na	na	5.5	7.3	7.5	2.0	3.1	2.7	1.3	0.9	5.0	4.0	2.0
ii) for steel plants	na	na	na	na	na	14.3	15.4	16.4	19.2	19.1	21.0	24.0	25.0
iii) for other domestic users	na	na	na	na	na	19.7	19.6	18.1	16.2	12.3	14.0	16.0	15.0
iv) Total	na	na	na	na	na	36.0	38.1	37.2	36.7	32.4	40.0	44.0	42.0
5. Cement	na	2.5	7.0	7.2	18.9	62.0	62.7	59.3	59.1	56.0	55.0	64.0	63.0
6. Foodgrains	4.0	9.6	14.5	24.3	35.6	57.9	71.3	70.5	67.0	60.1	58.0	62.0	56.0
7. Fertilizers	na	na	3.8	8.9	17.3	43.9	39.0	34.5	38.8	43.7	39.0	42.0	45.0
8. POL	na	2.6	5.3	11.7	15.1	26.1	28.5	29.3	27.2	29.3	28.0	29.0	28.0
9. Container Service -													
i) Domestic container	na	na	na	na	na	13.6	13.8	15.9	15.0	12.4	14.0	16.0	15.0
ii) EXIM containers	na	na	na	na	na	31.6	36.2	36.3	32.9	33.0	30.0	38.0	38.0
iii) Total	na	na	na	na	na	45.2	50.0	52.2	47.9	45.4	44.0	54.0	53.0
10. Balance (other goods)	22.3	31.9	37.9	39.1	36.4	60.8	54.4	66.0	55.1	54.7	50.0	58.0	57.0
11.Total revenue earning freight traffic	37.6	72.3	110.7	147.7	235.8	667.6	691.7	665.8	681.7	654.5	620.0	693.0	701.0

na: not available a: Excluding Konkan Railways Corporation Limited loading

P: Provisional POL: Petroleum, Oil & Lubricants

Figures for 2018-19 are provisional and based on Monthly Statement-7A.

Table 1.28. Operations of Road Transport

	Unit	1950-51	1960-61	1970-71	1980-81	1990-91	2000-01	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1. Length of roads@													
Total[a]	Thousand Km	399.9	524.5	914.9	1485.4	2327.4	3373.5	4865.4	5231.9	5402.5	5472.1	5603.3	5897.7
Surfaced		157.0	263.0	398.0	684.0	1090.2	1601.7	2698.6	3171.0	3220.5	3341.0	3501.9	3729.8
2. Length of national Highways@													
Total[a]	Thousand Km.	19.8	23.8	23.8	31.7	33.7	57.7	76.8	79.1	91.3	98.0	101.0	114.2
Surfaced		na	21.0	23.3	31.5	33.4	57.7	76.8	79.1	91.3	98.0	101.0	114.2
3. Length of State Highways@													
Total[a]	Thousand Km.	na	na	56.8	94.4	127.3	132.1	164.4	169.2	170.8	167.1	176.1	175.0
Surfaced		na	na	51.7	90.3	124.8	129.9	163.0	167.2	169.0	165.3	170.2	169.1
4. No. of Registered vehicles$													
All vehicles	Thousand	306.0	665.0	1865.0	5391.0	21374.0	54991.0	159491.0	176044.0	190704	210023	230031	253311
Goods vehicles		82.0	168.0	343.0	554.0	1356.0	2948.0	7658.0	8307.0	8698	9344	10516	12256
Buses*		34.0	57.0	94.0	162.0	331.0	634.0	1677.0	1814.0	1887	1971	1757	1864
5. Revenue realised from Road Transport#													
Central	(Crore)	34.8	111.7	451.8	930.9	4596.0	23861.0	75572.5	90931.2	89084.1	109941	199659.7	280132.1
States		12.6	55.2	231.4	750.4	3259.6	12901.7	55161.1	50602.7	56749.8	62630.7	70003.3	79962.2

Source: Ministry of Road Transport & Highways

@ : Source Basic Road Statistics of India 2016-17

$: Source Road Transport Year Book 2016-17 (Provisional) as publication is under finalization.

: Source State Finance of- A study of Budgets, RBI

Notes:

a : Includes rural roads constructed under Jawahar Rojgar Yojna as on 31st March, 1996. na : not available

*: Included omni buses.

P: Provisional

Table 1.29. Growth of Civil Aviation

	1960-61	1970-71	1980-81	1990-91	1999-00	2005-06	2007-08	2009-10	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1. Total fleet strenght (number)																
(i) Air India	13	11	18	24	26	38	-	-	-	-	-	-	-	-	-	-
(ii) Indian Airlines	88	73	45	56	44	55	-	-	-	-	-	-	-	-	-	-
(iii) Air India Ltd. (Erstwhile national Aviation Company of India Ltd)	-	-	-	-	-	-	108	109	94	93	96	101	107	111	114	126
(iv) Alliance Air	-	-	-	-	12	15	20	17	11	11	8	10	11	10	15	20
(v) Air India Express	-	-	-	-	-	4	18	25	21	21	21	17	18	23	23	25
(vi) Other Pvt Scheduled Airlines	-	-	-	-	37	131	235	232	229	253	273	279	312	349	378	520
2. Revenue tonne-Kilometers (million)																
(i) Air India	109.4	275.2	980.1	1342.7	1456.5	2364.0	-	-	-	-	-	-	-	-	-	-
(ii) Indian Airlines	82.4	202.1	400.3	697.6	738.0	1589.0	-	-	-	-	-	-	-	-	-	-
(iii) Air India Ltd. (Erstwhile national Aviation Company of India Ltd)	-	-	-	-	-	-	3460.0	3535.0	3704.4	3346.3	3910.0	4196.0	4363.7	4739.0	2586.3	5782.1
(iv) Alliance Air	-	-	-	-	131.0	73.0	40.0	38.0	30.2	26.6	22.7	18.0	20.2	29.4	19.5	62.0
(v) Air India Express	-	-	-	-	-	113.0	435.0	576.0	538.0	507.9	620.5	541.4	672.2	836.2	422.5	1029.4
(vi) Other Pvt Scheduled Airlines	-	-	-	-	441.9	1789.0	4173.6	5338.6	7673.0	7020.8	7280.8	8267.2	9607.2	11404.6	6415.3	15779.6
(vii) Dedicated Private Freighter	-	-	-	-	-	-	-	-	-	-	114314.5	113865.0	123876.0	131155.5	66042.5	125.2
(viii) Total (Other Pvt Scheduled Airlines+ Dedicated Private Freighter	-	-	-	-	-	-	-	-	-	-	121595.3	122132.2	133483.2	142560.1	72457.8	15904.8
3. Number of passengers carried (lakh)																
(i) Air India	1.3	4.9	14.2	21.6	31.9	43.6	-	-	-	-	-	-	-	-	-	-
(ii) Indian Airlines	7.9	21.3	54.3	78.7	58.9	78.2	-	-	-	-	-	-	-	-	-	-

Contd....

Table 1.29. Growth of Civil Aviation

(Contd.....)

	1960-61	1970-71	1980-81	1990-91	1999-00	2005-06	2007-08	2009-10	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
(iii) Air India Ltd. (Erstwhile national Aviation Company of India Ltd)	-	-	-	-	-	-	132.1	117.7	136.1	141.8	154.1	172.6	184.8	196.0	100.4	222.8
(iv) Alliance Air	-	-	-	-	18.6	10.1	5.4	4.6	4.7	3.9	3.6	3.1	4.0	6.3	4.9	16.0
(v) Air India Express	-	-	-	-		4.9	17.1	25.0	23.0	21.6	26.7	25.8	27.8	34.2	19	43.4
(vi) Other Pvt Scheduled Airlines	-	-	-	-	54.2	180.7	380.3	422.2	588.3	548.5	580.0	672.6	821.6	1009.2	565.2	1380.1
4. Passengers handled at (lakh)																
AAI Airports	na	na	107.4	177.2	390.4	733.4	-	508.7	684.0	683.9	716.5	1112.4	931.5	1132.8	1371.3	1587.9
Joint venture Interntl.Airports	-	-	-	-	-	-	-	728.8	939.1	910.1	972.7	788.9	1307.9	1516.8	1716.1	1859.0
Total at Indian Airports	na	na	107.4	177.2	390.4	733.4	-	1237.6	1623.1	1594.0	1689.2	1901.3	2239.5	2649.6	3087.5	3447.0
5.Cargo handled (thousand tonnes)																
AAI Airports	na	na	178.7	377.33	797.41	1397.3	493.6	593.0	703.4	650.4	636.5	681.6	724.5	808.7	921.0	943.0
Joint venture Interntl.Airports			-	-	-	-	1220.8	1366.8	1576.6	1540.1	1641.4	1846.0	1980.0	2169.6	2436.0	2617.0
Total at Indian Airports	na	na	178.7	377.33	797.41	1397.3	1714.5	1959.7	2280.0	2190.6	2277.9	2527.6	2704.5	2978.3	3357.0	3560.0

Source : Directorate General of Civil aviation : Airport Authority of India
Notes:
*: Fleet figure for the year 2018-19 are provisional
na : not available
P: Provisional

Table 1.30. Commodity Balance of Petroleum and Petroleum Products

(Million Tonnes)

Item	1950-51[a]	1960-61[a]	1970-71[a]	1980-81	1990-91	2000-01	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
I. Crude Oil														
1. Refinery throughput	0.3	6.6	18.4	25.8	51.8	103.4	204.1	219.2	222.5	223.2	232.9	245.3	251.9	257.2
2. Domestic production	0.3	0.5	6.8	10.5	32.2	32.4	38.1	37.9	37.8	37.4	36.9	36.0	35.6	34.2
(a) On-shore	0.3	0.5	6.8	5.5	11.8	11.8	18.0	19.4	19.6	18.5	17.8	17.6	17.5	17.3
(b) Off-shore	...	...	...	5.0	20.4	20.6	20.1	18.4	18.2	18.9	19.0	18.4	18.1	16.8
3. Imports	na	6.0	11.7	16.2	20.7	74.1	171.7	184.8	189.2	189.4	202.8	213.9	220.4	226.6
4. Exports	na	na	na	na	na	na	-	-	-	-	-	-	-	-
5. Net Imports (3-4)	na	na	na	na	na	na	171.7	184.8	189.2	189.4	202.8	213.9	220.4	226.6
II. Petroleum Products														
1. Domestic consumption[b]	3.3	7.7	17.9	30.9	55.0	100.1	148.1	157.1	158.4	165.5	184.7	194.6	206.1	211.6
of which														
(a) Naphtha	...	...	0.9	2.3	3.4	11.7	11.2	12.3	11.3	11.0	13.3	13.2	12.8	14.0
(b) Kerosene	0.9	2.0	3.3	4.2	8.4	11.3	8.2	7.5	7.2	7.0	6.8	5.4	3.8	3.4
(c) High speed diesel oil	0.2	1.2	3.8	10.3	21.1	37.9	64.8	69.1	68.4	69.4	74.6	76.0	81.0	83.5
(d) Fuel oils	0.9	1.7	4.7	7.5	9.0	12.7	9.3	7.7	6.2	6.0	6.6	7.2	6.7	6.5
2. Domestic productionc	0.2	5.7	17.1	24.1	48.6	95.6	203.2	217.7	220.8	221.1	231.9	243.5	254.4	262.3
of which														
(a) Naphtha	na	...	1.2	2.1	4.9	9.9	18.8	19.0	18.5	17.3	17.9	19.9	20.0	19.7
(b) Kerosene	na	0.9	2.9	2.4	5.5	8.7	7.9	8.0	7.4	7.5	7.5	6.0	4.4	4.0
(c) High speed diesel oil	na	1.1	3.8	7.4	17.2	39.1	82.9	91.1	93.8	94.4	98.6	102.4	107.9	110.5
(d) Fuel oils	na	1.6	4.1	6.1	9.4	11.4	18.4	15.1	13.4	11.9	9.7	9.9	9.4	10.0
3. Imports[a]	3.1	2.5	1.1	7.3	8.7	9.3	15.8	16.4	16.7	21.3	29.4	36.3	35.4	32.5
4. Exports	na	na	0.3	…	2.7	8.4	60.8	63.4	67.9	63.9	60.5	65.5	66.8	61.1
5. Net Imports (3-4)	na	na	0.8	7.3	6.0	0.9	-45.0	-47.6	-51.1	-42.6	-31.0	-29.2	-31.3	-28.5

Source: Ministry of Petroleum and Natural Gas.

Notes:

*: Provisional na: not available

a: Excluding Import of LNG

b: Excluding refinery fuel consumption. Including import by private parties.

c: Including Production of Petroleum Products from Fractionators

Table 1.31. Two Digit Level Indices of Industrial Production (Base 2011-12)

Industry Group (NIC 2008)	Industry	Weight	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
	General Index	100.00	103.3	106.7	111.0	114.7	120.0	125.3	129.8
	Mining	14.37	94.7	94.6	93.3	97.3	102.5	104.9	107.9
	Manufacturing	77.63	104.8	108.6	112.7	115.9	121.0	126.6	131.0
10	Manufacture of food products	5.30	103.3	104.6	110.9	104.7	98.9	108.1	121.1
11	Manufacture of beverages	1.04	106.7	104.8	108.2	109.7	106.3	105.4	108.7
12	Manufacture of tobacco products	0.80	107.5	116.4	131.1	136.3	115.9	95.1	93.9
13	Manufacture of textiles	3.29	108.0	112.6	116.9	119.4	117.4	117.1	118.4
14	Manufacture of wearing apparel	1.32	99.0	114.8	114.4	131.0	151.7	137.5	152.3
15	Manufacture of leather and related products	0.50	110.6	113.0	123.0	123.6	122.3	123.9	124.7
16	Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	0.19	97.0	94.6	95.3	97.5	93.1	92.4	104.0
17	Manufacture of paper and paper products	0.87	103.3	114.2	115.1	116.5	114.0	108.9	104.2
18	Printing and reproduction of recorded media	0.68	96.8	105.8	100.0	103.8	106.0	99.7	97.7
19	Manufacture of coke and refined petroleum products	11.77	105.9	108.0	108.6	113.7	119.1	123.5	126.7
20	Manufacture of chemicals and chemical products	7.87	103.9	108.8	109.2	113.7	116.5	116.1	118.8
21	Manufacture of pharmaceuticals, medicinal chemical and botanical products	4.98	108.1	114.3	116.9	132.1	172.3	212.1	215.0
22	Manufacture of rubber and plastics products	2.42	101.0	112.4	117.7	118.3	120.5	110.6	108.0
23	Manufacture of other non-metallic mineral products	4.09	102.9	103.1	108.2	110.4	109.9	113.9	123.6
24	Manufacture of basic metals	12.80	107.8	112.5	123.5	124.3	130.6	138.0	141.3
25	Manufacture of fabricated metal products, except machinery and equipment	2.65	97.0	101.5	105.9	103.4	105.5	107.9	106.4
26	Manufacture of computer, electronic and optical products	1.57	100.6	115.2	117.6	123.6	126.7	148.5	168.5
27	Manufacture of electrical equipment	3.00	113.0	117.4	122.0	128.4	122.6	107.4	110.0
28	Manufacture of machinery and equipment n.e.c.	4.77	102.9	103.3	102.6	105.9	114.1	120.5	123.4
29	Manufacture of motor vehicles, trailers and semi-trailers	4.86	100.1	99.1	102.6	101.1	101.7	114.5	122.8
30	Manufacture of other transport equipment	1.78	99.2	103.5	110.0	112.5	117.5	133.9	145.7
31	Manufacture of furniture	0.13	112.9	125.4	115.6	163.9	176.2	196.6	211.4
32	Other manufacturing	0.94	113.1	105.2	105.7	119.9	125.6	106.2	92.9
	Electricity	7.99	104.0	110.3	126.6	133.8	141.6	149.2	156.9

Source: Central Statistics Office, MOSPI

Table 2.1. Budgetary Transactions of the Central and State Governments and Union Territories (Including internal and extra-budgetary resources of public sector undertakings for their plans)

(₹ crore)

	1980-81	1990-91	2000-01	2011-12	2012-13	2013-14	2014-15	2015-16 (BE)	2015-16 (RE)	2016-17 (BE)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
I. TOTAL OUTLAY	36845	176548	615658	2725009	3021229	3372982	3480304	3838558	3851961	4306241
A. DEVELOPMENT[1]	24426	105922	317464	1605787	1782915	1935977	2043299	2018434	2189596	2486117
B. NON-DEVELOPMENT	12419	70626	298194	1119222	1238314	1437005	1437005	1820124	1662365	1820124
1. Defence (net)	3600	15427	49622	170913	181776	203499	218694	246727	224636	249099
2. Interest payments	2957	25006	122792	403235	457550	537468	585714	670904	655143	742792
3. Tax collection charges	504	1973	6570	22971	26489	29995	32563	37292	36092	40682
4. Police	1163	5657	21343	89815	101881	115217	128527	146244	145922	163817
5. Others[2]	4195	22563	97867	432288	470618	550826	471507	718957	600572	623734
II. CURRENT REVENUE	24563	110607	393284	1842477	2116869	2393750	2543960	2947996	2927445	3332388
A. TAX REVENUE	19844	87723	305320	1467890	1716117	1879143	2040027	2419085	2384421	2684384
1. Income and corporation tax	2817	10712	67460	487341	553170	632548	687299	791467	744623	839700
2. Customs	3409	20644	47542	149328	165346	172085	188016	208336	209500	230000
3. Union excise duties	6500	24514	68526	144901	175845	169455	189038	229054	283353	317860
4. Sales tax	4018	18228	72874	361332	422578	475131	506106	622856	585925	670875
5. Others	3100	13625	48918	324988	399178	429924	469568	567372	561020	625949
B. NON-TAX REVENUE[3]	4719	22884	87964	374587	400752	514607	503933	528911	543024	648004
(Internal resources of public sector undertakings for the Plan)	(1374)	(11183)	(39415)	(202717)	(196771)	(237848)	(211014)	(176778)	na	na
III. GAP (I-II)	12282	65941	222374	882533	904360	979232	936344	890562	924516	973853
FINANCED BY:										
IV NET CAPITAL RECEIPTS										
(A+B)	8831	54455	223283	785377	927020	973545	961258	855414	1042996	1082642
A. INTERNAL (net)	7161	50192	214965	769967	917508	962635	946725	842467	1028574	1060686
1. Net market loans[4]	3163	11308	85341	603608	673820	701972	721447	456405	401929	425181
2. Net small savings	1121	8309	8192	19078	11934	33283	15555	23836	42502	25375
3. Net State and public provident funds	558	3887	23661	17894	26303	17559	33828	36540	34659	37138
4. Special deposits of non-Government provident funds	604	6721	7177	0	0	0	0	0	0	0
5. Special borrowings from RBI against compulsory deposits	-70	-105	na	na	na	na	na	na	na	na
6. Net misc. capital receipts[5]	1785	20072	90594	129387	205451	209821	175895	325686	549484	572992
B. EXTERNAL[6]	1670	4263	8318	15410	9512	10910	14533	12947	14422	21956
1. Net loans	749	3181	7505	12448	7201	7292	12933	11173	11485	19094
(i) Gross	1141	5339	17328	26034	23309	25416	33534	34373	34580	44789
(ii) Less repayments	392	2158	9823	13586	16108	18124	20601	23200	23095	25695
2. Grants	436	586	813	2962	2311	3618	1600	1774	2937	2862
3. Net special credit	-53	-76	0							
V. OVERALL BUDGETARY DEFICIT	3451	11486	-909	97153	-22658	5689	105626	35147	91239	27402

Source : Economic Division, Department of Economic Affairs, Ministry of Finance

Notes: na Not available RE : Revised Estimates BE : Budget Estimates

1. Includes plan expenditure of Railways, Communications and non-departmental commercial undertakings financed out of their internal and extra budgetary resources, including market borrowings and term loans from financial institutions to State Governments public enterprises. Also includes developmental loans given by the Central and State Governments to non-departmental undertakings, local bodies and other parties. However, it excludes a notional amount of ₹45 crore in 1980-81 on account of conversion of loan capital given to non-departmental commercial undertakings into equity capital.
2. Includes general administration, pensions and ex-gratia payments to famine relief (only non-plan portion), subsidies on food and controlled cloth, grants and loans to foreign countries and loans for non-developmental purpose to other parties, but excludes Contingency Fund transactions. It also excludes notional transactions in respect of subscriptions to International Monetary Fund of ₹559 crore in 1980-81, ₹550 crore in 1990-1991, ₹629 crore in 2000-2001, ₹1613 crore in 2011-12, ₹4323 crore in 2012-13, ₹367 crore in 2013-14 , ₹4619 crore in 2014-15 and ₹52920 crore in 2015-16(RE).
3. Includes internal resources of Railways, Communications and non-departmental commercial undertakings for the plan.
4. Includes market borrowings of State Government public enterprises.
5. Excludes the notional receipts on account of repayments of loans by non-departmental commercial undertakings due to their conversion into equity capital. It also excludes notional transactions in respect of International Monetary Fund and Contingency Fund transactions.
6. ₹538 crore for loans from IMF Trust Fund are included in 1980-81 under external loans and an amount of ₹572 crores for revolving fund is included in External loans for 1990-91.

Table 2.2. Total Expenditure of the Central Government

(₹ crore)

	Final outlays			Transfer payments to the rest of the economy			Financial investments & loans to the rest of the economy (gross)	Total expenditure (4+7+8)
	Governmen consumption expenditure	Gross capital formation	Total (2+3)	Current	Capital	Total (5+6)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
First Plan (1951-52 to 1955-56)	1241	612	1854	809	123	932	966	3751
Second Plan (1956-57 to 1960-61)	1962	1445	3406	1567	249	1816	2600	7823
Third Plan (1960-61 to 1965-66)	4256	2445	6701	2983	501	3484	5076	15261
Annual Plan (1966-67 to 1968-69)	3878	1243	5121	3214	407	3621	4740	13481
Fourth Plan (1969-70 to 1973-74)	9775	2969	12745	8036	1454	9490	10760	32994
Fifth Plan (1974-75 to 1978-79)	17576	5951	23527	19773	3230	23003	21145	67674
Sixth Plan (1980-81 to 1984-85)	35885	14823	50708	50604	9910	60514	47034	158256
Seventh Plan (1985-86 to 1989-90)	81974	31616	113590	134246	26292	160538	89764	363892
Eighth Plan (1992-93 to 1996-97)	179676	73599	253275	387746	66433	454179	127752	835206
Ninth Plan (1997-98 to 2001-02)	331143	100568	431711	795621	106925	902546	150754	1485011
Tenth Plan (2002-03 to 2006-07)	516165	144027	660192	1390293	185704	1575997	123921	2360110
Eleventh Plan (2007-08 to 2011-12)	1002126	284215	1286341	2946106	529055	3475161	212323	4973825
1950-51	235	80	315	111	6	117	72	504
1955-56	269	153	422	203	49	251	301	975
1960-61	433	307	740	427	69	495	570	1806
1965-66a	1109	520	1630	754	132	886	1425a	3940a
1970-71	1669	519	2189	1239	193	1432	1956	5577
1975-76	3449	1204	4654	3018	536	3553	3830	12037
1980-81	5174	1908	7082	6912	1302	8214	7200	22495
1985-86	11210	4558	15768	18347	3825	22173	15172	53112
1990-91	22359	8602	30961	45134	7117	52251	21760	104973
1993-94b	31815	12765	44580	66750	11811	78560	22648	145788
1995-96	41881	16685	58566	85304	15263	100566	26101	185233
1997-98c	53090	18955	72046	111577	17360	128937	23884	224866

Contd....

Table 2.2. Total Expenditure of the Central Government *(Contd....)*

(₹ crore)

	Final outlays			Transfer payments to the rest of the economy			Financial investments & loans to the rest of the economy (gross)	Total expenditure (4+7+8)
	Governmen consumption expenditure	Gross capital formation	Total (2+3)	Current	Capital	Total (5+6)		
2000-01	71977	22258	94235	183696	22404	206100	27929	328265
2005-06	116305	34450	150755	297267	41681	338948	11380	501083
2010-11	230262	65059	295321	656300	150312	806612	62795	1164728
2011-12	255498	65041	320539	756885	141353	898238	44439	1263216
2012-13	271119	74747	345866	851208	130771	981979	46902	1374747
2013-14	306898	74940	381838	940445	144129	1084574	44552	1510964
2014-15	335428	81392	416819	1022900	146053	1168953	46331	1632103
2015-16	361284	76466	437750	1126844	83080	1209924	127382	1775056
2016-17 (RE)	442125	114308	556433	1180748	140416	1321165	74091	1951689
2017-18 (BE)	437209	139623	576832	1206018	212969	1418986	65067	2060885

Source : Ministry of Finance, Economic & Functional Classification of the Central Government Budget-various issues

Notes:

RE : Revised Estimates BE : Budget Estimates

a : For 1965-66, includes ₹ 53 crore as additional payments to IMF, IBRD, IDA & ADB following the change in the par value of the rupee. This is a nominal outlay as it is met by the issue of non-negotiable Government of India securities.

b : From 1993-94 onwards, Delhi is not included.

c : From 1997-98 onwards loans to States/UTs are exclusive of loans against States/UTs shares in small saving collections.

Tab 2.3 Financial Performance of Indian Railways

(₹ crore)

	Particulars	1980-81	1990-91	2001-02	2013-14	2014-15	2015-16	2016-17	2017-18
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Gross Traffic Receipts	2624	12096	37837	139558	156711	164334	165292	178725
	(i) Passenger Coaching	827	3147	11197	36532	42190	44283	46280	48643
	(ii) Other Coaching	116	336	872	3679	3998	4371	4312	4314
	(iii) Goods	1618	8408	24845	93906	105791	109208	104339	117055
	(iv) Other Earnings	82	242	944	5721	5093	5929	10368	8688
	(v) Suspense Account	-19	-37	-21	-280	-361	543	-7	24
2	Working Expenses	2537	11154	36293	130321	142996	147836	159030	175834
	(i) Ordinary Working Expenses	2233	8234	28703	97571	105996	107736	118830	128497
	(ii) Appropriation to depreciation reserve fund	220	1950	2000	7900	7775	5600	5200	1540
	(iii) Appropriation to Pension Fund	84	970	5590	24850	29225	34500	35000	45798
3	Net Traffic Receipts (1-2)	87	942	1544	9237	13715	16498	6263	2891
4	Net Miscellaneous Receipts	40	171	793	2512	3124	2731	-1350	-1225
5	Net Revenue (3+4)	127	1113	2337	11749	16838	19228	4913	1666
6	Dividend								
	(i) Payable to general revenues	325	938	2337	8009	9174	8723	***	***
	(ii) Payment of deferred dividend					0	0	0	0
	(iii) Deferred dividend	0	0	1000		0	0	0	0
	(iv) Net dividend payable	325	938	1337	8009	9174	8723	0	0
7	Surplus (+) or Deficit(-)	-198	175	1000	3740	7665	10506	4913	1666
8	(i) Capital at charge	6096	16126	37757	170168	197992	224685	249008	271276
	(ii) Investment from capital fund	0	0	10390	38676	44125	50450	53450	53450
	(iii) Total 8(i)+8(ii)	6096	16126	48147	208844	242117	275135	302458	324726
9	Item 5 as % of Item 8(iii)	2.1	6.9	4.9	5.6	7	7	2	1
10	item 7 as % of item 8(iii)	-3.2	1.1	2.1	1.8	3	4	2	1

Source : Ministry of Railways

Notes : *** Dividend Payment has been done away with as per Budget merger conditions and hence no dividend payment from 2016-17.

Table 2.4 Financial Performance of Department of Posts

(₹ crore)

	1980-81	1990-91	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Gross Receipt	278	840	3298	9367	10730	11636	12940	11511	12833
2. Net Working Expenses	346	1033	4848	14792	16204	17895	18947	23481	25249
3. Net Receipts (1-2)	-68	-193	-1550	-5425	-5474	-6259	-6007	-11970	-12416
4. Dividend to general revenues	4	0	0	0	0	0	0	0	0
5. Surplus(+)/deficit(-) (3-4)	-72	-193	-1550	-5425	-5474	-6259	-6007	-11970	-12416

Source: Department of Posts, Ministry of Communications

Table 2.5. Receipts and Expenditure of the Central Government

(₹ crore)

		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (BE)	2018-19* (RE)	2018-19 (PA)
1	Revenue Receipts (a+b)	788471	751437	879232	1014724	1101473	1195025	1374203	1435233	1725738	1729682	1563170
(a)	Tax Revenue (net of States' share)	569869	629765	741877	815854	903615	943765	1101372	1242488	1480649	1484406	1316951
(b)	Non-tax Revenue	218602	121672	137355	198870	197858	251260	272831	192745	245089	245276	246219
2	Revenue Expenditure	1040723	1145785	1243514	1371772	1466992	1537761	1690584	1878835	2141772	2140612	2008463
	of which:											
(a)	Interest Payments	234022	273150	313170	374254	402444	441659	480714	528952	575795	587570	582675
(b)	Major Subsidies	164516	211319	247493	244717	249016	241833	204025	191183	264336	266206	197066
(c)	Defence Expenditure	92061	103011	111277	124374	136807	145937	165410	186129	188723	191431	195935
3	Revenue Deficit (2-1)	252252	394348	364282	357048	365519	342736	316381	443602	416034	410930	445293
4	Capital Receipts	408857	552928	531140	544723	562201	595758	600991	706742	716475	727553	748252
	of which:											
(a)	Recovery of loans	12420	18850	15060	12497	13738	20835	17630	15633	12199	13155	17840
(b)	Other receipt (mainly PSU disinvestment)	22846	18088	25890	29368	37737	42132	47743	100045	80000	80000	85045
(c)	Borrowings and other liabilities $	373591	515991	490190	502858	510725	532791	535618	591064	624276	634398	645367
5	Capital expenditure	156605	158580	166858	187675	196681	253022	284610	263140	300441	316623	302959
6	Non-Debt Receipts [1+4(a)+4(b)]	823737	788375	920182	1056589	1152948	1257992	1439576	1550911	1817937	1822837	1666055
7	Total Expenditure [2+5=7(a)+7(b)]	1197328	1304365	1410372	1559447	1663673	1790783	1975194	2141975	2442213	2457235	2311422
	of which:											
(a)	Plan Expenditure	379029	412357	413625	453327	462644	471083	568599	n.a	n.a	n.a	n.a
(b)	Non-plan Expenditure	818299	891990	996747	1106120	1201029	1319700	1410669	n.a	n.a	n.a	n.a
8	Fiscal Deficit [7-1-4(a)-4(b)]	373591	515990	490190	502858	510725	532791	535618	591064	624276	634398	645361
9	Primary Deficit [8-2(a)]	139569	242840	177020	128604	108281	91132	54904	62112	48481	46828	62692

Source: Union Budget documents and Controller General of Accounts

Notes:

BE:Budget Estimates RE: Revised Estimates PA: Provisional Actuals * As per Interim Budget 2019-20

$: Does not include receipts in respect of Market Stablization Scheme, which will remain in the cash balance of the Central Government and will not be used for expenditure

Table 2.6. Receipts and Expenditure of the Central Government as a percentage of GDP

(As per cent to GDP)

		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (BE)	2018-19* (RE)	2018-19 (PA)
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Revenue Receipts (a+b)	10.1	8.6	8.8	9.0	8.9	8.7	9.0	8.4	9.2	9.2	8.2
(a)	Tax Revenue (net of States' share)	7.3	7.2	7.5	7.3	7.3	6.9	7.2	7.3	7.9	7.9	6.9
(b)	Non-tax Revenue	2.8	1.4	1.4	1.8	1.6	1.8	1.8	1.1	1.3	1.3	1.3
2	Revenue Expenditure	13.4	13.1	12.5	12.2	11.8	11.2	11.1	11.0	11.4	11.4	10.6
	of which:											
(a)	Interest Payments	3.0	3.1	3.1	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.1
(b)	Major Subsidies	2.1	2.4	2.5	2.2	2.0	1.8	1.3	1.1	1.4	1.4	1.0
(c)	Defence Expenditure	1.2	1.2	1.1	1.1	2.1	1.1	1.1	1.1	1.0	1.0	1.0
3	Revenue Deficit (2-1)	3.2	4.5	3.7	3.2	2.9	2.5	2.1	2.6	2.2	2.2	2.3
4	Capital Receipts	5.3	6.3	5.3	4.8	4.5	4.4	3.9	4.1	3.8	3.9	3.9
	of which:											
(a)	Recovery of loans	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1
(b)	Other receipt (mainly PSU disinvestment)	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.6	0.4	0.4	0.4
(c)	Borrowings and other liabilities $	4.8	5.9	4.9	4.5	4.1	3.9	3.5	3.5	3.3	3.4	3.4
5	Capital expenditure	2.0	1.8	1.7	1.7	1.6	1.8	1.9	1.5	1.6	1.7	1.6
6	Non-Debt Receipts [1+4(a)+4(b)]	10.6	9.0	9.3	9.4	9.3	9.2	9.4	9.1	9.7	9.7	8.8
7	Total Expenditure [2+5=7(a)+7(b)]	15.4	14.9	14.2	13.9	13.4	13.1	12.9	12.5	13.0	13.0	12.2
	of which:											
(a)	Plan Expenditure	5.9	4.7	4.2	4.0	3.7	3.4	3.7	0	0	0	0
(b)	Non-plan Expenditure	10.5	10.2	10.0	9.8	9.7	9.6	9.2	0	0	0	0
8	Fiscal Deficit [7-1-4(a)-4(b)]	4.8	5.9	4.9	4.5	4.1	3.9	3.5	3.5	3.3	3.4	3.4
9	Primary Deficit [8-2(a)]	1.8	2.8	1.8	1.1	0.9	0.7	0.4	0.4	0.3	0.2	0.3

Source: Union Budget documents and Controller General of Accounts

Notes:

BE:Budget Estimates RE: Revised Estimates PA: Provisional Actuals * As per Interim Budget 2019-20

$: Does not include receipts in respect of Market Stablization Scheme, which will remain in the cash balance of the Central Government and will not be used for expenditure

Table 2.7. Outstanding Liabilities of the Central Government

(₹ crore)

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (RE)	2018-19 (BE)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1. Internal liabilities#	3395877	3781135	4347164	4893303	5484848	6045007	6691709	7207802	7989545	8703657
(a) Internal debt	2328339	2667115	3230622	3764566	4240767	4738291	5304835	5741709	6424917	6996220
i) Market borrowings	1746619	2072033	2516953	2984309	3441641	3891734	4298784	4649487	5062881	5459131
ii) Others	581720	595082	713669	780257	799126	846557	1006051	1092222	1362037	1537089
(b) Other Internal liabilities	1067538	1114020	1116542	1128737	1244081	1306716	1386874	1466093	1564628	1707437
2. External debt(outstanding)*	134083	157639	170088	177289	184581	197514	210262	228258	250090	261516
3. Total outstanding liabilities (1+2)	3529960	3938774	4517252	5070592	5669429	6242521	6901971	7436060	8239635	8965173
4. Amount due from Pakistan on account of share of pre-partition debt	300	300	300	300	300	300	300	300	300	300
5. Net liabilities (3-4)	3529660	3938474	4516952	5070292	5669129	6242221	6901671	7435760	8239335	8964873
Memorandum items										
(a) External debt@	249306	278877	322897	332004	374483	366191	406586	408069	445289	456715
(b) Total outstanding liabilities(adjusted)	3645183	4060012	4670061	5225307	5859331	641198	7098295	7615871	8434834	9160372
(c) Internal liabilities (Non-RBI) ##	3087360	3464858	3904022	4396810	4984590	5540570	6139580	6651613	7286885	7925128
(d) Outstanding liabilities (Non-RBI) ##	3336666	3743735	4226919	4728814	5359073	5906761	6546166	7059682	7732174	8381843
(e) Contingent liabilities of Central Government	137460	151292	190519	233769	249503	294700	343762	366189	380173	n.a.
(f) Total assets	1607544	1794504	1927143	2080649	2253627	2464424	2773756	3069862	3381121	3736840
(As per cent of GDP)										
1. Internal liabilities#	52.4	48.6	49.8	49.2	48.8	48.6	48.9	46.9	47.6	46.5
a) Internal debt	35.9	34.3	37.0	37.9	37.8	38.1	38.8	37.4	38.3	37.4
i) Market borrowings	27.0	26.6	28.8	30.0	30.6	31.3	31.4	30.3	30.2	29.2
ii) Others	9.0	7.6	8.2	7.8	7.1	6.8	7.4	7.1	8.1	8.2
b) Other Internal liabilities	16.5	14.3	12.8	11.4	11.1	10.5	10.1	9.5	9.3	9.1
2. External debt(outstanding)*	2.1	2.0	1.9	1.8	1.6	1.6	1.5	1.5	1.5	1.4
3. Total outstanding liabilities (1+2)	54.5	50.6	51.7	51.0	50.5	50.2	50.4	48.4	49.1	47.8

Source: Union Budget documents and CAA&A

Notes:

* : External debt figures represent borrowings by Central Government from external sources and are based upon historical rates of exchange

@ : The external debt figures at current exchange rates are taken from Controller of Aid, Account and Audit Division, Ministry of Finance.

: Internal debt includes net borrowing of , ₹ 2,737 crore for 2009-10

: This includes marketable dated securties held by the RBI

RE: Revised Estimates BE: Budget Estimates

Table 2.8. Total Expenditure and Capital Formation by the Central Government and its Financing (As per economic and functional classification of the Central Government budget)

(₹ crore)

		2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17 (RE)	2017-18 (BE)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
I.	Total expenditure	992440	1164727	1263216	1374747	1510964	1632103	1775056	1951689	2060885
II.	Gross capital formation out of budgetary resources of Central Government	184501	256368	234969	230792	242877	261915	197990	290347	381174
	(i) Gross capital formation by the Central Government	58999	65059	65041	74747	74940	81392	76466	114308	139623
	(ii) Financial assistance for capital formation in the rest of the economy	125502	191309	169928	156045	167937	180523	121524	176039	241551
III.	Gross saving of the Central Government	-232452	-103270	-267428	-241090	-238268	-259468	-290204	-204778	-129106
IV.	Gap(II-III)	416953	359638	502397	471882	481145	521383	488194	495125	510280
	Financed by									
a.	Draft on other sectors of domestic economy	402774	333409	486987	462370	470235	506850	473565	477370	491431
	(i) Domestic capital receipts	404160	326979	502977	513382	489406	429098	460395	437143	478587
	(ii) Budgetary deficit/draw down of cash balance	-1386	6430	-15990	-51012	-19171	77752	13170	40227	12844
b.	Draft on foreign savings	14179	26229	15410	9512	10910	14533	14629	17755	18849
	(percentage increase over previous year)									
II.	Gross capital formation out of budgetary resources of Central Government	34.7	39.0	-8.3	-1.8	5.2	7.8	-24.4	46.6	31.3
	Memorandum items									
	(₹ crore)									
1	Total expenditure	992440	1164727	1263216	1374747	1510964	1632103	1775056	1951689	2060885
2	Gross capital formation out of budgetary resources of Central Government	184501	256368	234969	230792	242877	261915	197990	290347	381174
3	Consumption expenditure	210625	230262	255498	271119	306898	335428	361284	442125	437209
4	Current transfers	580898	656300	756885	851208	940445	1022900	1126844	1180748	1206018
5	Others	16417	21798	15864	21628	20744	11860	88938	38468	36485
	(Growth rate in per cent)									
1	Total expenditure	14.8	17.4	8.5	8.8	9.9	8.0	8.8	10.0	5.6
2	Gross capital formation out of budgetary resources of Central Government	34.7	39.0	-8.3	-1.8	5.2	7.8	-24.4	46.6	31.3
3	Consumption expenditure	20.8	9.3	11.0	6.1	13.2	9.3	7.7	22.4	-1.1
4	Current transfers	6.9	13.0	15.3	12.5	10.5	8.8	10.2	4.8	2.1
5	Others	65.8	32.8	-27.2	36.3	-4.1	-42.8	649.9	-56.7	-5.2
	(Point contribution in per cent)									
1	Total expenditure	14.8	17.4	8.5	8.8	9.9	8.0	8.8	10.0	5.6
2	Gross capital formation out of budgetary resources of Central Government	5.5	7.2	-1.8	-0.3	0.9	1.3	-3.9	5.2	4.7
3	Consumption expenditure	4.2	2.0	2.2	1.2	2.6	1.9	1.6	4.6	-0.3
4	Current transfers	4.3	7.6	8.6	7.5	6.5	5.5	6.4	3.0	1.3
5	Others	0.8	0.5	-0.5	0.5	-0.1	-0.6	4.7	-2.8	-0.1

Source: Ministry of Finance, An Economic and Functional classification of the Central Government Budget-various issues

Notes:

RE: Revised Estimates BE: Budget Estimates

1. Gross capital formation in this table includes loans given for capital formation on a gross basis. Consequently domestic capital receipts include loan repayments to the Central Government.
2. Consumption expenditure is the expenditure on wages and salaries and commodities and services for current use.
3. Interest payments, subsidies, pension etc. are treated as current transfers.
4. Gross capital formation & total expenditure are exclusive of loans to States'/UTs' against States'/UTs' share in the small savings collection.
5. The figures of total expenditure of the Central Government as per economic and functional classification do not tally with figures given in the Budget documents. In the economic and functional classification, interest transfered to DCUs, loans written off etc, are excluded from the current account. In the capital account, expenditure financed out of Railways, Posts &Telecommunications' own funds etc, are included.
6. Point contribution refers to contribution of individual component to total growth.

Table 2.9. Receipts and Disbursements of States and consolidated General Government

(₹ crore)

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE	2018-19 BE
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
State Governments									
Total Receipts (A+B)	1173575	1367917	1557338	1688047	2008065	2390845	2721784	3051897	3519646
A. Revenue Receipts (1+2)	935347	1098531	1252024	1369187	1591583	1832885	2046401	2457718	2812994
1. Tax Receipts	680198	812987	946081	1030692	1117113	1353336	1520773	1743769	2013453
of which									
States' Own Tax Revenue	460709	557396	654551	712419	779278	847145	912912	1050350	1198796
2. Non-tax Receipts	255149	285544	305943	338495	474471	479549	525628	713949	799540
of which									
Interest Receipts	15625	18582	24118	27215	24135	18216	24560	25012	27773
B. Capital Receipts	238228	269385	305314	318860	416482	557960	675383	594179	706652
of which									
Recovery of Loans and Advances	4995	17157	7265	6896	18916	7180	15835	56174	58518
II. Total Disbursements (a+b+c)	1158730	1351612	1534255	1706145	2025783	2360229	2708215	3177407	3559726
a) Revenue	932297	1074571	1231702	1379750	1637288	1838267	2086892	2518797	2783775
b) Capital	207617	238150	272576	302402	358856	431743	503458	619610	738304
c. Loans and Advances	18816	38891	29977	23992	29638	90219	117866	39000	37647
III. Revenue Deficit	-3051	-23960	-20322	10563	45704	5382	40491	61079	-29219
IV. Gross Fiscal Deficit	161461	168353	195470	247852	327191	420670	534332	514316	486513
General Government									
I. Total Receipts (A + B)	2153561	2454062	2769029	3001372	3189737	3778049	4288432	4771859	5278035
A. Revenue Receipts (1+2)	1578820	1692679	1971619	2211475	2387693	2748374	3132201	3592382	4118541
1. Tax Receipts	1250067	1442752	1687959	1846545	2020728	2297101	2622145	3013223	3494102
2. Non-Tax Receipts	328753	249927	283660	364930	366965	451272	510056	579159	624438
of which									
Interest Receipts	25078	28870	35543	40162	39622	35779	33220	31610	36835
B. Capital Receipts	574742	761383	797410	789897	802044	1029675	1156231	1179477	1159494
of which									
a) Disinvestment proceeds	24087	18753	25991	29728	38883	43266	48122	100303	81193
b) Recovery of Loans & Advances	8206	25370	12929	9385	22072	16561	20942	64880	61650
II. Total Disbursements (a+b+c)	2145145	2421768	2694934	3000299	3285210	3760611	4265969	4857990	5361181
a) Revenue	1828020	2063068	2315578	2579086	2798917	3096491	3489073	4092338	4505357
b) Capital	268328	291818	328324	377545	426949	539375	616988	670218	765487
c) Loans and advances	48797	66883	51031	43668	59345	124745	159907	95434	90338
III. Revenue Deficit	249200	370388	343959	367611	411224	348117	356872	499956	386816
IV. Gross Fiscal Deficit	534032	684966	684395	749711	836563	952410	1064704	1100425	1099797

Source: Reserve Bank of India

Notes: RE: Revised Estimates BE: Budget Estimates

(1) Negative (-) sign indicates surplus in deficit indicators.

(2) The ratios to GDP at current market prices are based on CSO's National Accounts 2004-05 series and data from 2011-12 onwards are based on new base 2011-12.

(3) Capital Receipts include public account on a net basis.

(4) Capital disbursements are exclusive of public accounts.

(5) Data pertains to budgets of 29 States.

Table 2.10. Receipts and Disbursements of States and consolidated General Government

(As per cent of GDP)

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE	2018-19 BE
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
State Governments									
Total Receipts (A+B)	15.1	15.7	15.7	15.0	16.1	17.4	17.7	17.9	18.5
A. Revenue Receipts (1+2)	12.0	12.6	12.6	12.2	12.8	13.3	13.3	14.4	14.8
1.Tax Receipts	8.7	9.3	9.5	9.2	9.0	9.8	9.9	10.2	10.6
of which									
States' Own Tax Revenue	5.9	6.4	6.6	6.3	6.3	6.2	5.9	6.1	6.3
2. Non-tax Receipts	3.3	3.3	3.1	3.0	3.8	3.5	3.4	4.2	4.2
of which									
Interest Receipts	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1
B. Capital Receipts	3.1	3.1	3.1	2.8	3.3	4.1	4.4	3.5	3.7
of which									
Recovery of Loans and Advances	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.3	0.3
II. Total Disbursements (a+b+c)	14.9	15.5	15.4	15.2	16.2	17.1	17.6	18.6	18.7
a) Revenue	12.0	12.3	12.4	12.3	13.1	13.3	13.6	14.7	14.6
b) Capital	2.7	2.7	2.7	2.7	2.9	3.1	3.3	3.6	3.9
c. Loans and Advances	0.2	0.4	0.3	0.2	0.2	0.7	0.8	0.2	0.2
III. Revenue Deficit	0.0	-0.3	-0.2	0.1	0.4	0.0	0.3	0.4	-0.2
IV. Gross Fiscal Deficit	2.1	1.9	2.0	2.2	2.6	3.1	3.5	3.0	2.6
General Government									
I. Total Receipts (A + B)	27.7	28.1	27.8	26.7	25.6	27.4	27.9	27.9	27.7
A. Revenue Receipts (1+2)	20.3	19.4	19.8	19.7	19.2	20.0	20.4	21.0	21.6
1. Tax Receipts	16.1	16.5	17.0	16.4	16.2	16.7	17.1	17.6	18.3
2. Non-Tax Receipts	4.2	2.9	2.9	3.2	2.9	3.3	3.3	3.4	3.3
of which									
Interest Receipts	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.2
B. Capital Receipts	7.4	8.7	8.0	7.0	6.4	7.5	7.5	6.9	6.1
of which									
a) Disinvestment Proceeds	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.6	0.4
b) Recovery of Loans & Advances	0.1	0.3	0.1	0.1	0.2	0.1	0.1	0.4	0.3
II. Total Disbursements (a+b+c)	27.6	27.7	27.1	26.7	26.3	27.3	27.8	28.4	28.1
a) Revenue	23.5	23.6	23.3	23.0	22.4	22.5	22.7	23.9	23.6
b) Capital	3.4	3.3	3.3	3.4	3.4	3.9	4.0	3.9	4.0
c) Loans and advances	0.6	0.8	0.5	0.4	0.5	0.9	1.0	0.6	0.5
III. Revenue Deficit	3.2	4.2	3.5	3.3	3.3	2.5	2.3	2.9	2.0
IV. Gross Fiscal Deficit	6.9	7.8	6.9	6.7	6.7	6.9	6.9	6.4	5.8

Source: Reserve Bank of India

Notes: RE: Revised Estimates BE: Budget Estimates

(1) Negative (-) sign indicates surplus in deficit indicators.

(2) The ratios to GDP at current market prices are based on CSO's National Accounts 2004-05 series and data from 2011-12 onwards are based on new base 2011-12.

(3) Capital Receipts include public account on a net basis.

(4) Capital disbursements are exclusive of public accounts.

(5) Data pertains to budgets of 29 States.

Table 3.1. Employment in Organised Sectors—Public and Private (as on March 31, 2012)

(Lakh persons)

	2006	2007	2008	2009	2010	2011	2012
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Public Sector							
By branch							
Central Government	28.6	28.0	27.4	26.6	25.5	24.6	25.2
State Governments	73.0	72.1	71.7	72.4	73.5	72.2	71.8
Quasi-Governments	59.1	58.6	58.0	58.4	58.7	58.1	58.0
Local bodies	21.2	21.3	19.7	20.7	20.9	20.5	21.1
Total	**181.9**	**180.0**	**176.7**	**178.0**	**178.6**	**175.5**	**176.1**
By industry							
Agriculture, hunting etc.	4.7	4.8	4.7	4.8	4.8	4.8	4.7
Mining and quarrying	11.5	11.4	11.2	11.1	11.0	10.9	10.8
Manufacturing	10.9	10.9	10.4	10.6	10.7	10.2	10.7
Electricity, gas and water	8.5	8.5	8.0	8.4	8.4	8.3	8.2
Construction	8.9	8.7	8.5	8.5	8.6	8.5	8.3
Wholesale and retail trade	1.8	1.8	1.7	1.7	1.7	1.7	1.7
Transport, storage & communications	26.8	26.4	26.3	26.0	25.3	23.8	24.9
Finance, insurance, real estate etc.	13.9	13.7	13.5	13.6	14.1	13.6	13.6
Community, social & personal services	91.8	90.9	88.5	90.1	90.5	91.0	90.4
Total	**178.7**	**176.9**	**172.8**	**174.8**	**175.1**	**172.7**	**173.3**
2. Private Sector							
Agriculture, hunting etc.	10.3	9.5	9.9	9.0	9.2	9.2	9.2
Mining and quarrying	1.0	1.0	1.1	1.2	1.6	1.3	1.4
Manufacturing	45.5	47.5	49.7	52.0	51.8	54.0	55.3
Electricity, gas and water	0.4	0.5	0.5	0.6	0.6	0.7	0.6
Construction	0.6	0.7	0.7	0.8	0.9	1.0	1.2
Wholesale and retail trade	3.9	4.1	2.7	4.7	5.1	5.5	6.0
Transport, storage & communications	0.9	1.0	1.0	1.3	1.7	1.9	2.1
Finance, insurance, real estate etc.	6.5	8.8	11.0	13.1	15.5	17.2	19.1
Community, social & personal services	18.8	19.5	21.7	20.2	21.4	23.5	24.5
Total	**87.7**	**92.4**	**98.4**	**102.9**	**107.9**	**114.2**	**119.4**
3. Public Sector							
Male	151.9	149.8	146.3	147.0	146.7	143.8	144.6
Female	30.0	30.2	30.4	30.9	32.0	31.7	31.5
Total	181.9	180.0	176.7	178.0	178.6	175.5	176.1
4. Private Sector							
Male	66.9	69.8	74.0	78.9	81.8	86.7	90.7
Female	21.2	22.9	24.7	25.0	26.6	27.8	29.0
Total	88.1	92.7	98.8	103.8	108.5	114.5	119.7
5. Public and Private Sector							
Male	218.7	219.6	220.4	225.9	228.5	230.5	235.3
Female	51.2	53.1	55.1	55.8	58.6	59.5	60.5
Total	**269.9**	**272.8**	**275.5**	**281.7**	**287.1**	**290.0**	**295.8**

Source: Directorate General of Employment, Ministry of Labour & Employment

Notes:

1. Excludes Sikkim, Arunachal Pradesh, Dadra & Nagar Haveli and Lakshadweep as these are not yet covered under the programme.
2. Industry-wise break-up may not tally with public sector, private sector and grand total due to non-inclusion of data as per NIC 1998, in respect of J&K , Manipur and Daman & Diu in 2012.

Table 3.2. Performance of Central Public Sector Enterprises

(₹ crore)

Particulars	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
(1)	(2)	(3)	(4)	(5)	(6)	(9)	(7)	(8)	(9)	(10)
No. of Operating CPSEs	213	217	220	225	230	234	236	244	257	257
Capital Employed	792232	908007	1153833	1337821	1508177	1710453	1833274	2037318	2138069	2273969
Total Gross Turnover	1271536	1244805	1498018	1822049	1945814	2066057	1995176	1834635	1955675	2155948
Total Net Income/Revenue	1309639	1272219	1470569	1804614	1931186	2056336	1965638	1764113	1821971	2033545
Net Worth	583144	652993	709498	776162	850921	926663	962518	1079953	1066885	1108595
Profit before dep., Impairment, Int., Exc. Items, & Taxes (PB-DIEET)	186836	211184	216602	250654	255936	289361	270400	275457	299028	317512
Depreciation, Depletion & Amortization	44441	51168	57118	63591	66109	69817	77500	67764	73739	81864
(DRE)/Impairment	7661	9565	187	154	436	851	554	347	277	(22)
Profit before Interest, Exc. Items, Ex. Ord. Items & Taxes (PBIEET)	142395	160017	159298	186910	189390	218693	192346	207346	225012	235670
Interest	39300	36060	26521	36152	38184	51638	44942	51449	47229	53302
Profit before Exp. Items Ex. Or.Items & Taxes (PBEET)	103095	123957	132777	150758	151207	167055	147412	155897	177784	182368
Exceptional Items	-	-	(1479)	(3957)	(13525)	(14618)	(1335)	7766	(889)	(4357)
Profit before Ex. Or. Items & Tax. (PBET)	115011	123942	134256	146801	164732	181673	148747	148131	178673	186725
Extra-Ordinary Items	(2684)	(8280)	(2695)	(428)	(1276)	(1550)	(1394)	(9553)	(34)	(934)
Profit Before Tax (PBT)	117695	132222	136951	147230	166008	183223	150141	157684	178707	187659
Tax Provisions	33828	40018	44871	48985	51025	55178	47230	43653	53183	59661
Net Profit/Loss after Tax from Continuing Operations	83867	92203	92079	98245	114982	128045	102911	114031	125523	127997
Net Profit/Loss after Tax from Discontinuing Operations	-	-	49	1	(1)	250	(45)	208	(25)	377
Overall Net Profit/Loss	83867	92203	92129	98246	114981	128295	102866	114239	125498	128374
Profit of Profit-making CPSEs	98488	108434	113944	125929	143543	149636	130364	144991	152978	159635
Loss of Loss incurring CPSEs	(14621)	(16231)	(21816)	(27683)	(28562)	(21341)	(27498)	(30756)	(27480)	(31261)
Profit - making CPSEs (No.)	158	157	158	161	151	164	159	164	175	184
Loss - making CPSEs (No.)	55	60	62	64	78	70	76	79	81	71
CPSEs making no Profit/Loss (No.)	0	0	0	0	1	0	1	1	1	2
Dividend	25501	33223	35700	42627	49703	65115	56527	68583	78129	76578
Dividend Tax	4132	5151	5372	5877	6704	8709	8642	10598	14419	12935

Source: Department of Public Enterprises

Table 4.1. Scheduled Commercial Banks : Seasonal Flow of Funds

(₹ Crore)

	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19	
Items	**H1**	**H2**	**H1**	**H2**	**H1**	**H2**	**H1**	**H2**	**H1**	**H2**	**H1**	**H2 (P)**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**
Sources												
1. Increase in aggregate deposits	399921	555186	347996	479730	375101	418903	766357	664010	159886	508507	373806	772698
2. Increase in borrowings from RBI	20640	-615	43092	73497	-94166	168431	-198100	-12557	18720	233448	-94362	1072
3. Increase in other borrowings@	32942	-33569	-33371	38205	15126	57980	-4124	21468	-7400	56788	9318	3028
4. Increase in other demand and time liabilities	-2597	29294	2635	16235	-4457	51297	-45890	5564	23288	71866	-56323	40957
5. Residual (Net)	36709	-58102	-62017	-20456	19919	-142805	-12192	-61977	207411	-185447	245214	-34941
Total	487615	492194	298334	587210	311523	553807	506051	616507	401905	685162	477654	782813
Uses												
1. Increase in bank credit	341562	392075	123970	418354	149471	563723	245253	346598	141972	641987	356239	787521
2. Increase in investments	105416	101300	150982	128023	150061	-16378	231321	174133	294834	-7344	129533	-67635
3. Increase in cash in hand	2256	3123	3392	4093	5075	-991	4512	-590	20466	-21761	12441	2347
4. Increase in balances with RBI	38380	-4304	19989	36740	6916	7452	24964	96367	-55367	72280	-20559	60580
Total	**487615**	**492194**	**298334**	**587210**	**311523**	**553807**	**506051**	**616507**	**401905**	**685162**	**477654**	**782813**

Source: Reserve Bank of India

Notes :

H1 : April to September H2 : October to March

(P): Provisional.

@: Excludes borrowings from RBI, EXIM Bank and NABARD.

1. Data also reflect redemption of Resurgent India Bonds of ₹ 226.93 billion, since October 2003; and the redemption of India Millennium Deposits (IMDs) of ₹ 319.59 billion on December 29, 2005.
2. Residual (net) is the balance of Uses of Funds over Sources of Funds and includes borrowings from RBI, EXIM Bank and NABARD.
3. The data relate to last reporting Fridays.
4. Figures may not add up to totals due to rounding off.

Table 4.2. Scheduled Commercial Banks: Variation in Selected Items

(₹ Crore)

Items	2013-14 Mar 22 to Mar 21	2014-15 Mar 21 to Mar 20	2015-16 Mar 20 to Mar 18	2016-17 Mar 18 to Mar 31	2017-18 Mar 31 to Mar 30	2018-19 Mar 30 to Mar 29	Outstanding as on June 7, 2019 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.Demand deposits	51622	80108	94967	392443	88843	141005	1292801
2.Time deposits* @	903484	747617	699038	1037923	579550	1006717	11247440
3.Aggregate deposits @	955106	827725	794005	1430366	668393	1147722	12540241
4 Borrowings from RBI	20026	116589	74265	-210657	252168	-93290	26544
5. Cash in hand & balances with RBI	39456	64215	18452	125252	15618	54833	586919
6. Investments in Govt. securities	207541	278557	134182	405815	287658	61595	3495208
7. Bank credit	733637	542325	713194	591851	783959	1146298	9651922

Source: Reserve Bank of India

Notes:

(P): Provisional

* : Revised in line with the new accounting standards and are consistent with the methodology suggested by the Working Group on Money Supply : Analytics and Methodology of Compilation (June 1998) from 1998-99 onwards.
The revision is in respect of pension and provident funds with commercial banks which are classified as other demand and time liabilities and includes those banks which have reported such changes so far.

@: Data also reflect redemption of Resurgent India Bonds of ₹226.93 billion, since October 2003; and the redemption of India Millennium Deposits (IMDs) of ₹319.59 billion on December 29, 2005.

Table 4.3. Number of Functioning Branches of Commercial Banks - Bank Group-wise

Branches as on End March

	2014	2015	2016	2017	2018	Rural	% of Rural Branches to Total
	Total	Total	Total	Total	Total		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Public Sector Banks	83201	88612	91638	94113	93137	28784	30.9
Regional Rural Banks	19292	20387	21254	21743	22082	15218	68.9
Private Sector Banks	20076	22333	27452	29799	31420	6557	20.9
Foreign Banks	322	329	332	301	299	10	3.3
Local Area Banks	89	104	115	76	87	11	12.6
Small Finance Banks	--	--	--	410	1733	354	20.4
Payments Banks	--	--	--	3	156	14	9.0
Total	**122980**	**131765**	**140791**	**146445**	**148914**	**50948**	**34.2**

Source: RBI, Master Office File (MOF) System

Notes:

1. Data include 'Administrative Offices'

2. Population groups are defined as follows: 'Rural' includes centres with population of less than 10,000, 'Semi-Urban' includes centres with population of 10,000 and above but less than of one lakh, 'Urban' includes centres with population of one lakh and above but less than of ten lakhs, and 'Metropolitan' includes centres with population of 10 lakhs and above. All population figures are as per census 2011.

3. 'Public Sector banks' comprises of State Bank of India (and its' erstwhile associates and Bhartiya Mahila Bank prior to April 1, 2017), IDBI bank and nationalized banks, excluding Regional Rural Banks.

4. MOF data are dynamic in nature. It is updated based on information as received from banks.

Table 4.4. Advances to Agriculture and Other Priority Sectors by Public Sector Banks

Sectors	Number of Accounts (in thousand)					Amount Outstanding (₹ crore)				
	March 2014	March 2015	March 2016	March 2017	March 2018	March 2014	March 2015	March 2016	March 2017	March 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.Agriculture	48336	51231	51363	52594	54846	702541	743577	902331	946850	961076
1 (a) Direct Finance [a]	47581	50535	na	na	na	525652	580164	na	na	na
1 (b) Indirect Finance [a]	755	696	na	na	na	176889	163413	na	na	na
2. Small Scale Industries [b]										
3.Micro & Small Enterprises	8358	8329	10592	11123	11026	593410	647855	733164	741958	755317
4. Setting up of Industrial Estates										
5. Small road & water transport Operators										
6. Retail Trade										
7. Small Business										
8. Professional &self employed persons										
9. Micro Credit										
10. Education	2555	2536	2435	2384	2293	55112	56997	59306	60010	59563
11.Consumption										
12. State sponsored Corpns/Organisations for on lending to Other Priority Sector										
13. State sponsored organisation for SC/ST purchase & supply of inputs & marketing of outputs										
14. Housing Loans	4009	4082	4187	4221	4152	235484	247887	273835	294149	298721
15. Funds provided to RRBs										
16. Advances to Self Help Groups										
17. Advances to Software Industries										
18.Advances to Food & Agro Processing Sector										
19. Investment in Venture Capital										
20. Total Priority Sector Advances [c]	64346	67151	69305	70806	72911	1602907	1707489	1981256	2043474	2199201
21. ANBC [d]						4110591	4584973	5056594	5329716	5350290
Percentage to ANBC										
1.Agriculture						17.09	16.22	17.84	17.77	17.96
1 (a) Direct Finance [a]						12.79	12.65	na	na	na
1 (b) Indirect Finance [a]						4.30	3.56	na	na	na

Contd....

Table 4.4. Advances to Agriculture and Other Priority Sectors by Public Sector Banks

Sectors	Number of Accounts (in thousand)					Amount Outstanding (₹ crore)				
	March 2014	March 2015	March 2016	March 2017	March 2018	March 2014	March 2015	March 2016	March 2017	March 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2. Small Scale Industries [b]										
3.Micro & Small Enterprises					14.44	14.13	14.50	13.92	14.12	
4. Setting up of Industrial Estates										
5. Small road & water transport Operators										
6. Retail Trade										
7. Small Business										
8. Professional &self employed persons										
9. Micro Credit										
10. Education						1.34	1.24	1.17	1.13	1.11
11.Consumption										
12. State sponsored corpns/Organisations										
for on lending to Other Priority Sector										
13. State sponsored organisation for SC/ST										
purchase &supply of inputs &marketing of outputs										
14. Housing Loans						5.73	5.41	5.42	5.52	5.58
15. Funds provided to RRBs										
16. Advances to Self Help Groups										
17. Advances to Software Industries										
18.Advances to Food & Agro Processing Sector										
19. Investment in Venture Capital										
20. Total Priority Sector Advances						38.99	37.24	39.18	38.34	41.10

Source: Reserve Bank of India
Notes:
na: not available
a: Excludes advances to plantations other than development finance
b: Includes small business
c: Total priority sector advances is the total of items 1 to 12 & 14 to 17 and half of item 13
d: ANBC stands for Adjusted Net Bank Credit

Table 4.5. State-wise Number of Reporting Bank-offices, Deposit and Bank Credit of SCBs and Percentage Share of Advances to Priority Sector in Total bank Credit of PSBs

States or UTs	Number of Reporting Bank Offices		Deposit (₹ Crore)		Credit (₹ Crore)		Percentage share of advances to priority sector in total bank credit of PSBs (P)	
	March 2018	December 2018	March 2018	December 2018	March 2018	December 2018	March 2018	December 2018
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Andaman & Nicobar Islands	67	68	4722	5117	1846	2072	39	na
Andhra Pradesh	6892	6896	276527	294976	310457	346736	56	na
Arunachal Pradesh	153	155	13317	13786	3322	3634	28	na
Assam	2326	2355	134643	135243	57307	62095	51	na
Bihar	6681	6798	317131	331934	101511	110131	63	na
Chandigarh	411	402	62287	66981	67384	76605	18	na
Chhattisgarh	2492	2529	133067	137255	83352	85196	42	na
Dadra & Nagar Haveli	60	60	3886	4091	1724	2149	73	na
Daman & Diu	47	45	4683	4917	1306	1438	65	na
Goa	678	668	66090	69371	17631	19349	44	na
Gujarat	7835	7906	643747	654308	482779	520939	43	na
Haryana	4808	4842	367362	400143	218336	245477	53	na
Himachal Pradesh	1532	1604	85753	93099	26479	28578	63	na
Jammu & Kashmir	1782	1772	104458	111651	44819	51323	39	na
Jharkhand	2947	2967	199475	212039	54639	57749	58	na
Karnataka	9933	10002	840424	890863	586740	627755	41	na
Kerala	6281	6421	440361	479447	281384	309649	54	na
Lakshadweep	13	13	998	1058	82	84	27	na
Madhya Pradesh	6511	6589	340117	359400	221512	242710	57	na
Maharashtra	12317	12454	2289301	2377728	2404766	2583258	30	na
Manipur	174	181	8972	8361	3998	4736	37	na
Meghalaya	343	340	21669	22558	5841	6103	32	na
Mizoram	189	190	8473	8458	3027	3279	49	na
Nagaland	160	162	10047	10267	3468	3835	31	na
NCT of Delhi	3549	3559	1145718	1211528	1069998	1183746	10	na
Odisha	4801	4818	271019	295003	100653	111599	52	na
Puducherry	239	239	16771	17272	10319	11369	61	na
Punjab	6436	6415	350459	377658	221388	230177	46	na
Rajasthan	7198	7237	336820	368366	254382	287761	67	na
Sikkim	137	140	8610	9354	2319	2759	47	na
Tamil Nadu	10710	10781	725810	765760	784172	835950	48	na
Telangana	5091	5086	420422	439662	445635	471779	26	na
Tripura	454	456	22178	23249	8981	9262	60	na
Uttar Pradesh	16913	17034	957832	998867	391892	419469	61	na
Uttarakhand	2041	2065	123440	133524	44669	49647	67	na
West Bengal	7932	7951	722699	748598	364454	366721	40	na
All India	**140133**	**141200**	**11479288**	**12081892**	**8682573**	**9375117**	**39**	**na**

Source: RBI, Quarterly Statistics on Deposits and Credit of Scheduled Commercial Banks (Basic Statistical Return (BSR)-7)

Notes:

P: Provisional na: not available

SCBs: Scheduled Commercial Banks

PSBs: Public Sector Banks

1. The number of reporting of branches / offices, which reported data in BSR-7 is shown.
2. Data are as per the latest geographical boundaries as updated in the MOF system.

Table 5.1. Index Numbers of Wholesale Prices

	Primary articles					Fuel & power	Manufactured products						All Commodities
	Total	Food articles		Non-Food articles	Minerals		Total	Food products	Textiles	Chemicals & chemical products	Basic metals, alloys & metal products	Machinery & machine tools	
		Total	Food grains										
Weight-Base: (2004-05=100)	**20.1**	**14.3**	**4.1**	**4.3**	**1.5**	**14.9**	**65.0**	**10.0**	**7.3**	**12.0**	**10.7**	**8.9**	**100.0**
Weight-Base: (2011-12=100)	**22.6**	**15.3**	**3.5**	**4.1**	**0.8**	**13.2**	**64.2**	**9.1**	**4.9**	**6.5**	**9.6**	**4.8**	**100.0**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**
Last month of (2004-05 = 100)													
2005-06	104	105	113	97	119	117	104	102	100	105	103	105	105.7
2006-07	118	119	126	107	135	119	110	107	101	110	116	112	112.8
2007-08	129	126	137	124	173	127	118	116	101	116	138	115	121.5
2008-09	136	136	152	125	168	123	120	123	103	116	130	118	123.5
2009-10	166	164	172	150	232	140	126	142	112	120	133	120	136.3
2010-11	188	179	176	191	267	158	136	145	132	129	148	123	149.5
2011-12	208	197	186	190	359	178	143	154	128	139	163	126	161.0
2012-13	223	214	216	208	352	192	149	166	133	146	165	129	170.1
2013-14	239	235	231	218	346	214	154	169	143	153	168	133	180.3
2014-15	239	249	236	203	243	188	154	170	140	151	162	135	176.1
2015-16	246	260	260	220	193	172	154	180	140	150	153	135	175.3
2016-17	259	269	270	231	247	204	159	192	143	152	161	135	185.3
Last month of (2011-12 = 100)													
2012-13	115	114	120	120	122	110	106	109	107	110	103	105	108.6
2013-14	121	123	127	118	115	119	111	116	114	116	105	108	114.3
2014-15	120	129	129	112	112	92	110	113	110	114	100	109	109.9
2015-16	123	133	141	117	116	77	109	117	109	111	89	109	107.7
2016-17	127	138	147	122	115	94	112	127	113	112	96	108	113.2
2017-18	128	137	141	120	138	98	116	128	114	116	110	110	116.3
2018-19 (P)	135	145	153	124	137	103	118	129	119	120	111	112	120.0
Average of months (2004-05 = 100)													
2005-06	104	105	107	97	115	114	102	101	99	104	102	104	104.5
2006-07	114	116	122	102	137	121	108	107	101	109	112	110	111.4

Contd....

Table 5.1. Index Numbers of Wholesale Prices

(Contd.....)

	Primary articles					Fuel & power	Manufactured products						All Commodities
	Total	Food articles		Non-Food articles	Minerals		Total	Food products	Textiles	Chemicals & chemical products	Basic metals, alloys & metal products	Machinery & machine tools	
		Total	Food grains										
Weight-Base: (2004-05=100)	**20.1**	**14.3**	**4.1**	**4.3**	**1.5**	**14.9**	**65.0**	**10.0**	**7.3**	**12.0**	**10.7**	**8.9**	**100.0**
Weight-Base: (2011-12=100)	**22.6**	**15.3**	**3.5**	**4.1**	**0.8**	**13.2**	**64.2**	**9.1**	**4.9**	**6.5**	**9.6**	**4.8**	**100.0**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**
2007-08	124	124	131	114	153	121	113	110	102	113	123	114	116.6
2008-09	138	135	145	129	187	135	120	120	103	118	138	117	126.0
2009-10	155	155	166	136	203	132	123	136	107	118	130	118	130.8
2010-11	182	180	174	167	253	148	130	141	120	124	141	121	143.3
2011-12	200	193	181	183	321	169	140	151	129	135	156	125	156.1
2012-13	220	212	207	202	347	186	147	163	131	144	166	128	167.6
2013-14	242	239	226	213	346	205	151	169	139	149	165	132	177.6
2014-15	249	253	235	212	309	203	155	173	143	153	166	135	181.2
2015-16	250	262	253	220	216	180	153	174	140	151	155	135	176.7
2016-17	262	275	281	230	220	190	157	191	142	151	156	135	183.2
Average of months (2011-12 = 100)													
2012-13	111	111	115	113	118	107	105	109	104	108	105	104	106.9
2013-14	122	125	125	118	114	115	109	114	112	113	103	106	112.5
2014-15	125	132	128	115	119	108	111	116	113	116	104	108	113.9
2015-16	125	135	137	118	106	87	109	115	109	113	92	109	109.7
2016-17	129	140	152	122	113	86	111	125	111	111	91	108	111.6
2017-18	131	143	143	120	123	93	114	127	113	113	101	109	114.9
2018-19(P)	134	144	147	123	136	104	118	129	118	119	112	111	119.8
2015-16													
April	122	131	130	112	107	91	110	113	109	114	99	109	110.2
May	123	132	132	116	103	96	111	113	110	115	98	110	111.4
June	125	134	133	117	108	96	110	113	110	115	97	111	111.8
July	124	134	134	116	105	94	110	113	110	114	95	110	111.1
August	125	136	135	118	105	88	109	114	110	113	92	110	110.0
September	126	136	137	119	108	86	109	114	109	113	92	108	109.9

Contd....

Table 5.1. Index Numbers of Wholesale Prices *(Contd.....)*

	Primary articles					Fuel & power	Manufactured products						All Commodities
	Total	Food articles		Non-Food articles	Minerals		Total	Food products	Textiles	Chemicals & chemical products	Basic metals, alloys & metal products	Machinery & machine tools	
		Total	Food grains										
Weight-Base: (2004-05=100)	**20.1**	**14.3**	**4.1**	**4.3**	**1.5**	**14.9**	**65.0**	**10.0**	**7.3**	**12.0**	**10.7**	**8.9**	**100.0**
Weight-Base: (2011-12=100)	**22.6**	**15.3**	**3.5**	**4.1**	**0.8**	**13.2**	**64.2**	**9.1**	**4.9**	**6.5**	**9.6**	**4.8**	**100.0**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**
October	126	138	140	120	95	86	109	115	109	113	92	109	110.1
November	127	139	141	121	100	86	109	115	108	112	89	109	109.9
December	127	138	142	122	120	85	108	115	109	111	87	109	109.4
January	124	136	142	121	99	80	108	116	108	111	87	108	108.0
February	122	133	141	118	102	76	108	116	109	111	87	108	107.1
March	123	133	141	117	116	77	109	117	109	111	89	109	107.7
2016-17													
April	126	138	144	121	104	78	109	120	110	112	90	108	109.0
May	129	141	147	121	111	81	110	121	110	112	90	108	110.4
June	132	144	151	124	119	85	110	123	110	111	90	108	111.7
July	132	145	155	127	96	85	110	124	111	112	89	108	111.8
August	131	143	154	125	128	81	110	125	112	111	88	108	111.2
September	131	142	153	123	129	83	110	126	112	110	89	107	111.4
October	129	142	155	120	105	85	111	127	111	110	91	108	111.5
November	129	142	158	118	111	87	111	127	111	111	92	108	111.9
December	127	138	158	119	114	88	111	128	111	110	93	108	111.7
January	127	137	153	122	113	93	112	128	111	111	94	108	112.6
February	127	137	150	124	113	95	112	128	112	111	94	108	113.0
March	127	138	147	122	115	94	112	127	113	112	96	108	113.2
2017-18													
April	127	139	147	121	116	92	113	127	114	112	97	108	113.2
May	127	138	145	120	120	91	113	127	114	112	97	108	112.9
June	127	139	144	118	118	90	113	127	114	112	96	109	112.7
July	133	148	143	119	120	88	113	127	113	111	97	108	113.9
August	135	151	143	121	121	89	113	127	114	111	99	109	114.8

Contd....

Table 5.1. Index Numbers of Wholesale Prices

	Primary articles					Fuel & power	Manufactured products						All Commodities
	Total	Food articles		Non-Food articles	Minerals		Total	Food products	Textiles	Chemicals & chemical products	Basic metals, alloys & metal products	Machinery & machine tools	
		Total	Food grains										
Weight-Base: (2004-05=100)	**20.1**	**14.3**	**4.1**	**4.3**	**1.5**	**14.9**	**65.0**	**10.0**	**7.3**	**12.0**	**10.7**	**8.9**	**100.0**
Weight-Base: (2011-12=100)	**22.6**	**15.3**	**3.5**	**4.1**	**0.8**	**13.2**	**64.2**	**9.1**	**4.9**	**6.5**	**9.6**	**4.8**	**100.0**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**
September	132	145	144	120	129	92	114	128	113	111	101	109	114.9
October	134	148	143	119	122	94	114	128	113	112	101	109	115.6
November	136	151	142	117	122	95	114	128	113	112	101	109	116.4
December	132	144	141	119	122	96	114	127	113	113	103	109	115.7
January	130	141	140	121	120	98	115	127	113	114	106	110	116.0
February	128	138	140	121	122	99	116	127	114	115	109	110	116.1
March	128	137	141	120	138	98	116	128	114	116	110	110	116.3
2018-19													
April	131	140	140	120	140	99	116	128	115	116	110	110	117.3
May	131	140	141	120	130	102	117	127	116	117	112	110	118.3
June	133	142	141	123	123	104	117	129	116	118	113	111	119.1
July	135	145	143	124	135	104	118	129	118	118	112	111	119.9
August	135	145	145	124	129	105	118	130	118	119	112	111	120.1
September	136	145	145	124	130	108	118	130	119	120	114	112	120.9
October	137	146	147	123	140	111	119	130	119	121	115	112	122.0
November	137	146	149	125	151	109	119	129	119	121	114	112	121.6
December	134	144	150	124	139	103	118	128	119	120	112	112	119.7
January	134	144	152	123	137	99	118	128	119	120	110	112	119.2
February	134	144	154	123	144	101	118	129	119	120	111	112	119.5
March(P)	135	145	153	124	137	103	118	129	119	120	111	112	120.0
April(P)	139	150	154	127	144	103	118	129	119	120	111	112	120.9

Source : Office of the Economic Adviser, Ministry of Commerce & Industry.

Note:

P: Provisional

Table 5.2. Index Numbers of Wholesale Prices – Selected Commodities and Commodity Groups

	Rice	Wheat	Pulses	Tea	Raw cotton	Raw jute	Ground-nut seed	Coal	Mineral oils	Sugar, khandsari & gur	Edible oils	Cotton yarn	Cotton fabric	Jute,hemp & mesta textiles	Fertili-zers	Cement & lime	Iron,steel & ferro alloys a
Weight-Base: (2004-05=100)	**1.79**	**1.12**	**0.72**	**0.11**	**0.70**	**0.06**	**0.40**	**2.09**	**9.36**	**2.09**	**3.04**	**1.38**	**1.23**	**0.26**	**2.66**	**1.39**	**6.88**
Weight-Base: (2011-12=100)	1.43	1.03	0.64	0.12	0.66	0.05	0.27	2.14	7.95	1.16	2.64	1.34	0.95	0.32	1.48	1.64	6.55
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**	**(15)**	**(16)**	**(17)**	**(18)**
Last month of (Base: 2004-05=100)																	
2005-06	105	117	126	92	91	159	94	118	122	112	93	98	98	114	103	106	97
2006-07	115	129	147	97	99	118	132	118	123	97	107	98	97	120	105	130	111
2007-08	131	140	148	110	122	130	147	136	133	93	127	100	98	110	107	138	138
2008-09	151	151	159	156	124	142	141	151	124	126	114	102	105	125	108	148	126
2009-10	163	173	199	129	149	173	153	163	147	178	114	123	109	157	110	151	127
2010-11	167	173	191	138	303	240	171	185	168	164	129	179	128	182	121	154	143
2011-12	175	172	210	145	196	227	231	210	193	169	142	150	131	171	141	163	158
2012-13	206	205	233	212	214	273	266	190	214	184	147	164	134	182	152	172	158
2013-14	232	218	228	170	234	270	197	190	237	178	147	185	142	187	153	164	161
2014-15	234	216	258	156	178	310	223	190	194	171	145	169	145	202	156	178	153
2015-16	239	228	347	182	180	505	256	190	169	183	150	165	146	238	159	176	140
2016-17	257	245	325	203	242	397	262	226	210	218	156	175	150	235	155	172	150
Last month of (Base: 2011-12=100)																	
2012-13	119	123	115	141	100	124	121	103	116	112	100	109	106	107	116	105	102
2013-14	133	128	115	113	107	125	99	107	128	109	107	120	112	108	118	108	104
2014-15	132	126	131	103	84	142	115	107	82	98	99	108	114	121	120	112	97
2015-16	135	134	167	121	86	226	129	106	58	110	100	105	112	153	121	109	84
2016-17	148	143	154	133	114	188	138	116	84	133	108	114	114	147	117	109	91
2017-18	153	141	122	120	103	166	114	123	89	115	117	113	118	145	119	114	109
2018-19(P)	157	156	135	133	117	203	127	124	95	112	114	117	124	155	123	117	109
Average of months (Base: 2004-05=100)																	
2005-06	105	105	113	89	90	135	97	118	117	109	94	95	99	112	102	102	100
2006-07	110	125	149	104	97	136	110	118	127	107	102	98	97	115	104	119	105
2007-08	122	134	145	104	112	122	140	122	126	91	116	101	99	111	106	138	119
2008-09	141	148	156	153	141	138	144	151	142	107	122	103	103	117	107	139	137
2009-10	158	166	191	174	139	160	148	156	136	162	114	111	107	146	108	149	124

Contd....

Table 5.2. Index Numbers of Wholesale Prices – Selected Commodities and Commodity Groups *(Contd....)*

	Rice	Wheat	Pulses	Tea	Raw cotton	Raw jute	Ground-nut seed	Coal	Mineral oils	Sugar, khandsari & gur	Edible oils	Cotton yarn	Cotton fabric	Jute,hemp & mesta textiles	Fertili-zers	Cement & lime	Iron,steel & ferro alloys a
Weight-Base: (2004-05=100)	**1.79**	**1.12**	**0.72**	**0.11**	**0.70**	**0.06**	**0.40**	**2.09**	**9.36**	**2.09**	**3.04**	**1.38**	**1.23**	**0.26**	**2.66**	**1.39**	**6.88**
Weight-Base: (2011-12=100)	1.43	1.03	0.64	0.12	0.66	0.05	0.27	2.14	7.95	1.16	2.64	1.34	0.95	0.32	1.48	1.64	6.55
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**	**(15)**	**(16)**	**(17)**	**(18)**
2010-11	167	171	197	148	199	211	165	165	157	161	121	142	115	165	117	151	136
2011-12	172	168	202	151	225	223	200	191	184	168	136	155	132	176	133	157	150
2012-13	194	194	241	199	206	242	247	209	202	186	148	157	134	178	149	169	160
2013-14	226	212	228	196	237	262	219	191	226	183	147	175	139	184	152	167	158
2014-15	241	212	241	179	206	288	210	190	220	183	145	179	144	193	155	170	158
2015-16	237	219	337	183	190	404	246	190	179	167	149	166	146	219	158	174	142
2016-17	252	242	406	210	224	448	265	199	194	208	156	172	148	238	157	175	143
Average of months (Base: 2011-12=100)																	
2012-13	113	115	120	132	95	110	121	102	111	112	106	105	103	103	114	108	105
2013-14	129	125	115	131	109	121	108	105	122	109	104	117	110	106	117	106	102
2014-15	137	123	122	118	96	133	107	107	109	108	102	115	115	113	119	111	102
2015-16	135	128	164	121	90	182	128	107	74	99	99	107	113	137	121	110	87
2016-17	144	142	193	140	107	208	138	109	73	125	107	110	114	151	119	111	86
2017-18	149	139	141	131	108	160	123	119	83	128	109	113	117	144	117	114	98
2018-19 (P)	155	149	127	141	117	182	118	123	97	111	118	117	123	149	121	114	112
2015-16																	
April	133	125	134	115	90	141	120	107	81	99	99	108	113	120	121	110	97
May	134	124	144	119	93	142	127	107	88	98	99	109	112	120	121	108	95
June	134	122	155	117	92	160	136	107	90	94	100	110	113	123	121	108	93
July	133	125	157	120	92	162	133	107	85	90	100	109	114	129	121	110	91
August	134	126	162	118	91	160	135	106	76	92	98	109	114	132	122	111	87
September	135	126	167	116	91	167	136	106	72	94	98	107	114	135	122	112	88
October	136	129	178	119	87	181	122	106	73	96	99	106	113	141	122	112	86
November	136	130	180	123	86	196	122	106	73	97	99	105	113	144	121	112	84
December	**135**	**132**	**179**	**126**	**89**	**205**	**126**	**106**	**71**	**100**	**98**	**104**	**113**	**148**	**121**	**110**	**81**
January	136	134	175	130	90	217	123	106	63	105	97	103	111	149	122	109	81
February	135	134	169	129	88	222	125	106	56	108	98	106	113	149	122	108	82

Contd....

Table 5.2. Index Numbers of Wholesale Prices – Selected Commodities and Commodity Groups *(Contd.....)*

	Rice	Wheat	Pulses	Tea	Raw cotton	Raw jute	Ground-nut seed	Coal	Mineral oils	Sugar, khandsari & gur	Edible oils	Cotton yarn	Cotton fabric	Jute,hemp & mesta textiles	Fertili-zers	Cement & lime	Iron,steel & ferro alloys a
Weight-Base: (2004-05=100)	**1.79**	**1.12**	**0.72**	**0.11**	**0.70**	**0.06**	**0.40**	**2.09**	**9.36**	**2.09**	**3.04**	**1.38**	**1.23**	**0.26**	**2.66**	**1.39**	**6.88**
Weight-Base: (2011-12=100)	1.43	1.03	0.64	0.12	0.66	0.05	0.27	2.14	7.95	1.16	2.64	1.34	0.95	0.32	1.48	1.64	6.55
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**	**(15)**	**(16)**	**(17)**	**(18)**
March	135	134	167	121	86	226	129	106	58	110	100	105	112	153	121	109	84
2016-17																	
April	136	133	180	141	90	229	139	106	62	117	103	105	113	156	121	109	85
May	139	135	189	141	94	232	143	106	67	118	105	107	114	155	121	110	85
June	142	137	198	146	105	251	146	107	73	119	104	108	113	155	121	112	84
July	144	138	212	142	116	243	150	107	72	122	104	110	113	158	120	112	82
August	145	139	204	137	116	197	146	107	66	123	106	113	114	155	119	111	81
September	145	140	199	141	111	194	140	107	69	124	108	112	117	150	118	113	83
October	145	141	211	141	106	194	132	107	71	126	108	110	114	148	118	113	86
November	145	148	215	142	102	197	126	107	75	127	108	110	115	147	118	111	87
December	144	152	205	143	104	190	132	107	77	126	110	110	115	144	117	110	87
January	144	151	183	140	111	190	134	114	82	130	111	111	114	145	117	109	88
February	146	149	164	134	114	191	132	116	84	133	110	112	113	146	117	109	88
March	148	143	154	133	114	188	138	116	84	133	108	114	113	147	117	109	91
2017-18																	
April	148	141	156	147	112	169	140	118	80	133	107	117	114	146	117	113	93
May	148	138	152	140	109	164	136	118	79	133	106	116	115	144	117	115	93
June	148	136	147	137	111	163	133	118	77	132	106	115	115	145	116	115	92
July	149	136	146	130	111	158	128	118	75	133	106	115	115	144	116	114	93
August	149	137	145	127	110	155	124	118	77	133	106	114	119	142	117	113	95
September	149	138	151	125	107	160	118	118	80	133	108	113	118	143	117	114	97
October	150	138	145	130	101	158	117	118	82	132	109	111	117	145	117	113	97
November	149	139	138	131	102	152	117	118	85	130	111	110	118	145	117	113	97
December	149	139	133	129	108	154	114	117	87	124	112	111	117	144	117	114	99
January	150	141	127	128	111	160	113	121	88	120	113	113	116	143	117	114	104
February	151	140	124	124	107	167	115	123	90	117	114	113	117	145	119	115	107

Contd....

Table 5.2. Index Numbers of Wholesale Prices – Selected Commodities and Commodity Groups

	Rice	Wheat	Pulses	Tea	Raw cotton	Raw jute	Ground-nut seed	Coal	Mineral oils	Sugar, khandsari & gur	Edible oils	Cotton yarn	Cotton fabric	Jute,hemp & mesta textiles	Fertili-zers	Cement & lime	Iron,steel & ferro alloys a
Weight-Base: (2004-05=100)	**1.79**	**1.12**	**0.72**	**0.11**	**0.70**	**0.06**	**0.40**	**2.09**	**9.36**	**2.09**	**3.04**	**1.38**	**1.23**	**0.26**	**2.66**	**1.39**	**6.88**
Weight-Base: (2011-12=100)	1.43	1.03	0.64	0.12	0.66	0.05	0.27	2.14	7.95	1.16	2.64	1.34	0.95	0.32	1.48	1.64	6.55
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**	**(15)**	**(16)**	**(17)**	**(18)**
March	153	141	122	120	103	166	114	123	89	115	117	113	118	145	119	114	109
2018-19																	
April	153	141	121	141	103	166	110	123	90	109	119	113	120	146	118	115	110
May	154	142	120	137	105	166	108	123	94	104	120	114	121	146	119	114	112
June	154	143	118	137	117	167	110	123	97	111	121	115	120	146	119	114	113
July	155	145	121	138	122	170	112	123	98	114	120	117	123	147	119	114	112
August	156	149	125	142	123	173	120	123	98	114	119	118	122	147	120	113	111
September	156	150	123	148	121	182	118	123	102	112	119	118	122	147	121	113	115
October	156	151	126	145	121	183	119	123	108	113	119	117	124	147	122	113	115
November	156	152	131	149	123	185	125	123	106	113	116	118	124	148	123	113	114
December	156	153	136	149	119	189	123	123	94	110	114	117	124	150	124	113	111
January	156	155	137	139	116	199	124	124	88	111	115	119	124	151	123	115	108
February	157	157	138	133	113	201	125	124	91	112	116	118	124	155	123	118	109
March(P)	157	156	135	133	117	203	127	124	95	112	114	117	124	155	123	117	109
April(P)	157	152	138	153	125	197	130	124	95	113	113	118	125	157	123	119	108

Source : Office of the Economic Adviser, Ministry of Commerce & Industry.

Notes:

P: Provisional

a: composite index of Iron & semis, steel long, steel flat, stainless steel & alloys and ferro alloys for base 2004-05 and inputs into steel making, metallic iron, mild steel-semi finished steel, mild steel-long products, mild steel-flat products, alloy steel other than stainless steel-shapes and stainless steel-semi finished for base 2011-12.

Table 5.3. All India Consumer Price Index Numbers

	Industrial Workers (CPI-IW)			New Series (CPI-NS)			Agricultural Labourers (CPI-AL)	Rural Labourers (CPI-RL)
Base	(1982=100 & 2001=100)			(2010=100 & 2012=100)			(1986-87=100)	(1986-87=100)
Description	Food	Non-Food	General	Rural	Urban	Combined	General	General
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Average of Months								
1995-96	337	280	313	…	…	…	237	238[b]
1996-97	369	307	342	…	…	…	256	256
1997-98	388	336	366	…	…	…	264	266
1998-99	445	372	414	…	…	…	293	294
1999-00	446	404	428	…	…	…	306	307
2000-01	453	433	444	…	…	…	305	307
2001-02	466	460	463	…	…	…	309	311
2002-03	477	488	482	…	…	…	319	321
2003-04	495	507	500	…	…	…	331	333
2004-05	506	538	520	…	…	…	340	342
2005-06	527[a]	563[a]	542[a]	…	…	…	353	355
2006-07	126	124	125	…	…	…	380	382
2007-08	136	130	133	…	…	…	409	409
2008-09	153	138	145	…	…	…	450	451
2009-10	176	151	163	…	…	…	513	513
2010-11	194	168	180	…	…	…	564	564
2011-12	206	185	195	113.1	110.4	111.9	611	611
2012-13	230	202	215	124.5	121.8	123.3	672	673
2013-14	259	216	236	112.6	111.8	112.2	750	751
2014-15	276	230	251	119.5	118.1	118.9	800	802
2015-16	293	241	265	126.1	123.0	124.7	835	839
2016-17	305	251	276	132.4	127.9	130.3	870	875
2017-18	310	263	284	137.2	132.5	135.0	889	895
2018-19	312	290	300	141.3	137.7	139.6	907	915
Last Month of								
1995-96	339	292	319	…	…	…	237	238
1996-97	373	322	351	…	…	…	262	262
1997-98	401	352	380	…	…	…	272	273
1998-99	431	391	414	…	…	…	296	296
1999-00	446	418	434	…	…	…	306	307
2000-01	446	444	445	…	…	…	300	302
2001-02	462	476	468	…	…	…	309	311
2002-03	479	498	487	…	…	…	324	326
2003-04	494	517	504	…	…	…	332	334
2004-05	502	555	525	…	…	…	340	342
2005-06	115[a]	122[a]	119[a]	…	…	…	358	360
2006-07	129	125	127	…	…	…	392	393
2007-08	141	134	137	…	…	…	423	423
2008-09	156	141	148	…	…	…	463	464
2009-10	181	161	170	…	…	…	536	536
2010-11	196	176	185	106.9	103.9	105.6	585	584
2011-12	212	192	201	116.2	114.6	115.5	625	626
2012-13	240	210	224	128.3	126.5	127.5	704	705
2013-14	258	223	239	114.6	113.7	114.2	763	765

Contd....

Table 5.3. All India Consumer Price Index Numbers *(Contd....)*

	Industrial Workers (CPI-IW)			New Series (CPI-NS)			Agricultural Labourers (CPI-AL)	Rural Labourers (CPI-RL)
Base	**(1982=100 & 2001=100)**			**(2010=100 & 2012=100)**			**(1986-87=100)**	**(1986-87=100)**
Description	**Food**	**Non-Food**	**General**	**Rural**	**Urban**	**Combined**	**General**	**General**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
2014-15	276	235	254	121.1	119.1	120.2	803	807
2015-16	293	247	268	128.0	123.8	126.0	843	848
2016-17	298	255	275	132.8	128.7	130.9	866	872
2017-18	303	273	287	138.7	134.0	136.5	887	894
2018-19	315	304	309	141.2	139.5	140.4	924	932
2015-16								
April	278	237	256	121.5	119.7	120.7	805	809
May	283	237	258	122.4	120.7	121.6	811	816
June	288	238	261	124.1	121.7	123.0	820	824
July	289	241	263	124.7	122.4	123.6	822	827
August	292	240	264	126.1	123.2	124.8	832	836
September	296	240	266	127.0	123.5	125.4	839	843
October	301	242	269	127.7	124.2	126.1	849	853
November	302	243	270	128.3	124.6	126.6	853	857
December	299	243	269	127.9	124.0	126.1	853	857
January	297	245	269	128.1	124.2	126.3	849	854
February	292	246	267	127.9	123.8	126.0	843	849
March	293	247	268	128.0	123.8	126.0	843	848
2016-17								
April	299	247	271	129.0	125.3	127.3	848	854
May	307	248	275	130.3	126.6	128.6	860	866
June	312	247	277	131.9	128.1	130.1	869	874
July	316	249	280	133.0	129.0	131.1	877	881
August	310	251	278	133.5	128.4	131.1	876	881
September	308	250	277	133.4	128.0	130.9	873	877
October	310	251	278	133.8	128.6	131.4	876	881
November	307	251	277	133.6	128.5	131.2	878	883
December	301	253	275	132.8	127.6	130.4	876	881
January	298	253	274	132.4	127.8	130.3	870	876
February	297	254	274	132.6	128.2	130.6	869	874
March	298	255	275	132.8	128.7	130.9	866	872
2017-18								
April	301	256	277	132.9	129.1	131.1	870	876
May	302	257	278	133.3	129.3	131.4	872	878
June	308	256	280	133.9	129.9	132.0	877	884
July	315	259	285	136.2	131.8	134.2	884	890
August	315	259	285	137.8	132.7	135.4	894	900
September	312	262	285	137.6	132.4	135.2	893	899
October	317	261	287	138.3	133.5	136.1	901	907
November	319	261	288	140.0	134.8	137.6	905	910
December	314	262	286	139.8	134.1	137.2	900	906
January	308	271	288	139.3	134.1	136.9	895	901
February	304	272	287	138.5	134.0	136.4	889	896
March	303	273	287	138.7	134.0	136.5	887	894
2018-19								

Contd....

Table 5.3. All India Consumer Price Index Numbers

	Industrial Workers (CPI-IW)			New Series (CPI-NS)			Agricultural Labourers (CPI-AL)	Rural Labourers (CPI-RL)
Base	(1982=100 & 2001=100)			(2010=100 & 2012=100)			(1986-87=100)	(1986-87=100)
Description	Food	Non-Food	General	Rural	Urban	Combined	General	General
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
April	305	273	288	139.1	134.8	137.1	888	896
May	307	274	289	139.8	135.4	137.8	891	899
June	311	274	291	140.5	136.2	138.5	894	902
July	314	290	301	141.8	137.5	139.8	902	910
August	314	290	301	142.5	138.0	140.4	907	915
September	312	292	301	142.1	138.1	140.2	910	917
October	314	292	302	142.2	138.9	140.7	913	920
November	314	292	302	142.4	139.0	140.8	914	921
December	311	292	301	141.9	138.0	140.1	913	921
January	311	304	307	141.0	138.0	139.6	915	923
February	312	303	307	141.0	138.6	139.9	917	925
March	315	304	309	141.2	139.5	140.4	924	932

Source: 1. Labour Bureau for consumer price indices for Industrial Workers (IW), Agricultural Labourers (AL) and Rural Labourers (RL),

2. CSO for consumer price indices- new series (CPI-NS).

Notes:

1. Weights of CPI-IW for food & non-food with base 1982=100 are 57% & 43% respectively and with base 2001=100 are 46.20% & 53.80% respectively.
2. CPI- New Series (Rural, Urban & Combined) with base 2010=100 was introduced w.e.f. January 2011. The CPI-UNME has since been totally discontinued.
3. CPI- New Series figures for 2013-14, 2014-15 and 2015-16 is based on new base 2012=100.

a: The current series of CPI for Industrial Workers with 2001 base was introduced w.e.f. January, 2006 and the figures from 2005-06 (last month) are based on new base. The earlier series on base 1982=100 was simultaneously discontinued. The conversion factor from the current to the old series is 4.63 in case of the General Index, and 4.58 for Food Index.

b: Average index from November, 1995 to March 1996.

Table 5.4. Index Numbers of Wholesale Prices – Relative Prices of Manufactured and Agricultural Products

Year/Months	General Index of Wholesale Price	Price Index of Manufactured Products	Price Index of Agricultural Products [a]	Manufactured price Index as percent of Agricultural Price Index
Weight (Base: 2004-05)	100.00	64.97	18.59	(col.3/Col.4)*100
Weight (Base: 2011-12)	100.00	64.23	19.37	
(1)	**(2)**	**(3)**	**(4)**	**(5)**
(Base : 2004-05 = 100)				
2005-06	104.5	102.4	103.4	99.1
2006-07	111.4	108.2	112.5	96.3
2007-08	116.6	113.4	121.5	93.4
2008-09	126.0	120.4	133.5	90.2
2009-10	130.8	123.1	151.0	81.7
2010-11	143.3	130.1	176.6	73.7
2011-12	156.1	139.5	190.4	73.3
2012-13	167.6	147.1	209.6	70.2
2013-14	177.6	151.5	233.0	65.0
2014-15	181.2	155.1	243.9	63.6
2015-16	176.7	153.4	252.3	60.8
2016-17	183.2	157.4	265.0	59.4
(Base : 2011-12 = 100)				
2012-13	106.9	105.3	111.4	94.5
2013-14	112.5	108.5	123.2	88.1
2014-15	113.9	111.2	128.0	86.9
2015-16	109.7	109.2	131.4	83.1
2016-17	111.6	110.7	136.3	81.1
2017-18	114.9	113.8	138.2	82.4
2018-19	119.8	117.9	139.3	84.6
2015-16				
April	110.2	110.1	126.8	86.9
May	111.4	110.5	128.6	86.0
June	111.8	110.3	130.1	84.8
July	111.1	109.9	130.0	84.5
August	110.0	109.2	132.1	82.6
September	109.9	109.2	132.5	82.4
October	110.1	109.4	134.1	81.6
November	109.9	108.8	134.9	80.7
December	109.4	108.4	134.2	80.7
January	108.0	108.0	133.0	81.2
February	107.1	108.3	130.1	83.3
March	107.7	108.8	130.0	83.7
2016-17				
April	109.0	109.2	134.3	81.3
May	110.4	109.8	136.6	80.4
June	111.7	110.0	139.8	78.7
July	111.8	110.3	140.7	78.4
August	111.2	110.2	138.9	79.3
September	111.4	110.4	137.9	80.1
October	111.5	110.8	137.2	80.7

Contd....

Table 5.4. Index Numbers of Wholesale Prices – Relative Prices of Manufactured and Agricultural Products

Year/Months	General Index of Wholesale Price	Price Index of Manufactured Products	Price Index of Agricultural Products [a]	Manufactured price Index as percent of Agricultural Price Index
Weight (Base: 2004-05)	100.00	64.97	18.59	(col.3/Col.4)*100
Weight (Base: 2011-12)	100.00	64.23	19.37	
(1)	**(2)**	**(3)**	**(4)**	**(5)**
November	111.9	111.0	136.8	81.1
December	111.7	111.1	133.7	83.1
January	112.6	111.6	133.5	83.6
February	113.0	111.8	133.9	83.5
March	113.2	112.3	134.3	83.6
2017-18				
April	113.2	112.6	134.9	83.5
May	112.9	112.6	134.1	84.0
June	112.7	112.6	134.7	83.6
July	113.9	112.6	141.7	79.5
August	114.8	112.8	144.5	78.1
September	114.9	113.7	139.5	81.5
October	115.6	113.7	141.7	80.2
November	116.4	114.0	143.9	79.2
December	115.7	114.2	138.8	82.3
January	116.0	114.9	136.5	84.2
February	116.1	115.5	134.2	86.0
March	116.3	115.8	133.6	86.6
2018-19				
April	117.3	116.3	135.7	85.7
May	118.3	116.9	136.0	85.9
June	119.1	117.3	137.7	85.2
July	119.9	117.7	140.3	83.9
August	120.1	117.8	140.4	83.9
September	120.9	118.4	140.1	84.5
October	122.0	118.9	141.1	84.3
November	121.6	118.8	141.6	83.9
December	119.7	118.3	139.4	84.8
January	119.2	118.1	139.8	84.5
February	119.5	118.2	139.3	84.8
March(P)	120.0	118.3	140.5	84.2
April(P)	120.9	118.3	145.1	81.5

Source: Office of the Economic Adviser, Ministry of Commerce & Industry
Notes:
a : Composite Index of the sub-groups - (Food Articles and Non-food Articles)

Table 5.5. Minimum Support Price/Procurement Price for Crops

(Crop Year Basis)(Rs./quintal)

Commodities	2002-03[b]	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Paddy (Common)	550	560	570	580[c]	645[h]	850[k]	950[k]	1000	1080	1250	1310	1360	1410	1470	1550	1750
Paddy (Grade 'A')	580	590	600	610[c]	675[h]	880[k]	980[k]	1030	1110	1280	1345	1400	1450	1510	1590	1770
Wheat	630	640	650[g]	750[h]	1000	1080	1100	1120	1285	1350	1400	1450	1525	1625	1735	1840
Jowar (Hybrid)	490	515	525	540	600	840	840	880	980	1500	1500	1530	1570	1625	1700	2430
Jowar (Maldandi)	...	...	...	555	620	860	860	900	1000	1520	1520	1550	1590	1650	1725	2450
Bajra	495	515	525	540	600	840	840	880	980	1175	1250	1250	1275	1330	1425	1950
Ragi	490	515	525	540	600	915	915	965	1050	1500	1500	1550	1650	1725	1900	2897
Maize	490	525	540	540	620	840	840	880	980	1175	1310	1310	1325	1365	1425	1700
Barley	505	540	550	565	650	680	750	780	980	980	1100	1150	1225	1325	1410	1440
Gram	1225	1425	1435	1445	1600	1730	1760	2100	2800	3000	3100	3175	3425[n]	3800[q]	4400#	4620
Masur	...	1525	1535	1545	1700	1870	1870	2250	2800	2900	2950	3075	3325[n]	3800[r]	4250*	4475
Arhar	1325	1390	1400	1410	1550[d]	2000	2300	3000[l]	3200[l]	3850	4300	4350	4425[o]	4625[s]	5450**	5675
Moong	1335	1410	1520	1520	1700[d]	2520	2760	3170[l]	3500[l]	4400	4500	4600	4650[o]	4800[s]	5575**	6975
Urad	1335	1410	1520	1520	1700[d]	2520	2520	2900[l]	3300[l]	4300	4300	4350	4425[o]	4575[s]	5400**	5600
Sugarcane [a]	69.50	74.50	79.50	80.25	81.18	81.18	129.84	139.12	145.00[m]	170.0	210.0	220.0	230.0	230.0	255	275
Cotton F-414/H-777	1695	1760	1760	1770[e]	1800[e]	2500[i]	2500[i]	2500[i]	2800[i]	3600	3700	3750	3800	3860	4020	5150
Cotton H-4 750	1895	1960	1980	1990[f]	2030[f]	3000[j]	3000[j]	3000[j]	3300[j]	3900	4000	4050	4100	4160	4320	5450
Groundnut	1375	1500	1520	1520	1550	2100	2100	2300	2700	3700	4000	4000	4030	4120[t]	4450**	4890
Jute(TD-5)	850	890	910	1000	1055	1250	1375	1575	1675	2200	2300	2400	2700	3200	3500	3700
Rapeseed/ mustard	1340	1700	1715	1715	1800	1830	1830	1850	2500	3000	3050	3100	3350	3600[t]	4000*	4200
Sunflower	1210	1340	1500	1500	1510	2215	2215	2350	2800	3700	3700	3750	3800	3850[t]	4100*	5388
Soyabean (Black)	805	900	900	900	910	1350	1350	1400	1650	2200	2500	2500	...	...	3050**	3399
Soyabean (Yellow)	895	1000	1010	1020	1050	1390	1390	1440	1690	2240	2560	2560	2600[p]	2675[t]		
Safflower	1305	1550	1565	1565	1650	1650	1680	1800	2500	2800	3000	3050	3300	3600[t]	4100*	4945

Contd....

Table 5.5. Minimum Support Price/Procurement Price for Crops *(Contd....)*

(Crop Year Basis)(Rs./quintal)

Commodities	2002-03[b]	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Toria	1305	1665	1680	1680	1735	1735	1735	1780	2425	2970	3020	3020	3290	3560		4190
Copra (milling)	3300	3500	3570	3590	3620	3660	4450	4450	4525	5100	5250	5250	5550	5950	6500	7511
Copra balls	3550	3750	3820	3840	3870	3910	4700	4700	4775	5350	5500	5500	5830	6240	6785	7750
Sesamum	1455	1500	1550	1560	1580	2750	2850	2900	3400	4200	4500	4600	4700	4800[q]	5300*	6249
Niger seed	1120	1180	1200	1220	1240	2405	2405	2450	2900	3500	3500	3600	3650	3725[t]	4050*	5877

Source: Deapartment of Agriculture, Cooperation and Farmers Welfare

Notes:

a: Statutory Minimum Price (SMP) upto 2008-09. Fair and Remunerative Price (FRP) from 2009-10 onwards.
b: Including Special onetime drought relief (SDR) price announced for 2002-03.
c: An additional incentive bonus of Rs. 40 per quintal was payable on procurement between January 10, 2006 to March 31, 2007.
d: A bonus of Rs. 40 per quintal was payable over and above the MSP.
e: Medium staple.
f: Long staple.
g: An incentive bonus of Rs. 50 per quintal is payable on wheat over the Minimum Support Price (MSP).
h: An additional incentive bonus of Rs. 100 per quintal was payable over the MSP.
i: Staple length (mm) of 24.5-25.5 and micronaire value of 4.3-5.1
j: Staple length (mm) of 29.5-30.5 and micronaire value of 3.5-4.3
k: An additional incentive bonus of Rs. 50 per quintal was payble over the MSP.
l: Additional incentive at the rate of Rs. 500 per quintal of tur, urad and moong sold to procurement agencies.
m: At 9.5 percent recovery, subject to a premium of Rs.1.53 for every 0.1 percent increase in the recovery above 9.5 percent.
n: Bonus of Rs. 75 per quintal is payable over and above the MSP.
o: Bonus of Rs. 200 per quintal is payable over and above the MSP.
p: Single MSP has been fixed irrespective of the variety.
q: Bonus of Rs. 200 per quintal is payable over and above the MSP.
r: Bonus of Rs. 150 per quintal is payable over and above the MSP.
s: Bonus of Rs. 425 per quintal is payable over and above the MSP.
t: Bonus of Rs. 100 per quintal is payable over and above the MSP.
*: Including Bonus of Rs. 100 per quintal
**: Including Bonus of Rs. 200 per quintal.
#: Including Bonus of Rs. 150 per quintal

Table 6.1 A. Foreign Exchange Reserves

(₹ crore)

End of Fiscal	Reserves							Transactions with IMF		
	Gold		RTP	SDRs		Foreign Currency Assets	Total	Drawals	Repurchases g	Outstanding repurchase obligations
	Tonnes	₹ crore	₹ crore	SDRs in Million	₹ crore	₹ crore	₹ crore (3+4+6+7)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1950-51	220	40	...	...	...	911	951	...	...	48
1951-52	220	40	...	...	...	747	787	...	...	48
1952-53	220	40	...	...	...	763	803	...	...	48
1953-54	220	40	...	...	...	792	832	...	17	30
1954-55	220	40	...	...	...	774	814	...	17	13
1955-56	220	40	...	...	...	785	825	...	7	6
1956-57	220	118	...	...	...	563	681	61	6	61
1957-58	220	118	...	...	...	303	421	35	...	95
1958-59	220	118	...	...	...	261	379	...	...	95
1959-60	220	118	...	...	...	245	363	...	24	71
1960-61	220	118	...	...	...	186	304	...	11	61
1961-62	220	118	...	...	...	180	298	119	61	119
1962-63	220	118	...	...	...	177	295	12	...	131
1963-64	220	118	...	...	...	188	306	...	24	107
1964-65	250	134	...	...	...	116	250	48	48	107
1965-66	216	116	...	...	...	182	298	65	36	137
1966-67	216	183	...	...	...	296	479	89	43	313
1967-68	216	183	...	...	...	356	539	68	43	338
1968-69	216	183	...	...	...	394	577	...	59	279
1969-70	217	183	...	123	92	546	821	...	125	154
1970-71	216	183	...	149	112	438	733	...	154	...
1971-72	216	183	...	248	194	480	857	...	...	...
1972-73	216	183	...	247	226	479	888	...	...	...
1973-74	216	183	...	245	230	581	994	62	...	59
1974-75	216	183	...	235	229	610	1022	485	...	557
1975-76	216	183	...	203	211	1492	1886	207	...	804
1976-77	223	188	...	187	192	2863	3243	...	303	492
1977-78	229	193	...	162	170	4500	4863	...	249	210
1978-79	260	220	...	365	381	5220	5821	...	207	...
1979-80	266	225	...	529	545	5164	5934	...	55 [e]	...
1980-81	267	226	...	491	497	4822	5545	274[a]	5[f]	268
1981-82	267	226	...	425	444	3355	4025	637[b]	...	901
1982-83	267	226	...	270	291	4265	4782	1893[b]	...	2867
1983-84	267	226	...	216	248	5498	5972	1414[b]	72[h]	4444

Contd....

Table 6.1 A. Foreign Exchange Reserves *(Contd....)*

(₹ crore)

End of Fiscal	Reserves							Transactions with IMF		
	Gold		RTP	SDRs		Foreign Currency Assets	Total	Drawals	Repurchases g	Outstanding repurchase obligations
	Tonnes	₹ crore	₹ crore	SDRs in Million	₹ crore	₹ crore	₹ crore (3+4+6+7)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1984-85	291	246	...	147	181	6817	7243	219[b]	156 [i]	4888
1985-86	325	274	...	115	161	7384	7819	...	253 [j]	5285
1986-87	325	274	...	139	232	7645	8151	...	672[k]	5548
1987-88	325	274	...	70	125	7287	7686	...	1209[l]	4732
1988-89	325	274	...	80	161	6605	7040	...	1547[m]	3696
1989-90	333	281	...	82	184	5787	6252	3334[c]	1460[n]	2572
1990-91	333	6828	...	76	200	4388	11416	3205[d]	1156[o]	5132
1991-92	351	9039	...	66	233	14578	23850	4231	1127[p]	8934
1992-93	354	10549	...	13	55	20140	30744	1007	868[q]	14986
1993-94	367	12794	...	77	339	47287	60420	...	420[r]	15812
1994-95	396	13752	...	5	23	66005	79780	...	3585[s]	13545
1995-96	398	15658	...	56	280	58446	74384	...	5749[t]	8152
1996-97	398	14557	...	1	7	80368	94932	...	3461[u]	4714
1997-98	396	13394	...	1	4	102507	115905	...	2286[v]	2624
1998-99	357	12559	...	6	34	125412	138005	...	1652[w]	1220
1999-2000	358	12973	...	3	16	152924	165913	...	...	...
2000-01	358	12711	...	2	11	184482	197204	...	...	...
2001-02	358	14868	...	8	50	249118	264036	...	...	...
2002-03	358	16785	3190	3	19	341476	361470	...	...	...
2003-04	358	18216	5688	2	10	466215	490129	...	2598.2	...
2004-05	358	19686	6289	3	20	593121	619116	...	414.9	...
2005-06	358	25674	3374	2	12	647327	676387	3024.6	220.5	...
2006-07	358	29573	2044	1	8	836597	868222	1360.3	...	...
2007-08	358	40124	1744	11	74	1196023	1237965	301.5	...	...
2008-09	358	48793	5000	1	6	1230066	1283865	371.1	2940.1	...
2009-10	558	81188	6231	3297	22596	1149650	1259665	...	2220.8	...
2010-11	558	102572	13158	2882	20401	1224883	1361013	161.3	1594.0	...
2011-12	558	138250	14511	2885	22866	1330511	1506139	…	1392.1	...
2012-13	558	139737	12513	2887	23538	1412631	1588418	48.9	1677.8	...
2013-14	558	129616	11019	2888	26826	1660914	1828375	4713.5	1821.5	...
2014-15	558	119160	8085	2889	24944	1985458	2137647	10573.0	635.7	...
2015-16	558	133429	16290	1066	9960	2219061	2378740	1484.3	…	...
2016-17	558	128828	15047	1066	9379	2244939	2398193	2018.5	…	...

Contd....

Table 6.1 A. Foreign Exchange Reserves *(Contd....)*

(₹ crore)

End of Fiscal	Reserves							Transactions with IMF		
	Gold		RTP	SDRs		Foreign Currency Assets	Total	Drawals	Repurchases g	Outstanding repurchase obligations
	Tonnes	₹ crore	₹ crore	SDRs in Million	₹ crore	₹ crore	₹ crore (3+4+6+7)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2017-18	560	139742	13520	1059	10017	2597569	2760849	3494.0	…	...
2018-19	613	159585	20657	1049	10076	2665564	2855882	1252.7	7069.3	...

Source: Reserve Bank of India

Notes:

SDRs: Special Drawing Rights,

RTP : Reserve Tranche Position in IMF

--- : Nil or Negligible.

a : Excludes ₹544.53 crore drawn under Trust Fund.

b : Drawals under Extended Fund Facility (EFF).

c : Drawals of ₹ 1883.6 crore under Compensatory and Contingency Financing Facility and ₹ 1450.2 crore under First Credit Tranche of Stand-by Arrangement.

d : Drawals of ₹ 2217.2 crore under Compensatory and Contingency Financing Facility and ₹ 987.5 crore under First Credit Tranche of Stand-by Arrangement.

e : Includes voluntary repurchases of Rupees (₹ 199 crore) and sales of Rupees (₹ 35.2 crore) by IMF under its General Resources Account.

f : Sales of Rupees by IMF.

g : Additionally, SDR 59.9 million in May 1979, SDR 7.3 million in July 1980 and SDR 34.5 million in March 1982 were used for voluntary repurchases of Rupees.

h : SDR 66.50 million were used for repurchases of drawals under Compensatory Financing Facility.

i. SDR 33.25 million and Rs. 117.85 crore in foreign currencies were used for repurchases of drawals under CFF.

j : SDR 66.5 million and SDRs 131.25 million were used for repurchases of drawals under CFF and EFF, respectively.

k : SDR 431.25 million were used for repurchases of drawals under EFF.

l : SDR 704.17 million were used for repurchases of drawals under EFF.

m : SDR 804.18 million were used for repurchases of drawals under EFF.

n : SDR 681.25 million were used for repurchases of drawals under EFF.

o : SDR 468.75 million were used for repurchases of drawals under EFF

p : SDR 337.49 million were used for repurchases of drawals under EFF.

q : SDR 237.49 million were used for repurchases of drawals under EFF.

r : SDR 95.84 million were used for repurchases of drawals under EFF.

s : SDR 812.77 million were used for repurchases of drawals under EFF.

t : SDR 1130.48 million were used for repurchases of drawals under EFF.

u : SDR 678.38 million were used for repurchases of drawals under EFF.

v : SDR 449.29 million were used for repurchases of drawals under EFF.

w : SDR 212.46 million were used for repurchases of drawals under EFF.

1. Figures after 1965-66 are not comparable with those of the earlier years owing to devaluation of the Rupee in June 1966.
2. Also figures for July 1991 onwards are not comparable with those of earlier periods due to the downward adjustment of the Rupee effected on July 1, 1991 and July 3, 1991.
3. Drawals, Repurchase and outstanding repurchase obligations are calculated at the ruling rates of exchange.
4. While reserves pertain to end period, repurchases are for the relevant periods.
5. Gold is valued at Rs. 53.58 per 10 grams up to May 1966 and at Rs. 84.39 per 10 grams up to September 1990 and closer to international market price w.e.f. October 17, 1990.
6. Foreign exchange includes (a) foreign assets of the Reserve Bank of India and (b) Government balances held abroad up to 1955-56.
7. i) FCA excludes US $ 250.00 millon invested in foreign currency denominated bonds issued by IIFC (UK) since March 20, 2009, excludes US $ 380.00 million since September 16, 2011, excludes US$ 550 million since February 27, 2012, excludes US $ 673 million since 30th March 2012 and US $ 790 million since July 5, 2012 as also its equavalent value in Indian rupee in respective months.

   ii.) SDRs 530.73 million since March 24, 2014 (Transferred by Government of India to RBI), SDR 530.80 million since June 2014, SDR 530.92 million since September 2014, SDR 1104.74 million since January 2015, SDR 1104.96 million since June 2015. SDRs 1105.24 million since December 2015 (as also its equivalent value in Indian Rupee).

   iii.) US$ 100 million under SAARC swap arrangement with Royal Monetary Authority of Bhutan during the period from March 2013 to June 2013, US$ 400 million under SAARC swap arrangement with Central Bank of Sri Lanka during period April to October 2015 and US$ 1100 million with Central Bank of Sri Lanka since September 2015 (as also its equivalent value in Indian Rupee).
8. FCA excludes US $ 250.00 millon invested in foreign currency denominated bonds issued by IIFC (UK) since March 20, 2009, excludes US $ 380.00 million since September 16, 2011, excludes US$ 550 million since February 27, 2012, excludes US $ 673 million since 30th March 2012 and US $ 790 million since July 5, 2012 as also its equavalent value in Indian rupee in respective months.
9. Totals may not tally due to rounding off.

Table 6.1 B. Foreign Exchange Reserves

(US$ million)

End of Fiscal	Reserves					Transactions with IMF		
	Gold	RTP	SDRs	Foreign Currency Assets	Total (2+3+4+5)	Drawals	Repurchases	Outstanding repurchase obligations
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1950-51	247	...	...	1914	2161	...	...	100
1951-52	247	...	...	1568	1815	...	...	100
1952-53	247	...	...	1603	1850	...	...	100
1953-54	247	...	...	1664	1911	...	36	64
1954-55	247	...	...	1626	1873	...	36	28
1955-56	247	...	...	1648	1895	...	15	13
1956-57	247	...	...	1184	1431	126	12	128
1957-58	247	...	...	637	884	72	...	200
1958-59	247	...	...	548	795	...	...	200
1959-60	247	...	...	515	762	...	50	150
1960-61	247	...	...	390	637	...	23	128
1961-62	247	...	...	377	624	249	127	250
1962-63	247	...	...	372	619	25	...	275
1963-64	247	...	...	395	642	...	50	225
1964-65	281	...	...	243	524	99	100	225
1965-66	243	...	...	383	626	137	75	288
1966-67	243	...	...	395	638	126	57	418
1967-68	243	...	...	475	718	89	58	450
1968-69	243	...	...	526	769	...	78	372
1969-70	243	...	123	728	1094	...	167	205
1970-71	243	...	148	584	975	...	205	...
1971-72	264	...	269	661	1194	...	...	...
1972-73	293	...	297	629	1219	...	...	...
1973-74	293	...	296	736	1325	79	...	75
1974-75	304	...	293	782	1379	608	...	715
1975-76	281	...	234	1657	2172	239	...	896
1976-77	290	...	217	3240	3747	...	336	559
1977-78	319	...	200	5305	5824	...	333	249
1978-79	377	...	470	6421	7268	...	256	...
1979-80	375	...	662	6324	7361	...	145	...
1980-81	370	...	603	5850	6823	342	16	327
1981-82	335	...	473	3582	4390	692	40	964
1982-83	324	...	291	4281	4896	1968	...	2876
1983-84	320	...	230	5099	5649	1376	70	4150
1984-85	325	...	145	5482	5952	201	134	3932
1985-86	417	...	131	5972	6520	...	209	4290
1986-87	471	...	179	5924	6574	...	521	4291
1987-88	508	...	97	5618	6223	...	930	3653
1988-89	473	...	103	4226	4802	...	1070	2365
1989-90	487	...	107	3368	3962	...	873	1493
1990-91	3496	...	102	2236	5834	1858	644	2623
1991-92	3499	...	90	5631	9220	1240	460	3451
1992-93	3380	...	18	6434	9832	1623	335	4799
1993-94	4078	...	108	15068	19254	325	134	5040

Contd....

Table 6.1 B. Foreign Exchange Reserves *(Contd....)*

(US$ million)

End of Fiscal	Reserves					Transactions with IMF		
	Gold	RTP	SDRs	Foreign Currency Assets	Total (2+3+4+5)	Drawals	Repurchases	Outstanding repurchase obligations
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1994-95	4370	...	7	20809	25186	...	1146	4300
1995-96	4561	...	82	17044	21687	...	1710	2374
1996-97	4054	...	2	22367	26423	...	977	1313
1997-98	3391	...	1	25975	29367	...	615	664
1998-99	2960	...	8	29522	32490	...	102	287
1999-2000	2974	...	4	35058	38036	...	...	...
2000-01	2725	...	2	39554	42281	...	...	...
2001-02	3047	...	10	51049	54106	...	...	...
2002-03	3534	672	4	71890	76100	...	...	...
2003-04	4198	1311	2	107448	112959	...	561.3	...
2004-05	4500	1438	5	135571	141514	...	93.5	...
2005-06	5755	756	3	145108	151622	670.0	50.7	...
2006-07	6784	469	2	191924	199179	302.7	...	...
2007-08	10039	436	18	299230	309723	74.2	...	...
2008-09	9577	981	1	241426	251985	86.3	611.9	...
2009-10	17986	1380	5006	254685	279057	...	461.3	...
2010-11	22972	2947	4569	274330	304818	36.2	353.2	...
2011-12	27023	2836	4469	260069	294397	…	275.1	...
2012-13	25692	2301	4328	259726	292046	9.0	309.7	
2013-14	21567	1834	4464	276359	304223	766.7	297.8	
2014-15	19038	1292	3985	317324	341638	1705.4	104.5	
2015-16	20115	2456	1502	336104	360176	229.4	…	
2016-17	19869	2321	1446	346319	369955	298.6	…	
2017-18	21484	2079	1540	399442	424545	543.7	…	
2018-19	23071	2986	1457	385357	412871	177.1	1005.9	

Source: Reserve Bank of India

Notes:

SDRs: Special Drawing Rights RTP: Reserve Tranche Position in IMF -----: Nil or Negligible

1. For compiling figures in US dollars, gold is valued at SDR 35 per troy ounce as in the International Financial Statistics of the IMF upto October 16, 1990. Thereafter gold has been valued at international market price.
2. Conversion of foreign currency assets and SDR in US dollars is done at exchange rates of the IMF.
3. Transactions with IMF are converted at respective SDR/$ rate.
4. While reserves pertain to end period, repurchases are for the relevant periods.
5. i) FCA excludes US $ 250.00 millon invested in foreign currency denominated bonds issued by IIFC (UK) since March 20, 2009, excludes US $ 380.00 million since excludes US $ 673 million since 30th March 2012 and US $ 790 million since July 5, 2012 (as also its equivalent value in Indian Rupee).September 16, 2011, excludes US $ 550 million since February 27, 2012.

   ii.) SDRs 530.73 million since March 24, 2014 (Transferred by Government of India to RBI), SDR 530.80 million since June 2014, SDR 530.92 million since September 2014, SDR 1104.74 million since January 2015, SDR 1104.96 million since June 2015. SDRs 1105.24 million since December 2015 (as also its equivalent value in Indian Rupee).

   iii.) US$ 100 million under SAARC swap arrangement with Royal Monetary Authority of Bhutan during the period from March 2013 to June 2013, US$ 400 million under SAARC swap arrangement with Central Bank of Sri Lanka during period April to October 2015 and US$ 1100 million with Central Bank of Sri Lanka since September 2015 (as also its equivalent value in Indian Rupee).
6. Includes Rs. 31,463 crore (US$ 6,699 million) reflecting the purchase of 200 metric tonnes of gold from IMF on November 3, 2009. by the IMF done on August 28, 2009 and September 9, 2009, respectively.
7. Includes SDRs 3,082.5 million allocated under general allocation and SDRs 214.6 million allocated under special allocation
8. Totals may not tally due to rounding off.

Table 6.2. Balance of Payments as per IMF Balance of Payments Manual 5

	Items	2000-01		2012-13		2013-14		2014-15	
		₹ crore	US$ million	₹ crore	US$ million	₹ crore	US$ million	₹ crore	US$ million
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Imports (c.i.f.)	264589	57912	2732146	502237	2815918	466216	2820072	461484
2	Exports (f.o.b.)	207852	45452	1667690	306581	1931074	318607	1934210	316545
3	Trade Balance (2-1)	-56737	-12460	-1064456	-195656	-884845	-147609	-885862	-144940
4	Invisibles								
	a) Receipts	147778	32267	1218893	224044	1413843	233569	1478048	241645
	b) Payments	102639	22473	634047	116551	716134	118256	755499	123564
	(of which: Interest & Service Payments on Loans and Credits)	21948	4801	59546	10944	67747	11176	77376	12650
	c) Net	45139	9794	584846	107493	697709	115313	722549	118081
5	Current Account Balance	-11598	-2666	-479610	-88163	-187136	-32296	-163313	-26859
6	Capital Account								
	I Foreign Investment	26744	5862	254653	46711	159650	26386	449072	73456
	i) Foreign Direct Investment								
	a) Inward FDI	18404	4031	146954	26953	186830	30763	215893	35283
	b) Outward FDI	-3480	-759	-38768	-7134	-56860	-9199	-24675	-4031
	c) Net	14924	3272	108186	19819	129969	21564	191219	31251
	ii) Portfolio Investment (net)	11820	2590	146467	26891	29680	4822	257853	42205
	II Loans (net)	24459	5264	169073	31124	45901	7765	19733	3184
	i) External Assistance								
	a) Inflow	13521	2941	25747	4735	28239	4659	35408	5780
	b) Out flow	11519	2531	20421	3752	22043	3627	24787	4054
	c) Net	2002	410	5326	982	6197	1032	10622	1725
	ii) Commercial Borrowingsa								
	a) Inflow	95750	20865	817606	150351	785202	130177	718760	117575
	b) Out flow	73293	16011	653858	120209	745498	123444	709649	116116
	c) Net	22457	4854	163747	30142	39704	6733	9112	1459
	III) Banking								
	a) Receipts	44448	9744	455407	83727	654482	108049	550976	90094
	b) Payments	53592	11705	365140	67157	502818	82601	478893	78476
	c) Net	-9144	-1961	90268	16570	151664	25449	72083	11618
	IV) Rupee Debt Service (net)	-2760	-617	-313	-58	-304	-52	-489	-81
	V) Other Capital								
	a) Receipts	12948	2856	97073	17861	133801	22171	176562	28914
	b) Payments	11637	2564	125020	22908	200892	32932	169411	27806
	c) Net	1311	292	-27946	-5047	-67091	-10761	7151	1109
	VI) Errors & omissions (net)	-1369	-305	14578	2689	-6629	-983	-6312	-1021
7	Total Capital (I to VI of 6)	39241	8535	500313	91989	283190	47804	541238	88265
8	Overall Balance (5 + 7)	27643	5868	20702	3826	96054	15508	377925	61406
9	Monetary Movement								
	a) IMF Transactions								
	i) Purchases								
	ii) Repurchases	115	26						
	iii) Net	-115	-26						
	b) Increase (-)/decrease (+) in Reserves	-27258	-5842	-20702	-3826	-96054	-15508	-377925	-61406
10	Total Reserve movement (9a(iii)+9b) [(-) Increase/ (+) decrease]	-27643	-5868	-20702	-3826	-96054	-15508	-377925	-61406

Contd....

Table 6.2. Balance of Payments as per IMF Balance of Payments Manual 5 *(Contd....)*

	Items	2015-16		2016-17		2017-18		2018-19 (Apr-Dec) (P)	
		₹ crore	US$ million	₹ crore	US$ million	₹ crore	US$ million	₹ crore	US$ million
	(1)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	Imports (c.i.f.)	2592820	396444	2633395	392580	3023163	469006	2756614	395142
2	Exports (f.o.b.)	1743289	266365	1878943	280138	1991436	308970	1742466	249869
3	Trade Balance (2-1)	-849531	-130079	-754452	-112442	-1031727	-160036	-1014148	-145272
4	Invisibles								
	a) Receipts	1538693	235044	1623552	242051	1826720	283406	1608334	230298
	b) Payments	832924	127116	966016	144025	1109119	172087	956257	136890
	(*of which*: Interest & Service Payments on Loans and Credits)	88044	13443	89552	13351	93531	14510	87812	12589
	c) Net	705769	107928	657536	98026	717601	111319	652077	93407
5	Current Account Balance	-143762	-22151	-96916	-14417	-314126	-48717	-362071	-51865
6	Capital Account								
	I Foreign Investment	208579	31891	289394	43224	337684	52401	104120	14766
	i) Foreign Direct Investment (FDI)								
	a) Inward FDI	294258	44907	283292	42215	253977	39431	233821	33640
	b) Outward FDI	-58476	-8886	-44379	-6603	-58925	-9144	-61342	-8820
	c) Net	235782	36021	238913	35612	195052	30286	172479	24820
	ii) Portfolio Investment (net)	-27203	-4130	50482	7612	142632	22115	-68359	-10054
	II) Loans (net)	-29767	-4634	16038	2379	107422	16660	40478	5498
	i) External Assistance								
	a) Inflow	40244	6123	43561	6495	49750	7718	42430	6052
	b) Out flow	30229	4619	30056	4482	30773	4774	27121	3892
	c) Net	10015	1505	13505	2013	18977	2944	15309	2160
	ii) Commercial Borrowings [a]								
	a) Inflow	748159	114200	764967	114037	898500	139393	395146	56612
	b) Out flow	787941	120339	762434	113672	810055	125676	369978	53274
	c) Net	-39781	-6139	2533	366	88445	13717	25168	3338
	III) Banking								
	a) Receipts	579805	88884	561610	83669	616727	95673	494388	71192
	b) Payments	514547	78254	672787	100285	512300	79483	387916	55696
	c) Net	65257	10630	-111177	-16616	104427	16190	106472	15496
	IV) Rupee Debt Service	-476	-73	-665	-99	-482	-75	-163	-24
	V) Other Capital								
	a) Receipts	160653	24419	240945	35925	266106	41282	149905	21427
	b) Payments	137909	21103	190199	28366	226037	35069	152304	21887
	c) Net	22744	3315	50747	7559	40069	6213	-2399	-461
	VI) Errors & Omissions	-6746	-1073	-3187	-480	5823	902	-6455	-912
7	Total Capital (I to VI of 6)	259592	40055	241150	35967	594942	92292	242053	34363
8	Overall Balance (5 + 7)	115830	17905	144234	21550	280816	43574	-120018	-17502
9	Monetary Movement								
	a) IMF Transactions								
	i) Purchases								
	ii) Repurchases								
	iii) Net								
	b) Increase (-)/decrease (+) in Reserves	-115830	-17905	-144234	-21550	-280816	-43574	120018	17502
10	Total Reserve movement (9a(iii)+9b) [(-) Increase/ (+) decrease]	-115830	-17905	-144234	-21550	-280816	-43574	120018	17502

Source: Reserve Bank of India

Notes:

P: Preliminary, PR : Partially Revised, a: Commercial borrowings include short term credit.

1. Grants received are covered under item 4(a).
2. Estimated interest accrued and credited to NRI deposits during the year has been treated as notional outflow under invisible payments and added as reinvestment in NRI deposits under banking capital.
3. In accordance with the provision of IMF's Balance of Payments Manual (5th Edition), gold purchased from the Government of India by the RBI has been excluded from the BOP statistics. Data for the earlier years has, therefore, been amended by making suitable adjustments in "Other Capital-Receipts and Foreign Exchange Reserves".
   Similarly, item "SDR Allocation" has been deleted from the table.
4. With effect from 1996-97, private transfer receipts include redemption in rupees of both principal and interest under Non-Resident External (Rupee) Account [NRE(R)A] and Non-Resident Non-Repatriable Rupee Deposit [NR(NR)RD] schemes. This marks an improvement in data reporting.
5. Totals may not tally due to rounding off.

Table 6.3 A. Balance of Payments as per Balance of Payments Manual 6

(₹ crore)

	Items	2015-16			2016-17			2017-18			2018-19 Apr-Dec (P)		
		Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Current Account (1.A+1.B+1.C)	3281796	3425146	-143350	3502402	3598871	-96469	3818016	4131780	-313765	3350748	3712424	-361676
1.A	Goods and Services (1.A.a+1.A.b)	2753734	3147437	-393703	2980310	3276311	-296002	3248907	3780666	-531759	2814798	3408069	-593271
1.A.a	Goods	1743289	2592820	-849531	1878943	2633395	-754452	1991436	3023163	-1031727	1742466	2756614	-1014148
1.A.b	Services (1.A.b.1 to 1.A.b.13)	1010446	554617	455828	1101366	642916	458450	1257472	757503	499968	1072333	651456	420877
1.A.b.1	Manufacturing services on physical inputs owned by others	1200	302	898	768	256	512	949	282	668	1289	214	1074
1.A.b.2	Maintenance and repair services n.i.e.	995	2119	-1124	1221	2372	-1151	1363	3528	-2165	1034	5916	-4882
1.A.b.3	Transport	91660	98618	-6958	106312	94773	11539	112418	113488	-1071	99777	105379	-5602
1.A.b.4	Travel	139542	96756	42786	155929	110318	45611	182768	125778	56990	145702	115398	30304
1.A.b.5	Construction	10256	6268	3987	14383	5911	8473	14541	10081	4460	18375	13256	5119
1.A.b.6	Insurance and pension services	13113	7530	5583	14795	10033	4761	16154	10957	5197	13561	8293	5268
1.A.b.7	Financial services	32271	20487	11784	34193	39262	-5069	33271	35691	-2420	26187	20074	6112
1.A.b.8	Charges for the use of intellectual property n.i.e.	3191	31952	-28761	3807	38368	-34561	4720	44339	-39618	3979	43265	-39286
1.A.b.9	Telecommunications, computer, and information services	501263	26732	474531	516771	32457	484314	514603	41887	472717	445568	37458	408110
1.A.b.10	Other business services	189693	203860	-14167	220981	216754	4227	240722	236096	4626	201124	204372	-3248
1.A.b.11	Personal, cultural, and recreational services	8658	7913	746	9338	14731	-5394	10430	14862	-4432	9765	13422	-3656
1.A.b.12	Government goods and services n.i.e.	3788	5677	-1890	3946	4021	-75	4280	5119	-839	3159	5786	-2627
1.A.b.13	Others n.i.e.	14816	46401	-31585	18921	73660	-54739	121252	115396	5856	102812	78620	24192
1.B	Primary Income	96324	256104	-159779	109268	285668	-176400	121579	306391	-184813	128019	270797	-142778
1.C	Secondary Income	431737	21605	410132	412825	36892	375933	447530	44723	402807	407930	33557	374373
2	Capital Account (2.1+2.2)	1987	1719	268	2910	1909	1001	2515	2700	-186	1781	2364	-583
2.1	Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	336	242	94	680	416	264	946	674	273	498	432	66
2.2	Capital transfers	1651	1477	174	2230	1493	737	1568	2027	-458	1283	1932	-649
3	Financial Account (3.1 to 3.5)	3339775	3189946	149829	3698957	3600303	98655	4146357	3838230	308128	2789725	2421011	368714
3.1	Direct Investment (3.1A+3.1B)	392422	156640	235782	474811	235898	238913	415421	220369	195052	336609	164129	172479

Contd....

Table 6.3 A. Balance of Payments as per Balance of Payments Manual 6 *(Contd.....)*

(₹ crore)

	Items	2015-16			2016-17			2017-18			2018-19 Apr-Dec (P)		
		Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
3.1.A	Direct Investment in India	364146	69888	294258	404057	120765	283292	392944	138968	253977	324989	91168	233821
3.1.B	Direct Investment by India	28276	86752	-58476	70753	115133	-44379	22477	81402	-58925	11620	72962	-61342
3.2	Portfolio Investment	1412345	1441933	-29588	1607507	1557026	50482	1902228	1759597	142632	1240190	1321317	-81127
3.2.A	Portfolio Invesment in India	1406792	1432998	-26207	1592617	1541095	51522	1892201	1749253	142948	1220461	1314064	-93603
3.2.B	Portfolio Invesment by India	5553	8935	-3381	14890	15931	-1040	10027	10344	-317	19729	7253	12476
3.3	Financial derivatives (other than reserves) and employee stock options	95295	90417	4878	155252	89346	65906	127419	145913	-18494	105994	103372	2622
3.4	Other investment	1434150	1379563	54587	1453014	1565426	-112412	1701289	1431535	269754	986913	832192	154721
3.4.1	Other equity (ADRs/GDRs)	2385	0	2385	0	0	0	0	0	0	12768	0	12768
3.4.2	Currency and deposits	392397	289262	103136	321269	403019	-81750	386460	324073	62387	308243	265170	43073
3.4.3	Loans (External Assistance, ECBs and Banking Capital)	386224	444261	-58037	435424	492278	-56854	530621	470765	59856	397345	298308	99037
3.4.4	Insurance, pension, and standardized guarantee schemes	2674	7972	-5298	2976	4941	-1965	762	11597	-10835	1142	6745	-5604
3.4.5	Trade credit and advances	589587	599194	-9607	613446	569981	43465	647895	558289	89606	226376	221537	4840
3.4.6	Other accounts receivable/payable—other	60883	38874	22009	79900	95207	-15307	135550	66810	68739	41040	40433	607
3.4.7	Special drawing rights	0	0	0	0	0	0	0	0	0	0	0	0
3.5	Reserve assets	5563	121393	-115830	8373	152607	-144234	0	280816	-280816	120018	0	120018
4	Total assets/liabilities	3339775	3189946	149829	3698957	3600303	98655	4146357	3838230	308128	2789725	2421011	368714
5	Net errors and omissions	2796	9542	-6746	5715	8903	-3187	12249	6426	5823	3521	9976	-6455

Source: Reserve Bank of India

Notes:

P: Preliminary, PR: Partially Revised

1. Totals may not tally due to rounding off.

Table 6.3 B. Balance of Payments as per Balance of Payments Manual 6

(US$ million)

	Items	2015-16			2016-17			2017-18			2018-19 Apr-Dec (P)		
		Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	Current Account (1.A+1.B+1.C)	501381	523469	-22088	522175	536525	-14350	592354	641015	-48661	480160	531968	-51808
1.A	Goods and Services (1.A.a+1.A.b)	420676	481079	-60402	444335	488432	-44098	504059	586533	-82474	403387	488406	-85019
1.A.a	Goods	266365	396444	-130079	280138	392580	-112442	308970	469006	-160036	249869	395142	-145272
1.A.b	Services (1.A.b.1 to 1.A.b.13)	154311	84635	69676	164197	95852	68345	195089	117527	77562	153518	93264	60254
1.A.b.1	Manufacturing services on physical inputs owned by others	183	45	138	115	38	76	147	44	104	182	31	151
1.A.b.2	Maintenance and repair services n.i.e.	152	324	-171	182	354	-172	211	547	-336	147	842	-695
1.A.b.3	Transport	14004	15080	-1076	15851	14132	1719	17441	17608	-166	14311	15094	-783
1.A.b.4	Travel	21268	14792	6476	23244	16451	6792	28355	19516	8839	20858	16583	4275
1.A.b.5	Construction	1562	955	607	2144	881	1263	2256	1565	691	2641	1902	739
1.A.b.6	Insurance and pension services	2002	1151	852	2206	1496	710	2506	1700	806	1942	1188	754
1.A.b.7	Financial services	4944	3135	1809	5099	5852	-754	5164	5537	-373	3747	2868	879
1.A.b.8	Charges for the use of intellectual property n.i.e.	489	4891	-4402	568	5720	-5152	732	6877	-6145	572	6202	-5629
1.A.b.9	Telecommunications, computer, and information services	76563	4076	72487	77044	4839	72206	79840	6499	73341	63843	5380	58463
1.A.b.10	Other business services	28994	31095	-2101	32946	32317	629	37346	36630	715	28822	29282	-460
1.A.b.11	Personal, cultural, and recreational services	1325	1221	104	1392	2197	-805	1618	2307	-688	1402	1923	-521
1.A.b.12	Government goods and services n.i.e.	579	869	-291	588	600	-11	664	794	-130	454	829	-375
1.A.b.13	Others n.i.e.	2245	7000	-4755	2818	10976	-8158	18807	17904	903	14597	11141	3456
1.B	Primary Income	14703	39078	-24375	16291	42593	-26302	18862	47542	-28681	18290	38742	-20452
1.C	Secondary Income	66002	3312	62690	61550	5500	56050	69433	6940	62494	58483	4820	53662
2	Capital Account (2.1+2.2)	304	263	41	434	285	150	390	419	-29	257	337	-80
2.1	Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	51	37	13	101	62	40	147	105	42	74	61	13
2.2	Capital transfers	253	226	27	333	223	110	243	314	-71	183	276	-93
3	Financial Account (3.1 to 3.5)	510639	487519	23120	551471	536790	14680	643243	595455	47788	400623	347822	52800
3.1	Direct Investment (3.1A+3.1B)	59878	23857	36021	70784	35172	35612	64461	34175	30286	48320	23500	24820
3.1.A	Direct Investment in India	55559	10652	44907	60220	18005	42215	60974	21544	39431	46668	13028	33640

Contd....

Table 6.3 B. Balance of Payments as per Balance of Payments Manual 6 *(Contd.....)*

(US$ million)

	Items	2015-16			2016-17			2017-18			2018-19 Apr-Dec (P)		
		Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
3.1.B	Direct Investment by India	4320	13205	-8886	10564	17167	-6603	3487	12632	-9144	1652	10472	-8820
3.2	Portfolio Investment	216181	220685	-4503	239738	232127	7612	295084	272969	22115	177948	189822	-11874
3.2A	Portfolio Invesment in India	215334	219349	-4016	237514	229748	7766	293529	271364	22165	175087	188780	-13693
3.2.B	Portfolio Invesment by India	848	1335	-487	2224	2378	-154	1556	1605	-50	2861	1042	1820
3.3	Financial derivatives (other than reserves) and employee stock options	14522	13891	631	23148	13327	9822	19766	22636	-2870	15113	14819	293
3.4	Other investment	219202	210326	8876	216558	233373	-16815	263932	222100	41832	141740	119681	22059
3.4.1	Other equity (ADRs/GDRs)	373		373	0	0	0	0	0	0	1820	0	1820
3.4.2	Currency and deposits	60024	44216	15808	47928	60009	-12081	59961	50286	9675	44278	38001	6276
3.4.3	Loans (External Assistance, ECBs and Banking Capital)	59140	67343	-8203	64821	73444	-8623	82309	73033	9276	56954	42790	14165
3.4.4	Insurance, pension, and standardized guarantee schemes	407	1194	-787	443	737	-294	118	1801	-1683	167	984	-818
3.4.5	Trade credit and advances	90043	91653	-1610	91453	84986	6467	100514	86614	13900	32624	32071	553
3.4.6	Other accounts receivable/payable—other	9215	5920	3294	11914	14198	-2285	21029	10365	10664	5898	5835	63
3.4.7	Special drawing rights				0	0	0				0	0	0
3.5	Reserve assets	856	18761	-17905	1242	22792	-21550	0	43574	-43574	17502	0	17502
4	Total assets/liabilities	510639	487519	23120	551471	536790	14680	643243	595455	47788	400623	347822	52800
5	Net errors and omissions	420	1493.415769	-1073	849	1329	-480	1900	998	902	502	1414	-912

Notes:

P: Preliminary, PR: Partially Revised

1. Totals may not tally due to rounding off

Table 6.4. Exchange Rate of Rupee vis-a-vis Selected Currencies of the World

(₹ per unit of foreign currency)

Year /Months	US dollar	Pound sterling	Euroa	Yen	Canadian dollar	Turkish lira	Indonesian rupiah	Brazillian real	Mexican peso	Korean won	Pakistan rupee	Thailand baht	SDR
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1992-93							**(Official Rate)**						
April	25.890	45.461		0.194	21.800	0.004	0.013	0.012	0.009	0.033	1.049	1.021	35.485
May	25.890	46.838		0.198	21.586	0.004	0.013	0.010	0.009	0.033	1.056	1.014	35.931
June	25.890	47.788		0.204	21.651	0.004	0.013	0.008	0.009	0.033	1.085	1.020	36.551
July	25.890	49.721		0.206	21.764	0.004	0.013	0.007	0.009	0.033	1.119	1.025	37.385
August	25.890	50.384		0.205	21.734	0.004	0.013	0.006	0.009	0.033	1.035	1.027	37.709
September	25.890	47.567		0.211	21.161	0.004	0.013	0.005	0.009	0.034	1.035	1.028	37.695
October	25.890	42.862		0.214	20.805	0.003	0.013	0.004	0.009	0.033	1.054	1.026	37.162
November	25.890	39.535		0.209	20.413	0.003	0.013	0.003	0.008	0.033	1.021	1.019	35.910
December	26.154	40.578		0.211	20.574	0.003	0.013	0.002	0.008	0.033	1.028	1.026	36.329
January	26.199	40.141		0.210	20.500	0.003	0.013	0.002	8.435b	0.033	1.025	1.028	36.082
February	26.199	37.704		0.217	20.788	0.003	0.013	0.002	8.460	0.033	1.010	1.029	35.939
							(Market Rate) [c]						
March 1993	31.526	45.952		0.270	25.279	0.003	0.015	0.001	10.151	0.040	1.198	1.242	43.521
1993-94	31.366	47.206		0.291	23.956	0.002	0.015	0.122	10.009	0.039	1.083	1.240	43.886
2000-01	45.684	67.552	41.483	0.414	30.383	0.007d	0.005	24.153	4.788	0.039	0.820	1.100	59.546
2001-02	47.692	68.319	42.181	0.382	30.473	0.004d	0.005	19.549	5.183	0.037	0.772	1.069	60.215
2002-03	48.395	74.819	48.090	0.397	31.253	0.003d	0.005	15.489	4.806	0.040	0.819	1.132	64.126
2003-04	45.952	77.739	53.990	0.407	33.991	0.003d	0.005	15.713	4.248	0.039	0.798	1.132	65.690
2004-05	44.932	82.864	56.555	0.418	35.205	8.269e	0.005	15.707	3.964	0.041	0.763	1.121	66.928
2005-06	44.273	79.047	53.912	0.391	37.137	32.843	0.045	19.170	4.122	0.044	0.741	1.096	64.490
2006-07	45.250	85.643	58.051	0.387	39.765	31.156	0.005	21.044	4.113	0.048	0.748	1.236	67.254
2007-08	40.261	80.841	57.060	0.353	39.042	32.155	0.004	21.762	3.703	0.043	0.658	1.194	62.651
2008-09	45.993	78.316	65.058	0.462	40.875	32.678	0.004	23.569	3.853	0.038	0.613	1.346	71.277
2009-10	47.443	75.781	67.051	0.511	43.567	31.266	0.005	25.455	3.616	0.039	0.572	1.409	73.733
2010-11	45.563	70.881	60.232	0.533	44.840	29.888	0.005	26.385	3.663	0.040	0.534	1.464	69.723
2011-12	47.923	76.391	65.894	0.607	48.222	27.682	0.005	28.222	3.788	0.043	0.547	1.564	75.313
2012-13	54.410	85.971	70.069	0.658	54.347	30.291	0.006	27.092	4.171	0.049	0.572	1.768	83.026
2013-14	60.502	96.306	81.175	0.604	57.437	30.100	0.006	26.907	4.679	0.056	0.587	1.924	92.260
2014-15	61.144	98.573	77.521	0.558	53.780	27.223	0.005	24.840	4.457	0.058	0.609	1.882	90.796

Contd....

Table 6.4. Exchange Rate of Rupee vis-a-vis Selected Currencies of the World *(Contd.....)*

(₹ per unit of foreign currency)

Year /Months	US dollar	Pound sterling	Euroa	Yen	Canadian dollar	Turkish lira	Indonesian rupiah	Brazillian real	Mexican peso	Korean won	Pakistan rupee	Thailand baht	SDR
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**
2015-16	65.468	98.726	72.289	0.546	49.945	23.060	0.005	18.378	3.944	0.057	0.632	1.872	91.345
2016-17	67.072	87.690	73.609	0.620	51.113	21.067	0.005	20.382	3.489	0.058	0.641	1.908	92.616
2017-18	64.455	85.513	75.438	0.582	50.261	17.558	0.004	20.037	3.483	0.058	0.604	1.953	90.899
2018-19	69.923	91.786	80.958	0.630	53.300	13.547	0.005	18.490	3.617	0.063	0.548	2.164	98.026
2018-19						**(Market Rate)c**							
April	65.636	92.569	80.661	0.610	51.575	16.155	0.005	19.257	3.572	0.062	0.568	2.097	95.242
May	67.539	90.973	79.825	0.615	52.490	15.281	0.005	18.602	3.456	0.063	0.585	2.113	96.164
June	67.793	90.067	79.162	0.616	51.646	14.645	0.005	17.919	3.340	0.062	0.572	2.087	95.858
July	68.693	90.496	80.299	0.617	52.323	14.386	0.005	17.967	3.619	0.061	0.553	2.065	96.540
August	69.547	89.693	80.439	0.626	53.331	11.745	0.005	17.697	3.692	0.062	0.568	2.107	97.110
September	72.215	94.189	84.216	0.645	55.389	11.453	0.005	17.578	3.801	0.065	0.589	2.216	101.226
October	73.632	95.870	84.610	0.653	56.583	12.681	0.005	19.564	3.833	0.065	0.568	2.247	102.260
November	71.854	92.622	81.616	0.634	54.441	13.443	0.005	18.973	3.550	0.064	0.538	2.181	99.372
December	70.731	89.583	80.479	0.630	52.730	13.315	0.005	18.192	3.522	0.063	0.511	2.164	98.168
January	70.733	91.158	80.831	0.650	53.169	13.222	0.005	18.911	3.689	0.063	0.510	2.225	98.629
February	71.222	92.668	80.848	0.646	53.933	13.507	0.005	19.128	3.712	0.064	0.515	2.276	99.094
March	69.479	91.549	78.512	0.625	51.987	12.733	0.005	18.097	3.613	0.061	0.499	2.190	96.654
2019-20						**(Market Rate)c**							
April	69.427	90.527	78.031	0.622	51.913	12.057	0.005	17.817	3.664	0.061	0.492	2.180	96.318

Source: Reserve Bank of India

Notes:

a : The Euro came into existence on January 1, 1999.

b : Peso revalued in January 1993, 1000 old Peso = 1 New Peso.

c : Indicative rates announced by Foreign Exchange Dealers Association of India (FEDAI).

d: 100 Turkish Lira

e : Turkish Lira has been replaced by New Lira w.e.f. 1.1.2005.

1. Annual/monthly averages. During March 1992 to February 1993, a dual exchange rate system was prevalent, in which the official rate was fixed by the RBI and the market rate was determined in the Inter-Bank market for the US dollar.
2. The data for 2001-02 in respect of Deutsche Mark, French Franc and Italian Lira pertain to 11 months only as Germany, France and Italy accepted the Euro as their national currency w.e.f. March 1, 2002.
3. Figures of US dollar, Pound sterling, Euro and Japanese yen from May 2012 onwards are RBI's reference rates.
4. Financial Benchmarks India Private Limited (FBIL) commenced dissemination of reference rates w.e.f. July 10, 2018.

Table 6.5. Trends in Nominal and Real Effective Exchange Rate of Rupee

(Tarde Based Weights)

Year/month (Average)	Nominal effective exchange rate (NEER) 6-currency Index	Real effective exchange rate (REER) 6-Currency Index	Nominal effective exchange rate (NEER) 36-currency Index	Real effective exchange rate (REER) 36-Currency Index
(1)	(2)	(3)	(4)	(5)
Base Year: 1993-94=100				
1994-95	96.86	105.71	99.21	104.59
1995-96	88.45	101.14	91.65	98.42
1996-97	86.73	100.97	89.08	96.64
1997-98	87.80	104.24	92.17	100.95
1998-99	77.37	95.99	88.76	92.84
1999-00	77.03	97.52	90.90	95.75
2000-01	77.30	102.65	92.11	100.04
2001-02	75.89	102.49	91.52	100.87
2002-03	71.09	97.43	89.22	98.19
2003-04	69.75	98.85	87.15	99.50
2004-05	69.26	101.35	87.28	100.05
Base Year: 2004-05=100				
2005-06	103.04	104.45	102.24	102.38
2006-07	98.09	103.82	97.63	100.76
2007-08	104.62	113.44	104.75	109.20
2008-09	90.42	103.94	93.34	99.65
2009-10	87.07	110.73	90.94	103.88
2010-11	91.83	124.50	93.54	112.68
2011-12	84.44	121.17	87.38	110.27
2012-13	75.59	117.15	78.32	105.57
2013-14	67.76	112.80	72.32	103.27
2014-15	68.60	119.92	74.07	108.96
2015-16	67.52	122.71	74.75	112.09
2016-17	66.86	125.17	74.65	114.52
2017-18	67.91	129.19	76.94	119.71
2018-19 (P)	63.07	121.70	72.63	113.99
2018-19 (P)				
April	64.53	123.47	74.44	116.26
May	63.84	123.06	73.57	115.15
June	64.10	123.18	73.94	115.94
July	64.03	123.37	73.68	115.84
August	63.84	123.63	73.43	115.71
September	61.35	118.69	70.94	111.31
October	60.64	117.29	69.87	109.78
November	62.40	121.25	71.64	113.05
December	63.23	122.74	72.72	114.51
January	62.76	120.67	72.23	113.27
February	62.29	119.72	71.64	112.06
March	63.88	123.30	73.52	115.00
2019-20 (P)				
April	64.07	123.33	73.75	115.37

Source: Reserve Bank of India P: Provisional

Notes:

1. REER figures for the period 1994-95 to 2004-05 are based on Wholesale Price Index (WPI).
2. REER figures for the period 2005-06 to 2014-15 are based on Consumer Price Index (CPI).

Table 7.1 A. Exports, Imports and Trade Balance

Year	Exports (including re-exports) (₹crore)	Imports (₹ crore)	Trade Balance (₹ crore)	Rate of Change	
				Export	Import
				(per cent)	
(1)	(2)	(3)	(4)	(5)	(6)
1949-50	485	617	-132	--	--
1950-51	606	608	-2	24.9	-1.5
1951-52	716	890	-174	18.2	46.4
1952-53	578	702	-124	-19.3	-21.1
1953-54	531	610	-79	-8.1	-13.1
1954-55	593	700	-107	11.7	14.8
1955-56	609	774	-165	2.7	10.6
1956-57	605	841	-236	-0.7	8.7
1957-58	561	1035	-474	-7.3	23.1
1958-59	581	906	-325	3.6	-12.5
1959-60	640	961	-321	10.2	6.1
1960-61	642	1122	-480	0.3	16.8
1961-62	660	1090	-430	2.8	-2.9
1962-63	685	1131	-446	3.8	3.8
1963-64	793	1223	-430	15.8	8.1
1964-65	816	1349	-533	2.9	10.3
1965-66	810	1409	-599	-0.7	4.4
1966-67	1157	2078	-921	42.8	47.5
1967-68	1199	2008	-809	3.6	-3.4
1968-69	1358	1909	-551	13.3	-4.9
1969-70	1413	1582	-169	4.1	-17.1
1970-71	1535	1634	-99	8.6	3.3
1971-72	1608	1825	-217	4.8	11.7
1972-73	1971	1867	104	22.6	2.3
1973-74	2523	2955	-432	28.0	58.3
1974-75	3329	4519	-1190	31.9	52.9
1975-76	4036	5265	-1229	21.2	16.5
1976-77	5142	5074	68	27.4	-3.6
1977-78	5408	6020	-612	5.2	18.6
1978-79	5726	6811	-1085	5.9	13.1
1979-80	6418	9143	-2725	12.1	34.2
1980-81	6711	12549	-5838	4.6	37.3
1981-82	7806	13608	-5802	16.3	8.4
1982-83	8803	14293	-5490	12.8	5.0
1983-84	9771	15831	-6060	11.0	10.8
1984-85	11744	17134	-5390	20.2	8.2
1985-86	10895	19658	-8763	-7.2	14.7
1986-87	12452	20096	-7644	14.3	2.2
1987-88	15674	22244	-6570	25.9	10.7
1988-89	20232	28235	-8003	29.1	26.9
1989-90	27658	35328	-7670	36.7	25.1

Contd....

Table 7.1 A. Exports, Imports and Trade Balance *(Contd....)*

Year	Exports (including re-exports) (₹crore)	Imports (₹ crore)	Trade Balance (₹ crore)	Rate of Change	
				Export	Import
				(per cent)	
(1)	(2)	(3)	(4)	(5)	(6)
1990-91	32553	43198	-10645	17.7	22.3
1991-92	44041	47851	-3810	35.3	10.8
1992-93	53688	63375	-9687	21.9	32.4
1993-94	69751	73101	-3350	29.9	15.3
1994-95	82674	89971	-7297	18.5	23.1
1995-96	106353	122678	-16325	28.6	36.4
1996-97	118817	138920	-20103	11.7	13.2
1997-98	130100	154176	-24076	9.5	11.0
1998-99	139752	178332	-38580	7.4	15.7
1999-00	159095	215529	-56434	13.8	20.9
2000-01	201356	228307	-26950	26.6	5.9
2001-02	209018	245200	-36182	3.8	7.4
2002-03	255137	297206	-42069	22.1	21.2
2003-04	293367	359108	-65741	15.0	20.8
2004-05	375340	501065	-125725	27.9	39.5
2005-06	456418	660409	-203991	21.6	31.8
2006-07	571779	840506	-268727	25.3	27.3
2007-08	655864	1012312	-356448	14.7	20.4
2008-09	840755	1374436	-533681	28.2	35.8
2009-10	845534	1363736	-518202	0.6	-0.8
2010-11	1142922	1683467	-540545	35.2	23.4
2011-12	1465959	2345463	-879504	28.3	39.3
2012-13	1634319	2669162	-1034843	11.5	13.8
2013-14	1905011	2715434	-810423	16.6	1.7
2014-15	1896348	2737087	-840738	-0.5	0.8
2015-16	1716384	2490306	-773921	-9.5	-9.0
2016-17	1849434	2577675	-728242	7.8	3.5
2017-18	1956515	3001033	-1044519	5.8	16.4
2018-19 (P)	2307663	3594373	-1286710	18.0	19.8

Source : Directorate General of Commercial Intelligence & Statistics (DGCI&S), Kolkata

Notes: P: Provisional.

1. For the years 1956-57, 1957-58, 1958-59 and 1959-60, the data are as per the Fourteenth Report of the Estimates Committee (1971-72) of the erstwhile Ministry of Foreign Trade.

Table 7.1 B. Exports, Imports and Trade Balance

Year	Exports (including re-exports) (US $ million)	Imports (US $ million)	Trade Balance (US $ million)	Rate of Change	
				Export	Import
				(per cent)	
(1)	(2)	(3)	(4)	(5)	(6)
1949-50	1016	1292	-276	--	--
1950-51	1269	1273	-4	24.9	-1.5
1951-52	1490	1852	-362	17.4	45.5
1952-53	1212	1472	-260	-18.7	-20.5
1953-54	1114	1279	-165	-8.1	-13.1
1954-55	1233	1456	-223	10.7	13.8
1955-56	1275	1620	-345	3.4	11.3
1956-57	1259	1750	-491	-1.3	8.0
1957-58	1171	2160	-989	-7.0	23.4
1958-59	1219	1901	-682	4.1	-12.0
1959-60	1343	2016	-673	10.2	6.0
1960-61	1346	2353	-1007	0.2	16.7
1961-62	1381	2281	-900	2.6	-3.1
1962-63	1437	2372	-935	4.1	4.0
1963-64	1659	2558	-899	15.4	7.8
1964-65	1701	2813	-1112	2.5	10.0
1965-66	1693	2944	-1251	-0.5	4.7
1966-67	1628	2923	-1295	-3.8	-0.7
1967-68	1586	2656	-1070	-2.6	-9.1
1968-69	1788	2513	-725	12.7	-5.4
1969-70	1866	2089	-223	4.4	-16.9
1970-71	2031	2162	-131	8.8	3.5
1971-72	2153	2443	-290	6.0	13.0
1972-73	2550	2415	135	18.4	-1.1
1973-74	3209	3759	-550	25.8	55.7
1974-75	4174	5666	-1492	30.1	50.7
1975-76	4665	6084	-1419	11.8	7.4
1976-77	5753	5677	76	23.3	-6.7
1977-78	6316	7031	-715	9.8	23.9
1978-79	6978	8300	-1322	10.5	18.0
1979-80	7947	11321	-3374	13.9	36.4
1980-81	8486	15869	-7383	6.8	40.2
1981-82	8704	15174	-6470	2.6	-4.4
1982-83	9107	14787	-5680	4.6	-2.6
1983-84	9449	15311	-5862	3.8	3.5
1984-85	9878	14412	-4534	4.5	-5.9
1985-86	8904	16067	-7163	-9.9	11.5
1986-87	9745	15727	-5982	9.4	-2.1
1987-88	12089	17156	-5067	24.1	9.1
1988-89	13970	19497	-5527	15.6	13.6
1989-90	16612	21219	-4607	18.9	8.8

Contd....

Table 7.1 B. Exports, Imports and Trade Balance *(Contd....)*

Year	Exports (including re-exports) (US $ million)	Imports (US $ million)	Trade Balance (US $ million)	Rate of Change	
				Export	Import
				(per cent)	
(1)	(2)	(3)	(4)	(5)	(6)
1990-91	18143	24075	-5932	9.2	13.5
1991-92	17865	19411	-1546	-1.5	-19.4
1992-93	18537	21882	-3345	3.8	12.7
1993-94	22238	23306	-1068	20.0	6.5
1994-95	26330	28654	-2324	18.4	22.9
1995-96	31797	36678	-4881	20.8	28.0
1996-97	33470	39133	-5663	5.3	6.7
1997-98	35006	41484	-6478	4.6	6.0
1998-99	33218	42389	-9171	-5.1	2.2
1999-2000	36715	49738	-13023	10.5	17.3
2000-01	44076	49975	-5899	20.0	0.5
2001-02	43827	51413	-7587	-0.6	2.9
2002-03	52719	61412	-8693	20.3	19.4
2003-04	63843	78149	-14307	21.1	27.3
2004-05	83536	111517	-27981	30.8	42.7
2005-06	103091	149166	-46075	23.4	33.8
2006-07	126414	185735	-59321	22.6	24.5
2007-08	163132	251654	-88522	29.0	35.5
2008-09	185295	303696	-118401	13.6	20.7
2009-10	178751	288373	-109621	-3.5	-5.0
2010-11	251136	369769	-118633	40.5	28.2
2011-12	305964	489319	-183356	21.8	32.3
2012-13	300401	490737	-190336	-1.8	0.3
2013-14	314405	450200	-135794	4.7	-8.3
2014-15	310338	448033	-137695	-1.3	-0.5
2015-16	262291	381008	-118717	-15.5	-15.0
2016-17	275852	384357	-108505	5.2	0.9
2017-18	303526	465581	-162055	10.0	21.1
2018-19 (P)	329536	514034	-184498	8.8	10.4

Source : DGCI&S, Kolkata

Notes: P: Provisional.

1. For the years 1956-57, 1957-58, 1958-59 and 1959-60, the data are as per the Fourteenth Report of the Estimates Committee (1971-72) of the erstwhile Ministry of Foreign Trade.

Table 7.2 A. Principal Imports

Quantity : Thousand tonnes

		Value : ₹ crore & US $ million								
		1960-61			1970-71			1980-81		
		Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
I.	**Food and live animals chiefly for food (excl. cashew raw)**	...	214	449	...	242	321	...	380	481
	of which:									
I.1	Cereals and cereal preparations	3747.7	181	380	3343.2	213	282	400.8	100	127
II.	**Raw materials and intermediate manufactures**	...	527	1105	...	889	1176	...	9760	12341
II.1	Cashewnuts (unprocessed)	na	...	...	169.4	29	39	25	9	11
II.2	Crude rubber (including synthetic and reclaimed)	36.2	11	23	7.8	4	5	26.2	32	40
II.3	Fibres	...	101	212	...	127	168	...	164	208
	of which:									
II.3.1	Synthetic and regenerated fibres (man-made fibres)	0.2	...	...	15.8	9	12	68.8	97	122
II.3.2	Raw wool	1.9	1	2	19	15	20	18.8	43	55
II.3.3	Raw cotton	237.1	82	172	139.1	99	131	na	...	...
II.3.4	Raw jute	100.4	8	17	0.7	...	0	8	1	1
II.4	Petroleum, oil and lubricants	800	69	145	12767	136	180	23537	5264	6656
II.5	Animal and vegetable oils and fats	...	5	10	...	39	51	...	709	896
	of which:									
II.5.1	Edible oils	31.1	4	8	84.7	23	31	1633.3	677	857
II.6	Fertilizers and chemical products	...	88	185	...	217	286	...	1490	1884
	of which:									
II.6.1	Fertilizers and fertilizer mfg	307	13	27	2392.7	86	113	5560.2	818	1034
II.6.2	Chemical elements and compounds	...	39	82	...	68	90	...	358	453
II.6.3	Dyeing, tanning and colouring material	...	1	2	...	9	12	...	21	26
II.6.4	Medicinal and pharmaceutical products	...	10	21	...	24	32	...	85	107
II.6.5	Plastic material, regenerated cellulose and artificial resins	...	9	19	...	8	11	...	121	154
II.7	Pulp and waste paper	80.3	7	15	71.7	12	16	36.9	18	23
II.8	Paper, paper board and manufactures thereof	55.6	12	25	159	25	33	371.4	187	236
II.9	Non-metallic mineral manufactures	...	6	13	...	33	44	...	555	702
	of which:									
II.9.1	Pearls, precious and semiprecious stones, unworked or worked	...	1	2	...	25	33	...	417	527
II.10	Iron and steel	1325.2	123	258	683.4	147	194	2031.1	852	1078
II.11	Non-ferrous metals	...	47	99	...	119	158	...	477	604
III.	**Capital goods** [a]	...	356	747	...	404	534	...	1910	2416
III.1	Manufactures of metals	...	23	48	...	9	12	...	90	113
III.2	Non-electrical machinery apparatus and appliances including machine tools [b]	...	203	426	...	258	341	...	1089	1377
III.3	Electrical machinery, apparatus and appliances [b]	...	57	120	...	70	93	...	260	328
III.4	Transport equipment	...	72	151	...	67	88	...	472	597
	Total Imports	**...**	**1122**	**2353**	**...**	**1634**	**2162**	**...**	**12549**	**15869**

Contd....

Table 7.2(A) Principal Imports *(Contd....)*

Quantity : Thousand tonnes

		Value : ₹ crore & US $ million								
		1990-91			2000-01			2010-11		
		Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million
(1)		(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
I.	**Food and live animals chiefly for food (excl. cashew raw)**	...	...	...	...	...	...	...	...	...
	of which:									
I.1	Cereals and cereal preparations	308.3	182	102	69.9	90	20	251.5	545	119
II.	**Raw materials and intermediate manufactures**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**
II.1	Cashewnuts (unprocessed)	82.6	134	75	249.7	962	211	501.0	2650	578
II.2	Crude rubber (including synthetic and reclaimed)	105.1	226	126	119.1	695	152	587.7	8074	1771
II.3	Fibres	...	...	...	...	...	...	...	...	...
	of which:									
II.3.1	Synthetic and regenerated fibres (man-made fibres)	21.2	56	31	42.6	275	60	81.5	957	210
II.3.2	Raw wool	29.4	182	102	53.7	458	100	94.4	1435	315
II.3.3	Raw cotton	0.2	1	0	212.3	1185	259	56.5	624	137
II.3.4	Raw jute	32.1	20	11	67.3	84	18	83.1	302	67
II.4	Petroleum, oil and lubricants	29359	10816	6028	...	71497	15650	...	482282	105964
II.5	Animal and vegetable oils and fats	...	...	...	...	...	...	...	...	...
	of which:									
II.5.1	Edible oils	525.8	326	182	4267.9	6093	1334	6677.6	29860	6551
II.6	Fertilizers and chemical products	...	...	...	...	...	...	...	...	...
	of which:									
II.6.1	Fertilizers and fertilizer mfg	7560.3	1766	984	7423.4	3034	664	20658.9	31533	6885
II.6.2	Chemical elements and compounds	...	2289	1276	...	1542	338	...	13278	2914
II.6.3	Dyeing, tanning and colouring material	...	168	94	...	874	191	...	5368	1178
II.6.4	Medicinal and pharmaceutical products	...	468	261	...	1723	377	...	11114	2436
II.6.5	Plastic material, regenerated cellulose and artificial resins	...	1095	610	...	2551	558	...	31304	6874
II.7	Pulp and waste paper	678.2	458	255	1050.9	1290	282	2634.5	5208	1145
II.8	Paper, paper board and manufactures thereof	286.4	456	254	585.6	2005	439	2145.0	9614	2111
II.9	Non-metallic mineral manufactures	...	...	...	...	797	174	...	...	...
	of which:									
II.9.1	Pearls, precious and semiprecious stones, unworked or worked	...	3738	2083	...	22101	4838	...	157596	34620
II.10	Iron and steel	1920.5	2113	1178	1613.6	3569	781	9843.9	47275	10376
II.11	Non-ferrous metals	...	1102	614	...	2462	539	...	212153	46677
III.	**Capital goods** [a]	...	10466	5833	...	25281	5534	...	231712	50907
III.1	Manufactures of metals	...	302	168	...	1786	391	...	15167	3332
III.2	Non-electrical machinery [b] apparatus and appliances including machine tools	...	4240	2363	...	16915	3703	...	118928	26111
III.3	Electrical machinery, apparatus and appliances [b]	...	1702	949	...	2227	487	...	17510	3845
III.4	Transport equipment	...	1670	931	...	4353	953	...	52112	11467
	Total Imports	**...**	**43198**	**24075**	**...**	**228307**	**51413**	**...**	**1683467**	**369769**

Contd....

Table 7.2(A) Principal Imports *(Contd....)*

Quantity : Thousand tonnes

Value : crore & US $ million

		2016-17			2017-18			2018-19 (P)		
		Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million
(1)		(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
I.	**Food and live animals chiefly for food (excl. cashew raw)**	...	...	...	...	...	...	...	...	...
	of which:									
I.1	Cereals and cereal preparations	6128	9589	1429	1988	3464	536	344	1476	211
II.	**Raw materials and intermediate manufactures**	...	...	...	...	...	...	...	...	...
II.1	Cashewnuts (unprocessed)	775	9027	1347	654	9134	1419	840	11162	1608
II.2	Crude rubber (including synthetic and reclaimed)	885	10030	1496	947	12034	1867	1082	14027	2002
II.3	Fibres	...	...	...	...	...	...	...	...	...
	of which:									
II.3.1	Synthetic and regenerated fibres (man-made fibres)	...	2454	366	...	2378	369		3275	467
II.3.2	Raw wool	87	1894	282	80	1885	292	77	2160	310
II.3.3	Raw cotton	500	6339	947	469	6307	979	299	4383	633
II.3.4	Raw jute	139	704	105	68	289	45	57	236	34
II.4	Petroleum, oil and lubricants	...	583217	86964	...	700321	108659	...	986260	140918
II.5	Animal and vegetable oils and fats									
	of which:									
II.5.1	Edible oils	14007	73039	10893	15361	74996	11637	15019	69024	9890
II.6	Fertilizers and chemical products									
	of which:									
II.6.1	Fertilizers and fertilizer mfr	23590	33706	5024	24769	34654	5376	27040	52095	7467
II.6.2	Chemical elements and compounds*	...	147356	21974	...	175944	27295	...	220476	31535
II.6.3	Dyeing, tanning and colouring material	...	15307	2283	...	18610	2888	...	22538	3222
II.6.4	Medicinal and pharmaceutical products	...	33502	4995	...	35330	5481	...	44429	6359
II.6.5	Plastic material, regenerated cellulose and artificial resins	...	80227	11964	...	93384	14488	...	109629	15681
II.7	Pulp and waste paper	...	6537	975	...	7442	1155	...	9186	1312
II.8	Paper, paper board and manufactures thereof	...	17456	2602	...	21285	3303	...	24886	3559
II.9	Non-metallic mineral manufactures									
	of which:									
II.9.1	Pearls, precious and semiprecious stones, unworked or worked	...	159464	23809	...	220966	34279	...	188881	27076
II.10	Iron and steel	13888	55278	8239	14246	67235	10432	15928	87984	12582
II.11	Non-ferrous metals	...	262961	39226	...	320381	49683	...	358671	51379
III.	**Capital goods** [a]	...	378724	56437	...	407051	63154	...	497160	71054
III.1	Manufactures of metals**	...	28028	4178	...	35022	5435	...	42460	6065
III.2	Non-electrical machinery [b] apparatus and appliances including machine tools	...	100318	14954	...	110681	17176	...	137630	19671
III.3	Electrical machinery, apparatus and appliances [b]	...	84126	12543	...	101447	15732	...	126931	18182
III.4	Transport equipment	...	152337	22688	...	146509	22733	...	173521	24760
	Total Imports	**...**	**2577675**	**384357**	**...**	**3001033**	**465581**	**...**	**3594373**	**514034**

Source : DGCI&S, Kolkata

Notes: P: Provisional.

... : not available.

a : From the year 1987-88 onwards, capital goods include project goods.

b : From the year 1991-92 onwards, Items III.2 & III.3 exclude electronic goods.

* : II.6.2 Chemical elements and compounds includes Organic & Inorganic Chemicals,Chemical material & Products

** : Items belonging to Manufactures of Metals (Except few ITCHS) already considered under other Groups of Table 4A.

Table 7.2 B : Share and Percentage Change of Major Imports

	Commodity Group	Percentage share			Percentage change[a]		
		2016-17	2017-18	2018-19 (P)	2016-17	2017-18	2018-19 (P)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
I.	**Food and allied products** [b]	**5.6**	**4.4**	**3.2**	**12.0**	**-5.1**	**-19.3**
	of which						
	1. Cereals [c]	0.4	0.1	0.0	417.7	-62.5	-60.6
	2. Pulses	1.1	0.6	0.2	8.8	-31.5	-60.8
	3. Cashew Nuts	0.4	0.3	0.3	0.5	5.4	13.3
	4. Edible Oils	2.8	2.5	1.9	3.8	6.8	-15.0
II.	**Fuel**	**26.7**	**28.3**	**32.5**	**6.3**	**28.1**	**27.0**
	5. Coal [d]	4.1	4.9	5.1	15.3	45.3	14.3
	6. POL	22.6	23.3	27.4	4.8	24.9	29.7
III.	**Fertilizers** [e]	**1.3**	**1.2**	**1.5**	**-37.8**	**7.0**	**38.9**
IV.	**Paper board manufactures & newsprint**	**0.9**	**0.9**	**0.9**	**7.4**	**18.2**	**11.2**
V.	**Capital goods** [f]	**14.7**	**13.6**	**13.8**	**4.7**	**11.9**	**12.5**
	of which						
	7. Machinery except elec & machine tool	3.9	3.7	3.8	-2.9	14.9	14.5
	8. Electrical machinery	3.3	3.4	3.5	-4.4	25.4	15.6
	9. Transport equipment	5.9	4.9	4.8	24.5	0.2	8.9
	10. Project goods	0.5	0.4	0.5	-24.9	0.2	14.3
VI.	**Others**	**37.0**	**39.1**	**36.6**	**-2.0**	**28.1**	**3.4**
	of which						
	11. Chemicals [g]	6.3	6.5	6.8	1.1	24.4	15.2
	12. Pearls precious semi precious stones	6.2	7.4	5.3	18.6	44.0	-21.0
	13. Iron & steel [h]	2.1	2.2	2.4	-26.8	26.6	20.6
	14. Non-ferrous metals [i]	2.6	2.8	2.9	1.5	29.8	15.0
	15. Gold & Silver	7.6	7.9	7.1	-17.3	25.6	-0.6
	16. Professional instruments, optical goods, etc.	1.0	1.0	1.0	6.5	23.3	9.1
	17. Electronic Goods	11.2	11.4	11.2	4.7	23.3	8.5
	Total Imports	**100.0**	**100.0**	**100.0**	**0.9**	**21.1**	**10.4**

Source: DGCI&S, Kolkata

Notes: P: Provisional.

a : In terms of US dollar

b : Including Tea, Sugar, Milk and Cream, Spices, Fruits & Nuts.

c : Including cereals preparations.

d : Including coke and briquettes.

e : Including fertilizers crude and fertilizers manufactured.

f : Including Manufactures of metals.

g : Including organic chemical, inorganic chemical, chemical materials & products and dyeing, tanning & colouring material.

h : Including primary steel and pig iron based items.

i : Excluding gold and silver

Table 7.3 A. Principal Exports

Quantity : Thousand tonnes
Value : ₹ crore & US $ million

		1960-61			1970-71			1980-81		
		Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
I.	Agricultural and allied products:	...	284	596	...	487	644	...	2057	2601
	of which									
I. 1	Coffee	19.7	7	15	32.2	25	33	87.3	214	271
I. 2	Tea and mate	199.2	124	260	199.1	148	196	229.2	426	538
I. 3	Oil cakes	433.8	14	29	878.5	55	73	886	125	158
I. 4	Tobacco	47.5	16	34	49.8	33	43	91.3	141	178
I. 5	Cashew kernels	43.6	19	40	60.6	57	76	32.3	140	177
I. 6	Spices	47.2	17	36	46.9	39	51	84.2	11	14
I. 7	Sugar and molasses	99.6	30	60	473	29	39	97	40	50
I. 8	Raw cotton	32.6	12	25	32.1	14	19	131.6	165	209
I. 9	Rice	...	...	...	32.8	5	7	726.7	224	283
I. 10	Fish and fish preparations	19.9	5	10	32.6	31	40	69.4	217	274
I. 11	Meat and meat preparations	...	1	2	...	3	4	...	56	70
I. 12	Fruits, vegetables and pulses									
	(excl.cashew kernels, processed	...	6	13	...	12	16	...	80	101
	fruits & juices)									
I. 13	Miscellaneous processed foods (incl.	...	1	2	...	4	6	...	36	45
	processed fruits and juices)									
II.	**Ores and minerals (excl. coal)**	...	52	109	...	164	217	...	414	523
	of which									
II.1	Mica	28.4	...	...	26.7	16	21	16.7	18	22
II.2	Iron ore (million tonne)	3.2	17	36	21.2	117	155	22.4	303	384
III.	**Manufactured goods**	...	291	610	...	772	1021	...	3747	4738
	of which									
III. 1	Textile fabrics & manufactures									
	(excl. carpets hand-made)	...	73	153	...	145	192	...	933	1179
	of which									
III.1.1	Cotton yarn,fabrics, made-ups etc.	...	65	136	...	142	188	...	408	516
III.1.2	Readymade garments of all									
	textile materials	...	1	2	...	29	39	...	550	696
III. 2	Coir yarn and manufactures	...	6	13	...	13	17	...	17	22
III. 3	Jute manufactures incl. twist & yarn	790.0	135	283	560.0	190	252	660.0	330	417
III. 4	Leather & leather manufactures incl.									
	leather footwear,leather travel	...	28	59	...	80	106	...	390	493
	goods & leather garments									
III. 5	Handicrafts (incl. carpets hand-made)[c]	...	11	23	...	73	96	...	952	1204
	of which:									
III. 5.1	Gems and jewellery	...	1	2	...	45	59	...	618	782
III. 6	Chemicals and allied products [a]	...	7	15	...	29	39	...	225	284
III. 7	Machinery, transport & metal manufactures									
	including iron and steel [b]	...	22	46	...	198	261	...	827	1045
IV.	**Mineral fuels and lubricants (incl. coal)** [d]	...	7	15	...	13	17	...	28	35
	Total Exports	**...**	**642**	**1346**	**...**	**1535**	**2031**	**...**	**6711**	**8486**

Contd....

Table 7.3 A: Principal Exports (Contd.) *(Contd....)*

Quantity : Thousand tonnes
Value : ₹ crore & US $ million

		1990-91			2000-01			2010-11		
		Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million
(1)		(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
I.	**Agricultural and allied products:**	...	6317	3521	...	28582	6256	...	111393	24448
	of which									
I. 1	Coffee	86.5	252	141	184.9	1185	259	232.6	3010	662
I. 2	Tea and mate	199.1	1070	596	202.4	1976	433	238.3	3354	736
I. 3	Oil cakes	2447.8	609	339	2417.8	2045	448	6936.9	11070	2438
I. 4	Tobacco	87.1	263	147	108.3	871	191	215.9	3985	875
I. 5	Cashew kernels	55.5	447	249	83.8	1883	412	12156.5	2853	627
I. 6	Spices	103.3	239	133	244.9	1619	354	762.7	8043	1768
I. 7	Sugar and molasses	191.0	38	21	769.0	511	112	2086.3	5633	1246
I. 8	Raw cotton	374.4	846	471	30.2	224	49	1885.8	13160	2910
I. 9	Rice	505.0	462	257	1534.4	2943	644	2471.4	11586	2545
I. 10	Fish and fish preparations	158.9	960	535	502.6	6367	1394	825.3	11917	2623
I. 11	Meat and meat preparations	...	140	78	...	1470	322	...	8960	1971
I. 12	Fruits, vegetables and pulses									
	(excl.cashew kernels, processed									
	fruits & juices)	...	216	120	...	1609	352	...	6350	1397
I. 13	Miscellaneous processed foods (incl.									
	processed fruits and juices)	...	213	119	...	1094	239	...	3669	806
II.	**Ores and minerals (excl. coal)**	...	1497	834	...	4139	906	...	39098	8581
	of which									
II.1	Mica	42.0	35	19	63.2	64	14	125.8	189	42
II.2	Iron ore (million tonne)	32.5	1049	585	20161.4	1634	358	46.9	21416	4715
III.	**Manufactured goods**	...	23736	13229	...	160723	35181		789433	173263
	of which									
III. 1	Textile fabrics & manufactures									
	(excl. carpets hand-made)	...	6832	3807	...	...	...			
	of which									
III.1.1	Cotton yarn,fabrics, made-ups etc.	...	2100	1170	...	16030	3509	...	13160	2910
III.1.2	Readymade garments of all									
	textile materials	...	4012	2236	...	25478	5577	...	52861	11614
III. 2	Coir yarn and manufactures	...	48	27	...	221	48	...	726	159
III. 3	Jute manufactures incl.twist & yarn	220.0	298	166	...	932	204	...	2092	459
III. 4	Leather & leather manufactures incl.									
	leather footwear,leather travel									
	goods & leather garments	...	2600	1449	...	8914	1951	...	17818	3909
III. 5	Handicrafts (incl. carpets hand-made) c	...	6167	3437	...	5097	1116	...	5877	1293
	of which									
III. 5.1	Gems and jewellery	...	5247	2924	...	33734	7384	...	184420	40509
III. 6	Chemicals and allied productsa	...	2111	1176	...	22851	5002	...	131544	28905
III. 7	Machinery, transport & metal manufactures									
	including iron and steel b	...	3872	2158	...	31870	6976	...	226805	49815
IV.	**Mineral fuels and lubricants (incl. coal) d**	...	948	528	...	8822	1931		192639	42280
	Total Exports	**...**	**32553**	**18143**	**...**	**201356**	**44076**		**1136964**	**251136**

Contd....

Table 7.3 A: Principal Exports (Concld.) *(Contd....)*

Quantity : Thousand tonnes
Value : ₹ crore & US $ million

		2016-17			2017-18			2018-19 (P)		
		Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million	Qty.	₹. Cr	$ million
(1)		(19)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
I.	**Agricultural and allied products:**	...	226775	33816	...	249182	38654	...	271358	38829
	of which									
I. 1	Coffee	288.6	5646	843	317.8	6245	969	282.9	5722	822
I. 2	Tea and mate	243.4	4906	731	272.9	5397	837	270.3	5828	831
I. 3	Oil cakes	2632.3	5410	805	3570.8	7043	1093	4486.1	10577	1512
I. 4	Tobacco	204.4	4250	634	185.4	3828	594	189.5	3984	570
I. 5	Cashew kernels	103.2	5323	793	98.4	5978	927	83.5	4606	658
I. 6	Spices	1014.5	19111	2852	1096.3	20085	3115	1091.8	23218	3323
I. 7	Sugar and molasses	2934.7	8974	1338	1881.9	5323	826	4829.1	10106	1444
I. 8	Raw cotton	996.1	10907	1621	1101.5	12200	1894	1143.1	14628	2104
I. 9	Rice	10756.0	38443	5734	12875.4	50308	7806	12014.4	53990	7753
I. 10	Fish and fish preparations	1185.3	39594	5903	1432.5	47646	7389	1436.7	47663	6802
I. 11	Meat and meat preparations		27036	4034	1374	26896	4171	1256	25987	3716
I. 12	Fruits, vegetables and pulses (excl.cashew kernels, processed fruits & juices)	...	12042.64105	1797.400611	...	11680.62824	1811.297326	...	12998.70051	1863.817852
I. 13	Miscellaneous processed foods (incl. processed fruits and juices)	...	5686.831025	848.364977	...	5992.484143	929.785554	...	6536.594702	933.596899
II.	**Ores and minerals (excl. coal)**	...	33018	4924	...	36381	5644	...	41446	5927
	of which									
II.1	Mica	134.4	374	56	153.986378	525	81	150.8	498	71
II.2	Iron ore (million tonne)	30.7	10291	1534	24202.422	9488	1471	16198.9	9265	1318
III.	**Manufactured goods**	...	1362095	203140	...	1393418	216122	...	1621779	231953
	of which									
III. 1	Textile fabrics & manufactures (excl. carpets hand-made)	...	150126.2629	22383.93167	...	175085.505	27169.09079	...	192745.8817	27592.25689
	of which									
III.1.1	Cotton yarn,fabrics, made-ups etc.	...	57358	8550	...	57422	8908	...	68786	9843
III.1.2	Readymade garments of all textile materials	...	116459.0236	17368.15338	...	107643.997	16706.94319	...	112700.5683	16138.18911
III. 2	Coir yarn and manufactures	...	1977	295	...	2100	326	...	2288	327
III. 3	Jute manufactures incl.twist & yarn	...	2080	310	...	2159	335	...	2274	325
III. 4	Leather & leather manufactures incl. leather footwear,leather travel goods & leather garments	...	34651.00658	5165.59914	...	34084.32879	5289.126297	...	35933.82667	5140.815886
III. 5	Handicrafts (incl. carpets hand-made) [c]	...	22909	3417	...	20969	3253	...	23227	3320
	of which	...			...					
III. 5.1	Gems and jewellery	...	290903	43413	...	267833	41544	...	281408	40251
III. 6	Chemicals and allied products [a]	...	167054	24911	...	198540	30800	...	264718	37840
III. 7	Machinery, transport & metal manufactures including iron and steel [b]	...	474106.0735	70723.46441	...	548535.5962	85088.80913	...	646000.0431	92450.91624
IV.	**Mineral fuels and lubricants (incl.coal)** [d]	...	217340	32415	...	247702	38438	...	335148	47874
	Total Exports	...	**1849434**	**275851.71**	**...**	**1956515**	303526	**...**	**2307663**	**330070**

Source: DGCI&S, Kolkata

Notes: P: Provisional.

... : Not available

a : Chemicals and allied products figrues relate to "Basic Chemicals" and "Plastic Linoleum products

b : Also includes electronic goods and computer software

c : Gems and Jewellery excluded from Handicarafts and reported as individual item since 1997-98

d : During 1990-91 and 2000-01 Crude oil exports amount to Nil

Table 7.3 B. Share and Percentage Change of Major Exports

	Commodity Group	Percentage share			Percentage change [a]		
		2016-17	2017-18	2018-19 (P)	2016-17	2017-18	2018-19 (P)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
I. Agricullture & allied		**12.3**	**12.7**	**11.8**	**2.3**	**14.3**	**0.4**
of which							
1	Tea	0.3	0.3	0.3	1.5	14.5	-0.4
2	Coffee	0.3	0.3	0.2	7.5	15.1	-15.5
3	Cereals	2.2	2.7	2.5	-3.9	35.6	-0.3
4	Unmanufactured Tobacco	0.2	0.2	0.2	-5.2	-6.3	-4.1
5	Spices	1.0	1.0	1.0	12.2	9.4	6.6
6	Cashewnuts	0.3	0.3	0.2	2.2	16.9	-29.0
7	Oil Meals	0.3	0.4	0.5	46.7	35.5	38.4
8	Fruits & Vegetables & Pulses	0.7	0.6	0.6	6.0	0.9	2.6
9	Marine Products	2.1	2.4	2.1	23.8	25.2	-7.8
10	Raw Cotton	0.6	0.6	0.6	-17.0	16.4	10.5
II. Ores and Minerals		1.8	1.9	1.8	34.9	14.7	5.0
of which							
11	Iron Ore	0.6	0.5	0.4	695.1	-4.1	-10.0
12	Processed minerals	0.3	0.3	0.4	2.7	8.1	21.6
13	Other ores & minerals	0.7	0.7	0.7	1.1	5.7	3.2
III. Manufactured goods		73.6	71.2	70.3	5.3	6.4	7.3
of which							
14	Leather & Manufactures	1.2	1.1	0.9	-6.5	2.2	-4.5
15	Leather footwear	0.8	0.7	0.7	-0.9	3.0	0.1
16	Gems & Jewellerly	15.7	13.7	12.2	10.3	-4.2	-3.1
17	Drugs, Pharmaceuticals & fine chemicals	1.2	1.2	1.2	-5.9	4.7	10.4
18	Dyes/intmdts. & Coaltar chemicals	0.8	0.8	0.9	2.6	14.1	16.9
19	Manufactures of metals	5.0	5.8	5.0	1.5	27.7	-6.9
20	Machinery & instruments	6.8	7.6	8.3	4.8	23.2	18.5
21	Transport equipments	7.7	7.0	7.3	3.0	0.1	13.4
22	Primary & semi-finished Iron & Steel	3.1	3.7	2.9	58.6	29.6	-13.4
23	Electronic Goods	2.0	1.9	2.4	1.3	5.9	40.5
24	Cotton yarn, fabrics, made-ups etc.	3.1	2.9	3.0	-3.6	4.2	10.4
25	Readymade Garments	6.3	5.5	4.9	2.4	-3.8	-3.5
26	Handicrafts	0.7	0.6	0.6	16.7	-5.3	0.8
IV. Crude & Petroleum Products (incl. Coal)		11.8	12.7	14.5	4.1	18.6	24.7
V. Other & unclassified items		0.6	1.5	1.6	1.0	204.1	17.2
Total Exports		**100.0**	**100.0**	**100.0**	**5.2**	**10.0**	**8.8**

Source: DGCI&S, Kolkata

Note: P: Provisional.

a : In terms of US dollar

Table 7.4 (A): Direction of Imports : Imports by Regions and Countries

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1) Europe	64,655	422,769	61,474	412,256	-4.9	16.0	69,898	450,625	78,746	549,990	12.7	15.3
1.1 EU Countries	43,934	287,369	42,385	284,275	-3.5	11.0	47,873	308,576	57,832	404,069	20.8	11.3
1) GERMANY	12,088	79,098	11,584	77,704	-4.2	3.0	13,296	85,700	15,027	105,179	13.0	2.9
2) BELGIUM	8,256	54,001	6,625	44,396	-19.8	1.7	5,993	38,646	10,469	73,002	74.7	2.0
3) U K	5,193	33,936	3,665	24,584	-29.4	1.0	4,807	30,989	7,562	52,746	57.3	1.5
4) FRANCE	3,730	24,420	5,708	38,264	53.0	1.5	6,524	42,032	6,211	43,391	-4.8	1.2
5) ITALY	4,072	26,645	3,895	26,128	-4.4	1.0	4,707	30,337	5,290	36,984	12.4	1.0
6) NETHERLAND	1,860	12,168	1,896	12,729	1.9	0.5	2,513	16,199	4,060	28,483	61.6	0.8
7) SPAIN	1,646	10,756	1,969	13,223	19.6	0.5	1,663	10,721	1,681	11,728	1.0	0.3
8) SWEDEN	1,485	9,693	1,161	7,788	-21.8	0.3	1,464	9,440	1,327	9,279	-9.4	0.3
9) FINLAND	1,002	6,550	1,012	6,792	0.9	0.3	1,401	9,023	1,124	7,795	-19.8	0.2
10) POLAND	570	3,731	691	4,637	21.3	0.2	767	4,944	793	5,540	3.4	0.2
11) AUSTRIA	827	5,422	908	6,085	9.8	0.2	973	6,274	716	5,004	-26.4	0.1
12) DENMARK	429	2,812	482	3,231	12.4	0.1	565	3,641	537	3,752	-4.8	0.1
13) IRELAND	552	3,613	526	3,528	-4.7	0.1	795	5,126	423	2,955	-46.9	0.1
14) CYPRUS	48	314	67	445	38.2	0.0	13	87	394	2,737	2,825.6	0.1
15) ROMANIA	309	2,024	317	2,128	2.6	0.1	412	2,656	315	2,197	-23.4	0.1
16) CZECH REPUBLIC	508	3,319	539	3,618	6.2	0.1	670	4,315	259	1,808	-61.3	0.1
17) SLOVENIA	89	579	102	682	14.8	0.0	112	722	249	1,748	122.4	0.0
18) HUNGARY	243	1,586	219	1,466	-9.8	0.1	271	1,746	241	1,684	-11.0	0.0
19) LITHUANIA	214	1,404	271	1,819	26.5	0.1	189	1,223	212	1,477	11.7	0.0
20) LATVIA	62	399	40	266	-35.6	0.0	53	339	158	1,111	201.0	0.0
21) GREECE	111	722	122	819	9.8	0.0	96	619	144	1,004	49.8	0.0
22) LUXEMBOURG	176	1,143	46	310	-73.8	0.0	53	343	132	931	147.7	0.0
23) PORTUGAL	103	671	141	946	37.7	0.0	190	1,225	133	926	-30.1	0.0
24) BULGARIA	94	616	182	1,220	94.4	0.0	142	916	126	876	-11.5	0.0

Contd....

Table 7.4 (A): Direction of Imports : Imports by Regions and Countries *(Contd....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
25) ESTONIA	142	913	102	687	-27.9	0.0	61	390	108	755	78.7	0.0
26) SLOVAK REP	65	423	69	460	6.0	0.0	95	614	57	402	-39.7	0.0
27) MALTA	26	174	22	150	-15.4	0.0	16	103	44	308	174.4	0.0
28) CROATIA	36	236	25	170	-29.6	0.0	32	206	39	268	21.4	0.0
1.2 European Free Trade Associatipn (EFTA)	19,890	129,967	17,821	119,473	-10.4	4.6	19,774	127,501	18,456	128,752	-6.7	3.6
1) SWITZERLAND	19,299	126,074	17,249	115,619	-10.6	4.5	18,923	122,018	18,077	126,098	-4.5	3.5
2) NORWAY	585	3,858	567	3,816	-3.2	0.1	842	5,425	366	2,569	-56.5	0.1
3) ICELAND	4	27	5	32	10.1	0.0	7	48	9	61	17.2	0.0
4) LIECHTENSTEIN	1	8	1	6	-27.1	0.0	2	10	4	25	125.0	0.0
1.3 Other European Countries	831	5,433	1,269	8,507	52.7	0.3	2,251	14,548	2,459	17,168	9.3	0.5
1) TURKEY	777	5,080	1,207	8,097	55.4	0.3	2,132	13,785	2,388	16,670	12.0	0.5
2) MACEDONIA	7	46	24	162	240.8	0.0	47	301	24	169	-48.3	0.0
3) ALBANIA	17	114	7	44	-62.2	0.0	39	251	23	160	-41.8	0.0
4) SERBIA	22	144	27	183	21.9	0.0	24	155	21	151	-11.1	0.0
5) BOSNIA-HRZGOVIN	4	29	3	22	-24.5	0.0	9	56	2	17	-72.0	0.0
6) MONTENEGRO	0	0	0	0	0.0	0.0	0	0	0	1	1,200.0	0.0
7) UNION OF SERBIA & MONTENEGRO	3	19	0	0	-98	0	0	0	0	0	#DIV/0!	0.0
2) Africa	31,667	206,498	28,845	193,456	-8.9	7.5	37,789	243,655	41,130	287,364	8.8	8.0
2.1 Southern African Customs Union (SACU)	6,547	42,692	7,256	48,652	10.8	1.9	8,634	55,654	7,558	52,793	-12.5	1.5
1) SOUTH AFRICA	5,948	38,785	5,834	39,117	-1.9	1.5	6,835	44,056	6,520	45,541	-4.6	1.3
2) BOTSWANA	542	3,539	1,307	8,766	141.1	0.3	1,638	10,561	974	6,810	-40.5	0.2
3) NAMIBIA	10	68	50	338	382.8	0.0	62	401	54	375	-13.9	0.0
4) SWAZILAND	41	268	39	264	-3.9	0.0	9	58	10	67	7.6	0.0
5) LESOTHO	5	32	25	167	404.3	0.0	90	578	0	0	-100.0	0.0

Contd....

Table 7.4 (A): Direction of Imports : Imports by Regions and Countries *(Contd.....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2.2 Other South African Countries	3,630	23,656	3,947	26,466	8.8	1.0	6,413	41,329	5,643	39,446	-12.0	1.1
1) ANGOLA	2,767	17,984	2,596	17,406	-6.2	0.7	4,324	27,863	4,027	28,147	-6.9	0.8
2) MOZAMBIQUE	363	2,375	546	3,662	50.5	0.1	932	6,009	1,097	7,677	17.8	0.2
3) ZAMBIA	475	3,134	744	4,991	56.5	0.2	1,095	7,056	511	3,567	-53.4	0.1
4) ZIMBABWE	24	162	60	406	147.3	0.0	62	401	8	55	-87.5	0.0
2.3 West Africa	16,741	109,124	13,025	87,367	-22.2	3.4	16,833	108,578	20,084	140,310	19.3	3.9
1) NIGERIA	9,949	64,923	7,659	51,375	-23.0	2.0	9,501	61,293	10,885	76,316	14.6	2.1
2) GHANA	2,981	19,405	1,939	13,015	-35.0	0.5	2,710	17,484	3,763	26,206	38.9	0.7
3) BURKINA FASO	238	1,550	256	1,715	7.7	0.1	633	4,081	881	6,149	39.3	0.2
4) SENEGAL	264	1,727	316	2,118	19.7	0.1	565	3,649	659	4,525	16.6	0.1
5) EQUTL GUINEA	457	3,012	798	5,353	74.5	0.2	756	4,869	634	4,426	-16.1	0.1
6) COTE D' IVOIRE	572	3,697	456	3,056	-20.4	0.1	442	2,847	603	4,196	36.5	0.1
7) GABON	106	691	69	466	-34.2	0.0	395	2,547	456	3,193	15.3	0.1
8) GUINEA	370	2,405	279	1,874	-24.6	0.1	515	3,317	414	2,870	-19.5	0.1
9) CONGO P REP	202	1,305	157	1,049	-22.4	0.0	199	1,283	406	2,863	104.0	0.1
10) BENIN	276	1,778	207	1,391	-24.8	0.1	223	1,437	376	2,604	68.5	0.1
11) CAMEROON	558	3,619	359	2,411	-35.6	0.1	213	1,373	343	2,356	61.3	0.1
12) TOGO	225	1,454	138	929	-38.5	0.0	164	1,055	304	2,126	85.5	0.1
13) LIBERIA	32	205	8	51	-76.2	0.0	37	237	141	931	284.1	0.0
14) GUINEA BISSAU	198	1,294	216	1,443	8.8	0.1	256	1,651	124	889	-51.7	0.0
15) GAMBIA	31	204	43	290	37.8	0.0	59	378	45	316	-23.2	0.0
16) MALI	243	1,606	99	662	-59.1	0.0	114	736	18	127	-84.0	0.0
17) MAURITANIA	19	122	11	73	-41.0	0.0	5	35	16	111	192.8	0.0
18) SIERRA LEONE	17	108	12	82	-26.1	0.0	24	156	12	82	-51.5	0.0
19) CAPE VERDE IS	3	18	2	13	-31.4	0.0	3	18	3	20	3.2	0.0
20) NIGER	0	2	0	0	-91	0.0	20	130	1	4	-96.8	0.0

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Table 7.4 (A): Direction of Imports : Imports by Regions and Countries *(Contd....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
21) ST HELENA	0	0	0	0	-100	0.0	0	0	0	1	133.3	0.0
22) SAO TOME	0	0	0	0	0.0	0.0	0	0	0	0	-80.0	0.0
2.4 Central Africa	531	3,438	369	2,475	-30.5	0.1	479	3,087	554	3,902	15.6	0.1
1) CHAD	321	2,077	169	1,138	-47.2	0.0	149	962	476	3,355	218.5	0.1
2) UGANDA	46	300	69	462	51.4	0.0	56	362	23	162	-59.0	0.0
3) MALAWI	64	422	41	278	-35.7	0.0	16	106	23	161	38.6	0.0
4) CONGO D. REP.	98	624	86	576	-12.1	0.0	225	1,453	19	133	-91.6	0.0
5) RWANDA	1	9	1	8	-12.6	0.0	5	34	7	47	25.1	0.0
6) BURUNDI	0	1	2	11	1,354.5	0.0	17	106	5	31	-72.5	0.0
7) C AFRI REP	1	5	0	3	-54.2	0.0	10	64	2	14	-79.6	0.0
2.5 East Africa	1,327	8,724	1,319	8,853	-0.6	0.3	1,404	9,044	1,563	10,892	11.4	0.3
1) TANZANIA REP	925	6,086	948	6,370	2.6	0.2	1,030	6,634	903	6,281	-12.3	0.2
2) MADAGASCAR	142	933	120	802	-15.5	0.0	168	1,079	297	2,074	76.8	0.1
3) KENYA	128	837	104	699	-18.2	0.0	73	468	137	961	88.9	0.0
4) MAURITIUS	20	133	18	123	-9.8	0.0	21	134	79	547	280.1	0.0
5) ETHIOPIA	61	399	67	449	10.0	0.0	47	306	55	378	15.9	0.0
6) COMOROS	15	100	26	173	69.9	0.0	37	240	35	247	-6.7	0.0
7) SOMALIA	16	101	18	119	13.6	0.0	4	23	18	130	416.3	0.0
8) REUNION	19	123	14	93	-26.0	0.0	18	116	18	127	0.6	0.0
9) DJIBOUTI	1	8	3	19	129.3	0.0	5	35	16	110	190.8	0.0
10) SEYCHELLES	1	4	1	6	38.8	0.0	1	9	5	37	284.7	0.0
2.6 North Africa	2,893	18,864	2,929	19,643	1.3	0.8	4,027	25,963	5,728	40,020	42.3	1.1
1) ALGERIA	299	1,972	605	4,055	102.1	0.2	1,261	8,132	1,697	11,900	34.6	0.3
2) EGYPT A RP	1,221	7,922	1,164	7,810	-4.7	0.3	1,293	8,333	1,678	11,698	29.8	0.3
3) MOROCCO	1,078	7,051	793	5,322	-26.4	0.2	780	5,025	1,327	9,267	70.2	0.3
4) SUDAN	149	964	245	1,637	64.3	0.1	452	2,917	743	5,195	64.3	0.1
5) LIBYA	9	56	7	50	-15.9	0.0	101	653	146	1,001	45.2	0.0

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Table 7.4 (A): Direction of Imports : Imports by Regions and Countries *(Contd.....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
6) TUNISIA	136	899	115	769	-15.9	0.0	140	903	138	959	-1.7	0.0
3) America	45,990	300,963	46,674	313,156	1.5	12.1	55,993	360,943	64,913	453,898	15.9	12.7
3.1 North America	28,299	185,376	29,383	197,158	3.8	7.6	35,270	227,373	44,366	310,272	25.8	8.6
1) U S A	21,781	142,678	22,307	149,655	2.4	5.8	26,611	171,564	35,299	246,798	32.6	6.9
2) MEXICO	2,283	14,905	2,945	19,776	29.0	0.8	3,930	25,330	5,577	38,999	41.9	1.1
3) CANADA	4,234	27,793	4,132	27,726	-2.4	1.1	4,729	30,479	3,490	24,475	-26.2	0.7
3.2 Latin America	17,692	115,587	17,291	115,998	-2.3	4.5	20,723	133,570	20,547	143,626	-0.9	4.0
1) VENEZUELA	5,702	37,150	5,512	36,964	-3.3	1.4	5,866	37,797	7,259	50,809	23.7	1.4
2) BRAZIL	4,040	26,392	4,115	27,653	1.8	1.1	5,498	35,429	4,406	30,840	-19.9	0.9
3) PERU	820	5,407	1,077	7,227	31.3	0.3	2,377	15,332	2,405	16,693	1.2	0.5
4) ARGENTINA	2,472	16,251	2,501	16,763	1.2	0.7	2,229	14,365	1,955	13,615	-12.3	0.4
5) CHILE	1,961	12,759	1,226	8,229	-37.5	0.3	2,092	13,478	1,238	8,642	-40.8	0.2
6) COLOMBIA	808	5,266	594	3,985	-26.5	0.2	593	3,823	1,055	7,394	78.0	0.2
7) BOLIVIA	240	1,580	174	1,167	-27.8	0.0	667	4,304	852	5,989	27.7	0.2
8) DOMINIC REP	479	3,146	675	4,515	41.0	0.2	646	4,172	567	4,000	-12.3	0.1
9) ECUADOR	564	3,652	356	2,384	-36.9	0.1	194	1,250	219	1,540	13.0	0.0
10) TRINIDAD	92	609	174	1,164	88.8	0.0	42	276	195	1,350	359.9	0.0
11) SURINAME	43	279	46	309	6.0	0.0	93	599	89	623	-3.6	0.0
12) COSTA RICA	62	403	59	394	-5.4	0.0	67	434	51	350	-24.9	0.0
13) URUGUAY	18	116	13	90	-24.1	0.0	25	161	43	301	72.0	0.0
14) BAHAMAS	77	511	259	1,728	235.1	0.1	40	261	39	275	-2.6	0.0
15) PANAMA REPUBLIC	72	473	202	1,353	178.4	0.1	43	279	39	266	-10.2	0.0
16) PARAGUAY	112	736	155	1,042	38.3	0.0	167	1,077	21	146	-87.4	0.0
17) HONDURAS	16	104	22	149	39.3	0.0	13	86	18	128	37.0	0.0
18) BR VIRGN IS	2	10	7	45	333.5	0.0	1	6	17	117	1,812.5	0.0
19) GUATEMALA	13	81	22	146	73.3	0.0	16	103	16	113	1.9	0.0

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Table 7.4 (A): Direction of Imports : Imports by Regions and Countries *(Contd....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
20) HAITI	3	21	4	24	10.1	0.0	8	53	14	97	66.5	0.0
21) NETHERLANDANTIL	59	395	67	446	12.6	0.0	8	53	10	68	17.7	0.0
22) BERMUDA	0	0	0	0	0.0	0.0	0	0	8	53	#DIV/0!	0.0
23) GUYANA	18	121	14	97	-21.6	0.0	7	43	6	45	-2.6	0.0
24) JAMAICA	2	10	1	8	-24.5	0.0	4	28	5	35	15.2	0.0
25) EL SALVADOR	6	40	6	39	-6.6	0.0	9	58	4	29	-53.4	0.0
26) CUBA	1	9	1	9	-1.5	0.0	2	13	4	27	84.5	0.0
27) NICARAGUA	4	25	3	18	-31.9	0.0	4	27	4	25	-13.7	0.0
28) FR GUIANA	1	8	1	10	25.0	0.0	1	6	2	13	114.1	0.0
29) BARBADOS	0	1	0	1	5.9	0.0	0	1	2	12	770.0	0.0
30) MARTINIQUE	0	0	0	0	0	0	0	0	1	6	1,520.0	0.0
31) VIRGIN IS US	1	7	5	30	319.4	0.0	0	2	1	5	171.4	0.0
32) BELIZE	1	7	1	3	-48.5	0.0	1	9	1	5	-52.2	0.0
33) ST LUCIA	0	3	0	2	-46.7	0.0	0	2	1	4	78.1	0.0
34) GRENADA	0	0	0	0	20.0	0.0	0	2	0	3	77.8	0.0
35) GUADELOUPE	0	0	0	0	-17	0	0	0	0	3	3,600.0	0.0
36) DOMINICA	0	1	1	5	670.0	0.0	0	2	0	2	10.7	0.0
37) CAYMAN IS	0	0	0	0	-60.0	0.0	6	42	0	2	-96.4	0.0
38) ANTIGUA	0	0	0	0	-100.0	0.0	0	0	0	1	650.0	0.0
39) MONTSERRAT	0	0	0	0	0	0	0	0	0	0	20.0	0.0
40) ST VINCENT	0	0	0	0	0	0	0	0	0	0	-60.0	0.0
41) ST KITT N A	0	1	0	0	-93.8	0.0	0	0	0	0	#DIV/0!	0.0
42) TURKS C IS	0	0	0	0	50.0	0.0	0	0	0	0	150.0	0
43) FALKLAND IS	2	11	0	0	-97	0	0	0	0	0	0.0	0
4) Asia	222,629	1,455,063	230,571	1,546,334	3.6	60.0	279,667	1,802,415	318,655	2,229,149	13.9	62.1
4.1 East Asia (Oceania)	9,703	63,430	11,828	79,387	21.9	3.1	14,902	96,058	13,914	97,108	-6.6	2.7

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Table 7.4 (A): Direction of Imports : Imports by Regions and Countries *(Contd.....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1) AUSTRALIA	8,899	58,181	11,154	74,864	25.3	2.9	13,994	90,197	13,131	91,638	-6.2	2.6
2) NEW ZEALAND	548	3,585	504	3,385	-7.9	0.1	644	4,152	631	4,403	-2.0	0.1
3) PAPUA N GNA	180	1,161	108	726	-39.8	0.0	196	1,266	89	626	-54.7	0.0
4) SOLOMON IS	68	444	54	364	-20.3	0.0	68	437	59	413	-13.2	0.0
5) SAMOA	2	16	6	42	156	0.0	0	2	3	19	957.7	0.0
6) FIJI IS	0	2	1	4	62.2	0.0	0	3	1	5	44.9	0.0
7) KIRIBATI REP	0	0	0	0	0	0	0	0	0	2	340.0	0.0
8) NAURU RP	6	38	0	0	-99	0.0	0	0	0	1	1,500.0	0.0
9) TONGA	0	0	0	0	0	0.0	0	0	0	0	0.0	0.0
10) TUVALU	0	0	0	1	1,200.0	0.0	0	0	0	0	#DIV/0!	0.0
11) VANUATU REP	0	2		0	-100	0.0	0	0	0	0	#DIV/0!	0
12) TIMOR LESTE	0	0	0	1	466.7	0.0	0	1	0	0	-50.0	0
4.2 ASEAN	39,910	260,744	40,617	272,397	1.8	10.6	47,134	303,820	59,293	414,791	25.8	11.6
1) SINGAPORE	7,308	47,735	7,087	47,542	-3.0	1.8	7,467	48,133	16,282	113,918	118.0	3.2
2) INDONESIA	13,132	85,800	13,428	90,082	2.3	3.5	16,439	105,961	15,849	111,140	-3.6	3.1
3) MALAYSIA	9,084	59,373	8,934	59,881	-1.7	2.3	9,012	58,081	10,792	75,302	19.8	2.1
4) THAILAND	5,510	36,011	5,415	36,313	-1.7	1.4	7,134	45,988	7,442	51,980	4.3	1.5
5) VIETNAM SOC REP	2,560	16,763	3,321	22,263	29.7	0.9	5,019	32,357	7,192	50,286	43.3	1.4
6) BRUNEI	554	3,610	628	4,208	13.3	0.2	435	2,805	591	4,122	35.9	0.1
7) PHILIPPINES	542	3,532	495	3,318	-8.8	0.1	764	4,928	581	4,063	-24.0	0.1
8) MYANMAR	984	6,378	1,067	7,156	8.4	0.3	640	4,120	521	3,674	-18.5	0.1
9) CAMBODIA	54	360	36	242	-33.7	0.0	56	360	43	298	-23.7	0.0
10) LAO PD RP	180	1,182	207	1,391	15.2	0.1	169	1,088	1	7	-99.4	0.0
4.3 West Asia- GCC	55,790	364,147	55,172	369,966	-1.1	14.4	64,079	413,051	79,697	557,909	24.4	15.5
1) U ARAB EMTS	19,446	126,981	21,510	144,237	10.6	5.6	21,739	140,096	29,768	208,425	36.9	5.8
2) SAUDI ARAB	20,321	132,580	19,972	133,946	-1.7	5.2	22,070	142,241	28,479	199,395	29.0	5.6
3) QATAR	9,022	58,912	7,646	51,276	-15.3	2.0	8,409	54,211	10,722	75,167	27.5	2.1

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Table 7.4 (A): Direction of Imports : Imports by Regions and Countries *(Contd.....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
4) KUWAIT	4,970	32,379	4,462	29,899	-10.2	1.2	7,166	46,221	7,431	51,949	3.7	1.4
5) OMAN	1,675	10,957	1,291	8,657	-22.9	0.3	4,264	27,500	2,758	19,199	-35.3	0.5
6) BAHARAIN IS	357	2,339	291	1,951	-18.6	0.1	431	2,783	540	3,775	25.2	0.1
4.4 Other West Asia	20,140	131,170	25,071	168,147	24.5	6.5	31,996	206,136	39,016	272,491	21.9	7.6
1) IRAQ	10,838	70,564	11,708	78,515	8.0	3.0	17,616	113,453	22,372	156,601	27.0	4.4
2) IRAN	6,279	40,823	10,507	70,478	67.3	2.7	11,112	71,620	13,526	94,113	21.7	2.6
3) ISRAEL	2,095	13,713	1,961	13,147	-6.4	0.5	2,067	13,321	1,932	13,470	-6.5	0.4
4) JORDAN	853	5,580	828	5,556	-2.9	0.2	985	6,349	1,116	7,822	13.3	0.2
5) LEBANON	28	180	30	203	9.4	0.0	38	248	44	305	14.2	0.0
6) SYRIA	41	266	32	216	-20.4	0.0	26	165	14	99	-44.8	0.0
7) YEMEN REPUBLC	7	44	5	32	-30.1	0.0	153	980	12	81	-92.3	0.0
4.5 NE Asia	94,112	616,112	95,069	637,563	1.0	24.7	118,353	762,710	122,424	856,646	3.4	23.9
1) CHINA P RP	61,708	404,051	61,283	411,103	-0.7	15.9	76,381	492,236	70,318	492,068	-7.9	13.7
2) HONG KONG	6,052	39,636	8,204	54,906	35.6	2.1	10,676	68,777	17,987	125,972	68.5	3.5
3) KOREA RP	13,047	85,363	12,585	84,404	-3.5	3.3	16,362	105,423	16,759	117,254	2.4	3.3
4) JAPAN	9,850	64,493	9,755	65,415	-1.0	2.5	10,973	70,745	12,773	89,278	16.4	2.5
5) TAIWAN	3,354	21,921	3,143	21,076	-6.3	0.8	3,926	25,303	4,577	32,000	16.6	0.9
6) MACAO	8	54	8	53	-4.6	0.0	8	54	6	44	-24.2	0.0
7) KOREA DP RP	88	567	89	592	0.8	0.0	25	162	3	23	-86.8	0.0
8) MONGOLIA	4	27	2	13	-51.9	0.0	2	11	1	7	-41.3	0.0
4.6 South Asia	2,975	19,459	2,813	18,873	-5.4	0.7	3,203	20,640	4,311	30,205	34.6	0.8
1) SRI LANKA DSR	743	4,854	602	4,040	-18.9	0.2	773	4,977	1,473	10,274	90.7	0.3
2) BANGLADESH PR	727	4,767	702	4,708	-3.5	0.2	686	4,420	1,043	7,326	52.1	0.2
3) PAKISTAN IR	441	2,885	454	3,049	3.1	0.1	489	3,150	495	3,476	1.3	0.1
4) NEPAL	471	3,069	445	2,985	-5.4	0.1	438	2,825	475	3,326	8.4	0.1
5) AFGHANISTAN TIS	308	2,029	293	1,967	-4.9	0.1	434	2,797	435	3,078	0.4	0.1
6) BHUTAN	281	1,827	308	2,063	9.4	0.1	378	2,436	369	2,576	-2.4	0.1

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Table 7.4 (A): Direction of Imports : Imports by Regions and Countries

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
7) MALDIVES	4	28	9	62	113.8	0.0	6	37	20	147	259.3	0.0
5) CIS & Baltics	7,078	46,269	9,323	62,467	31.7	2.4	12,876	83,043	9,443	65,904	-26.7	1.8
5.1 CARs Countries	457	2,980	612	4,085	34.0	0.2	1,116	7,208	863	6,030	-22.7	0.2
1) KAZAKHSTAN	353	2,295	521	3,474	47.7	0.1	907	5,857	709	4,953	-21.9	0.1
2) UZBEKISTAN	45	298	47	312	2.8	0.0	102	658	127	885	24.6	0.0
3) TURKMENISTAN	47	310	21	143	-54.6	0.0	26	169	21	143	-21.1	0.0
4) TAJIKISTAN	10	65	22	146	118.6	0.0	50	324	4	30	-91.6	0.0
5) KYRGHYZSTAN	2	12	1	10	-17.3	0.0	31	199	3	18	-91.6	0.0
5.2 Other CIS Countries	6,621	43,289	8,710	58,382	31.5	2.3	11,759	75,835	8,580	59,873	-27.0	1.7
1) RUSSIA	4,585	29,986	5,552	37,180	21.1	1.4	8,573	55,287	5,840	40,817	-31.9	1.1
2) UKRAINE	1,751	11,465	2,481	16,657	41.7	0.6	2,356	15,194	2,341	16,280	-0.6	0.5
3) BELARUS	165	1,066	171	1,143	3.4	0.0	208	1,338	227	1,582	9.3	0.0
4) AZERBAIJAN	77	487	462	3,105	498.9	0.1	593	3,828	148	1,029	-75.0	0.0
5) GEORGIA	24	160	32	211	28.8	0.0	27	174	22	156	-18.0	0.0
6) ARMENIA	14	93	1	7	-92.5	0.0	1	4	1	6	40.0	0.0
7) MOLDOVA	5	32	12	79	139.9	0.0	2	10	0	3	-75.2	0.0
6) Unspecified Region	8,987	58,744	7,471	50,007	-16.9	1.9437006	9357.88	60352.83	197.98	1380.16	-97.9	0.0
Total	**381,008**	**2,490,306**	**384,357**	**2,577,675**	**0.9**	**100.0**	**465581**	**3001033**	**514034**	**3594373**	**10.4**	**100.0**

Source: Department of Commerce based on DGCI&S data.
P : Provisional.

Table 7.4 (B): Direction of Exports : Exports by Regions and Countries

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1) Europe	50,413	330,132	53,327	357,519	5.8	19.3	60,346	388,924	64,381	449,874	6.7	19.5
1.1 EU Countries	44,607	292,119	47,319	317,239	6.1	17.2	53,630	345,630	57,208	399,794	6.7	17.4
1) U K	8,858	57,961	8,551	57,323	-3.5	3.1	9,713	62,572	9,333	65,268	-3.9	2.8
2) GERMANY	7,095	46,467	7,184	48,169	1.3	2.6	8,689	56,003	8,905	62,216	2.5	2.7
3) NETHERLAND	4,727	30,957	5,071	34,027	7.3	1.8	6,263	40,358	8,814	61,574	40.7	2.7
4) BELGIUM	5,028	32,959	5,657	37,915	12.5	2.1	6,207	40,008	6,730	47,010	8.4	2.0
5) ITALY	4,218	27,638	4,903	32,861	16.2	1.8	5,710	36,809	5,594	39,089	-2.0	1.7
6) FRANCE	4,634	30,328	5,250	35,180	13.3	1.9	4,902	31,594	5,236	36,600	6.8	1.6
7) SPAIN	3,237	21,215	3,426	22,972	5.8	1.2	3,996	25,760	4,183	29,218	4.7	1.3
8) POLAND	1,025	6,718	1,198	8,030	16.8	0.4	1,541	9,934	1,573	11,004	2.0	0.5
9) SWEDEN	684	4,476	709	4,754	3.7	0.3	772	4,972	792	5,535	2.7	0.2
10) DENMARK	689	4,515	693	4,647	0.6	0.3	784	5,053	746	5,225	-4.8	0.2
11) PORTUGAL	590	3,866	670	4,490	13.6	0.2	747	4,818	744	5,199	-0.5	0.2
12) IRELAND	526	3,445	485	3,256	-7.7	0.2	536	3,457	531	3,717	-1.0	0.2
13) GREECE	336	2,204	381	2,550	13.5	0.1	434	2,795	503	3,503	16.0	0.2
14) AUSTRIA	340	2,228	383	2,569	12.8	0.1	460	2,965	483	3,374	5.0	0.1
15) HUNGARY	345	2,258	406	2,725	17.7	0.1	403	2,595	458	3,205	13.8	0.1
16) ROMANIA	256	1,676	258	1,726	0.7	0.1	399	2,572	430	3,008	7.9	0.1
17) CZECH REPUBLIC	489	3,182	533	3,577	9.1	0.2	405	2,613	429	3,003	5.9	0.1
18) SLOVENIA	264	1,736	252	1,687	-4.6	0.1	287	1,850	317	2,216	10.4	0.1
19) FINLAND	249	1,629	270	1,810	8.6	0.1	283	1,823	256	1,792	-9.3	0.1
20) MALTA	325	2,117	137	922	-57.8	0.0	196	1,262	230	1,606	17.2	0.1
21) BULGARIA	146	949	240	1,605	64.6	0.1	173	1,117	213	1,485	23.2	0.1
22) CROATIA	112	737	124	831	10.4	0.0	169	1,087	154	1,074	-8.8	0.0
23) SLOVAK REP	138	899	146	980	6.3	0.1	152	983	146	1,020	-4.3	0.0
24) LITHUANIA	88	579	96	644	9.0	0.0	104	669	127	890	22.7	0.0

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Table 7.4 (B): Direction of Exports : Exports by Regions and Countries *(Contd....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
25) LATVIA	80	519	116	776	45.4	0.0	112	723	116	810	2.9	0.0
26) CYPRUS	60	391	72	480	20.0	0.0	100	646	71	495	-29.3	0.0
27) ESTONIA	64	417	98	654	53.1	0.0	80	518	64	450	-19.9	0.0
28) LUXEMBOURG	8	53	11	77	42.3	0.0	11	73	30	209	164.0	0.0
1.2 European Free Trade Associatipn (EFTA)	1,538	10,042	1,241	8,304	-19.3	0.4	1,453	9,366	1,534	10,720	5.6	0.5
1) SWITZERLAND	977	6,422	978	6,545	0.1	0.4	1,084	6,987	1,187	8,292	9.5	0.4
2) NORWAY	542	3,493	245	1,642	-54.8	0.1	360	2,323	313	2,186	-13.0	0.1
3) ICELAND	19	122	17	112	-9.9	0.0	6	38	31	218	421.9	0.0
4) LIECHTENSTEIN	1	5	1	5	-11.0	0.0	3	18	3	24	21.4	0.0
1.3 Other European Countries	4,268	27,971	4,768	31,976	11.7	1.7	5,263	33,928	5,639	39,359	7.1	1.7
1) TURKEY	4,140	27,136	4,627	31,031	11.8	1.7	5,091	32,815	5,452	38,058	7.1	1.7
2) SERBIA	43	283	50	336	15.5	0.0	59	381	74	516	24.8	0.0
3) MONTENEGRO	26	172	36	244	38.9	0.0	52	333	39	271	-24.6	0.0
4) ALBANIA	24	158	26	177	10.0	0.0	29	189	37	258	26.4	0.0
5) MACEDONIA	13	84	15	100	15.6	0.0	17	112	20	137	12.4	0.0
6) BOSNIA-HRZGOVIN	20	129	13	88	-33.5	0.0	15	99	17	119	11.1	0.0
7) UNION OF SERBIA & MONTENEGRO	1	9	0	1	-89.1	0.0	0	0	0	0	0.0	0.0
2) Africa	25,039	163,622	23,129	155,085	-7.6	8.4	24,904	160,534	28,542	199,543	14.6	8.7
2.1 Southern African Customs Union (SACU)	3,804	24,816	3,786	25,385	-0.5	1.4	4,042	26,055	4,378	30,513	8.3	1.3
1) SOUTH AFRICA	3,588	23,407	3,546	23,778	-1.2	1.3	3,825	24,660	4,067	28,334	6.3	1.2
2) BOTSWANA	52	341	77	517	47.2	0.0	109	698	178	1,254	64.2	0.1
3) NAMIBIA	74	484	90	603	22.1	0.0	44	283	82	578	87.8	0.0
4) LESOTHO	30	196	33	222	10.4	0.0	32	203	30	213	-3.6	0.0
5) SWAZILAND	60	387	40	265	-34.0	0.0	33	211	19	133	-41.3	0.0

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Table 7.4 (B): Direction of Exports : Exports by Regions and Countries *(Contd.....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2.2 Other South African Countries	1,968	12,822	1,511	10,136	-23.2	0.5	1,593	10,272	1,856	13,019	16.5	0.6
1) MOZAMBIQUE	1,242	8,087	1,010	6,778	-18.7	0.4	901	5,806	1,073	7,538	19.2	0.3
2) ZAMBIA	298	1,947	237	1,589	-20.4	0.1	294	1,898	319	2,238	8.4	0.1
3) ANGOLA	223	1,454	155	1,037	-30.7	0.1	235	1,514	282	1,974	20.2	0.1
4) ZIMBABWE	205	1,333	109	731	-46.8	0.0	164	1,055	182	1,269	11.1	0.1
2.3 West Africa	6,108	39,996	5,652	37,886	-7.5	2.0	6,719	43,310	7,698	53,876	14.6	2.3
1) NIGERIA	2,222	14,523	1,764	11,826	-20.6	0.6	2,255	14,535	3,005	21,040	33.3	0.9
2) GHANA	624	4,091	681	4,566	9.2	0.2	636	4,098	717	5,007	12.8	0.2
3) TOGO	532	3,504	316	2,116	-40.7	0.1	409	2,639	694	4,871	69.8	0.2
4) SENEGAL	559	3,661	634	4,246	13.5	0.2	724	4,668	639	4,461	-11.7	0.2
5) COTE D' IVOIRE	397	2,602	419	2,812	5.4	0.2	512	3,298	449	3,148	-12.3	0.1
6) BENIN	427	2,798	448	3,001	4.8	0.2	480	3,089	427	2,987	-11.0	0.1
7) GUINEA	278	1,818	355	2,379	27.5	0.1	378	2,436	405	2,828	7.1	0.1
8) BURKINA FASO	109	716	115	771	5.7	0.0	148	957	181	1,272	22.3	0.1
9) CAMEROON	191	1,246	149	998	-22.1	0.1	194	1,250	178	1,249	-8.1	0.1
10) LIBERIA	134	874	146	979	9.3	0.1	257	1,658	179	1,249	-30.5	0.1
11) GAMBIA	60	391	62	418	4.8	0.0	120	775	157	1,097	30.3	0.0
12) CONGO P REP	167	1,089	136	910	-18.5	0.0	117	752	133	933	13.9	0.0
13) MALI	108	708	108	723	-0.2	0.0	124	796	131	915	5.7	0.0
14) MAURITANIA	58	382	66	442	13.1	0.0	83	537	116	805	39.0	0.0
15) SIERRA LEONE	91	595	94	628	2.8	0.0	94	602	112	783	20.1	0.0
16) NIGER	80	528	81	545	1.3	0.0	120	775	95	665	-21.1	0.0
17) GABON	37	242	43	290	17.8	0.0	45	291	55	386	22.4	0.0
18) EQUTL GUINEA	18	116	11	75	-35.9	0.0	11	69	12	84	10.4	0.0
19) GUINEA BISSAU	14	95	22	145	49.7	0.0	11	69	11	76	0.7	0.0
20) CAPE VERDE IS	1	9	1	8	-12.6	0.0	1	10	2	11	8.1	0.0

Contd....

Table 7.4 (B): Direction of Exports : Exports by Regions and Countries *(Contd....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
21) SAO TOME	1	6	1	6	-1.1	0.0	1	6	1	8	32.6	0.0
22) ST HELENA	0	1	0	0	-87.5	0.0	0	0	0	0	100.0	0.0
2.4 Central Africa	1,252	8,194	1,045	7,004	-16.5	0.4	1,143	7,366	1,342	9,413	17.4	0.4
1) UGANDA	570	3,731	494	3,315	-13.2	0.2	532	3,431	580	4,058	9.0	0.2
2) CONGO D. REP.	318	2,085	199	1,335	-37.3	0.1	225	1,451	303	2,123	34.6	0.1
3) MALAWI	176	1,154	178	1,195	1.3	0.1	200	1,287	202	1,418	1.0	0.1
4) RWANDA	106	690	88	590	-17.0	0.0	91	584	145	1,019	59.9	0.0
5) BURUNDI	29	190	36	240	23.8	0.0	38	245	48	341	26.9	0.0
6) CHAD	43	284	39	258	-11.4	0.0	27	176	37	263	37.3	0.0
7) C AFRI REP	9	61	10	69	12.1	0.0	30	193	27	191	-10.4	0.0
2.5 East Africa	7,312	47,772	6,729	45,131	-8.0	2.4	6,533	42,108	7,378	51,573	12.9	2.2
1) KENYA	3,026	19,778	2,194	14,715	-27.5	0.8	1,975	12,724	2,072	14,441	4.9	0.6
2) TANZANIA REP	1,655	10,800	1,784	11,967	7.8	0.6	1,619	10,440	1,704	11,925	5.3	0.5
3) MAURITIUS	856	5,572	881	5,920	3.0	0.3	1,077	6,947	1,161	8,091	7.8	0.4
4) DJIBOUTI	205	1,334	280	1,880	37.1	0.1	376	2,422	791	5,549	110.0	0.2
5) ETHIOPIA	794	5,198	774	5,186	-2.5	0.3	684	4,409	766	5,364	12.0	0.2
6) SOMALIA	487	3,190	504	3,379	3.6	0.2	456	2,935	537	3,768	17.8	0.2
7) MADAGASCAR	197	1,284	214	1,428	8.4	0.1	228	1,469	196	1,384	-13.9	0.1
8) SEYCHELLES	34	224	36	241	5.3	0.0	42	271	84	586	100.9	0.0
9) REUNION	43	279	41	276	-3.6	0.0	46	299	47	329	1.9	0.0
10) COMOROS	17	112	21	139	22.2	0.0	30	192	19	135	-34.9	0.0
2.6 North Africa	4,595	30,022	4,407	29,544	-4.1	1.6	4,874	31,423	5,890	41,150	20.8	1.8
1) EGYPT A RP	2,338	15,272	2,067	13,855	-11.6	0.7	2,392	15,421	2,887	20,154	20.7	0.9
2) ALGERIA	788	5,135	842	5,643	6.9	0.3	823	5,307	940	6,575	14.2	0.3
3) SUDAN	782	5,110	749	5,021	-4.3	0.3	823	5,303	922	6,442	12.1	0.3
4) MOROCCO	342	2,246	374	2,507	9.3	0.1	432	2,789	680	4,752	57.3	0.2

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Table 7.4 (B): Direction of Exports : Exports by Regions and Countries *(Contd.....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
5) TUNISIA	222	1,459	255	1,712	14.9	0	282	1,817	304	2,127	8.0	0
6) LIBYA	123	801	120	805	-2.1	0.0	122	787	157	1,100	28.5	0.0
3) America	52,753	345,061	54,913	368,165	4.1	19.9	62,783	404,676	68,855	481,427	9.7	20.9
3.1 North America	45,224	295,887	47,682	319,678	5.4	17.3	54,171	349,166	59,114	413,306	9.1	17.9
1) U S A	**40,340**	**263,887**	**42,216**	**283,036**	**4.7**	**15.3**	**47,882**	**308,628**	**52,422**	**366,588**	**9.5**	**15.9**
2) MEXICO	2,865	18,793	3,461	23,206	20.8	1.3	3,783	24,384	3,842	26,786	1.6	1.2
3) CANADA	2,018	13,207	2,004	13,436	-0.7	0.7	2,506	16,154	2,851	19,932	13.8	0.9
3.2 Latin America	**7,529**	**49,174**	**7,231**	**48,487**	**-4.0**	**2.6**	**8,612**	**55,510**	**9,741**	**68,121**	**13.1**	**3.0**
1) BRAZIL	2,650	17,261	2,400	16,098	-9.4	0.9	3,063	19,747	3,800	26,617	24.1	1.2
2) COLOMBIA	887	5,795	785	5,260	-11.5	0.3	939	6,054	1,117	7,811	18.9	0.3
3) CHILE	679	4,451	674	4,522	-0.7	0.2	764	4,922	990	6,912	29.6	0.3
4) PERU	703	4,596	696	4,668	-1.0	0.3	761	4,904	721	5,041	-5.2	0.2
5) ARGENTINA	537	3,510	511	3,424	-4.8	0.2	709	4,567	563	3,910	-20.6	0.2
6) GUATEMALA	256	1,676	241	1,617	-5.8	0.1	292	1,882	305	2,137	4.6	0.1
7) ECUADOR	153	1,000	198	1,326	29.1	0.1	280	1,804	298	2,079	6.5	0.1
8) PANAMA REPUBLIC	201	1,319	220	1,476	9.3	0.1	227	1,463	227	1,593	0.1	0.1
9) DOMINIC REP	175	1,149	225	1,509	28.6	0.1	197	1,269	216	1,507	9.6	0.1
10) URUGUAY	153	996	188	1,263	22.8	0.1	159	1,028	181	1,268	13.5	0.1
11) HONDURAS	155	1,014	135	904	-13.0	0.0	146	943	167	1,169	14.1	0.1
12) VENEZUELA	131	852	62	416	-52.4	0.0	79	511	165	1,154	108.0	0.1
13) PARAGUAY	98	643	125	839	27.4	0.0	168	1,086	161	1,119	-4.6	0.0
14) COSTA RICA	135	884	159	1,069	18.2	0.1	134	861	136	953	1.9	0.0
15) BOLIVIA	74	487	80	533	6.8	0.0	105	679	105	735	-0.5	0.0
16) TRINIDAD	93	607	85	567	-9.0	0.0	89	572	84	585	-5.6	0.0
17) HAITI	62	406	71	479	14.7	0.0	94	606	79	555	-15.6	0.0
18) EL SALVADOR	69	448	60	405	-11.8	0.0	69	448	79	549	13.3	0.0

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Table 7.4 (B): Direction of Exports : Exports by Regions and Countries *(Contd....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
19) JAMAICA	40	263	43	288	7.0	0.0	52	337	55	388	6.1	0.0
20) NICARAGUA	83	541	86	578	4.6	0.0	87	563	54	374	-38.3	0.0
21) VIRGIN IS US	4	28	5	36	26.0	0.0	3	19	43	300	1,375.7	0.0
22) CUBA	54	353	42	280	-23.1	0.0	42	270	35	244	-16.3	0.0
23) NETHERLANDANTIL	37	243	38	255	2.4	0.0	39	248	31	214	-20.8	0.0
24) GUYANA	22	143	20	135	-8.2	0.0	26	168	30	207	13.9	0.0
25) SURINAME	13	84	11	70	-18.4	0.0	17	112	23	157	29.9	0.0
26) BELIZE	15	95	15	102	5.0	0.0	13	87	17	119	26.0	0.0
27) BARBADOS	11	69	12	83	17.6	0.0	13	82	12	87	-2.4	0.0
28) BR VIRGN IS	1	6	0	3	-51.2	0.0	1	5	11	73	1,306.6	0.0
29) BAHAMAS	12	79	6	40	-50.4	0.0	8	52	6	43	-24.9	0.0
30) CAYMAN IS	4	23	5	32	33.9	0.0	4	26	4	30	8.7	0.0
31) ST LUCIA	3	18	4	29	61.8	0.0	4	26	4	28	-1.2	0.0
32) GRENADA	2	12	3	20	61.5	0.0	3	17	4	26	42.8	0.0
33) MARTINIQUE	4	29	4	28	-7.0	0.0	4	29	4	25	-19.0	0.0
34) GUADELOUPE	3	19	4	29	53.0	0.0	5	34	3	24	-36.1	0.0
35) BERMUDA	3	17	4	28	62.2	0.0	3	20	3	22	1.0	0.0
36) ANTIGUA	3	17	2	13	-23.0	0.0	2	14	3	19	24.9	0.0
37) ST KITT N A	2	14	3	21	40.5	0.0	3	19	2	17	-17.4	0.0
38) FR GUIANA	1	8	1	10	25.6	0.0	2	14	2	13	-12.8	0.0
39) DOMINICA	1	10	2	16	68.5	0.0	2	14	1	9	-38.1	0.0
40) ST VINCENT	1	4	1	5	41.8	0.0	1	4	1	5	5.8	0.0
41) TURKS C IS	0	1	1	5	387.5	0.0	1	7	0	2	-77.4	0.0
42) MONTSERRAT	1	6	1	4	-35.4	0	0	0	0	0	200.0	0
43) FALKLAND IS	0	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0
4) Asia	127,815	836,486	137,748	923,518	7.8	49.9	149,635	964,614	160,724	1,123,832	7.4	48.8
4.1 East Asia (Oceania)	3,667	23,972	3,369	22,585	-8.1	1.2	4,474	28,832	4,026	28,099	-10.0	1.2

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Table 7.4 (B): Direction of Exports : Exports by Regions and Countries *(Contd.....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1) AUSTRALIA	3,263	21,331	2,958	19,828	-9.4	1.1	4,012	25,857	3,522	24,571	-12.2	1.1
2) NEW ZEALAND	308	2,015	310	2,077	0.5	0.1	353	2,275	380	2,661	7.6	0.1
3) FIJI IS	44	288	53	352	19.0	0.0	54	350	61	424	12.1	0.0
4) PAPUA N GNA	39	257	36	243	-8.0	0.0	42	270	50	347	18.6	0.0
5) TIMOR LESTE	3	22	2	16	-32.5	0.0	3	21	5	37	58.4	0.0
6) SAMOA	2	15	2	12	-20.3	0.0	2	15	3	18	7.9	0.0
7) SOLOMON IS	3	18	2	15	-14.8	0.0	1	8	3	18	100.8	0.0
8) VANUATU REP	2	13	2	14	3.5	0.0	2	15	2	14	-13.2	0.0
9) NAURU RP	0	0	3	17	25,200.0	0.0	1	9	1	4	-61.0	0.0
10) KIRIBATI REP	1	6	0	3	-50.0	0.0	1	4	0	3	-32.7	0.0
11) TONGA	1	7	1	8	8.0	0.0	1	8	0	2	-72.2	0.0
12) TUVALU	0	0	0	1	33.3	0.0	0	0	0	0	-100.0	0.0
4.2 ASEAN	25,134	164,605	30,962	207,620	23.2	11.2	34,206	220,530	37,460	262,025	9.5	11.4
1) SINGAPORE	7,720	50,532	9,565	64,116	23.9	3.5	10,203	65,790	11,569	80,916	13.4	3.5
2) VIETNAM SOC REP	5,266	34,589	6,787	45,509	28.9	2.5	7,813	50,388	6,507	45,410	-16.7	2.0
3) MALAYSIA	3,707	24,160	5,225	35,050	41.0	1.9	5,702	36,738	6,432	45,072	12.8	2.0
4) INDONESIA	2,819	18,446	3,488	23,401	23.7	1.3	3,966	25,573	5,278	36,891	33.1	1.6
5) THAILAND	2,988	19,557	3,133	21,012	4.9	1.1	3,654	23,551	4,434	31,050	21.3	1.3
6) PHILIPPINES	1,353	8,872	1,483	9,933	9.5	0.5	1,693	10,910	1,744	12,189	3.0	0.5
7) MYANMAR	1,071	7,082	1,108	7,435	3.5	0.4	966	6,227	1,205	8,456	24.7	0.4
8) CAMBODIA	143	935	105	705	-26.5	0.0	121	783	196	1,371	61.4	0.1
9) BRUNEI	28	186	43	287	50.7	0.0	63	407	56	393	-11.1	0.0
10) LAO PD RP	38	246	26	172	-32.2	0.0	25	161	39	275	57.5	0.0
4.3 West Asia- GCC	41,693	272,748	41,768	279,926	0.2	15.1	39,391	253,925	41,553	290,033	5.5	12.6
1) U ARAB EMTS	30,317	198,306	31,176	208,940	2.8	11.3	28,146	181,457	30,088	209,943	6.9	9.1
2) SAUDI ARAB	6,382	41,714	5,110	34,254	-19.9	1.9	5,411	34,868	5,552	38,787	2.6	1.7
3) OMAN	2,191	14,409	2,728	18,262	24.5	1.0	2,439	15,719	2,241	15,635	-8.1	0.7

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Table 7.4 (B): Direction of Exports : Exports by Regions and Countries *(Contd....)*

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
4) QATAR	902	5,899	785	5,262	-13.0	0.3	1,472	9,488	1,601	11,175	8.8	0.5
5) KUWAIT	1,248	8,161	1,498	10,047	20.1	0.5	1,366	8,804	1,330	9,294	-2.6	0.4
6) BAHARAIN IS	654	4,259	472	3,163	-27.9	0.2	557	3,589	740	5,199	32.9	0.2
4.4 Other West Asia	7,883	51,561	7,879	52,833	0.0	2.9	8,993	57,960	10,830	75,585	20.4	3.3
1) ISRAEL	2,821	18,467	3,087	20,698	9.4	1.1	3,364	21,687	3,787	26,432	12.6	1.1
2) IRAN	2,782	18,177	2,380	15,955	-14.4	0.9	2,652	17,094	3,511	24,461	32.4	1.1
3) IRAQ	1,004	6,550	1,111	7,456	10.7	0.4	1,462	9,423	1,789	12,507	22.3	0.5
4) YEMEN REPUBLC	400	2,635	446	2,990	11.6	0.2	563	3,632	741	5,169	31.6	0.2
5) JORDAN	500	3,265	522	3,504	4.5	0.2	541	3,478	579	4,058	7.0	0.2
6) LEBANON	240	1,571	211	1,412	-12.1	0.1	257	1,657	269	1,878	4.5	0.1
7) SYRIA	137	896	122	817	-11.0	0.0	153	989	155	1,081	0.8	0.0
4.5 NE Asia	30,845	201,898	34,548	231,643	12.0	12.5	39,471	254,443	41,938	293,878	6.3	12.7
1) CHINA P RP	9,015	58,960	10,172	68,254	12.8	3.7	13,334	86,000	16,750	117,275	25.6	5.1
2) HONG KONG	12,092	79,307	14,047	94,115	16.2	5.1	14,690	94,677	12,963	90,838	-11.8	3.9
3) JAPAN	4,663	30,436	3,846	25,787	-17.5	1.4	4,735	30,509	4,861	34,006	2.7	1.5
4) KOREA RP	3,525	23,051	4,243	28,444	20.4	1.5	4,462	28,759	4,706	32,882	5.5	1.4
5) TAIWAN	1,429	9,347	2,184	14,667	52.8	0.8	2,157	13,903	2,608	18,520	20.9	0.8
6) KOREA DP RP	111	730	45	301	-59.6	0.0	58	372	27	191	-53.1	0.0
7) MONGOLIA	8	55	10	66	15.9	0.0	20	132	23	158	11.3	0.0
8) MACAO	2	13	2	10	-23.4	0.0	14	89	1	7	-92.4	0.0
4.6 South Asia	18,594	121,701	19,222	128,911	3.4	7.0	23,101	148,924	24,917	174,212	7.9	7.6
1) BANGLADESH PR	6,035	39,527	6,820	45,741	13.0	2.5	8,615	55,538	8,933	62,441	3.7	2.7
2) NEPAL	3,903	25,552	5,454	36,580	39.7	2.0	6,613	42,624	7,616	53,248	15.2	2.3
3) SRI LANKA DSR	5,311	34,660	3,913	26,233	-26.3	1.4	4,476	28,870	4,707	32,974	5.2	1.4
4) PAKISTAN IR	2,171	14,287	1,822	12,222	-16.1	0.7	1,924	12,397	2,067	14,427	7.4	0.6
5) AFGHANISTAN TIS	527	3,436	506	3,397	-3.8	0.2	710	4,577	715	4,992	0.8	0.2

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Table 7.4 (B): Direction of Exports : Exports by Regions and Countries

Regions / Countries	2015-16		2016-17		Change (4) over (2)	Share in 2016-17	2017-18		2018-19 (P)		Change (10) over (8)	Share in 2018-19
	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)	(US$ million)	(₹ crore)	(US$ million)	(₹ crore)	(Per cent)	(Per cent)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
6) BHUTAN	469	3,068	509	3,414	8.6	0.2	546	3,520	656	4,584	20.2	0.2
7) MALDIVES	179	1,171	198	1,325	10.5	0.1	217	1,399	221	1,544	2.0	0.1
5) CIS & Baltics	2,392	15,670	2,794	18,729	16.8	1.0	3,007	19,386	3,467	24,283	15.3	1.1
5.1 CARs Countries	362	2,368	338	2,267	-6.7	0.1	365	2,353	442	3,107	21.3	0.1
1) UZBEKISTAN	95	618	109	729	15.1	0.0	133	856	201	1,417	51.8	0.1
2) KAZAKHSTAN	152	994	121	811	-20.4	0.0	125	808	143	1,004	14.2	0.0
3) TURKMENISTAN	69	447	58	387	-15.9	0.0	54	350	46	320	-16.0	0.0
4) KYRGHYZSTAN	25	164	30	204	21.2	0.0	29	184	30	210	5.0	0.0
5) TAJIKISTAN	22	145	20	137	-8.2	0.0	24	154	22	156	-6.9	0.0
5.2 Other CIS Countries	2,029	13,302	2,456	16,462	21.0	0.9	2,642	17,033	3,025	21,176	14.5	0.9
1) RUSSIA	1,588	10,409	1,937	12,985	22.0	0.7	2,113	13,622	2,390	16,729	13.1	0.7
2) UKRAINE	259	1,697	310	2,080	19.7	0.1	330	2,128	391	2,736	18.4	0.1
3) GEORGIA	83	542	91	609	10.1	0.0	77	498	110	774	42.9	0.0
4) BELARUS	36	235	40	269	12.4	0.0	48	307	56	390	17.1	0.0
5) AZERBAIJAN	33	218	40	271	20.6	0.0	34	217	43	306	29.0	0.0
6) ARMENIA	23	150	30	203	33.1	0.0	33	215	26	181	-22.0	0.0
7) MOLDOVA	8	51	7	45	-14.1	0.0	7	46	9	60	20.9	0.0
6) Unspecified Region	3,879	25,413	3,941	26,417	1.6	1.4	2,851	18,381	3,567	24,940	25.1	1.1
Total	**262291**	**1716384**	**275852**	**1849434**	**5.2**	**100.0**	**303526**	**1956515**	**329536**	**2307663**	**8.8**	**100.0**

Source: D/o Commerce based on DGCI&S data.
P : Provisional.

Table 7.5. India's Share in World Exports by Commodity Divisions and Groups

(US $ million)

Div. Sl. No.	Code Group	Commodity Division/Group	1980			1985		
			World	India	India's share (%)	World	India	India's share (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
01		Meat and meat preparations	17832	67	0.4	15755	61	0.4
03		Fish, crustaceans and molluscs & preparations	12258	242	2.0	14335	337	2.4
04		Cereals and cereal preparations	41989	201	0.5	32643	211	0.6
	042	Rice	4355	160	3.7	2916	162	5.6
05		Vegetables and fruits	24018	259	1.1	23606	332	1.4
06		Sugar, sugar preparations and honey	16183	46	0.3	10113	0	0.0
07		Coffee, tea, cocoa, spices and manufactures	22121	879	4.0	20779	971	4.7
	071	Coffee and coffee substitutes	12979	271	2.1	11676	226	1.9
	074	Tea and mate	1631	452	27.7	1973	517	26.2
	075	Spices	1072	156	14.5	1188	229	19.3
08		Feeding stuff for animals	10322	164	1.6	8515	127	1.5
12		Tobacco and tobacco manufactures	3423	151	4.4	7822	140	1.8
	121	Unmanufactured tobacco and refuse	3423	151	4.4	3798	113	3.0
	122	Manufactured tobacco	…	…	…	4024	27	0.7
22		Oilseeds and oleaginous fruit	9487	30	0.3	7896	20	0.3
28		Metalliferous ores and metal scrap	30239	465	1.5	23137	557	2.4
	281	Iron ore and concentrates	6515	411	6.3	6154	478	7.8
51		Organic chemicals	31841	17	0.1	36923	25	0.1
52		Inorganic chemicals	15491	26	0.2	16318	22	0.1
53		Dyeing, tanning and colouring materials	7986	65	0.8	8024	62	0.8
54	541	Medicinal and pharmaceutical products	13918	109	0.8	15920	130	0.8
55		Essential oils and perfume materials soap, cleansing etc.	7647	86	1.1	8136	56	0.7
58		Artificial resins, plastic materials, cellulose esters & ethers	27223	3	0.0	28456	5	0.0
59		Chemical materials and products n.e.s.	15960	8	0.0	16613	28	0.2
61		Leather, leather manufactures & dressed fur skins	5967	405	6.8	6444	534	8.3
	611	Leather	3415	342	10.0	4185	331	7.9
	612	Manufactures of leather or of composition leather	975	62	6.3	1233	202	16.4
	613	Fur skins,tanned or dressed etc.	1577	1	0.1	1026	0	0.0
65		Textile yarn, fabrics, made-up articles	48884	1145	2.3	48218	1037	2.1
	652	Woven cotton fabrics	6632	351	5.3	6804	327	4.8
	653	Woven fabrics of man made fibres	9325	44	0.5	9735	20	0.2
	654	Woven fabrics other than of cotton or man-made fibres	3188	204	6.4	3462	167	4.8
66	667	Pearls, precious and semi-precious stones	18563	579	3.1	12073	1165	9.6
67		Iron and steel	68231	87	0.1	61891	46	0.1
69		Manufactures of metals n.e.s.	36840	221	0.6	32884	125	0.4
71		Power-generating machinery & equipment	35722	88	0.2	38433	59	0.2
72		Machinery specialized for particular industries	58495	65	0.1	54707	97	0.2
73		Metal-working machinery	15671	32	0.2	12696	55	0.4
74		General industrial machinery & equipment & machine parts thereof	59443	67	0.1	53954	60	0.1
75		Office machinery and ADP equipment	24750	2	0.0	53604	30	0.1
76		Telecommunication and sound recording and reproducing apparatus and equipment	26799	11	0.0	47318	4	0.0
77		Electrical machinery, apparatus and appliances	60947	114	0.2	75739	121	0.2
78		Road vehicles (including air cushion vehicles)	127347	208	0.2	157446	126	0.1
79		Other transport equipment	41291	32	0.1	50709	27	0.1
84		Articles of apparel and clothing accessories	32365	590	1.8	38718	887	2.3
		Total Exports	**1997686**	**8486**	**0.4**	**1930849**	**8904**	**0.5**

Contd....

Table 7.5. India's Share in World Exports by Commodity Divisions and Groups *(Contd....)*

(US $ million)

Div. Sl. No.	Code Group	Commodity Division/Group	1990			2000		
			World	India	India's share (%)	World	India	India's share (%) share (%)
(1)	(2)	(3)	(10)	(11)	(12)	(13)	(14)	(15)
01		Meat and meat preparations	34118	77	0.2	44690	324	0.7
03		Fish, crustaceans and molluscs & preparations	32847	521	1.6	50875	1391	2.7
04		Cereals and cereal preparations	45314	285	0.6	53575	783	1.5
	042	Rice	3995	254	6.4	6411	654	10.2
05		Vegetables and fruits	50225	400	0.8	68355	856	1.3
06		Sugar, sugar preparations and honey	14236	21	0.1	13866	118	0.9
07		Coffee, tea, cocoa, spices and manufactures	21131	842	4.0	27953	956	3.4
	071	Coffee and coffee substitutes	8659	148	1.7	11559	264	2.3
	074	Tea and mate	2650	585	22.1	3087	431	14.0
	075	Spices	1415	109	7.7	2541	261	10.3
08		Feeding stuff for animals	15603	336	2.2	20295	469	2.3
12		Tobacco and tobacco manufactures	17860	145	0.8	21628	147	0.7
	121	Unmanufactured tobacco and refuse	5187	107	2.1	5525	147	2.7
	122	Manufactured tobacco	12674	39	0.3	16103	0	0.0
22		Oilseeds and oleaginous fruit	10477	83	0.8	14388	244	1.7
28		Metalliferous ores and metal scrap	35734	753	2.1	49515	510	1.0
	281	Iron ore and concentrates	7653	578	7.6	9229	363	3.9
51		Organic chemicals	70721	232	0.3	134109	1491	1.1
52		Inorganic chemicals	26079	59	0.2	33117	99	0.3
53		Dyeing, tanning and colouring materials	19952	233	1.2	34105	481	1.4
54	541	Medicinal and pharmaceutical products	37753	453	1.2	107482	1255	1.2
55		Essential oils and perfume materials soap, cleansing etc.	21027	240	1.1	44279	216	0.5
58		Artificial resins, plastic materials, cellulose esters & ethers	65712	29	0.0	123353	174	0.1
59		Chemical materials and products n.e.s.	33418	76	0.2	63411	437	0.7
61		Leather, leather manufactures & dressed fur skins	13226	832	6.3	24440	808	3.3
	611	Leather	9295	447	4.8	16551	388	2.3
	612	Manufactures of leather or of composition leather	2868	385	13.4	6831	421	6.2
	613	Fur skins,tanned or dressed etc.	1063	0	0.0	1058	0	0.0
65		Textile yarn, fabrics, made-up articles	105147	2180	2.1	167528	6000	3.6
	652	Woven cotton fabrics	15559	571	3.7	22387	1103	4.9
	653	Woven fabrics of man made fibres	22021	156	0.7	32151	506	1.6
	654	Woven fabrics other than of cotton or man-made fibres	8466	195	2.3	9432	370	3.9
66	667	Pearls, precious and semi-precious stones	27577	2710	9.8	54105	6477	12.0
67		Iron and steel	106342	283	0.3	146147	1481	1.0
69		Manufactures of metals n.e.s.	66088	341	0.5	125259	1167	0.9
71		Power-generating machinery & equipment	81675	126	0.2	158329	218	0.1
72		Machinery specialized for particular industries	118617	236	0.2	167582	346	0.2
73		Metal-working machinery	31051	58	0.2	41413	117	0.3
74		General industrial machinery & equipment & machine parts thereof	130836	132	0.1	225981	78	0.0
75		Office machinery and ADP equipment	126743	112	0.1	378980	0	0.0
76		Telecommunication and sound recording and reproducing apparatus and equipment	100965	31	0.0	299356	0	0.0
77		Electrical machinery, apparatus and appliances	185364	241	0.1	640575	92	0.0
78		Road vehicles (including air cushion vehicles)	312550	344	0.1	549596	370	0.1
79		Other transport equipment	96250	15	0.0	157654	53	0.0
84		Articles of apparel and clothing accessories	94577	2211	2.3	201379	7093	3.5
		Total Exports	**3303563**	**18143**	**0.5**	**6254511**	**41543**	**0.7**

Contd....

Table 7.5. India's Share in World Exports by Commodity Divisions and Groups *(Contd....)*

(US $ million)

Div. Sl. No.	Code Group	Commodity Division/Group	2005			2010		
			World	India	India's share (%)	World	India	India's share (%)
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)
01		Meat and meat preparations	73937	620	0.8	112000	1821	1.6
03		Fish, crustaceans and molluscs & preparations	71559	1590	2.2	101800	2403	2.4
04		Cereals and cereal preparations	72416	1753	2.4	94300	3136	3.3
	042	Rice	9841	1411	14.3	20300	2296	11.3
05		Vegetables and fruits	114274	1586	1.4	180700	2338	1.3
06		Sugar, sugar preparations and honey	24042	196	0.8	45500	1096	2.4
07		Coffee, tea, cocoa, spices and manufactures	44914	1042	2.3	80700	2233	2.8
	071	Coffee and coffee substitutes	15729	363	2.3	29600	558	1.9
	074	Tea and mate	4159	393	9.4	7200	720	10.0
	075	Spices	2995	281	9.4	6000	927	15.4
08		Feeding stuff for animals	30390	1127	3.7	57600	2067	3.6
12		Tobacco and tobacco manufactures	24759	232	0.9	35100	879	2.5
	121	Unmanufactured tobacco and refuse	6875	0	0.0	10800	713	6.6
	122	Manufactured tobacco	17884	0	0.0	24300	165	0.7
22		Oilseeds and oleaginous fruit	22888	319	1.4	56400	911	1.6
28		Metalliferous ores and metal scrap	124604	4899	3.9	299000	8475	2.8
	281	Iron ore and concentrates	27673	3816	13.8	105200	6147	5.8
51		Organic chemicals	217584	4536	2.1	335000	7735	2.3
52		Inorganic chemicals	55240	0	0.0	92200	972	1.1
53		Dyeing, tanning and colouring materials	50885	846	1.7	66300	1604	2.4
54	541	Medicinal and pharmaceutical products	67107	564	0.8	134700	1357	1.0
55		Essential oils and perfume materials soap, cleansing etc.	82162	511	0.6	122900	1159	0.9
58		Artificial resins, plastic materials, cellulose esters & ethers	72911	0	0.0	108400	910	0.8
59		Chemical materials and products n.e.s.	106894	1153	1.1	174100	2136	1.2
61		Leather, leather manufactures & dressed fur skins	25347	773	3.1	28200	915	3.2
	611	Leather	20500	638	3.1	23500	785	3.3
	612	Manufactures of leather or of composition leather	3125	0	0.0	3100	130	4.2
	613	Fur skins,tanned or dressed etc.	1722	0.0	0.0	1600	0.0	0.0
65		Textile yarn, fabrics, made-up articles	213619	8462	4.0	259700	12833	4.9
	652	Woven cotton fabrics	28814	861	3.0	28600	1050	3.7
	653	Woven fabrics of man made fibres	32121	981	3.1	36200	1987	5.5
	654	Woven fabrics other than of cotton or man-made fibres	11076	495	4.5	9900	518	5.2
66	667	Pearls, precious and semi-precious stones	91907	11929	13.0	129500	22589	17.4
67		Iron and steel	312975	4959	1.6	416400	10612	2.5
69		Manufactures of metals n.e.s.	215402	2774	1.3	301800	4169	1.4
71		Power-generating machinery & equipment	252199	926	0.4	330700	2335	0.7
72		Machinery specialized for particular industries	264538	1125	0.4	364800	2230	0.6
73		Metal-working machinery	63925	268	0.4	69400	381	0.5
74		General industrial machinery & equipment & machine parts thereof	375374	1825	0.5	527900	3886	0.7
75		Office machinery and ADP equipment	488065	470	0.1	572700	619	0.1
76		Telecommunication and sound recording and reproducing apparatus and equipment	492806	0	0.0	626200	2408	0.4
77		Electrical machinery, apparatus and appliances	852088	2126	0.2	1240100	5522	0.4
78		Road vehicles (including air cushion vehicles)	896733	3088	0.3	1063500	8746	0.8
79		Other transport equipment	214311	1023	0.5	333500	5804	1.7
84		Articles of apparel and clothing accessories	286840	9212	3.2	372000	11229	3.0
		Total Exports	**10355384**	**99618**	**1.0**	**15102605**	**226334**	**1.5**

Contd....

Table 7.5. India's Share in World Exports by Commodity Divisions and Groups *(Contd....)*

(US $ million)

Div. Sl. No.	Code Group	Commodity Division/Group	2014			2015		
			World	India	India's share (%)	World	India	India's share (%)
(1)	(2)	(3)	(22)	(23)	(24)	(25)	(26)	(27)
01		Meat and meat preparations	151600	5079	3.4	132000	4347	3.3
03		Fish, crustaceans and molluscs & preparations	138400	5500	4.0	124200	4778	3.8
04		Cereals and cereal preparations	130900	10598	8.1	119700	7380	6.2
	042	Rice	26400	7906	29.9	23200	6380	27.5
05		Vegetables and fruits	233900	3305	1.4	229800	3176	1.4
06		Sugar, sugar preparations and honey	49000	1386	2.8	42700	1529	3.6
07		Coffee, tea, cocoa, spices and manufactures	106000	3238	3.1	102500	3407	3.3
	071	Coffee and coffee substitutes	39200	843	2.2	37400	813	2.2
	074	Tea and mate	9100	694	7.6	8400	713	8.5
	075	Spices	9700	1575	16.2	10300	1701	16.5
08		Feeding stuff for animals	84800	2043	2.4	73900	1066	1.4
12		Tobacco and tobacco manufactures	45200	957	2.1	40100	935	2.3
	121	Unmanufactured tobacco and refuse	12000	688	5.7	11100	639	5.8
	122	Manufactured tobacco	33200	269	0.8	29000	296	1.0
22		Oilseeds and oleaginous fruit	85100	1837	2.2	72800	1408	1.9
28		Metalliferous ores and metal scrap	318300	2217	0.7	233700	1543	0.7
	281	Iron ore and concentrates	116900	874	0.7	68900	211	0.3
51		Organic chemicals	395200	10967	2.8	335600	10124	3.0
52		Inorganic chemicals	101400	908	0.9	90300	813	0.9
53		Dyeing, tanning and colouring materials	77300	2886	3.7	68600	2452	3.6
54	541	Medicinal and pharmaceutical products	189500	2243	1.2	186300	2339	1.3
55		Essential oils and perfume materials soap, cleansing etc.	161100	1905	1.2	149500	1833	1.2
58		Artificial resins, plastic materials, cellulose esters & ethers	135200	1272	0.9	123400	1223	1.0
59		Chemical materials and products n.e.s.	223600	3355	1.5	199100	3156	1.6
61		Leather, leather manufactures & dressed fur skins	34400	1603	4.7	29700	1312	4.4
	611	Leather	27400	1361	5.0	23000	1095	4.8
	612	Manufactures of leather or of composition leather	4600	243	5.3	4700	216	4.6
	613	Fur skins,tanned or dressed etc.	2400	0	0.0	2000	1	0.0
65		Textile yarn, fabrics, made-up articles	320200	18266	5.7	297400	17263	5.8
	652	Woven cotton fabrics	32300	1861	5.8	29700	1771	6.0
	653	Woven fabrics of man made fibres	47700	2152	4.5	45100	2091	4.6
	654	Woven fabrics other than of cotton or man-made fibres	10800	322	3.0	9700	301	3.1
66	667	Pearls, precious and semi-precious stones	161900	24402	15.1	139800	22395	16.0
67		Iron and steel	467100	11540	2.5	376400	8289	2.2
69		Manufactures of metals n.e.s.	402000	7953	2.0	371800	7113	1.9
71		Power-generating machinery & equipment	410900	3991	1.0	372600	3637	1.0
72		Machinery specialized for particular industries	428400	4233	1.0	378100	4101	1.1
73		Metal-working machinery	90500	512	0.6	78700	527	0.7
74		General industrial machinery & equipment & machine parts thereof	695100	6137	0.9	633300	6179	1.0
75		Office machinery and ADP equipment	604100	528	0.1	534300	590	0.1
76		Telecommunication and sound recording and reproducing apparatus and equipment	785600	2036	0.3	775500	1315	0.2
77		Electrical machinery, apparatus and appliances	1500800	6218	0.4	1449900	5975	0.4
78		Road vehicles (including air cushion vehicles)	1374300	13519	1.0	1300400	13079	1.0
79		Other transport equipment	378500	11405	3.0	372600	7923	2.1
84		Articles of apparel and clothing accessories	496100	17650	3.6	470200	18168	3.9
		Total Exports	**18671016.9**	**317544.6**	**1.7**	**16205368.1**	**264381.0**	**1.6**

Contd....

Table 7.5. India's Share in World Exports by Commodity Divisions and Groups *(Contd....)*

(US $ million)

Div. Sl. No.	Code Group	Commodity Division/Group	2016			2017		
			World	India	India's share (%)	World	India	India's share (%)
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)
01		Meat and meat preparations	131200	3975	3.0	143324	4310	3.0
03		Fish, crustaceans and molluscs & preparations	133300	5499	4.1	145034	7041	4.9
04		Cereals and cereal preparations	115900	6096	5.3	123631	7883	6.4
	042	Rice	20800	5316	25.6	24068	7076	29.4
05		Vegetables and fruits	238300	3269	1.4	253331	3873	1.5
06		Sugar, sugar preparations and honey	47100	1769	3.8	50037	1275	2.5
07		Coffee, tea, cocoa, spices and manufactures	102600	3493	3.4	108534	3863	3.6
	071	Coffee and coffee substitutes	37300	844	2.3	39607	968	2.4
	074	Tea and mate	8600	705	8.2	9257	819	8.8
	075	Spices	10400	1766	17.0	11296	1915	17.0
08		Feeding stuff for animals	70800	775	1.1	73156	1455	2.0
12		Tobacco and tobacco manufactures	40500	1012	2.5	41413	930	2.2
	121	Unmanufactured tobacco and refuse	11300	671	5.9	11244	613	5.4
	122	Manufactured tobacco	29200	341	1.2	30169	317	1.1
22		Oilseeds and oleaginous fruit	74300	1352	1.8	81696	1375	1.7
28		Metalliferous ores and metal scrap	225800	2095	0.9	285054	2890	1.0
	281	Iron ore and concentrates	71000	1005	1.4	92432	1651	1.8
51		Organic chemicals	315500	10083	3.2	352908	12320	3.5
52		Inorganic chemicals	81600	854	1.0	92080	1134	1.2
53		Dyeing, tanning and colouring materials	69400	2459	3.5	76443	2768	3.6
54	541	Medicinal and pharmaceutical products	187100	2427	1.3	196955	2229	1.1
55		Essential oils and perfume materials	155200	1951	1.3	170888	2266	1.3
		soap, cleansing etc.						
58		Artificial resins, plastic materials,	122100	1187	1.0	132385	1366	1.0
		cellulose esters & ethers						
59		Chemical materials and products n.e.s.	199000	3279	1.6	218106	3762	1.7
61		Leather, leather manufactures & dressed fur skins	26300	1118	4.3	30997	1095	3.5
	611	Leather	20300	908	4.5	24666	882	3.6
	612	Manufactures of leather or of composition leather	4900	210	4.3	4991	214	4.3
	613	Fur skins,tanned or dressed etc.	1100	0	0.0	1340	0	0.0
65		Textile yarn, fabrics, made-up articles	286700	16121	5.6	300104	17078	5.7
	652	Woven cotton fabrics	27800	1622	5.8	27644	1662	6.0
	653	Woven fabrics of man made fibres	42900	1740	4.1	43624	1794	4.1
	654	Woven fabrics other than of cotton or man-made fibres	9100	283	3.1	9026	260	2.9
66	667	Pearls, precious and semi-precious stones	144400	24566	17.0	141573	25328	17.9
67		Iron and steel	339400	8245	2.4	408993	13905	3.4
69		Manufactures of metals n.e.s.	358100	6546	1.8	386331	7065	1.8
71		Power-generating machinery & equipment	375200	4205	1.1	400246	5780	1.4
72		Machinery specialized for particular industries	371900	3866	1.0	442816	4428	1.0
73		Metal-working machinery	73600	561	0.8	74580	522	0.7
74		General industrial machinery & equipment & machine parts thereof	622900	6115	1.0	667079	7015	1.1
75		Office machinery and ADP equipment	498700	538	0.1	705947	1013	0.1
76		Telecommunication and sound recording and reproducing apparatus and equipment	753200	1475	0.2	641180	973	0.2
77		Electrical machinery, apparatus and appliances	1455400	6077	0.4	1631879	6631	0.4
78		Road vehicles (including air cushion vehicles)	1324200	14098	1.1	1423793	15302	1.1
79		Other transport equipment	358400	6422	1.8	365808	7216	2.0
84		Articles of apparel and clothing accessories	455100	17932	3.9	473772	18313	3.9
		Total Exports	**15628916.4**	**260326.9**	**1.7**	**17033133.5**	**294364.5**	**1.7**

Source: Various issues of United Nations' International Trade Statistics Year Book, and http://comtrade.un.org/

Table 7.6. Index Numbers of Foreign Trade

(Base : 1999-2000=100)

Year	Unit Value Index		Volume Index			Terms of Trade	
	Exports	Imports	Exports	Imports	Gross	Net	Income
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2000-01	102	109	125	99	79	94	117
2001-02	103	112	126	103	82	92	116
2002-03	106	128	150	109	73	83	124
2003-04	114	132	161	128	80	86	139
2004-05	131	157	179	150	84	83	149
2005-06	139	179	206	174	84	78	160
2006-07	158	206	227	191	84	77	174
2007-08	166	210	245	218	89	79	194
2008-09	194	239	267	262	98	81	217
2009-10	196	215	264	288	109	91	241
2010-11	223	243	304	311	102	92	279
2011-12	268	425	331	246	79	67	222
2012-13	284	459	357	261	73	62	221
2013-14	312	518	378	233	62	60	228
2014-15	300	518	397	235	59	58	230
2015-16	372	518	290	214	74	72	208
2016-17	372	523	313	220	70	71	223
2017-18	376	513	322	260	81	73	236
2018-19 (Q3)	402	600	364	289	79	67	244

Source: DGCI&S, Kolkata

Notes:

1. Net terms of trade, i.e., the ratio of overall export unit value index to similar Import index.
2. Gross terms of trade, i.e., the ratio of overall import quantum Index to similar export index.
3. Income terms of trade = (NTT x QIE)/100
4. QIE = Quantum Index of Exports.

Table 8.1(A). Overall External Assistance

(₹ crore)

Year	Loans	Grants	Total (2+3)
(1)	(2)	(3)	(4)
A. Authorization			
1985-86	5337.0	313.4	5650.4
1986-87	5730.0	429.5	6159.5
1987-88	8203.1	1062.2	9265.3
1988-89	12855.6	214.2	13069.8
1989-90	10105.8	720.2	10826.0
1990-91	7601.3	522.1	8123.4
1991-92	11805.8	901.8	12707.6
1992-93	13082.1	1011.7	14093.8
1993-94	11618.8	2415.1	14033.9
1994-95	12384.3	1075.8	13460.1
1995-96	10833.2	1330.0	12163.2
1996-97	14208.8	2932.6	17141.4
1997-98	14865.0	2101.0	16966.0
1998-99	8320.8	209.8	8530.6
1999-2000	17703.7	2615.3	20319.0
2000-01	16455.2	1963.5	18418.7
2001-02	21630.0	3465.0	25095.0
2002-03	19875.7	1296.1	21171.8
2003-04	14754.4	2350.7	17105.1
2004-05	22746.1	3071.1	25817.2
2005-06	17309.1	1628.8	18937.9
2006-07	28271.0	3518.9	31789.9
2007-08	28988.4	4294.4	33282.8
2008-09	28283.4	1242.5	29525.9
2009-10	48968.8	957.6	49926.4
2010-11	35895.1	1536.5	37431.6
2011-12	59035.3	1095.5	60130.8
2012-13	66891.6	1889.0	68780.6
2013-14	54372.6	140.2	54512.8
2014-15	48135.5	119.7	48255.2
2015-16	64208.0	3655.2	67863.2
2016-17	62650.4	249.5	62899.9
2017-18	61212.6	2531.4	63744.0
2018-19	83636.9	1587.6	85224.4
B. Utilization			
1985-86	2493.1	442.9	2936.0
1986-87	3175.7	429.3	3605.0
1987-88	4574.4	477.5	5051.9
1988-89	4738.6	565.8	5304.4
1989-90	5137.8	664.7	5802.5

Contd....

Table 8.1(A). Overall External Assistance

(₹ crore)

Year	Loans	Grants	Total (2+3)
(1)	(2)	(3)	(4)
1990-91	6170.0	534.3	6704.3
1991-92	10695.9	919.1	11615.0
1992-93	10102.2	879.6	10981.8
1993-94	10895.4	885.6	11781.0
1994-95	9964.5	916.0	10880.5
1995-96	9958.6	1063.6	11022.2
1996-97	10892.9	1085.6	11978.5
1997-98	10823.4	921.3	11744.7
1998-99	12343.4	895.5	13238.9
1999-2000	13330.7	1073.9	14404.6
2000-01	13527.2	727.2	14254.4
2001-02	16111.7	1447.6	17559.3
2002-03	13898.3	1835.8	15734.1
2003-04	15271.0	2073.4	17344.4
2004-05	14660.9	2490.7	17151.6
2005-06	16097.8	2790.6	18888.4
2006-07	16890.6	2528.4	19419.0
2007-08	17177.7	2673.7	19851.4
2008-09	24089.9	2803.8	26893.7
2009-10	27617.8	3121.2	30739.0
2010-11	35116.1	2789.5	37905.6
2011-12	29349.4	2926.2	32275.6
2012-13	25494.1	2373.6	27867.7
2013-14	31772.4	3415.8	35187.5
2014-15	35257.3	1491.7	36749.0
2015-16	40369.4	2197.0	42566.4
2016-17	47665.0	990.5	48655.5
2017-18	49969.1	1424.1	51393.2
2018-19	60434.4	816.0	61250.4

Source : Aid Accounts and Audit Division, Department of Economic Affairs, Ministry of Finance.

Notes :

1. Figures of authorization have been arrived at by applying the average exchange rate of the rupee with individual donor currencies.
2. Figures of utilization are at current rates applicable on the date of transaction.
3. Figures of authorization and utilization include loans and grants on both Government and Non-Government accounts.
4. Totals may not tally due to rounding off.

Table 8.1(B). Overall External Assistance

(US$ million)

Year	Loans	Grants	Total (2+3)
(1)	(2)	(3)	(4)
A. Authorization			
1985-86	4362.1	256.2	4618.3
1986-87	4484.2	336.1	4820.3
1987-88	6326.7	819.2	7145.9
1988-89	8877.0	147.9	9024.9
1989-90	6069.9	432.6	6502.5
1990-91	4236.4	291.0	4527.4
1991-92	4766.0	364.1	5130.1
1992-93	4275.7	330.7	4606.4
1993-94	3717.5	772.7	4490.2
1994-95	3958.2	343.8	4302.0
1995-96	3249.8	399.0	3648.8
1996-97	4000.4	825.6	4826.0
1997-98	4006.8	566.3	4573.1
1998-99	1979.2	49.9	2029.1
1999-2000	4091.4	604.4	4695.8
2000-01	3609.4	430.7	4040.1
2001-02	4438.7	711.1	5149.8
2002-03	4183.5	244.4	4427.9
2003-04	3300.8	525.9	3826.7
2004-05	5212.2	703.7	5915.9
2005-06	3912.2	368.1	4280.4
2006-07	6209.8	773.0	6982.8
2007-08	7182.2	1064.0	8246.1
2008-09	6183.2	271.6	6454.9
2009-10	10318.0	201.8	10519.8
2010-11	7881.0	337.4	8218.3
2011-12	12343.4	229.1	12572.5
2012-13	12301.0	347.4	12648.3
2013-14	9003.7	23.2	9027.0
2014-15	7881.8	19.6	7901.4
2015-16	9818.2	558.9	10377.1
2016-17	9324.9	37.1	9362.0
2017-18	9501.0	392.9	9893.9
2018-19	11987.5	227.5	12215.1
B. Utilization			
1985-86	2037.7	362.0	2399.7
1986-87	2485.3	336.0	2821.3
1987-88	3528.0	368.2	3896.2
1988-89	3272.1	390.7	3662.8
1989-90	3086.0	399.2	3485.2

Contd....

Table 8.1(B). Overall External Assistance

(US$ million)

Year	Loans	Grants	Total (2+3)
(1)	(2)	(3)	(4)
1990-91	3438.7	297.8	3736.5
1991-92	4317.9	371.0	4688.9
1992-93	3301.8	287.5	3589.3
1993-94	3486.0	283.4	3769.4
1994-95	3184.8	292.7	3477.5
1995-96	2987.4	319.1	3306.4
1996-97	3066.8	305.6	3372.4
1997-98	2917.4	248.3	3165.7
1998-99	2936.0	213.0	3149.0
1999-00	3080.8	248.2	3329.0
2000-01	2967.2	159.5	3126.7
2001-02	3306.3	297.1	3603.4
2002-03	2946.6	386.6	3333.2
2003-04	3416.3	463.8	3880.1
2004-05	3359.5	570.7	3930.2
2005-06	3607.0	625.3	4232.3
2006-07	3918.0	586.5	4265.5
2007-08	4280.5	666.3	4946.8
2008-09	4769.3	555.1	5324.4
2009-10	6130.5	692.8	6823.3
2010-11	7866.5	624.9	8491.4
2011-12	6060.2	590.1	6650.3
2012-13	4715.1	439.0	5154.1
2013-14	5282.9	567.8	5850.7
2014-15	5634.2	238.4	5872.6
2015-16	6068.0	330.2	6398.3
2016-17	7341.5	152.6	7494.1
2017-18	7752.8	220.8	7973.6
2018-19	8619.3	115.9	8735.2

Source : Aid Accounts and Audit Division, Department of Economic Affairs, Ministry of Finance.

Notes :

1. Figures in this table are converted from the preceding Table 8.1(A) based on the respective Rupee-US dollar rate.
2. Totals may not tally due to rounding off.

Table 8.2 (A). Authorization of External Assistance by Source

(₹ crore)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I. Consortium Members								
(a) Loans	11189.6	59893.3	35842.5	37464.7	52429.6	41070.1	44238.7	53871.9
(b) Grants	1912.3	813.0	93.3	98.0	3.1	215.9	475.5	52.6
Total	13101.9	60706.3	35935.9	37562.7	52432.7	41286.0	44714.2	53924.4
Country-wise Distribution								
(i) Austria								
Loans	...	...	...	...	...	...		
(ii) Belgium								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(iii) Canada								
(a) Loans	...	...	...	...	...	...		
(b) Grants	20.5	...	...	...	...	...		
Total	20.5	...	...	...	...	...		
(iv) Denmark								
Grants	15.6	...	...	...	...	...		
(v) France								
(a) Loans					1805.0	957.3	1846.2	1982.2
(b) Grants	9.3	769.8	1645.2	...			45.2	0.0
(vi) Germany								
(a) Loans	187.7	3240.2	1215.7	5659.1	1783.4	10487.7	1145.4	970.9
(b) Grants	5.7	38.5	...	21.3	...	...	54.3	52.6
Total	193.4	3278.7	1215.7	5680.4	1783.4	10487.7	1199.6	1023.5
(vii) Italy								
Loans	42.6	...	...	...	...			
(viii) Japan								
(a) Loans	784.1	23049.8	18818.6	6756.1	17337.0	10178.7	23163.0	30373.4
(b) Grants	2.2	...	90.3				204.4	0.0
Total	786.3	23049.8	18909.0	6756.1	17337.0	10178.7	23367.4	30373.4
(ix) Netherlands								
(a) Loans	...	...	...	...	...	...		
(b) Grants	6.7	...	...	...	...	...		
Total	6.7	...	...	...	...	...		
(x) Sweden								
Grants	...	...	...	...	...	...		
(xi) U.K.								
Grants	474.7	764.2	...	...	...	...		
(xii) U.S.A.								
(a) Loans	...	...	...	...	...	...		
(b) Grants	0.8	...	...	...	...	...		
Total			0.8	...	...	...	...	...

Contd....

Table 8.2 (A). Authorization of External Assistance by Source

(₹ crore)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(xiii) I.B.R.D.								
(a) Loans	6816.8	2619.5	2361.2	14657.3	17667.0	13819.6	15764.8	20545.4
(b) Grants	391.7	10.3	3.0	76.7	3.1	215.9	171.6	0.0
Total	7208.5	2629.8	2364.2	14733.9	17670.1	14035.5	15936.5	20545.4
(xiv) I.D.A.								
(a) Loans	3358.4	7374.7	11801.8	10392.3	13837.1	5626.9	2319.4	
(b) Grants	985.1	...	...	...	...	...	0.0	
Total	4343.5	7374.7	11801.8	10392.3	13837.1	5626.9	2319.4	
II. Russia Fed. & East European Countries								
Loans	...	22839.3	...	...	...	...		
Country-wise Distribution								
(i) Russia Fed.		22839.3						
Loans	...	22839.3	...	...	...	...		
III. Others								
(a) Loans	5265.6	6998.3	18530.1	10670.7	11778.4	21580.3	16973.8	29765.0
(b) Grants	51.2	1076.0	46.8	21.7	3652.1	33.6	2055.9	1535.0
Total	5316.8	8074.3	18576.9	10692.4	15430.5	21613.9	19029.7	31300.0
(i) Switzerland								
Grants	...	...	...	.....	.....	.....		
(ii) European Economic Community								
Grants	...	559.9	...	...	...	...		
(iii) O.P.E.C. Fund								
Loans	...	...	...	...	...	...		
(iv) Saudi Arab Fund for Development								
Loans	...	...	...	...	...	...		
(v) Kuwait Fund for Arabic Economic Development								
Grants	...	...	...	...	...	...		
(vi) IFAD (International Fund for Agricultural Development								
(a) Loans	...	...	400.1	383.2	475.7	...	973.2	
(b) Grants	...	...	...	...	...	...	6.4	
Total	...	...	400.1	383.2	475.7	...	979.6	
(vii) IMF Trust Fund								
Loans	...	...	...	...	...	...		
(viii) International Sugar Org.								
Loans	...	...	...	...	...	...		
(ix) ADB								
(a) Loans	5265.6	6998.3	18130.0	10287.6	9858.7	17387.8	11561.6	22020.5
(b) Grants		...	...	11.0	13.1	33.6	0.0	1081.4
Total	5265.6	6998.3	18130.0	10298.6	9871.8	17421.4	11561.6	23102.0

Contd....

Table 8.2 (A). Authorization of External Assistance by Source

(₹ crore)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(x) European Investment Bank								
(a) Loans	...	...	...	...	1444.0	1841.0		
(b) Grants	...	...	...	...		...		
Total	...	...	...	...	1444.0	1841.0		
(xi) Spain								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(xii) Norway								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(xiii) Australia								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(xiv) Other International Institutions[a]								
(a) Loans						2351.5	4439.1	7744.5
(b) Grants	51.2	516.2	46.8	10.7	3639.0	...	2049.5	453.6
Grand Total	18418.7	68780.6	54512.8	48255.1	67863.2	62899.9	63744.0	85224.4
(a) Loans	16455.2	66891.6	54372.6	48135.5	64208.0	62650.4	61212.6	83636.9
(b) Grants	1963.5	1889.0	140.2	119.7	3655.2	249.5	2531.4	1587.6

Source: Aid Accounts and Audit Division, Department of Economic Affairs, Ministry of Finance.

---- Nil or Negligible

a Other International Institutions include UNICEF, UNDP, ILO, WHO, UNFPA, UNESCO, UPU, WFP, Global Fund, IDF (WB), UN-FAO, NDB, AIIB and Ford Foundation.

Notes:

1. Figures of authorization of external assistance include agreements signed on Government and Non-Government accounts.
2. Totals may not tally due to rounding off.

Table 8.2(B). Authorization of External Assistance by Source

(US$ Million)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I. Consortium Members								
(a) Loans	2454.4	11014.00	5935.28	6134.53	8017.11	6112.86	6866.41	7721.35
(b) Grants	419.5	149.50	15.46	16.04	0.48	32.14	73.80	7.54
Total	2873.9	11163.50	5950.74	6150.57	8017.59	6145.00	6940.21	7728.89
Country-wise Distribution								
(i) Austria								
Loans	...	...	...	...	...	...		
(ii) Belgium								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(iii) Canada								
(a) Loans	...	...	...	...	...	...		
(b) Grants	4.5	...	...	...	...	...		
Total	4.5	...	...	...	...	...		
(iv) Denmark								
Grants	3.4	...	...	...	...	...		
(v) France								
(a) Loans					276.01	142.48	286.55	284.10
(b) Grants	2.1	141.57	272.44				7.02	0.00
(vi) Germany								
(a) Loans	41.2	595.86	201.31	926.62	272.70	1560.99	177.77	139.15
(b) Grants	1.3	7.07	...	3.49	…	…	8.42	7.54
Total	42.4	602.93	201.31	930.11	272.70	1560.99	186.19	146.69
(vii) Italy								
Loans	9.4	...	...	...	...	...		
(viii) Japan								
(a) Loans	172.0	4238.71	3116.24	1106.26	2651.04	1514.99	3595.19	4353.37
(b) Grants	0.5	...	14.95				31.73	0.00
Total	172.5	4238.71	3131.19	1106.26	2651.04	1514.99	3626.92	4353.37
(ix) Netherlands								
(a) Loans	...	...	...					
(b) Grants	1.5	...	...	...	...	...		
Total	1.5	...	...	...	...	...		
(x) Sweden								
Grants	...	...	...	...	...	...		
(xi) U.K.								
Grants	104.1	140.53	...	...	...	...		
(xii) U.S.A.				...	...	...	...	
(a) Loans	...	...	...	...	...	...		
(b) Grants	0.2	...	...	...	...	...		
Total	0.2	...	...	...	...	...		

Contd....

Table 8.2(B). Authorization of External Assistance by Source

(US$ Million)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(xiii) I.B.R.D.								
(a) Loans	1495.3	481.70	391.00	2400.00	2701.50	2056.90	2446.90	2944.73
(b) Grants	85.9	1.90	0.51	12.55	0.48	32.14	26.64	0.00
Total	1581.2	483.60	391.51	2412.55	2701.98	2089.04	2473.54	2944.73
(xiv) I.D.A.								
(a) Loans	736.7	1356.16	1954.29	1701.65	2115.86	837.50	360.00	
(b) Grants	216.1	...	...	...	….	….	0.00	
Total	952.8	1356.16	1954.29	1701.65	2115.86	837.50	360.00	
II. Russia Fed. & East European Countries								
Loans	...	4200.00	...	...	...	...		
Country-wise Distribution								
(i) Russia Fed.								
Loans	...	4200.00	...	...	...	...		
III. Others								
(a) Loans	1155.0	1286.94	3068.45	1747.24	1801.06	3212.01	2634.55	4266.16
(b) Grants	11.2	197.88	7.75	3.55	558.44	5.00	319.10	220.01
Total	1166.2	1484.82	3076.20	1750.79	2359.50	3217.01	2953.65	4486.17
(i) Switzerland								
Grants	...	...	...	...	...	...		
(ii) European Economic Community								
Grants	...	102.96	...	...	...	...		
(iii) O.P.E.C. Fund								
Loans	...	...	...	...	...	...		
(iv) Saudi Arab Fund for Development								
Loans	...	...	...	...	...	...		
(v) Kuwait Fund for Arabic								
Economic Development								
Grants	...	...	...	...	...	...		
(vi) IFAD (International Fund for								
Agricultural Development)								
(a) Loans	...	...	66.25	62.74	72.74	...	151.05	
(b) Grants	...	...	...	...	...	...	1.00	
Total	...	...	66.25	62.74	72.74	...	152.05	
(vii) IMF Trust Fund					...	...		
Loans	...	...	...	...	...	...		
(viii) International Sugar Org.					...	...		
Loans	...	...	...	...	...	...		
(ix) ADB								
(a) Loans	1155.0	1286.94	3002.20	1684.50	1507.51	2588.00	1794.50	3156.16
(b) Grants	...	...	...	1.80	2.00	5.00	0.00	155.00
Total	1155.0	1286.94	3002.20	1686.30	1509.51	2593.00		3311.16

Contd....

Table 8.2(B). Authorization of External Assistance by Source

(US$ Million)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(x) European Investment Bank								
(a) Loans					220.81	274.01		
(b) Grants								
Total					220.81	...		
(xi) Spain								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(xii) Norway								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(xiii) Australia								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(xiv) Other International Institutionsa								
(a) Loans						350.00	689.00	1110.00
(b) Grants	11.2	94.92	7.75	1.75	556.44	...	318.10	65.01
Grand Total	4040.1	12648.32	9026.94	7901.36	10377.09	9362.01	9893.87	12215.05
(a) Loans	3609.4	12300.94	9003.73	7881.77	9818.17	9324.87	9500.96	11987.51
(b) Grants	430.7	347.38	23.21	19.59	558.92	37.14	392.91	227.54

Source: Aid Accounts and Audit Division, Department of Economic Affairs, Ministry of Finance.

---- Nil or Negligible

a Other International Institutions include UNICEF, UNDP, ILO, WHO, UNFPA, UNESCO, UPU, WFP, Global Fund, IDF (WB), UN-FAO, NDB, AIIB and Ford Foundation.

Notes:

1. Figures in this table are converted from the preceding Table 8.2(A) based on the respective Rupee- US dollar rates.
2. Totals may not tally due to rounding off.

Table 8.3(A). Utilization of External Assistance by Source

(₹ crore)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I. Consortium Members								
(a) Loans	11168.6	18390.8	25164.7	26630.2	31364.6	35578.5	36439.04	42677.57
(b) Grants	634.0	1560.1	1043.4	749.6	405.1	135.8	99.14	130.08
Total	11802.6	19950.9	26208.1	27379.8	31769.7	35714.3	36538.18	42807.65
Country-wise Distribution								
(i) Austria								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(ii) Belgium								
Loans	...	...	...	...	...	...		
(iii) Canada								
(a) Loans	...	...	...	...	...	...		
(b) Grants	2.9	...	...	...	...	...		
Total	2.9	...	...	...	...	...		
(iv) Denmark								
(a) Loans	...	...	...	...	...	...		
(b) Grants	49.5	...	...	...	...	...		
Total	49.5	...	...	...	...	...		
(v) France								
(a) Loans	65.2	16.0	921.7	225.78	329.4	790.4	1045.15	977.66
(b) Grants	...	...	...	...	…	-0.16	0	6.49
Total	65.2	16.0	921.7	225.78	329.4	790.3	1045.15	984.15
(vi) Germany								
(a) Loans	318.9	1379.9	3122.0	1861.1	2111.3	2622.4	2080.82	4881.17
(b) Grants	67.8	62.1	65.6	56.0	80.1	34.7	21.18	5.76
Total	386.7	1442.0	3187.6	1917.1	2191.4	2657.1	2102	4886.93
(vii) Italy								
Loans	...	...	...	...	...	...		
(viii) Japan								
(a) Loans	2714.0	7260.0	8750.5	8825.9	10341.5	12506.1	14439.34	16769.86
(b) Grants	15.8	...	4.4	0.0	29.1	36.0	0	46.75
Total	2729.8	7260.0	8754.9	8825.9	10370.5	12542.1	14439.34	16816.61
(ix) Netherlands								
(a) Loans	...	...	...	...	...	...		
(b) Grants	70.3	...	...	...	...	...		
Total	70.3	...	...	...	...	...		
(x) Sweden								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		

Contd....

Table 8.3(A). Utilization of External Assistance by Source

(₹ crore)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(xi) U.K.								
(a) Loans	...	...	...	...	...	...		
(b) Grants	307.3	1293.4	855.0	601.8	224.3	-0.3		
Total	307.3	1293.4	855.0	601.8	224.3	-0.3		
(xii) U.S.A.								
(a) Loans	...	...	...	...	...	...		
(b) Grants	81.1	23.6	43.4	...	4.7	...		
Total	81.1	23.6	43.4	...	4.7	...		
(xiii) I.B.R.D.								
(a) Loans	3222.4	4894.8	5631.6	7703.5	9137.3	8794.1	8134.98	10595.34
(b) Grants	24.5	180.6	73.8	85.9	67.0	65.5	77.96	71.08
Total	3246.9	5075.4	5705.3	7789.4	9204.3	8859.6	8212.94	10666.42
(xiv) I.D.A.								
(a) Loans	4848.1	4840.1	6738.9	8013.9	9441.4	9247.4	8437.2	6004.64
(b) Grants	14.8	0.5	1.2	6.0	0.0	0.0	0	0
Total	4862.9	4840.6	6740.1	8019.8	9441.4	9247.4	8437.2	6004.64
(xv) IMF Trust Fund	...	...	...	...	...			
II. Russia Fed.& East European Countries								
Loans	130.1	26.4	8.2	16.9	3.7	1618.1		
Country-wise Distribution								
(i) Russia Federation.								
Loans	130.1	26.4	8.2	16.9	3.7	1618.1	2301.55	3448.9
(ii) Reps. of Czech & Slovak								
Loans	...	...	...	...	...			
III. Others								
(a) Loans	2228.5	7076.9	6599.5	8610.3	9004.8	12086.6	13530.08	17756.82
(b) Grants	93.2	813.52	2371.83	742.1	1791.99	854.7	1324.98	685.95
Total	2321.7	7890.5	8971.3	9352.3	10796.8	12941.2	14855.06	18442.77
Country-wise Distribution								
(i) Abu Dhabi Fund								
Loans	...	...	...	...	...	...		
(ii) Switzerland								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(iii) Other International Institutionsa								
Loan							511.34	2417.39
Grants	50.0	710.2	1746.0	739.68	1504.35	776.19	1130.25	669.87
Total							1641.59	3087.26
(iv) European Economic Community								

Contd....

Table 8.3(A). Utilization of External Assistance by Source

(₹ crore)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Grants	36.3	104.0	622.4	...	287.6	70.4	189.33	
(v) Oil Producing & Exporting Countries								
Loans	41.5	20.8	7.9	54.5	26.3	18.7		
(vi) Saudi Arab Fund for Development								
Loans	...	...	...	...	...			
(vii) Norway								
(a) Loans	...							
(b) Grants	6.9	...	...	...	...			
Total	6.9	...	...	...	...			
(viii) Spain								
Loans	...	...	...	...	...			
(ix) Kuwait Fund for Arabic								
Economic Development								
(a) Loans	...	...	...	...	...			
(b) Grants	...	...	...	...	...			
Total	...	...	...	...	...			
(x) IFAD (International Fund for								
Agricultural Development)								
(a) Loans	40.1	140.7	210.3	191.7	220.1	196.2	276.66	282.37
(b) Grants	...	-0.8	3.5			1.0		
Total	40.1	140.0	213.8	191.7	220.1	197.2	276.66	282.37
(xi) ADB								
(a) Loans	2146.9	6915.4	6381.2	8364.0	8758.4	11141.0	11980.69	14258.51
(b) Grants	...	...	...	2.41	…	7	5.35	16.08
Total	2146.9	6915.4	6381.2	8366.4	8758.4	11148.0	11986.04	14274.59
(xii) European Investment Bank								
(a) Loans	...	...	...	...	...	730.7	761.41	798.55
(b) Grants	...	...	...	...	...	...	0	0
Total	...	...	...	...	...	730.7	761.41	798.55
(xiii) Australia								
Loans	...	...	...	...	...	...		
Grand Total	14254.4	27867.7	35187.6	36749.0	42566.5	48655.5	51393.24	61250.42
(a) Loans	13527.2	25494.1	31772.4	35257.3	40369.4	47665.1	49969.12	60434.39
(b) Grants	727.2	2373.7	3415.2	1491.7	2197.1	990.5	1424.12	816.03

Source: Aid Accounts and Audit Division, Department of Economic Affairs, Ministry of Finance.

---- Nil or Negligible

a Other International Institutions include UNICEF, UNDP, ILO, WHO, UNFPA, UNESCO, UPU, WFP, Global Fund, IDF (WB), UN-FAO, NDB, AIIB and Ford Foundation.

Notes:

1. Utilization figures are exclusive of suppliers' credit and commercial borrowings.
2. Utilization of assistance is on Government and Non-Govt. accounts.
3. Totals may not tally due to rounding off.

Table 8.3(B). Utilization of External Assistance by Source

(US$ million)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I. Consortium Members								
(a) Loans	2449.8	3401.4	4184.2	4255.6	4714.5	5479.9	5650.87	6090.95
(b) Grants	139.1	288.5	173.5	119.8	60.9	21.0	15.32	18.65
Total	2588.9	3689.9	4357.7	4375.4	4775.4	5500.9	5666.19	6109.6
Country-wise Distribution								
(i) Austria								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(ii) Belgium								
Loans	...	...	...	...	...	...		
(iii) Canada								
(a) Loans	...	...	...	...	...	...		
(b) Grants	0.6	...	...	...	...	...		
Total	0.6	...	...	...	...	...		
(iv) Denmark								
(a) Loans	...	...	...	...	...	...		
(b) Grants	10.9	...	...	...	...	...		
Total	10.9	...	...	...	...	...		
(v) France								
(a) Loans	14.3	3.0	153.3	36.08	49.5	121.7	162.3	139.19
(b) Grants	...	...	...	...	...	0.0	0	0.91
Total	14.3	3.0	153.3	36.08	49.5	121.7	162.3	140.1
(vi) Germany								
(a) Loans	70.0	255.2	519.1	297.4	317.4	403.9	323.77	683.32
(b) Grants	14.9	11.5	10.9	8.9	12.0	5.3	3.27	0.83
Total	84.9	266.7	530.0	306.4	329.4	409.3	327.04	684.15
(vii) Italy								
Loans	...	...	...	...	...	...		
(viii) Japan								
(a) Loans	595.3	1342.7	1455.0	1410.4	1554.5	1926.2	2237.28	2389.33
(b) Grants	3.5	...	0.7	...	4.4	5.6		6.58
Total	598.8	1342.7	1455.7	1410.4	1558.8	1931.8	2237.28	2395.91
(ix) Netherlands								
(a) Loans	...	...	...	...	...	...		
(b) Grants	15.4	...	...	...	...	...		
Total	15.4	...	...	...	...	...		
(x) Sweden								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(xi) U.K.								

Contd....

Table 8.3(B). Utilization of External Assistance by Source

(US$ million)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(a) Loans	...	...	...	...	...	...		
(b) Grants	67.4	239.2	142.2	96.2	33.7	0.0		
Total	67.4	239.2	142.2	96.2	33.7	0.0		
(xii) U.S.A.								
(a) Loans	...	...	...	...				
(b) Grants	17.8	4.4	7.2	...	0.7			
Total	17.8	4.4	7.2	...	0.7			
(xiii) I.B.R.D.								
(a) Loans	706.8	905.3	936.4	1231.1	1373.5	1354.5	1260.22	1522.93
(b) Grants	5.4	33.4	12.3	13.7	10.1	10.1	12.05	10.33
Total	712.2	938.7	948.6	1244.8	1383.5	1364.6	1272.27	1533.26
(xiv) I.D.A.								
(a) Loans	1063.4	895.2	1120.5	1280.6	1419.2	1424.3	1310.57	866.42
(b) Grants	3.2	0.1	0.2	1.0	0.0	0.0		
Total	1066.6	895.3	1120.7	1281.6	1419.2	1424.3	1310.57	866.42
(xv) IMF Trust Fund	...	...	...	...	...	...		
II. Russia Fed.& East European Countries								
Loans	28.5	4.9	1.4	2.7	0.6	249.2		
Country-wise Distribution								
(i) Russia Federation.								
Loans	28.5	4.9	1.4	2.7	0.6	249.2	356.73	489.76
(ii) Reps. of Czech & Slovak								
Loans	...	...	...	...	...	...		
III. Others								
(a) Loans	488.8	1308.9	1097.3	1376.0	1353.5	1861.6	2101.89	2528.3
(b) Grants	20.5	150.5	394.4	118.6	269.4	131.6	205.5	97.29
Total	509.3	1459.3	1491.7	1494.5	1622.9	1993.3	2307.39	2625.59
Country-wise Distribution								
(i) Abu Dhabi Fund								
Loans	...	...	...	...	...	...		
(ii) Switzerland								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(iii) Other International Institutions [a]								
Loans							78.94	346.71
Grants	11.0	131.4	290.3	118.2	226.12	119.6	175.1	95.02
Total							254.04	441.73
(iv) European Economic Community								
Grants	8.0	19.2	103.5	...	43.2	10.9	29.57	
(v) Oil Producing & Exporting Countries								
Loans	9.1	3.9	1.3	8.7	4.0	2.9		

Contd....

Table 8.3(B). Utilization of External Assistance by Source

(US$ million)

Source and type of assistance	2000-01	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(vi) Saudi Arab Fund for Development								
Loans	...	...	...	...	...	...		
(vii) Norway								
(a) Loans	...	...	...	...	...	...		
(b) Grants	1.5	...	...	...	...	...		
Total	1.5	...	...	...	...	...		
(viii) Spain								
Loans	...	...	...	...	...	...		
(ix) Kuwait Fund for Arabic								
Economic Development								
(a) Loans	...	...	...	...	...	...		
(b) Grants	...	...	...	...	...	...		
Total	...	...	...	...	...	...		
(x) IFAD (International Fund for								
Agricultural Development)								
(a) Loans	8.8	26.0	35.0	30.6	33.1	30.2	43	40.89
(b) Grants	...	-0.1	0.6	...	...	0.2		
Total	8.8	25.9	35.6	30.6	33.1	30.4	43	40.89
(xi) ADB								
(a) Loans	470.9	1279.0	1061.0	1336.6	1316.5	1716.0	1859.78	2027.41
(b) Grants	...	...	...	0.4	….	1.08	0.83	2.27
Total	470.9	1279.0	1061.0	1337.0	1316.5	1717.1	1860.61	2029.68
(xii) European Investment Bank								
(a) Loans	...	...	...	...	...	112.6	120.17	113.29
(b) Grants	...	...	...	...	...			
Total	...	...	...	...	...	112.6	120.17	113.29
(xiii) Australia								
Loans	...	...	...	...	...			
Grand Total	3126.7	5154.1	5850.7	5872.6	6398.3	7494.2	7973.58	8735.19
(a) Loans	2967.1	4715.1	5282.9	5634.2	6068.0	7341.5	7752.76	8619.25
(b) Grants	159.6	439.0	567.9	238.4	330.2	152.6	220.82	115.94

Source: Aid Accounts and Audit Division, Department of Economic Affairs, Ministry of Finance.

---- Nil or Negligible

a Other International Institutions include UNICEF, UNDP, ILO, WHO, UNFPA, UNESCO, UPU, WFP, Global Fund, IDF (WB), UN-FAO, NDB, AIIB and Ford Foundation.

Notes:

1. Figures in this table are converted from the preceding Table 8.3(A) based on the respective Rupee- US dollar rates.
2. Totals may not tally due to rounding off.

Table 8.4(A). India's External Debt Outstanding

(₹ crore)

Sl. No.	Components of External Debt	End-March											
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	End December 2018
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
I.	**Multilateral**	157901	201425	193436	216672	257089	279310	321560	328148	359490	354134	371930	401287
	A. Government Borrowing	144627	181997	170722	190326	222579	235670	268491	269431	294122	288246	304595	327140
	(i) Concessional	107395	127771	116046	120653	138691	143130	163589	154581	166506	156726	164002	164764
	a) IDA	105947	126127	114552	119068	136816	141119	161165	152171	163772	154050	160970	161524
	b) Others	1448	1644	1494	1585	1875	2011	2424	2410	2734	2676	3032	3241
	(ii) Non-concessional	37232	54226	54676	69673	83888	92540	104902	114850	127616	131519	140593	162375
	a) IBRD	22631	29948	28874	39218	45328	48239	53433	57107	61553	60667	61663	68758
	b) Others	14601	24278	25802	30455	38560	44301	51469	57743	66063	70852	78930	93617
	B. Non-Government Borrowing	13274	19428	22714	26346	34510	43640	53069	58717	65368	65888	67335	74147
	(i) Concessional	0	0	0	0	0	0	0	0	0	0	0	4
	(ii) Non-concessional	13274	19428	22714	26346	34510	43640	53069	58717	65368	65888	67335	74143
	a) Public Sector	10352	14298	14919	15802	19407	23414	28105	31385	35409	32123	33712	37968
	i) IBRD	4690	7105	8544	9193	11092	12749	14412	15674	17005	16625	16935	18393
	ii) Others	5662	7193	6375	6609	8315	10664	13693	15711	18404	15498	16777	19575
	b) Financial Institutions	2350	3721	5385	7511	10290	14370	18881	21859	25190	29883	30365	32367
	i) IBRD	593	744	1343	1899	2707	2973	3820	3709	5984	7276	7418	6475
	ii) Others	1757	2977	4042	5612	7583	11397	15061	18150	19206	22607	22947	25892
	c) Private Sector	572	1409	2410	3033	4813	5856	6083	5473	4769	3882	3258	3808
	i) IBRD	0	0	0	0	0	0	0	0	0	0	0	1723
	ii) Others	572	1409	2410	3033	4813	5856	6083	5473	4769	3882	3258	2086
II.	**Bilateral**	78802	104997	101976	114904	137086	136329	148813	136060	149483	150780	164579	173947
	A .Government borrowing	59391	74662	71584	80406	91641	88007	96918	88452	102925	109742	128945	137824
	(i) Concessional	59391	74662	71584	80406	91641	88007	96918	88452	102925	109742	128945	137824
	(ii) Non-concessional	0	0	0	0	0	0	0	0	0	0	0	0
	B.Non-Government borrowing	19411	30335	30392	34498	45445	48322	51895	47608	46558	41038	35635	36123
	(i) Concessional	1737	3262	3169	4101	7648	8435	10318	10080	11892	11988	12753	16520

Contd....

Table 8.4(A). India's External Debt Outstanding

(₹ crore)

Sl. No.	Components of External Debt	End-March											
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	End December 2018
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	a) Public Sector	1226	1156	1121	1621	4963	5916	7763	7546	9052	6758	7586	11107
	b) Financial Institutions	511	2106	2048	2480	2685	2519	2555	2534	2840	5230	5167	5413
	c) Private Sector	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Non-concessional	17674	27073	27223	30397	37797	39887	41577	37528	34666	29049	22881	19603
	a) Public Sector	10097	15076	13845	13789	14200	13010	13374	11561	10848	9472	8518	7975
	b) Financial Institutions	3735	4311	3436	3754	3886	4206	4361	3323	3119	3167	2507	2401
	c) Private Sector	3842	7686	9942	12854	19711	22671	23842	22644	20699	16410	11856	9227
III.	**IMFa**	4479	5188	27264	28163	31528	32439	36910	34350	37177	35129	37716	38719
IV.	**Export Credit**	41296	73772	76011	83112	97117	96556	93275	78915	70612	62324	61511	56784
	a) Buyers' credit	33134	64046	66849	73273	85896	84667	80069	66006	55574	46688	43533	37786
	b) Suppliers' credit	2998	3234	2937	2847	3252	4236	4779	5217	6088	6093	6766	7014
	c) Export credit component of bilateral credit	5164	6492	6225	6992	7969	7653	8427	7692	8950	9543	11213	11985
V.	**Commercial Borrowings**	249243	318209	319221	448448	614623	762128	897744	1128501	1199043	1117547	1315594	1360643
	a) Commercial bank loans [b]	160577	219925	202350	261678	373194	454450	582644	635246	647567	568987	551922	616496
	b) Securitized borrowings [c]	82641	91286	113177	183504	238849	306070	313416	490895	549076	546261	761439	741976
	c) Loans/securitized borrowings etc., with multilateral/bilateral guarantee + IFC(W)	6025	6998	3694	3266	2580	1608	1684	2360	2400	2299	2233	2171
VI.	**NRI Depositsd (Above one year Maturity)**	174623	210118	217062	230812	299840	385202	624101	720997	841955	757751	820737	880145
VII.	**Rupee Debt** [e]	8065	7760	7480	7147	6922	6839	8826	9426	8479	7962	7886	7590
	a) Defence	7172	6935	6709	6416	6220	6164	8179	8807	7887	7398	7350	7081
	b) Civilian	893	825	771	731	702	675	647	619	592	564	536	509
VIII.	**Total Long Term Debt (I TO VII)**	714409	921469	942450	1129258	1444205	1698803	2131229	2436397	2666239	2485626	2779954	2919116
IX.	**Short-Term Debt**	182881	220656	236188	290149	399962	525931	550985	535145	553044	571387	664575	724821
	a) Trade-Related Credits	167540	203345	214267	261006	333202	472026	491271	510938	530806	560781	652969	704495

Contd....

Table 8.4(A). India's External Debt Outstanding

(₹ crore)

Sl. No.	Components of External Debt	End-March											
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	End December 2018
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	1) Above 6 Months	91502	118936	126391	157806	200454	321010	330500	334267	339674	364104	431225	360576
	2) Upto 6 Months	76038	84409	87876	103200	132748	151016	160771	176671	191132	196677	221744	343919
	b) FII Investment in Govt. Treasury Bills and other instruments	2603	10522	15153	24214	48066	29671	33686	7307	132	260	580	8840
	c) Investment in Treasury Bills by foreign central banks and other international institutions etc.	620	534	467	225	326	447	572	714	714	1577	1791	1706
	d) External Debt Liabilities of:	12118	6255	6301	4704	18368	23787	25456	16186	21392	8768	9234	9780
	1) Central Bank	4458	3892	3139	693	871	985	892	939	1197	1575	1782	1559
	2) Commercial banks	7660	2363	3162	4011	17497	22802	24564	15247	20195	7194	7453	8221
X.	**Grand Total(VIII+IX)**	897290	1142125	1178638	1419407	1844167	2224734	2682214	2971542	3219283	3057013	3444529	3643937

Source: Ministry of Finance (Department of Economic Affairs), Ministry of Defence, Reserve Bank of India, Securities & Exchange Board of India .

Notes:

PR: Partially Revised; QE : Quick Estimates.

IFC(W): International Finance Corporation, Washington D.C.

FII: Foreign Institutional Investors

a: Relates to SDR allocations from March 2004 onwards.

b: Includes Financial Lease since 1996.

c: Also includes India Development Bonds (IDBs), Resurgent India Bonds (RIBs), India Millennium Deposits (IMDs), Foreign Currency Convertible Bonds (FCCBs) and net investment by 100% FII debt funds and securitized borrowings of commercial banks FCCB debt has been adjusted since end-March, 1998 after netting out conversion into equity and redemptions.

d: Figures include accrued interest.

e: Rupee denominated debt owed to Russia and payable through exports.

NRO Deposits are included under NRI Deposits from the quarter ended June 2005. Supplier's Credits upto 180 days and FII investment in short-term debt instruments are included under short-term debt from the quarter ended March 2005. Vostro balances / Nostro overdrafts of commercial banks, balances of foreign central banks/international institutions with RBI and investment in T-bills/securities by foreign central banks/ international institutions have been included in external debt from the quarter ended March 2007.

8.4(B). India's External Debt Outstanding

(US$ million)

Sl. No.	Components of External Debt	End-March											
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	End Dec 2018
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
I.	**Multilateral**	39490	39538	42857	48475	50452	51590	53418	52391	54000	54502	57272	57060
	A. Government Borrowing	36171	35724	37825	42579	43686	43539	44598	43015	44171	44356	46907	46497
	(i) Concessional	26859	25080	25711	26992	27221	26443	27173	24679	25006	24117	25256	23418
	a) IDA	26497	24757	25380	26637	26853	26071	26770	24294	24595	23705	24789	22958
	b) Others	362	323	331	355	368	372	403	385	411	412	467	461
	(ii) Non-concessional	9312	10644	12114	15587	16465	17096	17425	18336	19165	20238	21651	23079
	a) IBRD	5660	5878	6397	8774	8897	8912	8876	9117	9244	9335	9496	9773
	b) Others	3652	4766	5717	6813	7568	8184	8549	9219	9921	10903	12155	13306
	B. Non-Government Borrowing	3319	3814	5032	5896	6766	8051	8820	9376	9829	10146	10364	10563
	(i) Concessional	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Non-concessional	3319	3814	5032	5896	6766	8051	8820	9376	9829	10146	10364	10563
	a) Public Sector	2589	2807	3305	3536	3808	4324	4669	5010	5319	4944	5191	5399
	i) IBRD	1173	1395	1893	2057	2177	2355	2394	2502	2554	2558	2608	2614
	ii) Others	1416	1412	1412	1479	1631	1969	2275	2508	2765	2386	2583	2785
	b) Financial Institutions	587	730	1193	1681	2017	2650	3139	3492	3791	4603	4672	4620
	i) IBRD	148	146	298	425	531	549	635	592	899	1120	1142	920
	ii) Others	439	584	895	1256	1486	2101	2504	2900	2892	3484	3530	3700
	c) Private Sector	143	277	534	679	941	1077	1012	874	719	599	501	543
	i) IBRD	0	0	0	0	0	0	0	0	0	0	0	245
	ii) Others	143	277	534	679	941	1077	1012	874	719	599	501	298
II.	**Bilateral**	19708	20610	22593	25712	26884	25158	24727	21726	22464	23210	25341	24739
	A. Government borrowing	14853	14655	15860	17988	17987	16259	16099	14121	15457	16887	19857	19589
	(i) Concessional	14853	14655	15860	17988	17987	16259	16099	14121	15457	16887	19857	19589
	(ii) Non-concessional	0	0	0	0	0	0	0	0	0	0	0	0
	B. Non-Government borrowing	4855	5955	6733	7724	8897	8899	8628	7605	7007	6323	5484	5150
	(i) Concessional	435	641	702	918	1501	1558	1714	1610	1786	1845	1964	2348

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8.4(B). India's External Debt Outstanding

(US$ million)

Sl. No.	Components of External Debt	End-March											
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	End Dec 2018
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	a) Public Sector	307	227	248	363	974	1093	1290	1205	1359	1040	1168	1579
	b) Financial Institutions	128	414	454	555	527	465	424	405	427	805	796	769
	c) Private Sector	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Non-concessional	4420	5314	6031	6806	7396	7341	6914	5995	5221	4478	3520	2802
	a) Public Sector	2525	2959	3072	3087	2781	2397	2223	1846	1646	1459	1311	1137
	b) Financial Institutions	934	846	761	840	762	776	724	531	455	488	386	342
	c) Private Sector	961	1509	2198	2879	3853	4168	3967	3618	3120	2531	1823	1322
III.	**IMFa**	1120	1018	6041	6308	6163	5964	6149	5488	5605	5410	5784	5533
IV.	**Export Credit**	10328	14481	16841	18647	18990	17760	15518	12608	10640	9609	9460	8122
	a) Buyers' credit	8287	12572	14811	16437	16790	15567	13323	10547	8378	7201	6693	5414
	b) Suppliers' credit	750	635	651	646	636	779	795	833	918	940	1040	1005
	c) Export credit component of bilateral credit	1291	1274	1379	1564	1564	1414	1400	1228	1344	1468	1727	1703
V.	**Commercial Borrowings**	62334	62461	70726	100476	120136	140125	149375	180295	180761	172358	202262	194904
	a) Commercial bank loans [b]	40159	43169	44832	58643	72946	83555	96946	101492	97624	87754	84854	88333
	b) Securitized borrowings [c]	20668	17918	25075	41100	46686	56274	52149	78426	82775	84249	117065	106260
	c) Loans/securitized borrowings etc., with multilateral/bilateral guarantee + IFC(W)	1507	1374	819	733	504	296	280	377	362	355	343	311
VI.	**NRI Depositsd (Above one year Maturity)**	43672	41554	47890	51682	58608	70822	103845	115163	126929	116867	126182	125774
VII.	**Rupee Debte**	2017	1523	1658	1601	1354	1258	1468	1506	1278	1228	1213	1087
	a) Defence	1794	1361	1487	1437	1216	1133	1361	1407	1189	1141	1130	1015
	b) Civilian	223	162	171	164	138	125	107	99	89	87	83	72
VIII.	**Total Long Term Debt (I TO VII)**	178669	181185	208606	252901	282587	312677	354500	389177	401677	383184	427512	417219
IX.	**Short-Term Debt**	45738	43313	52329	64990	78179	96697	91678	85498	83375	88124	102173	103854
	a) Trade-Related Credits	41901	39915	47473	58463	65130	86787	81743	81631	80022	86489	100389	100942
	1) Above 6 Months	22884	23346	28003	35347	39182	59021	54992	53405	51208	56155	66297	51664

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8.4(B). India's External Debt Outstanding

(US$ million)

Sl. No.	Components of External Debt	End-March											
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	End Dec 2018
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	2) Upto 6 Months	19017	16569	19470	23116	25948	27766	26751	28226	28814	30333	34091	49278
	b) FII Investment in Govt. Treasury Bills and other instruments	651	2065	3357	5424	9395	5455	5605	1167	20	40	89	1267
	c) Investment in Treasury Bills by foreign central banks and other international institutions etc.	155	105	103	50	64	82	95	114	108	243	275	244
	d) External Debt Liabilities of:	3031	1228	1396	1053	3590	4373	4235	2586	3225	1352	1420	1401
	1) Central Bank	1115	764	695	155	170	181	148	150	180	243	274	223
	2) Commercial banks	1916	464	701	898	3420	4192	4087	2436	3045	1110	1146	1178
X.	**Grand Total (VIII+IX)**	224407	224498	260935	317891	360766	409374	446178	474675	485052	471308	529685	521073
	Memo Items :												
	Concessional Debtf	44164	41899	43931	47499	48063	45518	46454	41916	43526	44077	48290	46443
	Concessional Debt to total external debt (per cent)	19.7	18.7	16.8	14.9	13.3	11.1	10.4	8.8	9.0	9.4	9.1	8.9
	Short-term debt	45738	43313	52329	64990	78179	96697	91678	85498	83375	88124	102173	103854
	Short-term debt to total external debt (per cent)	20.4	19.3	20.1	20.4	21.7	23.6	20.6	18.0	17.2	18.7	19.3	19.9

Source: Ministry of Finance (Department of Economic Affairs), Ministry of Defence, Reserve Bank of India, Securities & Exchange Board of India.

Notes:

PR: Partially Revised; QE : Quick Estimates.

IFC(W): International Finance Corporation, Washington D.C.

FII: Foreign Institutional Investors

a: Relates to SDR allocations from March 2004 onwards.

b: Includes Financial Lease since 1996.

c: Also includes India Development Bonds (IDBs), Resurgent India Bonds (RIBs), India Millennium Deposits (IMDs),

Foreign Currency Convertible Bonds (FCCBs) and net investment by 100% FII debt funds and securitized borrowings of commercial banks

FCCB debt has been adjusted since end-March, 1998 after netting out conversion into equity and redemptions.

d: Figures include accrued interest.

e: Rupee denominated debt owed to Russia and payable through exports.

f: The definition of concessional debt here includes 'concessional' categoreis under multilateral and bilateral debt and rupee debt under item VII.

NRO Deposits are included under NRI Deposits from the quarter ended June 2005. Supplier's Credits upto 180 days and FII investment in short-term debt instruments are included under short-term debt from the quarter ended March 2005. Vostro balances / Nostro overdrafts of commercial banks, balances of foreign central banks/international institutions with RBI and investment in T-bills/securities by foreign central banks/ international institutions have been included in external debt from the quarter ended March 2007.

Table 9.1. Selected Indicators of Human Development for Major States

State	Life expectancy at birth (in years)						Infant mortality rate (per 1000 live births)						Birth rate (per 1000)		Death rate (per 1000)		Total fertility rate (TFR)	
	2008-12			2012-16			2007			2017			2007	2017	2007	2017	2005	2016
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Total	Total	Total	Total	Total	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Andhra Pradesh	64.7	69.4	67.0	68.0	71.4	69.6	54	55	54	31	33	32	18.7	16.2	7.4	7.2	2.0	1.7
Assam	61.2	64.8	62.7	64.4	66.8	65.5	64	67	56	41	46	44	24.3	21.2	8.6	6.5	2.9	2.3
Bihar	66.7	67.6	67.2	68.9	68.5	68.7	57	58	58	34	37	35	29.4	26.4	7.5	5.8	4.3	3.3
Gujarat	65.5	70.1	67.7	67.4	71.8	69.5	50	54	55	30	30	30	23.0	19.9	7.3	6.2	2.8	2.2
Haryana	65.4	70.1	67.6	67.2	72.0	69.4	55	56	55	28	31	30	23.4	20.5	6.6	5.8	2.8	2.3
Himachal Pradesh	68.3	72.7	70.5	69.4	75.5	72.3	45	49	47	22	23	22	17.4	15.8	7.1	6.6	2.2	1.7
Jammu & Kashmir	69.9	72.4	71.0	71.6	76.2	73.5	49	52	51	22	24	23	19.0	15.4	5.8	4.8	2.4	1.7
Karnataka	65.8	70.3	68.0	67.6	70.7	69.1	46	47	47	24	26	25	19.9	17.4	7.3	6.5	2.2	1.8
Kerala	71.6	77.7	74.7	72.2	77.9	75.1	12	13	13	9	10	10	14.7	14.2	6.8	6.8	1.7	1.8
Madhya Pradesh	61.9	65.0	63.3	63.7	67.2	65.4	72	72	72	48	45	47	28.5	24.8	8.7	6.8	3.6	2.8
Maharashtra	68.8	72.9	70.8	70.8	73.7	72.2	33	35	34	18	19	19	18.1	15.7	6.6	5.7	2.2	1.8
Odisha	63.4	65.3	64.3	66.2	69.1	67.6	70	72	71	40	41	41	21.5	18.3	9.2	7.4	2.6	2.0
Punjab	68.1	72.9	70.3	71.0	74.2	72.5	42	45	43	20	22	21	17.6	14.9	7.0	7.0	2.1	1.7
Rajasthan	65.2	69.4	67.2	66.1	70.7	68.3	63	67	65	37	40	38	27.9	24.1	6.8	6.0	3.7	2.7
Tamil Nadu	67.9	71.9	69.8	69.5	73.4	71.4	34	36	35	17	16	16	15.8	14.9	7.2	6.7	1.7	1.6
Uttar Pradesh	62.3	64.8	63.5	63.9	65.6	64.8	67	70	69	39	43	41	29.5	25.9	8.5	6.7	4.2	3.1
West Bengal	68.1	71.5	69.7	69.8	71.9	70.8	36	37	37	23	24	24	17.9	15.2	6.3	5.8	2.1	1.6
All India	**65.4**	**68.8**	**67.0**	**67.4**	**70.2**	**68.7**	**55**	**56**	**55**	**32**	**34**	**33**	**23.1**	**20.2**	**7.4**	**6.3**	**2.9**	**2.3**

Source : Office of the Registrar General of India, Ministry of Home Affairs
Note : Andhra Pradesh includes Telangana.

Table 9.2. Gross Enrolment Ratio 2016-17 (Provisional)

(per cent)

States/UTs	Classes I-V			Classes VI-VIII			Classes I-VIII		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Andhra Pradesh	84.76	80.69	82.79	82.21	82.06	82.14	83.80	81.21	82.54
Arunachal Pradesh	107.57	104.75	106.18	116.31	123.49	119.85	110.26	110.54	110.40
Assam	106.11	108.73	107.39	91.17	102.52	96.69	100.95	106.60	103.71
Bihar	94.68	101.78	98.08	94.26	115.27	103.86	94.55	105.82	99.87
Chhattisgarh	97.26	96.87	97.07	99.55	102.12	100.81	98.11	98.81	98.45
Gujarat	93.15	97.11	94.97	95.65	99.11	97.20	94.12	97.86	95.83
Haryana	93.06	94.93	93.90	89.67	100.88	94.40	91.77	97.06	94.08
Himachal Pradesh	97.14	98.77	97.91	102.18	103.90	102.99	99.04	100.69	99.82
Jammu & Kashmir	76.66	77.57	77.09	65.50	67.04	66.22	72.46	73.67	73.03
Jharkhand	97.09	96.16	96.64	87.84	96.17	91.81	94.00	96.16	95.04
Karnataka	104.17	103.21	103.71	92.83	92.98	92.90	99.89	99.42	99.66
Kerala	95.15	95.14	95.14	92.69	94.63	93.63	94.20	94.94	94.56
Madhya Pradesh	92.67	91.54	92.13	87.55	92.27	89.73	90.75	91.80	91.25
Maharashtra	97.77	97.20	97.50	96.71	101.03	98.69	97.37	98.60	97.94
Manipur	120.65	120.49	120.57	116.43	122.27	119.27	119.32	121.05	120.16
Meghalaya	128.28	129.89	129.07	119.13	137.31	128.04	125.52	132.12	128.76
Mizoram	117.73	113.54	115.68	128.11	126.85	127.50	120.89	117.53	119.25
Nagaland	80.82	82.59	81.67	87.54	93.64	90.44	82.94	86.02	84.42
Odisha	101.38	99.02	100.22	95.67	93.56	94.64	99.24	96.99	98.14
Punjab	97.09	102.10	99.31	93.69	103.14	97.72	95.78	102.48	98.71
Rajasthan	98.43	97.09	97.80	91.72	92.32	91.99	96.03	95.45	95.76
Sikkim	96.19	87.65	91.98	131.90	141.92	136.79	108.16	105.62	106.91
Tamil Nadu	101.98	102.03	102.01	91.82	95.16	93.42	97.87	99.30	98.56
Telangana	99.15	98.09	98.64	86.56	87.28	86.91	94.32	93.93	94.13
Tripura	101.94	102.85	102.38	124.00	128.95	126.40	108.98	111.12	110.02
Uttar Pradesh	83.91	90.85	87.16	66.30	80.66	72.74	77.58	87.37	82.09
Uttarakhand	96.27	96.57	96.41	85.90	87.67	86.73	92.34	93.18	92.74
West Bengal	96.47	96.06	96.27	89.72	103.47	96.34	93.97	98.76	96.30
A & N Islands	89.06	84.70	86.87	85.02	81.14	83.06	87.50	83.33	85.40
Chandigarh	76.27	84.92	80.07	90.46	102.51	95.60	81.62	91.33	85.84
D & N Haveli	85.36	80.21	82.87	93.91	89.04	91.57	88.48	83.41	86.03
Daman & Diu	80.50	88.26	83.96	77.42	85.87	81.13	79.38	87.41	82.94
Delhi	106.24	112.75	109.19	120.15	140.78	128.96	111.10	121.88	115.89
Goa	100.07	102.74	101.33	95.40	98.99	97.07	98.29	101.33	99.72
Lakshadweep	74.30	65.95	70.02	89.08	75.05	81.37	79.78	69.64	74.43
Puducherry	81.56	90.33	85.57	80.23	90.23	84.79	81.06	90.29	85.27
All India	**94.02**	**96.35**	**95.12**	**86.90**	**95.19**	**90.73**	**91.42**	**95.94**	**93.55**

Source: School Education in India, U-DISE 2016-17 (Provisional)

Table 9.3. Number of Recognised Educational Institutions in India

(in numbers)

States/UTs	2015-16[1]				2017-18[2]						
	Intermediate/ Sr. Sec. Schools	High/ Secondary Schools	Upper Primary Schools	Only Primary Schools	Universities / University level Institutes	Colleges	Technical Education (Polytech-nics)	PGDM	Nursing	Teacher Training	Institutes under Ministries
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Andhra Pradesh	2589	11234	10086	38793	34	2624	144	6	242	393	3
Arunachal Pradesh	155	263	1266	2363	9	30	6	na	na	5	na
Assam	2075	6987	13451	48529	21	512	18	1	24	27	1
Bihar	3926	3701	33204	43405	24	770	50	4	51	28	3
Chhattisgarh	3818	2465	14672	32826	24	741	2	3	40	25	1
Gujarat	6592	4350	29642	11840	65	2196	10	9	131	141	17
Haryana	4300	3363	4658	9994	40	964	132	11	18	29	12
Himachal Pradesh	2212	1570	2930	11327	25	327	29	1	26	18	1
Jammu & Kashmir	1061	3141	10286	14604	14	297	29	na	22	23	6
Jharkhand	1229	3372	15917	28010	21	309	31	5	23	5	1
Karnataka	4509	13627	30563	26790	60	3593	290	20	514	416	10
Kerala	2949	1733	4020	8428	22	1306	70	4	159	196	2
Madhya Pradesh	8100	6793	47276	88593	52	2124	59	12	117	122	4
Maharashtra	8738	16287	29448	53151	54	4314	628	60	289	959	14
Manipur	210	899	933	2951	5	87	na	na	na	10	1
Meghalaya	300	1255	3597	9362	8	60	3	na	7	8	2
Mizoram	138	615	1511	1561	3	30	2	na	4	9	na
Nagaland	175	561	825	1265	5	66	4	na	3	8	na
Odisha	1291	9454	22795	36760	25	1042	124	7	167	65	3
Punjab	4553	4618	5446	14371	31	1053	168	2	150	51	3
Rajasthan	16958	11237	37656	42577	79	2957	186	9	50	196	6
Sikkim	87	140	346	706	7	17	2	na	1	4	na
Tamil Nadu	6877	5594	9733	35379	58	2472	498	10	112	292	11
Telangana	2162	11333	7189	21948	24	2045	152	8	151	181	1
Tripura	411	603	1262	2568	4	52	na	na	3	4	na
Uttar Pradesh	15937	8632	75644	155756	76	6922	317	67	248	213	6

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Table 9.3. Number of Recognised Educational Institutions in India

(in numbers)

States/UTs	2015-16[1]				2017-18[2]						
	Intermediate/ Sr. Sec. Schools	High/ Secondary Schools	Upper Primary Schools	Only Primary Schools	Universities / University level Institutes	Colleges	Technical Education (Polytech-nics)	PGDM	Nursing	Teacher Training	Institutes under Ministries
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Uttarakhand	2218	1294	5017	15497	33	440	105	3	30	13	2
West Bengal	6898	3296	8839	76703	43	1341	143	13	69	205	13
A & N Islands	63	49	84	218	0	7	na	na	na	na	na
Chandigarh	90	70	29	12	3	25	3	1	na	3	na
D & N Haveli	21	20	129	177	0	8	na	na	1	na	1
Daman & Diu	24	18	44	59	0	9	na	na	na	2	na
Delhi	1684	377	939	2755	27	178	17	12	22	35	12
Goa	110	385	86	973	3	56	8	1	1	1	na
Lakshadweep	13	1	14	17	na	0	na	na	na	na	na
Puducherry	164	202	87	278	4	76	9	na	1	4	na
All India	**112637**	**139539**	**429624**	**840546**	**903**	**39050**	**3239**	**269**	**2676**	**3691**	**136**

Source: 1 : Educational Statistics at a Glance, 2018 Ministry of Human Resource Development
2 : AISHE 2017-18, Ministry of Human Resource Development

Note:
na: not available
1: Upper primary means primary schools/sections, secondary means secondary schools/sections and senior secondary means senior secondary schools/sections unless otherwise mentioned.

Table 9.4. State-Wise Literacy Rates (1951-2011)

(per cent)

States/UTs	1951	1961	1971	1981	1991	2001	2011
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pradesh	na	21.2	24.6	35.7	44.1	60.5	67.0
Arunachal Pradesh	na	7.1	11.3	25.6	41.6	54.3	65.4
Assam	18.5	33.0	33.9	na	52.9	63.3	72.2
Bihar	13.5	22.0	23.2	32.3	37.5	47.0	61.8
Chhattisgarh	9.4	18.1	24.1	32.6	42.9	64.7	70.3
Gujarat	21.8	31.5	37.0	44.9	61.3	69.1	78.0
Haryana	na	na	25.7	37.1	55.9	67.9	75.6
Himachal Pradesh	na	na	na	na	63.9	76.5	82.8
Jammu & Kashmir	na	13.0	21.7	30.6	na	55.5	67.2
Jharkhand	12.9	21.1	23.9	35.0	41.4	53.6	66.4
Karnataka	na	29.8	36.8	46.2	56.0	66.6	75.4
Kerala	47.2	55.1	69.8	78.9	89.8	90.9	94.0
Madhya Pradesh	13.2	21.4	27.3	38.6	44.7	63.7	69.3
Maharashtra	27.9	35.1	45.8	57.2	64.9	76.9	82.3
Manipur [a]	12.6	36.0	38.5	49.7	59.9	70.5	76.9
Meghalaya	na	26.9	29.5	42.1	49.1	62.6	74.4
Mizoram	31.1	44.0	53.8	59.9	82.3	88.8	91.3
Nagaland	10.5	22.0	33.8	50.3	61.7	66.6	79.6
Odisha	15.8	21.7	26.2	33.6	49.1	63.1	72.9
Punjab	na	na	34.1	43.4	58.5	69.7	75.8
Rajasthan	8.5	18.1	22.6	30.1	38.6	60.4	66.1
Sikkim	na	na	17.7	34.1	56.9	68.8	81.4
Tamil Nadu	na	36.4	45.4	54.4	62.7	73.5	80.1
Tripura	na	20.2	31.0	50.1	60.4	73.2	87.2
Uttar Pradesh	12.0	20.9	24.0	32.7	40.7	56.3	67.7
Uttarakhand	18.9	18.1	33.3	46.1	57.8	71.6	78.8
West Bengal	24.6	34.5	38.9	48.7	57.7	68.6	76.3
A & N Islands	30.3	40.1	51.2	63.2	73.0	81.3	86.6
Chandigarh	na	na	70.4	74.8	77.8	81.9	86.0
D & N Haveli	na	na	18.1	32.9	40.7	57.6	76.2
Daman & Diu	na	na	na	na	71.2	78.2	87.1
Delhi	na	62.0	65.1	71.9	75.3	81.7	86.2
Goa	23.5	35.4	52.0	65.7	75.5	82.0	88.7
Lakshadweep	15.2	27.2	51.8	68.4	81.8	86.7	91.8
Puducherry	na	43.7	53.4	65.1	74.7	81.2	85.8
All India [a]	**18.3**	**28.3**	**34.5**	**43.6**	**52.2**	**64.8**	**73.0**

Source: Office of the Registrar General of India, Ministry of Home Affairs

Notes:

a : India and Manipur figures exclude those of the three sub-divisions viz. Mao Maram, Paomata and Purul of Senapati district of Manipur as census results of 2001 in these three sub-divisions were cancelled due to technical and administrative reasons.

na : not available

1. Literacy rates for 1951, 1961 and 1971 Censuses relate to population aged five years and above and from 1981 onwards Literacy rates relate to the population aged seven years and above. The literacy rate for 1951 in case of West Bengal relates to total population including 0-4 age group. Literacy rate for 1951 in respect of Chhattisgarh, Madhya Pradesh and Manipur are based on sample population.

Table 9.5. Households with access to Safe Drinking Water in India

(per cent)

States/ UTs	Households with Tap/Handpump/Tubewell								
	1991			2001			2011		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Andhra Pradesh	55.1	49.0	73.8	80.1	76.9	90.2	90.5	88.6	94.5
Arunachal Pradesh	70.0	66.9	88.2	77.5	73.7	90.7	78.6	74.3	91.3
Assam	45.9	43.3	64.1	58.8	56.8	70.4	69.9	68.3	78.2
Bihar	58.8	56.5	73.4	86.6	86.1	91.2	94.0	93.9	94.7
Chhattisgarh	a	a	a	70.5	66.2	88.8	86.3	84.1	93.9
Gujarat	69.8	60.0	87.2	84.1	76.9	95.4	90.3	84.9	97.0
Haryana	74.3	67.1	93.2	86.1	81.1	97.3	93.8	92.0	96.7
Himachal Pradesh	77.3	75.5	91.9	88.6	87.5	97.0	93.7	93.2	97.8
Jammu & Kashmir	na	na	na	65.2	54.9	95.7	76.8	70.1	96.1
Jharkhand	a	a	a	42.6	35.5	68.2	60.1	54.3	78.4
Karnataka	71.7	67.3	81.4	84.6	80.5	92.1	87.5	84.4	92.3
Kerala	18.9	12.2	38.7	23.4	16.9	42.8	33.5	28.3	39.4
Madhya Pradesh	53.4	45.6	79.4	68.4	61.5	88.6	78.0	73.1	92.1
Maharashtra	68.5	54.0	90.5	79.8	68.4	95.4	83.4	73.2	95.7
Manipur	38.7	33.7	52.1	37.0	29.3	59.4	45.4	38.1	60.8
Meghalaya	36.2	26.8	75.4	39.0	29.5	73.5	44.7	35.1	79.5
Mizoram	16.2	12.9	19.9	36.0	23.8	47.8	60.4	43.4	75.8
Nagaland	53.4	55.6	45.5	46.5	47.5	42.3	53.8	54.6	51.8
Odisha	39.1	35.3	62.8	64.2	62.9	72.3	75.3	74.4	79.8
Punjab	92.7	92.1	94.2	97.6	96.9	98.9	97.6	96.7	98.9
Rajasthan	59.0	50.6	86.5	68.2	60.4	93.5	78.1	72.8	94.3
Sikkim	73.1	70.8	92.8	70.7	67.0	97.1	85.3	82.7	92.2
Tamil Nadu	67.4	64.3	74.2	85.6	85.3	85.9	92.5	92.2	92.9
Tripura	37.2	30.6	71.1	52.5	45.0	85.8	67.5	58.1	91.9
Uttar Pradesh	62.2	56.6	85.8	87.8	85.5	97.2	95.1	94.3	97.9
Uttarakhand	a	a	a	86.7	83.0	97.8	92.2	89.5	98.7
West Bengal	82.0	80.3	86.2	88.5	87.0	92.3	92.2	91.4	93.9
A & N Islands	67.9	59.4	90.9	76.7	66.8	97.8	85.5	78.2	98.1
Chandigarh	97.7	98.1	97.7	99.8	99.9	99.8	99.3	98.7	99.4
D& N Haveli	45.6	41.2	91.0	77.0	70.5	96.1	91.6	84.3	98.4
Daman & Diu	71.4	56.9	86.8	96.3	94.9	98.9	98.7	97.8	99.0
Delhi	95.8	91.0	96.2	97.2	90.1	97.7	95.0	87.9	95.2
Goa	43.4	30.5	61.7	70.1	58.3	82.1	85.7	78.4	90.4
Lakshadweep	11.9	3.4	18.8	4.6	4.6	4.6	22.8	31.2	20.2
Puducherry	88.8	92.9	86.1	95.9	96.6	95.5	97.8	99.6	97.0
All India	**62.3**	**55.5**	**81.4**	**77.9**	**73.2**	**90.0**	**85.5**	**82.7**	**91.4**

Source: Office of the Registrar General of India, Ministry of Home Affairs

Notes:

a : Created in 2001. Uttarakhand, Jharkhand and Chhattisgarh for 1991 are included under Uttar Pradesh, Bihar and Madhya Pradesh respectively.

na : not available as no census was carried out in Jammu & Kashmir during 1991.

Table 9.6. Population of India (1951-2011)

(in thousands)

States /UTs	1951	1961	1971	1981	1991	2001	2011
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pradesh	31115	35983	43503	53551	66508	76210	84581
Arunachal Pradesh [a]	na	337	468	632	865	1098	1384
Assam [b]	8029	10837	14625	18041	22414	26656	31206
Bihar	29085	34841	42126	52303	64531	82999	104099
Chhattisgarh	7457	9154	11637	14010	17615	20834	25545
Gujarat	16263	20633	26697	34086	41310	50671	60440
Haryana	5674	7591	10036	12922	16464	21145	25351
Himachal Pradesh	2386	2812	3460	4281	5171	6078	6865
Jammu & Kashmir [c]	3254	3561	4617	5987	7837	10144	12541
Jharkhand	9697	11606	14227	17612	21844	26946	32988
Karnataka	19402	23587	29299	37136	44977	52851	61095
Kerala	13549	16904	21347	25454	29099	31841	33406
Madhya Pradesh	18615	23218	30017	38169	48566	60348	72627
Maharashtra	32003	39554	50412	62783	78937	96879	112374
Manipur [d]	578	780	1073	1421	1837	2294	2856
Meghalaya	606	769	1012	1336	1775	2319	2967
Mizoram	196	266	332	494	690	889	1097
Nagaland	213	369	516	775	1210	1990	1979
Odisha	14646	17549	21945	26370	31660	36805	41974
Punjab	9161	11135	13551	16789	20282	24359	27743
Rajasthan	15971	20156	25766	34262	44006	56507	68548
Sikkim	138	162	210	316	406	541	611
Tamil Nadu	30119	33687	41199	48408	55859	62406	72147
Tripura	639	1142	1556	2053	2757	3199	3674
Uttar Pradesh	60274	70144	83849	105137	132062	166198	199812
Uttarakhand	2946	3611	4493	5726	7051	8489	10086
West Bengal	26300	34926	44312	54581	68078	80176	91276
A & N Islands	31	64	115	189	281	356	381
Chandigarh	24	120	257	452	642	901	1055
D & N Haveli	42	58	74	104	138	220	344
Daman & Diu	49	37	63	79	102	158	243
Delhi	1744	2659	4066	6220	9421	13851	16788
Goa	547	590	795	1008	1170	1348	1459
Lakshadweep	21	24	32	40	52	61	64
Puducherry	317	369	472	604	808	974	1248
All India [d]	**361088**	**439235**	**548160**	**683329**	**846421**	**1028737**	**1210855**

Source : Office of the Registrar General of India, Ministry of Home Affairs

Notes:

a : Census conducted for the first time in 1961.

b : The 1981 Census could not be held in Assam. Total population for 1981 has been worked out by interpolation.

c : The 1991 Census could not be held in Jammu & Kashmir. Total population for 1991 has been worked out by interpolation.

d: India and Manipur figures include estimated population for those of the three sub-divisions viz. Mao Maram, Paomata and Purul Senapatidistrict of Manipur as census results of 2001 in these three sub-divisions were cancelled due to technical and administrative reasons.

na: not available

Table 9.7. Population under different age groups and Child Sex Ratio in 2001 and 2011

States/UTs	Age Group 2001					Age Group 2011					Child Sex Ratio (0-6 years)	
	0-14	15-34	35-59	60 & above	Age not stated	0-14	15-34	35-59	60 & above	Age not stated	2001	2011
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Andhra Pradesh	24398125	26904637	18985717	5788078	133450	21790792	30609248	23131065	8278241	771431	961	939
Arunachal Pradesh	442825	366838	237279	49916	1110	493361	512549	312669	63639	1509	964	972
Assam	9970342	9220063	5875783	1560366	28974	10248899	11123193	7736116	2078544	18824	965	962
Bihar	34874151	24971476	17473783	5501274	177825	41721188	32264872	22002745	7707145	403502	942	935
Chhattisgarh	7692654	6782442	4826242	1504383	28082	8183836	8861697	6472641	2003909	23115	975	969
Gujarat	16624168	18233455	12267094	3499063	47237	17445613	21695832	16272844	4786559	238844	883	890
Haryana	7579980	7458045	4441951	1584089	80499	7529954	9370426	6225793	2193755	31534	819	834
Himachal Pradesh	1884390	2159835	1471395	547564	14716	1775385	2419844	1956201	703009	10163	896	909
Jammu & Kashmir	3617025	3523571	2282065	675324	45715	4240710	4411400	2951417	922656	15119	941	862
Jharkhand	10708694	8563383	6061782	1578662	33308	11891118	10992825	7630779	2356678	116734	965	948
Karnataka	16845601	18667321	13223774	4062022	51844	16024874	22349821	16883719	5791032	45851	946	948
Kerala	8296545	11271154	8911546	3335675	26454	7830974	10335954	11011254	4193393	34486	960	964
Madhya Pradesh	23252416	19871596	12783564	4280924	159523	24302242	25176834	17351555	5713316	82862	932	918
Maharashtra	31100375	34038392	23167117	8454660	118083	29917215	40661653	30280834	11106935	407696	913	894
Manipur	706705	813358	496722	145470	4533	861688	1060221	726088	200020	7777	957	930
Meghalaya	980877	776836	452223	105726	3160	1177942	1052138	592123	138902	5784	973	970
Mizoram	313736	331766	193272	49023	776	356002	412771	259172	68628	633	964	970
Nagaland	728409	762383	404177	90323	4744	679032	760810	434463	102726	1471	964	943
Odisha	12207872	12591532	8904094	3039100	62062	12076422	14385953	11408224	3984448	119171	953	941
Punjab	7617876	8609860	5845668	2191693	93902	7084950	10174719	7576330	2865817	41522	798	846
Rajasthan	22543231	18257954	11608147	3810272	287584	23725426	23811691	15629580	5112138	269602	909	888
Sikkim	188907	205320	115646	29040	1938	165937	251098	151614	40752	1176	963	957
Tamil Nadu	16710874	22392020	17366443	5507400	428942	17007503	25144641	22418323	7509758	66805	942	943
Tripura	1075552	1135652	750645	232549	4805	1017991	1362144	1002622	289544	1616	966	957
Uttar Pradesh	67923332	51963534	33924676	11649468	736911	71308266	68153539	43288570	15439904	1622062	916	902
Uttarakhand	3086976	2845406	1884841	654356	17770	3129008	3602662	2437205	900809	16608	908	890
West Bengal	26645405	27999332	19719644	5700099	111717	24737475	32655852	26027955	7742382	112451	960	956
A & N Islands	104044	142088	90375	17366	2279	92675	147586	114528	25424	368	957	968
Chandigarh	261188	364690	228545	44912	1300	266512	426702	294812	67078	346	845	880
D & N Haveli	77758	90151	43663	8814	104	107813	147931	73701	13892	372	979	926
Daman & Diu	43194	75924	30973	8042	71	54985	122110	54435	11361	356	926	904
Delhi	4492939	5368740	3248002	719650	21176	4565319	6534460	4524015	1147445	16702	868	871
Goa	331226	523205	373952	112273	7012	318160	503105	471691	163495	2094	938	942
Lakshadweep	20734	21382	14752	3729	53	16457	22857	19774	5270	115	959	911
Puducherry	262686	373118	256712	81016	813	298392	440449	387575	120436	1101	967	967
All India	**363610812**	**347676459**	**237962264**	**76622321**	**2738472**	**372444116**	**421959587**	**308112432**	**103849040**	**4489802**	**927**	**918**

Source: Office of the Registrar General of India, Ministry of Home Affairs

Table 9.8. Socio- Economic Profiles and								
Socio-economic Indicators/Items	**Andhra Pradesh**	**Assam**	**Bihar**	**Chhat-tisgarh**	**Guja-rat**	**Harya-na**	**Him-achal Pradesh**	**Jammu & Kash-mir**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
Demographic indicators*								
Population 2001 (in '000)	76210	26656	82999	20834	50671	21145	6078	10144
Population 2011 (in '000)	84581	31206	104099	25545	60439	25351	6865	12541
Percentage decadal growth rate of population (1991-2001)	14.6	18.9	28.6	18.3	22.7	28.4	17.5	29.4
Percentage decadal growth rate of population (2001- 2011)	11.0	17.1	25.4	22.6	19.3	19.9	12.9	23.6
Sex-ratio 2001 (Females per 1000 males)	978	935	919	989	920	861	968	892
Sex-ratio 2011 (Females per 1000 males)	993	958	918	991	919	879	972	889
Sex ratio at birth 2013-15 (Females per 1000 males)	918	900	916	961	854	831	924	899
Sex ratio at birth 2014-16 (Females per 1000 males)	913	896	908	963	848	832	917	906
States HDI and its components**								
HDI Ranking 1999-2000	15	17	19	21	10	7	4	11
HDI 1999-2000	0.368	0.336	0.292	0.278	0.466	0.501	0.581	0.465
Health Index 1999-2000	0.521	0.339	0.506	0.341	0.562	0.576	0.681	0.457
Income Index 1999-2000	0.197	0.152	0.100	0.127	0.323	0.417	0.426	0.431
Education Index 1999-2000	0.385	0.516	0.271	0.365	0.512	0.512	0.636	0.507
HDI Ranking 2007-08	15	16	21	23	11	9	3	10
HDI 2007-08	0.473	0.444	0.367	0.358	0.527	0.552	0.652	0.529
Health Index 2008	0.580	0.407	0.563	0.417	0.633	0.627	0.717	0.530
Income Index 2007-08	0.287	0.288	0.127	0.133	0.371	0.408	0.491	0.459
Education Index 2007-08	0.553	0.636	0.409	0.526	0.577	0.622	0.747	0.597
Growth in GSDP and Per capita Income at constant prices (2011-12)#								
GSDP 2015-16 (%)	12.2	15.7	5.8	2.8	10.2	9.0	8.1	17.7
GSDP 2016-17 (%)	10.4	5.1	9.9	8.5	10.1	8.7	7.0	5.4
Average GSDP 2014-15 to 2016-17 (%)	10.6	9.2	6.4	4.4	10.3	7.8	7.5	6.6
Per capita income (PCY) 2015-16 (%)	11.9	13.0	3.3	0.6	8.4	7.5	7.1	18.1
Per capita income (PCY) 2016-17 (%)	9.6	3.5	8.2	7.2	9.3	7.2	5.5	3.7
Poverty Headcount Ratio (HCR) * **								
2011-12 (Rural)	10.9	33.9	34.1	44.6	21.5	11.6	8.5	11.5
2011-12 (Urban)	5.8	20.5	31.2	24.8	10.1	10.3	4.3	7.2
2011-12 (Total)	9.20	31.9	33.7	39.9	16.6	11.2	8.1	10.4
2009-10 (Rural)	22.8	39.9	55.3	56.1	26.7	18.6	9.1	8.1
2009-10 (Urban)	17.7	26.1	39.4	23.8	17.9	23.0	12.6	12.8
2009-10 (Total)	21.1	37.9	53.5	48.7	23.0	20.1	9.5	9.4
Rural Urban Disparity ##								
Rural Average MPCE 2009-10 (in ₹)	1234	1003	780	784	1110	1510	1536	1344
Rural share of food expenditure 2009-10 (%)	58.0	64.4	64.7	58.2	57.7	54.0	51.6	57.8
Urban Average MPCE 2009-10 (in ₹)	2238	1755	1238	1647	1909	2321	2654	1759
Urban share of food expenditure 2009-10 (%)	44.8	52.9	52.9	43.7	46.2	43.1	41.5	51.3
Rural Average MPCE 2011-12 (in ₹)	1754	1219	1127	1027	1536	2176	2034	1743
Rural share of food expenditure 2011-12 (%)	51.4	61.3	59.3	52.7	54.9	52.1	47.3	55.3
Urban Average MPCE 2011-12 (in ₹)	2685	2189	1507	1868	2581	3817	3259	2485
Urban share of food expenditure 2011-12 (%)	42.3	47.7	50.5	42.2	45.2	39.2	42.4	47.8

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Inter-State Comparison of Selected Major States of India												
Jharkhand	Karna-taka	Kerala	Madhya Pradesh	Maha-rashtra	Odisha	Punjab	Rajast-han	Tamil Nadu	Uttar Pradesh	Uttara-khand	West Bengal	All India
(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
26946	52851	31841	60348	96879	36805	24359	56507	62406	166198	8489	80176	**1028737**
32988	61095	33406	72627	112374	41974	27743	68548	72147	199812	10086	91276	**1210855**
23.4	17.5	9.4	24.3	22.7	16.3	20.1	28.4	11.7	25.9	20.4	17.8	**21.5**
22.4	15.6	4.9	20.3	16.0	14.0	13.9	21.3	15.6	20.2	18.8	13.8	**17.7**
941	965	1058	919	922	972	876	921	987	898	962	934	**933**
948	973	1084	931	929	979	895	928	996	912	963	950	**943**
902	939	967	919	878	950	889	861	911	879	844	951	**900**
918	935	959	922	876	948	893	857	915	882	850	937	**898**
23	12	2	20	6	22	5	14	8	18	16	13	
0.268	0.432	0.677	0.285	0.501	0.275	0.543	0.387	0.480	0.316	0.339	0.422	**0.387**
0.434	0.567	0.782	0.363	0.601	0.376	0.632	0.520	0.586	0.398	0.465	0.600	**0.497**
0.100	0.260	0.458	0.127	0.297	0.076	0.455	0.293	0.285	0.179	0.179	0.210	**0.223**
0.271	0.468	0.789	0.365	0.606	0.372	0.542	0.348	0.570	0.371	0.371	0.455	**0.442**
19	12	1	20	7	22	5	17	8	18	14	13	
0.376	0.519	0.790	0.375	0.572	0.362	0.605	0.434	0.570	0.380	0.490	0.492	**0.467**
0.500	0.627	0.817	0.430	0.650	0.450	0.667	0.587	0.637	0.473	0.530	0.650	**0.563**
0.142	0.326	0.629	0.173	0.351	0.139	0.495	0.253	0.355	0.175	0.302	0.252	**0.271**
0.485	0.605	0.924	0.522	0.715	0.499	0.654	0.462	0.719	0.492	0.638	0.575	**0.568**
-6.2	11.1	6.8	9.1	7.6	8.2	5.7	8.1	8.2	8.8	8.1	6.1	**8.0**
11.2	7.6	7.4	12.5	10.0	10.4	7.2	5.5	4.3	7.3	6.0	7.9	**8.2**
5.8	8.3	6.2	8.9	8.0	6.8	5.7	6.9	5.8	6.7	6.5	5.6	**7.9**
-8.7	10.5	6.4	7.7	6.8	7.3	4.5	6.4	7.9	6.8	6.9	5.0	**6.7**
10.4	6.2	7.4	11.5	8.6	9.5	5.7	3.6	2.8	5.5	4.3	7.0	**6.8**
40.8	24.5	9.1	35.7	24.2	35.7	7.7	16.1	15.8	30.4	11.6	22.5	**25.7**
24.8	15.3	4.9	21.0	9.1	17.3	9.2	10.7	6.5	26.1	10.5	14.7	**13.7**
36.9	20.9	7.1	31.7	17.4	32.6	8.3	14.7	11.3	29.4	11.3	19.9	**21.9**
41.6	26.1	12.0	42.0	29.5	39.2	14.6	26.4	21.2	39.4	14.9	28.8	**33.8**
31.1	19.6	12.1	22.9	18.3	25.9	18.1	19.9	12.8	31.7	25.2	22.0	**20.9**
39.1	23.6	12.0	36.7	24.5	37.0	15.9	24.8	17.1	37.7	18.0	26.7	**29.8**
825	1020	1835	903	1153	818	1649	1179	1160	899	1747	952	**1054**
60.9	56.5	45.9	55.8	54.0	61.9	48.2	54.8	54.7	57.9	45.1	63.4	**57.0**
1584	2053	2413	1666	2437	1548	2109	1663	1948	1574	1745	1965	**1984**
51.5	42.3	40.2	41.7	41.0	48.4	44.3	48.0	45.0	46.3	48.5	46.2	**44.4**
1006	1561	2669	1152	1619	1003	2345	1598	1693	1156	1726	1291	**1430**
58.4	51.4	43.0	52.9	52.4	57.2	44.1	50.5	51.5	53.0	49.6	58.2	**52.9**
2018	3026	3408	2058	3189	1941	2794	2442	2622	2051	2339	2591	**2630**
46.5	40.1	37.0	42.2	41.6	45.4	41.0	44.8	42.7	44.0	46.3	44.2	**42.6**

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Table 9.8. Socio- Economic Profiles and								
Socio-economic Indicators/Items	**Andhra Pradesh**	**Assam**	**Bihar**	**Chhat-tisgarh**	**Guja-rat**	**Harya-na**	**Him-achal Pradesh**	**Jammu & Kash-mir**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
WPR 2017-18 (15 Years & above) @								
Rural (%)	61.0	43.8	35.6	65.5	49.1	41.3	60.2	53.2
Urban (%)	49.3	42.8	34.7	50.0	45.1	42.4	48.3	43.6
Total (%)	57.2	43.7	35.5	62.4	47.4	41.7	58.9	51.0
Unemployment Rate 2015-16 (15 Years & above) @								
Rural (%)	3.6	8.1	6.8	2.5	5.2	9.2	5.2	4.3
Urban (%)	6.6	6.3	9.0	7.5	4.2	6.9	8.7	9.9
Total (%)	4.5	7.9	7.0	3.3	4.8	8.4	5.5	5.4
Health related *								
Male Life expectancy at birth (2011-15)	67.1	63.5	68.5	63.6	66.9	66.9	69.1	71.2
Female Life expectancy at birth (2011-15)	71.2	66.2	68.3	66.8	71.6	71.9	75.2	76.1
Total Life expectancy at birth (2011-15)	69.0	64.7	68.4	65.2	69.1	69.1	72.0	73.2
Male Life expectancy at birth (2012-16)	68.0	64.4	68.9	63.6	67.4	67.2	69.4	71.6
Female Life expectancy at birth (2012-16)	71.4	66.8	68.5	66.8	71.8	72.0	75.5	76.2
Total Life expectancy at birth (2012-16)	69.6	65.5	68.7	65.2	69.5	69.4	72.3	73.5
Infant Mortality Rates (per 1000 live births) 2016	34	44	38	39	30	33	25	24
Infant Mortality Rates (per 1000 live births) 2017	32	44	35	38	30	30	22	23
Birth Rate (per 1000) 2016	16.4	21.7	26.8	22.8	20.1	20.7	16.0	15.7
Death Rate (per 1000) 2016	6.8	6.7	6.0	7.4	6.1	5.9	6.8	5.0
Birth Rate (per 1000) 2017	16.2	21.2	26.4	22.7	19.9	20.5	15.8	15.4
Death Rate (per 1000) 2017	7.2	6.5	5.8	7.5	6.2	5.8	6.6	4.8
Education related $								
GER (I-V Class) (2016-17)	82.79	107.39	98.08	97.07	94.97	93.90	97.91	77.09
GER(VI-VIII Class) (2016-17)	82.14	96.69	103.86	100.81	97.20	94.40	102.99	66.22
GER(IX-X Class) (2016-17)	76.30	78.56	76.71	87.65	74.54	86.34	103.86	61.65
Pupil-Teacher Ratio (2015-16) Primary School	21	21	36	20	19	20	12	9
Pupil-Teacher Ratio (2015-16) Upper Primary School	16	13	24	17	13	13	10	6
Pupil-Teacher Ratio (2015-16) High School	20	14	66	33	34	15	18	15
GER (I-V Class) (2015-16)	83.84	105.63	106.56	99.69	96.72	91.43	98.13	86.33
GER(VI-VIII Class) (2015-16)	80.21	90.95	104.84	101.45	95.35	91.69	103.01	70.72
GER(IX-X Class) (2015-16)	74.08	76.43	77.42	91.60	73.79	83.61	105.72	66.01
Pupil-Teacher Ratio (2014-15) Primary School	21	24	35	21	20	22	12	9
Pupil-Teacher Ratio (2014-15) Upper Primary School	15	14	23	18	13	14	10	6
Pupil-Teacher Ratio (2014-15) High School	19	13	59	33	34	14	19	16

Source:
* : Office of Registrar General of India(RGI). Andhra Pradesh excludes Telangana for Sex ratio at birth 2014-16,
** : India HDR 2011 & 1999-2000,
*** : NITI Aayog (Planning Commission),
$: School Education in India, U-DISE Flash Statistics 2016-17 (Provisional) and Educational Statisics at a Glance 2018,
: CSO,
National Statistical Office (NSO), Monthly per capita expenditure (MPCE) is based on mixed modified recall period,
@ : Periodic Labour Force Survey 2017-18 (NSO); WPR (Worker Participation Rate) and Unemployment Rate are based on Usual Principal & Subsidiary Status (UPSS).

Note:
na: not available.

Inter-State Comparison of Selected Major States of India												
Jharkhand	Karna-taka	Kerala	Madhya Pradesh	Maha-rashtra	Odisha	Punjab	Rajast-han	Tamil Nadu	Uttar Pradesh	Uttara-khand	West Bengal	All India
(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
43.2	51.9	41.9	57.3	55.0	45.6	41.1	50.3	53.7	42.5	41.5	48.5	**48.1**
36.0	44.9	40.2	45.3	44.7	41.1	45.8	41.5	47.9	39.3	38.5	46.1	**43.9**
41.7	49.1	41.2	54.3	50.5	44.9	42.9	48.2	51.0	41.8	40.6	47.8	**46.8**
6.8	3.9	10.0	3.4	3.2	6.9	7.6	4.4	7.9	5.4	6.9	3.8	**5.3**
10.4	6.5	13.2	7.6	7.4	8.4	7.7	7.2	6.9	9.5	9.5	6.4	**7.7**
7.5	4.8	11.4	4.3	4.8	7.1	7.7	5.0	7.5	6.2	7.6	4.6	**6.0**
67.0	67.2	72.2	63.2	70.3	65.6	70.3	65.7	69.1	63.4	68.9	69.4	**66.9**
67.5	70.9	78.2	66.5	73.9	68.3	74.2	70.4	73.0	65.6	74.9	71.8	**70.0**
67.2	69.0	75.2	64.8	72.0	66.9	72.1	67.9	71.0	64.5	71.8	70.5	**68.3**
67.8	67.6	72.2	63.7	70.8	66.2	71.0	66.1	69.5	63.9	68.5	69.8	**67.4**
68.0	70.7	77.9	67.2	73.7	69.1	74.2	70.7	73.4	65.6	74.8	71.9	**70.2**
67.9	69.1	75.1	65.4	72.2	67.6	72.5	68.3	71.4	64.8	71.5	70.8	**68.7**
29	24	10	47	19	44	21	41	17	43	38	25	**34**
29	25	10	47	19	41	21	38	16	41	32	24	**33**
22.9	17.6	14.3	25.1	15.9	18.6	14.9	24.3	15.0	26.2	16.6	15.4	**20.4**
5.5	6.7	7.6	7.1	5.9	7.8	6.0	6.1	6.4	6.9	6.7	5.8	**6.4**
22.7	17.4	14.2	24.8	15.7	18.3	14.9	24.1	14.9	25.9	17.3	15.2	**20.2**
5.5	6.5	6.8	6.8	5.7	7.4	7.0	6	6.7	6.7	6.7	5.8	**6.3**
96.64	103.71	95.14	92.13	97.50	100.22	99.31	97.80	102.01	87.16	96.41	96.27	**95.12**
91.81	92.90	93.63	89.73	98.69	94.64	97.72	91.99	93.42	72.74	86.73	96.34	**90.73**
63.50	84.44	99.36	80.15	91.74	79.91	87.08	76.63	93.87	67.82	84.40	78.56	**79.35**
27	19	18	20	24	17	18	17	18	39	18	25	**23**
19	13	14	18	17	14	12	10	15	31	17	27	**17**
62	16	17	39	23	20	16	21	21	56	16	39	**27**
108.16	102.47	95.17	94.48	97.98	102.72	101.86	100.25	103.05	93.03	99.86	101.94	**99.02**
99.55	92.00	94.55	94.00	98.34	92.39	98.12	89.79	94.23	75.38	87.41	101.58	**91.82**
72.47	82.10	102.00	80.49	89.48	78.28	85.96	75.48	93.15	67.62	85.37	81.72	**79.30**
29	18	17	22	25	19	19	17	18	39	19	25	**24**
20	13	14	19	17	14	12	10	15	33	17	28	**17**
61	16	17	40	23	20	17	23	21	57	18	37	**27**