सत्यमेव जयते

Economic Survey 2019-20

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Government of India
Ministry of Finance
Department of Economic Affairs
Economic Division
North Block
New Delhi-110001
E-mail: cordecdn-dea@nic.in
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Krishnamurthy V. Subramanian
(Chief Economic Adviser)
Ministry of Finance
Government of India

ABBREVIATIONS

AA	Advance Authorization
AAGR	Average Annual Growth Rate
AAI	Airports Authority of India
AAY	Antyodaya Anna Yojana
AB-HWCs	Ayushman Bharat-Health & Wellness Centres
ABRR	Annual Business Responsibility Reporting
AE	Advance Estimate
AE	Advanced Economies
AFB	Adaptation Fund Board
AFD	Agence Française de Dévelopment
AGB	Above Ground Biomass
AHF	Affordable Housing Fund
AIF	Alternate Investment Fund
AIIMS	All India Institute of Medical Sciences
AITIGA	ASEAN India Trade in Goods Agreement
AMFFRI	Agricultural Marketing and Farmer Friendly Reforms Index
ANM	Auxiliary Nurse Midwife
APL	Above Poverty Line
APMC	Agricultural Produce Market Committee
APTA	Asia Pacific Trade Agreement
ARPIT	Annual Refresher Programme in Teaching
ARPU	Average Revenue Per User
ARTIS	Application for Remedies in Trade for Indian industry and other Stakeholders
ASEAN	Association of South East Asian countries
ASHAs	Accredited Social Health Workers
ASI	Annual Survey of Industries
AUM	Assets Under Management
AYUSH	Ayurveda, Yoga, Unani, Siddha and Homeopathy
B2B	Business to Business
B2C	Business to Consumer
BCD	Basic Customs Duty
BCM	Billion Cubic Metres
BE	Budget Estimates
BHLG	Bilateral High Level Group
BoP	Balance of Payments
BPCL	Bharat Petroleum Corporation Limited
BPL	Below Poverty Line
Bps	Basis points
BRICS	Brazil, Russia, India, China and South Africa
BRT	Bus Rapid Transit System
BSE	Bombay Stock Exchange
BSNL	Bharat Sanchar Nigam Limited
BTIA	Bilateral Trade and Investment Agreement
BTP	Bio-Technology Parks
BTS	Base Transceiver Stations
BUR	Biennial Update Report
C&D	Construction & Demolition
CAD	Current Account Deficit
CAGR	Compound Annual Growth Rate
CAP	Cover and Plinth
CAPEX	Capital expenditure
CAPS	Cyber Agro Physical Systems
CBIC	Central Board of Indirect Taxes and Customs
CBR	Crude birth rate
CCAP	Climate Change Action Programme
CCEA	Cabinet Committee on Economic Affairs
CCIL	Clearing Corporation of India
CCP	Central Counterparty
CDR	Crude death rate
CDRI	Coalition for Disaster Resilient Infrastructure
CDS	Credit Default Swaps
CECA	Comprehensive Economic Cooperation

	Agreement
CECPA	Comprehensive Economic Cooperation and Partnership Agreement
CEPA	Comprehensive Economic Partnership Agreement/ Comprehensive Economic Policy Agreement
CEPI	Custodian of Enemy Property
CFPI	Consumer Food Price Index
CGA	Controller General of Accounts
CGWA	Central Ground Water Authority
CHC	Custom Hiring Centre
CHC	Community Health Centre
CIC	Currency in Circulation
CIP	Central Issue Price
CIRP	Corporate Insolvency Resolution Process
CISF	Community Investment Support Fund
CIT	Corporate Income Tax
CMIE	Centre for Monitoring Indian Economy
CNA	Central Nodal Agencies
CNSA	China National Space Administration
CoC	Committee of Creditors
CONCOR	Container Corporation of India
COP	Conference of Parties
CPFI	Central Public Financial Institutions
CPI	Consumer Price Index
CPI-AL	Consumer Price Inflation- Agricultural Labourers
CPI-C	Consumer Price Index- Combined
CPI-IW	Consumer Price Inflation- Industrial Workers
CPI-RL	Consumer Price Inflation- Rural Labourers
CPSEs	Central Public Sector Enterprises
CPSU	Central Public Sector Undertaking
CPWD	Central Public Works Department
CRAR	Capital to Risk-weighted Asset Ratio
CSC	Common Service Centre
CSO	Central Statistics Office
CSS	Centrally Sponsored Scheme
CTCN	Climate Technology Centre and Network
CVD	Countervailing Duty
CWC	Central Warehousing Corporation
DAC&FW	Department of Agriculture Cooperation and Farmers Welfare
DARE	Department of Agricultural Research and Education
DAY-NRLM	Deendayal Antyodaya Yojana-National Rural Livelihoods Mission
DB	Doing Business
DBT	Direct Benefit Transfer
DCIL	Dredging Corporation of India Limited
DCP	Decentralized Procurement
DCs	Designated Customers
DDU-GKY	Pt. Deen Dayal Upadhyaya Grameen Kaushalya Yojana
DDWS	Department of Drinking Water and Sanitation
DEA	Department of Economic Affairs
DFIA	Duty Free Import Authorization
DFPD	Department of Food & Public Distribution
DG, WTO	Director General, World Trade Organization
DGCI&S	Directorate General of Commercial Intelligence and Statistics
DGFT	Directorate General of Foreign Trade
DGTR	Directorate General of Trade Remedies
DH	District Hospitals
DIDF	Dairy Processing and Infrastructure Development Fund
DIPAM	Department of Investment and Public Asset Management
DMRC	Delhi Metro Rail Corporation
DoE	Department of Expenditure
DOS	Depot Online System
DPCO	Drug price Control Order
DPD	Direct Port Delivery
DPE	Direct Port Entry
DPIIT	Department for Promotion of Industry and Internal Trade

DTA	Domestic Tariff Area	FAO	Food and Agriculture Organization
DWT	Dead Weight Tonnage	FBIL	Financial Benchmark India Private Ltd
EBR	Extra Budgetary Resources	FC	Financial Creditor
ECBC	Energy Conservation Building Code	FCI	Food Corporation of India
ECBs	External Commercial Borrowings	FD	Fiscal Deficit
ECGC	Export Credit Guarantee Corporation	FDI	Foreign Direct Investment
ECIS	Export Credit Insurance Scheme	FFC	Fourteenth Finance Commission
ECOWAS	Economic Community of West African States	FFO	Further Fund Offer
EDA	Emerging and Developing Asia	FIDF	Fisheries and Aquaculture Infrastructure Development Fund
EDP	Entrepreneurship Development Programme	FII	Foreign Institutional Investors
EE	Eligible Entities	FLFPR	Female Labour Force Participation Rate
EEZ	Exclusive Economic Zone	FMCG	Fast Moving Consumer Goods
EFTA	European Free Trade Association	FMD	Foot and Mouth Disease
EGSA	Extended Gram Swaraj Abhiyan	FOB	Free On Board
EHS	Early Harvest Scheme	FPI	Foreign Portfolio Investment
EHTP	Electronic Hardware Technology Park	FPO	Further Public Offer
EKTA	Ekikrit Krishi Shiksha Takniki Ayaam	FRA	Global Forest Resource Assessment
EMDE	Emerging Market and Developing Economies	FRBM	Fiscal Responsibility and Budget Management
EME	Emerging Market Economies	FSB	Financial Stability Board
EmOC	Emergency Obstetric Care	FTA	Free Trade Agreements
e-NAM	Electronic National Agriculture Market	FTP	Foreign Trade Policy
EOU	Export Oriented Units	FVCI	Foreign Venture Capital Investment
EP	End Period	FWPR	Female Worker Population Ratio
EPCG	Export Promotion Capital Goods	FY	Financial Year
EPFO	Employees' Provident Fund,	GB	Gigabyte
EQUIP	Education Quality Upgradation and Inclusion Programme	GCA	Gross Cropped Area
ESG	Environmental, Social and Governance	GCC	Gulf Cooperation Council
ESIC	Employees' State Insurance Scheme	GCF	Gross Capital Formation
ETCA	Economic and Technology Cooperation Agreement	GCF	Green Climate Fund
ETF	Exchange Traded Funds	GDP	Gross Domestic Product
EU	European Union	GeM	Government e-Marketplace
EUS	Employment Unemployment Survey	GFSI	Global Food Security Index
EV	Electrical Vehicle	Gg	Gigagram
EXIM	Export & Import	GI	Geographical Indication
		GHG	Greenhouse Gas

GIAN	Global Initiative for Academics Network
GIP	Graduate Insolvency Programme
GNI	Gross National Income
GNIE	Government not included elsewhere
GNPA	Gross Non-Performing Advances
GP	Gram Panchayats
GSA	Gram Swaraj Abhiyan
GSDP	Gross State Domestic Product
G-sec	Government Securities
GSM	Global System for Mobile
GST	Goods and Services Tax
GSTIN	Goods and Services Tax Number
GSTP	Global System of Trade Preferences
GSTR	Goods and Services Tax Return
GSVA	Gross State Value Added
GT	Gross Tonnage
GTR	Gross Tax Revenue
GVA	Gross Value Added
GW	Gigawatt
ha	Hectare
HDI	Human Development Index
HDR	Human Development Report
HEFA	Higher Education Financing Agency
HEMM	Heavy Earth Moving Machinery
HFC	Housing Finance Company
HPCL	Hindustan Petroleum Corporation Limited
HS	Harmonized System
HSCC	Hospital Services Consultancy Corporation
I&FC	Irrigation & Flood Control
IBA	Indian Banks' Association
IBBI	Insolvency and Bankruptcy Board of India
IBC	Insolvency and Bankruptcy Code
IC	Insurance Company
ICA	Inter-Creditor Agreement
ICAR	Indian Council of Agricultural Research
ICC	Internal Complaint Committee
ICDS	Integrated Child Development Services
ICEDASH	Indian Customs Ease of doing business Dashboard
ICT	Information and Communication Technology
ICV	Internal Combustion Vehicle
IEBR	Internal and Extra Budgetary Resources
IES	Interest Equalization Scheme
IFPRI	International Food Policy Research Institute
IGST	Integrated Goods and Services Tax
IGST	Integrated Goods and Services Tax
IICA	Indian Institute of Corporate Affairs
IIP	Index of Industrial Production
ILFS	Infrastructure Leasing and Financing Services (ILFS)
ILO	International Labour Organisation
IMF	International Monetary Fund
IMG	Inter-Ministerial Group
IMR	Infant Mortality Rate
IPCC	Intergovernmental Panel on Climate Change
IPO	Initial Public Offer
IPR	Intellectual Property Rights
IPSF	International Platform on Sustainable Finance
IPV	Inactivated Polio Vaccine
IR	Indian Railways
IRCTC	Indian Railways Catering and Tourism Corporation
IREDA	Indian Renewable Energy Development Agency
IRF	Impulse Response Function
IRFC	Indian Railway Finance Corporation
IRM	Initial Resource Mobilization
IRSDC	Indian Railway Station Development Corporation
ISA	International Solar Alliance
ISRO	Indian Space Research Organisation

IT-BPM	Information Technology and Business Process Management
ITC	Input Tax Credit
ITI	Industrial Training Institute
ITR	Income Tax Return
ITTNC	India-Thailand Trade Negotiation committee
JAC	Joint Administrative committee
JIPMER	Jawaharlal Institute of Postgraduate Medical Education & Research
JSA	Jal Shakti Abhiyan
KALIA	Krushak Assistance for Livelihood and Income Augmentation
KCC	Kisan Credit Card
KIOCL	Kudremukh Iron Ore Company Limited
KMS	Kharif Marketing Season
KSTA	Knowledge Support and Technical Assistance
KTI	Kuntiz Trypsin Inhibitor
KVK	Krishi Vigyan Kendra
KW	Kilo Watt
LAF	Liquidity Adjustment Facility
LCC	Local Complaint Committee
LCR	Liquidity Coverage Ratio
LED	Light Emitting Diode
LFPR	Labour-Force Participation Rate
LHS	Left Hand Side
LMT	Lakh Metric Tonne
LPI	Logistics Performance Index
LSAS	Life Saving Anesthesia Skills
LULUCF	Land use, Land-Use Change and Forestry
LWE	Left Wing Extremism
M0	Reserve Money
M1	Narrow Money
MB	Megabyte
MC	Ministerial Conference
MCI	Medical Council of India
MCLR	Marginal Cost of Funds based Lending Rate
MDB	Multilateral Development Bank
MDF	Moderately Dense Forest
MDM	Mid Day Meal
MEIS	Merchandise Exports from India Scheme
MEP	Minimum Export Price
MFIs	Micro Finance Institutions
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Scheme
MIDH	Mission for Integrated Development of Horticulture
MIF	Micro Irrigation Fund
MMR	Maximum Marginal Rate
MMR	Maternal Mortality Ratio
MMT	Million Metric Tonnes
MMTPA	Million Metric Tonne Per Annum
MoEF&CC	Ministry of Environment, Forest and Climate Change
MoHUA	Ministry of Housing and Urban Affairs
MoM	Month -on -Monto
MoP	Muriate of Potash
MORTH	Ministry of Road Transport and Highways
MOSPI	Ministry of Statistics & Programme Implementation
MOVCDNER	Mission Organic Value Chain Development for North Eastern Region
MPC	Monetary Policy Committee
MR	Measles-Rubella
MRO	Maintenance, Repair & Overhaul
MRP	Maximum Retail Price
MSDE	Ministry of Skill Development and Entrepreneurship
MSEs	Micro and Small Enterprises
MSF	Marginal Standing Facility
MSMEs	Micro, Small and Medium Enterprises
MSP	Minimum Support Price
MSS	Market Stabilisation Scheme
MT	Million Tonnes

MT	Metric Tonne
MTFP	Medium Term Fiscal Policy
MTM	Market-to-Market
MTNL	Mahanagar Telephone Nigam Limited
Mtoe	Millions of Tonnes of Oil Equivalent
MTPA	Million Tonnes Per Annum
MUDRA	Micro Units Development and Refinance Agency Ltd.
MW	Mega Watt
NABARD	National Bank for Agriculture and Rural Development
NAFCC	National Adaptation Fund for Climate Change
NAFED	National Agricultural Cooperative Marketing Federation of India
NAFTA	North America Free Trade Agreement
NAPCC	National Action Plan on Climate Change
NASA	National Aeronautics and Space Administration
NASSCOM	National Association of Software and Services Companies
NBFC	Non Banking Financial Companies
NCCF	National Cooperative Consumers' Federation
NCDC	National Cooperatives Development Corporation
NCDs	Non-Communicable Diseases
NCEUS	National Commission for Enterprises in Unorganized Sector
NCIP	National Crop Insurance Portal
NCLT	National Company Law Tribunal
NCR	National Capital Region
NCTE	National Council for Teacher Education (NCTE)
NCTF	National Committee on Trade Facilitation
NDA	Net Domestic Assets
NDC	Nationally Determined Contribution
NDTL	Net Demand and Time Liabilities
NEAT	National Educational Alliance for Technology
NEEPCO	North Eastern Electric Power Corporation Limited
NEET	National Eligibility cum Entrance Test
NEMMP	National Electric Mobility Mission Plan
NER	Net Enrolment Ratio
NER	Nominal Exchange Rate
NFA	Net Foreign Assets
NFC	Non Food Credit
NFEE	Net Foreign Exchange Earnings
NFSA	National Food Security Act
NFSM	National Food Security Mission
NGT	National Green Tribunal
NH	National Highways
NHA	National Health Accounts
NHAI	National Highway Authority of India
NHB	National Housing Bank
NHM	National Health Mission
NIFAP	National lnland Fisheries and Aquaculture Policy
NIIP	Net International Investment Position
NIMH	National Institute of Miners' Health
NINL	Neelachal Ispat Nigam Ltd.
NIOSH	National Institute of Occupational Safety & Health
NIP	National Infrastructure Pipeline
NISHTHA	National Initiative for School Heads' and Teachers' Holistic Advancement
NLE	Nodal Loaning Entities
NLEM	National List of Essential Medicines
NMEEE	National Mission for Enhanced Energy Efficiency
NMOOP	National Mission on Oilseeds and Oil Palm
NMSA	National Mission for Sustainable Agriculture
NPA	Non-Performing Assets
NPCC	National Projects Construction Corporation Limited
NPPA	National Pharmaceutical Pricing Authority

NPS	National Pension System
NRCs	National Resource Centres
NRI	Non-Resident Indians
NSDL	National Securities Depository Limited
NSO	National Statistical Office
NSSF	National Social Security Fund
NSSF	National Small Savings Fund
NSSO	National Sample Survey Office
NSSO	National Sample Survey Organization
NTFAP	National Trade Facilitation Action Plan
NTT	Net Terms of Trade
NUHF	National Urban Housing Funds
NUIH	National Urban Innovation Hub
NVGs	National Voluntary Guidelines
ODF	Open Defecation Free
ODMS	Online Depot Management System
OECD	Organisation for Economic Co
OF	Open Forest
OFS	Offer for Sale
OHS	Occupational Health Services
OMO	Open Market Operation
OMSS	Open Market Sale Scheme
OOPE	Out of Pocket Expenditure
OSC	One Stop Centre
P	Provisional
PA	Provisional Actuals
PCV	Pneumococcal Conjugate Vaccine
PE	Provisional Estimates
PE	Private Equity
PE	Provisional Estimates
PEG	Private Entrepreneurs Guarantee
PHC	Primary Health Centre
PKVY	Paramparagat Krishi Vikas Yojana
PL	Personal Loan
PLFS	Periodic Labour Force Survey
PM KISAN	Pradhan Mantri Kisan Samman Nidhi
PM10	Suspended Particulate Matter
PM2.5	Fine Particulate Matter
PMAY	Pradhan Mantri Awas Yojana
PMAY-G	Pradhan Mantri Aawash Yojana Gramin
PMAY-U	Pradhan Mantri Awas Yojana-Urban
PMAY-U	Pradhan Mantri Aawash Yojana-Gramin -Urban
PMC	Project Management Consultants
PMEGP	Prime Minister's Employment Generation Programme
PMFBY	Pradhan Mantri Fasal Bima Yojana
PMI	Purchasing Managers' Index
PM-KISAN	Pradhan Mantri Kisan Samman Nidhi
PMKSY	Pradhan Mantri Krishi Sinchayee Yojana
PMKSY	Pradhan Mantri Kisan Sampada Yojana
PMKSY-PDMC	Pradhan Mantri Krishi Sinchayee Yojana - Per Drop More Crop
PMKVY	Pradhan Mantri Kaushal Vikas Yojana
PMMMNMTT	Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching
PMMSY	Pradhan Mantri Matsya Sampad Yojana
PMMY	Pradhan Mantri Mudra Yojana
PMUY	Pradhan Mantri Ujjwala Yojana
POL	Petroleum, Oil and Lubricants
PoS	Point of Sale
PPAC	Petroleum Planning and Analysis Cell
PPPs	Public Private Partnerships
PS	Principal status
PS	Primary status
PSB	Public Sector Banks
PSE	Public Sector Enterprises
PSF	Price Stabilisation Fund
PSU	Public Sector Undertaking
PTA	Preferential Trade Agreement
PVB	Private Sector Bank
QE	Quick Estimates
QIP	Qualified Institutional Placement
QTL	Quintal
RBI	Reserve Bank of India
RD	Revenue Deficit
RE	Revised Estimates

REC	Rural Electrification Corporation Limited
REER	Real Effective Exchange Rate
ReMS	Rashtriya e-Market Services
RFID	Radio-frequency Identification
RGM	Rashtriya Gokul Mission
RHS	Right hand side
RITES	Railway Infrastructure Technical & Economic Services
RKVY	Rashtriya Krishi Vikas Yojana
RMK	Rashtriya Mahila Kosh
RMSA	Rashtriya Madhyamik Shiksha Abhiyan
RoA	Return on Assets
RoDTEP	Remission of Duties or Taxes on Export Product
RoE	Return on Equity
RPL	Recognition of Prior Learning
RRR	Reverse Repo Rate
RSA	Restructured Standard Advances
RTE	Right of Children to Free and Compulsory Education
RUSA	Rashtriya Uchchatar Shiksha Abhiyan
RVNL	Rail Vikas Nigam Limited
RVV	Rotavirus Vaccine
RWBCIS	Restructured Weather Based Crop Insurance Scheme
S&T	Scientific & Technological
SA	Stressed Advances
SAARC	South Asian Association for Regional Cooperation
SACU	Southern African Custom Union
SAFTA	South Asian Free Trade Area
SAPTA	SAARC Preferential Trading Agreement
SAUBHAGYA	Sahaj Bijli Har Ghar Yojana
SBM	Swachh Bharat Mission
SBM-G	Swachh Bharat Mission Grameen
SC	Scheduled Caste
SCB	Scheduled Commercial Bank
SCI	Shipping Corporation of India
SCM	Smart Cities Mission
SDG	Sustainable Development Goals
SDH	Sub District Hospitals
SDMS	Skill Development Management System
SDR	Special Drawing Rights
SEBI	Securities and Exchange Board of India
SEIS	Service Export from India Scheme
SHC	Sub-health Centres
SHG	Self Help Group
SIDBI	Small Industries Development Bank of India
SION	Standard Input Output Norms
SLAC	State Level Appraisal Committee
SLR	Statutory Liquidity Ratio
SLSMC	State Level Sanctioning and Monitoring Committee
SMAM	Sub Mission on Agricultural Mechanization
SPS	Sanitary and Phytosanitary
SRI	System of Rice Intensification
SS	Subsidiary Status
SS	Secondary status
SSA	Sarva Shiksha Abhiyan (SSA)
SSCs	Sector Skill Councils
ST	Scheduled Tribe
STP	Software Technology Parks
STT	Securities Transaction Tax
STT	Short Term Training
SWC	State Warehousing Corporation
SWIFT	Single Window Interface for Facilitating Trade
TB	Treasury Bill
TBT	Technical Barriers to Trade
TCIL	Telecommunications Consultants India Limited
TCs/TPs	Training Centres /Training Providers
TDGVA	Tourism Direct Gross Value Added
TDS	Tax Deduction at Source
TE	Teacher Education
TEC	Technology Executive Committee

TEPA	Trade and Economic Partnership Agreement
TEQIP	Technical Education Quality Improvement Programme
TFA	Trade Facilitation Agreement
TFR	Total fertility rate
THDCIL	Tehri Hydro Power Development Corporation
TIES	Trade Infrastructure for Export Scheme
TMA	Transport and Marketing Assistance
TMR	Trade Margin Rationalisation
ToI	Tax on Income other than Corporation Tax
ToT	Terms of Trade
TPD	Tons Per Day
TPDS	Targeted Public Distribution System
TPRU	Tax Policy Research Unit
TReDS	Trade Receivables electronic Discount System
TSP	Telecom Service Providers
U5MR	Under-five Mortality
UAE	United Arab Emirates
UDAN	Ude Desh ka Aam Naagarik
UDAY	Ujwal DISCOM Assurance Yojana
U-DISE	Unified District Information System for Education
UED	Union Excise Duties
UJALA	Unnat Jeevan by Affordable LEDs and Appliances for All
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNCTAD	United Nations Conference on Trade and Development
UNDESA	United Nations Department of Economic & Social Affairs
UNESCAP	United Nations Economic and Social Commission for Asia and Pacific
UNFCCC	United Nations Framework Convention on Climate Change
USA	United States of America
UTs	Union Territories
UTs	Union Territories
VAR	Vector Auto regression
VDF	Very Dense Forest
VIIRS	Visible Infrared Imaging Radiometer Suite
WACR	Weighted Average Call Rate
WALR	Weighted Average Lending Rate
WAPCOS	Water and Power Consultancy Services
WEF	World Economic Forum
WEO	World Economic Outlook
WHL	Women Helpline Scheme
WIM	Warsaw International Mechanism
WPI	Wholesale Price Index
WTO	World Trade Organization
YoY	Year on Year
ZBNF	Zero Budget Natural Farming

State of the Economy

01

CHAPTER

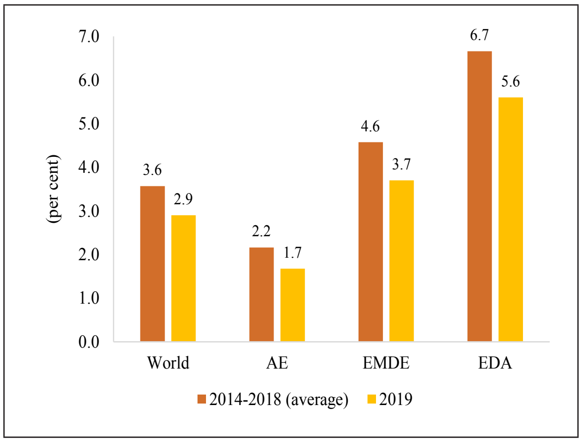
The year 2019 was a difficult year for the global economy with world output growth estimated to grow at its slowest pace of 2.9 per cent since the global financial crisis of 2009, declining from a subdued 3.6 per cent in 2018 and 3.8 per cent in 2017. Uncertainties, although declining, are still elevated due to protectionist tendencies of China and USA and rising USA-Iran geo-political tensions. Amidst a weak environment for global manufacturing, trade and demand, the Indian economy slowed down with GDP growth moderating to 4.8 per cent in H1 of 2019-20, lower than 6.2 per cent in H2 of 2018-19. A sharp decline in real fixed investment induced by a sluggish growth of real consumption has weighed down GDP growth from H2 of 2018-19 to H1 of 2019-20. Real consumption growth, however, has recovered in Q2 of 2019-20, cushioned by a significant growth in government final consumption. At the same time, India's external sector gained further stability in H1 of 2019-20, with a narrowing of Current Account Deficit (CAD) as percentage of GDP from 2.1 in 2018-19 to 1.5 in H1 of 2019-20, impressive Foreign Direct Investment (FDI), rebounding of portfolio flows and accretion of foreign exchange reserves. Imports have contracted more sharply than exports in H1 of 2019-20, with easing of crude prices, which has mainly driven the narrowing of CAD. On the supply side, agricultural growth, though weak, is moderately higher in H1 of 2019-20 than in H2 of 2018-19. Headline inflation rose from 3.3 per cent in H1 of 2019-20 to 7.4 per cent in December 2019 on the back of temporary increase in food inflation, which is expected to decline by year end. Rise in CPI-core and WPI inflation in December 2019 suggests building of demand pressure.

The deceleration in GDP growth can be understood within the framework of a slowing cycle of growth with the financial sector acting as a drag on the real sector. In an attempt to boost demand, 2019-20 has witnessed significant easing of monetary policy with the repo rate having been cut by RBI by 110 basis points. Having duly recognized the financial stresses built up in the economy, the government has taken significant steps this year towards speeding up the insolvency resolution process under Insolvency and Bankruptcy Code (IBC) and easing of credit, particularly for the stressed real estate and Non-Banking Financial Companies (NBFCs) sectors. At the same time, impact of critical measures taken to boost investment, particularly under the National Infrastructure Pipeline, present green shoots for growth in H2 of 2019-20 and 2020-21. Based on first Advance Estimates of India's GDP growth for 2019-20 recorded at 5 per cent, an uptick in GDP growth is expected in H2 of 2019-20. The government must use its strong mandate to deliver expeditiously on reforms, which will enable the economy to strongly rebound in 2020-21.

GLOBAL ECONOMY IN 2019-20

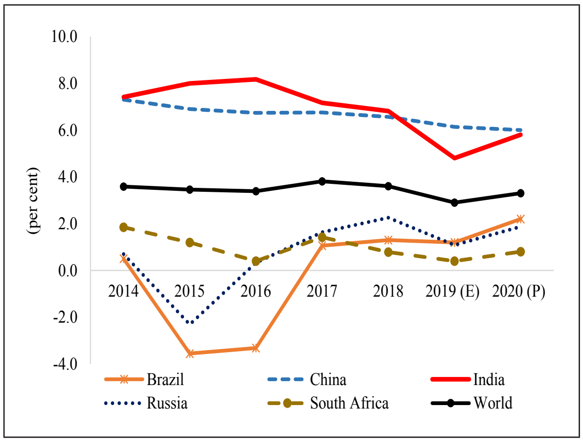
1.1 The World Economic Outlook (WEO) Update of January 2020 published by IMF has estimated the global output to grow at 2.9 per cent in 2019, declining from 3.6 per cent in 2018 and 3.8 per cent in 2017. The global output growth in 2019 is estimated to be the slowest since the global financial crisis of 2009, arising from a geographically broad-based decline in manufacturing activity and trade. Stabilising, yet uncertain, trade tensions between China and the USA have contributed to the decline of world output and trade. The growth of advanced economies has similarly declined from 2.5 per cent in 2017 to 2.2 per cent in 2018 and is estimated to further decline to 1.7 per cent in 2019 (Figure 1). The larger group of OECD countries has also seen a drop in their growth from 2.6 per cent in 2017 to 2.3 per cent in 2018 and is estimated to grow at 1.7 per cent in 2019. WEO has projected the declining growth of global output to rebound in 2020 with a modest uptick to 3.3 per cent.

Figure 1: Growth of global output



Data Source: World Economic Outlook, October 2019 database and January 2020 update
Note: AE – Advanced Economies, EMDE – Emerging Market and Developing Economies, EDA – Emerging and Developing Asia.

Figure 2: Growth of individual BRICS countries

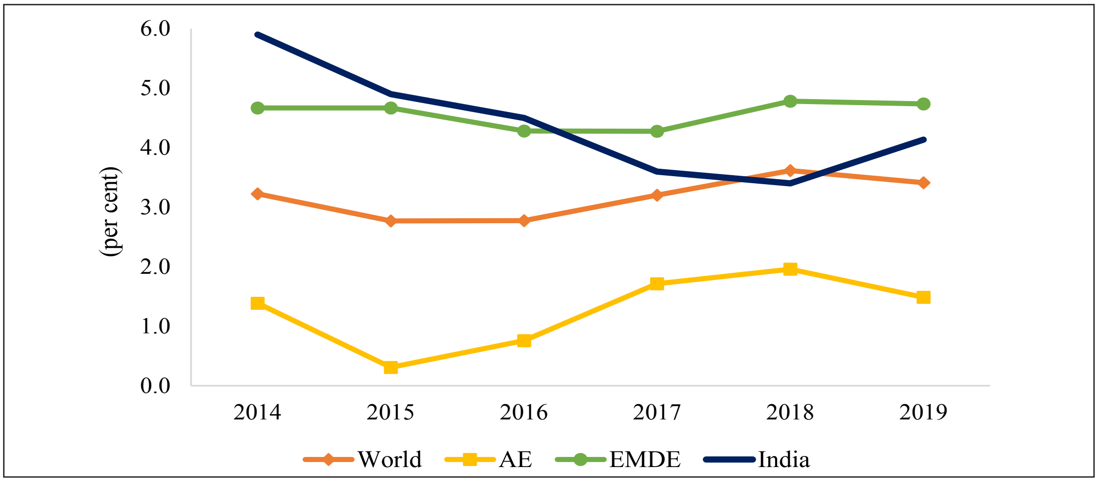


Data Source: World Economic Outlook, October 2019 database and January 2020 update
Note: E – Estimates of IMF, P – Projections of IMF

1.2 As in other major economies, India's Gross Domestic Product (GDP) growth also correlates with the growth of global output, an observation earlier made in the Economic Survey of 2015-16. Not surprisingly, the deceleration in India's GDP growth since 2017 has tracked the decline in world output (Figure 2). However, for three years prior to 2017, when global output growth was not declining, India surged ahead of the rest of the world, recording in 2014-18 an average growth significantly higher than that of any comparable peer, both among advanced and emerging market economies. The WEO Update of January 2020 has projected the growth of Indian economy to increase to 5.8 per cent in 2020 expecting India to contribute significantly to an eventual pickup in the growth of world output. India's GDP in nominal prices was ₹ 190.1 lakh crore (US$ 2.7 trillion) in 2018-19.

1.3 Along with the weakening of global economic activity, inflation the world over also remained muted in 2019 (Figure 3). Inflation softened in advanced and emerging

Figure 3: Consumer Price inflation across country groups

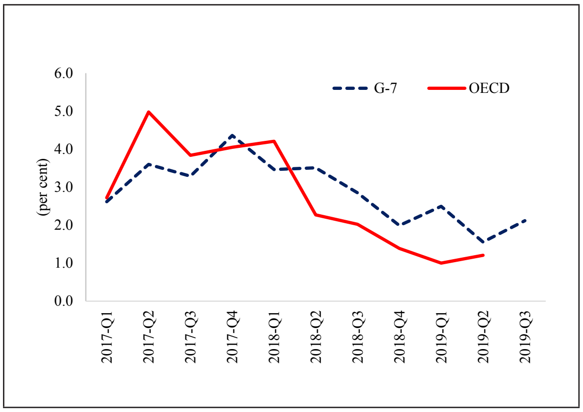


Data Source: World Economic Outlook, October 2019 database, National Statistical Office
Notes: 1. AE – Advanced Economies, EMDE – Emerging Market and Developing Economies, EDA – Emerging and Developing Asia.
2. For India, years are from April to March and data for 2019 is for April to December.

economies reflecting a slack in consumer demand. From the supply side, lower energy prices in 2019 also contributed to softening of inflation. In India, inflation slightly rose to 4.1 per cent in April-December 2019, after a sharp decline from 5.9 per cent in 2014 to 3.4 per cent in 2018.

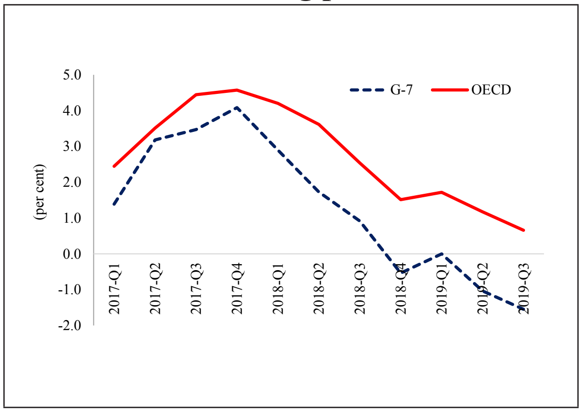
1.4 The global slack in consumer demand affected industrial activity, which slumped in most of the major economies in 2019 (Figure 4 and Figure 5). In particular, global production in automobile industry fell sharply due to a decline in demand, which was caused by changes in technology and emission standards in many countries.

Figure 4: Growth of fixed investment



Data Source: OECD database
Note: Quarters are on calendar year basis.
G-7 refers to the group of seven large advanced economies in the world; namely Canada, France, Germany, Italy, Japan, the United Kingdom and the United States

Figure 5: Growth of index of manufacturing production



Data Source: OECD database
Note: Quarters are on calendar year basis.
OECD is the Organisation for Economic Co-operation and Development with 36 member countries.

India also experienced a similar downturn in the auto industry (IMF's World Economic Outlook October, 2019 and January 2020).

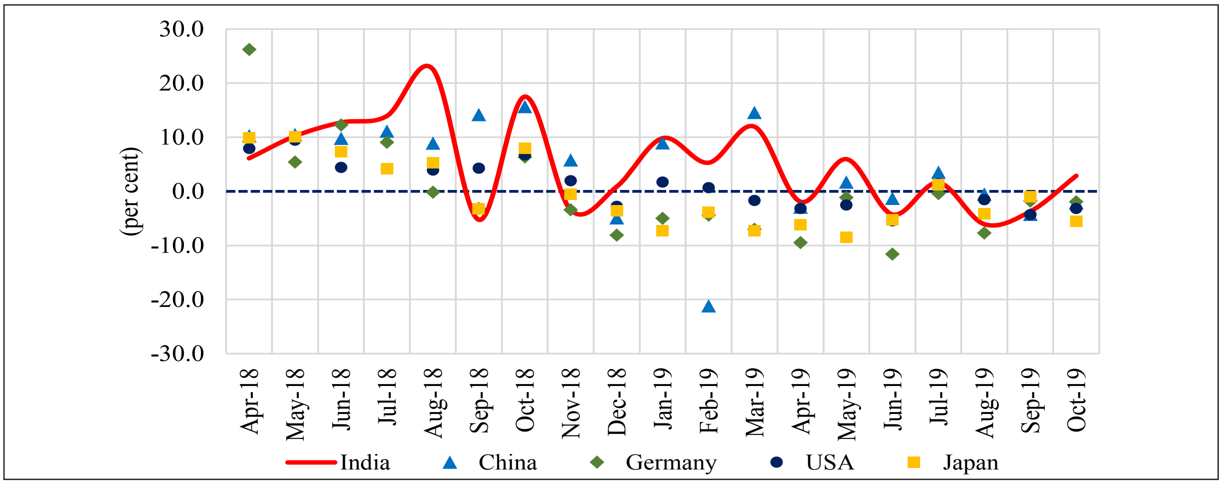
1.5 As global industrial activity slowed down, there was a drop in growth of manufacturing exports from major economies. Increasing trade barriers as well as trade uncertainty stemming from growing trade tensions also weakened business confidence and further limited trade. India's manufacturing exports also fell (Figure 6).

INDIAN ECONOMY IN 2019-20

Size of the economy

1.6 The WEO of October 2019 has estimated India's economy to become the fifth largest in the world, as measured using GDP at current US$ prices, moving past United Kingdom and France. The size of the economy is estimated at US$ 2.9 trillion in 2019 (Table 1).

Figure 6: Non-agriculture, non-fuel merchandise export[1] growth



Data Source: Trade Map Database

Table 1: Top 10 Economies in the world in terms of GDP at current US$ trillion

Sl. No.	Country	2017	2018	2019 (E)	Change in position in 2019
1	United States	19.5	20.6	21.4	-
2	China	12.1	13.4	14.1	-
3	Japan	4.9	5.0	5.2	-
4	Germany	3.7	4.0	3.9	-
5	India	2.7	2.7	2.9	▲
6	United Kingdom	2.6	2.8	2.7	▼
7	France	2.6	2.8	2.7	▼
8	Italy	2.0	2.1	2.0	-
9	Brazil	2.1	1.9	1.8	-
10	Korea	1.6	1.7	1.6	-

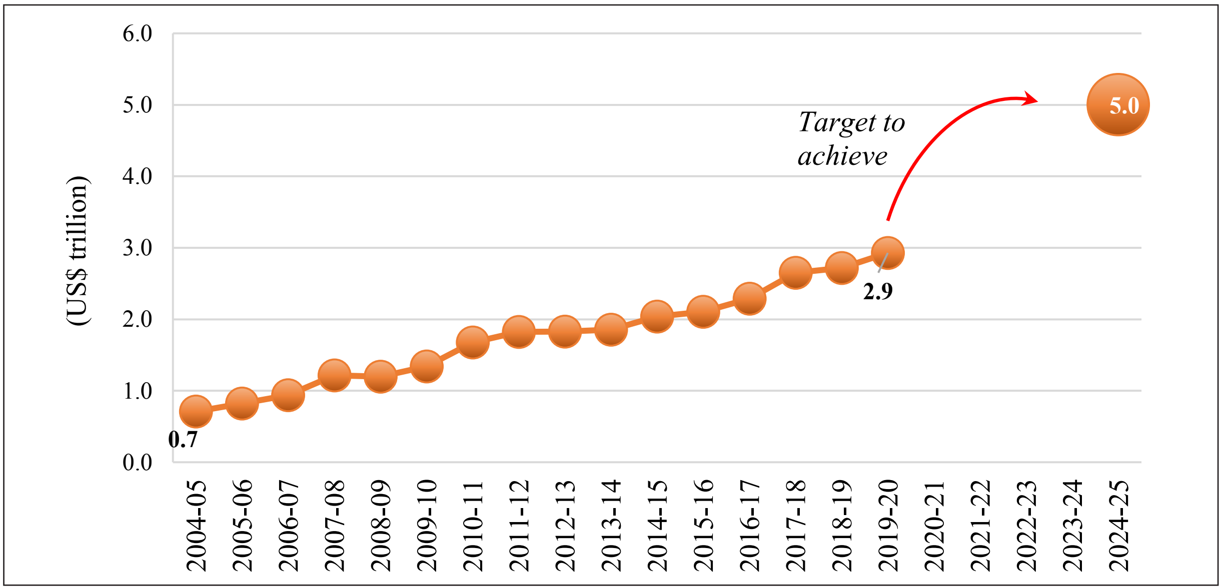
Data Source: World Economic Outlook, October 2019 database

Notes: E : IMF's estimate; ▲ indicates improvement in rank; ▼ indicates drop in rank and - indicates unchanged rank

1. Total merchandise exports of product categories under HS code 28 to 96 are considered as manufacturing exports.

1.7 In July 2019, the Union Budget 2019-20 had articulated the vision of the Hon'ble Prime Minister to make India a US$ 5 trillion economy by 2024-25. The march towards this milestone has, however, been challenged by less than expected growth of India's GDP so far this year, on the back of a decline in world output. Yet, given India's record of growth with macroeconomic stability over the last five years (annual average growth rate of 7.5 per cent and annual average inflation of 4.5 per cent), the economy is poised for a rebound towards the US$ 5 trillion goal (Figure 7).

Figure 7: Increasing size of the Indian economy (GDP at current US$)



Data Source: National Statistical Office, Reserve Bank of India (RBI) and IMF

GVA and GDP growth

1.8 The National Statistical Office (NSO) has estimated India's GDP to have grown at 4.8 per cent in the first half (H1) (April-September) of 2019-20, lower than 6.2 per cent recorded in the second half (H2) (October-March) of 2018-19. On the supply side, the deceleration in GDP growth has been contributed generally by all sectors save 'Agriculture and allied activities' and 'Public administration, defence, and other services', whose growth in H1 of 2019-20 was higher than in H2 of 2018-19 (Table 2).

Table 2: Quarter wise growth of real Gross Value Added (GVA) and GDP (per cent)

	2018-19				2019-20	
	Q1	Q2	Q3	Q4	Q1	Q2
GVA at basic prices	7.7	6.9	6.3	5.7	4.9	4.3
Agriculture, forestry & fishing	5.1	4.9	2.8	–0.1	2.0	2.1
Industry	9.8	6.7	7.0	4.2	2.7	0.5
Services	7.1	7.3	7.2	8.4	6.9	6.8
GDP at market prices	8.0	7.0	6.6	5.8	5.0	4.5

Data Source: National Statistical Office

1.9 On the demand side, the deceleration in GDP growth was caused by a decline in the growth of real fixed investment in H1 of 2019-20 when compared to 2018-19 induced in part by a sluggish growth of real consumption. However, growth of real consumption started picking up in Q2 of 2019-20, mostly driven by a significant jump in government final consumption. Growth of private final consumption expenditure also picked up in the same quarter. The contribution of net exports to GDP in Q2 of 2019-20 became less negative as in real terms the contraction of exports was much smaller than contraction of imports. Lower growth of GDP and softer price of crude oil caused a large contraction of imports (Table 3).

Table 3: Real growth of GDP (per cent)

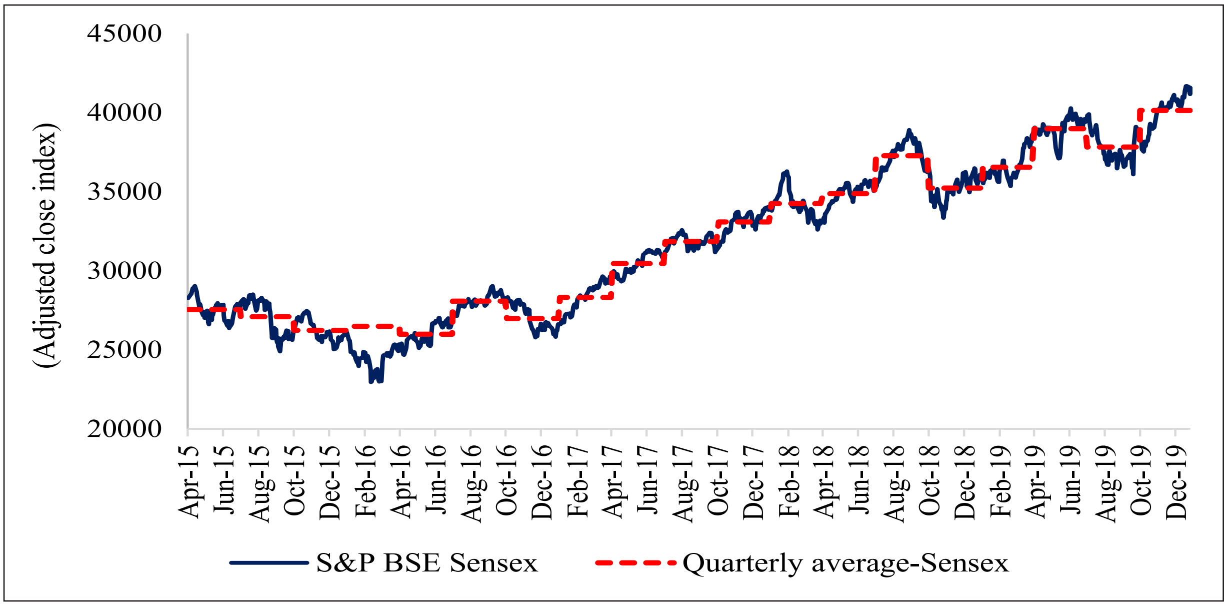
	2017-18	2018-19 (PE)	2019-20	
			Q1	Q2
Gross Domestic Product	7.2	6.8	5.0	4.5
Total consumption	8.6	8.3	4.1	6.9
Government consumption	15.0	9.2	8.8	15.6
Private consumption	7.4	8.1	3.1	5.1
Fixed investment	9.3	10.0	4.0	1.0
Exports of goods and services	4.7	12.5	5.7	-0.4
Imports of goods and services	17.6	15.4	4.2	-6.9

Data Source: National Statistical Office
Note: PE – Provisional Estimates.

1.10 Despite the deceleration in GDP growth for the sixth consecutive quarter, the stock market continues to be upbeat about the country's growth prospects. The Bombay Stock Exchange (BSE) Sensex increased by 7.0 per cent at end December 2019 over end March 2019 (Figure 8). This may also reflect the growing perception of India becoming an attractive destination for investment in the backdrop of a decline in the growth of major economies of the world and continued easing of monetary policy by the US Fed. The net FDI and net Foreign Portfolio Investment (FPI) in first eight months of 2019-20 stood at US$ 24.4 billion and US$ 12.6 billion respectively, more than the inflows received in the corresponding period of 2018-19.

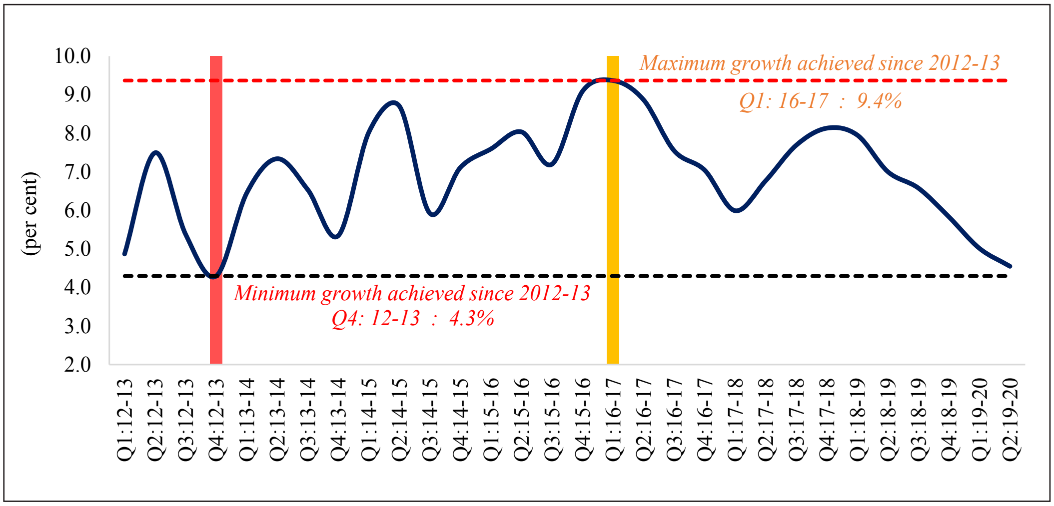
1.11 Since 2011-12, India recorded its lowest quarterly GDP growth in Q4 of 2012-13 (Figure 9). After 13 quarters, the economy achieved its highest quarterly growth of 9.4 per cent in Q1 of 2016-17. Again after 13 quarters, the economy has recorded a low growth of 4.5 per cent in Q2 of 2019-20. It appears that the length of the business cycle is about 13 quarters. A study on business cycle measurement in India (Pandey et al. 2018) using growth data since 1996 shows similar results. Their study indicates that when GDP is accelerating the business cycle on average is 12 quarters. However, in the deceleration phase, the business cycle on average reduces to 9 quarters. A resurgence in growth is, accordingly, expected to begin in H2 of 2019-20.

Figure 8: Movement in BSE Sensex



Data Source: BSE

Figure 9: Quarter wise growth of real GDP

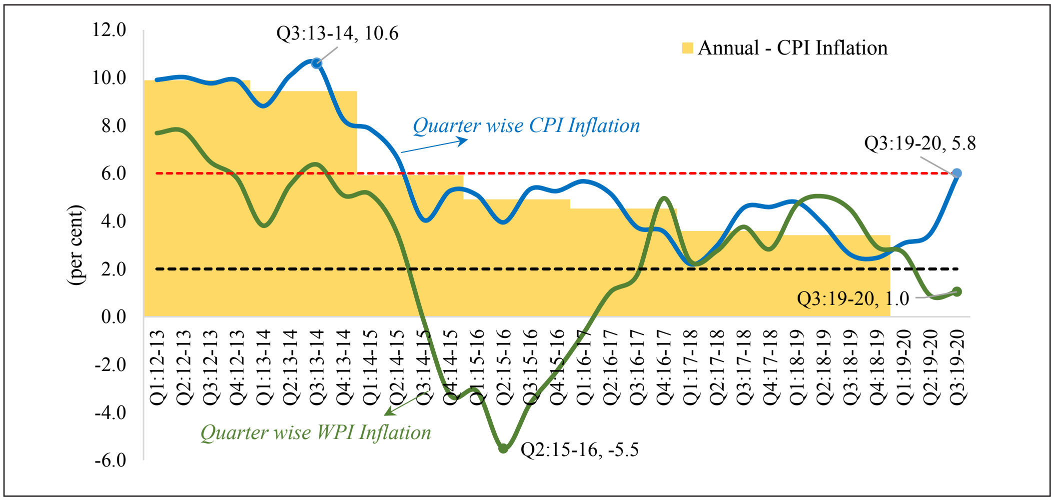


Data Source: National Statistical Office

Inflation

1.12 In H1 of 2019-20, CPI (Headline) inflation was estimated at 3.3 per cent, slightly higher than that in H2 of the previous year. There has been a further uptick in headline inflation in the month of December 2019 to 7.35 per cent contributed mainly by supply-side factors. The food prices spiked following unseasonal rainfall and a flood-like situation in many parts of the country, which affected agricultural crop production. The Wholesale Price Index (WPI) inflation, on the other hand, declined sharply from 3.2 per cent in April 2019 to 2.6 per cent in December 2019, reflecting weakening of demand pressure in the economy (Figure 10).

Figure 10: CPI and WPI inflation



Data Source: National Statistical Office and Department for Promotion of Industry and Internal Trade (DPIIT)

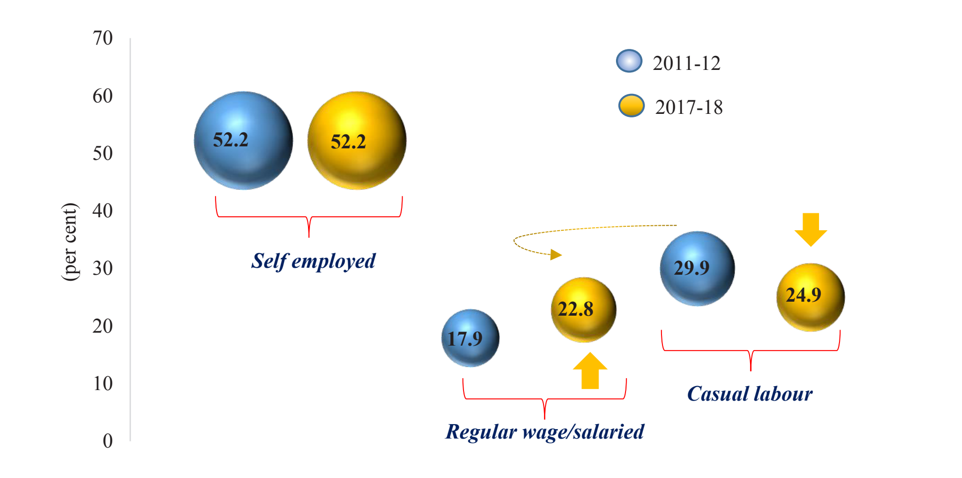
1.13 Core inflation (headline less food and fuel inflation) further reflects the state of demand in the economy. There has been a secular moderation in CPI-core inflation from 6.3 per cent in Q1 of 2018-19 to 4.3 per cent in Q2 of 2019-20, which also reflects a weakening of demand pressure in the economy. The core-CPI and WPI inflation together moderated inflation, as captured by the GDP deflator, which fell from 3.7 per cent in H2 of 2018-19 to 2.1 per cent in H1 of 2019-20. This significantly lowered the nominal growth of GDP as well.

Employment: Formal vs. Informal

1.14 As several polices have been implemented to enhance the formalization of the economy, examining the impact of the same is crucial Due to the changes in methodology and sampling design, labour market estimates based on Periodic Labour Force Survey (PLFS) are not strictly comparable with the results of earlier quinquennial surveys on Employment-Unemployment conducted by National Sample Survey Organization (NSSO). Yet a limited comparability has been attempted to highlight the shift towards increased employability in formal sector jobs.

1.15 As per the latest available data on employment, there has been an increase in the share of formal employment, as captured by 'Regular wage/salaried', from 17.9 per cent in 2011-12 to 22.8 per cent in 2017-18 (Figure 11). This 5 percentage points increase in the share of 'Regular wage/salaried' group has been on account of 5 percentage points decrease in the share of casual workers, which reflects formalization in the economy. As a result, in absolute terms, there was a significant jump of around 2.62 crore new jobs over this period in the usual status category with 1.21 crore in rural areas and 1.39 crore in urban areas. Remarkably, the proportion of women workers in 'Regular wage/salaried' employees category has increased by 8 percentage points (from 13 percent in 2011-12 to 21 per cent in 2017-18) with addition of 0.7 crore new jobs for female workers in this category. The drop in casual labour has mainly originated from the rural sector where rural labourers have shifted from agricultural to industrial and services activity. In urban region, there has been a shift of employment from self- employed to salaried jobs.

Figure 11: Distribution of workers by all ages in usual status (PS+SS) by statuses in employment



Data Source: Periodic Labour Force Survey 2017-18, Ministry of Statistics & Programme Implementation
Note: PS- Principal Status, SS- Subsidiary Status.

1.16 The provisional Annual Survey of Industries for fiscal year ending March 2018, also shows an increase in jobs in the organized manufacturing sector. Between 2014-15 and 2017-18, total number of workers increased by 14.7 lakh and total persons engaged increased by 17.3 lakh, in the organised manufacturing sector in India.

Fiscal situation

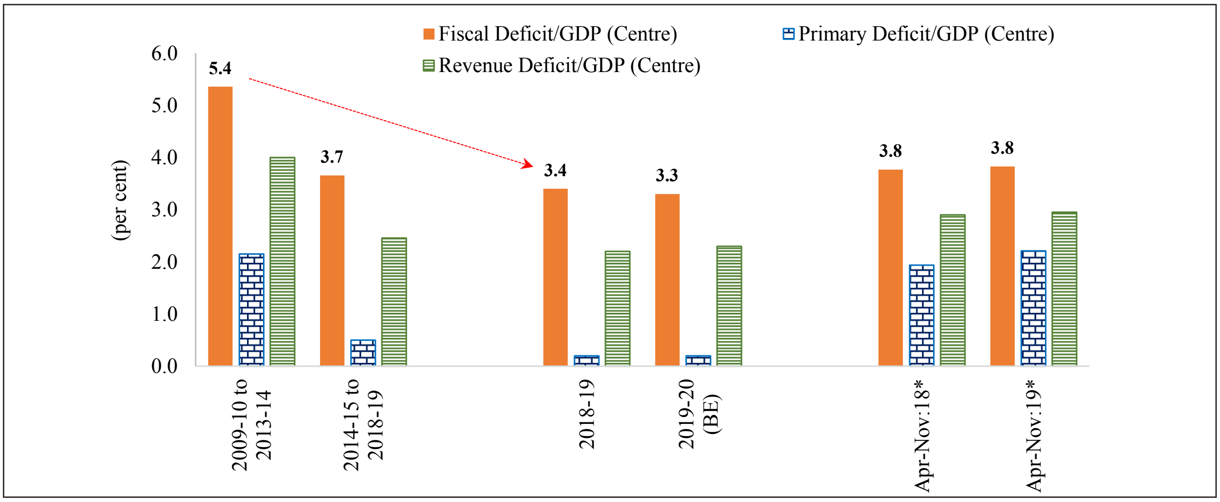
1.17 In 2019-20, Centre's fiscal deficit was budgeted at ₹ 7.04 lakh crore (3.3 per cent of GDP), as compared to ₹ 6.49 lakh crore (3.4 per cent of GDP) in 2018-19 PA (Figure 12). In the first eight months of 2019-20, fiscal deficit stood at 114.8 per cent of the budgeted level .

1.18 Net Tax revenue to the Centre, which was envisaged to grow at more than 25 per cent in 2019-20 BE relative to 2018-19 PA, grew at 2.6 per cent during April to November 2019, which was nearly half its' growth rate for the corresponding period last year. This is primarily owing to low growth in Gross Tax Revenue (GTR) of 0.8 per cent during first eight months of 2019-20 vis-a-vis 7.1 per cent growth for the corresponding period in 2018-19 (Table 6, Chapter 2). Goods and Services Tax (GST) collections, the biggest component of indirect taxes, grew by 4.1 per cent for the Centre during April-November 2019. However, the uptick in growth of cumulative GST collections for the Centre started in October 2019 and has sustained its momentum in November and December 2019 as well.

1.19 Specifically, the GST (Centre + States) collection for the month of November 2019 was the third highest monthly collection since introduction of GST (July 2017). From April-December 2019, gross GST revenue collection has crossed the mark of ₹ 1 lakh crore five times with a revenue of ₹ 1.03 lakh crore in December 2019. This may be the result of concerted efforts taken by the Government to improve tax compliance and revenue collection as well as a reflection of a rebounding economy.

1.20 On the expenditure side, the budgeted expenditure of the Central government grew at 12.8 per cent in April-November 2019 over

Figure 12: Gross Fiscal Deficit (Centre) as percentage of GDP



Data Source: Union Budget and CGA
Note: * : The figures for 2018 are with respect to GDP (PE) data for 2018-19 and figures for 2019 are provisional and with respect to budgeted GDP for 2019-20.

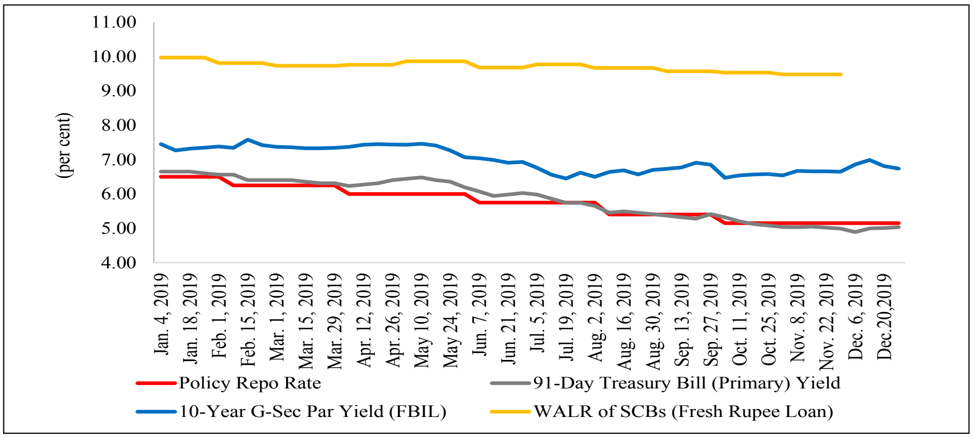
the corresponding period of the previous year, expending almost 60 per cent of the budget. The capital expenditure during April to November 2019-20 has grown at roughly three times vis-à-vis the same period in 2018-19. Also, revenue expenditure has grown at a higher rate during these eight months of 2019-20, compared to the same period previous year (Chapter 2, Figure 8).

Monetary policy

1.21 The liquidity condition of banks became comfortable after June 2019 and has remained healthy since then (Chapter 4, Figure 5). Average daily net absorption soared from ₹ 45.6 thousand crore in June 2019 to ₹ 256.4 thousand crore in December 2019. Durable liquidity injection was undertaken through four open market operation (OMO) purchase auctions and a US$ 5 billion buy/sell swap auction. Abundant liquidity in the banking system is also reflected in the weighted call money rate, which has mostly traded within the Liquidity Adjustment Facility (LAF) corridor (LAF corridor is the spread between the repo and the reverse repo rate) (Chapter 4, Figure 6).

1.22 The stance of the Monetary Policy Committee of Reserve Bank of India continued to be accommodative as it reduced the policy repo rate by 135 basis points since February 2019. The rate cut along with excess liquidity in banks was expected to transmit well into lowering interest rates. However, the transmission has varied across different market segments (Figure 13). The transmission to short term treasury bills was full during this period while it was partial for long term securities. The transmission to credit market was also partial as Weighted Average Lending Rate (WALR) of Scheduled Commercial Banks (SCBs) on fresh rupee loan reduced by only 33 basis points (bps) between February and November 2019. Thus, less than a quarter of the rate cuts by RBI was transmitted by banks to new borrowers. The median of 1-year Marginal Cost of Funds based Lending Rate (MCLR) reduced by 49 bps between February and November 2019; which represents a transmission of about a third of the rate cut by RBI.

Figure 13: Policy rate, yield and lending rate



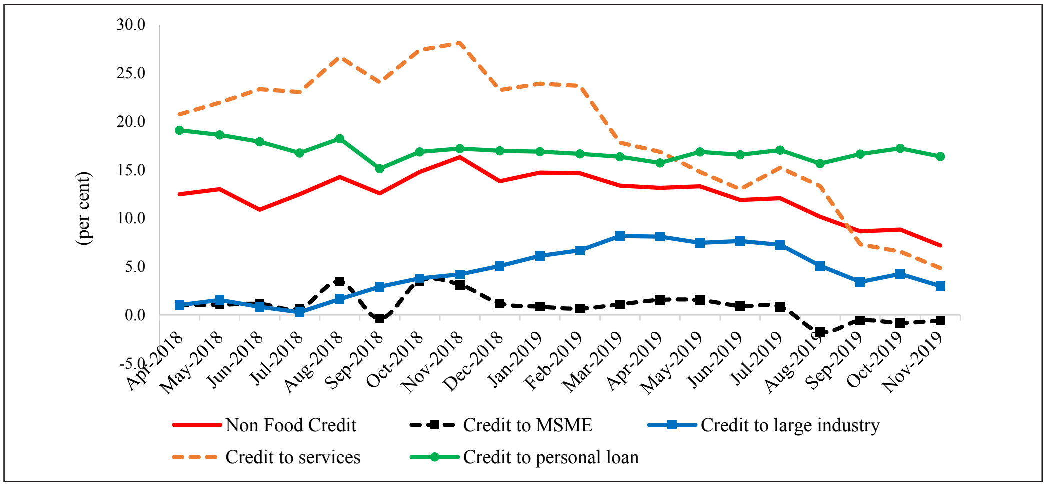
Data Source: RBI
Note: WALR refers to Weighted Average Lending Rate

Credit growth

1.23 The growth of bank credit which was picking up in H1 of 2018-19, started decelerating in H2 of 2018-19 and further in H1 of 2019-20. The deceleration was witnessed across all major segments of non-food credit, save personal loans which continued to grow at a steady and robust pace. The deceleration in credit growth was most in the services sector. Credit growth to industry also witnessed a significant decline in recent months, both for MSME sector as well as large industries. Agriculture and allied activities benefited from a higher growth of credit (Figure 14).

1.24 Decline in credit growth has been attributed to growing risk aversion of banks that continue to apprehend the build-up of Non-Performing Assets (NPAs). This is despite the admission of more than 2000 corporate insolvency resolution processes between December 2016 and June 2019.

Figure 14: Growth of non-food bank credit



Data Source: RBI
Note: Growth of sectoral credit corresponds to select 41 Scheduled Commercial Banks.

The IBC process contributed to reducing the NPAs from 11.2 per cent of gross advances in March 2018 to 9.3 per cent in March 2019. However, the NPA ratio remains the same six months forward, at 9.3 per cent, in end September 2019.

1.25 The prospects of easy investment in G-secs is possibly running complementary to the risk aversion being displayed by SCBs. During the first eight months of 2019-20, scheduled commercial banks mobilized the same amount of deposits as in the corresponding period of the previous year. Yet, the SCBs chose to invest thrice the amount in G-secs in the current year, as compared to the previous year while reducing their credit off-take by more than four-fifths. It appears that risk aversion towards lending to the private sector has increased in 2019 (Table 4).

1.26 The risk aversion to lending to the private sector appears to be relatively more in respect of Public Sector Banks (PSBs). As Figure 15 shows, growth of credit from the PSBs was not only much lower than that of private sector banks but credit growth of PSBs also dipped sharply from December 2018 onwards.

External sector performance

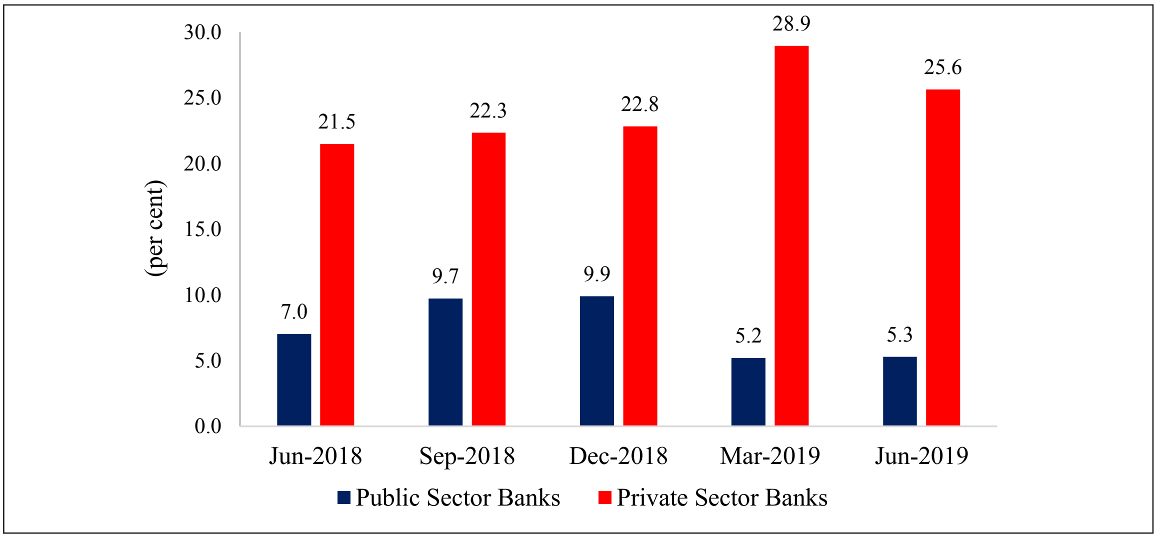
1.27 In October and November 2019, major commodity groups have shown a positive

Table 4: Net Scheduled Commercial Bank Credit (in ₹ lakh crore)

	April-November	
	2018-19	2019-20
Net Credit of Scheduled Commercial Banks	5.07	0.89
Net Aggregate Deposits of Scheduled Commercial Banks	3.87	3.85
Incremental Credit-Deposit Ratio (per cent)	131.0	23.1
Investment in Government Securities	1.07	3.37

Data Source: RBI

Figure 15: Growth in credit of Public & Private Sector Banks



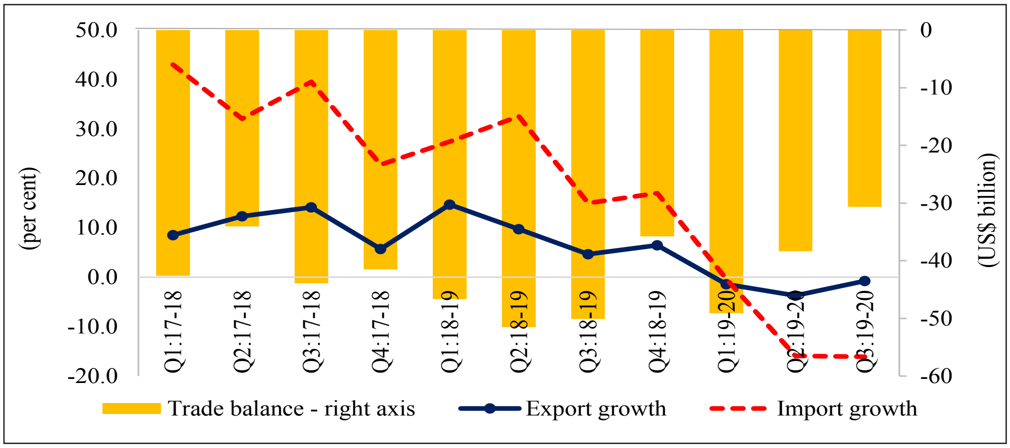
Data Source: RBI

growth in exports over the corresponding month of the previous year while imports of major commodity groups have contracted. However, the slower contraction in merchandise exports as compared to imports has so far resulted in improvement in trade balance in 2019-20 (Figure 16).

1.28 The contraction in import bill was partly contributed by a decline in oil prices in the current year as compared to 2018-19 (Figure 17), while slower contraction of exports may have resulted from a pick-up in global activity. The depreciation of real exchange rate since July 2019 may have been supportive of resurgence in India's exports (Figure 18), though the evidence for exchange rate depreciation contributing to exports seems tenuous (Volume 1, Chapter 5).

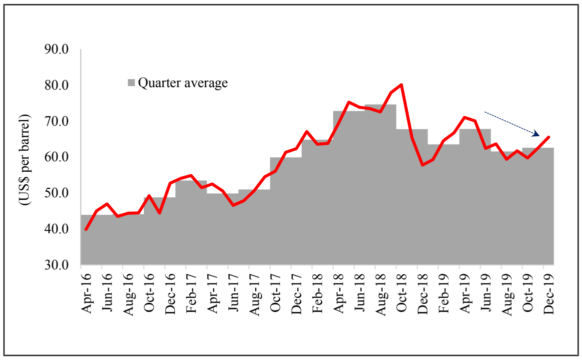
1.29 Despite muted growth of services exports, the trade balance on the services account continued to be positive in 2019-20. The trade surplus on services account has been estimated at US$ 40.5 billion in H1 of 2019-20 (Figure 19), as compared to US$ 38.9 billion in 2018-19.

Figure 16: Growth of merchandise exports and imports



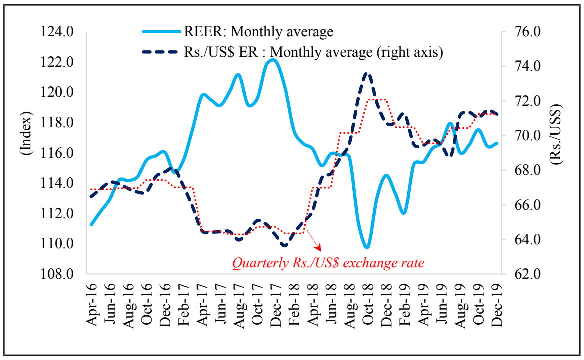
Data Source: Department of Commerce, Ministry of Commerce and Industry

Figure 17: Crude oil prices (Indian Basket) – US$ per barrel



Data Source: Petroleum Planning and Analysis Cell

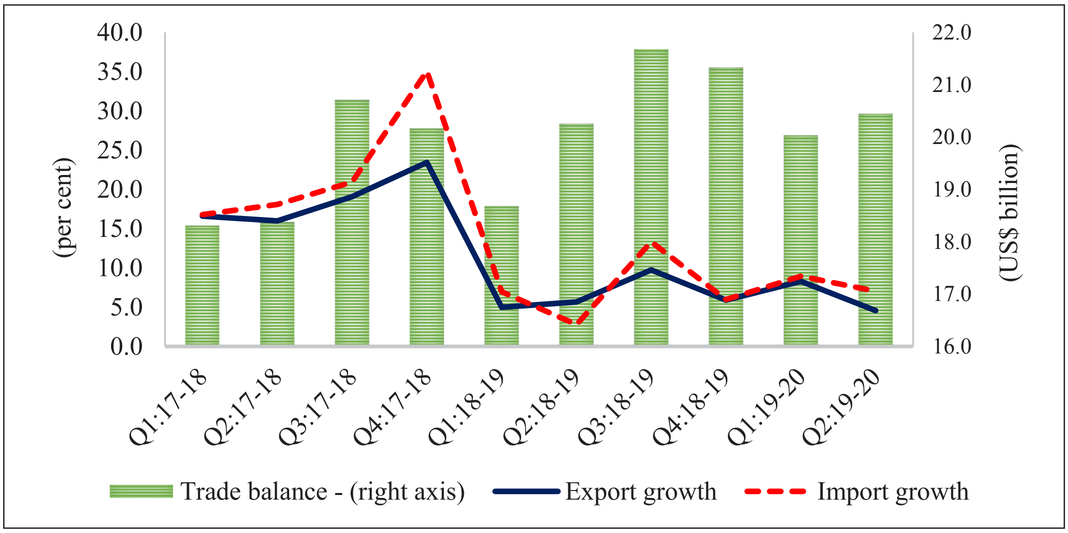
Figure 18: Exchange Rate of Indian Rupee



Data Source: RBI

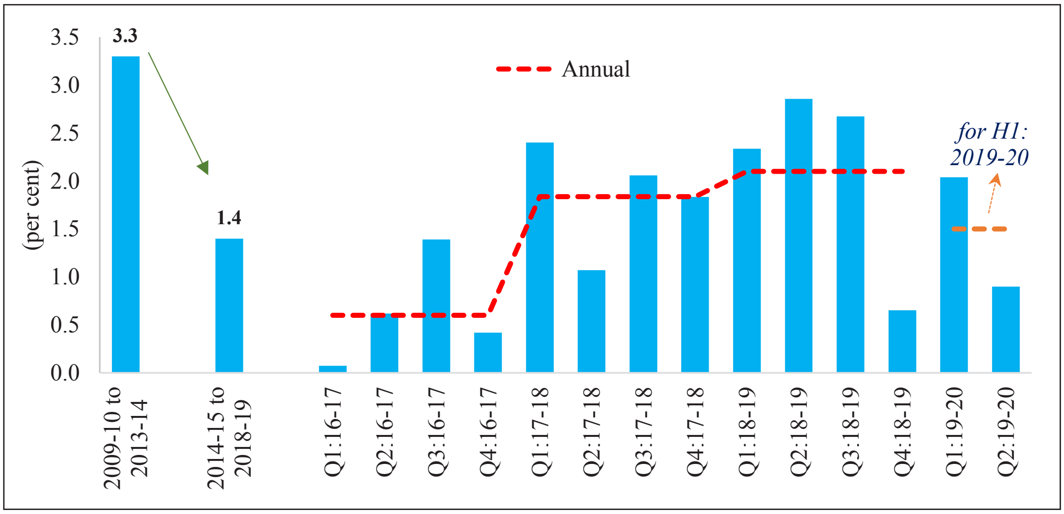
Note: REER refers to Real Effective Exchange Rate (36 currency trade weights)

Figure 19: Growth of services exports and imports



Data Source: RBI

Figure 20: Current Account Deficit as percentage of GDP

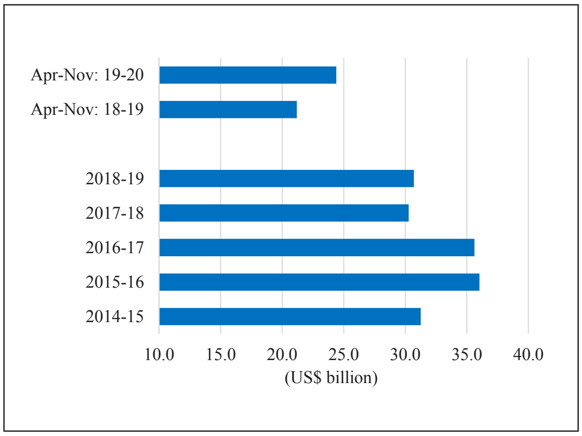


Data Source: RBI

1.30 Lower Current Account Deficit (CAD) reflects reduced external indebtedness of the country making domestic economic policy increasingly independent of external influence. The CAD, which was 2.1 per cent of GDP in 2018-19, has improved to 1.5 per cent in H1 of 2019-20 on the back of significant reduction in trade deficit (Figure 20).

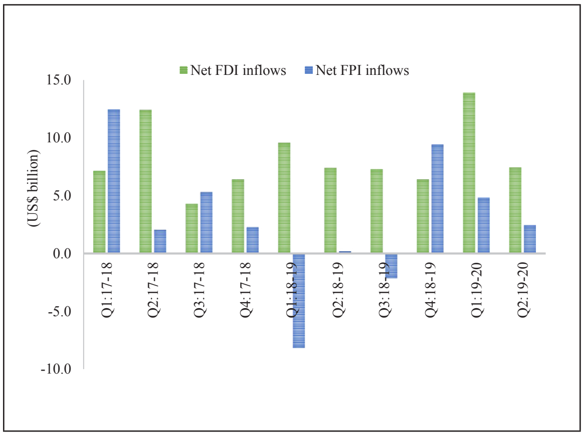
1.31 Foreign Direct Investment (FDI) provides a more stable source of financing the CAD as compared to external borrowings. During 2014-19, gross FDI to India has been robust as compared to the previous five years; the trend has continued in 2019-20 as well (Figure 21). In the first eight months of 2019-20, both gross and net FDI flows to the country have been more than the flows received in corresponding period of 2018-19. Net FPI inflow in H1 of 2019-20 was also robust at US$ 7.3 billion as against an

Figure 21: Net annual FDI inflows



Data Source: RBI's monthly bulletins

Figure 22: Quarterly trends in capital inflows



Data Source: RBI

outflow of US$ 7.9 billion in H1 of 2018-19 (Figure 22).

1.32 Consequent to the improvement in current account and higher capital flows into the country, the Balance of Payments (BoP) position of the country has improved from foreign exchange reserves of US$ 302 billion in end March, 2019 to US$ 461.2 billion as on 10th January 2020.

Sectoral developments

1.33 Resources move across sectors in response to changes in relative prices causing different sectors of the economy to grow at different rates. A high growth of GDP does not attract much attention to sectoral contribution to growth as much as low growth of GDP does. Yet, at all levels of growth, structural change is imminent and it is the pace of change that becomes a matter of interest (Table 5).

1.34 Share of agriculture and allied sectors in the total GVA of the country has declined from 2009-14 to 2014-19 mainly on account of relatively higher growth performance of tertiary sectors. This is a natural outcome of the development process

Table 5: Sectoral shares in GVA (per cent)

	2009-10 to 2013-14	2014-15 to 2018-19	2018-19	H1: 2019-20
Agriculture, forestry & fishing	18.3	17.4	16.1	13.9
Industry	32.3	29.6	29.6	28.3
Mining & Quarrying	3.2	2.4	2.4	2.1
Manufacturing	17.5	16.6	16.4	15.4
Electricity, Gas, Water supply & other utility services	2.4	2.6	2.8	2.9
Construction	9.2	8.0	8.0	8.0
Services	49.4	52.9	54.3	57.8

Trade, Hotel, Transport, Storage, Communication and services related to broadcasting	17.5	18.3	18.3	18.1
Financial, Real estate & Professional services	19.2	20.9	21.3	24.5
Public Administration, Defence and other services	12.7	13.7	14.7	15.2

Source: National Statistical Office

that leads to faster growth of non-agricultural sectors.

1.35 The contribution of industrial activities to GVA has also declined from 2009-14 to 2014-19. Manufacturing sector, which contributes more than 50 per cent of industrial GVA, has driven the decline while the share of construction sector has also moderated.

1.36 Services sector has moved ahead faster, distancing itself further from agriculture and industry. Financial, real estate and professional services has driven the increase in the contribution of service sector followed by public administration. Even globally, the services sector has supported global growth partly offsetting the decline in manufacturing activity.

FIRST ADVANCE ESTIMATES: 2019-20

1.37 As per First Advance Estimates, growth in real GDP during 2019-20 is estimated at 5.0 per cent, as compared to the growth rate of 6.8 per cent in 2018-19. The nominal GDP is estimated at ₹ 204.4 lakh crore in 2019-20 with a growth of 7.5 per cent over the provisional estimates of GDP (₹ 190.1 lakh crore) for 2018-19.

1.38 The contribution of total consumption and net exports in GDP at current prices are estimated to increase in 2019-20 vis-à-vis 2018-19. Fixed investment as percentage of GDP at current prices is estimated to be 28.1 per cent in 2019-20, lower as compared to 29.3 per cent in 2018-19 (Table 6).

Table 6: Demand side components (as per cent of GDP)

	2017-18	2018-19	2019-20	Percentage points change in share in 2019-20 over 2018-19
	1st RE	PE	1st AE	[Increase (+)/ Decrease (-)]
Total consumption	70.0	70.6	72.1	1.5
Government consumption	11.0	11.2	11.9	0.7
Private consumption	59.0	59.4	60.2	0.8
Gross Fixed Capital Formation	28.6	29.3	28.1	-1.2
Net exports	-3.2	-3.9	-2.8	1.1
Exports of goods & services	18.8	19.7	18.4	-1.3
Imports of goods & services	22.0	23.6	21.2	-2.4

Source: National Statistical Office

Note: RE - Revised Estimate, PE - Provisional Estimate, AE - Advance Estimate

Table 7: Growth of GVA and GDP at constant (2011-12) prices (per cent)

	2017-18	2018-19	2019-20	Percentage points Change in growth in 2019-20 over 2018-19
	1st RE	PE	1st AE	[Increase (+)/ Decrease (-)]
GVA at basic prices	**6.9**	**6.6**	**4.9**	**-1.7**
Agriculture & Allied Sectors	**5.0**	**2.9**	**2.8**	**-0.1**
Industry	**5.9**	**6.9**	**2.5**	**-4.4**
Mining & quarrying	5.1	1.3	1.5	0.2
Manufacturing	5.9	6.9	2.0	-5.0
Electricity, Gas, Water supply & other utility services	8.6	7.0	5.4	-1.6
Construction	5.6	8.7	3.2	-5.6
Services	**8.1**	**7.5**	**6.9**	**-0.7**
Trade, hotel, transport, communication and services related to broadcasting	7.8	6.9	5.9	-1.0
Financial, real estate & professional services	6.2	7.4	6.4	-1.1
Public administration, defence and other services	11.9	8.6	9.1	0.5
GDP at market prices	**7.2**	**6.8**	**5.0**	**-1.8**

Source: National Statistical Office

Note: RE - Revised Estimates, PE - Provisional Estimates, AE - Advance Estimates

1.39 Growth of real GVA at basic prices is estimated at 4.9 per cent in 2019-20, as compared to 6.6 per cent in 2018-19. Deceleration in GVA growth is estimated across all subsectors except 'Public administration, defence and other services' (Table 7).

1.40 Key indicators of the economy are reflected in Table 8. Given a 4.8 per cent real GDP growth in H1 of 2019-20, the first Advance Estimates imply that growth in H2 of 2019-20 will witness an uptick over H1 of 2019-20. The following developments suggest why it may be so:

First, NIFTY India Consumption Index picked up for the first time this year with a positive year-on-year growth of 10.1 per cent in October 2019 as compared to negative growth in the previous months. The growth continues to remain positive at 5.7 per cent in November 2019 and 0.2 per cent in December 2019.

Second, reinstating the positive confidence in Indian economy the secondary market continues to be upbeat and the BSE Sensex increased by 7.0 per cent (up to 31st December 2019) over end March 2019.

Third, foreign investors continue to show confidence in India. The country has attracted a net FDI of US$ 24.4 billion in April-November of 2019-20 as compared to US$ 21.2 billion in April-November of 2018-19. Net FPI inflow in April-November 2019-20

Table 8 : Key Indicators

Data categories	Unit	2016-17	2017-18	2018-19	2019-20
GDP and Related Indicators					
GDP at current market prices	₹ lakh Crore	153.6	171.0	190.1[a]	204.4[b]
GDP at constant market prices	₹ lakh Crore	123.0	131.8	140.8[a]	147.8[b]
Growth Rate	(per cent)	8.2	7.2	6.8[a]	5.0[b]
GVA at current basic prices	₹ lakh Crore	139.4	154.8	172.0[a]	185.0[b]
GVA at constant basic prices	₹ lakh Crore	113.2	121.0	129.1[a]	135.4[b]
Growth Rate	(per cent)	7.9	6.9	6.6[a]	4.9[b]
Gross Savings	% of GDP	30.3	30.5	na	na
Gross Capital Formation	% of GDP	30.9	32.3	na	na
Per Capita Net National Income (at current prices)	₹	104659	114958	126406[a]	135050[b]
Production					
Food grains	Million tonnes	275.1	285.0	285.0[c]	140.6[c]
Index of Industrial Production (growth)	(per cent)	4.6	4.4	3.8	0.6[d]
Electricity Generation (growth)	(per cent)	4.7	4.0	3.5	0.3[d]
Prices					
WPI inflation (average)	(per cent)	1.7	3.0	4.3	1.5[e]
CPI (Combined) inflation (average)	(per cent)	4.5	3.6	3.4	4.1[e]
External Sector					
Merchandise export growth (in US$ term)	(per cent)	5.2	10.0	8.8	-2.0[e]
Merchandise import growth (in US$ term)	(per cent)	0.9	21.1	10.4	-8.9[e]
Current Account Balance	% of GDP	-0.6	-1.8	-2.1	1.5[f]
Foreign Exchange Reserves (end of year)	US$ Billion	370.0	424.5	412.9	457.5[j]
Average Exchange Rate	₹ /US$	67.1	64.5	69.9	70.4[e]
Money and Credit					
Broad Money (M3) growth (annual)	(per cent)	10.1	9.2	10.5	9.8[g]
Scheduled Commercial Bank Credit (growth)	(per cent)	8.2	10.0	13.3	7.2[g]

Data categories	Unit	2016-17	2017-18	2018-19	2019-20
Fiscal Indicators (Centre)					
Gross Fiscal Deficit	% of GDP	3.5	3.5	3.4[h]	3.3[i]
Revenue Deficit	% of GDP	2.1	2.6	2.2[h]	2.3[i]
Primary Deficit	% of GDP	0.4	0.4	0.2[h]	0.2[i]

Notes: Na: Not available,
a: Provisional estimates, b: First advance estimate, c: Fouth AE for 2018-19 and first AE for 2019-20,
d: (April-November) 2019, e: (April-December) 2019, f: (April-September) 2019, g: November 2019,
h: Revised Estimate i. Budget Estimate j. End of December 2019

was positive at US$ 12.6 billion as against an outflow of US$ 8.7 billion in April-November 2018-19.

Fourth, the lagged effect of previous cuts in the repo rate is showing up in the build-up of demand pressure. CPI-core inflation has risen from 3.4 per cent in October 2019 to 3.6 per cent in November 2019 and further to 3.8 per cent in December 2019. WPI Inflation has also been rising from zero per cent in October 2019 to 0.6 per cent in November 2019 and 2.6 per cent in December 2019.

Fifth, the terms of trade for farmers has been improving and will lead to increase in rural consumption. Food inflation since April 2019 has been rising.

Sixth, industrial activity is on a rebound and is showing signs of pick up. IIP in November 2019 has registered a growth of 1.8 per cent as compared to a contraction by 3.4 per cent in October 2019 and by 4.3 per cent in September 2019. Along with IIP, growth of eight core industries is also showing signs of recovery by registering a smaller contraction of 1.5 per cent in November 2019 as compared to a contraction of 5.8 per cent in October 2019. This is consistent with business cycle.

Seventh, PMI Manufacturing has registered a steady improvement increasing from 50.6 in October 2019 to 51.2 and 52.7 in November 2019 and December 2019 respectively. PMI Services has also increased from 49.2 in October 2019 to 52.7 in November 2019 and further to 53.3 in December 2019.

Eighth, growth in merchandize exports has been improving as reflected in a contraction by 0.8 percent in Q3 2019-20 which was smaller as compared to a contraction by 3.7 per cent in Q2 2019-20. Accordingly inducement of exports to GDP growth is expected to increase. As per first Advance Estimates of 2019-20, contribution of net exports to the growth of GDP is estimated to increase by 1.1 percentage points over 2018-19.

Ninth, forex reserves have built up from US$ 413 billion in end March 2019 to US$ 461.2 billion as on 10th January, 2020 reflective of increasing confidence of overseas investors in India's economy.

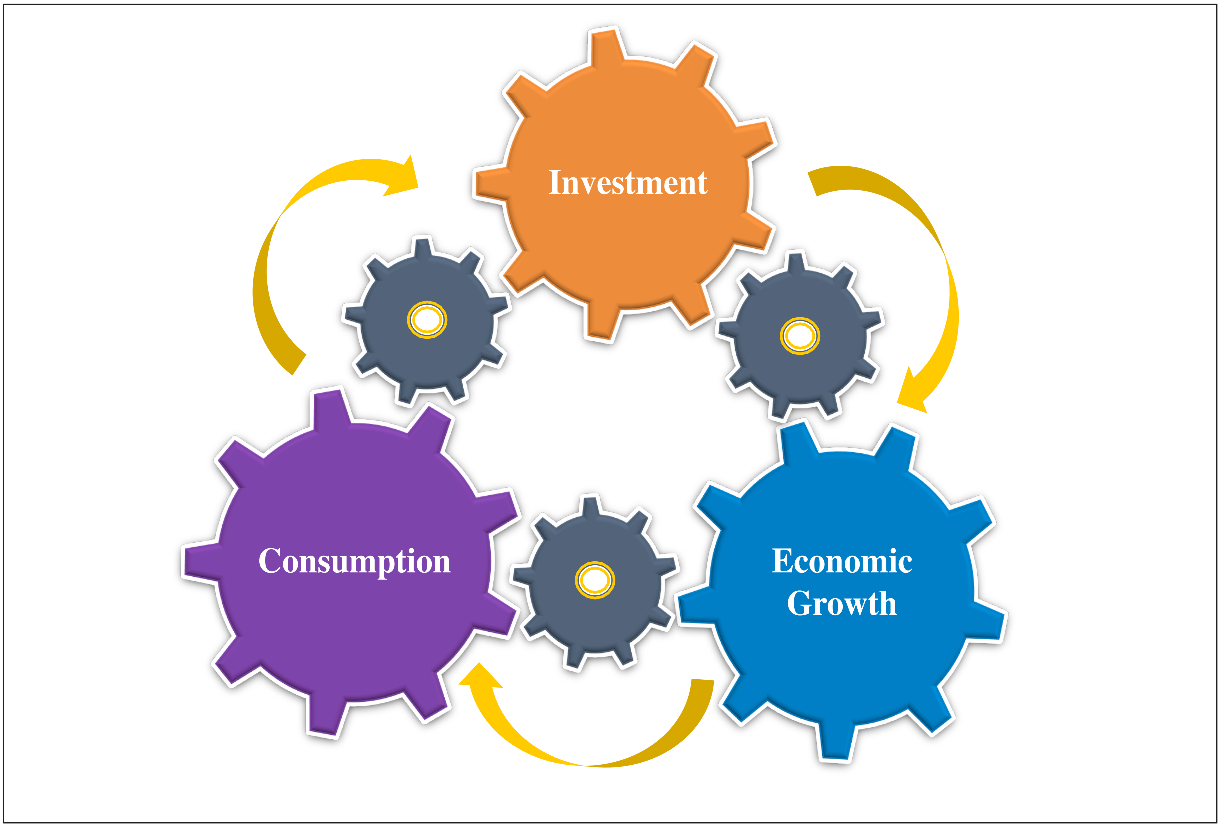
Tenth, the gross GST revenue collected in the month of December 2019 and November 2019 registered a positive growth rate of 9 per cent and 6 per cent respectively over the corresponding month of the previous year after registering negative growth rates in September and October 2019. During April-December 2019, the gross GST revenue collected has surpassed ₹ 1 lakh crore five times, pointing towards an increased economic activity overall.

THE RECENT GROWTH DECELERATION: DRAG OF THE FINANCIAL SECTOR ON THE REAL SECTOR

The Slowing Cycle of growth

1.41 The Economic Survey, 2018-19 describes the virtuous cycle of growth wherein increase in the rate of fixed investment accelerates the growth of GDP that in turn induces a higher growth in consumption. Higher growth of consumption improves the investment outlook, which results in still higher growth of fixed investment that further accelerates the growth of GDP, inducing a still higher growth of consumption. This virtuous cycle of higher fixed investment-higher GDP growth-higher consumption growth (Figure 23) generates economic development in the country.

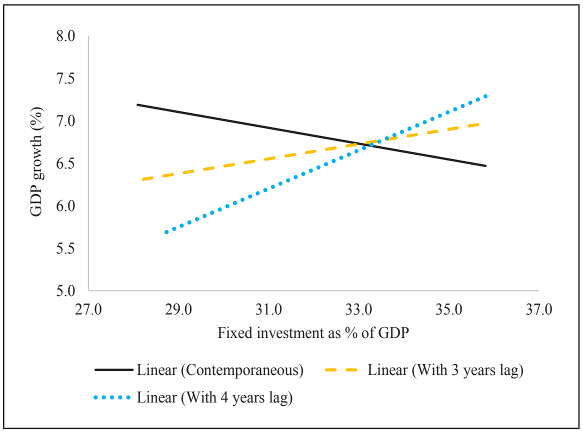
Figure 23: Virtuous cycle of growth



1.42 Conversely, when this virtuous cycle rotates slowly, declining rate of fixed investment decelerates GDP growth with a lag, which eventually causes a deceleration in the growth of consumption as well. In case of India, the lag between rate of fixed investment and its impact on GDP growth is seen to be of three to four years (Figure 24). Similarly, the impact of GDP growth on consumption growth gets reflected in one to two years (Figure 25). Therefore, a contemporaneous comparison of trends of GDP growth and investment is not appropriate, given the negative correlation seen between the two.

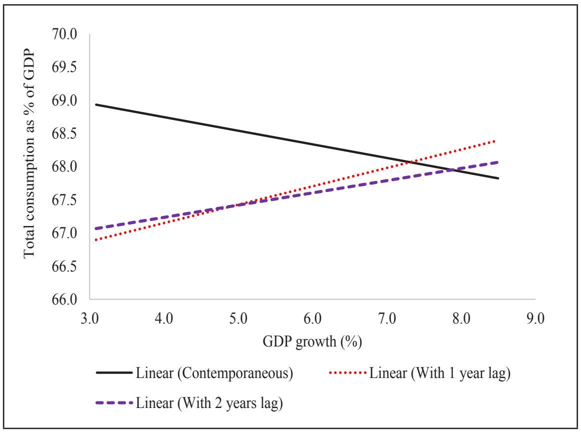
1.43 The Indian economy, since 2011-12, has been under the influence of slowing

Figure 24: Lagged effect of Investment on growth (2004-2019)



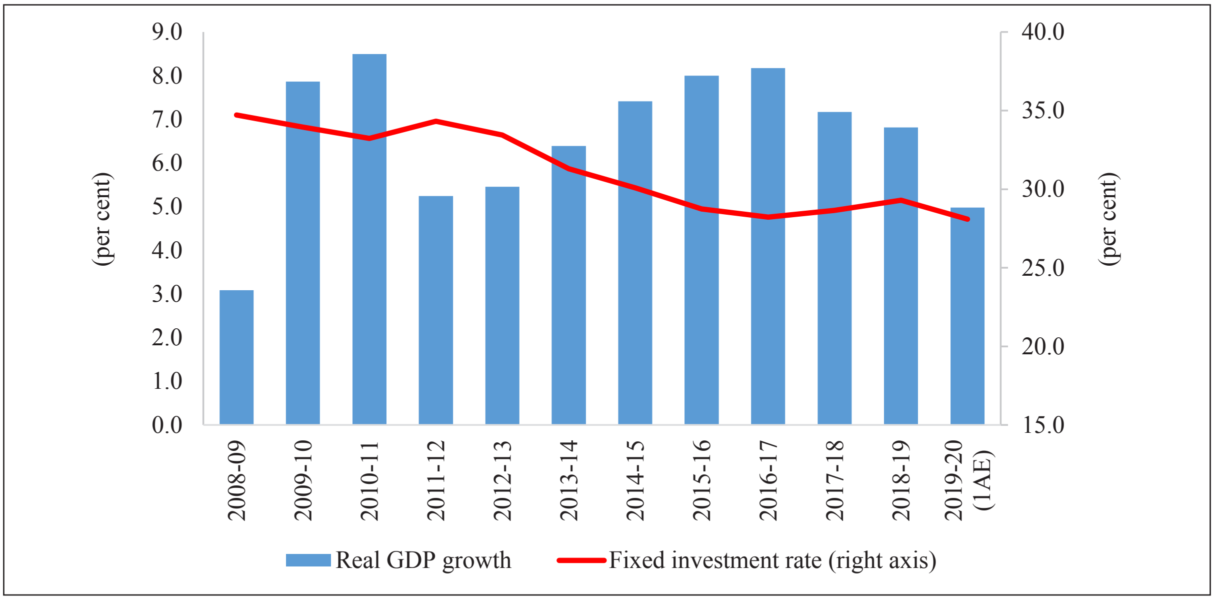
Data Source: National Statistical Office

Figure 25: Lagged effect of growth on Consumption (2004-2019)



Data Source: National Statistical Office

Figure 26: Real GDP growth and Investment – Annual movement



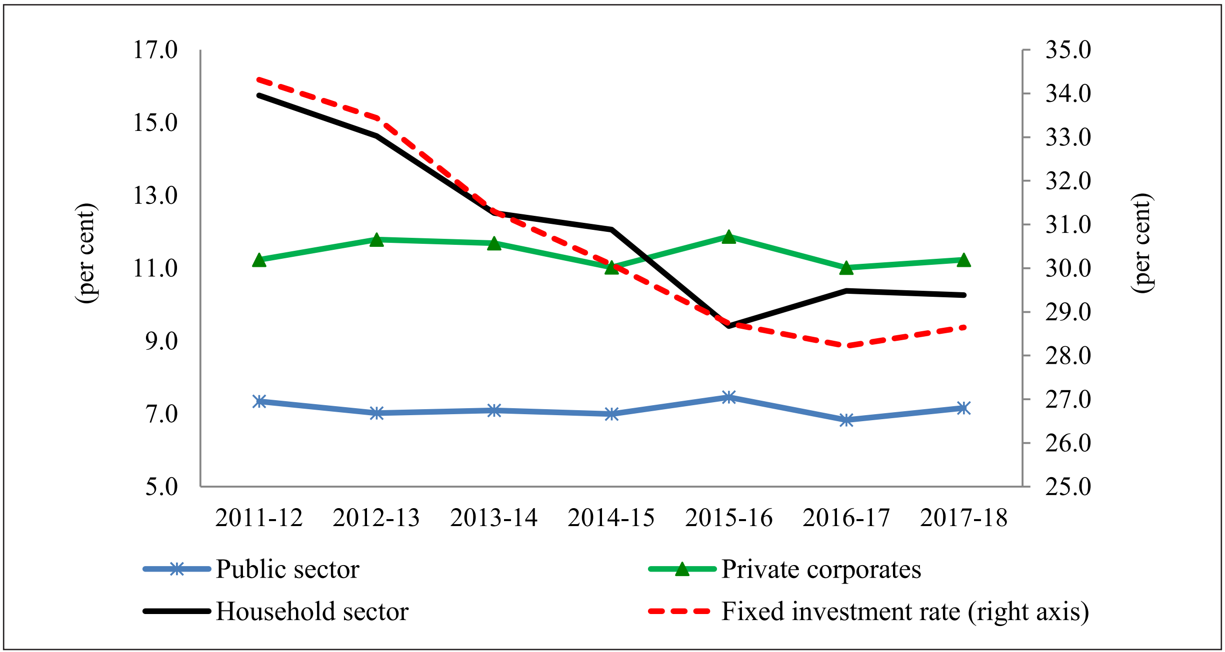
Data Source: National Statistical Office

cycle of growth. The fixed investment rate has started declining sharply since 2011-12 and subsequently plateaued from 2016-17 onwards. Given the lagged impact of the investment rate on GDP growth shown in Figure 24 (with the effect being most pronounced after four years), the deceleration in growth since 2017-18 is consistent with the framework described here (Figure 26).

Decline in fixed investment rate

1.44 The drop in fixed investment by households from 14.3 per cent to 10.5 per cent explains most of the decline in overall fixed investment between 2009-14 to 2014-19 (Figure 27). Fixed investment in the public sector marginally decreased from 7.2 per cent of GDP to 7.1 per cent during the two

Figure 27: Fixed investment by institutional sector (as per cent of GDP)



Data Source: National Statistical Office

periods. However, the stagnation in private corporate investment at approximately 11.5 per cent of GDP between 2011-12 to 2017-18 has a critical role to play in explaining the slowing cycle of growth and, in particular, the recent deceleration of GDP and consumption.

Drag of financial sector on private corporate investment

1.45 To make sense of the decline in corporate investment when it stems from issues related to the financial sector, we must understand the boom in credit (Mian and Sufi, 2018). It is now well recognized that a sudden credit expansion, which is purely supply led, results in short lived expansion of output and employment but causes significant contraction in the long run. The International Monetary Fund (2017) finds this relationship for 80 countries. In most of these cases, the credit channel works through household debt where households increase demand using debt in the short run and reduce demand later during the deleveraging phase, thereby, resulting in recessions.

1.46 In the Indian context, the credit channel has worked through corporate investment. The bust following the boom was characterized by deleveraging and low investment rate in the corporate sector, eventually causing the recent deceleration of GDP growth. Here, it may be useful to ask if the origins of slowing cycle of growth lie in the enormous lending boom of the mid and late 2000s when non-food bank credit almost tripled between 2003-04 to 2007-08 and doubled between 2007-08 to 2011-12. Is it possible that this excessive bank lending, driven by the irrational exuberance of the boom period, led to a decline in corporate investments in the future?

1.47 To provide careful evidence on this phenomenon, the relationship between credit expansion by a firm and its future investment is examined. Following the methodology used in Mian & Sufi (2018), the data is organized at firm-year level. For any firm year t, the dependent variable is the growth in investments from year t to t+4 and the explanatory variable is the credit expansion during t-5 to t-1. For instance, in the year 2012, investment growth is the log of difference in fixed assets between 2011-12 and 2015-16 while credit expansion is the difference in the debt to total assets ratio between 2006-07 and 2010-11. For each of the five firm-years (2011 to 2015), the dependent variable is regressed on the explanatory variable across a cross-section of firms. The statistical significance of the relationship between the two is tabulated below (Table 9).

1.48 Crucially, we note that for the year 2013, the relationship is both negative and statistically significant. This implies that firms that excessively borrowed between 2007-08 to 2011-12 actually ended up investing significantly less during 2012-13 to 2016-2017. As this result is statistically not significant for any other five-year periods, the year 2013 becomes pivotal in explaining the impact of credit exuberance on investment. In fact, the year 2013 being pivotal in the analysis above matches exactly with the fall in investment rate at the macro level seen in Figure 26.

Table 9 : Relationship between credit expansion and investment

Firm Year	Credit Expansion (Increase in debt/assets ratio)	Investment (Growth in Fixed Assets)	Relationship
2011	2006-10	2011-15	Not Significant
2012	2007-11	2012-16	Not Significant
2013	2008-12	2013-17	Significant and Negative
2014	2009-13	2014-18	Not Significant
2015	2010-14	2015-19	Not Significant

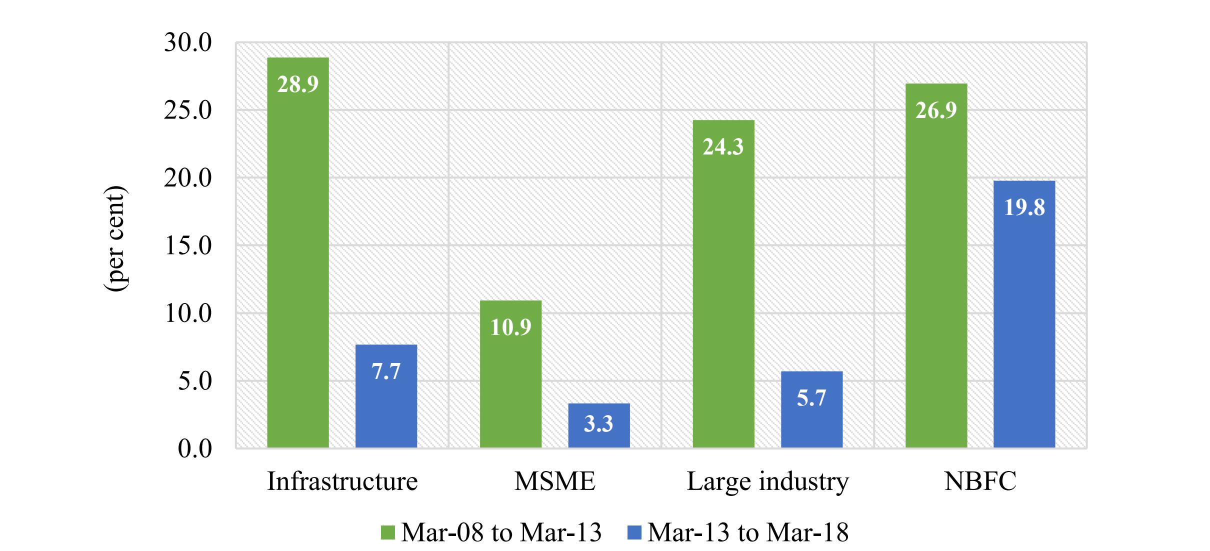
1.49 The year 2007-08 when firms started to borrow excessively coincides with the year in which RBI extended regulatory forbearance to almost all loans (RBI, Prudential Guidelines on Restructuring of Advances by Banks, August 27, 2008). It appears that the firms that were beneficiaries of excess lending, facilitated by regulatory forbearance, seem to have cut down investment the most. Perhaps, the beneficiary firms were the ones that were more focused at de-leveraging, owing to their higher debt to asset ratio, than investing in new assets.

1.50 Post the credit boom, the credit growth of banks also started to slow down. Growth (CAGR) of non-food credit for Scheduled Commercial Banks' (SCBs) fell from 16.7 per cent in 2009-14 to 10.5 per cent in 2014-19. The decline in the growth of non-food SCB credit followed a rise in the Non- Performing Assets (NPA) of banks from an average of 3.0 per cent of gross advances in 2009-14 to 8.3 per cent in 2014-19. Bank credit growth (CAGR) to large units, MSMEs, infrastructure and even Non-Banking Financial Companies (NBFCs) significantly fell in 2014-19 as compared to 2009-14 (Figure 28).

Decline in household investment

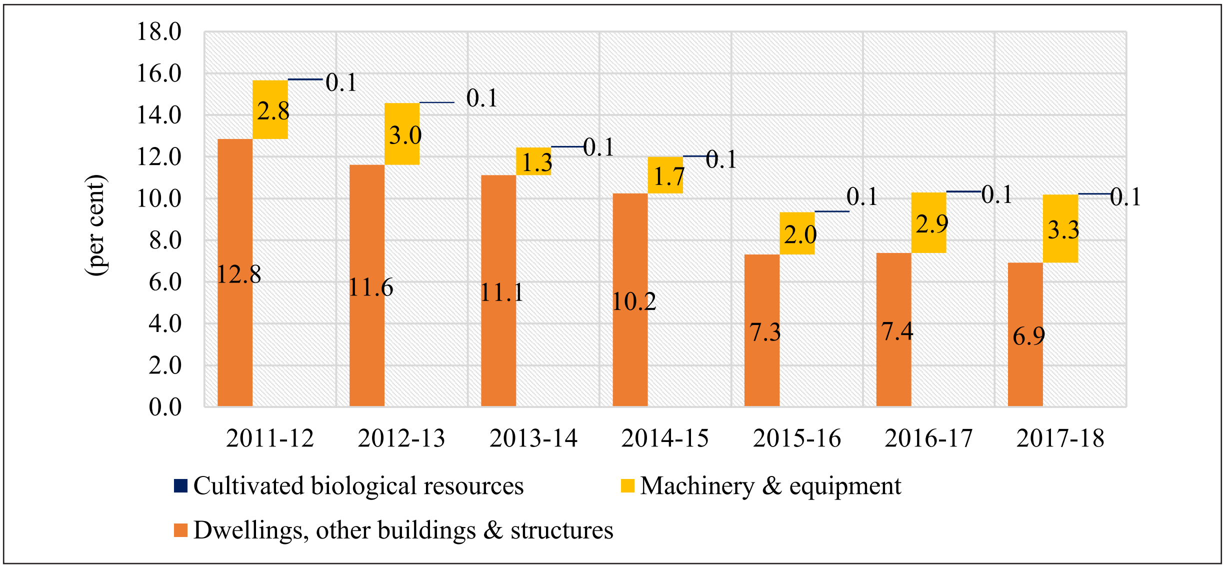
1.51 The household sector includes family households as well as 'quasi-corporates'.

Figure 28: Credit growth (CAGR) across sectors



Data Source: RBI

Figure 29: Household Fixed investment by asset (as percentage of GDP)



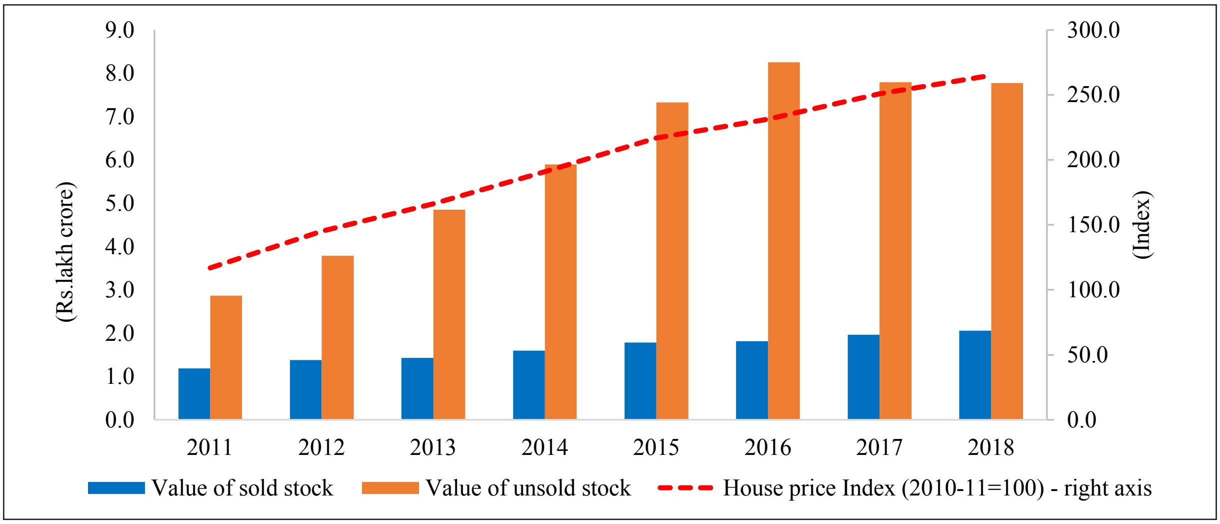
Data Source: National Statistical Office

Unincorporated enterprises belonging to households, which have complete sets of accounts, are called 'quasi-corporates'. A break-down of household sector investment shows that investment in the groups 'Machinery and equipment' and 'Dwellings, other buildings and Structures' together account for more than two-thirds of total household sector investment.

1.52 Unincorporated household enterprises, in addition to supplying directly for retail consumption, are also suppliers to incorporated enterprises from the back end of the value chain. The stagnation in machinery and equipment investment of households at around 2.4 per cent of GDP, from 2011-12 to 2017-18 (Figure 29), can possibly be linked with the leveling of private corporate investment during the same period.

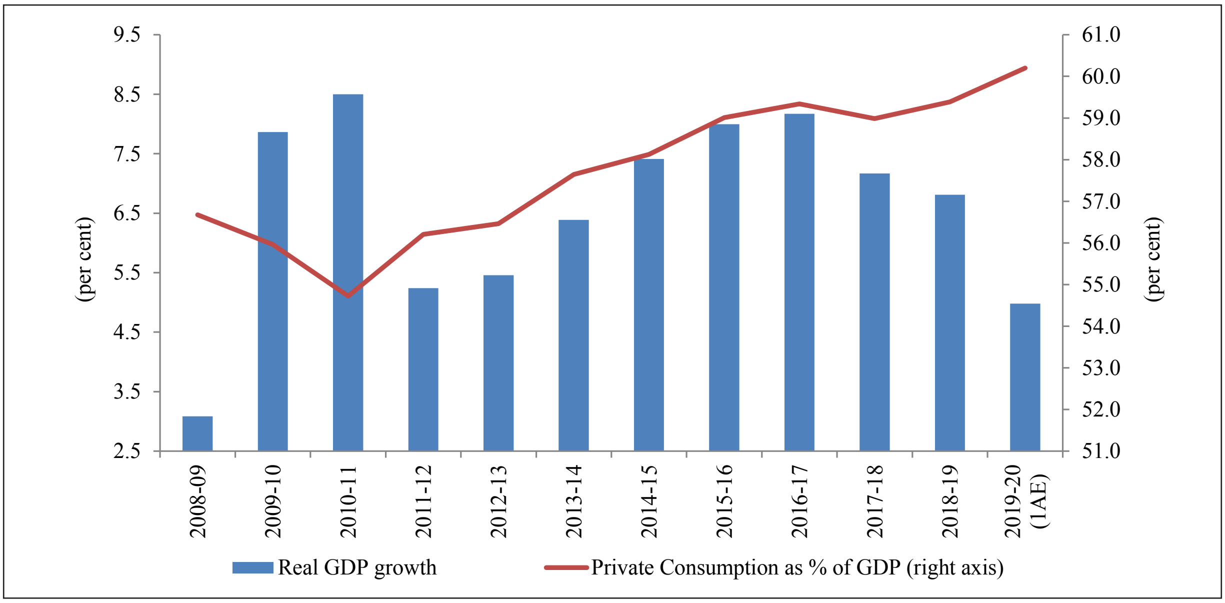
1.53 The decline in household investment in 'Dwellings, other buildings and Structures', over 2011-12 to 2017-18 is a reflection of slower growth in purchase of houses by households. The real estate sector, and residential property in particular, has been reeling with issues of delayed project deliveries and stalled projects leading to a build-up of unsold inventory over the years. Housing prices have remained elevated, even though growth in prices has fallen sharply since Q1 of 2015-16 and remained muted since then. As at end of December 2018, about 9.43 lakh units worth ₹ 7.77 lakh crore with 41 months of inventory are stuck in various stages of the project cycle across top 8 cities (Figure 30).

Figure 30: Housing unsold inventory, sales and price index



Data Source: Liases Foras (2019), RBI
Note: Years here are calendar years.

Figure 31: Real GDP growth and Private consumption (as percentage of GDP) Annual movement

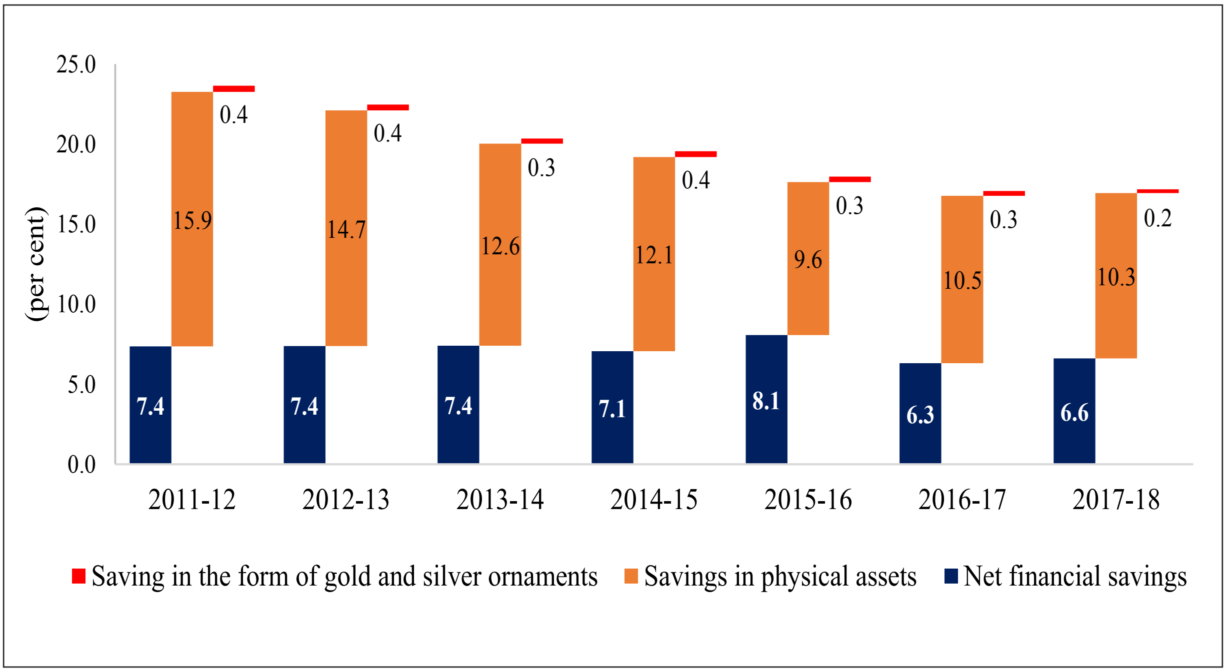


Data Source: National Statistical Office

Delayed decline in private consumption

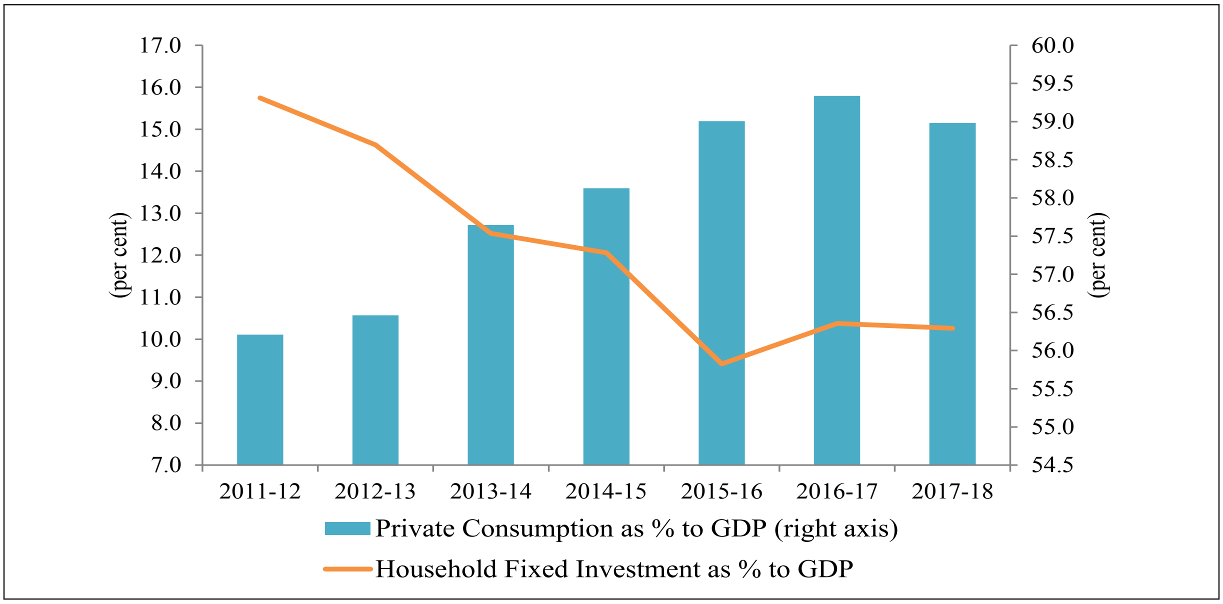
1.54 Private consumption increased as a proportion of GDP from 2009-16, particularly in 2014-16 (Figure 31). Thereafter, it declined in 2017-18 and rose again in 2018-19, before declining sharply in H1 of 2019-20. As shown in Figure 25, the effect of GDP growth on consumption manifests after a lag of 1-2 years. Therefore, the declining

Figure 32: Household savings by asset type (as percentage of GDP)



Data source: National Statistical Office

Figure 33: Household fixed investment and Private Consumption (as percentage of GDP)



Data source: National Statistical Office

trend in consumption from 2017-18 reflects partly the effect of decline in GDP growth on consumption.

1.55 Change in household investment contributed to increasing consumption in the period until 2016-17 (Figure 33). A drop in savings in physical assets of households has been observed over this period (Figure 32). Income not saved in physical assets by households is either saved in the form of valuables (gold or silver) or as net household financial savings or is consumed. During 2011-12 to 2016-17, when savings in physical assets dropped, neither savings in gold and silver by households nor net household financial savings rose as a proportion of GDP. Thus, it appears that resources not deployed by households in physical assets 2011-12 onwards were mostly expended on consumption.

OUTLOOK

1.56 The IMF in its January 2020 update of World Economic Outlook has projected India's real GDP to grow at 5.8 per cent in 2020-21. World Bank in its January 2020 issue of Global Economic Prospects also sees India's real GDP growing at 5.8 per cent in 2020-21.

1.57 Based on the first Advance Estimates of India's real GDP growth in 2019-20, an uptick in GDP growth in H2 of 2019-20 is expected as compared to first half of the same year. With a view to making an assessment of the likely growth in GDP, both the downside and upside risks to an expected acceleration in GDP growth are discussed below.

Downside Risks

- Continued global trade tensions could delay the recovery in the growth of global output, which may constrain the export performance of the country. Weaker export growth may reduce the inducement to increase the fixed investment rate in the economy.
- Escalation in US-Iran geo-political tensions may increase the price of crude oil and depreciate the rupee. Net FPI inflows may weaken, as a result, adding further pressure on the rupee to depreciate. If a fuller pass-through of the costlier crude oil is allowed, it may fuel inflationary pressure in the economy, cause the growth of private consumption to decline and weaken the inducement to invest. Even if a partial pass-through happens, fiscal deficit may swell, may increase the yield on G-sec and thereby, increase the cost of capital that may again weaken the inducement to invest.
- Growth in advanced countries has weakened with very low inflation. The conventional monetary policy has almost run its full course. Subsequently, quantitative easing may fuel inflation and reduce the real interest rate. At some point in future, if short-term interest rates are raised by the central banks to contain inflation, it may result in capital flight from emerging and developing market economies (EMEs) including India. The rupee may come under pressure making imports costlier. Leakage from the domestic circular flow of income may increase which may adversely impact private consumption and investment. If instead, fiscal expansion is the preferred policy option in advanced countries, increase

in short-term interest rates may happen all the more earlier and weaken the growth impulse in EMEs including India.

- The implementation of IBC Code is making progress, albeit slowly. Unless this speeds up, the risk aversion of banks to lend further may not reduce. Risk premiums may then continue to be high and cuts in repo rates may not transmit to lowering lending rates. Private investment may, therefore, remain muted.
- Investment in the public sector may increase, as is expected after the announcement of the National Infrastructure Pipeline (NIP) of projects worth ₹ 102 lakh crore. If this leads to expansion of fiscal deficit, bond yields may increase, thereby, possibly crowding out private investment. If instead private investment seeks external funding, CAD would widen and depreciate the rupee, bringing in its wake the adverse impact on consumption, investment and growth.
- Should productivity gains not significantly increase with reforms, it may raise the requirement of fixed investment rate to boost economic growth.
- A non-rising gross domestic savings rate may further deteriorate the CAD, depreciate the rupee and make the virtuous cycle more difficult to realize.

Upside Risks

- There are tentative signs that manufacturing activity and global trade are bottoming out. This may positively impact India's exports. At the same time, there is renewed initiative to boost exports through various reform measures including scaling up of logistics infrastructure that may increase export competitiveness.
- Government's thrust on affordable housing is evident, in order to boost the real estate sector and consequently the construction activity in the country. Higher investment in housing by households may increase the fixed investment in the economy. Existing unsold housing inventory can be cleared and the balance sheets of both bank/ non-bank lenders cleaned if the real estate developers are willing to take a 'hair-cut' by allowing the house-prices to drop.
- Global sentiment continues to favor India as reflected in robust and rising inflows of net FDI into the country. Relocation of investors from other countries to India in the wake of trade tensions will also add to the flow. The announcement of NIP may further increase FDI inflows into the country in both brown-field and green-field infrastructure projects. Continuous relaxation of FDI guidelines may address the concerns of foreign investors and improve the investment climate.
- A boost to Make in India may not only enhance exports but replace imports of products in which India has sufficient scope for expansion in domestic manufacturing.
- India has been making steady progress in improving its rank in the Ease of Doing

Business, assessed for about 190 countries by the World Bank. Earlier the rank had improved with the implementation of GST. Lately the improvement in rank has resulted from progress in trade facilitation as cross-border movement of goods has involved lesser waiting time. As the implementation of GST further settles down, the increased unification of the domestic market may reduce business costs and facilitate fresh investment. Reforms in land and labor market may further reduce business costs.

- Reduction in the base corporate tax rate to 15 per cent for new manufacturing companies may increase the rate of return on investment above the hurdle rate of the cost of capital and encourage a surge in new investments.
- Merger of public sector banks may increase the financial strength of the merged entities, lower the risk aversion and result in lowering of lending rates.

Projection of GDP growth in 2020-21

1.58 On a net assessment, it appears that the upside risks should prevail, particularly when the government, with a strong mandate, has the capacity to deliver expeditiously on reforms. GDP growth of India should strongly rebound in 2020-21 and more so on a low statistical base of 5 per cent growth in 2019-20.

1.59 On a net assessment of both the downside/upside risks, India's GDP growth is expected to grow in the range of 6.0 to 6.5 per cent in 2020-21.

CHAPTER AT A GLANCE

- The year 2019 was a difficult year for the global economy with world output growth estimated to grow at its slowest pace of 2.9 per cent since the global financial crisis of 2009, declining from a subdued 3.6 per cent in 2018 and 3.8 per cent in 2017.
- Amidst a weak environment for global manufacturing, trade and demand, the Indian economy slowed down with GDP growth moderating to 4.8 per cent in H1 of 2019-20, lower than 6.2 per cent in H2 of 2018-19.
- A sharp decline in real fixed investment induced by a sluggish growth of real consumption has weighed down GDP growth from H2 of 2018-19 to H1 of 2019-20. Real consumption growth, however, has recovered in Q2 of 2019-20, cushioned by a significant growth in government final consumption.
- On the supply side, the deceleration in GVA growth has been contributed generally by all sectors save 'Agriculture and allied activities' and 'Public administration, defence, and other services', whose growth in H1 of 2019-20 was higher than in H2 of 2018-19.
- India's external sector gained further stability in H1 of 2019-20, with a narrowing of current account deficit (CAD) as percentage of GDP from 2.1 in 2018-19 to 1.5 in H1 of 2019-20, impressive foreign direct investment (FDI), rebounding of portfolio flows and accretion of foreign exchange reserves. Imports have contracted more sharply than exports in H1 of 2019-20, with easing of crude prices, which has mainly driven the narrowing of CAD.
- Headline inflation rose from 3.3 per cent in H1 of 2019-20 to 7.35 per cent in December 2019-20 on the back of temporary increase in food inflation, which is expected to decline by year end. Rise in CPI-core and WPI inflation in December 2019-20 suggests building of demand pressure.
- The deceleration in GDP growth can be understood within the framework of a slowing cycle of growth. The financial sector acted as a drag on the real sector: investment-growth-consumption, as described in the Economic Survey of 2018-19.
- In an attempt to boost investment, consumption and exports, the government in 2019-20 has taken important reforms towards speeding up the insolvency resolution process under Insolvency and Bankruptcy Code (IBC), easing of credit, particularly for the stressed real estate and NBFC sectors, and announcing the National Infrastructure Pipeline 2019-2025 amongst other measures.
- Based on CSO's first Advance Estimates of India's GDP growth for 2019-20 at 5 per cent, an uptick in GDP growth is expected in H2 of 2019-20. The government must use its strong mandate to deliver expeditiously on reforms, which will enable the economy to strongly rebound in 2020-21.

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ANNEX

RECENT REFORMS

Government in 2019-20 has taken important reforms to boost the overall investment, consumption and exports in the economy. Some of the major reforms in this regard are as enumerated below:

Measures to Boost Investment

- In December 2019, Cabinet approved the Insolvency and Bankruptcy Code (Second Amendment) Bill, 2019. The amendments aim at fast-tracking the insolvency resolution process and to further improve the ease of doing business.
- On 31st December 2019, the government released the Report of the Task Force on National Infrastructure Pipeline (NIP) for each of the years from 2019-20 to 2024-25. The report has submitted proposals for projects whose aggregate value is estimated at ₹ 102 lakh crore.
- Government has brought in Taxation Laws (Amendment) Ordinance 2019 to make certain amendments in the Income-tax Act 1961 and the Finance (No. 2) Act 2019.

  (i) A new provision has been inserted in the Income-tax Act with effect from 2019-20 which allows any domestic company an option to pay income-tax at the rate of 22 per cent subject to condition that they will not avail any exemption/incentive. The effective tax rate for these companies shall be 25.17 per cent inclusive of surcharge & cess. Also, such companies shall not be required to pay Minimum Alternate Tax.

  (ii) In order to attract fresh investment in manufacturing and thereby boost the 'Make-in-India' initiative of the Government, a new provision has been inserted in the Income-tax Act with effect from 2019-20 which allows any new domestic company incorporated on or after 1st October 2019 making fresh investment in manufacturing, an option to pay income-tax at the rate of 15 per cent. This benefit is available to companies which do not avail any exemption/incentive and commences their production on or before 31st March, 2023. The effective tax rate for these companies shall be 17.01 per cent inclusive of surcharge & cess. Also, such companies shall not be required to pay Minimum Alternate Tax. Corporate income tax rates in India are now amongst the lowest in the world.

- Rapid growth requires rapid investment which in turn is dependent on robust supply of credit. Government has taken notable steps in this regard:

  (i) Budget 2019-20 announced an infusion of ₹ 70,000 crore into Public Sector Banks (PSBs) to boost credit and investment in the economy. As of November 2019, ₹ 60,314 crore has been infused from this provision, thereby, equipping banks for growth and investment.

  (ii) Strong banks are imperative to achieve a US$ 5 trillion economy. Along with numerous governance reforms, government has proposed an amalgamation of 10 PSBs to form 4 merged entities with a view to create next generation banks with strong national presence and global reach. Operational efficiency gains arising due to this consolidation are expected to reduce the cost of lending.

(iii) The Monetary Policy Committee of RBI changed its stance from calibrated tightening to neutral in February 2019 and to accommodative from June 2019 onwards. Accordingly, the policy rate has been reduced by 135 bps since February 2019.

(iv) In order to enhance debt flow to housing and infrastructure projects, government has proposed to establish an organization, Credit Enhancement for Infrastructure and Housing Projects.

(v) As per RBI, all new floating rate retail loans and floating rate loans to micro and small enterprises extended by banks with effect from 1st October 2019 are to be linked to one of the specified external benchmarks. These benchmarks consist of the policy repo rate, Government of India 3-months or 6-months Treasury Bill yields, or any other benchmark indicated by the Financial Benchmarks India Private Ltd (FBIL).

- Government has taken various measures to boost the growth of the auto sector:

  (i) one-time registration fees being deferred till June 2020,

  (ii) BS IV vehicles purchased till 31st March 2020 to remain operational for entire period of registration

  (iii) additional 15 per cent depreciation on all vehicles to increase to 30 per cent acquired during the period from now till 31st March 2020,

  (iv) both Electrical Vehicles (EVs) and Internal Combustion Vehicles (ICVs) will continue to be registered and,

  (v) to boost demand, government will lift the ban on replacing old vehicles with purchage of new vehicles by Goverment Departments.

- In December 2019, modifications to the MSME Interest Subvention Scheme were approved to further smoothen operational difficulties and to improve access to credit at a reduced cost.

- Government has approved creation and launch of Bharat Bond Exchange Traded Fund (ETF) to create an additional source of funding for Central Public Sector Undertakings (CPSUs), Central Public Sector Enterprises (CPSEs), Central Public Financial Institutions (CPFIs) and other government organizations. Bharat Bond ETF would be the first corporate bond ETF in the country.

- With a view to boosting the realty sector and incentivising the consumers to buy houses, the government has taken some notable measures

  (i) Government has approved the establishment of a 'Special Window' fund to provide priority debt financing for the completion of stalled housing projects that are in the 'Affordable and Middle-Income' Housing sector. For the purpose of the fund, government shall act as the Sponsor and the total commitment to be infused by the government would be upto ₹ 10,000 crores. The fund is seeking matching contributions from banks, LIC and others to generate a total corpus of around ₹ 25,000 crore. The fund will be set up as a Category-II AIF (Alternate Investment Fund) debt fund registered with SEBI and would be run professionally.

  (ii) Eligible beneficiaries of Pradhan Mantri Awas Yojana (Gramin) are to be provided 1.95

crore houses with amenities like toilets, electricity and LPG connections during its second phase (2019-20 to 2021-22).

(iii) External Commercial Borrowings (ECB) guidelines will be relaxed to facilitate financing of home buyers who are eligible under the Pradhan Mantri Awas Yojana (PMAY), in consultation with RBI. This is in addition to the existing norms for ECB for affordable housing.

(iv) House Building Advance: The interest rate on House Building Advance shall be lowered and linked with the 10 Year G Sec Yields.

(v) Additional deduction up to ₹ 1.5 lakh for interest paid on loans borrowed up to 31st March, 2020 for purchase of house valued up to ₹ 45 lakh to promote affordable housing.

(vi) Banks to launch Repo rate /external benchmark linked loan products. Reduced EMI for housing loans by directly linking Repo rate to interest rates

(vii) Additional liquidity support to HFCs of ₹ 20,000 crore by National Housing Bank (NHB), thereby, increasing it to ₹ 30,000 crore.

- To guarantee support and enable NBFCs/Housing Finance Companies (HFCs) to resolve any temporary liquidity or cash flow mismatch issues, government has rolled out the 'Partial Credit Guarantee Scheme' for purchase of high-rated pooled assets from financially sound NBFCs / HFCs by PSBs. The amount of overall guarantee is limited to first loss of up to 10 per cent of fair value of assets being purchased by the banks under the Scheme, or ₹ 10,000 crore, whichever is lower, as agreed by Department of Economic Affairs (DEA). The scheme would cover NBFCs / HFCs that may have slipped into SMA-0 category during the one-year period prior to 1st August 2018, and asset pools rated 'BBB+' or higher.

- The Stand Up India Scheme has been extended upto the year 2025. The Scheme aims to facilitate bank loans between ₹ 10 lakh to ₹ 100 lakh to atleast one Scheduled Caste (SC) or Scheduled Tribe (ST) borrower and atleast one woman borrower per bank branch for setting up a greenfield enterprise. In case of non-individual enterprises, at least 51 per cent of the shareholding and controlling stake should be held by either an SC/ST or woman entrepreneur.

- Government has put in place an investor friendly FDI policy by liberalizing the policy to allow upto 100 per cent FDI by automatic route on most of the sectors.

- To mitigate genuine difficulties of startups and their investors, Section 56(2)(viib) of the Income-Tax Act (regarding angel tax) will no longer be applicable to startups registered with DPIIT.

Measures to boost Consumption

1.41 Government has taken various measures to boost the incomes especially rural incomes to usher spending and consumption levels in the economy.

- Increase in the Minimum Support Prices (MSPs) for all mandated Rabi crops and Kharif crops for 2019-20 season.

- To provide an assured income support to the small and marginal farmers, the cash transfer scheme Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) providing an income support of ₹ 6,000 per year has been extended to all eligible farmer families irrespective of the size of land holdings.
- With a move towards attaining universal social security, Government has approved a new scheme that offers pension coverage to the trading community. Under this scheme all shopkeepers, retail traders and self-employed persons are assured a minimum monthly pension of ₹ 3,000 per month after attaining the age of 60 years.
- W.e.f. 1st August 2019, GST rate on all electric vehicles has been reduced from 12 per cent to 5 per cent and of charger or charging stations for EVs from 18 per cent to 5 per cent . Hiring of electric buses (of carrying capacity of more than 12 passengers) by local authorities will be exempted from GST.

Measures to boost Exports

- The scheme for Remission of Duties or Taxes on Export Product (RoDTEP) will replace Merchandise Exports from India Scheme (MEIS) for reimbursement of taxes & duties for export promotion. Textiles and all other sectors which currently enjoy incentives upto 2 per cent over MEIS will transit into RoDTEP. In effect, RoDTEP will more than adequately incentivize exporters than existing schemes put together.
- Special Economic Zones (Amendment) Bill, 2019 has been approved wherein a trust or any entity notified by the Central Government will be eligible to be considered for grant of permission to set up a unit in Special Economic Zones.
- In order to boost credit to the export sector, RBI enhanced the sanctioned limit to be eligible under priority sector lending norms. The limit has been raised from ₹ 25 crore to ₹ 40 crore per borrower. Furthermore, the existing criterion of 'units having turnover of up to ₹ 100 crore' has been removed.
- Export Credit Guarantee Corporation (ECGC) will expand the scope of Export Credit Insurance Scheme (ECIS) to offer higher insurance cover to banks lending working capital for exports. This will enable reduction in overall cost of export credit including interest rates, especially to MSMEs
- Government has approved the Sugar export policy for evacuation of surplus stocks during sugar season 2019-20. This shall involve providing a lump sum export subsidy at the rate of ₹ 10,448 per Metric Tonne (MT) to sugar mills for the sugar season 2019-20. The total estimated expenditure of about ₹ 6,268 crore will be incurred for this purpose.
- For enabling handicrafts industry to effectively harness e-commerce for exports, mass enrolment of artisans across India will be effected in collaboration with Ministry of Textiles.

Fiscal Developments

02
CHAPTER

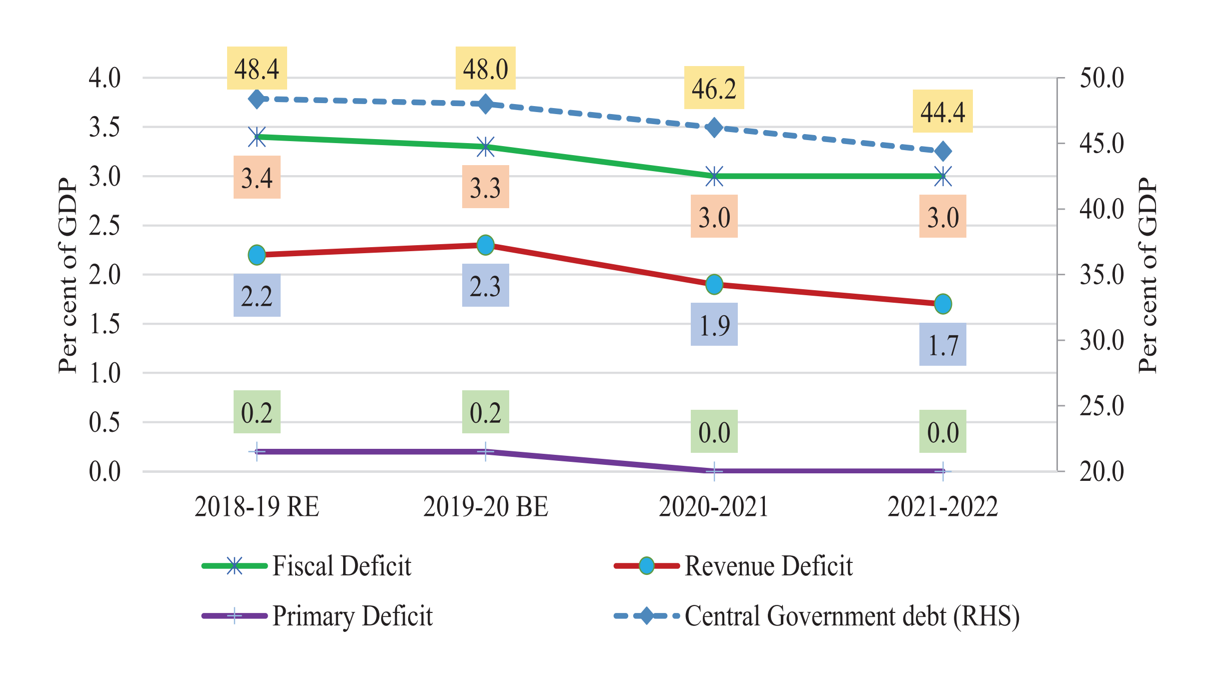
The year 2019-20 has been challenging for the Indian economy owing to the decelerating growth rate experienced in the first half of the year. Amongst the various reforms introduced during the year to promote growth and investment, reduction in corporate income tax rate was a major structural reform. The fiscal policy 2019-20 was characterized by sluggish growth in Tax revenue relative to the budget estimates. The Non-Tax revenue registered a considerably higher growth in the first eight months of this financial year compared to the same period last year. On the expenditure side, Total Expenditure has increased at a considerable pace during April to November 2019-20 with Capital Expenditure growing at roughly three times the growth registered during the same period last year. The fiscal deficit as a per cent of Budget Estimate during the first eight months of this financial year was at a similar level as that in the corresponding period last year. Going forward, considering the urgent priority of the Government to revive growth in the economy, the fiscal deficit target may have to be relaxed for the current year.

2.1 Amidst the global setting of subdued growth and intensified trade tensions, the Budget 2019-20 presented in July 2019 reaffirmed Government's commitment to growth with macroeconomic stability.

2.2 The Medium Term Fiscal Policy (MTFP) Statement presented with the Budget 2019-20, pegged the fiscal deficit target for 2019-20 at 3.3 per cent of GDP, which was further expected to follow a gradual path of reduction and attain the targeted level of 3 per cent of GDP in 2020-21, and continue at the same level in 2021-22. It was further projected that Central Government liabilities will come down to 48.0 per cent of GDP in 2019-20. The declining path of Central government debt was expected to continue with debt reaching 46.2 per cent of GDP and 44.4 per cent of GDP in 2020-21 and 2021-22, respectively. This declining debt trajectory was expected based on a stable inflation regime and reduction in fiscal deficit. The fiscal indicators of deficits and debt as presented in the MTFP (July 2019) may be seen in Figure 1.

2.3 This chapter reviews the fiscal developments in India during the year 2019-20. It begins with discussion of Central Government finances over the recent years, followed by analysis of the fiscal performance during the current financial year based on data released by the Controller General of Accounts (CGA) upto November 2019. Thereafter, it briefly touches upon

Figure 1: Medium Term Fiscal Policy Statement: Fiscal Indicators



Source: Medium Term Fiscal Policy Statement, Budget 2019-20 (July 2019)

the combined fiscal health of States and finally concludes with a snapshot of General Government finances, and an outline of the outlook for 2020-21.

CENTRAL GOVERNMENT FINANCES

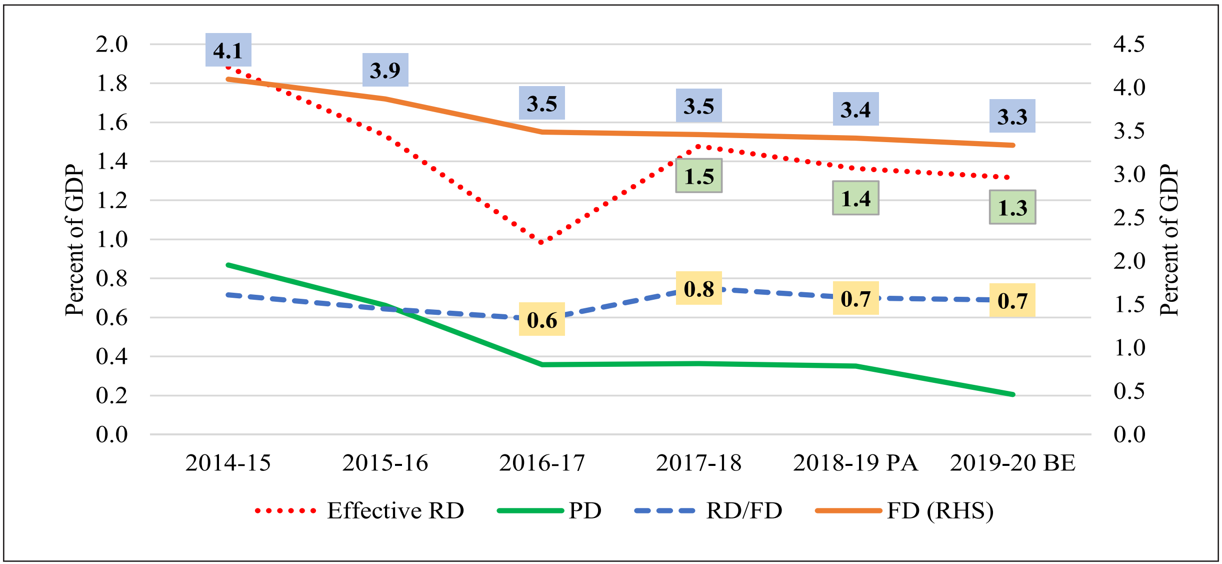
2.4 Following the path of fiscal consolidation, the Union Budget 2019-20 sought to contain the fiscal deficit, which is reflective of the total borrowing requirements of Government, at ₹ 7,03,760 crore i.e. 3.3 per cent of the GDP, as against 3.4 per cent of GDP in 2018-19 Provisional Actuals (PA) (refer to Figure 2). The ratio of revenue deficit to fiscal deficit broadly measures the extent of borrowings used for financing current expenditure of the Government. In 2019-20 BE, it was pegged at roughly the same level as in 2018-19 PA (Figure 2).

2.5 Major fiscal indicators of the Central Government and their growth rates are presented in Table 1 and Table 2, respectively. The prominent changes in the Central Government finances evident from these tables include improvement in the tax to GDP ratio and reduction in primary deficit as a per cent of GDP.

Trends in Receipts

2.6 Central government receipts can broadly be divided into Non-debt and debt receipts. The Non-debt receipts comprise of Tax revenue, Non-Tax revenue and Non-debt Capital receipts like recovery of loans and disinvestment receipts. Debt receipts mostly comprise of market borrowings and other liabilities, which the government is obliged to repay in the future. The Budget 2019-20 targeted a high growth in Non-debt receipts of the Central Government, which was driven by high expected growth in Net Tax

Figure 2: Trends in Deficits



Source: Union Budget Documents & CGA BE: Budget Estimate, PA: Provisional Actuals FD: Fiscal Deficit; RD: Revenue Deficit; PD: Primary Deficit.
Note: RD/FD has no units.

Table 1: Central Government's Fiscal Parameters

	2014-15	2015-16	2016-17	2017-18	2018-19 PA	2019-20 BE
						(in ₹ Lakh crore) (Figures in parenthesis are as a per cent of GDP)
Revenue Receipts	11.01	11.95	13.74	14.35	15.53	19.63
	(8.8)	(8.7)	(8.9)	(8.4)	(8.2)	(9.3)
Gross Tax Revenue	12.45	14.56	17.16	19.19	20.8	24.61
	(10)	(10.6)	(11.2)	(11.2)	(10.9)	(11.7)
Net Tax Revenue	9.04	9.44	11.01	12.42	13.17	16.5
	(7.2)	(6.9)	(7.2)	(7.3)	(6.9)	(7.8)
Non-Tax Revenue	1.98	2.51	2.73	1.93	2.36	3.13
	(1.6)	(1.8)	(1.8)	(1.1)	(1.2)	(1.5)
Non-debt Capital Receipts*	0.51	0.63	0.65	1.16	1.13	1.2
	(0.4)	(0.5)	(0.4)	(0.7)	(0.6)	(0.6)
Non-debt Receipts	11.53	12.58	14.4	15.51	16.66	20.83
	(9.2)	(9.1)	(9.4)	(9.1)	(8.8)	(9.9)
Total Expenditure	16.64	17.91	19.75	21.42	23.15	27.86
	(13.3)	(13.0)	(12.9)	(12.5)	(12.2)	(13.2)
Revenue Expenditure	14.67	15.38	16.91	18.79	20.07	24.48
	(11.8)	(11.2)	(11.0)	(11.0)	(10.6)	(11.6)

Capital Expenditure	1.97	2.53	2.85	2.63	3.08	3.39
	(1.6)	(1.8)	(1.9)	(1.5)	(1.6)	(1.6)
Fiscal Deficit	5.11	5.33	5.36	5.91	6.49	7.04
	(4.1)	(3.9)	(3.5)	(3.5)	(3.4)	(3.3)
Revenue Deficit	3.66	3.43	3.16	4.44	4.54	4.85
	(2.9)	(2.5)	(2.1)	(2.6)	(2.4)	(2.3)
Primary Deficit	1.08	0.91	0.55	0.62	0.67	0.43
	(0.9)	(0.7)	(0.4)	(0.4)	(0.4)	(0.2)
Memo Item						
GDP at Market Price	124.68	137.72	153.62	170.95	190.1	211.01

Source: Union Budget Documents & CGA
BE: Budget Estimate, PA: Provisional Actuals
*includes disinvestment proceeds

Table 2: Growth rate of Central Government's Fiscal Indicators (in per cent)

Items	2014-15	2015-16	2016-17	2017-18	2018-19 PA	2019-20 BE*
Revenue Receipts	8.5	8.5	15.0	4.4	8.2	26.4
Gross Tax Revenue	9.3	16.9	17.9	11.8	8.4	18.3
Net Tax Revenue	10.8	4.4	16.7	12.8	6.0	25.3
Non-Tax Revenue	-0.5	27.0	8.6	-29.4	22.3	32.9
Non-debt Capital Receipts#	23.0	22.3	3.8	77.0	-2.5	6.3
Non-debt Receipts	9.1	9.1	14.4	7.7	7.4	25.0
Total Expenditure	6.7	7.6	10.3	8.4	8.1	20.4
Revenue Expenditure	6.9	4.8	9.9	11.1	6.8	21.9
Capital Expenditure	4.8	28.6	12.5	-7.5	16.9	10.0

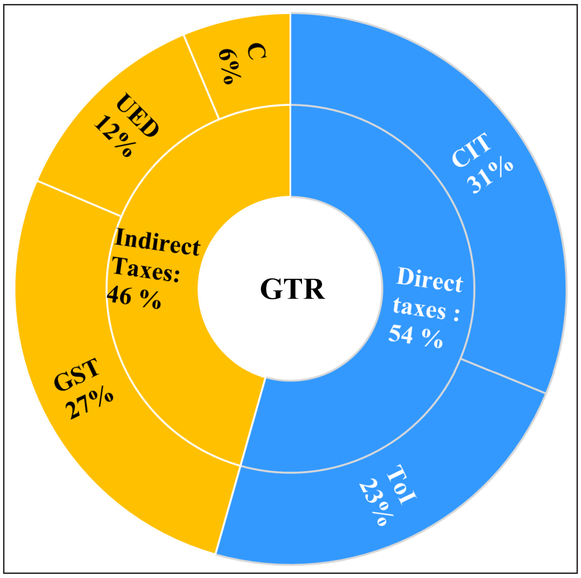
Source: Union Budget Documents & CGA
BE: Budget Estimate, PA: Provisional Actuals
* Rate of growth vis-à-vis 2018-19 PA
#includes disinvestment proceeds

revenue and Non-Tax revenue (refer to Table 2)

Tax Revenue

2.7 Budget 2019-20 estimated the Gross Tax Revenue (GTR) to be ₹24.61 lakh crore which is 11.7 per cent of GDP. This builds into growth of 9.5 per cent over the revised estimates (RE) of 2018-19 and 18.3 per cent over 2018-19 PA. The direct taxes, comprising mainly of corporate and personal income tax, constitute around 54 per cent of GTR. These were envisaged to grow at 11.3 per cent relative to 2018-19 RE and 18.7 per cent relative to 2018-19 PA. On the other hand, the indirect taxes were expected to grow at 7.3 per cent vis-a-vis 2018-19 RE and 20.6 per cent as against 2018-19 PA. The contribution of different taxes in GTR for 2019-20 BE is shown in Figure 3.

Figure 3: Composition of taxes in Gross Tax Revenue in 2019-20 BE



Source: Union Budget Documents & CGA
GTR: Gross Tax Revenue, CIT: Corporation Tax, ToI: Taxes on Income other than Corporation Tax (includes STT), C: Customs, UED: Union Excise Duties, GST: Goods and Services Tax

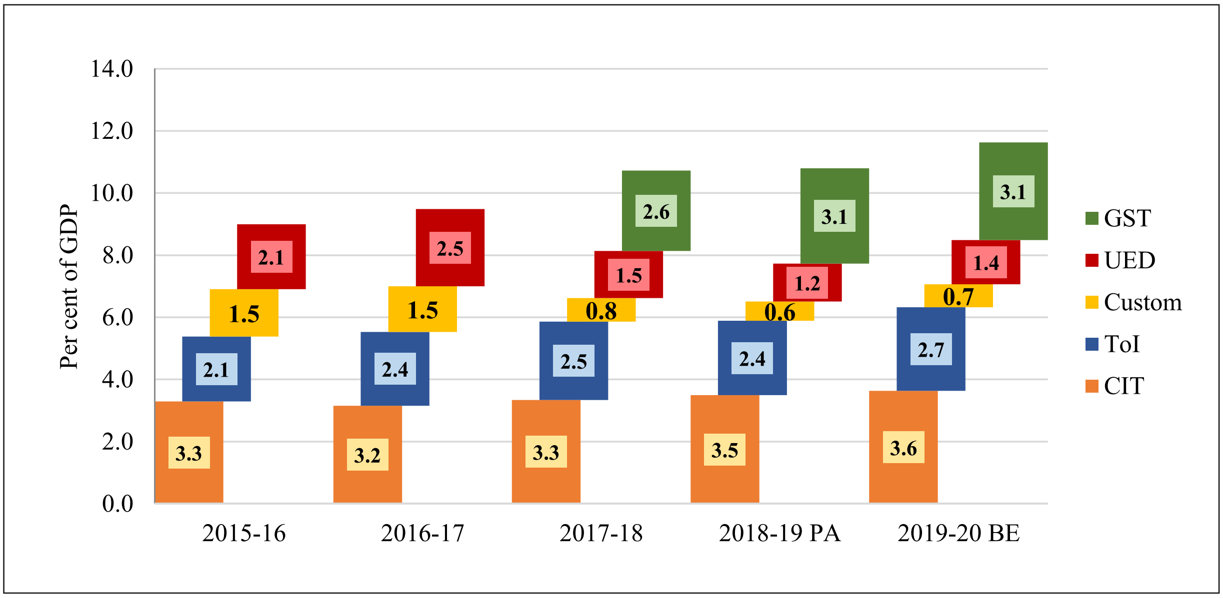
2.8 The direct taxes were estimated at 6.3 per cent of GDP in 2019-20 BE. Trends in major taxes in relation to GDP displayed in Figure 4 show that receipts from corporate and personal income tax have improved over the last few years. Better tax administration, widening of TDS carried over the years, 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 would depend on the revenue buoyancy of GST. Major measures taken for indirect and direct taxes in the year 2019-20 are presented at Annex.

2.9 During the year 2019-20 (upto November), the actual realization of Net Tax Revenue to the Center has been ₹ 7.51 lakh crore, which is 45.5 per cent of BE.

Non-Tax Revenue

2.10 Non-Tax revenue comprises mainly of interest receipts on loans to States and

Figure 4: Taxes as a percent of GDP



Source: Union Budget Documents & CGA
Note: 1. CIT: Corporation Tax, ToI: Taxes on Income other than Corporation Tax (includes STT), UED: Union Excise Duties, GST: Goods and Services Tax, 2. GST includes CGST, IGST and Compensation Cess

Table 3: Trends in Non-Tax Revenue of Central Government

	2014-15	2015-16	2016-17	2017-18	2018-19 PA	2019-20 BE
						(in ₹ Lakh crore)
Interest receipts	0.24	0.25	0.16	0.14	0.12	0.14
Dividends & Profits	0.90	1.12	1.23	0.91	1.13	1.64
External Grants	0.02	0.02	0.01	0.04	0.01	0.01
Others	0.83	1.12	1.32	0.84	1.09	1.35
Non-Tax Revenue	1.98	2.51	2.73	1.93	2.36	3.13

Source: Union Budget Documents & CGA
BE: Budget Estimate, PA: Provisional Actuals

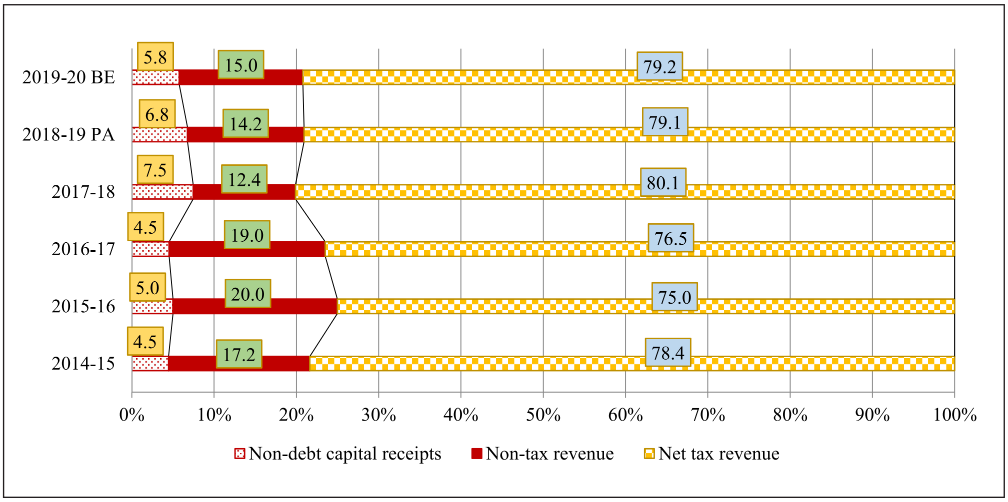
Union Territories, dividends and profits from Public Sector Enterprises including surplus of Reserve Bank of India (RBI) transferred to Government of India, receipts from services provided by the Central Government and external grants. The Budget 2019-20 aimed to raise ₹ 3.13 lakh crore of Non-Tax revenue, 1.5 per cent of the GDP, 0.3 percentage points more than that in 2018-19 PA. Roughly, two third of this increase in the BE is envisaged from dividends and profits especially surplus transferred by RBI (refer to Table 3).

2.11 As against the 2019-20 BE of ₹3.13 lakh crore for Non-Tax Revenue, the actual realization upto November 2019 has been 74.3 per cent of the BE.

Non-debt Capital receipts

2.12 Non-debt Capital receipts mainly consist of recovery of loans and advances, and disinvestment receipts. Over the last few years, the contribution of Non-debt Capital receipts have improved in the total pool of Non-debt receipts (Figure 5). They have been pegged at ₹1.20 lakh crore, 0.6 per cent of GDP, in 2019-20 BE owing to an envisaged growth of 6.3 per cent over 2018-19 PA. The receipts from recovery of loans and advances

Figure 5: Composition of Non-debt receipts of Central Government



Source: Union Budget Documents & CGA
BE: Budget Estimate, PA: Provisional Actuals

have been declining over the years and are pegged at 12.4 per cent of Non-debt Capital receipts in 2019-20 BE. The major component of Non-debt Capital receipts is disinvestment receipts that accrue to the government on sale of public sector enterprises owned by the government (including sale of strategic assets). Government aimed at mobilising ₹ 1.05 lakh crore on account of disinvestment proceeds as per 2019-20 BE.

2.13 During the year 2019-20 (upto November), the actual realization of Non-debt Capital receipts to the Centre has been ₹ 0.29 lakh crore as against BE of ₹ 1.20 lakh crore. Given the significant pipeline of deals that are in process, realizations are likely to accelerate.

Trends in Expenditure

2.14 It is imperative for any developing economy to optimally allocate the available resources without compromising on the crucial developmental and macroeconomic goals. As India's tax to GDP ratio is low, Government faces the challenge of providing sufficient funds for investment and infrastructure expansion while staying within the bounds of fiscal prudence. Therefore, improving the composition and quality of expenditure becomes significant.

2.15 The composition of government expenditure in the last few years reveals that expenditure on defence services, salaries, pensions, interest payments and major 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 utilization of defence expenditure, promote self-reliance, and encourage private sector participation in the defence sector. Expenditures on salaries, pensions and interest payments are, generally speaking, committed in nature and therefore have limited headroom for creation of additional fiscal space. Budgetary expenditure on subsidies has seen significant moderation through improved targeting. There is still headroom available for further

Table 4: Major Items of Revenue Expenditure

Items	2014-15	2015-16	2016-17	2017-18	2018-19 PA*	2019-20 BE
						In ₹ lakh crore
Revenue Expenditure	14.67	15.38	16.91	18.79	20.07	24.48
	(6.9)	(4.8)	(9.9)	(11.2)	(6.8)	(21.9)
of which,						
a. Salaries (pay & allowances)	1.34	1.45	1.77	1.94	2.18	2.35
	(13.6)	(7.9)	(22.6)	(9.3)	(12.7)	(7.5)
b. Pensions	0.94	0.97	1.31	1.46	1.60	1.74
	(25.0)	(3.4)	(35.8)	(10.9)	(9.9)	(8.9)
c. Interest payment	4.02	4.42	4.81	5.29	5.83	6.60
	(7.5)	(9.7)	(8.8)	(10.0)	(10.2)	(13.4)
d. Major subsidies	2.49	2.42	2.07	1.91	1.97	3.02
	(1.6)	(-2.7)	(-14.8)	(-7.5)	(3.1)	(53.1)
e. Defence Services	1.40	1.46	1.65	1.86	1.96	2.02
	(12.9)	(3.9)	(13.3)	(12.5)	(5.3)	(3.0)

Source: Union Budget Documents & CGA

BE: Budget Estimate, PA: Provisional Actuals

Numbers in parenthesis are growth rates

*The figure for Salaries (Pay & allowances) for 2018-19 is Revised Estimate (RE).

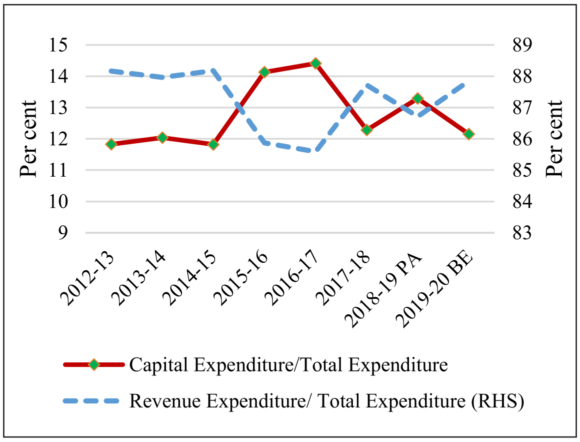
rationalization of subsidies especially food subsidy. There has been considerable restructuring and reclassification of Central sector and Centrally Sponsored Schemes in the recent years

2.16 Budget 2019-20 estimated total expenditure at 27.86 lakh crore, comprising revenue expenditure of ₹24.48 lakh crore and capital expenditure of ₹3.39 lakh crore, which work out to be 11.6 per cent and 1.6 per cent of GDP, respectively. Analysis of Budget Estimates of expenditure in 2019-20 over 2018-19 PA suggests that Central Government budgetary expenditure is envisaged to increase by one percentage point of GDP in 2019-20. The entire increase is on revenue account with capital spending remaining unchanged as per cent of GDP. Within revenue expenditure, more than forty per cent of the increase is explained by increase in interest payments and major subsidies (refer to Table 4).

2.17 The expenditure on major subsidies, which is a significant component of non-committed revenue expenditure was pegged at 1.4 per cent of GDP in 2019-20 BE. The budgetary expenditure on major subsidies has shown a declining trend over the past years. In 2019-20 BE, the major subsidies are estimated at ₹ 3.02 lakh crore owing to requirements for food, fertilizer and petroleum subsidies.

2.18 The quality of expenditure is captured by the share of capital expenditure in total expenditure. Figure 6 shows that share of capital expenditure in total expenditure is envisaged to decline roughly by a percentage point in 2019-20 BE over 2018-19 PA. However, capital spending in 2019-20 BE is estimated to grow by 10 per cent over 2018-19 PA to reach ₹3.39 lakh crore. Major sectors apart from defence services, that account for bulk of capital expenditure

Figure 6: Share of Revenue and Capital Expenditure in Total Expenditure



Source: Union Budget Documents & CGA
BE: Budget Estimate, PA: Provisional Actuals.

allocation in 2019-20 BE include internal security, investments in Financial Institutions, pass through assistance for metro projects, space technology and construction of Roads and Railways. Apart from budgetary spending, Extra Budgetary Resources (EBR) have also been mobilized to finance infrastructure investment since 2016-17. EBRs are those financial liabilities that are raised by public sector undertakings for which repayment of entire principal and interest is done from the Central Government Budget. Government has raised EBRs of ₹88,454 crore during three years from 2016-17 to 2018-19. It proposes to raise EBR of ₹57,004 crore in 2019-20 BE which is 0.27 per cent of GDP. These EBRs are not taken into account while calculating the Fiscal Deficit. However, they are considered in the calculations of Government Debt.

Transfer to States

2.19 The Fourteenth Finance Commission (FFC) for the award period 2015-20 had made far-reaching changes to strengthen fiscal federalism in the country. Consequently, States have obtained larger fund transfers as well as greater autonomy to utilise funds as per their needs. 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.

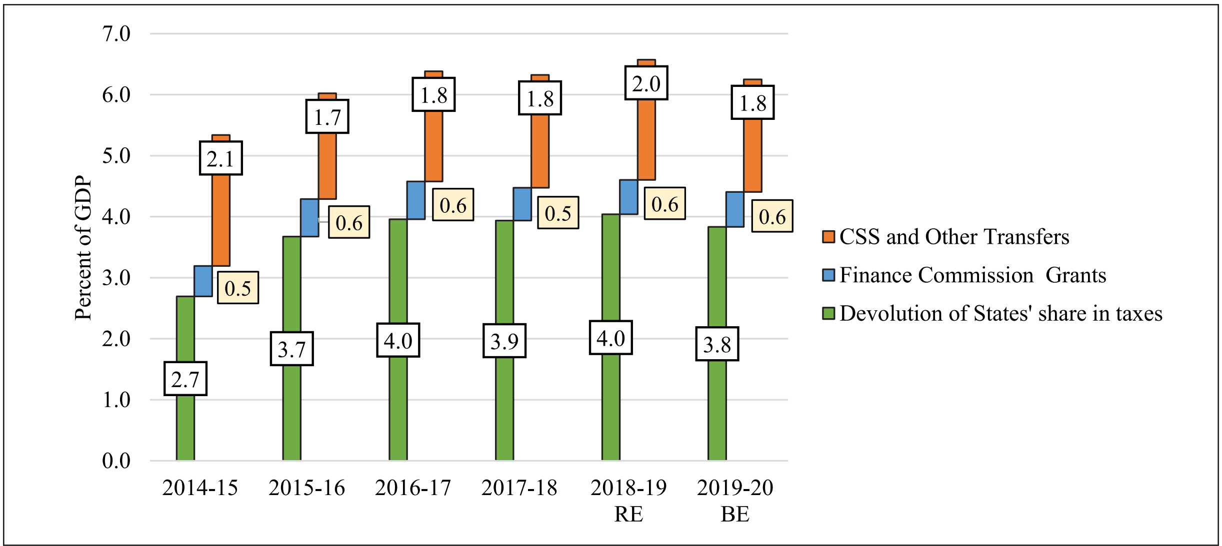
2.20 The total transfers to States are given in Table 5 and Figure7. Both in absolute terms, and as a percentage of GDP, total transfers to States have risen between 2014-15 and 2018-19 RE by 1.2 percentage points of GDP. The Budget 2019-20 envisages an increase in expected grants and loan to States by ₹73,963 crore relative to 2018-19 RE, on account of higher requirements under compensation to States for revenue losses on roll out of GST, grants to rural and urban bodies and releases under Samagra Shiksha.

Table 5: Transfers to States (in ₹ lakh crore)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19 RE	2019-20 BE
Devolution of States' share in Taxes	3.36	5.06	6.08	6.73	7.61	8.09
Finance Commission Grants	0.62	0.85	0.96	0.92	1.06	1.20
CSS and Other Transfers	2.68	2.39	2.77	3.16	3.71	3.90
Total transfers to States	6.66	8.29	9.81	10.81	12.38	13.19

Source: Union Budget Documents
BE: Budget Estimates, RE: Revised Estimates
Note: States includes only 29 States.

Figure 7: Central Government transfers to States



Source: Union Budget Documents
BE: Budget Estimates, RE: Revised Estimates
Note: States includes only 29 States.

Fiscal outcome in 2019-20 (upto November 2019) vis-à-vis 2019-20 BE

2.21 Indian economy registered a sluggish growth during first half of 2019-20. A series of measures were introduced by the Government during the financial year to boost the economy, which are expected to have a substantial direct and indirect impact on the fiscal performance of the economy.

2.22 The accounts for April to November 2019-20, released by the Controller General of Accounts, show that the fiscal deficit of the Central Government at end November 2019 stood at 114.8 per cent of the BE, same as in the corresponding period of the last year (Table 6)

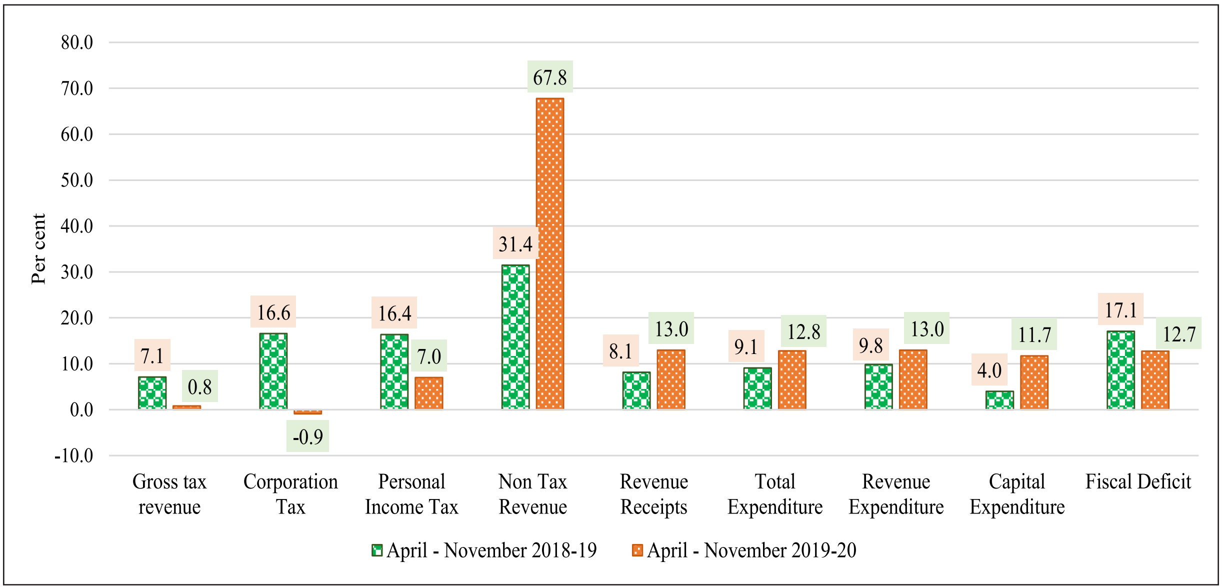
2.23 Revenue receipts have grown at a much higher pace during the current financial year (April to November 2019) over the corresponding period last year (Figure 8). Considerable growth in Non-Tax revenue, especially dividends and profits, which offset the low growth in Net Tax revenue, underlie it. Dividends and profits led by transfer from RBI grew at roughly three times in April-November 2019 over the same period last year. It was ₹1.58 lakh crore in April - November 2019 compared to ₹0.55 lakh crore in the same period last year.

Table 6: Fiscal Outcome for 2019-20 (till November 2019)

		2019-20 BE (In ₹ lakh crore)	April to November					
			In ₹ lakh crore		Percentage of respective BE		Growth over last year (per cent)	
			2018-19	2019-20	2018-19	2019-20	2018-19	2019-20
1	Revenue Receipts	19.63	8.70	9.83	50.4	50.1	8.1	13.0
2	Gross Tax Revenue	24.61	11.65	11.74	51.3	47.7	7.1	0.8
3	Assignment to States	8.09	4.32	4.22	54.8	52.1	12.1	-2.3
4	Tax Revenue (Net to Centre)	16.50	7.32	7.51	49.4	45.5	4.6	2.6
5	Non-Tax Revenue	3.13	1.39	2.33	56.6	74.3	31.4	67.8
6	Non-debt Capital receipts	1.20	0.26	0.29	28.5	24.2	-57.5	10.4
7	Non-debt receipts	20.83	8.97	10.12	49.3	48.6	3.4	12.9
8	Total Expenditure	27.86	16.13	18.20	66.1	65.3	9.1	12.8
9	Revenue Expenditure	24.48	14.22	16.06	66.4	65.6	9.8	13.0
10	Capital Expenditure	3.39	1.91	2.14	63.7	63.2	4.0	11.7
11	Revenue Deficit	4.85	5.51	6.23	132.6	128.4	12.6	13.0
12	Effective Revenue Deficit	2.78	4.17	4.94	188.8	177.8	15.3	18.5
13	Fiscal Deficit	7.04	7.17	8.08	114.8	114.8	17.1	12.7
14	Primary Deficit	0.43	3.68	4.66	759.9	1076.5	21.9	26.5

Source: CGA Monthly Accounts; BE: Budget Estimates

Figure 8: Growth rate of fiscal indicators in 2019-20 (upto November 2019)



Source: CGA Monthly Accounts

2.24 Net Tax revenue to the Centre, which was envisaged to grow at more than 25 per cent in 2019-20 BE relative to 2018-19 PA, grew at 2.6 per cent during April to November 2019, which was nearly half its' growth rate for the corresponding period last year. This is primarily owing to low growth in GTR of 0.8 per cent during first eight months of 2019-20 vis-a-vis 7.1 per cent growth for the corresponding period in 2018-19. Within direct taxes, personal income tax has grown at 7 per cent while corporate tax has registered a negative growth during the first eight months of the current financial year. This compares poorly with growth recorded by these taxes at 16.4 per cent and 16.6 per cent respectively, over the same period last year (Figure 8). Recently Government has undertaken major changes in the corporate tax rate which are given in Box 1.

Box 1: Major reform in corporate taxation

On Sept 20, 2019, the Government announced a major cut in the corporate income tax (CIT) rate applicable to the domestic companies. This was followed by the 'Taxation Laws (Amendment) Act, 2019 dated Dec 12, 2019, which introduced two new sections viz. 115BAA and 115BAB in the Income Tax Act. The existing companies have been given an option to forego certain deductions and exemptions availed under the Act and choose a new CIT rate structure with a maximum marginal rate (MMR), inclusive of surcharge and cess, of 25.17 per cent as against the existing MMR of 34.61 per cent. In order to give boost to the manufacturing sector, the new manufacturing companies registered on or after 1.10.2019 have been given an option to choose a CIT rate with MMR of 17.16 per cent. The new CIT rate structure is available with effect from the current financial year i.e. 2019-20. However the CIT rate applicable to the foreign companies remained unchanged. The table below gives an overview of the existing and new CIT rate structure applicable to the domestic companies for the financial year 2019-20.

Table- Comparison of existing and new rates of corporate income tax for domestic companies for the financial year 2019-20

<table>
<tr><th></th><th colspan="2">Existing rate</th><th colspan="2">New rate</th></tr>
<tr><td rowspan="4">Base CIT rate</td><td>Criteria</td><td>Rate</td><td>Criteria</td><td>Rate</td></tr>
<tr><td>If Total turnover or gross receipt in the financial year 2017-18 does not exceed ₹ 400 Crore</td><td rowspan="2">25%</td><td>(a) If a company opts for section115BAA*</td><td>22%</td></tr>
<tr><td>If a manufacturing company set up on or after 1.3.2016 opts for section 115BA</td><td>(b) If a manufacturing company set up on or after 1.10.2019 opts for section115BAB** and commences manufacturing on or before 31.03.2023.</td><td>15%</td></tr>
<tr><td>If not covered by (a) or (b)</td><td>30%</td><td>If not covered by (a) or (b)</td><td>Old rate structure applicable</td></tr>
<tr><td rowspan="2">MAT rate</td><td rowspan="2">All companies</td><td rowspan="2">18.5%</td><td>If not in (a) or (b)</td><td>15%</td></tr>
<tr><td>If in (a) or (b)</td><td>NIL</td></tr>
<tr><td rowspan="3">Surcharge rate</td><td>If Total Income not more than ₹1 crore</td><td>0%</td><td rowspan="3">All companies</td><td rowspan="3">10%</td></tr>
<tr><td>If total income more than ₹ 1 crore but not more than ₹10 crore</td><td>7%</td></tr>
<tr><td>If total income is more than ₹10 crore</td><td>12%</td></tr>
<tr><td>Cess rate</td><td>All companies</td><td>4%</td><td>All companies</td><td>4%</td></tr>
</table>

** Companies included under Section 115BAA: Existing domestic companies that opt for new CIT rate and satisfy the following pre-conditions:*

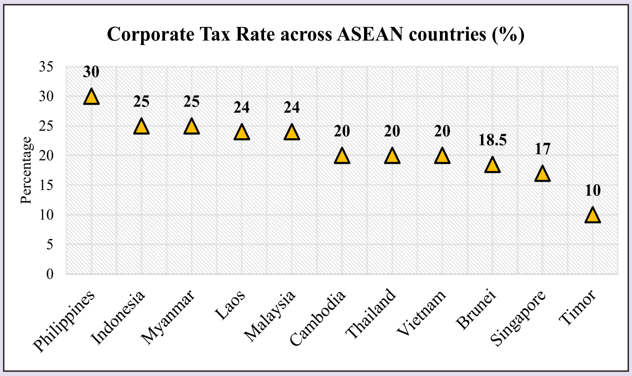
- *Deductions or exemptions are not claimed under section 10AA, or 32(1) (iia), or 32AD, or 33AB, or 33ABA, or 32(2AA)/(2AB) (1)(ii)/(iia)/(iii), or 35AD, or 35CCC, or 35 CCD, or under any provisions of Chap VI-A other than section 80JJAA.*
- *Set-off of carried forward / current losses or depreciation attributable to any of the aforesaid deductions is not availed.*
- *Only depreciation other than additional depreciation under section 32(1)(iia) is claimed*

*** Companies included under Section 115BAB: New manufacturing companies that are set up and registered on or after Oct 1, 2019, which bring in fresh investment, commence manufacturing on or before March 31, 2023 and satisfy certain pre-conditions including the aforesaid pre-conditions.*

Rationale behind the reform

All over the world, many countries had reduced CIT rate to attract investment and create employment opportunities. The act of reduction of CIT rate by other countries, in particular Asian developing countries, which compete with India to attract investments, provided an impetus to lower the CIT rates in India. It is expected that this would spur investment, stimulate growth and create job opportunities in India. A comparison of the CIT rates in ASEAN countries, with the reduced CIT rate in India (for new manufacturing companies in particular), presented in the figure below, shows that the CIT rate in India is now lower than most ASEAN countries. The stimulus provided by the corporate tax cut is also expected to have a multiplier effect on the economy. Fresh investments in the coming future are expected to not only result in creation of new jobs but also lead to increased income levels. As a result, tax collections are also likely to rise in the medium to long run.

Figure : Corporate Tax Rate across ASEAN countries



Who will benefit?

An analysis conducted by Tax Policy Research Unit (TPRU), based on income tax return (ITR) data of corporates for the financial year 2016-17, points out that most of the companies (99.1 per cent) have a gross turnover of below ₹ 400 crore (say small and medium companies) and are already taxed at the base CIT rate of 25 per cent. With surcharge and cess, their MMR varies from 26 per cent to 29.12 per cent. On the other hand, only 0.9 per cent of the companies i.e. 4,698 companies have gross turnover of over ₹ 400 crore (say large companies) and their MMR varies from 30.9 per cent to 34.61 per cent. Thus, the impact of CIT rate cut varies from gain of about 3.2 per cent to 13.5 per cent of the existing tax liability for small/medium companies to about 18.5 per cent to 27.3 per cent of the existing tax liability for large companies.

Source: Department of Revenue, Ministry of Finance

2.25 The indirect tax receipts have registered a growth of -0.9 per cent in the first eight months of this fiscal year. Gross GST collections, Centre and States taken together, was ₹ 8.05 lakh crore in April to November 2019, which is an increase of 3.7 per cent over the corresponding period last year. The GST collections for the Centre for the same period registered a growth of 4.1per cent over the corresponding period last year.

2.26 Notably, so far, during 2019-20, despite the rationalisation of GST rates, the gross GST monthly collections has crossed the mark of ₹ one lakh crore, for a total of five times, including the consecutive months of November 2019 and December 2019. An analysis to estimate the impact of GST rate rationalisation on GST revenue collection may be seen in Box 2. The increase in GST collections may be a result of concerted efforts taken by the government to improve tax compliance and Tax revenue collection. These include extensive automation of business processes, application of e-way bill mechanism, targeted action on compliance verification, enforcement based on risk assessment and proposed introduction of electronic invoice system. The details of reforms in GST may be seen at Annex 1. Amongst the reforms undertaken for increasing GST compliance, the GSTN has taken several initiatives to incorporate behavioural parameters to induce voluntary compliance by taxpayers. Some of these may be seen in Box 3.

Box 2: Vector Autoregression Analysis (VAR) of GST rate rationalisation on GST collections

Variable and Data

Variables: GDP, GST collection and GST rationalisation.

Variable description: GST rationalisation is the number of goods in the 28% category, as this is the only category which has witnessed drastic changes in the past GST Council meetings. The GST collection includes revenue from CGST, SGST, and IGST. Values of GDP and GST collections are taken in logarithmic form.

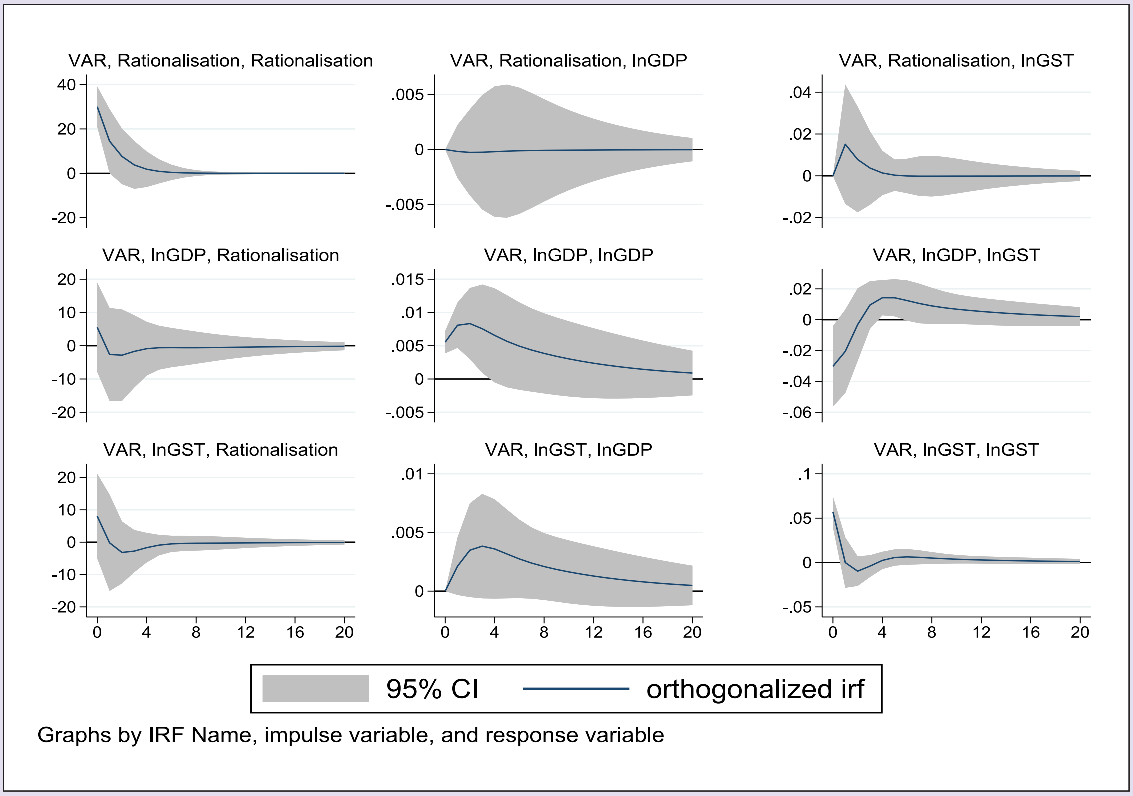
Data: The data for GST collections is from GSTN, GST rationalisation from CBIC, and GDP data from CSO, MOSPI. The data for GST rationalisation and GST collection are available on a monthly basis, whereas the GDP data is available at quarterly interval. Monthly data for GDP has been interpolated to make the data comparable with other data series.

Methodology

Using the Vector Autoregression (VAR) model we analysed the impact of a shock through GST rates on GST collection. We selected two lags for our analysis using AIC criterion and estimated the VAR model. Post estimation of the model, we used the standard impulse response function (IRF) to see the impact of a shock to the GST rates on GST collections. The IRFs from the VAR model is given in the graph below.

Conclusion

It is found that a positive shock to the GST rationalisation variable (implying increasing the number of goods under GST) leads to an increase in GST collection in first few months, specifically one to three months after the shock and then the impact tappers off.



Source: Survey calculations, CSO (MOSPI), CBIC, GSTN

Box 3: Use of Behavioural parameters by GSTN to enhance voluntary compliance

Amongst the various measures taken by the Government to simplify the GST tax system, several initiatives by GSTN to create an environment of voluntary compliance are based on taxpayers behaviour parameters incorporating factors such as deterrence, developing social and personal norms, reducing complexity, and enhancing fairness and trust. Some of these are discussed below:

- **E-way bill**

The GST rules provide for electronic generation of e-way bill for transportation of goods above a certain threshold of value of the goods being transported. Comparison of data from e-way bill portal to that in GST portal enables verification of the supply of goods involving physical movement. This acts as an effective tool of deterrence to prevent misreporting of information.

- **PIN code to PIN code distance mapping in e-way bill system**

The inclusion of origin and destination PIN Codes in the e-way bill portal prevents any over-reporting of distance which could lead to misuse of the e-way bill for multiple trips. This is enabled through a technology based solution. This deters misreporting by tax payers and help curb tax evasion.

- **Return filing status of a GSTIN visible in public domain on the GST Portal**

The publicly available information on the return filing status of GSTIN enables the buyers to choose the compliant taxpayers for doing business, and minimise the business risk by increasing the probability of availing a timely ITC. This initiative of the Government thus encourages a better compliance environment through social and market pressures.

- **Caution against mismatch in GSTR-2A & GSTR-3B; and GSTR-1 & GSTR-3B, above a certain threshold**

While filing the GST returns, tax liability is declared in both GSTR-1(invoice level detail) and GSTR-3B (summary), and ITC is declared in GSTR-3B (summary) and is also auto-populated in GSTR-2A (through GSTR-1). In case the liability declared in GSTR-3B is lesser than GSTR-1, or the ITC claimed in GSTR-3B is more than GSTR-2A, a comparison of this anomaly is visible on suppliers' GST dashboard to induce the taxpayer to correct it and avoid future litigation. Making this information available to the taxpayers, on a month-wise basis; and sending regular SMSs regarding such mismatch in data, encourages them to take timely corrective action, if so required.

- **SMSs for reminders of due date of monthly return (On 10th, 13th, and 15th of every month) and non-filing of return.**

SMS reminders are sent to Authorised Signatories of firms for gently reminding upcoming Due Date of filing summary return GSTR-3B, and, to both Authorised Signatories and Directors/Partners of the firms (non-filers) in case the Due Date is missed, induces taxpayers to inculcate the behaviour of timely filing of returns by way of creating internal organisational pressures and hence build on their personal norms.

- **Free accounting & billing software provided to small taxpayers**

In order to ease the compliance in the technology driven GST regime, GST Council has decided to offer free services like preparing invoices, GST returns, Income Tax returns, Balance sheet and Profit & Loss statement through accounting & billing software for the small businesses, which constituted more than 80% of all GST taxpayers in March 2019.

- **Questionnaire based filing of return and showing the relevant tables**

In order to reduce the complexity of returns and simplify the process, the GST portal adopts a questionnaire based return filing system, whereby based on the reply given by the taxpayer in the questionnaire, only relevant tables for filing will be visible to taxpayer on returns dashboard. This simplification is meant to ease compliance for the taxpayers.

- **Compliance rating score of the taxpayers available in the public domain**

GST Act provides for public display of compliance rating score of every registered GST tax-payer based on taxpayer record of compliance with provisions of GST Act. Government is in the process of finalising the method of computation of this compliance rating. Once finalised and made available in public domain, this would enable buyers to choose compliant taxpayers for doing business, as their timely ITC claim is dependent on timely filing of GST return by the seller. The deterrence of a possible loss of business on account of a low compliance rating score would induce taxpayers to be more compliant. In addition, public display of this information would increase the transparency and lead to improved trust of the businesses in the tax administration and develop a social norm of good compliance in the long run.

- **Acknowledging contribution of compliant taxpayers**

Government has decided to issue a certificate to compliant GST taxpayers, and acknowledge their contribution towards nation building. This appreciation serves to motivate taxpayers to continue their compliant behaviour in future as well.

Source: Goods and Services Tax Network (GSTN)

2.27 The Non-debt Capital receipts includes recovery of loans and disinvestment receipts. Government has targeted to mobilise ₹1.05 lakh crore from disinvestment proceeds. So far, it has been able to raise ₹0.18 lakh crore which is 17.2 per cent of 2019-20 BE. The details of disinvestment during 2019-20 and new initiatives being undertaken by Department of Investment and Public Asset Management (DIPAM) are given in Box 4.

Box 4: Disinvestment

The B.E. for disinvestment proceeds for the year 2019-20 was fixed at ₹1.05 lakh crore. As on 31st December 2019, the Government has mobilised ₹0.18 lakh crore using a variety of instruments like Initial Public Offers (IPOs), Offer for Sale (OFS), Exchange Traded Funds (ETF) etc. Details are as under:

Listing of shares (IPO): During the year 2019-20, two IPOs namely Indian Railway Catering and Tourism Corporation (IRCTC) and Rail Vikas Nigam Ltd (RVNL) were successfully listed yielding ₹636 crore and ₹475.89 crore respectively, while five more PSEs, namely, Indian Railway Finance Corporation (IRFC), Kudremukh Iron Ore Company Limited (KIOCL) (FPO), RailTel, Water and Power Consultancy Services (WAPCOS) and Telecommunications Consultants India Limited (TCIL) are in the process of listing (as on 31.12.2019).

Offer for sale (OFS): During the year 2019-20, OFS of Railway Infrastructure Technical and Economic Service (RITES) has been concluded yielding ₹729.45 crore.

ETFs: ETFs were the biggest source of receipts during current year with Further Fund Offer-5 (FFO) of CPSE-ETF fetching ₹10,000.39 crore and FFO-2 of Bharat 22 ETF fetching ₹4,368.80 crore in July 2019 and October 2019 respectively. In aggregate, ETFs have fetched ₹14,369.19 crore in 2019-20 (as on 31.12.2019).

Others: Sale of Enemy Shares by Custodian of Enemy Property for India (CEPI): ₹1,881.21 crore

Major Initiatives taken by DIPAM

1. Strategic Disinvestment:

The CCEA has given in-principle approval (on 20.11.2019) for strategic disinvestment of the GoI shareholding in five public sector enterprises along with management control. These are: Bharat Petroleum Corporation Ltd (BPCL); Shipping Corporation of India (SCI); Container Corporation of India (CONCOR); Tehri Hydro Power Development Corporation (THDCIL), and North Eastern Electric Power Corporation Ltd (NEEPCO). The strategic sale of THDC, NEEPCO and Numaligarh subsidiary of BPCL will be made to a CPSE buyer. The CCEA has also given in principle approval (on 08.01.2020) of strategic disinvestment of Government of India shareholding in Neelachal Ispat Nigam Ltd. (NINL). With this, a total of 34 CPSEs/Subsidiaries/Units of CPSEs (including Air India) have now been accorded 'in-principle' approval by the government for strategic disinvestment. The Government strategically sold its stake in 5 CPSEs namely Hindustan Petroleum Corporation Limited (HPCL), Rural Electrification Corporation Limited (REC), Dredging Corporation of India Limited (DCIL), Hospital Services Consultancy Corporation Limited (HSCC) & National Projects Construction Corporation Limited (NPCC) in last two years which resulted in a yield of ₹52,869 crore. The process for strategic disinvestment in identified CPSEs in the current year has been initiated.

Streamlining the procedure for strategic disinvestment: In order to make the procedure for strategic disinvestment more expeditious and result-oriented, CCEA has approved a modified procedure for strategic disinvestment, whereby, the Inter-Ministerial Group (IMG) chaired by the Secretary, DIPAM and Co-Chaired by Secretary of the Administrative ministry/department concerned will drive the procedure and play a pivotal role in the entire process.

2. Reduction of Shareholding in select CPSEs below 51% while retaining management control: In the Budget Speech of 2019-20 the Government had announced the decision to modify present policy of retaining 51% Government stake to retaining 51% stake inclusive of the stake of government controlled institutions. Accordingly, the CCEA has given in principle approval (on 20.11.2019) for reduction of Government of India paid-up share capital below 51% in select CPSEs while retaining the management control, taking into account the Government shareholding post such reduction and the shareholding of Government controlled institutions. This policy decision will increase the bandwidth for disinvestment through minority stake sale.

3. Asset Monetization Framework: The Union Cabinet in February 2019 approved the procedure and mechanism for Asset Monetization of CPSEs/PSUs/other Government organizations and Immovable Enemy Properties. This will enable monetization of identified non-core assets of CPSEs under strategic disinvestment and Immovable Enemy Property under the custody of Custodian of Enemy Property (CEPI), Ministry of Home Affairs. This Framework is also available to monetize assets of other CPSEs/PSUs/other Government Organizations and loss making/sick CPSEs.

4. Debt ETF: Cabinet Committee on Economic Affairs (CCEA) has approved the creation and launch of India's first corporate Debt Exchange Traded Fund (Debt ETF) which would create an additional source of funding for Central Public Sector Enterprises (CPSEs), Central Public Financial Institutions (CPFIs), and other Government organizations and would increase the retail participation in the Indian corporate bond market.

Bharat Bond ETF was launched on 12th December, 2019 which received a strong response from investors across different segments and was oversubscribed by 1.7 times. It has provided a new window of access to retail investors in bond market. With regular issuances, the Bharat bond ETF will help in deepening the bond market in India and develop a yield curve for CPSEs over a period of time.

Source: Department of Investment and Public Asset Management (DIPAM)

2.28 On the expenditure side, the capital expenditure during April to November 2019-20 has grown at roughly three times vis-à-vis the same period in 2018-19. Also revenue expenditure has grown at a higher rate during these eight months of 2019-20, compared to the same period previous year. Among the major subsidies, the growth in expenditure on Urea and Petroleum subsidies has been higher during this period as compared to April to November 2018-19 (refer to Table 7).

Table 7: Expenditure on major subsidies

Items	Budget Estimate (In ₹ lakh crore)	April to November (In ₹ lakh crore)		
	2019-20	2017	2018	2019
Total Major Subsidies	3.02	2.06	2.19	2.35
Food Subsidy	1.84	1.35	1.42	1.32
Nutrient Based Fertilizers Subsidy	0.26	0.18	0.20	0.22
Urea Subsidy	0.54	0.32	0.33	0.51
Petroleum	0.37	0.21	0.23	0.30

Source: CGA Monthly Accounts

2.29 Based on the above analysis there is an apprehension that the Tax revenue for the current fiscal year would be muted relative to the target envisaged in 2019-20 BE. The gap due to lower tax receipts could be to some extent compensated by higher mobilisation of Non-Tax revenue and disinvestment proceeds for 2019-20. However, high growth in Non-Tax revenue may not be sustainable year after year. The realization from Non-Tax revenue and disinvestment being uncertain adds to the volatility in revenue projection.

2.30 Thus in order to be on track with the fiscal path outlined by the Medium Term Fiscal Policy Statement, it would be imperative to rationalize expenditure. However, given the sluggish demand and decline in growth of private consumption expenditure reported in first half of the fiscal year, any cut in expenditure especially capital expenditure would have adverse implications for growth. Moreover, since a considerable proportion of revenue expenditure like interest payments, wages and salaries and pensions is committed in nature, this leaves a little fiscal headroom for manoeuvre. Therefore, the focus of the Government should lie on rationalization of non-committed revenue expenditure like subsidies. Further, to boost the domestic demand which is crucial for revival of growth, fiscal deficit target may have to be relaxed for the current year.

Central Government Debt

2.31 Total liabilities of the Central Government include debt contracted against the Consolidated Fund of India, technically defined as Public Debt, as well as liabilities in the Public Account. These liabilities include[1] 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 8).

[1] As per Status Paper on Government Debt.

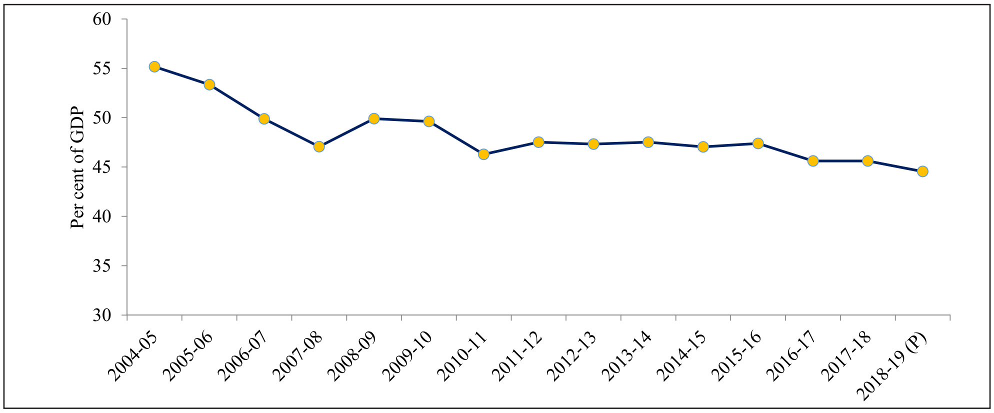
Table 8: Debt Position of the Central Government (in ₹ Lakh crore)

	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.

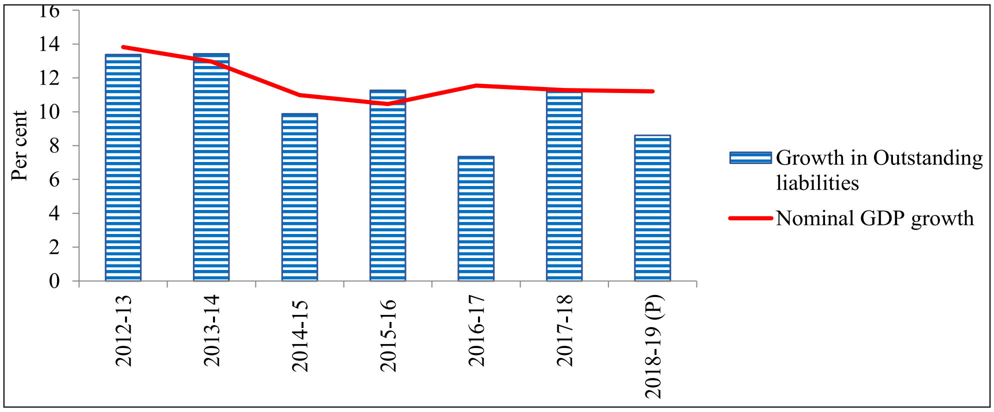
2.32 Figure 9 shows that total liabilities of the Central Government, as a ratio of GDP, has been consistently declining, particularly after the enactment of the FRBM Act, 2003. This is an outcome of both fiscal consolidation efforts as well as relatively high GDP growth (Figure 10).

Figure 9: Trend in Centre's Debt-GDP ratio



Source: Various issues of Status Paper on Government Debt; P: Provisional

Figure 10: GDP growth and growth in Outstanding Liabilities

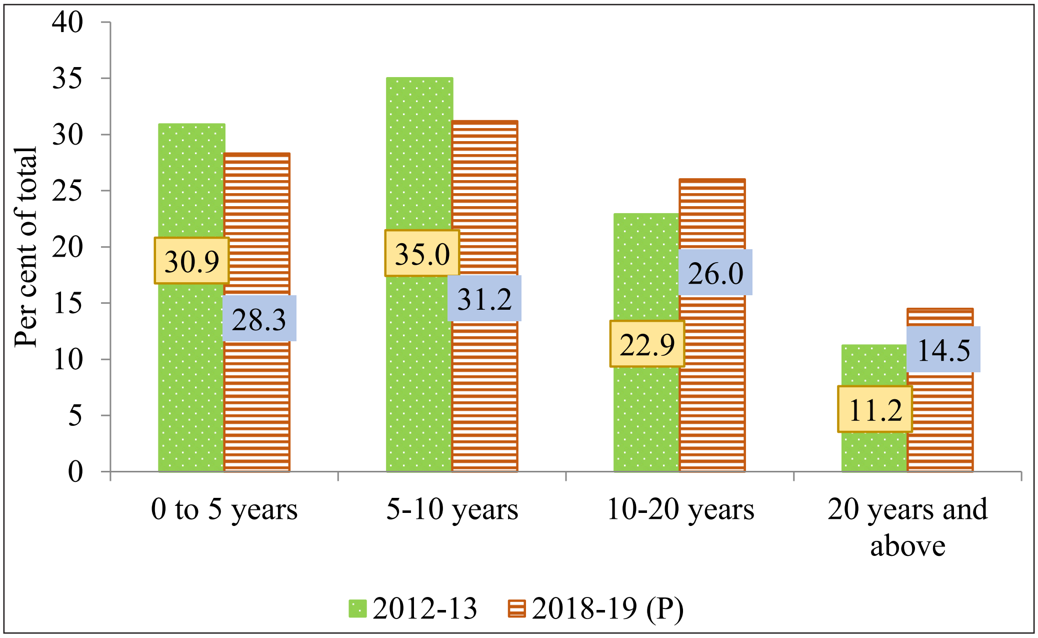


Source: Various issues of Status Paper on Government Debt; P: Provisional

2.33 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.

2.34 The other salient feature is the gradual elongation of the maturity profile of the Central Government's debt (refer to Figure 11) 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 Government of India has increased from 9.7 years at end March 2010 to 10.4 years at end March 2019.

Figure 11: Maturity Profile of Outstanding Dated Central Government Securities (as per cent of Total)



Source: Status Paper on Government Debt, 2017-18; Quarterly Report on Public Debt Management for April- March 2018-19; P: Provisional

STATE FINANCES

2.35 As per 2019-20 budget estimates of the State Governments, the States' combined own Tax revenue and own Non-Tax revenue is anticipated to grow at 11.1 per cent and 9.9 per cent respectively, which is low relative to the robust growth displayed in 2018-19 RE. The envisaged growth of 8.4 per cent in total expenditure in 2019-20 BE w.r.t. 2018-19 RE is largely led by 9.4 per cent growth in revenue expenditure, whereas the capital expenditure is placed to grow at only 3.7 per cent (refer to Table 9). The rising trend in revenue expenditure is driven by rise in committed expenditure including pension and interest. In fact, the RBI Study on State Finances attributes the fiscal consolidation of the States in the last four to five years to the steep decline in expenditure, mainly capital, which may have adverse implications for the pace and quality of economic development, given the large welfare effects of a much wider interface with the lives of people at the federal level.

2.36 The States have thus continued on the path of fiscal consolidation and contained the fiscal deficit within the targets set out by the FRBM Act. For the year 2019-20, the States have budgeted for gross fiscal deficit of 2.6 per cent of GDP as against an estimate of 2.9 per cent in 2018-19 RE (2.4 per cent in 2018-19 PA) and 2.4 per cent in 2017-18. The financing pattern of Gross Fiscal Deficit for States has also changed over the years. Financing via market borrowings has increased from 61.6 per cent in 2015-16 to 73.7 per cent in 2018-19 RE and is further expected to rise to 87.9 per cent in 2019-20 BE.

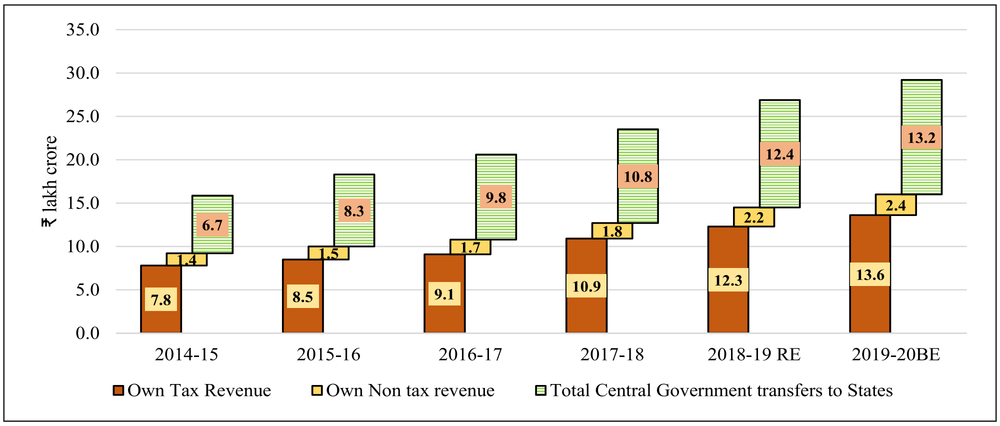
2.37 On the other hand, the debt to GDP ratio for States has risen since 2014-15 owing to the issuance of UDAY bonds in 2015-16 and 2016-17, farm loan waivers, and the

Table 9: Fiscal Indicators of States

Items	2014-15	2015-16	2016-17	2017-18	2018-19 RE	2019-20 BE
						(in ₹ lakh crore)
Own Tax Revenue	7.8	8.5	9.1	10.9	12.3	13.6
	(9.4)	(8.7)	(7.8)	(19.6)	(12.4)	(11.1)
Own Non-Tax Revenue	1.4	1.5	1.7	1.8	2.2	2.4
	(8.4)	(6.95)	(10.3)	(4.7)	(24.4)	(9.9)
Revenue Expenditure	16.4	18.4	20.9	23.0	28.3	30.9
	(18.7)	(12.3)	(13.5)	(10.2)	(22.9)	(9.4)
Capital Expenditure	3.0	4.2	5.1	4.3	5.9	6.1
	(23.3)	(40.5)	(20.4)	(-16.6)	(38.1)	(3.7)
Total Expenditure	19.4	22.6	26.0	27.3	34.2	37.0
	(19.4)	(16.7)	(14.8)	(5.0)	(25.3)	(8.4)

Source: RBI State Finances: A Study of Budget and Union Budget Documents,
RE: Revised Estimates; BE: Budget Estimates; Numbers in parenthesis are growth rates
Note: States include only 29 States

Figure 12: Revenue Receipts of States

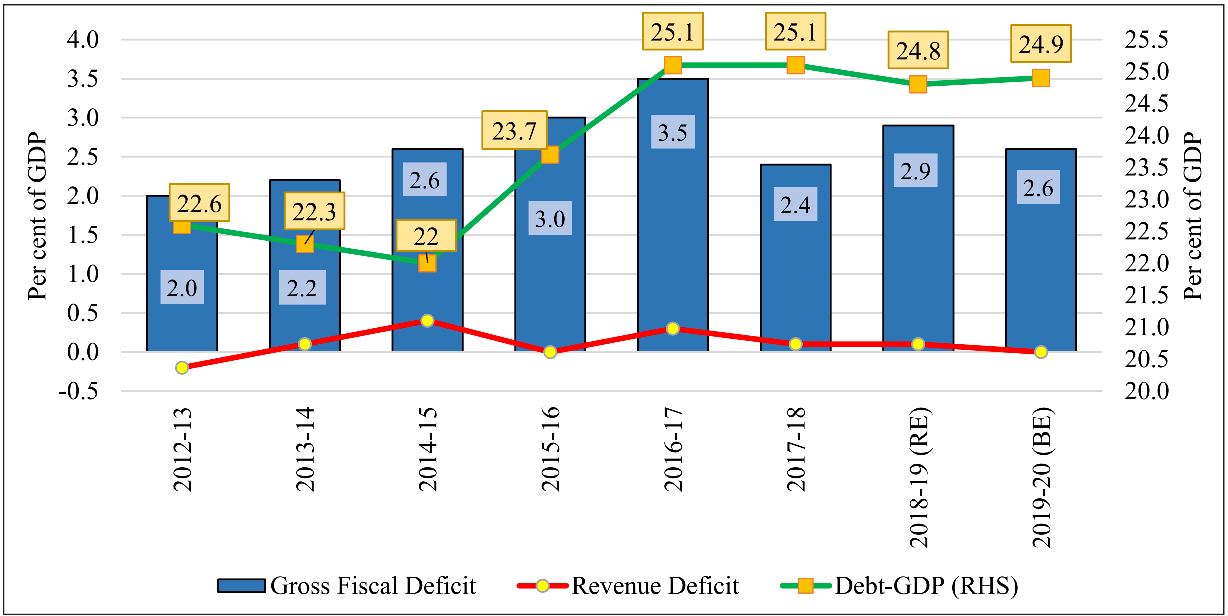


Source: RBI State Finances: A Study of Budget and Union Budget Documents
RE: Revised Estimates; BE: Budget Estimates
Note: States include only 29 States

implementation of Pay Commission awards (Figure 13). The Debt to GDP for States is likely to remain around 25 per cent of GDP in 2019-20, clearly making the sustainability of debt the main medium term fiscal challenge for States.

2.38 Net borrowing ceilings of the States for the year 2019-20 has been fixed at ₹6,11,186 crore anchoring the fiscal deficit target of 3 per cent of respective State GSDP as recommended by Fourteenth Finance Commission (FFC) for its award period (2015-20). As per the recommendation of FFC, the Union Government has approved year-to-year flexibility for additional fiscal deficit to States for the period 2016-17 to 2019-20 to a maximum of 0.5 per cent over and above the normal limit of 3 per cent in any given year to the States subject to the States maintaining the debt-GSDP ratio within 25 per cent and Interest Payments to the Total Revenue Receipts ratio within 10 per cent in the previous year. However, the flexibility in availing the additional fiscal deficit will be available to State if there is no revenue deficit in the year in which borrowing limits are to be fixed and immediately preceding year. After complying with these conditions, the additional borrowings of ₹ 12,269 crore in 2016-17 to seven eligible States, ₹ 12,873 crore in 2017-18 to nine eligible States, ₹ 12,664 crore in 2018-19 to ten eligible States and ₹4,214 crore in 2019-20 (till 04 November, 2019) to four eligible States have been allowed under flexibility options recommended by FFC.

Figure 13: Major deficit and debt indicators of States

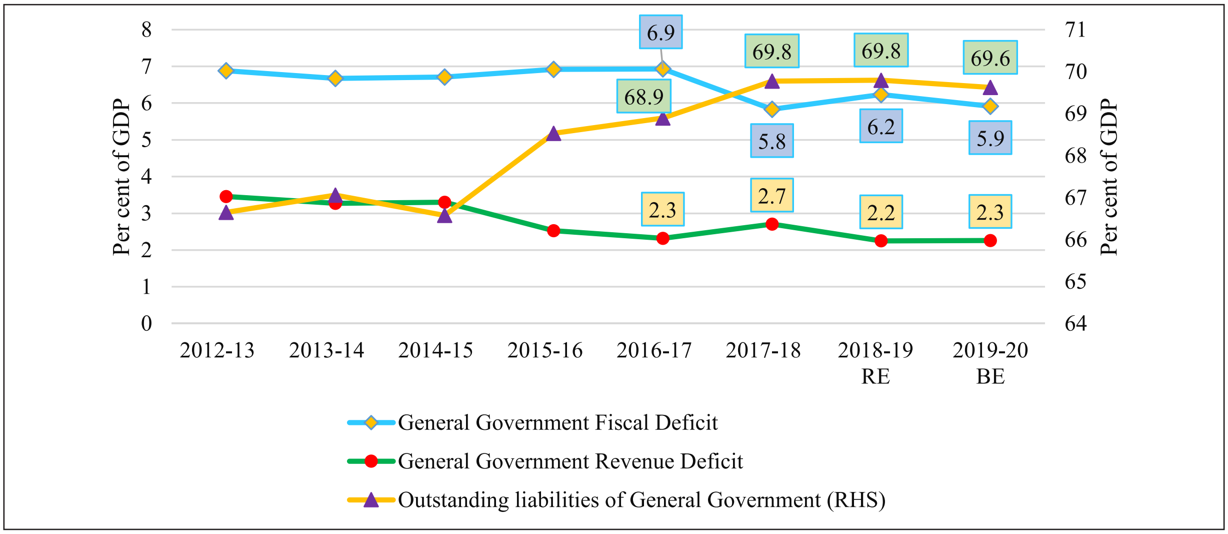


Source: RBI State Finances: A Study of Budget; RE: Revised Estimates; BE: Budget Estimates
Note: States include 29 states and 2 Union Territories with legislatures.

GENERAL GOVERNMENT FINANCES

2.39 It is critical to analyse the General Government finances to get an overview of fiscal position of the Government as a whole. The General Government (Centre plus States) is expected to continue on the path of fiscal consolidation as the fiscal deficit of General Government is expected to decline from 6.2

Figure 14: Trends in General Government Debt and Deficits (as a per cent of GDP)



Source: RBI
BE: Budget Estimates; RE: Revised Estimates

per cent of GDP in 2018-19 RE to 5.9 per cent of GDP in 2019-20 BE (Figure 14). However the combined liabilities of Centre and States have increased to 69.8 per cent of GDP as on end-March 2019 (RE) from 68.5 per cent of GDP as on end-March 2016.

OUTLOOK

2.40 The year 2020-21 is expected to pose challenges on the fiscal front. While on one hand the outlook for global growth persists to be weak, with escalated trade tensions adding to the risk; on the other hand, the pace of recovery of growth will have implications for revenue collections.

2.41 In order to boost the sluggish demand and consumer sentiments, counter-cyclical fiscal policy may have to be adopted to create additional fiscal headroom. During the first eight months of 2019-20, the indirect tax collections have been muted. Therefore, revenue buoyancy of GST would be key to the resource position of both Central and State Governments. On the expenditure side, rationalisation of subsidies especially food subsidy could be an important tool for expanding the headroom for fiscal manoeuvre. The Fifteenth Finance Commission reportedly has also submitted its Interim Report and its recommendations especially on tax devolution would have implications for Central Government finances.

2.42 Finally, the geopolitical situation unfolding in West Asia is likely to have implications for oil prices and thereby on the petroleum subsidy, apart from having implications for current account balance.

CHAPTER AT A GLANCE	
➢	During the first eight months of 2019-20, the Revenue Receipts registered a higher growth compared to the same period last year, which was led by considerable growth in Non-Tax revenue.
➢	During 2019-20 (upto December 2019), the gross GST monthly collections has crossed the mark of ₹ one lakh crore for a total of five times.
➢	Structural reforms undertaken in taxation during the current financial year include change in corporate tax rate and measures to ease the implementation of GST.
➢	The States have continued on the path of fiscal consolidation and contained the fiscal deficit within the targets set out by the FRBM Act.
➢	The General Government (Centre plus States) has been on path of fiscal consolidation
➢	Going forward, considering the urgent priority of the Government to revive growth in the economy, the fiscal deficit target may have to be relaxed for the current year.

Annex 1

Major measures taken for Indirect taxes during 2019-20

A. Basic Custom Duty (BCD)

- The basic customs duty rates in general are Nil/2.5%/5%/7.5% on the inputs/ intermediate products [industrial chemicals, ores and concentrates, fuels, textile fibres and yarns etc] used in industries for manufacturing. Finished items of consumption attract higher duty, e.g., items like paper and paper products, marble slabs, auto parts, electronic items etc.
- In line with the efforts made to remove inversions in duty structure, Tariff Commission and Department for Promotion of Industry and Internal Trade (DPIIT) examined the issues of inversion/ negative effective protection to the domestic industry. In majority of cases Tariff Commission did not find any inversion. Appropriate corrections were made in few cases recommended by them. The inversion now being spoken about essentially emanates from Free Trade agreements (FTA) and ITA.
- To safeguard the strategic interests of the country specified Defence equipment and their parts, imported by the Ministry of Defence or the Armed Forces, have been exempted from Basic Customs Duty in the Budget 2019-20.
- In line with “Make in India” initiative of the Government, and to provide level playing field, ensure better capacity utilization and achieve import substitutions, custom duty was increased on goods like specified electrical/electronics/telecom equipment and hardware, Poly Vinyl Chloride, specified articles of nylon, HDPE and plastics, stainless steel and other alloy steel and their semi-finished products, wires of alloy steels, certain automobile parts, newsprint, uncoated paper used for printing of newspapers and lightweight coated paper used for printing of magazines. The end use based exemption granted to Palm stearin and fatty oils was also withdrawn.
- Further, to reduce input costs and/or to remove duty inversion, and in turn incentivize the domestic value addition in these sectors, customs duty was reduced on certain goods like specified parts for manufacture of electric vehicles, naphtha, ethylene dichloride (EDC), propylene oxide (PO) and raw material for manufacture of artificial kidneys, disposable sterilized dialyzer and micro-barrier of artificial kidney. Moreover, capital goods used for manufacturing of electronic items, namely populated PCBA, camera module of cellular mobile phones, charger/adapter of cellular mobile phone, lithium ion cell, display module, set top box and compact camera module were exempted from BCD.
- To incentivize exports, the export duty on EI leather has been abolished and on Hides, skins and leathers (tanned and untanned, all sorts) the export duty has been reduced.
- Moreover, as part of revenue augmentation exercise, customs duty rates on all precious metals like gold, silver, platinum, waste of precious metal etc. (other than rhodium), gold and silver dore, gold/silver bought by an eligible passenger has been raised by 2.5% (10% to 12.5%).

B. Goods and Services Tax (GST)

- The introduction of GST has been a game changer for the Indian economy as it has replaced multi-layered, complex indirect tax structure with a simple, transparent and technology-driven tax regime. GST has integrated India into a single common market by breaking barriers to inter-state trade and commerce. By eliminating cascading of taxes and reducing transaction costs, it has enhanced ease of doing business and has provided an impetus to 'Make in India' campaign.

- However, there are criticisms of the implementation of the GST. There are too many rates, too large a set of commodities has been excluded, and the system is more complex than it needs to be especially in the matter of crediting taxes paid on inputs and providing refunds to exporters. The government has acknowledged many of these problems and they are being addressed on regular basis.
- To bring about further reforms in the indirect tax system, the government is coming up with following measures:

I. A single source fully automated return system:

- Since the inception of Goods and Services Tax (GST), the main intention of the government was to have a robust system for allowing invoice level reconciliation of transactions. It was envisioned in the form of the returns GSTR-1, GSTR-2 and GSTR-3. However, keeping taxpayer convenience and revenue interest, a simplified return in Form GSTR 3B read with GSTR 1 was introduced. The government intended to implement its principle idea of invoice-level reconciliation by following the sequence of returns GSTR-1, GSTR-2 and GSTR-3.
- The New Return System, which is proposed to be introduced w.e.f. 01.04.2020 aims to reduce manual efforts and uses technology extensively, while maintaining a similar working model.It aims to achieve this by having a single main return (GST RET-1/2/3) supported by two annexures (GST ANX-1 & GST ANX-2) that work dynamically on a separate facility.

II. Fully electronic refund process through FORM GST RFD-01 and single disbursement:

- The necessary capabilities for making the refund procedure fully electronic, in which all steps of submission and processing shall be undertaken electronically, have been deployed on the common portal with effect from 26.09.2019.
- Further, separate disbursement of refund amounts under different tax heads by different tax authorities, i.e. disbursement of Central tax, Integrated tax and Compensation Cess by Central tax officers and disbursement of State tax by State tax officers, was causing undue hardship to the refund applicants. In order to facilitate refund applicants on this account, both the sanction order and the corresponding payment order for the sanctioned refund amount, under all tax heads, is issued by one officer only.

III. Rationalization of cash ledger:

- With regards to single cash ledger, rationalisation of the ledger in such a manner that earlier 20 heads are merged into 5 major heads is on the anvil. Unified Cash Ledger will be rolled out w.e.f. 01.02.2020.

IV. Generation and quoting of Document Identification Number

- In keeping with the Government's objective of transparency and accountability in indirect tax administration through widespread use of information technology CBIC w.e.f. 08.11.2019 has introduced Document Identification Number (DIN), for all communications sent by its offices to taxpayers and other concerned persons. Presently DIN is applicable for search authorization, summons, arrest memos, inspection notices and letters issued in the course of any enquiry.

V. Sabka Vishwas (Legacy Dispute Settlement) Scheme 2019

- The scheme is a one-time measure for liquidation of past disputes of Central Excise, Service Tax and 26 other indirect tax enactments. It provides an opportunity of voluntary disclosure to non-compliant taxpayers. Cases covered under the scheme are (i) A show cause notice or appeals arising out of a show cause notice pending as on the 30th day of June, 2019 (ii) An amount in arrears (iii) An enquiry, investigation or audit where the amount has been quantified on or before the 30th day of June, 2019 and (iv) A voluntary disclosure.
- The scheme provides that eligible persons shall declare the unpaid tax dues and pay the same in accordance with the provisions of the scheme. The scheme provides for certain immunities including penalty, interest or any other proceedings including prosecution to those persons who pay the declared tax dues.

VI. Electronic invoicing

- The Government has proposed to introduce electronic invoicing system (e-invoice) for all B2B invoices in a phased manner. Phase 1 would be voluntary and is proposed to be rolled out from Jan 2020. Further, it is proposed to make e-invoicing mandatory for those having annual turnover of more than 100 crores w.e.f. 01.04.2020. This would help in seamless flow of credit and invoice matching as envisaged in the GST regime. Further, it would help in real-time updation of data on the GSTN system and thereby, drastically reducing the time taken in filing the returns.

VII. Quick Response (QR) Code

- The Government is proposing to implement the system of invoice with dynamic QR code for all B2C invoices for the taxpayers having annual aggregate turnover of more than 500 crores w.e.f. 01.04.2020. Further, to ensure the smooth roll out, these taxpayers would have an option to voluntarily issue invoices with QR code w.e.f. 01.03.2020.

VIII. Exemption from filing of Annual Returns for small taxpayers:

- The Government has exempted the small taxpayers having annual aggregate turnover of ₹ 2 crores and less from filing the annual returns in the format GSTR 9 for the period 2017-18 and 2018-19 vide Notification No. 47/2019-CT dated 09.10.2019 which provides that if these taxpayers have not filed their annual returns by the due date, it should be considered as deemed to be furnished by due date.

IX. Changes with respect to rates on Goods:

- The changes in GST rates during the year 2019 have been made to make the GST rate structure simpler, promote exports, address issues of credit accumulation, resolve disputes for past periods etc. The details are mentioned below:

a) Reduction in the GST rate on supply of goods:

i. 12% to 5% on all electric vehicles

ii. 18% to 5% on charger or charging stations for Electric vehicles

iii. 18% to 12% on parts of Slide Fasteners

iv. 18% to 5% on Marine Fuel 0.5% (FO)

v. 12% to 5% on Wet Grinders (consisting stone as a grinder)

vi. 5% to Nil on Dried tamarind and Plates and cups made up of leaves/ flowers/bark

vii. 3% to 0.25% on cut and polished semi- precious stones

viii. Applicable rate to 5% on specified goods for petroleum operations undertaken under Hydrocarbon Exploration Licensing Policy (HELP)

b) Exemptions from GST/IGST on:

i. imports of specified defence goods not being manufactured indigenously (upto 2024)

ii. supply of goods and services to FIFA and other specified persons for organizing the Under-17 Women's Football World Cup in India.

iii. supply of goods and services to Food and Agriculture Organisation (FAO) for specified projects in India.

c) GST rates have been increased from, -

i. 5% to 12% on goods, falling under chapter 86 of tariff like railway wagons, coaches, rolling stock (without refund of accumulated ITC). This is to address the concern of ITC accumulation with suppliers of these goods.

ii. 18% to 28% +12% compensation cess on caffeinated Beverages

d) Measures for Export Promotion

i. Exemption from GST/IGST:

(a). at the time of import on Silver/Platinum by specified nominated agencies

(b). supply of Silver/Platinum by specified nominated agency to exporters for exports of Jewellery.

ii. Inclusion of Diamond India Limited (DIL) in the list of nominated agencies eligible for IGST exemption on imports of Gold/ Silver/Platinum so as to supply at Nil GST to Jewellery exporters.

e) GST concession in certain cases for specific period: -

i. Exemption to Fishmeal for the period 01.07.17 to 30.09.19. There were doubts as regards taxability of fishmeal in view of the interpretational issues. However, any tax collected for this period shall be required to be deposited.

ii. 12% GST during the period 1.07.2017 to 31.12.2018, on pulley, wheels and other parts (falling under heading 8483) and used as parts of agricultural machinery.

- GST rate structure on auto and auto parts has been discussed and debated significantly in last few months. Auto sector contributes significantly to GST revenue. Therefore, any change in GST rate of automobiles and parts will have a significant implication to revenue and compensation requirement. The GST rates on auto sectors has been discussed in the GST Council. The Council did not recommend any change. It was felt that temporary auto slowdown may be attributable to certain other reasons such as lack of credit, base effect (as in last few years auto sector has grown rapidly), and structural changes like adoption of newer fuel standards from BS-IV to BS-VI from April 20 etc.

X. Changes with respect to rates on Services:

- The GST rates on services were fitted into 4 slabs i.e 5%, 12%, 18% and 28%, largely based on the Pre-GST indirect tax incidence both of Centre and States, including the embedded taxes. These rates were recommended by the GST Council in its 14th and 15th meetings held on 18.05.2017 and 03.06.2017 respectively.
- The said GST rate structure was reviewed by the GST Council in its subsequent meetings and certain changes in the rate structure were recommended.
- Notably multiple reliefs from GST taxation have been provided to following categories of services: Agriculture, farming and food processing industry, Education, training and skill development, Pension, social security and old age support, Banking/ Finance/ Insurance services, Government Services, Tourism and hospitality services, Construction and works contract services, Transportation services, Hospitality and tourism industry
- Details of major decisions taken in 2019-20 for GST rates on services is as below:

a) Measures taken for Common Man during 2019-20

i. In order to boost the demand of real estate sector, with effective from 01.04.2019, GST at effective rate of 1% without ITC on affordable residential apartments and 5% without ITC on residential apartments outside affordable segment has been levied.

ii. Intermediate tax on development right, such as Transfer of Development Rights, long term lease (premium), Floor Space Index has been exempted to address the cash flow issues in the real estate sector.

iii. GST rate on hotel accommodation service are redistributed under following tax slabs:

Transaction Value per Unit (₹) per day	GST
₹ 1000 and less	Nil
₹ 1001 to ₹ 7500	12%
₹ 7501 and more	18%

iv. GST on outdoor catering services other than in premises having daily tariff of unit of accommodation of ₹ 7501 has been reduced from 18% to 5% without ITC.

b) Measures taken for MSMEs during 2019-20

i. To boost the MSME sector, with effect from 01.04.2019, composition scheme for service providers has been introduced. The scheme can be availed by a registered person having annual turnover upto ₹ 50 lakhs in the preceding financial year. The service providers opting for new composition scheme can now pay GST @ 6% and would not be eligible to avail any input tax.

ii. GST rate on supply of job work services in relation to diamonds has been reduced from 5% to 1.5%.

iii. GST rate has been reduced from 18% to 12% on supply of all job work services, which are not currently eligible for the 5% rate (such as machine job work in engineering industry), except supply of job work in relation to bus body building which would remain at 18%.

Annex 2

Major measures taken for Direct taxes during 2019-20 and other measures

A. Summary of important measures announced in the Union Budget 2019-20:

- **Reduction in corporate tax rate** - The rate of income-tax for companies with a turnover up to ₹ 400 crore in FY 2017-18 has been reduced to 25 per cent as against prevailing rate of 30% for others.
- **Provisions of Tax Deducted at Source (TDS) –** It has been provided that:
  - deduction of TDS at the rate of 5% is to be done by individual or HUF on payments made to contractors or professionals exceeding ₹ 50 lakhs;
  - a deduction at the rate of two per cent is to be done on cash withdrawal in excess of one crore rupees in aggregate during the year from a banking company/cooperative bank/post office unless the persons making the withdrawals have been exempted;
  - while deducting TDS of one percent on the consideration paid for purchase of immovable property, the consideration shall include all charges of the nature of club membership fee, car parking fee, electricity and water facility fees, maintenance fee, advance fee or any other charges of similar nature, which are incidental to transfer of the immovable property;
  - at the time of pay out of any sum under life insurance policy, TDS will be deducted at the rate of five per cent on income component of the pay-out i.e. sum paid out minus amount of premium paid.
  - that in case of non-deduction of TDS on payment made to a non-resident, the deductor will not to be considered as assessee in default, if the non-resident has filed ITR declaring such income before the due date of filing of return.
- **Deemed accrual of gift made to a person outside India-** It has been provided that certain gifts made by residents to persons outside India on or after 05.07.2019, shall be income deemed to accrue or arise in India subject to provisions of Double Taxation Avoidance Agreement (DTAA) between India and the foreign country.

- **Mandatory furnishing of ITR-** It has been provided that persons entering into high value transactions such as having a deposit of an amount/aggregate of the amounts exceeding one crore rupees in one or more current account, incurred expenditure of an amount/aggregate of the amounts exceeding two lakh rupees for himself or any other person foreign travel, has paid an electricity bill of an amount/aggregate of the amounts exceeding one lakh rupees or fulfils any other prescribed condition shall be mandatorily required to file ITR.
- **Interchangeability of PAN and Aadhaar –** It has been provided that in case of a person who does not have PAN but has Aadhaar, PAN will be allotted to such person on the basis of Aadhaar if the person enters into certain reportable transactions. Further, a person who has linked his Aadhaar to his PAN can use Aadhaar instead of his PAN wherever required.
- **Pre-filling of return -** Pre-filled Income tax Returns (ITR) have been provided to individual taxpayers with income from salary, house property, capital gains from securities, bank interest, dividends and various tax deductions. Information regarding these incomes and deductions are being collected from concerned sources such as banks, mutual funds, EPFO etc. to enable pre-filling. The scope of furnishing of Statement of Financial Transactions (SFT) has been widened by requiring more organisations/institutions to submit information in respect of financial transactions facilitated or undertaken by them.
- **Promoting Digital Payments –** In order to promote digitalization of the economy it has been provided that certain prescribed electronic modes will also be acceptable forms of electronic modes of payment under the Act. Further, section 269SU has been introduced in the Income-tax Act, 1961(the Act) to provide that with effect from 01.11.2019 every person, carrying on business in which the total sales exceeds ₹ 50 cr. in the previous financial year, shall be required to provide a facility for accepting payment through the prescribed electronic modes, in addition to the facility for other electronic modes of payment, if any.
- **Incentives to International Financial Services Centre (IFSC)** - Several direct tax incentives have been provided to an IFSC such as 100 % profit-linked deduction under section 80-LA of the Act in any ten-year block within a fifteen-year period, exemption from dividend distribution tax from current and accumulated income to companies and mutual funds, exemptions on capital gain to Category-III AIF and interest payment on loan taken from non-residents.
- **Incentives to certain Non-banking Financial Companies (NBFCs)-** It has been provided that interest on bad or doubtful debts made by RBI-regulated NBFCs will be taxed on receipt basis and deduction on such interest payment will also be allowed to borrowers on payment basis if it is actually paid on or before the due date of furnishing the return of income of the relevant previous year.
- **Relaxation in conditions of special taxation regime for offshore funds-** Section 9A of the Act which provides for the conditions under which the operation of an offshore fund will not constitute business connection in India has been amended to provide that minimum corpus amount of ₹ 100 crore can be met by a new fund, either within six months of it being set up or by the end of the financial year, whichever is later and the renumeration paid to the fund manager should be at least equivalent to the amount calculated as per the prescribed manner.

- **Promotion of Electric Vehicles** – Section 80EEB has been inserted to the Act to provide deduction in respect of interest on loan taken for purchase of an electrical vehicle from any financial institution up to a maximum of ₹ 1,50,000/- subject to the condition that the loan has been sanctioned during the period beginning on the 01.04.2019 to 31.03.2023.
- **Exemption of certain interest income of a non-resident -** In order to incentivize low cost foreign borrowings, section 194LC and section 10 of the Act have been amended to provide that the interest income on account of interest payable by an Indian company or a business trust to a non-resident, including a foreign company, in respect of rupee denominated bond issued outside India during the period 17.09.2018 to 31.03.2019 shall be exempt.
- **Housing for All-** For realization of the goal of affordable housing for all, section 80IBA of the Act has been amended to extend the profit linked deduction up to 31.03.2020 for developers of affordable housing projects. Section 80EEA has also been amended to provide an additional deduction of up to ₹ 1,50,000/- for interest paid on loans borrowed up to 31.03.2020 for purchase of an affordable house valued up to ₹ 45 lakh.
- **Incentives to National Pension System (NPS) subscribers -** The limit of exemption has been increased to 60 per cent of the total amount payable to the person at the time of closure or his opting out of the NPS scheme. Section 80 CCD has been amended to increase the limit from 10 to 14 per cent of contribution made by the Central Government to the account of its employee. In addition, any amount paid or deposited by a Central Government employee as a contribution to Tier-II account of the new pension scheme shall be eligible for deduction under section 80C subject to the specified conditions.
- **Incentives for start-ups –** To facilitate ease of doing business in the case of an eligible start-up, it has been provided to allow previous year losses to be carried forward and set off against the income of the previous year if the existing shareholders continue as shareholders in the closely held eligible start-up, irrespective of the change in shareholding pattern. Further the period of exemption of capital gains arising from sale of residential house for investment in start-ups up has been extended up to 31.3.2021.
- **Incentives for Category II Alternative Investment Fund (AIF)-** In order to facilitate venture capital undertakings, section 56 of the Act has been amended to exempt Category II AIF from payment of tax on the excess amount of consideration received, in case when the aggregate consideration received for issue of shares exceeds the fair market value.
- **Incentive for resolution of distressed companies –** It has been provided that distressed companies whose Board of Directors have been suspended by the NCLT and temporary directors have been appointed on the recommendation of the Central Government and a change in the shareholding has taken place in accordance with a resolution plan approved by NCLT, then such companies will be allowed to carry forward and set off their losses.
- **Exemption from deeming of fair market value of shares for certain transactions -** It has been provided that certain class of persons will be exempted from the provisions relating to deeming of fair market value of shares while computing capital gains and deemed gift, in case the parties to the transaction have no control over the determination

of price of shares.

- **Tax on buy-back of shares of listed companies-** Section 115QA of the Act has amended to provide that tax on the buy-back of shares of listed companies will be applicable. The Taxation Laws Amendment, Act (2019) (TLAA) amended the date of effectivity to provide that buy-back tax on listed shares will not apply in case of buy-backs announced on or before 05.07.2019.
- **Cancellation of registration of exempt institution-** It has been provided that a charitable institution/trust which is exempt under the Act, is required to comply with the provisions of any law which is material for its purpose, violation of which will lead to cancellation of the registration.
- **Facilitating demerger of Ind-AS compliant companies**- Section 2 of the Act has been amended to provide that in case of demerger, the requirement of recording property and liabilities at book value by the resulting company shall not be applicable in a case where the property and liabilities of the undertakings received by it are recorded at a value different from the value appearing in the books of account of the demerged company immediately before the demerger in compliance to the Indian Accounting Standards.
- **Modification of return of income filed in consequence to signing of the Advance Pricing Agreement (APA)** - Section 92CD of the Act has been amended to clarify that in cases where assessment or reassessment has already been completed and modified return of income has been filed by the tax payer pursuant to signing of APA, the total income is to be computed accordingly by the Assessing Officer.
- **Secondary Adjustment-** In order to make the secondary adjustment regime more effective and easy to comply with, section 92CE has been amended to, *inter alia*, provide that the excess money may be repatriated from any of the associated enterprises of the assessee which is not resident in India and in a case where the excess money or part thereof has not been repatriated in time, the assessee will have the option to pay additional income-tax at the rate of eighteen per cent on such excess money or part thereof which will be considered as the final payment of tax and no credit shall be allowed in respect of the amount of tax so paid.
- **Concessional rate of Short-term Capital Gains (STCG) tax to certain equity-oriented fund of funds –** In order to incentivise fund of funds set up for disinvestment of Central Public Sector Enterprises (CPSEs), the concessional rate of tax for short-term capital gains has been extended in respect of transfer of units of such fund of funds.
- **Pass through of losses in cases of Category I and Category II AIF -** Section 115UB of the Act has been amended to provide pass through of certain losses in cases of Category I and Category II AIF.
- **Definition of the "accounting year" in section 286 –** Section 286 of the Act which provides for furnishing of a Country-by Country Report (CbCR) by a parent entity or alternate reporting entity (ARE) resident in India of an international group of which it is a constituent , has been amended to provide that in case when the CbCR is to be furnished by the ARE, the reporting accounting year shall be the one applicable to the parent entity.

- **Maintenance of Master File-** Section 92D of the Act has been amended to provide that the Master File will be maintained by a constituent entity of an international group resident in India, even when there is not international transaction undertaken by the constituent entity.
- **Determination of penalty for under reporting of income –** Section 270A of the Act has been amended to provide a manner of computing the quantum of penalty in a case where the person has under-reported income and furnished his return for the first time under section 148.
- **Prosecution in case of failure to file return of income-** It has been provided that prosecution for failure of filing return of Income shall not be initiated in cases where the total tax payable after adjusting for self-assessment tax and tax collected at source in addition to other taxes already paid does not exceed ₹ 10,000/-.
- **Recovery of tax in pursuance of agreements with foreign countries-** It has been provided that in case where a tax defaulter is resident in India or other any country, the relevant tax recovery officer having jurisdiction over that person can recover tax against the properties of the said defaulter (irrespective of whether details of property are available or not) in respective countries.
- **Claim of refund-** The procedure for claiming of refund has been simplified by amending section 239 of the Act so as to provide that every claim for refund shall be made by furnishing return in accordance with the provisions of section 139 of the Act.

B. Other Measures taken during the year 2019-20

- The Taxation Laws (Amendment) Ordinance, 2019 was promulgated on 20.09.2019. Subsequently the Ordinance has been replaced by the TLAA which provides that:
  - existing domestic companies may opt for a concessional tax regime at an effective tax rate of 25.17% (22% tax, plus surcharge at 10% and cess at 4%), if they do not avail the specified deductions and incentives and fulfill certain pre-conditions.
  - new manufacturing domestic companies set up on or after 01.10.2019 and which commence manufacturing or production by 31.03.2023 may opt to be taxed at an effective tax rate of 17.16% (15% tax, plus surcharge at 10% and cess at 4%), provided that they do not avail of any specified incentives or deductions and fulfill certain pre-conditions.
  - the companies opting for the concessional tax regime will not be required to pay MAT.
  - for companies which do not opt for the concessional tax regimes, the rate of MAT has been reduced from 18.5% to 15.5%.
  - the enhanced surcharge introduced vide the Finance (No.2) Act, 2019 will not apply on the capital gains arising on account of transfer of certain securities and units on which securities transaction tax has been paid. The enhanced surcharge will also not apply to the capital gains income of FPIs arising out of transfer of any security including derivatives, having concessional tax regime

- **Prescribed electronic modes for purpose of section 269SU** – It has been notified vide Notification No. 105/2019 dated 30.12.2019 through GSR. 960 (E) published in the Official Gazette, that with effect from 01.01.2020, any debit card powered by Rupay, Unified Payments Interface(UPI)(BHIM-UPI) and Unified Payments Interface Quick Response Code (UPI QR Code)(BHIM-UPI QR Code) shall be the prescribed electronic modes as mandated under section 269SU, for accepting payments by businesses whose total sales exceeds ₹ 50 crore in the year immediately preceding the financial year.

- **Enhanced Depreciation on Automobiles** - In order to provide relief to tax payers purchasing new vehicles for the purpose of business or profession, enhanced depreciation of 30 % for motor cars and 45 % for motors buses/lorries has been provided with effect from 23.08.2019 vide Notification no. 69/2019 dated 20.09.2019 through GSR No. 679(E) published in the Official Gazette.

- **E-Assessment Scheme-2019-** In order to remove the existing human interface and personal interaction prevailing in the assessment procedure, a scheme of faceless assessment in electronic mode involving no human interface has been notified vide Notification No. 61/2019 dated 12.09.2019 through **S.O. 3264(E) published in the Official Gazette.**

- **Simplification of compliance norms for Startups -** A Start-up Cell under the aegis of Member (IT&C), CBDT has been constituted to redress grievances and to address various tax related issues in the cases of Start-ups. A consolidated circular clarifying the provisions pertaining to assessment of Startups has also been issued which clarifies that the outstanding income-tax demand relating to additions made relating to angel tax would not be pursued and no communication in respect of outstanding demand would be made with the Start-up entity. Further, other income-tax demand of the Start-ups would not be pursued unless the demand was confirmed by ITAT.

- **Document Identification Number (DIN)-** Every communication of the department whether it is related to assessment, appeals, investigation, penalty, and rectification among other things issued from 01.10.2019 onwards will mandatorily have a computer-generated unique document identification number (DIN). Any communication such as tax notice, summon or letter issued to any corporate or individual tax payer will be invalid without this number.

- **Reduction in Litigation -** The monetary thresholds for filing of departmental appeals have been raised from ₹ 20 lakh to ₹ 50 lakh for appeal before ITAT, from ₹ 50 lakh to ₹ 1 crore for appeal before High Court and from ₹ 1 crore to ₹ 2 crore for appeal before Supreme Court. Pending appeals involving tax effect lower than these thresholds shall also be withdrawn or not pressed by the Department.

- **Relaxation in norms for prosecution** – It has been provided that prosecution in appropriate cases will be launched only if the quantum of tax evasion is above a minimum threshold. Further, in cases where evasion is below the minimum monetary threshold, launch of prosecution has to be approved by a collegium comprising of two high ranking officers. Further, the 12-month time limit for filing compounding application has been relaxed as a one-time measure, to mitigate hardship in genuine cases.

03 CHAPTER

External Sector

India's external sector gained further stability in the first half of 2019-20, witnessing improvement in Balance of Payments (BoP) position. India's foreign reserves are comfortably placed at US$ 461.2 billion as on 10th January, 2020. The improvement in BoP was anchored by narrowing of current account deficit (CAD) from 2.1 per cent in 2018-19 to 1.5 per cent of GDP in H1 of 2019-20. The contraction of CAD has emanated from easing of crude prices. Export growth remains subdued with external demand weakened by slowdown in global investment, output and heightened trade tensions, notwithstanding resilient service exports. Increase in service imports is inevitable with increasing foreign direct investment (FDI) and 'Make in India'. Petroleum products, precious stones, drug formulations & biologicals, gold and other precious metals continue to be top exported commodities, with fastest growth seen in drug formulations & biologicals in 2019-20 (April to November). Crude petroleum, gold, petroleum products, coal, coke & briquittes constitute top import items, with fastest growth seen in electronics in 2019-20 (April to November). India's top five trading partners continue to be USA, China, UAE, Saudi Arabia and Hong Kong. Further improvement in BoP was contributed by easing of external financial conditions, impressive FDI, rebounding of portfolio flows and receipt of robust remittances. Net FDI inflows have continued to be buoyant in 2019-20 attracting US$ 24.4 billion in the first eight months, higher than the corresponding period of 2018-19. This reflects a global sentiment that increasingly believes in India's growth story and reform measures being undertaken by the government. External debt as at end September, 2019 remains low at 20.1 per cent of GDP. India's Net International Investment Position (NIIP) to GDP ratio has also improved compared to 2018-19. After witnessing significant decline since 2014-15, India's external liabilities (debt and equity) to GDP has increased at the end of June, 2019 primarily driven by increase in FDI, portfolio flows and external commercial borrowings (ECBs).

OVERVIEW: INDIA's BALANCE OF PAYMENTS

3.1 Almost synchronous with the acceleration in GDP growth to 7.5 per cent in 2014-19, the Balance of Payments (BoP) position of India improved from accumulated foreign reserves of US$ 304.2 billion at end of 2013-14 to US$ 412.9 billion at end of 2018-19. For an open emerging market economy like India, improvement in BoP position is critical. It ensures financing of essential imports like crude oil and other such inputs that drive the manufacturing sector which provides livelihood to crores of people in the country. For a country that has mostly remained in current account deficit, injecting into its income stream not as much earnings from abroad as permitting leakage from it through payments overseas, a continuous improvement in its BoP position is a reflection of a global sentiment that increasingly believes in India's growth story. This belief will hold the country in good stead when it looks to access foreign savings to meet the investment requirement for a US$ 5 trillion-economy.

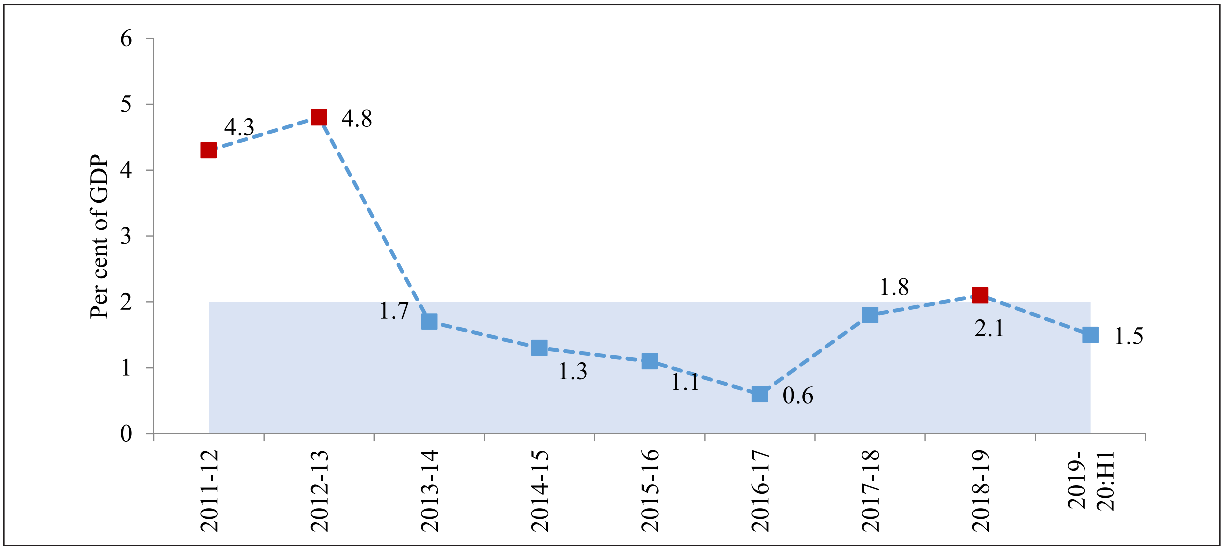
3.2 Despite GDP growth decelerating in 2019-20 the global sentiment has remained positive. The BoP has improved from US$ 412.9 billion of forex reserves in end March, 2019 to US$ 433.7 billion in end September, 2019 and further to US$ 461.2 billion as on 10th January, 2020. Yet the improvement has an undercurrent of vulnerability. Unlike in 2014-19 when a sharp decline in crude price combined with high FDI inflows to engineer an improvement in BoP position, the improvement in the first half of 2019-20 has emanated from a lower growth of imports following a sharp deceleration in GDP growth and some easing of crude prices besides continued acceleration in FDI inflows. The weakening of the GDP growth poses a challenge to both net FDI and net FPI inflows in improving the BoP position of the country. Should such inflows become smaller on the back of growing pessimism on India's prospective growth, the BoP position may worsen making access to foreign savings much more difficult in times to come.

3.3 Some of the components of BoP have contributed to improving the BoP position and some have not, both in the period 2014-19 and in 2019-20. The components that have contributed favorably will need to be further enhanced and those that have not will need to be re-energized, through an effective mix of policies. The data pertaining to 2019-20 is provisional. The balance of payments table from 2014-19 to 2019-20 (April to September) is placed at Annexure I.

A. Current Account Deficit (CAD)

3.4 An increase in CAD as a ratio to GDP worsens the BoP by drawing down on forex reserves or building the potential to worsen it by increasing the external debt burden. Yet that has not been the case with CAD to GDP ratio significantly improving from 2009-14 to 2014-19 (Table 1). The improvement has continued going forward with the CAD to GDP ratio lower in the first half of 2019-20 as compared to 2018-19 (Figure 1).

Figure 1: Current Account Deficit (CAD) as per cent of GDP



Source: Reserve Bank of India.

Table 1: Current account deficit (CAD) as per cent of GDP

2009-14	2014-19	2018-19	2019-20 H1
-3.3	-1.4	-2.1	-1.5

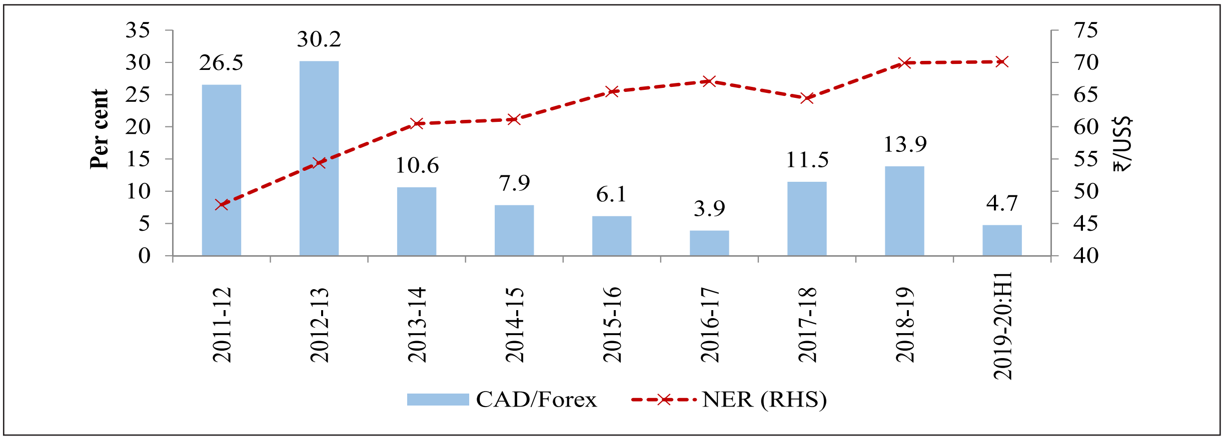
Source: Reserve Bank of India.

3.5 The backup to CAD is the forex reserves with increase in CAD/forex ratio reflecting the decreasing strength of the backup. The decreasing strength spills into depreciating the currency. The ratio increased from 10.6 per cent in 2013-14 to 13.9 per cent in 2018-19 and depreciated the rupee from ₹ 60.50:1 US$ to ₹ 69.92:1 US$ between the two points in time (Figure 2). As the Nominal Exchange Rate (NER) has more or less stayed stable in 2019-20 it appears that the strength of the backup has not changed. Ceteris paribus, depreciation in NER makes imports costlier besides disincentivising foreign portfolio investors, which increases the pressure on BoP to worsen.

A.1 Merchandise Trade Deficit

3.6 Merchandise trade deficit is the largest component of India's current account deficit significantly impacting the BoP position. Over the recent years, the escalation of global trade tensions leading to slowdown in world trade has increased the fragility of India's trade deficit with the potential of worsening the BoP. In sync with an estimated 2.9 per cent growth in global output in 2019, growth in global trade is estimated to grow at 1.0 per cent after having peaked in 2017 at 5.7 per cent. The slowdown of world trade reflects a confluence of factors, including a slowdown in investment, reduced spending on heavily traded capital goods and a sizable decline in trade in cars and car parts. Global trade growth is however projected to recover to 2.9 per cent in 2020 with recovery in global economic activity. However, there is heightened uncertainty regarding the future structure of global value chains and the repercussions of trade tensions on technology, which may continue to weigh down the growth in world trade.[1]

Figure 2: Movements in CAD/Forex and NER

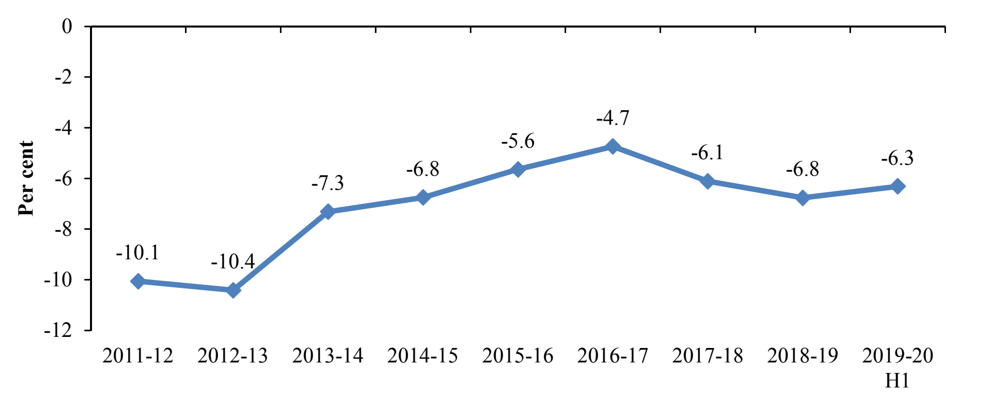


Source: Reserve Bank of India.

3.7 On average, India's merchandise trade balance has improved from 2009-14 to 2014-19 (Table 2), although most of the improvement in the latter period was on account of more than fifty per cent decline in crude prices in 2016-17. Lately the improvement in trade balance has positively contributed to the improvement in BoP position (Figure 3).

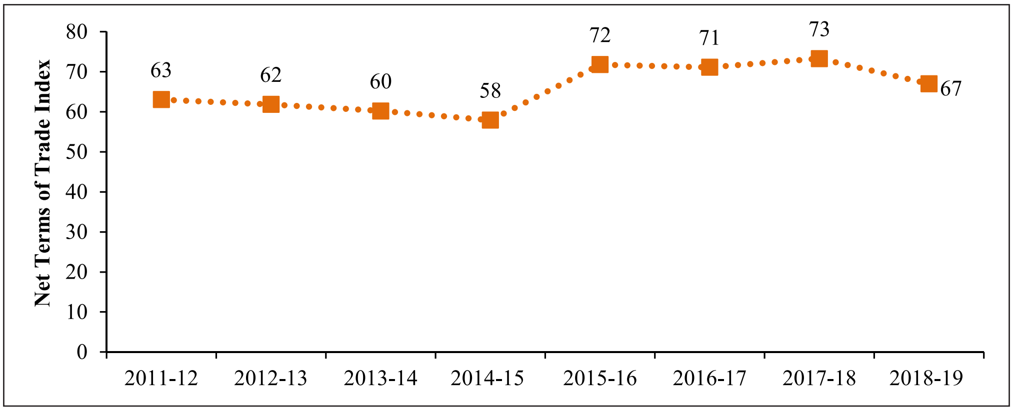
1. Arguments guided by World Economic Outlook of IMF.

Figure 3: Merchandise Trade Balance as per cent of GDP



Source: Department of Commerce & Central Statistics Office (CSO).

Figure 4: Terms of Trade (Base Year 1999-2000)



Source: Directorate General of Commercial Intelligence and Statistics (DGCI&S), Kolkata.

Table 2: Merchandise Trade Balance as per cent of GDP

2009-14	2014-19	2018-19	2019-20 H1
-8.6	-6.0	-6.8	-6.3

Source: Department of Commerce & Central Statistics Office (CSO).

3.8 The adverse movement in Net terms of trade[2] (NTT) between export and import prices may immiserize exporters but can lead to improvement in merchandise trade deficit as costlier imports lead to smaller purchase of quantity imports. Since 2017-18 the adverse movement has started which has contributed to the improvement in trade balance in the BoP (Figure 4).

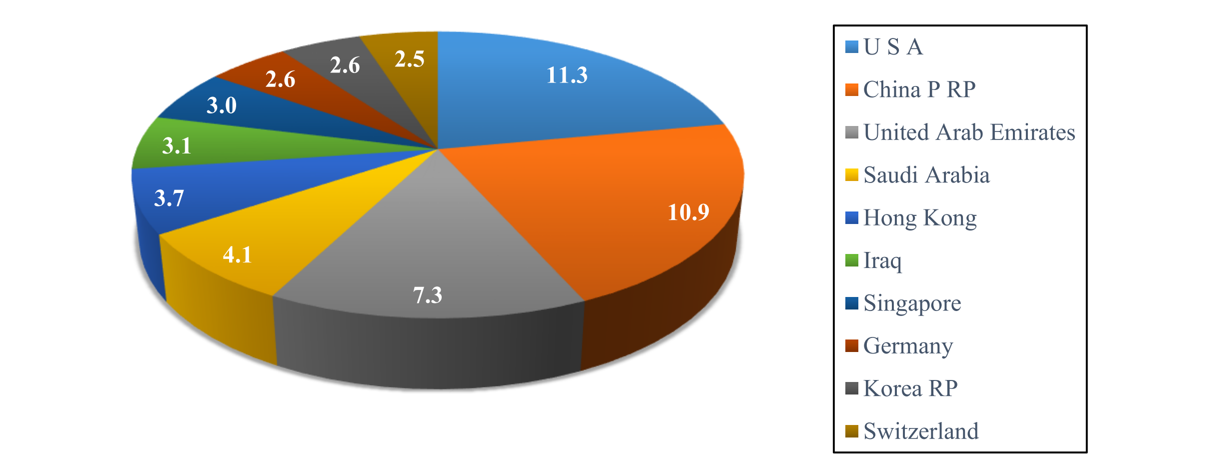
3.9 India's top 10 trading partners during 2019-20 (April-November) jointly account for more than 50 per cent[3] of India's total merchandise trade (Figure 5).

3.10 The bilateral trade position with respect to top trading partners over a period of time

2. Net terms of trade (NTT) of a country is the ratio of unit value index of export to that of import.

3. Exports plus imports from a trade partner as a share of total imports plus exports of India determines the share of the trade partner in India's merchandize trade.

Figure 5: Top 10 Trading Partners of India in 2019-20 (April-November)(in Per cent)



Source: Computed from latest data available on Department of Commerce's website, 'https://commerce-app.gov.in/eidb/default.asp'.

is shown in Table 3. With two top trading countries i.e. USA and United Arab Emirates, India has consistently run trade surplus since 2014-15. On the other hand, India has trade deficit continuously since 2014-15 with respect to other major trading partners i.e. China PRP, Saudi Arabia, Iraq, Germany, Korea RP, Indonesia and Switzerland. India had trade surplus with Hong Kong and Singapore till 2017-18, before it changed to trade deficit in 2018-19. The bilateral imbalances have remained stable in most cases.

Table 3: Bilateral Trade Surplus/Deficit (Sorted on Year: 2018-19)

(Values in US$ Billion)

	Country	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20 (April-November)
Trade Surplus Countries	U S A	20.63	18.55	19.90	21.27	16.86	10.91
	United Arab Emirates	6.89	10.87	9.67	6.41	0.34	0.25
Trade Deficit Countries	China PRP	-48.48	-52.70	-51.11	-63.05	-53.57	-35.32
	Saudi Arabia	-16.95	-13.94	-14.86	-16.66	-22.92	-14.32
	Iraq	-13.42	-9.83	-10.60	-16.15	-20.58	-13.98
	Germany	-5.25	-5.00	-4.40	-4.61	-6.26	-3.09
	Korea RP	-8.93	-9.52	-8.34	-11.90	-12.05	-7.80
	Indonesia	-10.96	-10.31	-9.94	-12.48	-10.57	-6.99
	Switzerland	-21.06	-18.32	-16.27	-17.84	-16.90	-11.97
	Hong Kong	8.03	6.04	5.84	4.01	-4.99	-3.88
	Singapore	2.68	0.41	2.48	2.74	-4.71	-3.15

Source: Computed from latest data available on Department of Commerce's website, 'https://commerce-app.gov.in/eidb/default.asp'.

A.1.1 Merchandise Exports

3.11 An increase in merchandise exports to GDP ratio has a net positive impact on BOP position. Over the years the merchandise exports to GDP ratio has been declining, entailing a negative impact on the BoP position (Table 4 and Figure 6).

Table 4: Merchandise Exports as per cent of GDP

2009-14	2014-19	2018-19	2019-20 H1
15.7	12.7	12.1	11.3

Source: Department of Commerce & Central Statistics Office (CSO).

3.12 The slowdown of world output has definitely had an impact on reducing the export to GDP ratio, particularly from 2018-19 to H1 of 2019-20. The appreciation in the real exchange rate (Table 5 and Figure 6) has also contributed to the declining exports to GDP ratio.

Table 5: Real Effective Exchange Rate (Base 2004-05=100)

2009-14	2014-19	2018-19	2019-20 H1
107.1	113.9	114.0	116.5

Source: Reserve Bank of India

3.13 The impact on India's exports of a slowdown in world output and appreciation of India's real exchange rate has been an outcome of increasing integration of India's exports with global value chain. The integration with the global value chain has increased following a relatively higher growth in manufacturing exports. In view of government's growing emphasis on "Make in India" programme, increase in the share of manufacturing exports in total exports is inevitable (Table 6 and Figure 7).

Table 6: India's Manufactured exports share in Total merchandise exports

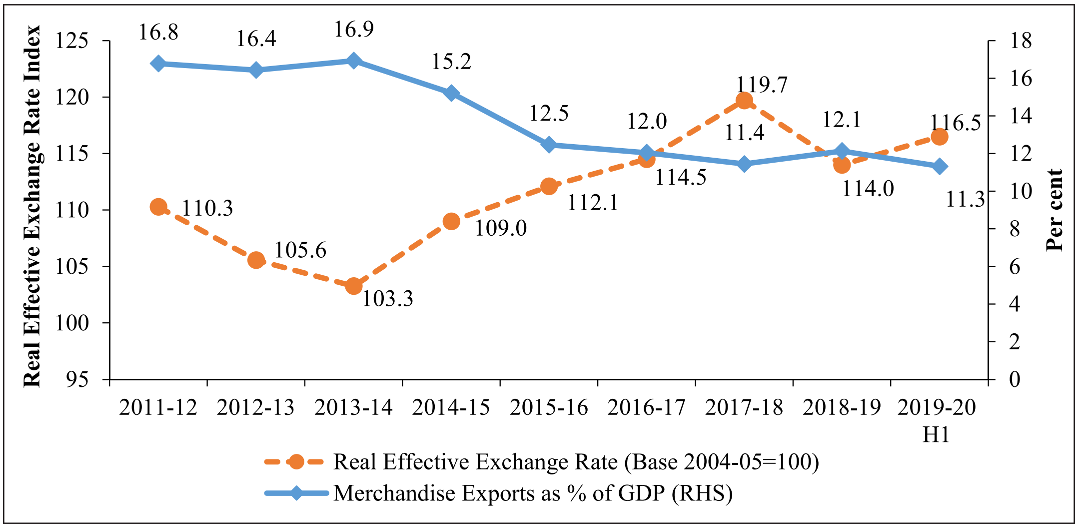
2009-13	2014-18	2017	2018
66.5	72.8	74.4	72.8

Source: Trademap.org.

Note: The years mentioned are calendar years.

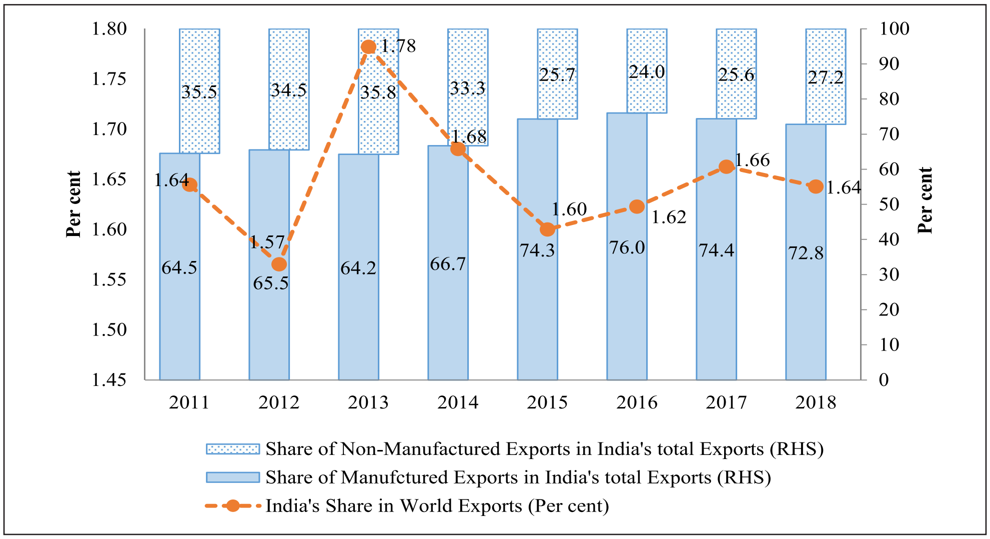
3.14 Petroleum, Oil and Lubricants (POL) exports have a dominant share in India's export basket. However, since petroleum exports are a value-added pass through of petroleum imports, exports net of POL

Figure 6: Movement in 36 Currency REER (Base 2004-05) & Merchandise Exports as per cent of GDP



Source: Reserve Bank of India, Department of Commerce & Central Statistics Office (CSO).

Figure 7: India's share in World Exports, Share of Manufactured &Non-Manufactured Items in India's Total Merchandise Exports



Source: Trademap.org.
Note: The years mentioned are calendar years.

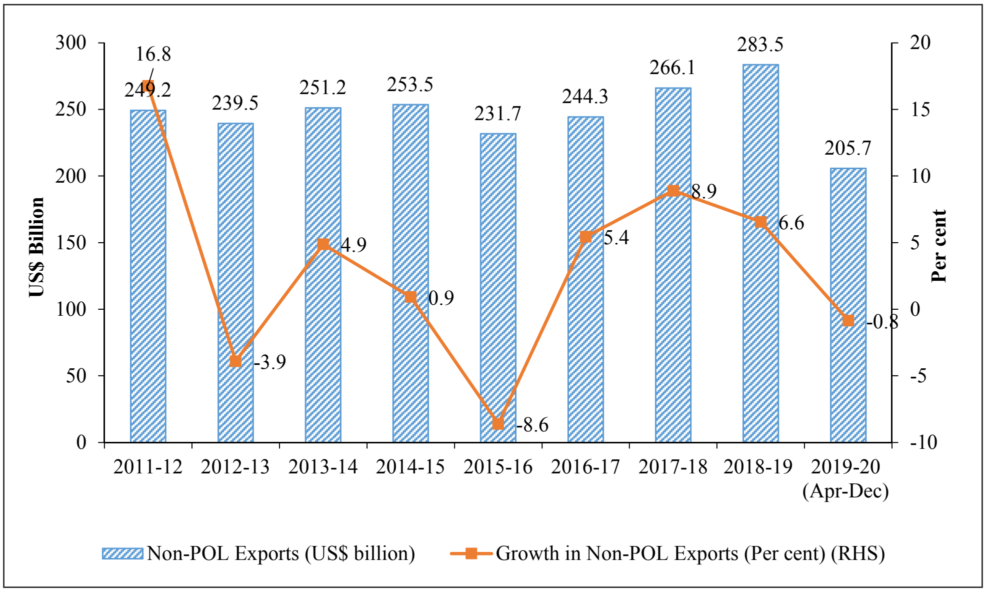
exports reflects how broad-based India's exports are in generating value addition in the country. Growth in Non-POL exports dropped significantly from 2009-14 to 2014-19 (Table 7 and Figure 8). This is a challenge that needs to be addressed in times to come.

Table 7: Growth of Non-POL Exports

2009-14	2014-19	2018-19	2019-20 (Apr-Dec)
11.0	2.6	6.6	-0.8

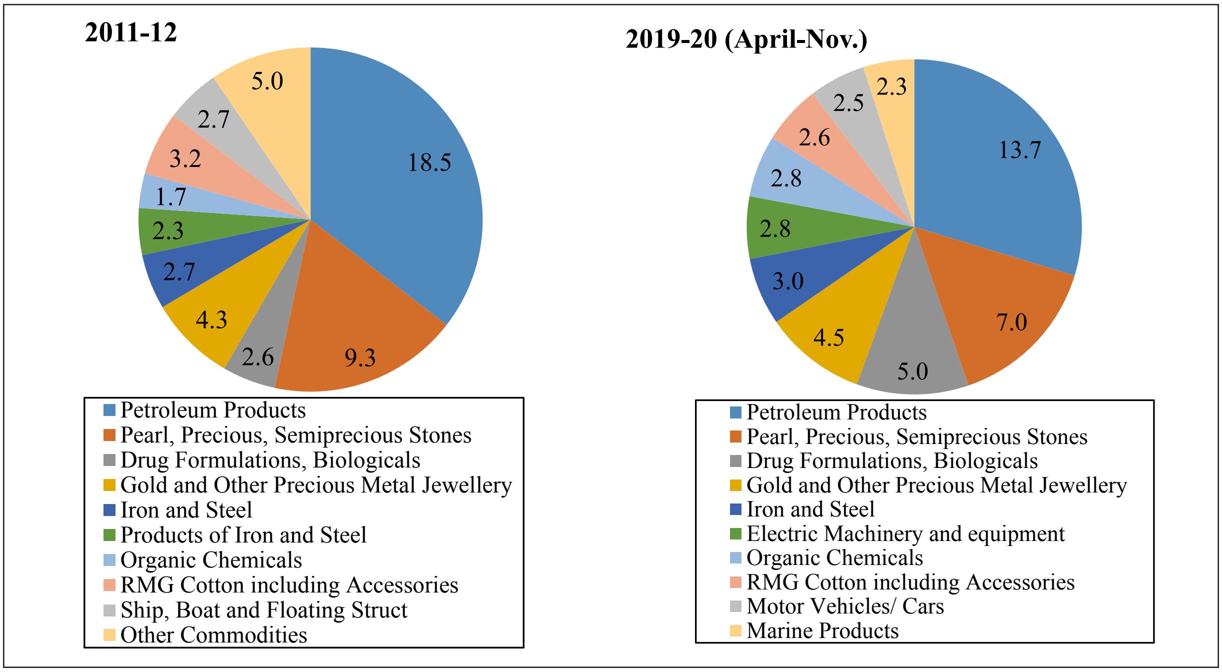
Source: Department of Commerce.

Figure 8: Non-POL Exports and its Growth rate



Source: Department of Commerce.

Figure 9: Commodity-wise Composition of Exports (By Share in Per cent)

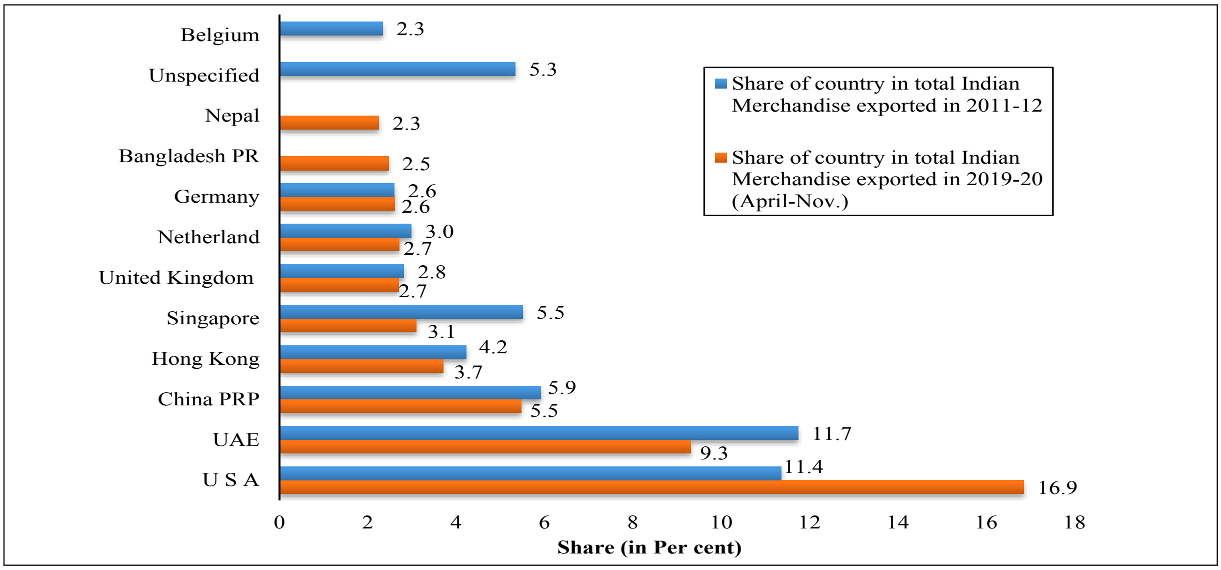


Source: Department of Commerce.

3.15 In 2019-20 (April-November), petroleum products continued to be the largest exported commodity, in value terms. In terms of growth, it was drug formulations, biologicals which grew the highest between 2011-12 and 2019-20 (April-November) (Figure 9).

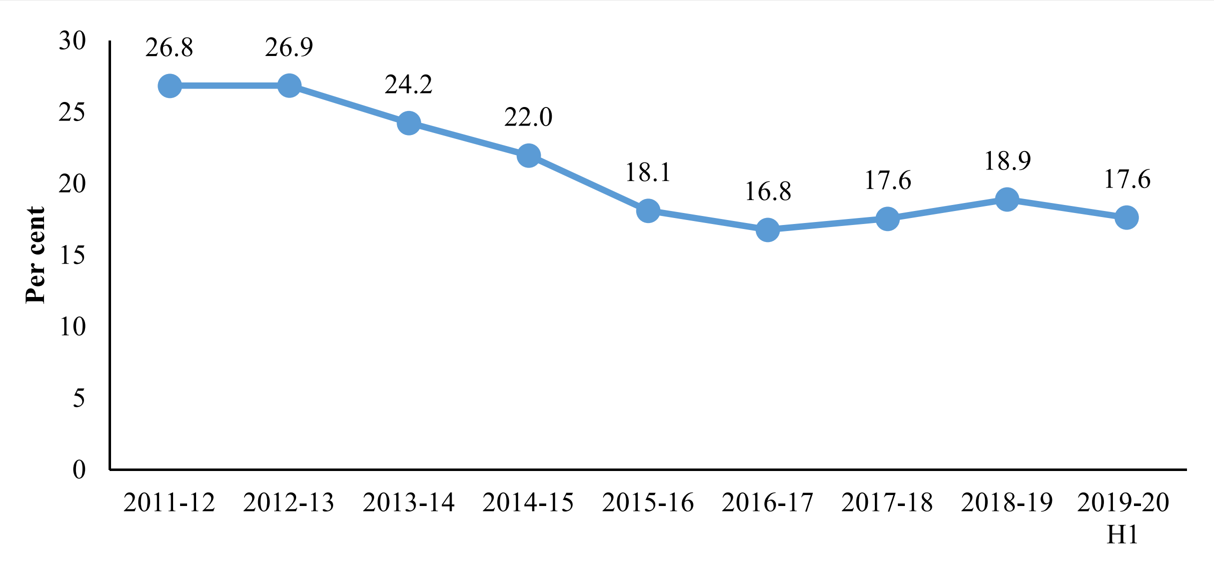
3.16 India's largest export destination country continues to be the United States of America (USA) in 2019-20 (April-November), followed by United Arab Emirates (UAE), China and Hong Kong. Between 2011-12 and 2019-20, India's exports to USA grew the highest (Figure 10).

Figure 10: Top 10 Export Destinations in 2011-12 and 2019-20 (April-November)



Source: Department of Commerce.

Figure 11: India's Merchandise Imports as percent of GDP



Source: Department of Commerce & Central Statistics Office (CSO).

A.1.2 Merchandise Imports

3.17 An increase in the merchandise imports to GDP ratio has a net negative impact on the BoP position. Over the years the ratio has been declining for India entailing a net positive impact on the BoP position (Table 8 and Figure 11).

3.18 Crude oil imports have a large presence in the import basket that correlates India's total imports with crude prices. Evidence also bears this out. As crude price rises so does the share of crude in total imports that increases imports to GDP ratio (Table 9 and Figure 12).

Table 8: India's Merchandise Imports as percent of GDP

2009-14	2014-19	2018-19	2019-20-H1
24.3	18.7	18.9	17.6

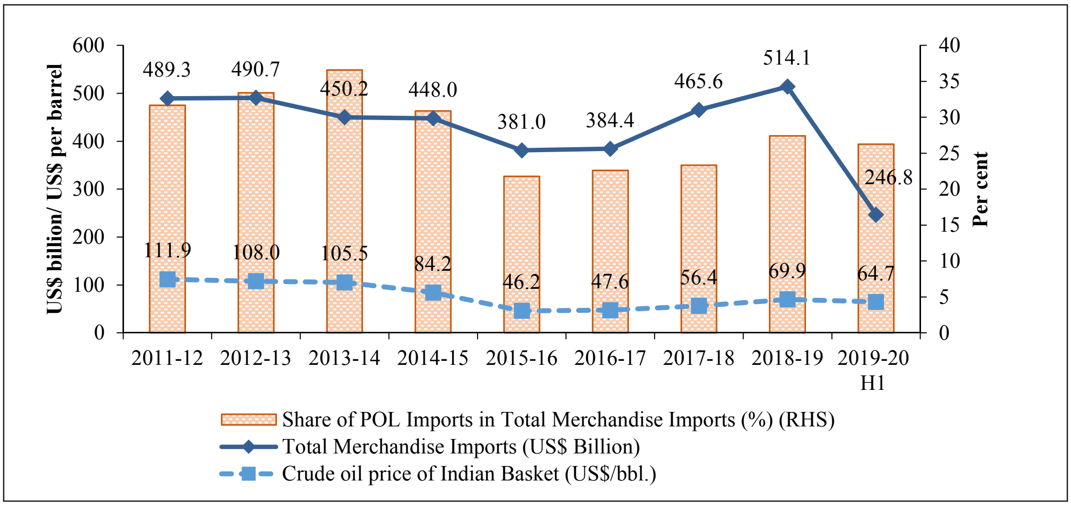
Source: Department of Commerce & Central Statistics Office (CSO).

Table 9: Share of POL Import in Total Imports and Crude Oil Price (Indian Basket)

Item	2009-14	2014-19	2018-19	2019-20-H1
Share of POL imports in total imports (per cent)	32.1	25.2	27.4	26.3
Crude oil price of Indian Basket (US$/bbl.)	96.0	60.8	69.9	64.7
Merchandise Imports as percent of GDP	24.3	18.7	18.9	17.6

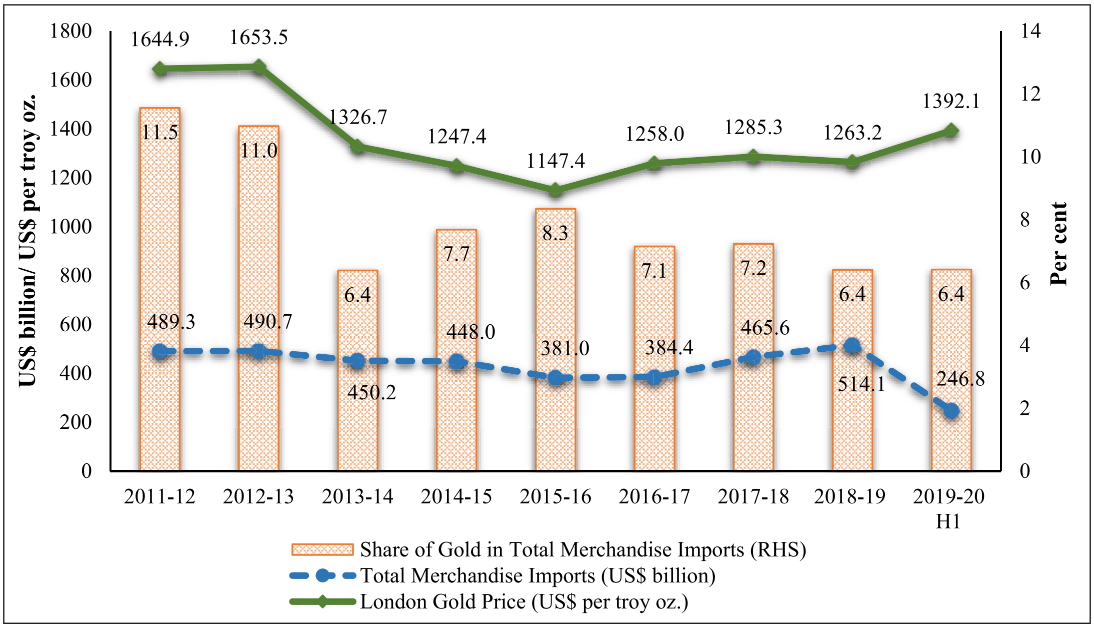
Source: Department of Commerce and Ministry of Petroleum and Natural Gas.

Figure 12: India's Imports, Share of POL import in Total Imports and Crude Oil Price



Source: Department of Commerce and Ministry of Petroleum and Natural Gas.

Figure 13: India's Gold Import Value and share vis-à-vis Gold Price



Source: Department of Commerce & World Bank Pink Sheet.

3.19 Gold imports also have a significant presence in the import basket that correlates India's total imports with gold prices. While broadly that has been true for the two five-year periods, 2009-14 and 2014-19, the share remained the same between 2018-19 and the first half of 2019-20, despite an increase in gold prices, possibly due to increase in import duty that reduced the import of gold (Table 10 and Figure 13).

3.20 Although a fall in merchandise imports to GDP ratio entails a net positive impact on the BoP position, it may be a reflection of a deceleration in GDP growth. Non-pol-non-gold imports are understood to be positively correlated with GDP growth. However, non-pol-non-oil imports fell as a proportion to GDP from 2009-14 to 2014-19 when GDP growth accelerated between the two periods

Table 10: Share of Gold Imports in Total Imports and London Gold Price

Item	2009-14	2014-19	2018-19	2019-20-H1
Share of gold imports in total imports (per cent)	10.0	7.4	6.4	6.4
London Gold Price (US$ per troy oz.)	1388.3	1240.3	1263.2	1392.1
Merchandise Imports as percent of GDP (per cent)	24.3	18.7	18.9	17.6

Source: Department of Commerce & World Bank Pink Sheet.

Table 11: Non-POL, Non- Gold Imports and Growth in Real GDP

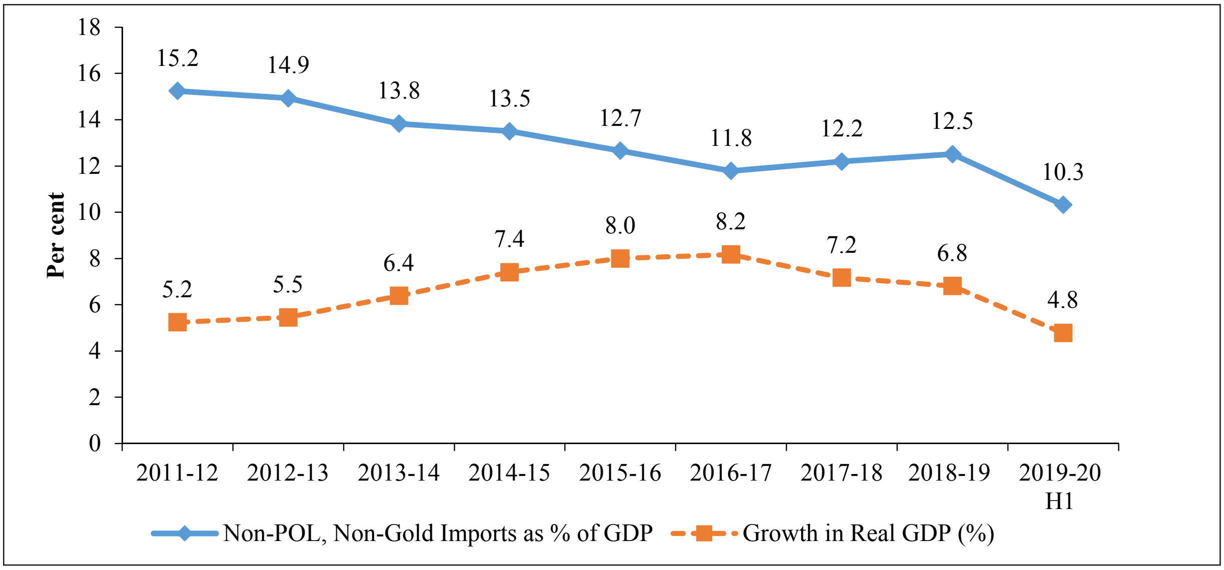
Item	2009-14	2014-19	2018-19	2019-20-H1
Non-POL, Non- gold imports as percent of GDP (per cent)	14.0	12.5	12.5	10.3
Growth in Real GDP (per cent)	6.7	7.5	6.8	4.8

Source: Department of Commerce & Central Statistics Office (CSO).

(Table 11). This may have happened because of consumption driven growth while the investment rate declined lowering non-pol-non-gold imports. Continuous decline in investment rate decelerated GDP growth, weakened consumption, dampened the investment outlook, which further reduced GDP growth and along with it non-pol-non-gold imports as a proportion of GDP from 2018-19 to H1 of 2019-20 (Figure 14).

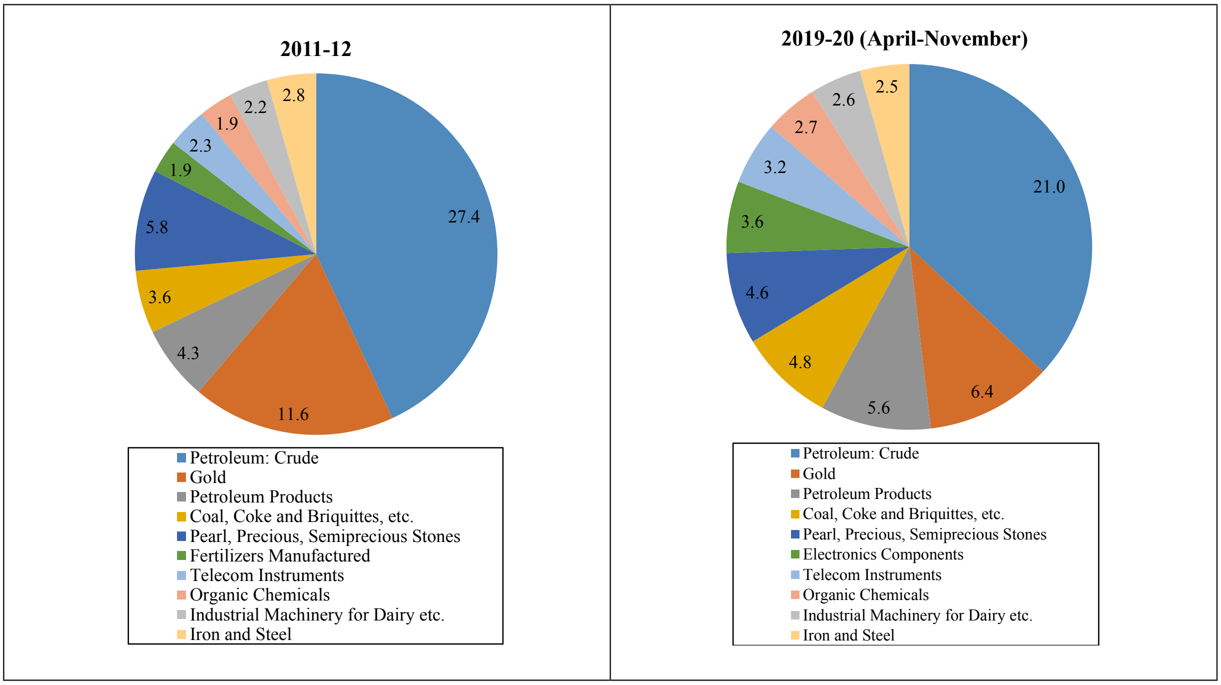
3.21 In the import basket of 2019-20 (April-November), crude petroleum had the largest share followed by gold and petroleum products. However, between 2011-12 and 2019-20, imports of Electronics grew the fastest from a negligible share to 3.6 per cent (Figure 15).

Figure 14: Non-POL, Non-Gold Imports as per cent of GDP and Growth in Real GDP



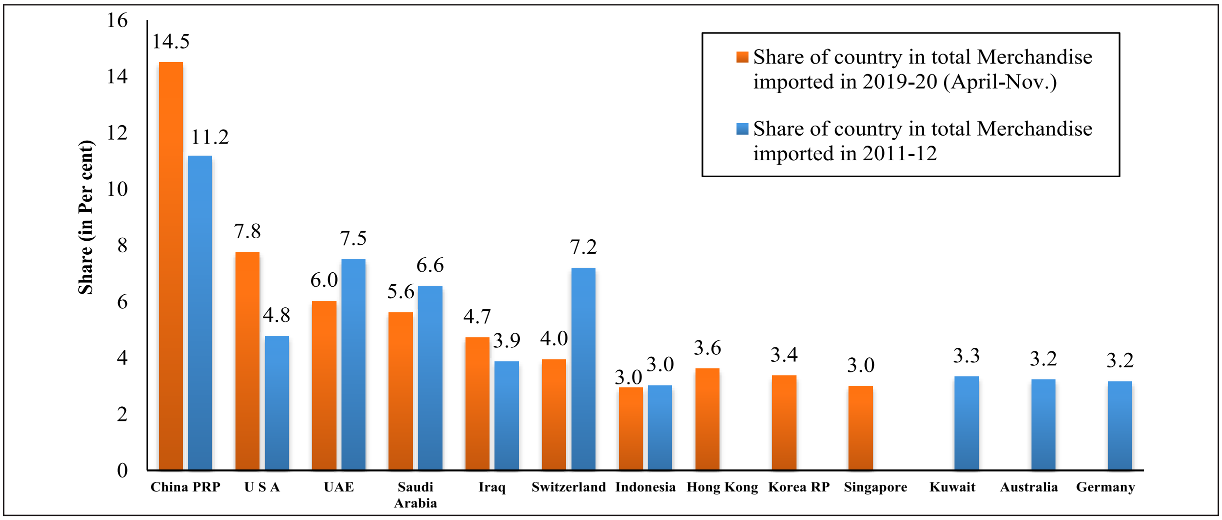
Source: Department of Commerce & Central Statistics Office (CSO).

Figure 15: Commodity-wise Composition of Imports in (By Share in Per cent)



Source: Department of Commerce.

Figure 16: Top 10 Import Origins of India in 2011-12 and 2019-20 (April-November) (By Share in Per cent)

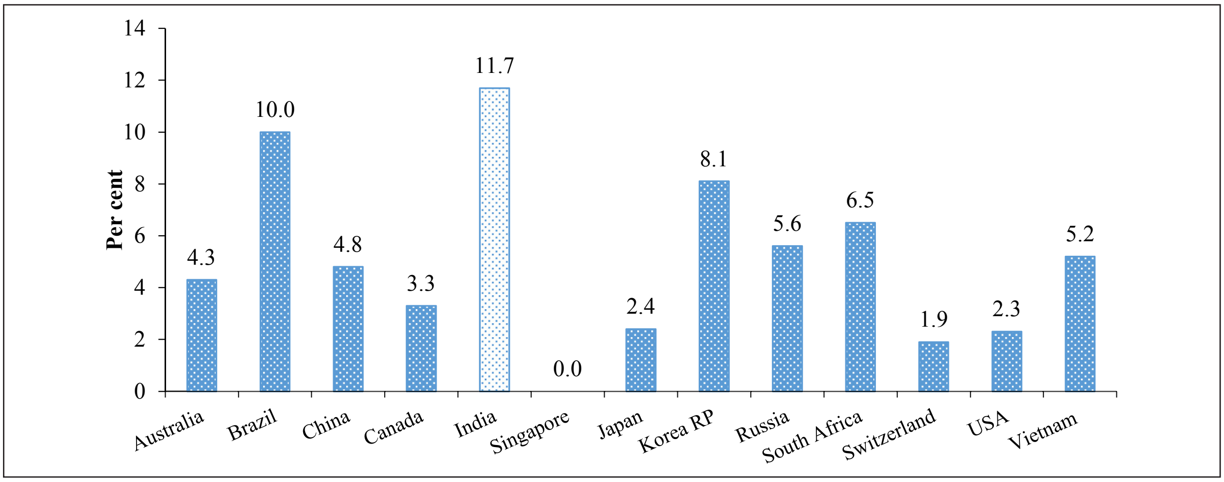


Source: Department of Commerce.

3.22 China continues to be the largest exporter to India followed by USA, UAE and Saudi Arabia. In recent times, Hong Kong, Korea and Singapore have also emerged as significant exporters to India (Figure 16).

3.23 In the presence of high custom duties, the impact of acceleration in the growth of GDP on increasing non-pol-non-gold imports is somewhat muted, which limits the worsening impact on BoP. On the other hand, when GDP growth decelerates, high tariffs amplify the impact on lowering non-pol-non-gold imports thereby making a more than proportionate improvement in BoP. In this regard, India has also benefitted with tariff levels steeper than that in other countries (Figure 17).

Figure 17: Trade Weighted Average Import Tariff (Total) during 2017



Source: WTO Tariff Profiles database, 'https://www.wto.org/english/res_e/statis_e/tariff_profiles_list_e.htm'

A.2 Net Services

3.24 Net services as a proportion of GDP reflects the net impact of service exports and imports on BoP. India's net services surplus has been steadily declining in relation to GDP (Table 12 and Figure 18).

Table 12: Net services as per cent of GDP

2009-14	2014-19	2018-19	2019-20 H1
3.3	3.2	3.1	2.9

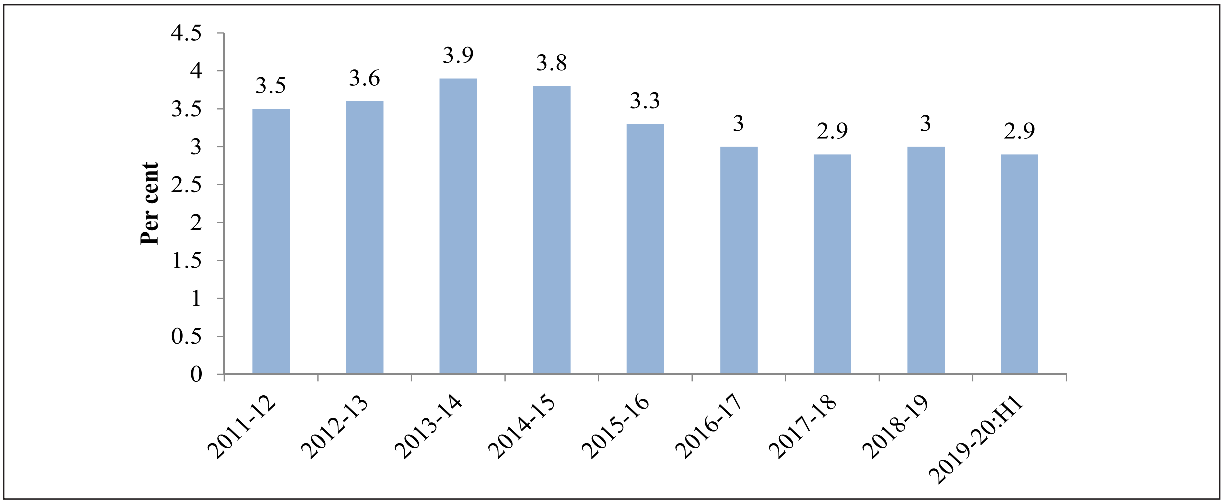
Source: Reserve Bank of India.

3.25 The surplus on net services has been significantly financing the merchandise trade deficit. The financing reached its peak to about two-thirds of merchandise deficit in 2016-17 before declining to less than half in the last couple of years (Figure 19). Given a steady decline in net services to GDP ratio, the extent of financing will steadily fall unless merchandise trade deficit improves in relation to GDP.

A.2.1 Service Exports

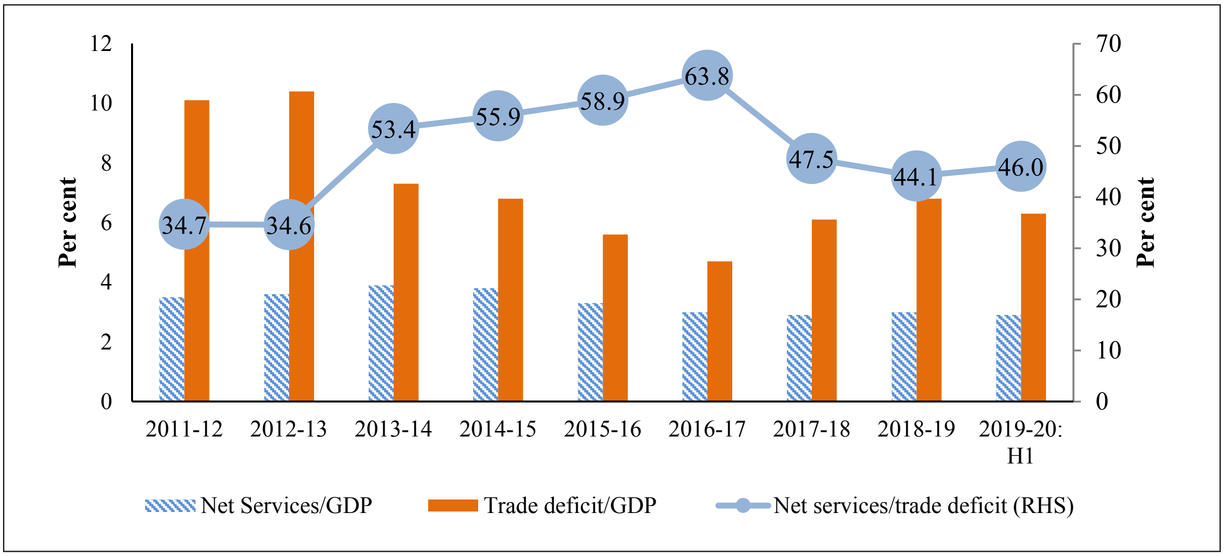
3.26 An increase in service exports to GDP ratio has a net positive impact on the

Figure 18: Net services as per cent of GDP



Source: Reserve Bank of India.

Figure 19: Net services and trade deficit



Source: Reserve Bank of India

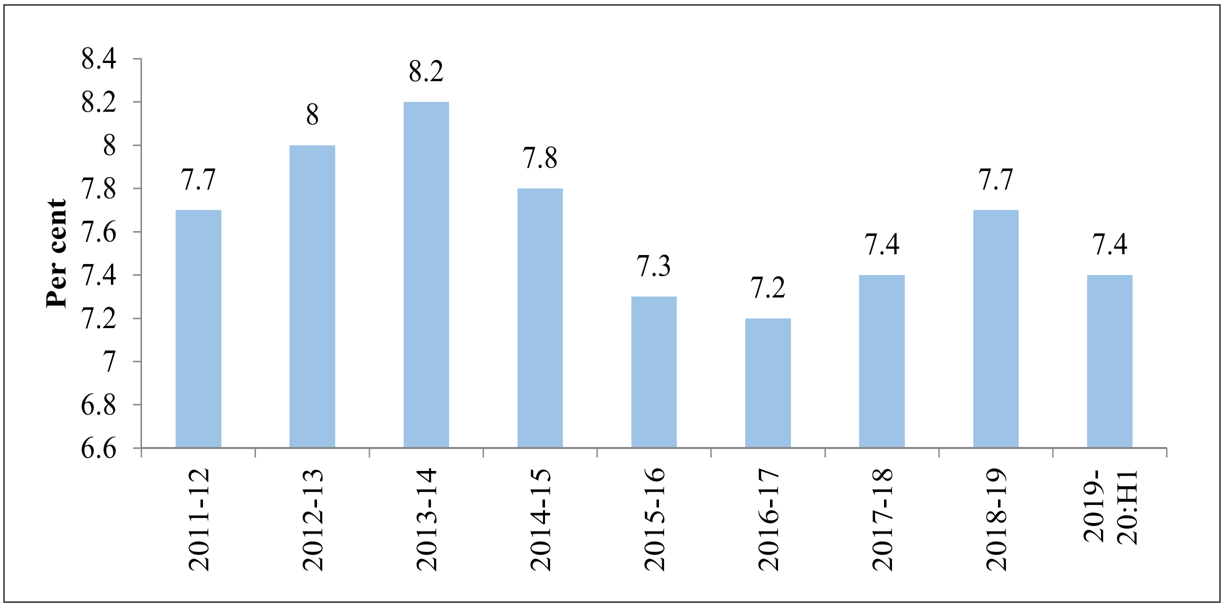
BoP position. India's service exports have however consistently hovered between 7.4 to 7.7 per cent of GDP reflecting the steadiness of this source in contributing to the stability of BoP (Table 13 and Figure 20).

Table 13: Service Exports as per cent of GDP

2009-14	2014-19	2018-19	2019-20 H1
7.7	7.5	7.7	7.4

Source: Reserve Bank of India.

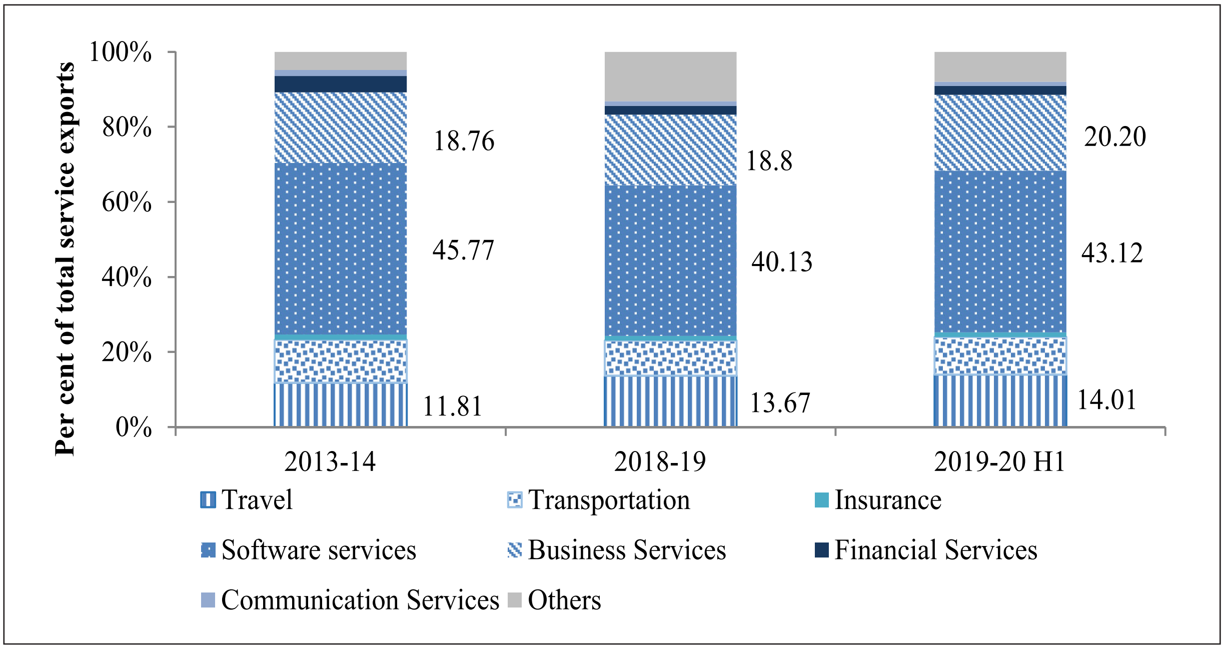
Figure 20: Service exports as per cent of GDP



Source: Reserve Bank of India.

3.27 The composition of service exports has remained largely unchanged over the years. Software services constitute the bulk of it at around 40-45 per cent, followed by business services at about 18-20 per cent, travel at 11-14 per cent and transportation at 9-11 per cent (Figure 21).

Figure 21: Composition of service exports



Source: Reserve Bank of India

A.2.2 Service Imports

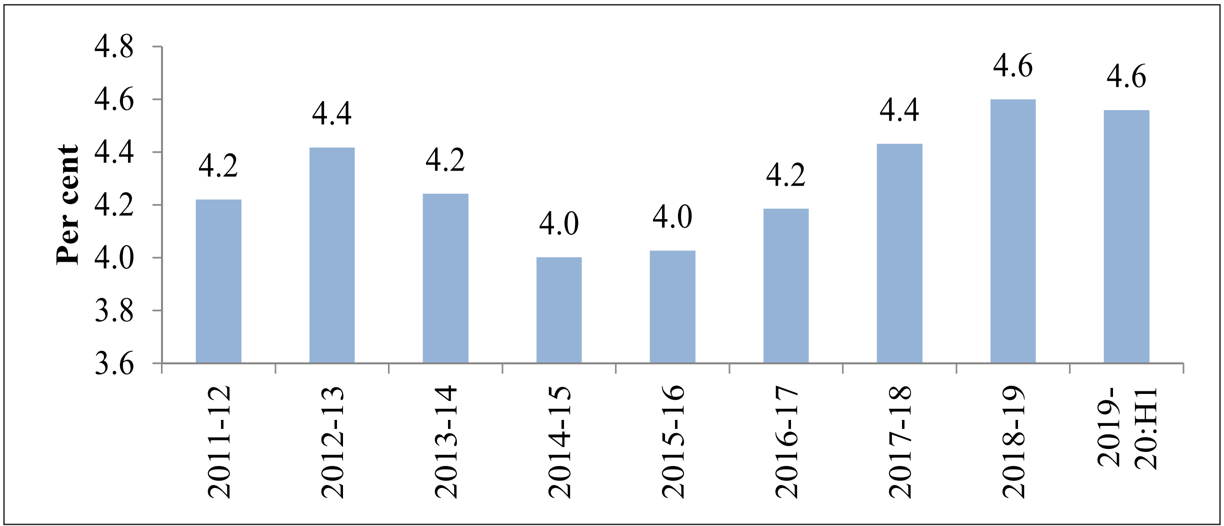
3.28 An increase in service imports to GDP ratio has a net negative impact on the BoP position. Over the years, service imports in relation to GDP has been steadily rising putting pressure on BoP to worsen (Table 14 and Figure 22). However, increase in service imports to GDP ratio is inevitable given a rising level of FDI and a gradual upscaling of the Make in India program.

Table 14: Service Imports as per cent of GDP

2009-14	2014-19	2018-19	2019-20 H1
4.4	4.3	4.6	4.6

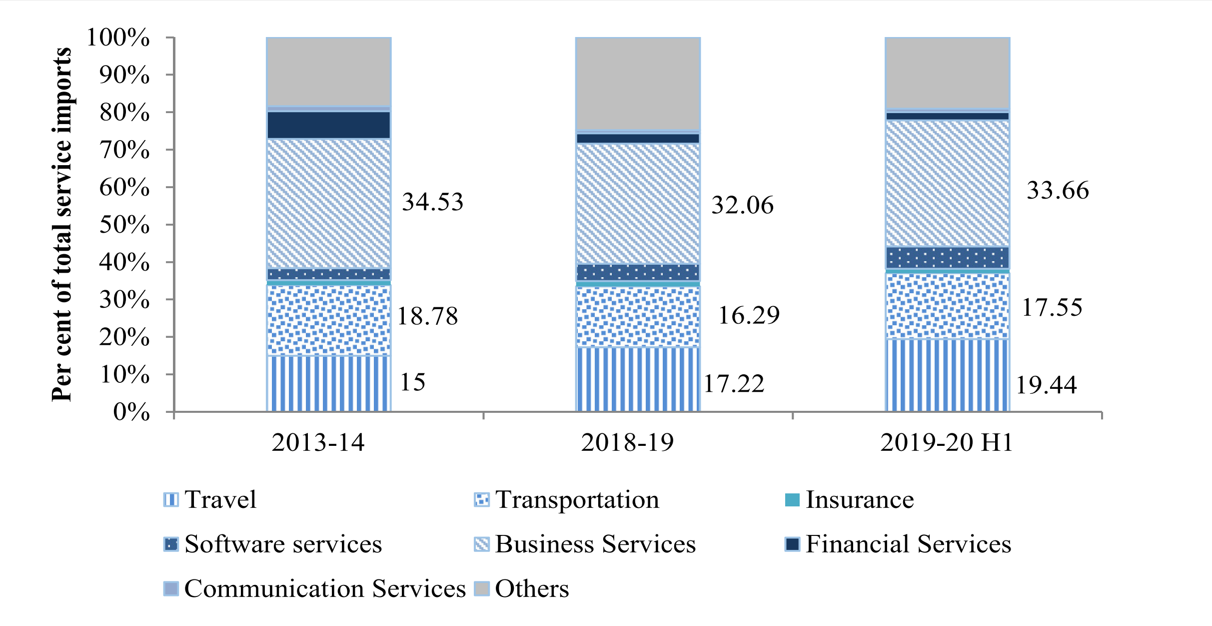
Source: Reserve Bank of India.

Figure 22: Service imports as per cent of GDP



Source: Reserve Bank of India.

Figure 23: Composition of service imports



Source: Reserve Bank of India

3.29 The relative shares of the various constituents of service imports have also not varied much with business services constituting about a third of service imports, which is in consonance with the rising level of economic activity in the country. The component of travel services has however been steadily increasing reflecting the growing attractiveness of global destinations to the domestic tourists in the country (Figure 23).

A.3 Policy Environment

A.3.1 India and WTO

3.30 India hosted a WTO Ministerial Meeting of Trade Ministers on 13-14 May 2019 in New Delhi wherein sixteen developing and six least developed countries along with the DG, WTO participated to deliberate on matters of concern to the member countries. The meeting culminated in an outcome document, which lays out priorities for developing countries in various areas and envisages addressing the challenges being faced by the Dispute Settlement system of the WTO.

3.31 India has also been working collectively with other developing countries and has submitted a paper in the General Council meeting of the WTO spelling out the priorities that are required to be taken into consideration while undertaking reforms in the WTO. The submission calls for preservation of core principles of the Multilateral Trading System, safeguarding special and differential treatment provisions, resolution of the Appellate Body crisis, addressing unilateral actions and continuation of negotiations in mandated areas, among others. In particular, India has emphasized that special and differential treatment provisions are essential for better integration of the developing countries in the global trading system. These provisions are at the core of the WTO and must be preserved.

3.32 In addition, a submission on transparency and notification requirements at the WTO has also been made by India along with other WTO members including Cuba, African group. The submission outlines that transparency should be a common thread running in all the operations of the WTO. Developing countries including the least developed countries, who are already resource/capacity constrained should not be penalized in the name of improving transparency.

3.33 The twelfth Ministerial Conference of the WTO (MC12) is scheduled to be held in June 2020 in Nur-Sultan, Kazakhstan. Discussions for an outcome at MC12 are underway at various informal Ministerial meetings and regular meetings at the WTO. Despite wide divergences among members in the positions taken by them in different areas of negotiation, India is regularly engaging with members with a view to find solutions which addresses the issues of concern to the larger membership of the WTO.

3.34 India has, time and again, underscored the need of a permanent solution in public stockholding for food security programmes. There has, however not been constructive engagement in this area of negotiation. Besides, India is also fully engaged in the fisheries subsidies negotiations in the WTO and considers safeguarding the interests of poor, small and artisanal farmers as a priority in the negotiations.

3.35 India has bilateral trade arrangements with many major regional groupings/ countries. The list of Free Trade Agreements (FTAs) and Preferential Trade agreements (PTAs) already in force and the list of on-going trade negotiations are placed at Annexure II.

A.3.2 Trade Facilitation

3.36 India ratified the WTO Agreement on Trade Facilitation (TFA) in April 2016 and subsequently constituted a National Committee on Trade Facilitation (NCTF) to commence the implementation. In order to optimize the gains of trade facilitation, National Trade Facilitation Action Plan (NTFAP 2017-20) containing specific activities to further ease out the bottlenecks to trade was released on 20th July, 2017 with an overall vision of the Government to see India as an active facilitator of trade. Since then, the NCTF has played an important role in reducing the high cost of imports and exports so as to integrate the country's cross-border trade with the global value chain. As a result of consistent trade facilitation efforts, India has improved its ranking from **143** in 2016 to **68** in 2019 under the indicator, "Trading across Borders", which is monitored by World Bank in determining the overall ranking of around 190 countries in its Ease of Doing Business Report.

3.37 Sub-parameters of indicator "Trading Across Borders" namely time and cost required to comply with documentary requirement and border requirement for export and import have shown significant improvement since India ratified the WTO's trade facilitation agreement in 2016. Further, in order to achieve cargo release time targets, India is undertaking a national level Time Release Study (TRS) for the first time in 2019 across multiple locations covering seaports, Inland Container Depots (ICDs), air cargo complex and integrated check posts. The intended objectives of national TRS are to assess impact of extant measures to reduce release time, examine extant procedures, technologies and infrastructure and administrative concerns and thereby identify manual processes and physical touchpoints, bottlenecks and inefficiencies (by stakeholders) to bring down the overall release time.

3.38 The key initiatives contributing to reduction in overall cargo release time and

Box 1: Major Schemes for Export Promotion

Merchandise Exports from India Scheme (MEIS): Introduced w.e.f. 01.04.2015, the objective of MEIS is to offset infrastructural inefficiencies and associated costs involved in exporting goods/ products which are produced/ manufactured in India. The scheme incentivizes exporters in terms of Duty Credit Scrips at the rate 2, 3, 4, 5, 7 per cent of Free On Board (FOB) value of exports realized. These scrips are transferable and can be used to pay certain Central Duties/ taxes including customs duties. The scheme covers exports of more than 8000 tariff lines. The process from application till final issuance of the MEIS scrip is digitized end to end, without any manual interface for more than 99 per cent of HS Codes on which MEIS is eligible.

Services Exports from India Scheme (SEIS): Under this scheme, rewards on Net foreign exchange earnings, to service providers of notified services who are providing service from India to the rest of the World, in the form of Duty Credit scrips are available. The scrips, just like MEIS are transferable and can be used to pay certain Central Duties/ taxes including customs duties. The service exporters are eligible for SEIS at the rate of 5 per cent and 7 per cent of the Net Foreign Exchange Earnings (NFEE) for exports made in a Financial Year.

Export Promotion Capital Goods (EPCG) Scheme: This Scheme allows exporters to import capital goods (except certain specified items under the Scheme) for pre-production, production and post-production at zero customs duty. In return, the exporters are required to fulfill the export obligation to the tune of six times the import duties, taxes and cess saved amount on capital goods, to be fulfilled in six years from date of issue of the Authorization. Capital goods imported under EPCG authorizations for physical exports are also exempt from Integrated Goods and Services Tax (IGST) and Compensation Cess, at present up to 31.03.2020.

Advance Authorization Scheme: Advance Authorization (AA) is issued to allow duty free import of inputs, which are physically incorporated in export products (making normal allowance for wastage). In addition, fuel, oil, catalyst which are consumed/ utilized in the process of production of export products are also be allowed.

Duty Free Import Authorization (DFIA): Duty Free Import Authorization (DFIA) is issued on post export basis for products for which Standard Input Output Norms (SION) have been notified. One of the objectives of the scheme is to facilitate transfer of the authorization or the inputs imported as per SION, once export is completed. Provisions of DFIA Scheme are similar to Advance Authorization Scheme.

Interest Equalization Scheme (IES): The scheme came into effect from 01.04.2015 for a period of 5 years. This scheme is being implemented by the DGFT through Reserve Bank of India (RBI) for pre and post Shipment Rupee Export Credit. Under the Scheme, interest equalization @ 3 per cent per annum has been made available to eligible exporters. W.e.f. 02.11.2018, the interest equalization rate has been increased from 3 per cent to 5 per cent for exports made by MSME sector under the ongoing Interest Equalization Scheme (IES) on Pre and post Shipment Rupee Export Credit. The merchant exporters have also been included at the interest equalization rate of 3 per cent under this scheme w.e.f. 02.01.2019.

Export Oriented Units (EOU)/Electronic Hardware Technology Park(EHTP)/Software Technology Parks (STP)/Bio-Technology Parks (BTP) Scheme: The objectives of these four schemes, i.e.; Export Oriented Units (EOU), Electronic Hardware Technology Park (EHTP), Software Technology Parks (STP) and Bio-Technology Parks (BTP) Scheme; are to promote exports, enhance foreign exchange earnings, attract investment for export production and employment generation. The units undertaking to export their entire production of goods and services (except permissible sales in DTA) may be set up under the schemes. Trading units are not covered under these schemes. Under this scheme, the EOUs etc. are permitted to import and/ or procure from DTA or bonded warehouse in DTA or from international exhibition held in India till 31.03.2020 (as provided by GST Council and notifications issued there under) without payment of customs duty as provided under First Schedule to the Customs Tariff Act, 1975 and additional duty, if any, of Customs leviable under Section 3(1), 3(3) and 3(5) and without payment of Integrated Tax and GST Compensation Cess leviable under section 3(7) and 3(9) of the said Act as per notification issued by the Department of Revenue from time to time.

Deemed Exports Scheme: Deemed Exports refers to those transactions in which the goods supplied do not leave the country and the payment for such supplies is received either in Indian rupees or in free foreign exchange. Under the scheme of deemed exports, exemption/ refund of duties on the goods manufactured and supplied to specified categories of deemed exports as given under the Foreign Trade Policy (FTP) is provided to ensure a level playing field to domestic manufacturers. The benefits under the Scheme are duty exemption, refund of terminal excise duty, refund of duties suffered by the inputs utilized in manufacture and supply of the goods to the specified categories of deemed exports. Under the GST regime, the Duty Drawback is limited to exemption/ refund of basic custom duties.

Transport and Marketing Assistance (TMA) for Specified Agriculture Products Scheme: To mitigate disadvantage of higher cost of transportation of export of specified agriculture products due to trans-shipment and to promote brand recognition for Indian agricultural products in specified overseas markets, the "Transport and Marketing Assistance" (TMA) scheme for specified agriculture products was launched in February, 2019 and is available for exports occurring from 01.03.2019 to 31.03.2020.

Trade Infrastructure for Export Scheme (TIES): The Government of India has launched a scheme namely, Trade Infrastructure for Export Scheme (TIES), from FY 2017-18 with the objective to assist Central and State Government Agencies for creation of appropriate infrastructure for growth of exports from the States. The Scheme provides financial assistance in the form of grant-in-aid to Central/State Government owned agencies for setting up or for up-gradation of export infrastructure as per the guidelines of the Scheme. Establishment of facility for the identification of origin and authenticity at Export Inspection Agency, Mumbai and Construction of office-cum-lab complex of EIA Chennai SO Visakhapatnam are two projects, approved under TIES.

Source: Department of Commerce.

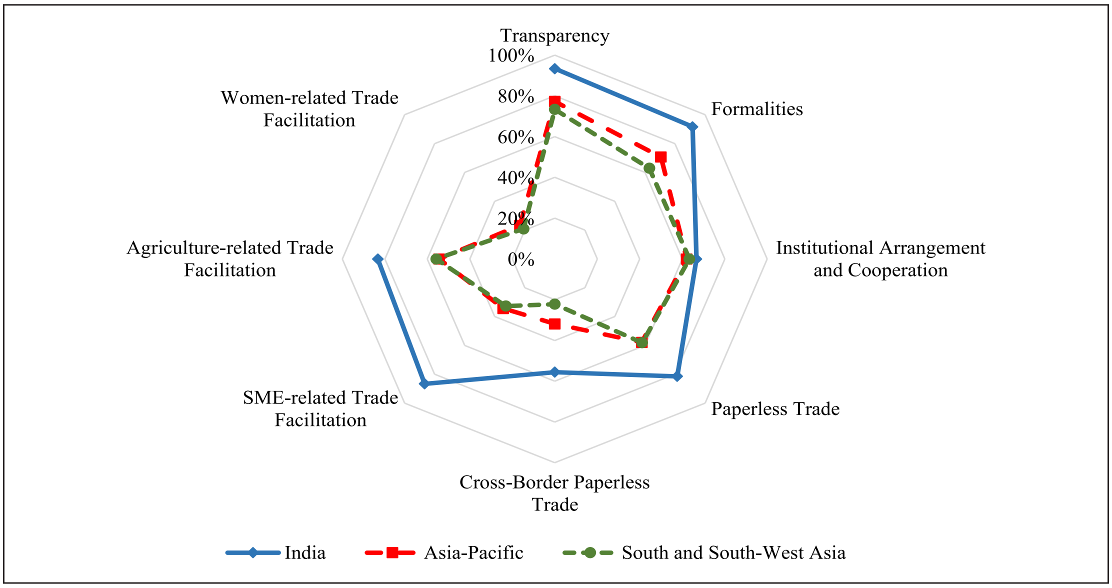
consequent improvement in ranking of India under the indicator "Trading across Borders" include the following:

- Enablement of Single Window Interface for Facilitating Trade (SWIFT) on Customs Portal,
- Enablement of post clearance audit,
- Self e-sealing through RFID tag by trusted exporters,
- Requirement of only 3 mandatory documents for import/export,
- Introduction of 'E-Sanchit' for lodging supporting documents online,
- Tracking of imported cargo clearance time through Indian Customs Ease of Doing Business Dashboard (ICEDASH),
- 24X7 online customs clearance facility,
- Elimination of merchant overtime fees,
- Launch of Atithi mobile App for international passengers and
- Elimination of merchant overtime fees and installation of drive through scanners.

3.39 New schemes like Direct Port Delivery (DPD) for imports and Direct Port Entry (DPE) for exports are facilitating faster clearances at the ports. Up-gradation of port infrastructure, putting up new scanners at ports, development of robust risk based measures and introduction of new Port Community System at all major ports, have led to improvement in average dwell time at sea ports. New initiatives like 'Turant'[4] customs will make customs clearance faster and faceless.

3.40 In a recently released UN global survey on digital and sustainable trade facilitation 2019, India has not only improved its overall trade facilitation score from 69 per cent to 80 per cent but also outperformed other countries in the Asia-pacific and South and South-west Asia region (Figure 24).

Figure 24: India's performance in Digital and Sustainable Trade Facilitation, in comparison to Asia-Pacific and South and South-West Asia (2019)



Source: UN Global Survey on Digital and Sustainable Trade Facilitation, 'https://untfsurvey.org/economy?id=IND'

4. It is a set of next generation of reforms, under which a new functionality in software systems of Indian customs is enabled, that obviates the need of producing import related documents physically to custom officials for approval, thereby reducing release time.

Table 15: World Bank Logistics Performance Index in 2018

Country	LPI Rank	Customs	Infrastructure	International shipments	Logistics competence	Tracking & tracing	Timeliness
Germany	1	1	1	4	1	2	3
Sweden	2	2	3	2	10	17	7
Belgium	3	14	14	1	2	9	1
Austria	4	12	5	3	6	7	12
Japan	5	3	2	14	4	10	10
India	44	40	52	44	42	38	52

Source: World Bank.

A.3.3 Trade related Logistics

3.41 Indian logistics sector is riding a growth wave and is a sunshine industry. According to estimates, Indian logistics sector is expected to grow at 8-10 per cent over the medium term. The logistics industry of India is currently estimated to be around US$ 160 billion and is expected to touch US$ 215 billion by 2020[5].

3.42 The Indian warehousing and logistic market received around US$ 3.4 billion of institutional capital over the last few years (January 2014 - January 2018). Investments into the warehousing sector account for around 26 per cent of the total private equity investments into real estate during this period. Many new startups are coming up in logistics eco-system with already 350 startups registered in Logistics. Agri-logistcs is also attracting attention. Solar powered micro cold stores are being developed and app based grading facilities are being created. Startups are also working on providing solution to making vehicles more fuel-efficient and environment friendly. In terms of job creation, experts predict that logistics sector can be the largest job creator by 2022. The sector currently provides employment to more than 22 million people in the country.

3.43 According to World Bank's Logistics Performance Index, India ranks 44th in 2018 globally, up from 54th rank in 2014. The top 5 countries in the world in Logistics Performance Index (LPI) are shown in Table 15, along with India, with their rankings in LPI and each separate indicator.

3.44 To improve trade logistics, Government is building infrastructure through ambitious projects like the Bharatmala, Sagarmala and the Dedicated Freight Corridors. Inland waterways are being developed as a cost effective means of transportation. Multimodal logistic parks are being created to promote multimodal transportation. These are part of the infrastructure project pipeline worth ₹102 lakh crore whose details have been released by government in December, 2019. The infrastructure projects will be created over the next five years.

3.45 The Government of India is working on a National Logistics Policy and a National Logistics Action Plan. Major commodities have been identified and will be encouraged to be transported by the cheapest mode. Movement by other modes like railways, coastal, waterways and slurry pipelines are being promoted through infrastructure and policy interventions. Fast-tags have been

5. As per inputs received from Department of Commerce.

made mandatory to cut delays at toll plazas. Qualification packs have been created to improve skilling in the sector. Apprentice programmes are being promoted through industry participation. Standards are being developed to bring in efficiency.

3.46 The government's focus going forward is to bring down the cost of logistics which will boost the competitiveness of our manufacturing sector. 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.

A.3.4 Anti-dumping and Safeguard Measures

3.47 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.

3.48 During the period from 01.04.2019 to 30.11.2019, Directorate General of Trade Remedies (DGTR) initiated 25 anti-dumping investigations, 5 countervailing duty investigations and 6 safeguard investigations. Final findings in 14 anti-dumping investigations, 4 countervailing duty investigations and preliminary findings in 5 investigations were issued during this period.

3.49 In its efforts to promote transparency, efficiency and expedited relief to the domestic producers, DGTR has introduced online portal to submit online petitions for different trade remedies like anti-dumping duty, safeguard duty and countervailing duty. The portal is named ARTIS (Application for Remedies in Trade for Indian industry and other Stakeholders). Applicants can monitor the current status of their applications through online portal.

3.50 Outreach programmes to sensitize various stakeholders about the available Trade Remedy Measures are being conducted by officers of DGTR from time to time. In addition, seminar and interactive sessions on Trade Remedy Mechanism for delegations from GCC and Zimbabwe have been held. A Help Desk & Facilitation Centre has been established to facilitate optimal utilization by different stakeholders of available trade remedial measures aimed at curbing 'unfair trade'.

A.4 Net Remittances

3.51 An increase in net remittances improves the BoP position. Net remittances from Indians employed overseas has been constantly increasing year after year and has continued doing so with the amount received in the first half of 2019-20 being more than 50 per cent of the total receivables in 2018-19 (Table 16). The pro-cyclicality of India's remittances with respect to crude oil price movements has been established empirically by various studies including the Economic Survey 2016-17. Apparently because of this link, remittances had fallen in 2016-17 when crude prices had significantly declined (Figure 25).

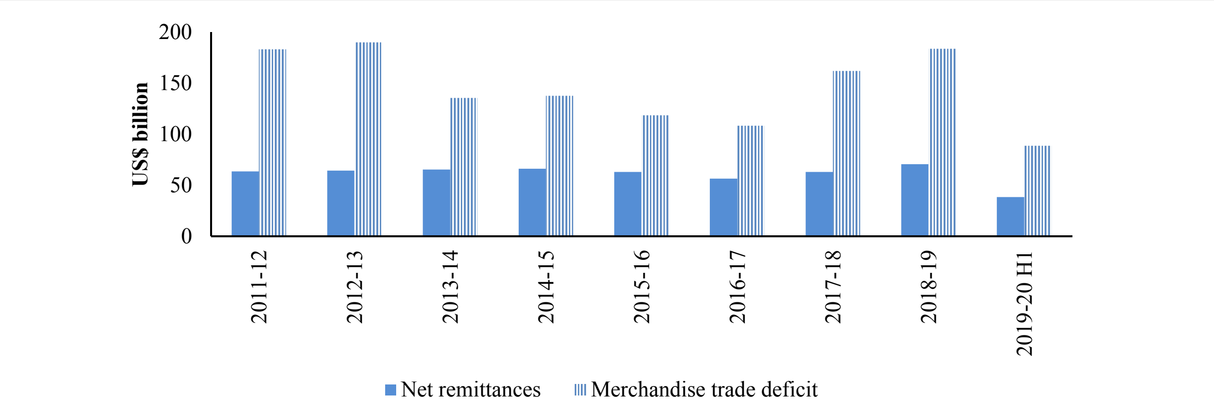
Table 16: Net Remittances (US$ billion)

2009-14	2014-19	2018-19	2019-20 H1
298.21	319.53	70.60	38.4

Source: Reserve Bank of India

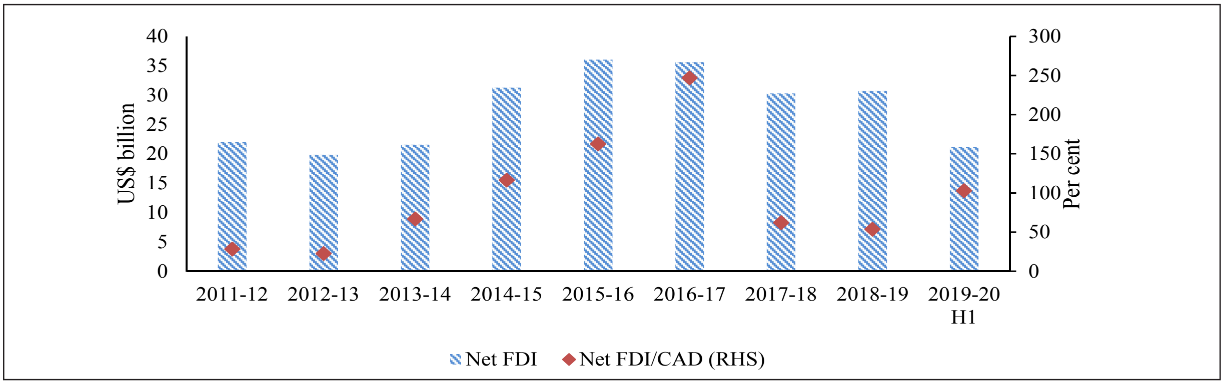
3.52 The Migration Report 2019 released by the United Nations has placed India as the leading country of origin of international migrants in 2019 with a diaspora strength

Figure 25: Remittances and Merchandise trade deficit



Source: Reserve Bank of India & Department of Commerce.

Figure 26: Net FDI and CAD



Source: Reserve Bank of India

of 17.5 million. Further, as per the October 2019 report of World Bank, India remained the top remittance recipient country in 2018, followed by China, Mexico, the Philippines and Egypt.

B. Foreign Direct Investment (FDI)

3.53 Net FDI in the first eight months of 2019-20 stood at US$ 24.4 billion. An increase in net FDI improves the BoP position. The impressive improvement in BoP position from March, 2014 to March, 2019 is mainly attributed to almost doubling of net FDI into the country from 2009-14 to 2014-19. Net FDI inflows have continued to be buoyant in 2019-20 attracting in the first half itself an amount more than 50 per cent of the previous year level (Table 17). Continuous liberalization of FDI guidelines has been responsible for rising inflows of foreign investment into the country.

Table 17: Net FDI (US$ billion)

2009-14	2014-19	2018-19	2019-20 H1
92.51	163.87	30.7	21.3

Source: Reserve Bank of India

3.54 An increase in net FDI also provides a more stable source of funding the CAD and in that sense provides greater stability to the improvement in BoP position as compared to other capital inflows. Net FDI's financing of CAD in the first half of 2019-20 has been higher than the same period of 2018-19 (Figure 26).

C. Foreign Portfolio Investment (FPI)

3.55 Net FPI in the first eight months of 2019-20 stood at US$ 12.6 billion. An increase in net FPI flows improves the BoP position and arises on account of cross-border transactions involving debt or equity securities, other than those included in direct investment or reserve assets. However, FPI is often referred to as "hot money" because of its tendency to flee at the first signs of trouble in an economy or improvement in investment attractiveness elsewhere in the world, particularly in the US at the hands of the Federal Reserve. In relation to net FDI, dependence on net FPI to finance the CAD was less in 2014-19 at 17.1 per cent as compared to 45.6 per cent in 2009-14 (Figure 27). In 2018-19, there was a net portfolio outflow from the country that was seen as weakening of confidence of investors in India's economy. However, portfolio flows in H1 of 2019-20 have turned positive which could be attributed to the dovish monetary policy stance of the US, enhanced liquidity in global markets and reinforced growth prospects for India post budget announcements and reform measures (Table 18).

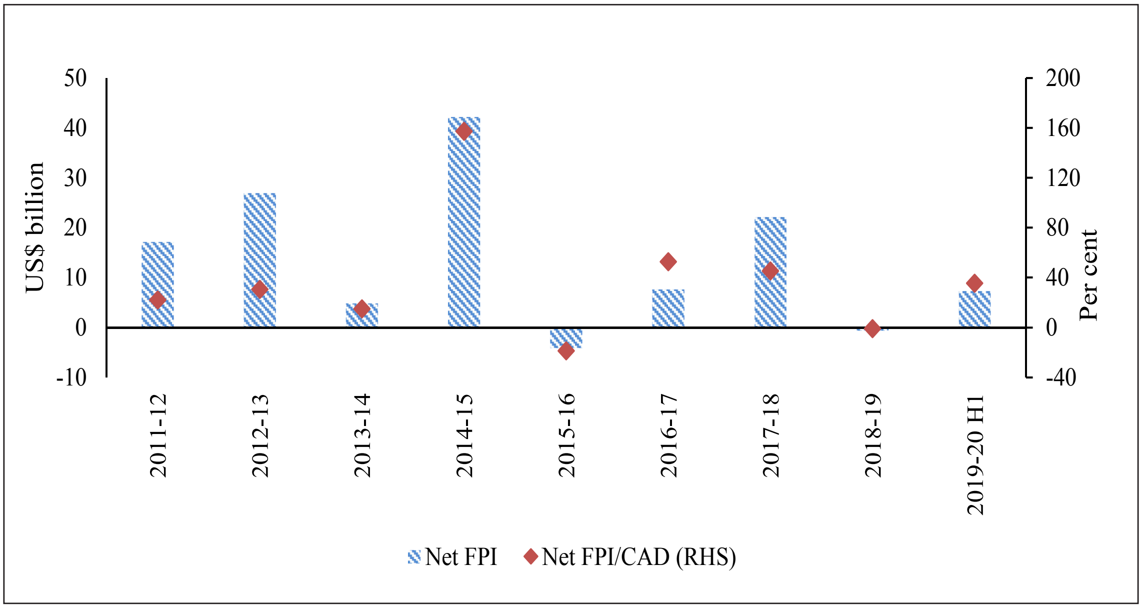
Table 18: Net FPI (US$ billion)

2009-14	2014-19	2018-19	2019-20 H1
59.1	67.18	-0.62	7.3

Source: Reserve Bank of India

3.56 The debt-equity composition of net FPI matters in terms of impacting servicing of external debt. A lower debt component reduces the debt servicing burden and improves the BoP position. In recent quarters until Q1 of 2019-20, a change in the composition of FPI flows towards more non debt creating equity and investment funds is discernible (Figure 28). However, on the flip side increase in investment in debt instruments is important to deepen the debt market in the country.

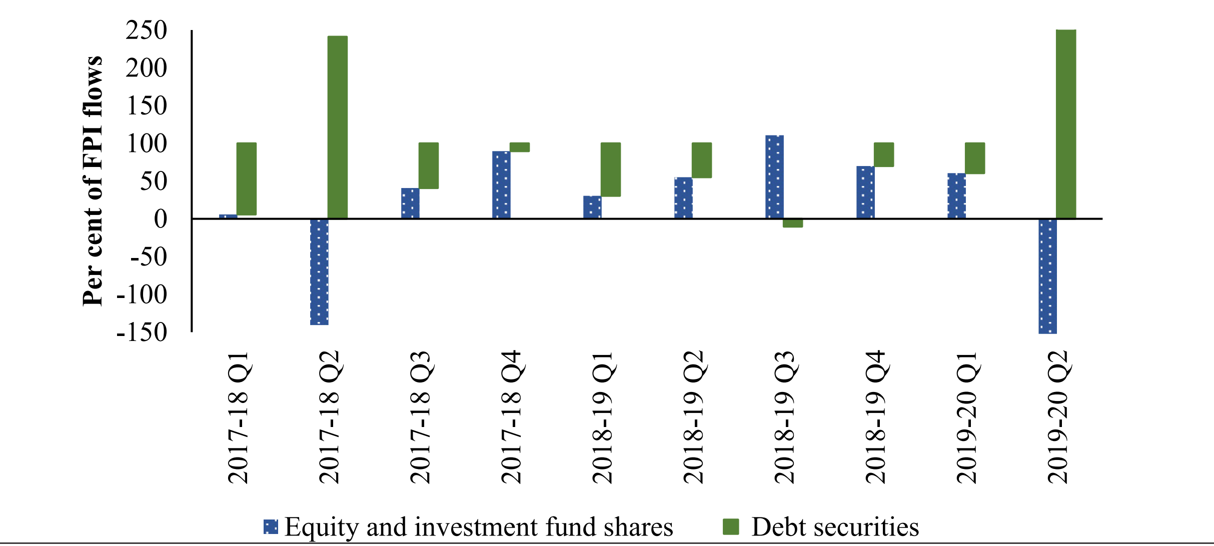
Figure 27: Net FPI and CAD



Source: Reserve Bank of India

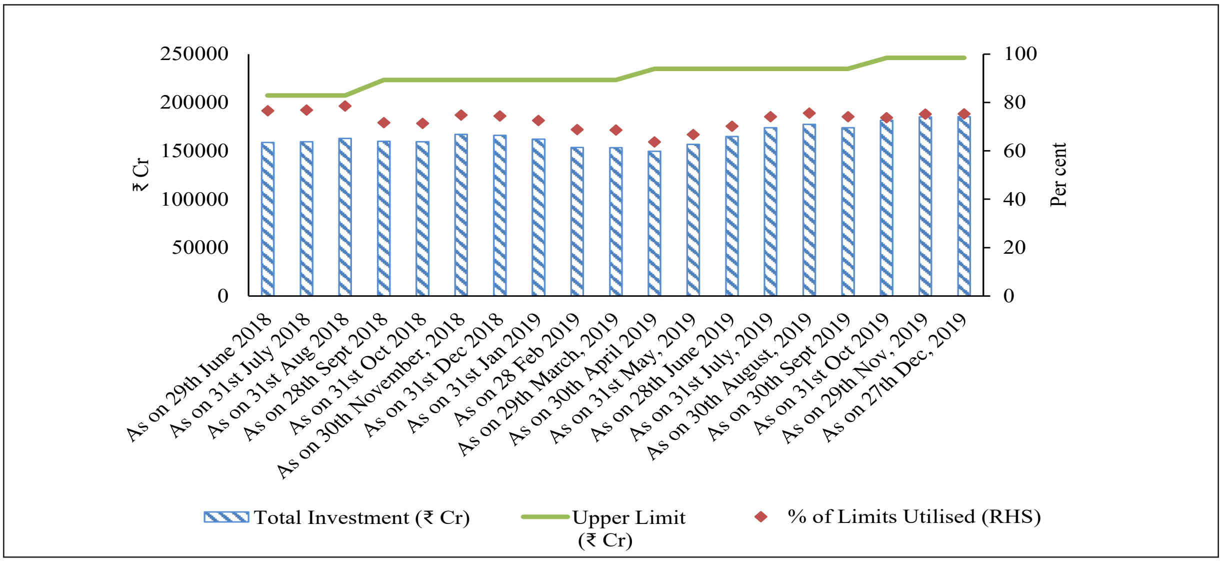
3.57 A report on assessment of India's BoP in 2018-19 published by RBI in November, 2019 stated that the highest FPI outflow in the debt segment took place from the sovereign sector (i.e., G-Secs). In this regard the recent policy initiatives of enhancing investment limits of FPIs in government securities and easing of minimum residual maturity are

Figure 28: Composition of FPI flows



Source: Reserve Bank of India

Figure 29: FPI in government securities.



Source: Clearing Corporation of India (CCIL).

likely to boost FPI flows. In April, 2018, RBI revised the limit for FPI investment in central government securities (G-secs) wherein the limit would be increased by 0.5 per cent each year to 5.5 per cent of outstanding stock of securities in 2018-19 and 6 per cent of outstanding stock of securities in 2019-20. Based on latest data available, the utilization rate of FPI limits in G-secs increased from 68.6 per cent in March 2019 to 75.6 per cent in December, 2019 (Figure 29).

D. External Commercial Borrowings (ECBs)

3.58 An increase in net ECBs improves the BoP position but it worsened the BoP by turning negative during 2014-19, from a healthy positive level in 2009-14 (Table 19). In

2018-19 however there was a surge in net ECB inflows and almost a matching amount has already flowed into the country in the first half of 2019-20.

Table 19: Net ECB (US$ billion)

2009-14	2014-19	2018-19	2019-20 H1
42.80	-4.24	9.77	9.76

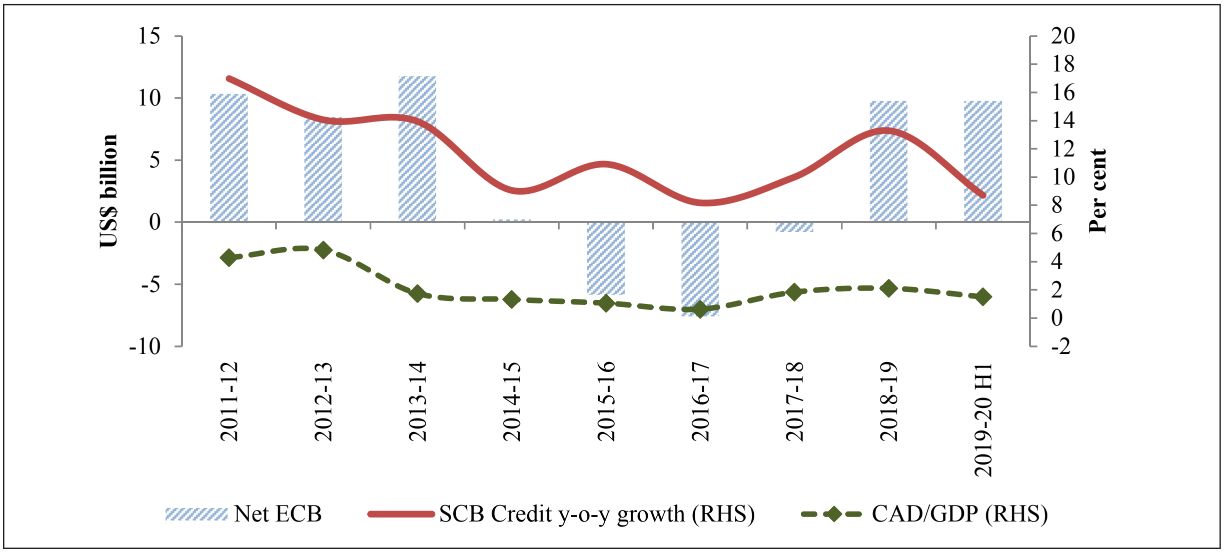
Source: Reserve Bank of India

3.59 While domestic bank credit growth has remained subdued in recent years, credit through the ECB route has witnessed significant growth since 2017-18 (Figure 30). The increasing preference of corporates for the ECB route may be attributed to low global interest rates and improved liquidity overseas. In addition, a host of measures introduced recently by the government towards liberalization of ECBs, rationalisation of all-in-cost of ECBs, expansion of list of eligible borrowers, removal of sector-wise borrowing limits for all eligible borrowers up to US$ 750 million and approval of oil marketing companies to raise up to US$ 10 billion for working capital, has increased the attractiveness of ECBs.

3.60 The availability of ECB avenue and an increasingly easier one at that raises a question mark on the assertion that increase in fiscal deficit crowds out private investment for want of funds. In an open economy foreign savings are always available and India has benefited from that by attracting FDI and ECBs. In this regard if fixed corporate investment rate during 2014-19 did not rise it was not because government was crowding out the corporate sector by pre-empting commercial bank credit. For had that been the reason, the corporate sector could have easily accessed ECBs as it did post 2017-18.

3.61 In an open economy framework a rising fiscal deficit gives rise to two problems. First, it increases the domestic cost of capital tempting corporates to invest their surplus in the domestic market while seeking to finance their investment through ECBs. Low interest rate abroad plus the cost of hedging turns out to be lower than the domestic cost of capital. Second, as higher fiscal deficit pushes corporates into seeking

Figure 30: ECBs, Scheduled Commercial Bank (SCB) credit (y-o-y) and CAD



Source: Reserve Bank of India

larger amounts of foreign savings, the CAD widens, bringing the country closer to the twin-deficit challenge, wherein even a small loss of investor confidence can result in capital flight and sharp depreciation of the rupee. In this situation a default on the BoP becomes highly probable.

E. External Debt

3.62 An increase in external debt to GDP ratio increases debt servicing and draws down on forex reserves worsening BoP position. After a significant reduction in 2014-19 relative to 2009-14, India's external debt to GDP ratio slightly increased by 0.3 per cent at the end of first half of 2020 over its level at end-March 2019, primarily on account of an increase in commercial borrowings, non-resident deposits and short-term trade credit (Table 20 and Figure 31). However, the increase was partially offset by valuation gains resulting from appreciation of the US dollar against Indian rupee and other major currencies in Q2 of 2019-20. India's external debt remains low as compared to the average external debt to GDP ratio of all developing countries (25.6 per cent) according to World Bank's International Debt Statistics, 2020.

Table 20: External Debt (Per cent of GDP)

2009-14	2014-19	2018-19	2019-20 H1
23.9	19.7	19.8	20.1

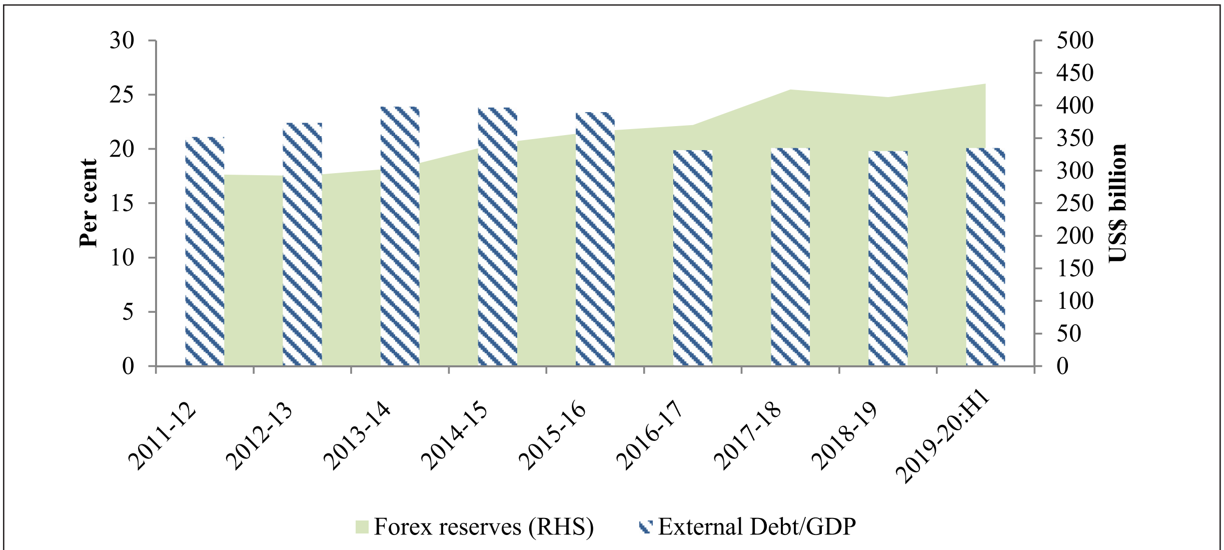
Source: Reserve Bank of India, Quarterly external debt report, DEA, M/o Finance.

3.63 A rising share of short-term debt makes the BoP position more vulnerable because of relatively higher rates of interest on such borrowings. However, a contraction of short term debt is visible in the falling share of short term debt (with original maturity of up to one year) in total external debt since 2012-13 (Figure 32). At a time when exports are not growing rapidly, loans at high interest rates can create pressure on BoP in the future.

F. External liabilities (Debt + Equity)

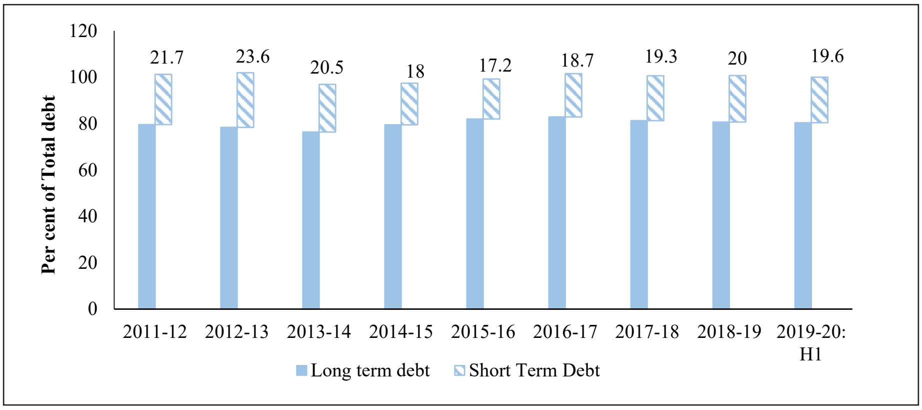
3.64 External liabilities (Debt + Equity)/ GDP ratio is a more comprehensive measure of external liabilities as it adds dividend payout to debt servicing. A rise in this ratio draws down to a greater extent the forex reserves and worsens the BoP position. A recall of equity investment, both under FPI and FDI can increase the vulnerability of BoP position. India's external liabilities to GDP

Figure 31: External debt/GDP and Foreign exchange reserves



Source: Reserve Bank of India, Quarterly external debt report, DEA, M/o Finance

Figure 32: Short term debt



Source: Reserve Bank of India, Quarterly external debt report, DEA, M/o Finance

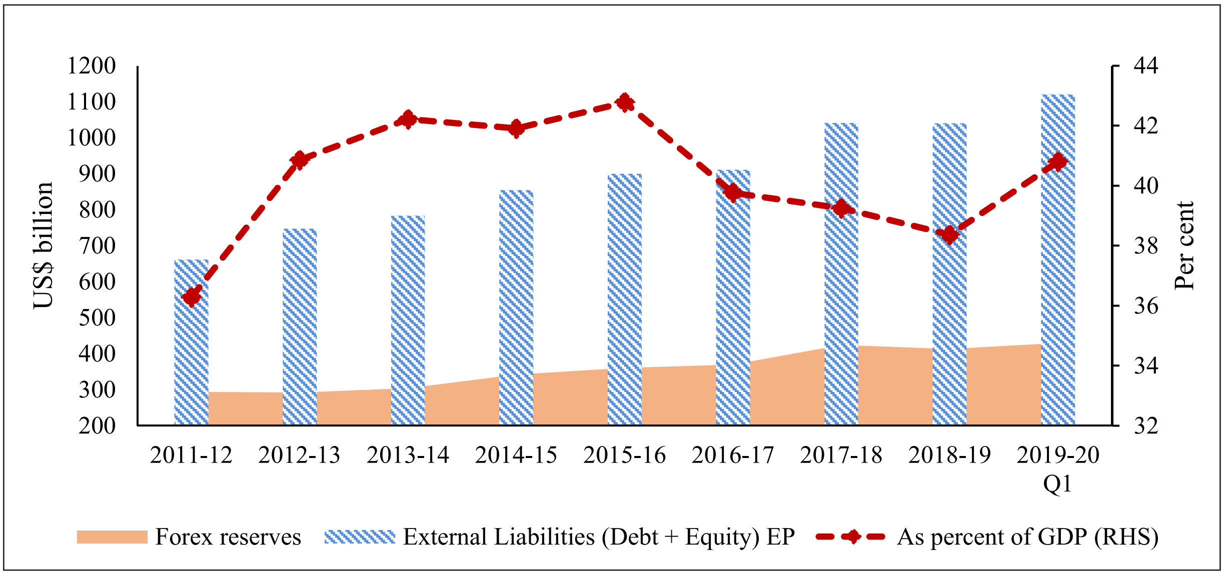
ratio has witnessed significant decline during 2014-19 as against 2009-14 (Table 21 and Figure 33). The recent surge in this ratio in Q1 of 2019-20 despite modest external debt level indicates that total external liabilities are relatively skewed towards equities. This may be attributed to the rise in FDI and FPI inflows, a larger part of which is accounted for by equity. An increase in non-debt liabilities in the form of dividend pay outs on foreign investment in equity will exert strain on BoP. However, on the flip side such investment holds potential for future wealth creation and the pressure on BoP may be lifted to some extent if the dividend payouts are deployed back in the country.

Table 21: External Liabilities (Debt + Equity)/GDP (End Period)

2009-14	2014-19	2018-19	2019-20 Q1
42.2	38.2	38.4	40.8

Source: IMF (based on latest data available)

Figure 33: External Liabilities (Debt + Equity)-End Period (EP)



Source: Reserve Bank of India, IMF (based on latest data available)

G. Net International Investment Position (NIIP)

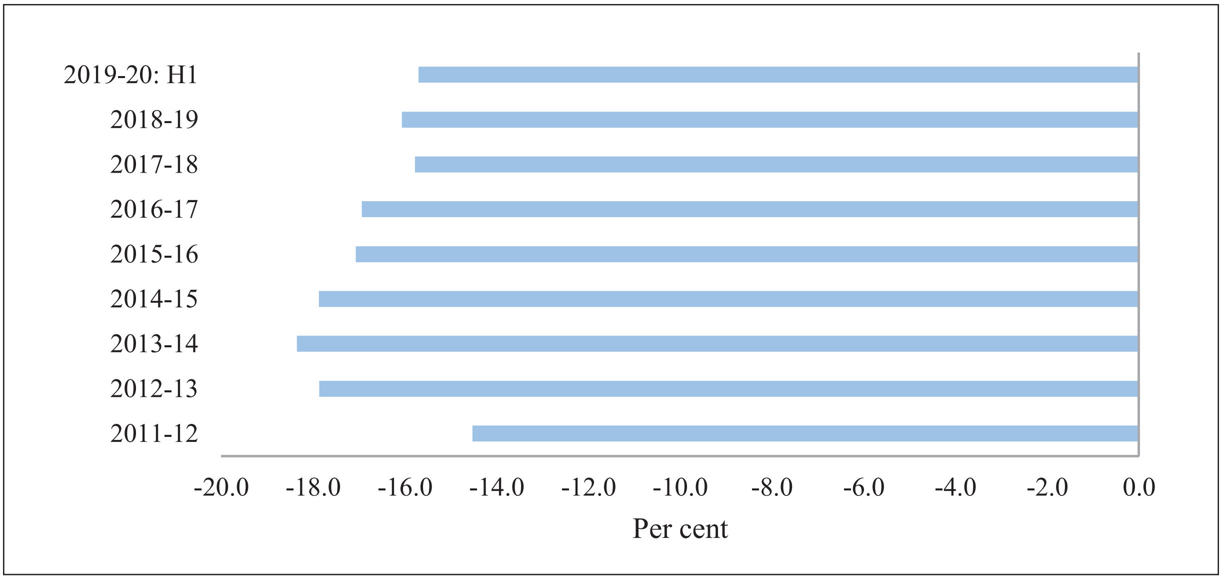
3.65 NIIP measures the gap between a nation's stock of foreign assets and foreigner's stock of that nation's assets at a specific point in time. Changes in NIIP/GDP ratio nets out the impact of investment made by the country abroad from the external liabilities borne by the country thereby measuring the net changes in the debt and equity servicing burden in relation to GDP. The surge in net FDI inflows has worsened the absolute NIIP level from 2009-14 to 2014-19 (Table 22). However, in relation to GDP the burden has reduced and so has the debt and equity servicing obligations. At the end of 2019-20:H1, NIIP/GDP ratio has remained the same as at end of 2018-19 (Figur 34).

Table 22: Net IIP (End Period)

Item	2009-14	2014-19	2018-19	2019-20 H1
NIIP ($US billion)	-340.8	-436.8	-436.8	-436.7
NIIP/GDP	-18.4	-16.1	-16.1	-15.7

Source: Reserve Bank of India

Figure 34: Net IIP/GDP

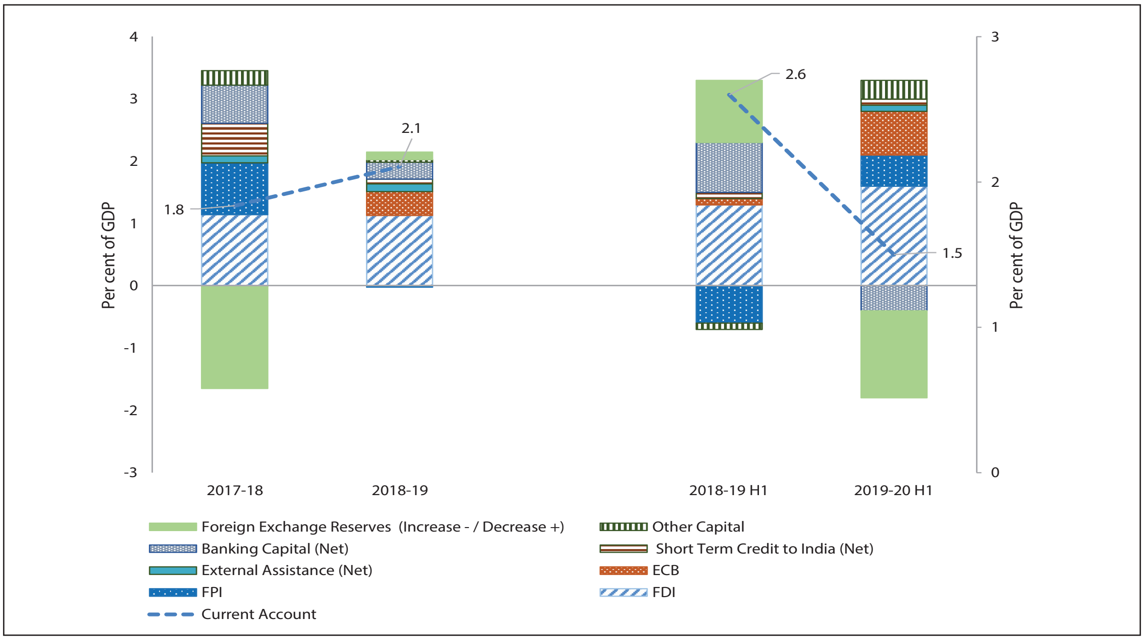


Source: Reserve Bank of India

OUTLOOK

3.66 After witnessing a rise in vulnerabilities in 2018-19 leading to a modest depletion of foreign exchange reserves, India's external sector has gained further stability in the first half of 2019-20 with improvement in BoP position anchored by capital flows bouncing back through FDI, FPI and ECBs, receipt of robust remittances and contraction of CAD to GDP ratio. External debt remains low at 20 per cent of GDP. As on 10th January, 2020, India's foreign exchange reserves stood at US$ 461.2 billion, recording an accretion of US$ 27.5 billion from H1 of 2019-20. Summary of changes in foreign exchange reserves over the years is placed at Annexure-III. Financing of CAD in recent years is depicted in Figure 35.

Figure 35: Financing of CAD



Source: Reserve Bank of India

3.67 In recent times India's tariff regime have come under pressure from trade partners who seek a cut in the country's basic custom duties. India has defended its tariff regime stating that it is necessary for protecting the vulnerable businesses in India. However, independent of trade partners, Government is aware that some reduction in tariff rates may have to be done in respect of intermediate inputs and raw material to correct the presently inverted duty structure. A corrected duty structure will reduce the cost of intermediate inputs imported for manufacturing of exports thereby making the country's exports more competitive. The resulting increase in exports will strengthen India's BoP position. Box 2 discusses that every time India's imports of intermediate inputs have risen so have the exports of associated consumption goods with an elasticity of greater than 1. Accordingly, a reduction in basic custom duty on intermediate inputs will not only correct the inverted duty structure creating the right incentives for boosting manufacturing but will also increase the growth of exports of consumption goods that significantly use imported intermediate goods.

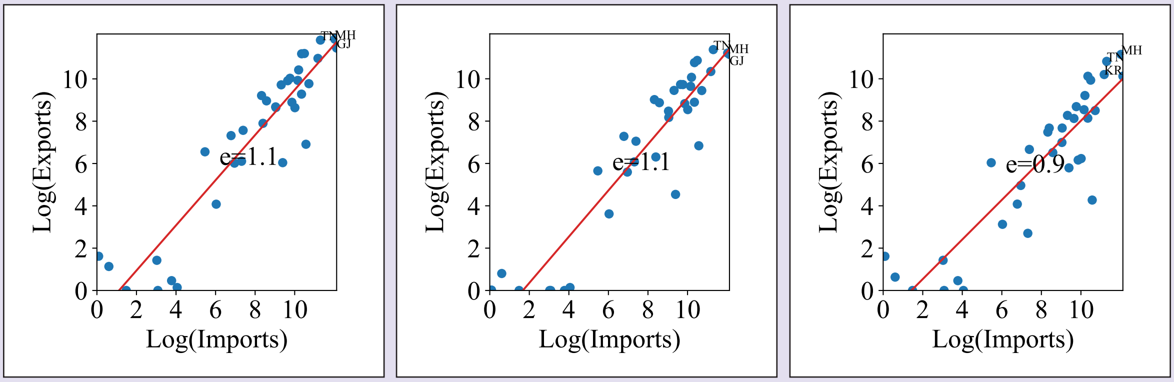
Box 2: IMPORT ELASTICITY OF EXPORTS

An analysis of the relation between exports of finished goods and imports of raw materials and intermediate goods for India is being undertaken. The raw/ intermediate goods are being imported for production of goods that can be consumed domestically or exported. For instance, trans-axles and its parts are imported for production of trucks; gold is imported for making jewellery; etc. This analysis is done by using data available from e-way bills during the period October, 2018 to September, 2019. The product level classification of World Integrated Trade Solution (WITS) viz., raw materials, intermediate goods, consumer goods and capital goods is used to further disaggregate this data at the 4-digit level. For illustration, in the leather sector, WITS product-level classification has been used only for chapters 41, 42 and 43 of harmonized system codes to identify raw materials/ intermediate goods and consumer/ capital goods at the 4-digit level. The E-Way bill product level data is also available at 4-digit. For sectors like automobiles and pharmaceuticals, research papers and reports have been used that have classified raw materials and final goods at 4-digit level.

At an aggregate level, the import elasticity of exports is 1.1 (as shown in Figure A), i.e., 1 per cent increase in imports of raw materials and intermediate goods leads to 1.1 per cent increase in exports of finished goods from India. Figures B and C show the import elasticities of export of consumer goods and capital goods as 1.1 and 0.9 respectively. This implies that exports of consumer goods are more sensitive to imports of raw materials and intermediate goods, as compared to capital goods.

Import elasticity of export

Figure A: Aggregate | **Figure B: Consumer Goods** | **Figure C: Capital Goods**



Source: E-Way bill data and Survey Calculations.

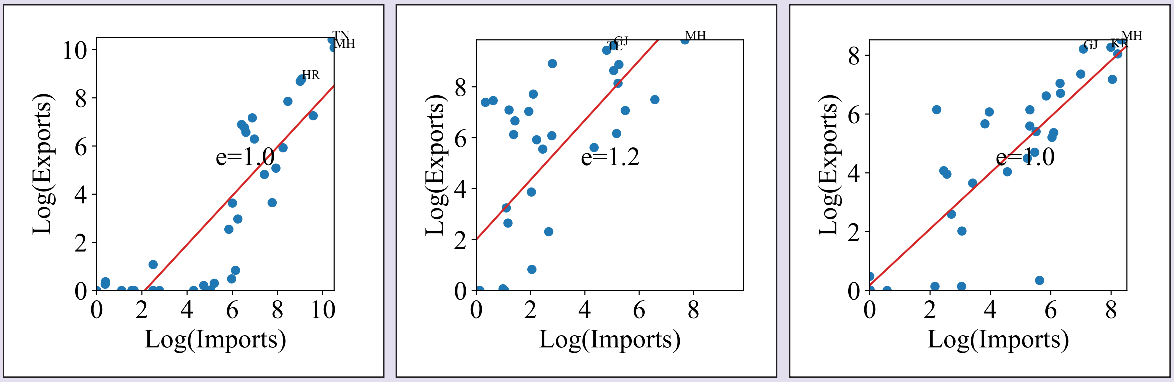
Note: Based on chapters 10 to 99

Sector-wise Analysis

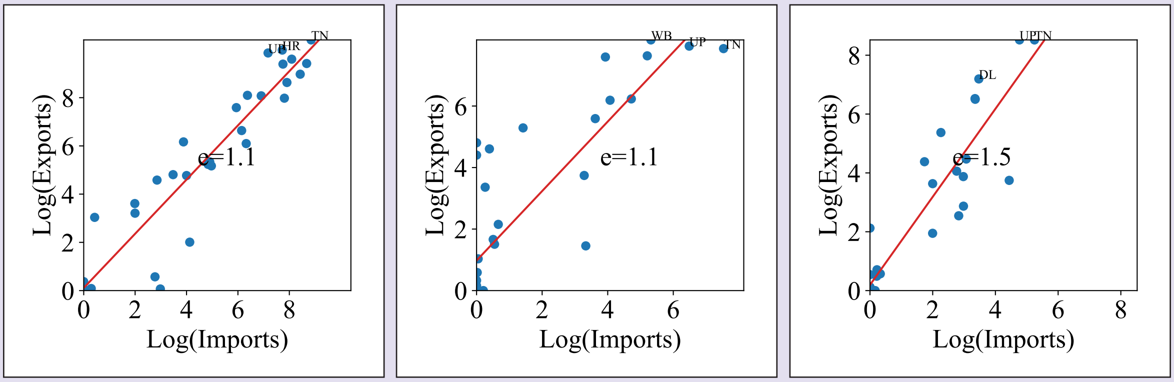
Sector wise analysis shows that sectors like automobiles, motorcycles, organic and inorganic chemicals, pharmaceutical products, machinery, articles of apparel, articles of leather, footwear, miscellaneous manufactured articles like toys and cushions, glassware and ceramic products, optical instruments, boilers, stainless steel and switches have import elasticity of export greater than 1. Figure D shows the import elasticities for some of the sectors.

Figure D: Sectors with import elasticity of exports greater than 1

Automobiles | **Pharmaceuticals products** | **Machinery**



Articles of Apparel **Articles of Leather** **Footwear**



Source: E-Way bill data and Survey calculations.

The following table shows the raw materials/ intermediate goods used in the production of the finished good in the aforementioned sectors.

Sector	Raw Materials/ Intermediate Goods	Final Goods
Automobiles	Chassis, bodies, auto parts and accessories, tubes and pipes of vulcanized rubber, safety glass	Tractors, motor vehicles, dumpers, special purpose motor vehicles, motorcycles
Pharmaceuticals	Antisera, vaccines, immunological products, drugs of animal origin not for retail sale	Medicines and drugs for retail sale
Machinery	Parts of shavers, electric transformers, primary cells,	Fans, dish-washing machines, washing machines, vacuum cleaners, ovens, filament lamps, DC motors, generators, transformers
Articles of apparel	Cotton, silk, yarn, wool, woven fabrics, synthetic staple fibres, jute	Sanitary towels, carpets, cloths, wall coverings, blankets, shawls, mattresses
Articles of leather	Skin and fur-skins of animals, animal leather	Trunks, handbags, gloves, jackets, belts
Footwear	Leather soles, sheep lining, umbrella frames, felt hat forms and bodies	Footwear, hats, umbrellas

Source: World Integrated Trade Solution (WITS)

This shows that through value addition, India is exporting a processed final product after importing raw materials in these sectors. This moves India up in the value chain in these sectors. To support this further, it is necessary to facilitate ease of import of raw materials and intermediate goods in these sectors, by reducing basic custom duty on intermediate inputs. This will not only correct the inverted duty structure but would also create right incentives for boosting manufacturing, employment and growth of exports of consumer goods.

CHAPTER AT A GLANCE

- India’s Balance of Payments (BoP) position witnessed improvement from US$ 412.9 billion of forex reserves in end March, 2019 to US$ 433.7 billion in end September, 2019, anchored by narrowing of current account deficit (CAD) from 2.1 per cent in 2018-19 to 1.5 per cent of GDP in H1 of 2019-20. India’s foreign reserves stood at US$ 461.2 billion as on 10th January, 2020.
- In sync with an estimated 2.9 per cent growth in global output in 2019, global trade is estimated to grow at 1.0 per cent after having peaked in 2017 at 5.7 per cent. However, it is projected to recover to 2.9 per cent in 2020 with recovery in global economic activity.
- India’s merchandise trade balance has improved from 2009-14 to 2014-19 although most of the improvement in the latter period was on account of more than fifty per cent decline in crude prices in 2016-17.
- Petroleum products, precious stones, drug formulations & biologicals, gold and other precious metals continue to be top exported commodities. Crude petroleum, gold, petroleum products, coal, coke & briquittes constitute top import items. India’s top five trading partners continue to be USA, China, UAE, Saudi Arabia and Hong Kong.
- India’s net services surplus has been steadily declining in relation to GDP. It financed two-thirds of merchandise deficit in 2016-17 before declining to less than half in the last couple of years.
- Under trade facilitation, India has improved its ranking from 143 in 2016 to 68 in 2019 under the indicator, “Trading across Borders”, monitored by World Bank in determining the overall ranking of around 190 countries in its Ease of Doing Business Report.
- The logistics industry of India is currently estimated to be around US$ 160 billion and is expected to touch US$ 215 billion by 2020.
- Net remittances from Indians employed overseas has been constantly increasing year after year and has continued doing so with the amount received in H1 of 2019-20 being more than fifty per cent of the previous year level.
- Net FDI inflows have continued to be buoyant in 2019-20 attracting US$ 24.4 billion in the first eight months, higher than the corresponding period of 2018-19. Net FPI in the first eight months of 2019-20 stood at US$ 12.6 billion.
- External debt as at end September, 2019 remains low at 20.1 per cent of GDP. After witnessing significant decline since 2014-15, India’s external liabilities (debt and equity) to GDP has increased at the end of June, 2019 primarily driven by increase in FDI, portfolio flows and external commercial borrowings (ECBs).

Annexure I

Balance of Payments

(US$ Million)

Sl No	Item	2014-15	2015-16	2016-17	2017-18	2018-19	2018-19 Apr-Sep	2019-20 Apr-Sep
1	2	3	4	5	6	7	8	9
I	**Current Account**							
1	Exports	3,16,545	2,66,365	2,80,138	3,08,970	3,37,237	1,66,788	1,62,743
2	Imports	4,61,484	3,96,444	3,92,580	4,69,006	5,17,519	2,62,575	2,47,037
3	Trade Balance (1-2)	-1,44,940	-1,30,079	-1,12,442	-1,60,036	-1,80,283	-95,788	-84,294
4	Invisibles (net)	1,18,081	1,07,928	98,026	1,11,319	1,23,026	60,931	63,673
	A. Services	76,529	69,676	68,345	77,562	81,941	38,932	40,474
	B. Income	-24,140	-24,375	-26,302	-28,681	-28,861	-14,363	-14,739
	C. Transfers	65,692	62,627	55,983	62,438	69,946	36,362	37,938
5	Goods and Services Balance	-68,411	-60,402	-44,098	-82,474	-98,342	-51,240	-43,820
6	**Current Account Balance (3+4)**	**-26,859**	**-22,151**	**-14,417**	**-48,717**	**-57,256**	**-34,857**	**-20,621**
II	**Capital Account**							
	Capital Account Balance	**89,286**	**41,128**	**36,447**	**91,390**	**54,403**	**21,391**	**39,935**
	i. External Assistance (net)	1,725	1,505	2,013	2,944	3,413	478	1,913
	ii. External Commercial Borrowings (net)	1,570	-4,529	-6,102	-183	10,416	877	9,767
	iii. Short-term credit	-111	-1,610	6,467	13,900	2,021	1,298	1344
	iv. Banking Capital(net) of which:	11,618	10,630	-16,616	16,190	7,433	10,583	-5,702
	Non-Resident Deposits (net)	14,057	16,052	-12,367	9,676	10,387	6,838	5,034
	v. Foreign Investment(net) of which	73,456	31,891	43,224	52,401	30,094	9,040	28,646
	A. FDI (net)	31,251	36,021	35,612	30,286	30,712	16,983	21,327
	B. Portfolio (net)	42,205	-4,130	7,612	22,115	-618	-7,943	7,319
	vi. Other Flows (net)	1,028	3,242	7,460	6,138	1,026	-885	3967
III	**Errors and Omission**	**-1,021**	**-1,073**	**-480**	**902**	**-486**	**259**	**-211**
IV	**Overall Balance**	**61,406**	**17,905**	**21,550**	**43,574**	**-3,339**	**-13,206**	**19102**
V	Reserves change [increase (-) / Decrease (+)]	-61,406	-17,905	-21,550	-43,574	3,339	13,206	-19,102

Source: Reserve Bank of India.

Note: P: Preliminary

Annexure II

Free Trade Agreements (FTAs) already in force

S.No.	Name of the Agreement	Date of Signing of the Agreement	Date of Implementation of the Agreement & Recent Developments
1	India - Sri Lanka FTA	28th December. 1998	Date of implementation of treaty was 1st March, 2000, The negotiations for the proposed Economic and Technology Cooperation Agreement (ETCA) between India and Sri Lanka, covering trade in goods, trade in services, investment and economic and technology cooperation are in progress. Eleven Round of Negotiations have been completed.
2	Agreement on SAFTA (India, Pakistan, Nepal, Sri Lanka, Bangladesh, Bhutan, the Maldives and Afghanistan)	4th January, 2004	Date of implementation of treaty was 1st January, 2006 *(Tariff concessions implemented from 1st July, 2006)*
3	India Nepal Treaty of Trade	27th October, 2009	The Treaty has been extended for a further period of seven years and is currently in force till 26th October 2023. A Comprehensive Review of the India-Nepal Treaty of Trade, initiated in 2018, is in progress.
4	India - Bhutan Agreement on Trade Commerce and Transit	17th January, 1972	Renewed periodically, with mutually agreed modifications. Agreement dated 29th July 2006 was valid for ten years. With mutual consent, the validity was extended for a period of one year or the period till the proposed new Agreement comes into force. The renewed Agreement has been signed on 12th November, 2016 and came into force with effect from 29th July, 2017.
5	India - Thailand FTA - Early Harvest Scheme (EHS)	9th October, 2003	Date of implementation of treaty was 1st September, 2004
6	India - Singapore CECA	29th June, 2005	Date of implementation of treaty was 1st August, 2005. The second review of India Singapore CECA was jointly concluded and announced on 1st June, 2018 during the state visit of Prime Minister of India to Singapore.
7	India - ASEAN- CECA - Trade in Goods, Services and Investment Agreement (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam)	13th August, 2009 for goods and November, 2014 for Services and Investment	Date of implementation of treaty for **Goods** • 1st January, 2010 in respect of India and Malaysia, Singapore, Thailand. • 1st June, 2010 in respect of India and Vietnam. • 1st September, 2010 in respect of India and Myanmar. • 1st October, 2010 in respect of India and Indonesia. • 1st November, 2010 in respect of India and Brunei. • 24th January, 2011 in respect of India and Laos. • 1st June, 2011 in respect of India and the Philippines. • 1st August, 2011 in respect of India and Cambodia. **Services and Investment** For Services and Investment, date of implementation of treaty was 1stJuly, 2015.
8	India - South Korea CEPA	7th August, 2009	Date of implementation of treaty was 1st January, 2010. The two sides have commenced negotiations for upgradation of CEPA in 2016 to explore the possibility of providing further tariff concessions/ simplification of Rules of Origin to Indian exporters. 8th round of negotiations for upgrading India-Korea CEPA was held in June, 2019 in India.
9	India - Japan CEPA	16th February, 2011	Date of implementation of treaty was 1st August, 2011
10	India - Malaysia CECA	18th February, 2011	Date of implementation of treaty was 1st July, 2011

Source: Department of Commerce.

Annexure II (contd.)

Preferential Trade Agreements (PTAs) already in force

S.No.	Name of the Agreement	Date of Signing of the Agreement	Date of Implementation of the Agreement & Recent Developments
1	Asia Pacific Trade Agreement (APTA) (Bangladesh, China, India, Republic of Korea, Lao People's Democratic Republic and Sri Lanka)	July, 1975 (revised on 2nd November, 2005)	Date of implementation of treaty was 1st November, 1976.
2	Global System of Trade Preferences (GSTP) (Algeria, Argentina, Bangladesh, Benin, Bolivia, Brazil, Cameroon, Chile, Colombia, Cuba, Democratic People's Republic of Korea, Ecuador, Egypt, Ghana, Guinea, Guyana, India, Indonesia, Iran, Iraq, Libya, Malaysia, Mexico, Morocco, Mozambique, Myanmar, Nicaragua, Nigeria, Pakistan, Peru, Philippines, Republic of Korea, Romania, Singapore, Sri Lanka, Sudan, Thailand, Trinidad and Tobago, Tunisia, Tanzania, Venezuela, Viet Nam, Yugoslavia, Zimbabwe)	13th April, 1988	Date of implementation of treaty was 19th April, 1989.
3	SAARC Preferential Trading Agreement (SAPTA) (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka)	11th April, 1993	Date of implementation of treaty was 7th December, 1995
4	India - Afghanistan	6th March, 2003	Date of implementation of treaty was 13th May, 2003
5	India – MERCOSUR (Argentina, Brazil, Paraguay and Uruguay)	25th January, 2004	Date of implementation of treaty was 1st June, 2009.
6	India – Chile	8th March, 2006	Date of implementation of treaty was 11th September, 2007. The agreement has been expanded on 6th September, 2016 and came into force w.e.f. 16th May, 2017.

Source: Department of Commerce.

Annexure II (contd.)

On-going Trade Negotiations

S. No.	Name of the Agreement	Status
1	India - EU BTIA	Negotiations launched on 28th June, 2007 in the areas of Goods, Services, Investment, Sanitary and Phyto-sanitary Measures, Technical Barriers to Trade, Trade Facilitation and Customs Cooperation, Competition, IPR & GIs. Etc. Sixteen rounds of have been held till date.
2	India - Sri Lanka Economic and Technical Cooperation Agreements (ETCA)	Eleven rounds of negotiations have been held so far.
3	India - Thailand CECA	Early Harvest Scheme on 83 items implemented. So far, thirty rounds of India-Thailand Trade Negotiation committee (ITTNC) meetings have been held.
4	India - Mauritius Comprehensive Economic Cooperation and Partnership Agreement (CECPA)	The negotiations under CECPA include Trade in Goods, Trade in Services, Trade Remedies, SPS/TBT issues and Dispute Settlements. The negotiations for CECPA has been finalized.
5	India - EFTA TEPA (Iceland, Norway, Liechtenstein and Switzerland)	The India- EFTA TEPA (Trade and Economic Partnership Agreement) was launched in January, 2008. So far, seventeen rounds of negotiations have been held.
6	India - New Zealand FTA/CECA	Ten Rounds of negotiation of CECA have been held so far. The 10th Round was held in New Delhi on 17-18 February, 2015.
7	India – Israel Trade Agreement	Nine rounds of negotiations on India-Israel FTA have been held so far.
8	India - Singapore CECA (3rd review)	Third review of India Singapore CECA was launched on 1st September, 2018.
9	India - SACU PTA (South Africa, Botswana, Lesotho, Swaziland and Namibia)	Five rounds of negotiations have been held so far.
10	India - Mercosur PTA expansion (Argentina, Brazil, Paraguay and Uruguay)	The existing India-MERCOSUR PTA is being expanded. The third meeting of Joint Administrative Committee (JAC) was held in Brasilia on 29th September, 2016. Both sides have exchanged their initial offers on 14th September, 2017.
11	BIMSTEC CECA (Bangladesh, India, Myanmar, Sri Lanka, Thailand, Bhutan and Nepal)	Twenty one meetings of the Trade Negotiation Committee (TNC) have taken place. The 21st Meeting of BIMSTEC Trade Negotiating Committee (TNC) was held during 18-19 November, 2018 in Dhaka, Bangladesh.
12	India - Gulf Cooperation Council (GCC) Framework Agreement	Two rounds of negotiations have been held so far in 2006 and 2008. In 2011, GCC Secretariat stated to have deferred negotiations with all countries until GCC States completely review the issue of negotiations. Recently GCC Secretariat vide its Note Verbale dated 6th November, 2019 has informed that GCC welcomes resumption of India-GCC FTA negotiations.
13	India – Canada FTA	Ten rounds of negotiation on India-Canada CEPA have been held so far. The 10th round was held in August, 2017 in New Delhi. An Inter-Sessional round was held in February, 2018 at Ottawa.
14	India - Australia	Nine rounds of negotiations have been held. The 9th round of negotiations was held on 21-23 September, 2015 in New Delhi, India.

(Contd.)

Annexure II (contd.)

On-going Trade Negotiations

S. No.	Name of the Agreement	Status
15	India-Malaysia CECA (1st Review)	The first meeting of the India-Malaysia Joint Committee meeting to review implementation of India-Malaysia CECA was held on 8th December, 2014.
16.	India-ASEAN Trade in Goods Agreement (1st Review)	India has requested for the review of India ASEAN Trade in Goods Agreement (AITIGA).
17	India-Korea CEPA review	Eight rounds of negotiations for upgrading India-Korea CEPA have been held so far. The 8th round was held on 17-18 June, 2019 in New Delhi.
18	India-Iran PTA	Four meetings have taken place so far
19	India-Peru Trade Agreement	The four rounds of negotiations have taken place so far.
20	India-EAEU Technical Consultations	The first round of technical consultations were held on 30-31 January, 2018 in New Delhi.
21	India-Bangladesh CEPA	A Joint Study for examining the feasibility of CEPA is to be carried out. India has identified Centre for Regional Trade for conducting the study and Bangladesh has been requested to identify a suitable organisation for this purpose.
22	India-Chile PTA (2nd Expansion)	First meeting of the 2nd Expansion of India Chile PTA was held in New Delhi on 10-11 December, 2019.

Source: Department of Commerce.

Annexure III

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	18.4
2	2008-09	252.0	-57.7	-20.1	-37.7
3	2009-10	279.1	27.1	13.4	13.6
4	2010-11	304.8	25.8	13.1	12.7
5	2011-12	294.4	-10.4	-12.8	2.4
6	2012-13	292.0	-2.4	3.8	-6.2
7	2013-14	304.2	12.2	15.5	-3.3
8	2014-15	341.6	37.4	61.4	-24.0
9	2015-16	360.2	18.5	17.9	0.6
10	2016-17	370.0	9.8	21.6	-11.8
11	2017-18	424.5	54.6	43.6	11.0
12	2018-19	412.9	-11.7	-3.3	-8.3
13	H1: 2018-19	400.5	-24.0	-13.2	-10.8
14	H1: 2019-20	433.7	20.8	19.1	1.7

Source: Reserve Bank of India (RBI).

Monetary Management and Financial Intermediation

04
CHAPTER

Monetary policy remained accommodative in 2019-20. The repo rate was cut by 110 basis points in four consecutive Monetary Policy Committee meetings in the financial year due to slower growth and lower inflation. However, it was kept unchanged in the fifth meeting held in December 2019. Liquidity conditions were tight for initial two months of 2019-20; but subsequently it has remained comfortable. The financial flows to the economy however, remained constrained as credit growth declined for both banks and Non-Banking Financial Corporations. The Gross Non Performing Advances ratio of Scheduled Commercial Banks has remained unchanged at 9.3 per cent between March and September 2019 and increased slightly for the Non-Banking Financial Corporations from 6.1 per cent to 6.3 per cent. Capital to Risk-weighted Asset ratio of Scheduled Commercial Banks increased from 14.3 per cent to 15.1 per cent between March 2019 and September 2019. Nifty50 and S&P BSE Sensex indices, reached record high closing of 12,355 and 41,952 respectively during 2019-20 (upto January 16, 2020). The resolution under IBC has been much higher as compared to previous resolution channels. Amount recovered as percentage of amount involved was 49.6 per cent in 2017-18 and 42.5 per cent in 2018-19. The proceedings under IBC take on average about 340 days, including time spent on litigation, in contrast with the previous regime where processes took about 4.3 years.

MONETARY DEVELOPMENTS DURING 2019-20

4.1 Monetary policy during 2019-20 was conducted under the revised statutory framework, which became effective from June 27, 2016. As on end January 2020, five meetings of the Monetary Policy Committee (MPC) have been held in financial year 2019-20. In the first four meetings, the MPC decided to cut the policy repo rate changing the stance of monetary policy from neutral to accommodative. The repo rate was reduced by 110 basis points (bps) from 6.25 per cent in April 2019 to 5.15 per cent in October 2019 (Table 1). MPC's decision was guided by low inflation and the need to strengthen domestic growth by spurring private investment in the economy.

4.2 In its fifth bi-monthly monetary policy statement in December 2019, MPC decided to keep the repo rate unchanged at 5.15 per cent, underlining the rising consumer price inflation as one of the reasons. MPC also signaled its intention to wait until effective monetary policy transmission happens.

Various high frequency indicators along with surveys conducted by the Reserve Bank indicated a weakening of both domestic and external demand conditions; hence the real GDP projections were revised downwards to 5 per cent for 2019-20.

Table 1: Revision in Policy Rates

Effective Date	Repo Rate (per cent)	Reverse Repo Rate (per cent)	Bank Rate/ MSF Rate* (per cent)	Cash Reserve Ratio (per cent of NDTL)	Statutory Liquidity Ratio (per cent of NDTL)
04-04-19	6.00	5.75	6.25	4.00	19.25
06-06-19	5.75	5.50	6.00	4.00	19.00
07-08-19	5.40	5.15	5.65	4.00	18.75
04-10-19	5.15	4.90	5.40	4.00	18.50**
05-12-19	5.15	4.90	5.40	4.00	18.50
04-01-20	5.15	4.90	5.40	4.00	18.25

Source: RBI.

Notes: NDTL is Net Demand and Time Liabilities.
*: Bank Rate was aligned to MSF rate with effect from February 13, 2012.
**: See RBI notification dated December 5, 2018 to reduce in SLR to 18 per cent in phases, viz., w.e.f. January 5, 2019 - 19.25 per cent; April 13, 2019 - 19.00 per cent; July 6, 2019 - 18.75 per cent; October 12, 2019 -18.50 per cent; January 4, 2020 - 18.25 per cent; and April 11, 2020 - 18.00 per cent.

Table 2: Year on Year (YoY) Change in Monetary Aggregates as on end March of each year (per cent)

Items	2013-14	2014-15	2015-16	2016-17*	2017-18	2018-19	2019-20#
Currency in Circulation	9.2	11.3	14.9	-19.7	37	16.8	11.9
Cash with Banks	10.7	12.4	6.6	4.2	-2.1	21.4	15.8
Currency with the Public	9.2	11.3	15.2	-20.8	39.2	16.6	11.8
Bankers' Deposits with the RBI	34	8.3	7.8	8.4	3.9	6.4	17.1
Demand Deposits	7.8	9.8	11	18.4	6.2	9.6	13.1
Time Deposits	14.9	10.7	9.2	10.2	5.8	9.6	9.8
Reserve Money (M0)	14.4	11.3	13.1	-12.9	27.3	14.5	13.2
Narrow Money (M1)	8.5	11.3	13.5	-3.9	21.8	13.6	12.5
Broad Money (M3)	13.4	10.9	10.1	6.9	9.2	10.5	10.4

Source: RBI.

Notes: * March 31, 2017 over April 1, 2016 (barring M0, CIC, and Bankers' Deposits with the RBI).
As on December 2019.

4.3 During 2018-19, the growth rates of monetary aggregates witnessed reversion to their long-term trend after experiencing unusual behavior in 2016-17 due to demonetisation and again in 2017-18 due to the process of remonetisation.

4.4 The growth of reserve money as on December 2019 was 13.2 per cent (Table 2 and Figure 1). On the component side, the expansion in reserve money was led by Currency in Circulation (CIC) (Table 2). From the sources side, expansion in M0 during 2019-20 so far (as on December 27, 2019) was contributed mainly by RBI's Net Foreign Assets (NFA) as against Net Domestic Assets (NDA) during the previous year. Within NDA, while net RBI credit to the Government has contributed to the expansion in M0, it has been at a lower magnitude vis-à-vis last year. Among other sources, RBI's claims on banks decreased, indicating surplus liquidity conditions in 2019-20 so far (discussed in more detail in the next section).

Figure 1: Reserve Money Growth (Year on Year (YoY))

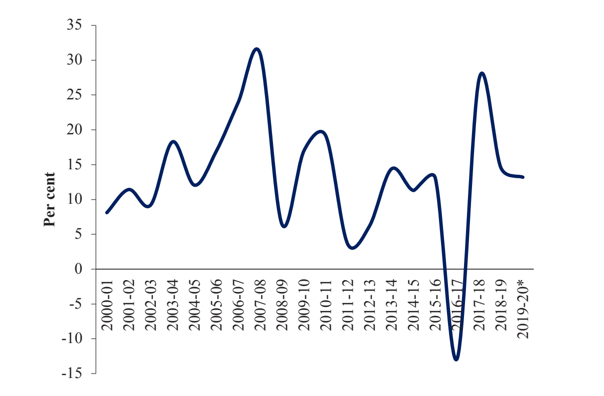
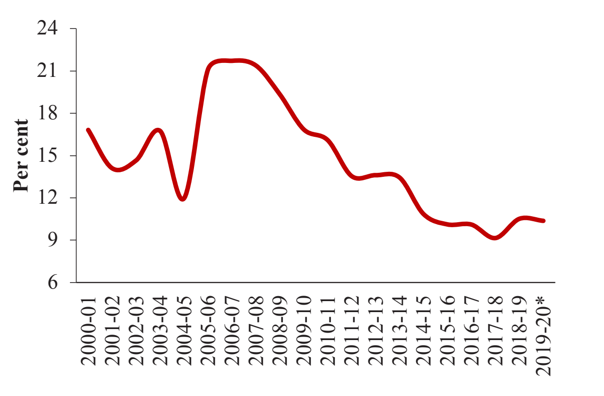
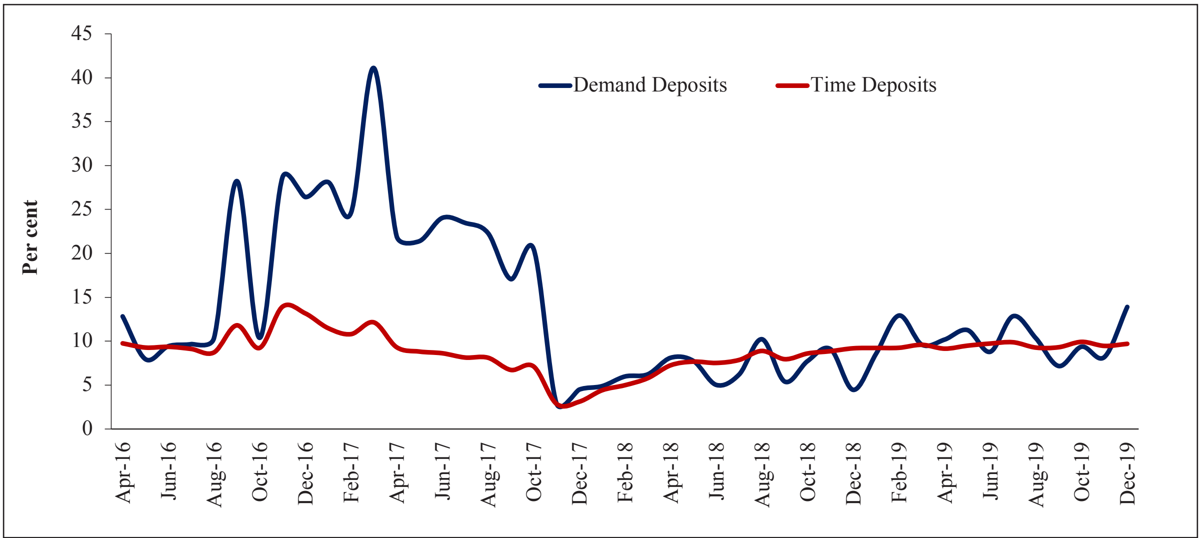


Figure 2: Broad Money Growth (YoY)



Source: RBI.
Notes: *: As on December 2019.

Figure 3: Deposits Growth (YoY)

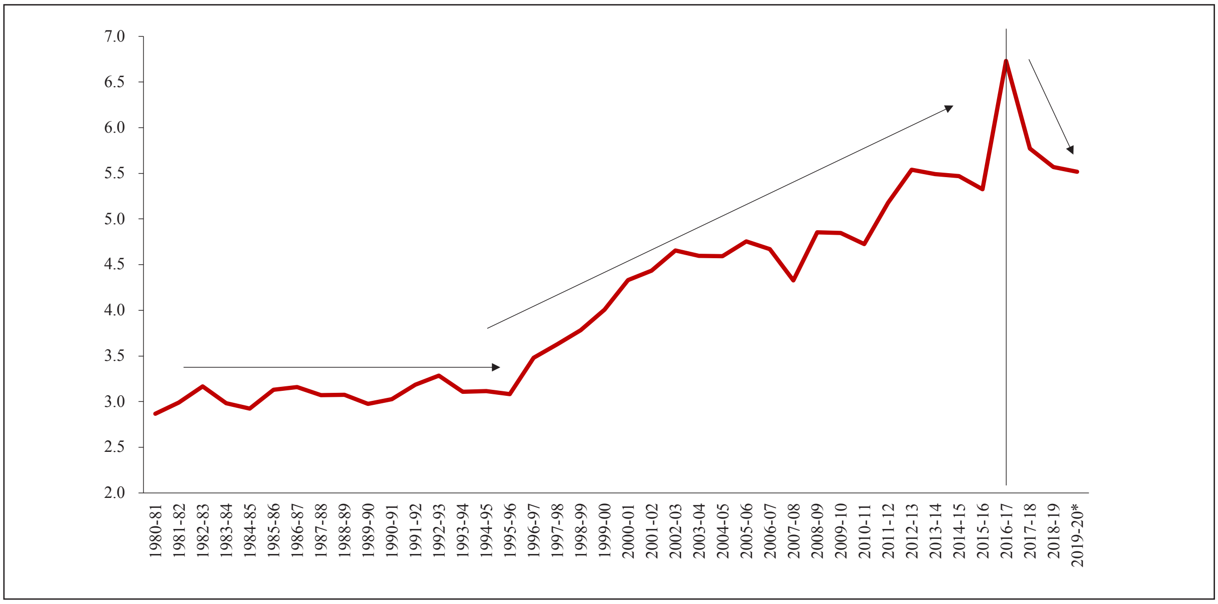


Source: RBI.
Note: Figures for December 2019 are as of December 20.

4.5 Broad money (M3) growth has been on declining trend since 2009 (Figure 2). However, since 2018-19 it has picked up marginally, mainly driven by the growth in aggregate deposits and stands at 10.4 per cent as on December 2019. Note that this is far below average growth of 14.9 per cent from 2000-01 to 2018-19 (Figure 2). From the component side, the expansion in M3 so far during the year is attributable to aggregate deposits, which recorded a higher growth of 10.1 per cent as on December 20, 2019 as compared with 9.2 per cent a year ago. Growth in both, time deposits and demand deposits picked up in 2019-20 and was higher in December 2019 as compared to December 2018 (Figure 3). On the sources side, banks' credit to the government mainly contributed to M3 expansion.

4.6 Between mid- 1990's to 2016-17, the money multiplier (measured as a ratio of M3/M0) was mostly increasing; however, it has been declining since 2017-18. Money Multiplier recorded a slight decline in 2019-20 as well (Figure 4).

Figure 4: Money Multiplier (M3/M0)

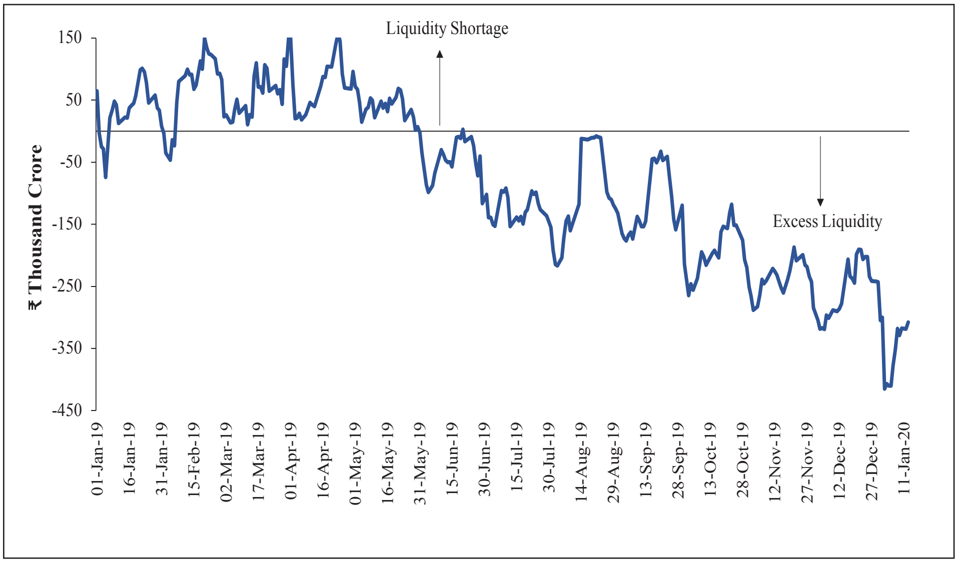


Source: RBI.
Note:*: As on December 2019.

LIQUIDITY CONDITIONS AND ITS MANAGEMENT

4.7 Systemic liquidity in 2019-20 has been largely in surplus since June 2019 (Figure 5). Durable liquidity injection was undertaken through four Open Market Operations (OMOs) purchase auctions and one US$ 5 billion buy/sell swap auction, all conducted during first quarter of 2019-20. Moreover, the Reserve Bank's forex operations augmented the domestic rupee liquidity in contrast to absorption last year. Furthermore, the Statutory Liquidity Ratio (SLR) has been reduced by 25 bps each in four steps effective April 13, 2019, July 6, 2019, October 12, 2019 and January 4, 2020 respectively, to 18.25 per cent of Net Demand and Time Liabilities (NDTL) of banks, in accordance with the roadmap announced in December 2018 with a view to aligning the SLR with the Liquidity Coverage Ratio (LCR). Other factors creating surplus liquidity are moderation in currency demand after two years of high demand following demonetisation.

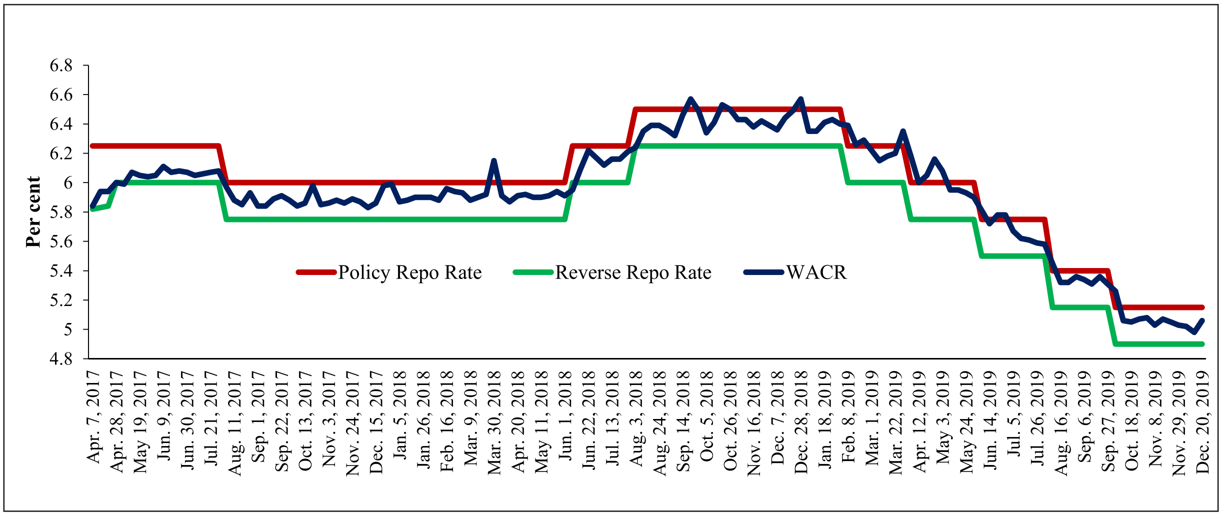
Figure 5: Daily Liquidity Management



Source: Net liquidity injected data from Money Market Operation, RBI

4.8. April and May were the only two months in 2019-20 (upto January 2020) when liquidity was in deficit due to restrained government spending and high demand for cash. The unwinding of Government of India cash balances – a regular feature every year in April – was much lower in the current year due to the imposition of the model code of conduct during elections restraining government spending. RBI conducted a US$/₹ buy/sell swap auction of US$ 5 billion for a tenor of three years in April, thereby injecting ₹ 34,874 crore, and two OMO purchase auctions in May amounting to ₹ 25,000 crore. The increased spending by the government, net forex purchases by the RBI and return of currency to the banking system combined with the two OMO purchase auctions amounting to ₹ 27,500 crore conducted by the Reserve Bank resulted in surplus liquidity in June. Liquidity has remained in surplus despite some episodes of forex sales in July and August.

Figure 6: Policy Corridor and Call Rate



Source: RBI.

4.9 Comfortable liquidity situation is also evident in the Weighted Average Call Money Rate (WACR) being mostly been close to the repo rate within the Liquidity Adjustment Facility (LAF) corridor (Figure 6).

4.10 With a view of moving further towards harmonization of the effective liquidity requirements of banks with LCR a roadmap was given in April 2019 to increase the Facility to Avail Liquidity for LCR by 50 bps in four steps to reach 15 per cent of NDTL by April 2020. Thus, by April 1, 2020, the total High Quality Liquid Assets carve out from SLR would be 17.0 per cent of NDTL of banks.

DEVELOPMENTS IN THE G-SEC MARKET

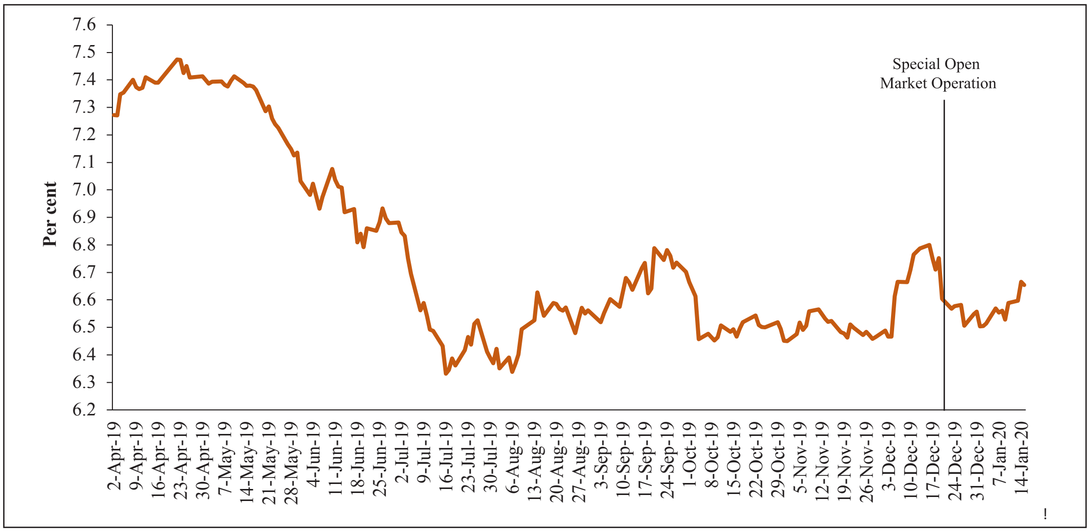
4.11 During the first half of 2019-20, the 10-year benchmark G-Sec yield mostly softened (Figure 7), tracking subdued crude oil prices, surplus liquidity, and four consecutive policy rate cuts amounting to 110 bps.

4.12 In first quarter of 2019-20, initially from April to mid-May 2019, 10-year benchmark yield hardened marginally on account of rise in crude oil prices. Thereafter, it largely followed a downward trend. The primary drivers for the softening of yield may be attributed to change in monetary policy stance of the U.S. Fed (on global growth concerns and ongoing trade tensions), easing of liquidity condition of the banking system, consecutive policy rate cuts by the RBI along with change of stance from neutral to accommodative. Additionally, benign crude oil prices aided the sentiment. Transfer of RBI surplus to the Government, accommodative stance by MPC, significant and sustained surplus liquidity, also, capped further upside in yields.

4.13 The softening of the benchmark yield continued during early period of second quarter of 2019-20 amidst expectation of another rate cut on the back of slowing economy. Thereafter, the yield started to harden on the back of news of launch of a new 10-year security and unexpected rise in crude oil prices. After the December 2019 MPC meeting where policy repo rates were kept unchanged, the 10 year G-Sec yields went up and stood at 6.8 per cent on December 16, 2019.

4.14 "Special Open Market Operation" by Reserve Bank of India, which means purchase of long term securities and simultaneous sale

Figure 7: 10-Year Benchmark G-Sec Yield



Source: CCIL.

of short term securities helped bring down the yield slightly on 10 year G-Secs. This is expected to bring down the term premium by reducing the differential between the long and short term bond yields. The first round of sale and purchase worth ₹10,000 crore was done on December 23, 2019. The second and third round was on December 30, 2019 and January 6, 2020 respectively for the same amount. This led to a slight decline in the yield of 10-year G-Sec. The 10-year benchmark bond (6.45% GS 2020) yield closed at 6.8 per cent on December 16, 2019 and declined to 6.6 per cent on December 20, 2019 and 6.5 per cent on January 2, 2020. However, the yield on 10-year benchmark bond drifted up again and stood at 6.63 per cent on January 15, 2020.

BANKING SECTOR

4.15 Gross Non Performing Advances (GNPA) ratio (i.e. GNPAs as a percentage of Gross Advances) of Scheduled Commercial Banks remained flat at 9.3 per cent at end September 2019, as was at end March 2019. Similarly their Restructured Standard Advances (RSA) ratio remained unchanged at 0.4 per cent during the same period. The Stressed Advances (SA) ratio of Scheduled Commercial Banks (SCBs) followed suit by remaining flat at 9.7 per cent as at end-September 2019. GNPA ratio of Public Sector Banks (PSBs) was unchanged at 12.3 per cent while stressed advances ratios increased from 12.7 per cent at end March 2019 to 12.9 per cent at end September 2019.

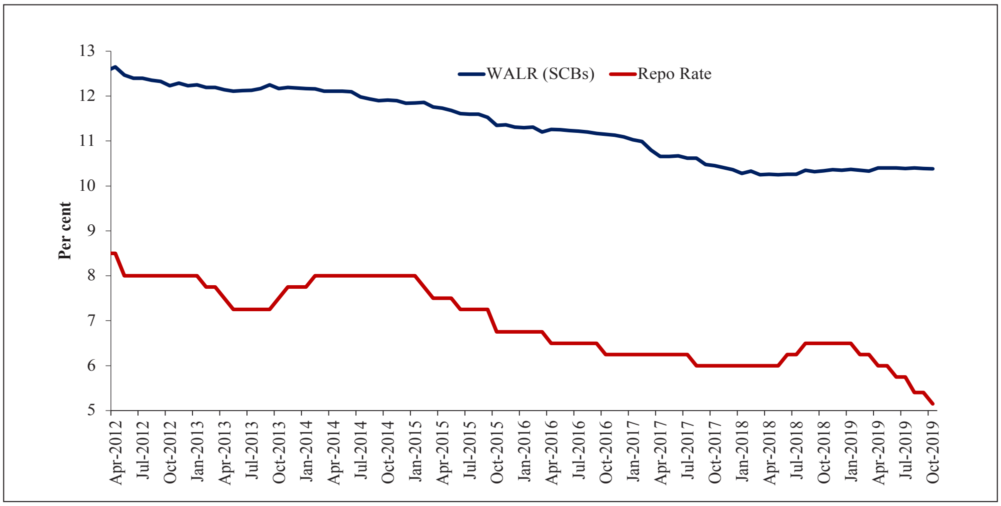
4.16 Capital to risk-weighted asset ratio (CRAR) of SCBs increased from 14.3 per cent to 15.1 per cent between March 2019 and September 2019, largely due to improvement in CRAR of PSBs. SCBs' Return on Assets (RoA) recovered from (-) 0.1 per cent to 0.4 per cent during H1 of 2019-20, while their Return on Equity (RoE) recovered from (-) 1.6 per cent to 4.1 per cent during the same period. However, many PSBs have continued to record negative profitability ratios since March 2016, mainly on account of provisioning requirements.

MONETARY TRANSMISSION

4.17 Transmission of monetary transmission has been weak in 2019 on all three accounts: Rate Structure, Quantity of Credit, and Term Structure.

(a) Rate Structure: The Weighted Average Lending Rate (WALR) of SCBs has not

Figure 8: Weighted Average Lending Rate on outstanding loans and Repo rate

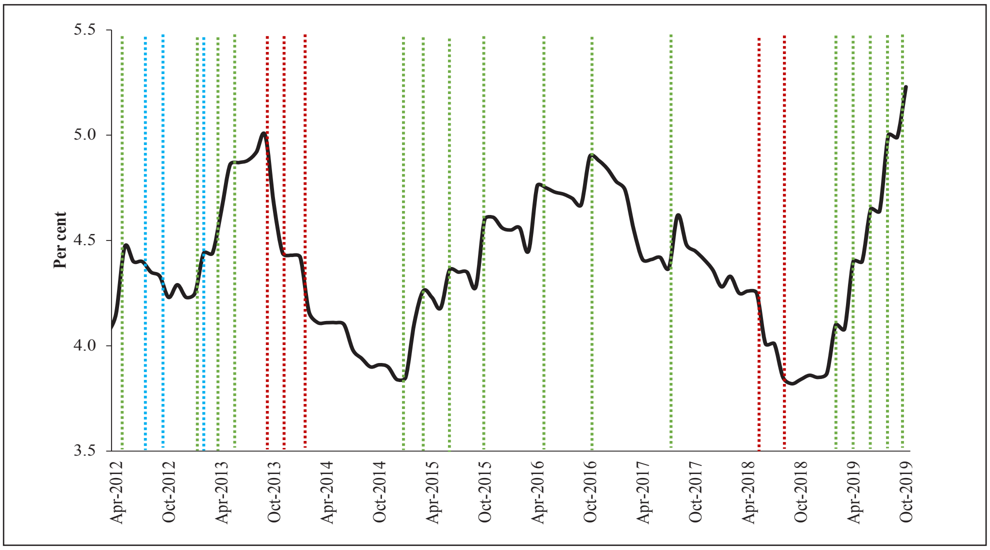


Source: RBI.

declined at all in 2019 despite reduction of repo rate by 135 bps since January 2019 (Figure 8). WALR on outstanding rupee loans of SCBs was 10.38 per cent in January 2019 and 10.40 per cent in October 2019. The monetary transmission has been slightly better for fresh loans. WALR on fresh loans of Public Sector Banks reduced by 47 bps and that of Private Sector Banks reduced by 40 bps from January to October 2019. However, even this has been much less than the repo rate cut of 135 bps (in 2019).

4.18 The credit spread (difference between repo rate and WALR) is at the highest level in this decade. WALR on outstanding loans of SCBs is 525 bps higher than the repo rate, suggesting that there has been no transmission

Figure 9: Credit spread

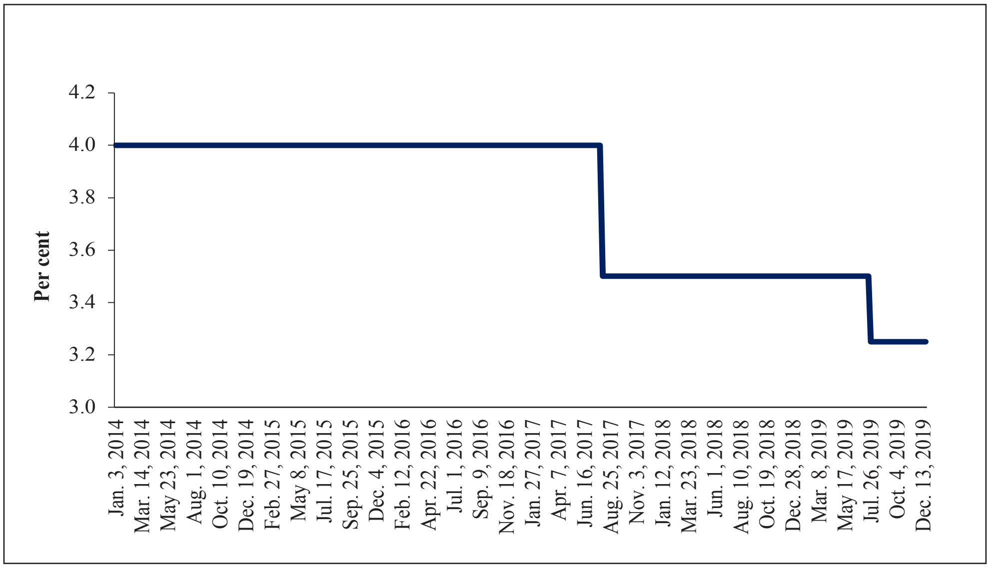


Source: RBI.

Note: Blue means CRR cut, Red denotes Repo hike, Green denotes Repo cut.

Credit spread is defined as difference between repo rate and WALR on outstanding loans.

Figure 10: Saving Deposit Rate



Source: RBI.

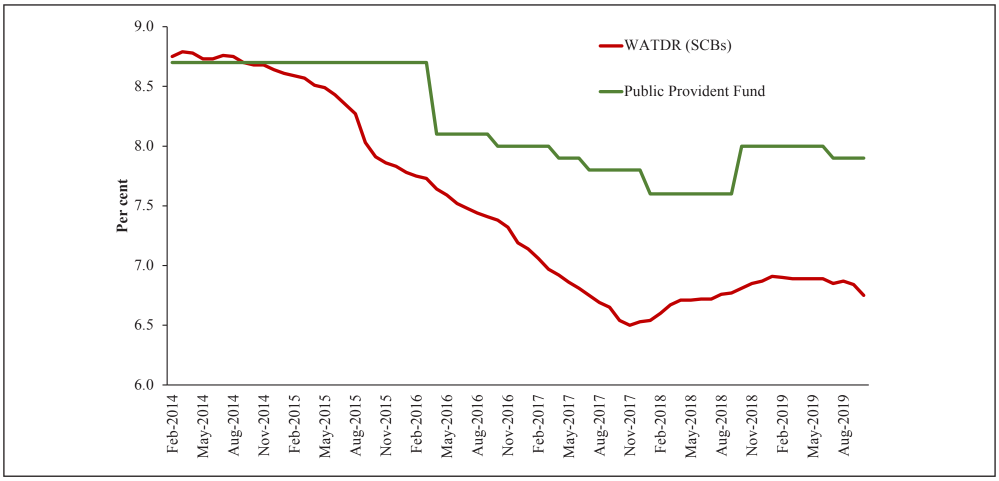
of the cut in repo rate to lending rates of the banks in 2019. (Figure 9).

4.19 There has been a reduction in the saving deposit rate by 25 bps in 2019 (Figure 10). The term deposit rate which is more important has seen a decline of only 16 bps from January 2019 to October 2019. An important limiting factor seems to be the rate on small savings scheme like Public Provident Fund (PPF). In 2014, the Weighted Average Term Deposit Rate (WATDR) was same as PPF, however the gap between them is 115 bps at end October 2019 (Figure 11). It is unlikely that the term deposit rates can decline without a decrease in administered rates on schemes like these.

(b) Term structure

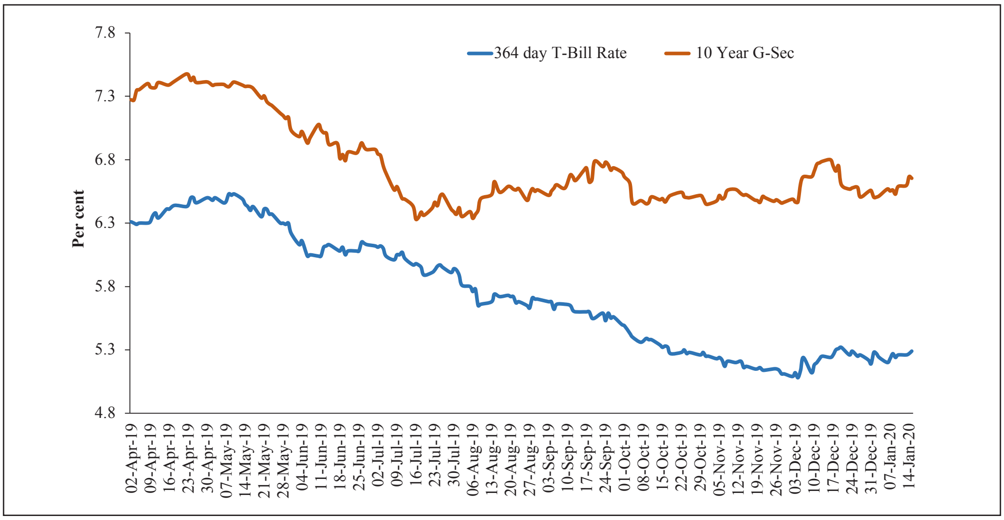
4.20 RBI's monetary easing and LAF liquidity has had some impact on short term interest rates. However, this impulse is not feeding through to longer term maturities. Since the beginning of the year, the yields on short term government securities (364 days T-bill) have declined much faster than that

Figure 11: Term Deposit Rate of SCBs and rate of interest on Public Provident Fund



Source: RBI and Ministry of Finance.

Figure 12: Bond yields (per cent)



Source: CCIL.

of long term Government securities (10-year G-sec). Infact, after August 2019 the yield on 10-year G-Sec have not declined much, barring the small decline after Special Open Market Operation by RBI (details in previous section) (Figure 12).

(c) Credit Growth

4.21 Despite a decrease in policy rates, the credit growth in the economy has been declining since the beginning of this year. Bank Credit growth (YoY) moderated from 12.9 per cent in April 2019 to 7.1 per cent as on December 20, 2019. The credit growth has been moderating from December 2018, when it was 13.9 per cent (Figure 13(a)). The moderation in credit growth was witnessed across all the major segments of non-food credit, except personal loans, which continued to grow at a steady and robust pace during 2019-20 so far (data available till November 2019). The moderation was led by a sharp deceleration in credit growth to the services sector. Credit growth to industry has been very low in the recent months (Figure 13(b)). The main contributor to this slowdown has been a negative growth of credit to Micro, Small and Medium Enterprises and Textiles (Table 3).

Figure 13 (a): Bank Credit Growth (YoY)

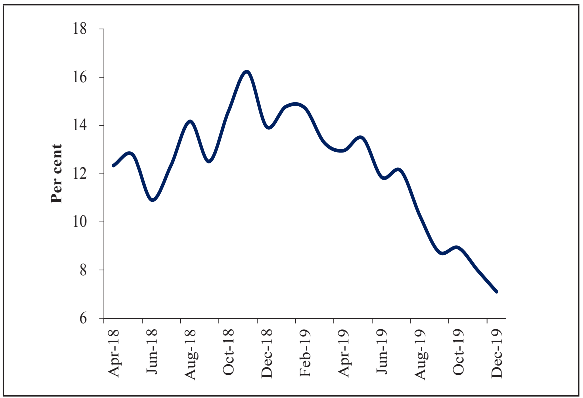
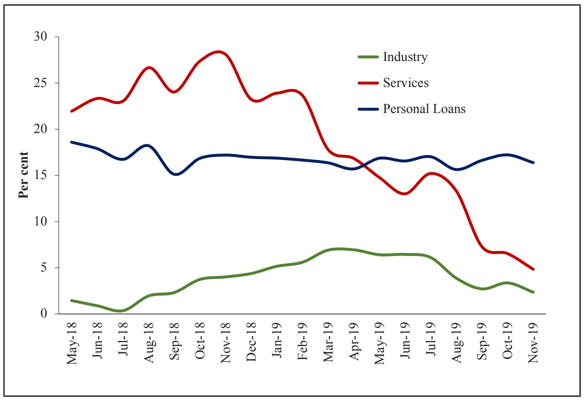


Figure 13 (b): Sectoral Bank Credit Growth (YoY)



Source: RBI.

Table 3: Growth in Industry-wise Deployment of Bank Credit by Major Sectors (YoY, per cent)

Item	Mar-15	Mar-16	Mar-17	Mar-18	Mar-19	Nov-19#
Non Food Credit	8.6	9.1	8.4	8.4	12.3	7.2
Industry	5.6	2.7	-1.9	0.7	6.9	2.4
Micro & Small	9.1	-2.3	-0.5	0.9	0.7	-0.1
Medium	0.4	-7.8	-8.7	-1.1	2.6	-2.4
Large	5.3	4.2	-1.7	0.8	8.2	3.0
Textiles	-0.1	1.9	-4.6	6.9	-3.0	-6.1
Infrastructure	10.5	4.4	-6.1	-1.7	18.5	7.0

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.
as on November 22, 2019.

Box 1: Major Policy Changes related to Banking Regulations

1. *Permitting One-time Restructuring of Existing Loans to MSMEs Classified as 'Standard' without a Downgrade in the Asset Classification*

A one-time restructuring of existing loans to MSMEs that were in default but with asset classification as 'standard' as on January 1, 2019, was permitted without an asset classification downgrade. The scheme is available to MSMEs qualifying with objective criteria including, *inter alia*, a cap of ₹ 25 crore on the aggregate exposure of banks and NBFCs as on January 1, 2019. The restructuring will have to be implemented by March 31, 2020 and an additional provision of 5 per cent will have to be maintained in respect of accounts restructured under this scheme.

2. *Bank Lending to Infrastructure Investment Trusts (InvITs)*

It was decided to permit banks to lend to InvITs, subject to certain safeguards which include a Board approved policy on exposures to InvITs, assessment of all critical parameters including sufficiency of cash flows at InvIT level, overall leverage of the InvITs and the underlying SPVs to be within the leverage permitted under the Board approved policy, monitoring of performance of the underlying SPVs on an ongoing basis and lending to only those InvITs where none of the underlying SPVs are facing 'financial difficulty'.

3. *Resolution of Stressed Assets*

Reserve Bank released the new Prudential Framework for Resolution of Stressed Assets. The fundamental principles underlying the regulatory approach for resolution of stressed assets are as under:

(i) Early recognition and reporting of default in respect of large borrowers by banks, FIs and NBFCs;

(ii) Complete discretion to lenders with regard to design and implementation of resolution plans, subject to the specified timeline and independent credit evaluation;

(iii) Harmonised framework for resolution of stressed assets, in supersession of all earlier resolution schemes (S4A, SDR, 5/25, *etc*.);

(iv) A system of disincentives in the form of additional provisioning for delay in implementation of resolution plan or initiation of insolvency proceedings;

(v) Withdrawal of asset classification dispensations on restructuring. Future upgrades to be contingent on a meaningful demonstration of satisfactory performance for a reasonable period;

(vi) For the purpose of restructuring, the definition of 'financial difficulty' to be aligned with the guidelines issued by the Basel Committee on Banking Supervision; and,

(vii) Signing of inter-creditor agreement (ICA) by all lenders to be mandatory, which will provide for a majority decision making criteria.

4. *External Benchmark Based Lending*

As the transmission of policy rate changes to the lending rate of the banks under the current MCLR framework was not satisfactory, guidelines were issued to banks on September 4, 2019 mandating banks *w.e.f.* October 1, 2019 to link all new floating rate personal or retail loans and floating rate loans to MSE to an external benchmark as under:

a) *Benchmarks:* The banks are free to choose one of the several benchmarks from Repo Rate, 3 Months or 6 Months Treasury Bill yield and any other benchmark market interest rate published by the Financial Benchmark India Private Ltd (FBIL).

b) *Spread*: Banks are free to decide the spread over the external benchmark. However, credit risk premium may undergo change only when borrower's credit assessment undergoes a substantial change, as agreed upon in the loan contract. Further, other components of spread including operating cost could be altered once in three years.

c) *Reset of interest rates:* The interest rate under external benchmark shall be reset at least once in three months.

5. Revised guidelines on compensation of Whole Time Directors/Chief Executive Officers/Material Risk Takers and Control Function Staff for all Private Sector Banks (including LABs, SFBs, PBs, WOS, and foreign banks) to be effective from April 01, 2020:

a) Substantial portion of compensation *i.e.* at least 50 per cent should be variable (Earlier no threshold was prescribed)

b) Employee Stock Ownership Plans (ESOPs) to be included as a component of Variable Pay as share-linked instruments. (Earlier excluded)

c) Variable Pay is to be capped at 300 per cent of Fixed Pay (Earlier Variable Pay was capped at 70 per cent of Fixed Pay but did not include ESOPs/share-linked instruments)

d) Minimum 50 per cent of Variable Pay is to be via non-cash component (such as ESOPs). (Earlier no specific proportion was prescribed)

e) Mandating a compulsory deferral mechanism for Variable Pay, regardless of quantum of variable pay (Earlier it was mandated only beyond a specified threshold)

f) Mandating imposition of malus in case of divergence in NPA/provisioning beyond RBI prescribed threshold for public disclosure. (New addition)

g) Quantitative and Qualitative criteria are being prescribed for identification of Material Risk Takers (New addition).

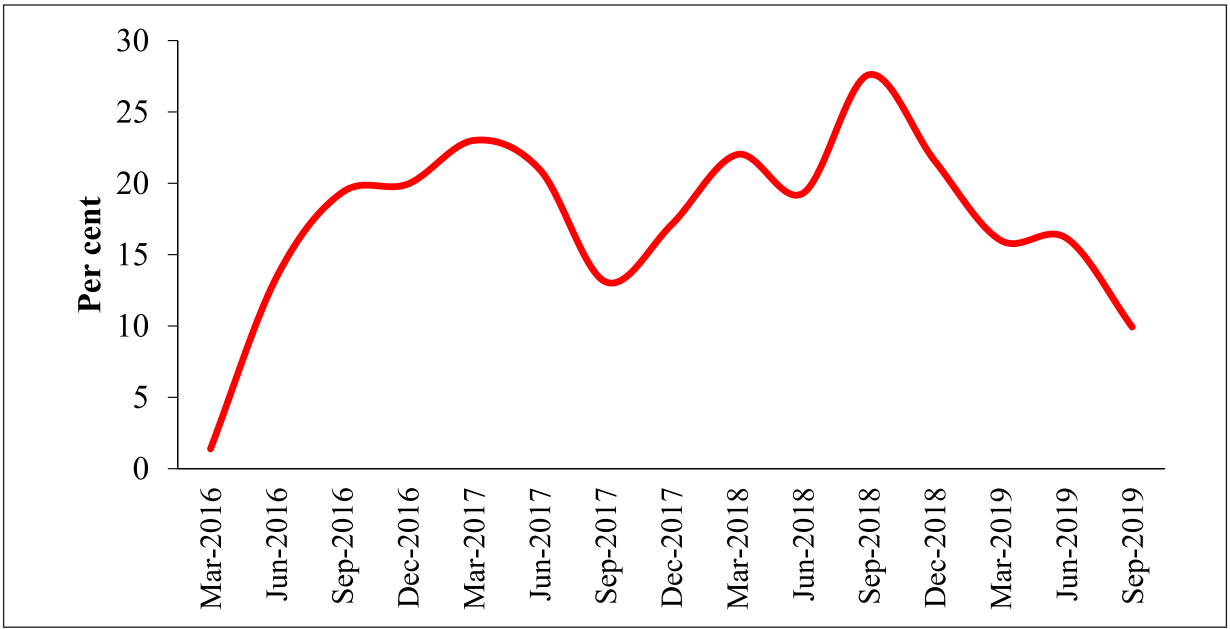
NON-BANKING FINANCIAL SECTOR (NBFC)

4.22 After growing very fast in 2017-18 and in first half of 2018-19, the sector has decelerated sharply since then. The growth of loans from NBFCs declined from 27.6 per cent in September 2018 and 21.6 per cent in December 2018 to 9.9 per cent at end September 2019 (Figure 14).

4.23 The balance sheet of the NBFC sector grew by 17.9 per cent from ₹ 26.18 lakh crore to ₹ 30.85 lakh crore during 2018-19. This growth was on top of a growth of 21.3 per cent recorded during 2017-18 despite concerns over NBFCs. The third quarter of 2018-19 witnessed liquidity stress. The cost of funds for NBFCs declined by March 2019 and further by September 2019, as reflected in the 3-month CP discount rate[1] (Figure 15).

1. Data for September 2019 is provisional.

Figure 14: Growth in Loans and advances by NBFCs (YoY)

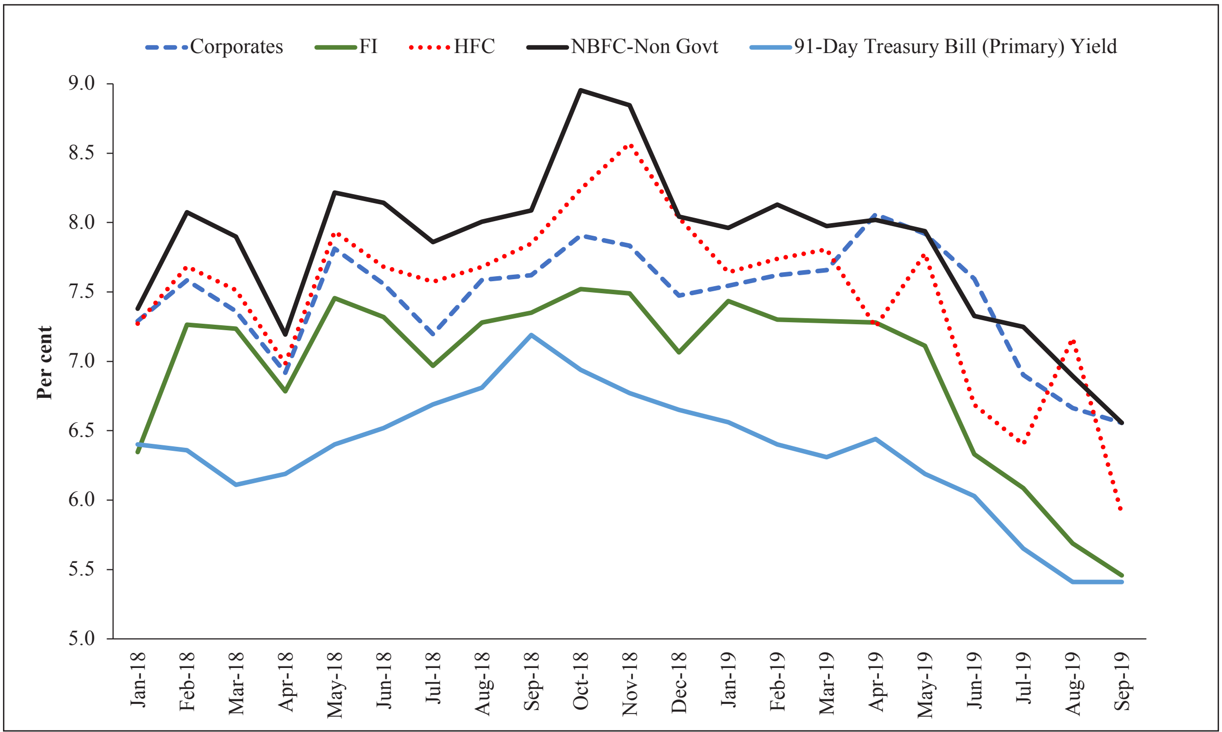


Source: RBI.

Note: 1. Data pertains to deposit taking NBFCs and Non-Deposit Taking Systematic Important NBFCs including Government Companies.

2. Data from June 2018 onwards is provisional.

Figure15: Category wise 3-Month CP Rate[2]



Source: RBI.

2. Data for September 2019 is provisional.

4.24 There is an observable shift in the sources of funding of NBFCs. Bank borrowings increased from ₹5.62 lakh crore in October 2018 to ₹ 7.13 lakh crore in October 2019 i.e. a growth of 26.8 per cent (Figure 16 (a)). However, this growth is much lower as compared to end October 2018. Deployment of credit by mutual funds to NBFCs has been contracting since October 2018 (Figure 16 (b)).

4.25 The market borrowings increased from ₹ 10.4 lakh crore to ₹ 10.5 lakh crore during September 2018 to September 2019. Among the instruments of market borrowing, the share of Commercial Papers decreased by 31.2 per cent from September 2018 to September 2019, while the share of Non-Convertible Debentures (NCDs) increased by 7.7 per cent from ₹ 8.61 lakh crore to ₹ 9.27 lakh crore in the same period.

4.26 As against the regulatory requirement of 15 per cent, the Capital to risk weighted assets ratio (CRAR) of NBFC sector remained at 19.5 per cent at end March 2019 and end September 2019. The gross NPAs ratio of NBFC sector increased from 5.8 per cent at end March 2018 to 6.1 per cent at end March 2019 and further increased marginally to 6.3 per cent at end September 2019. The net NPAs ratio marginally increased from 3.3 per cent in March 2018 to 3.4 per cent in March 2019 and remained same as on September 2019. The Return on Assets (RoA) of the sector decreased to 1.5 per cent as on March 2019 from 1.6 per cent as on March 2018. Further, the Return on Equity (RoE) moderated to 6.6 per cent as on March 2019 from 6.9 per cent as on March 2018.

Figure 16 (a): Growth in Bank Credit to NBFCs

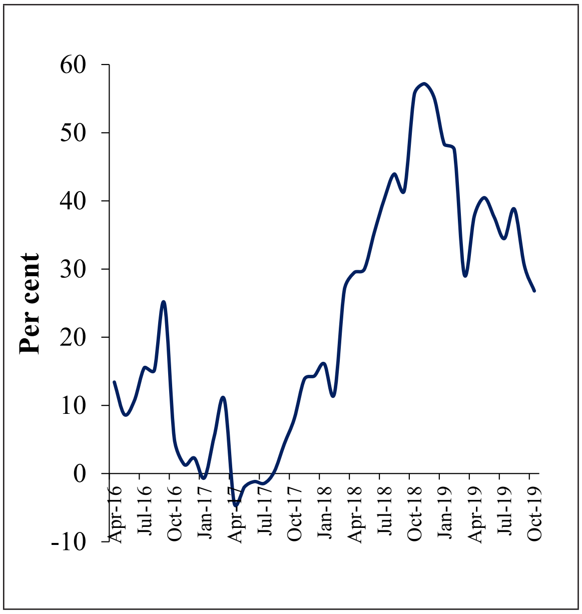
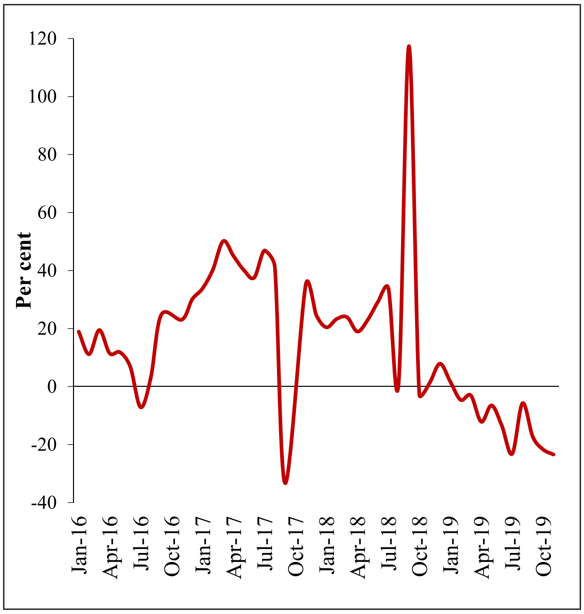


Figure 16 (b): Growth in Deployment of Funds by MFs to NBFCs



Source: SEBI & RBI (Sectoral deployment of bank credit by major sectors)

Note for figure 16(a)

1. This data includes HFCs as well.
2. 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.

Box 2: Major Policy Changes related to Non-banking Financial Regulation /Supervision

In the aftermath of the IL&FS event, several measures were undertaken to strengthen the regulation and supervision of the NBFC sector, as set out below.

1. Amendment to the RBI Act, 1934 to Strengthen the Regulation and Supervision of the NBFC Sector vesting additional powers with the Reserve Bank to:

a. Raise the minimum net owned fund requirement for NBFCs up to ₹ 100 crore (from existing ₹ 2 crore);

b. Remove Director of an NBFC from the office (other than Government companies);

c. Supersede the Board of Directors of NBFC (other than Government companies);

d. Remove or debar statutory auditor from exercising the duties as auditor of any of the RBI regulated entities;

e. Resolve NBFCs through amalgamation, reconstruction, splitting the viable and non-viable businesses in separate units;

f. Direct an NBFC to annex its financial statements such as statements and information relating to the business or affairs of any group company of the NBFC and to cause an inspection or audit to be made of any group company of an NBFC and its books of account.

g. To increase the quantum of penalties that the Reserve Bank may impose.

2. Eligible NBFC-ND-SIs as Authorised Dealers (ADs) - Category II: The Reserve Bank allowed non-deposit taking systemically important NBFC-ICCs to obtain AD-Category II license, effective April 16, 2019, in order to increase accessibility and efficiency of the services extended to the members of the public for their day-to-day non-trade current account transactions. Eligible NBFCs will have to satisfy certain conditions and seek specific permission from the Reserve Bank.

3. Liquidity Risk Framework for NBFCs: All non-deposit taking NBFCs with asset size of ₹ 100 crore and above, systemically important Core Investment Companies and all deposit taking NBFCs irrespective of their asset size, shall adhere to the set of liquidity risk management guidelines:

a) Granular maturity buckets and tolerance limits,

b) Liquidity risk monitoring tools/ metrics to capture strains in liquidity position,

c) Adoption of "stock" approach to liquidity, in addition to structural & dynamic liquidity,

d) Extension of principles of sound liquidity risk management to aspects like off-balance sheet and contingent liabilities, intra-group fund transfers, etc., and

e) Introduction of Liquidity Coverage Ratio (LCR) for all non deposit taking NBFCs (excluding Core Investment Companies, Non-operating Financial Holding Companies Standalone Primary Dealers and Type-I NBFCs) with asset size ₹ 5,000 crore and above and all deposit taking NBFCs irrespective of size to maintain sufficient High Quality Liquid Assets (HQLA) to survive any acute liquidity stress. The LCR will be progressively increased to 100 per cent by December 1, 2024.

4. Review of Limits for NBFC-Micro Finance Institutions (NBFC-MFIs): The household income limits for borrowers of NBFC-MFIs have been raised from the current level of ₹ 1,00,000 for rural areas and ₹ 1,60,000 for urban/semi urban areas to ₹ 1,25,000 and ₹ 2,00,000, respectively, along with increase in lending limit from ₹ 1,00,000 to ₹ 1,25,000 per eligible borrower effective November 8, 2019.

Housing Finance Companies: The regulation of Housing Finance Companies (HFCs) has been transferred by Government of India from National Housing Bank (NHB) to the RBI with effect from August 9, 2019.

DEVELOPMENTS IN CAPITAL MARKET

Primary Market

A. Public Issue

4.27 The total money raised by public and rights issue increased to ₹ 73,896 crore in the year 2019-20 (up to December 31, 2019) from ₹ 44,355 crore in the corresponding period last year. In the same period in 2018-19, the Primary market resource mobilisation through public and rights issues had declined as compared to 2017-18.

Equity

4.28 The resource mobilisation through public issue (equity) decreased in April-December 2019 compared to the similar period for previous year, continuing with the declining trend of last year. During April-December 2019, 47 companies mobilized ₹ 10,895 crore through public equity issuance compared to 103 companies raising ₹ 13,947 crore in April-December 2018, indicating a decrease of 21.9 per cent over the period. On the other hand, resource mobilization through rights issues (equity) during April-December 2019 increased sharply with resource mobilization of ₹ 51,255 crore, as compared to ₹ 1,843 crore in the corresponding period of last year (Table 4).

Table 4: Primary Market Resource Mobilisation through Public and Rights Issues

Issue Type	2016-17 (upto Dec 31, 2016)		2017-18 (upto Dec 31, 2017)		2018-19 (upto Dec 31, 2018)		2019-20 (upto Dec 31, 2019)	
	No of issues	Amount (₹ crore)	No of issues	Amount (₹ crore)	No of issues	Amount (₹ crore)	No of issues	Amount (₹ crore)
Public Issue (Equity)	70	24,515	134	64,141	103	13,947	47	10,895
Rights Issue (Equity)	5	1,297	14	4,522	6	1,843	11	51,255
Public Issue (Debt)	12	27,161	4	3,896	15	28,565	27	11,746
Total Public Issue	**87**	**52,973**	**152**	**72,559**	**124**	**44,355**	**85**	**73,896**

Source: SEBI.

Debt

4.29 Resource mobilization through issuance of debt securities to public declined significantly to ₹ 11,746 crore raised through 27 issues during April-December 2019, as compared to ₹ 28,565 crore through 15 issues in the corresponding period of the previous year.

B. Private Placement

4.30 During 2019-20 (up to December 31, 2019), Indian corporates preferred private placement route to gear up the capital in the corresponding period in previous year. ₹ 6.29 lakh crore was raised through 1,520 issues in April-December 2019 through private placements, as compared to ₹ 5.3 lakh crore through 2,006 issues in the corresponding period of previous year (Table 5).

Equity

4.31 There were 225 issues which raised ₹ 1.79 lakh crore through private placement of equity securities in April-December 2019, compared to 335 issues which raised ₹ 1.57 lakh crore in April-December 2018. Out of the 225 issues, there were 9 qualified institutional placement (QIP) allotments and 216 preferential allotments which raised ₹ 34,029 crore and ₹ 1.45 lakh crore, respectively, during April-December 2019, as compared to 11 QIPs allotments and 324 preferential allotments which raised ₹ 6,958 crore and ₹ 1.50 lakh crore, respectively, in April-December 2018.

Debt

4.32 Further, the resource mobilization through private placement of corporate bonds stood at ₹ 4.50 lakh crore during April-

Table 5: Primary Market Resource Mobilisation through Private Placements

Issue Type	2016-17 (upto Dec 31, 2016)		2017-18 (upto Dec 31, 2017)		2018-19 (upto Dec 31, 2018)		2019-20 (upto Dec 31, 2019)	
	No of issues	Amount (₹ crore)	No of issues	Amount (₹ crore)	No of issues	Amount (₹crore)	No of issues	Amount (₹crore)
QIPs Allotment (Equity)	14	4,395	37	57,711	11	6,958	9	34,029
Preferential Allotment (Equity)	299	30,224	307	40,668	324	1,49,921	216	1,45,404
Private Placement of Bonds	2,662	4,78,974	1,943	4,60,061	1,671	3,73,375	1,295	4,49,939
Total Private Placement	**2,975**	**5,13,593**	**2,287**	**5,58,440**	**2,006**	**5,30,254**	**1,520**	**6,29,372**

Source: BSE, NSE, MSEI and SEBI.

December 2019, as compared to ₹ 3.73 lakh crore during April-December 2018.

Mutual Fund Activities

4.33 There was a net inflow of ₹1.9 lakh crore into the mutual funds industry during April-December 2019 as compared to a net inflow of ₹ 0.8 lakh crore for the corresponding period in last year. The net Assets Under Management (AUM) of all mutual funds increased by 18.4 per cent to ₹ 26.3 lakh crore at the end of December 31, 2019 from ₹ 22.2 lakh crore at the end of December 31, 2018 (Table 6).

INVESTMENT BY FOREIGN PORTFOLIO INVESTORS (FPIs)

4.34. There were net inflows to the tune of ₹ 0.81 lakh crore on account of the FPIs in the Indian capital market during April-December 2019, as compared to net outflows of ₹ 0.94 lakh crore during April-December 2018. The total cumulative investment by FPIs (at the acquisition cost) increased by 7.8 per cent to US$ 259.5 billion as on December 31, 2019 from US$ 240.1 billion as on December 31, 2018 (Table 7).

MOVEMENT OF INDIAN BENCHMARK INDICES

4.35. India's benchmark indices, namely, Nifty50 and S&P BSE Sensex, reached record highs during 2019-20 (upto January 16, 2020). The S&P BSE Sensex, the benchmark index of Bombay Stock Exchange (BSE), reached an all-time high closing of 41,952 on January 14, 2020, witnessing an increase of 7.9 per cent from 38,871 level on April 1, 2019. Nifty 50 index reached an all time high closing at 12,355 on January 16, 2020 (Figure 17).

Table 6: Mobilization of Funds by Mutual Funds

Period	No. of Folios (crore)	Gross Mobilization (₹ lakh crore)	Redemption (₹ lakh crore)	Net Inflows (₹ lakh crore)	Net AUM at the end of the period (₹ lakh crore)
2018-19 (upto December 31, 2018)	8.03	139.30	138.50	0.80	22.20
2019-20 (upto December 31, 2019)	8.71	134.30	132.50	1.90	26.30

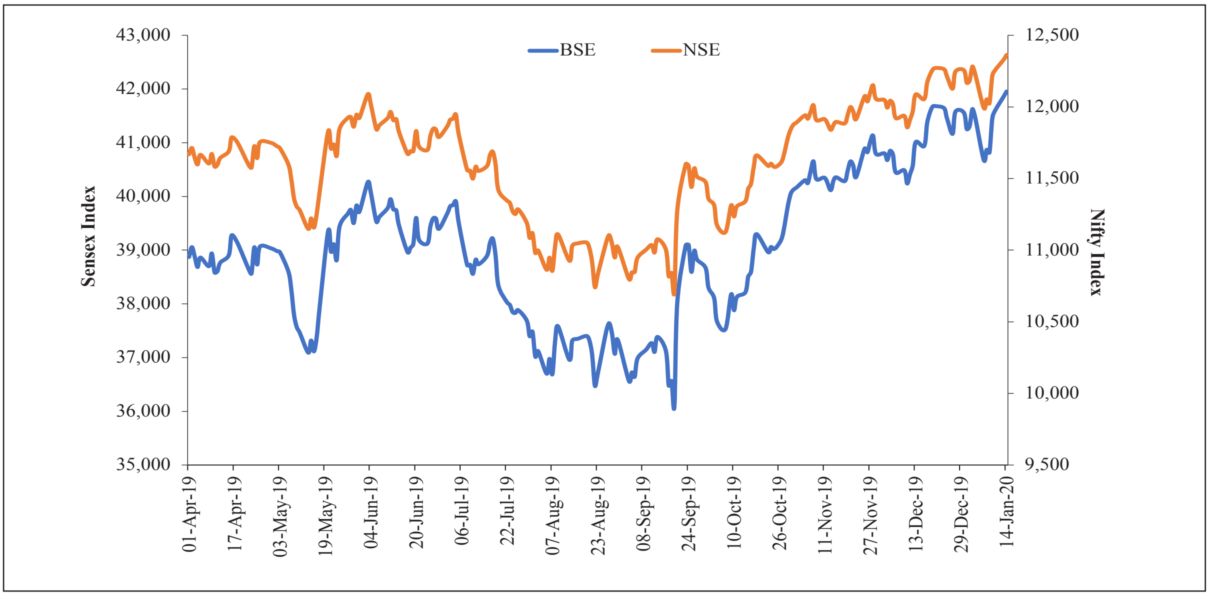
Source: SEBI.

Table 7: Investment by Foreign Portfolio Investors

Year/Month	Gross Purchase (₹ crore)	Gross Sales (₹ crore)	Net Investment (₹ crore)	Net Investment (US $ mn.)	Cumulative Net Investment (US $ mn.)
2018-19 (upto December 31, 2018)	11,78,809	12,72,988	-94,179	-13,442	2,40,171
2019-20 (upto December 31, 2019)	13,79,888	12,99,141	80,746	11,465	2,59,579

Source: NSDL.

Figure 17: Movement of Indian Benchmark Indices



Source: BSE and NSE.

Box 3: Benefits of Enabling Bilateral Netting for Financial Contracts in India

A *bilateral netting* agreement enables two counterparties in a financial contract to offset claims against each other to determine a single net payment obligation due from one counterparty to the other. Similarly, a *multilateral netting* agreement allows counterparties to offset claims against each other through a Central Counterparty (CCP) in a clearing house. Under instances of default, including insolvency, dissolution or winding-up of counterparty, *close-out netting* enables the non-defaulting counterparty to prematurely terminate the financial contract and sum the mutual claims to determine a single net amount due from one counterparty to the other.

At present, there are legal provisions for multilateral close-out netting for financial transactions intermediated through a CCP, such as the Clearing Corporation of India Limited (CCIL), under the *Payment and Settlement Systems (Amendment) Act (2015)*. However, bilateral netting for financial contracts is not permitted in India. This negatively impacts banks and other financial market participants via several channels:

(i) In the absence of bilateral netting, RBI's regulations require banks to measure credit exposure to a counterparty for OTC derivative contracts based on *gross* marked-to-market (MTM) exposure instead of *net* MTM exposure. This increases credit risk for financial market participants, especially in the event of insolvency of a counterparty, which could then raise systemic risk.

(ii) In implementing the Basel III regulatory reforms[3], RBI requires banks to calculate regulatory capital requirements for OTC derivative transactions based on *gross* MTM exposure to a counterparty instead of *net* MTM exposure. This forces banks to hold more regulatory capital than what would be required under bilateral netting. According to RBI estimates, bilateral netting

3. The post-crisis G20 and Basel reforms in the OTC derivatives market require non-centrally cleared derivative transactions to be subject to higher capital requirements relative to transactions intermediated through a CCP.

arrangements could have helped 31 major banks participating in India's OTC derivatives market save about ₹ 22.58 billion in regulatory capital during FY2017-18.

(iii) The RBI's current proposal for implementing global OTC derivatives market reforms[4] requires financial institutions to exchange *margin*[5](collateral) with counterparties for OTC derivative transactions based on *gross* counterparty exposure instead of *net* counterparty exposure. Implementation of this reform going forward would force banks to divert more capital towards collateral requirements than what would be required if bilateral netting is permitted. According to CCIL estimates, banks and primary dealers would have had to hold about ₹436.98 billion of additional capital as *margin*[6] as of March 2018 if margin regulations were implemented.

(iv) Higher regulatory capital burden makes trading activity for financial contracts more capital intensive, translating into higher cost of transaction. This discourages market participation by banks and primary dealers, affecting market liquidity and market development in terms of depth. This is one of the major factors hindering activity in India's Credit Default Swaps (CDS) market (*RBI Report of Working Group on Development of Corporate Bond Market in India, 2016*).

Global regulatory bodies such as the Financial Stability Board (FSB) and the Basel Committee on Banking Supervision have supported the use of close-out netting due to its positive impact on financial stability. At present, major jurisdictions such as the U.S., U.K., Australia, Canada, Japan, France, Germany, Singapore and Malaysia have legal provisions in place for netting agreements.

Hence, establishing a legal framework for bilateral close-out netting in India would help: (a) reduce credit risk and regulatory capital burden for banks, freeing up capital for other productive uses; (b) reduce hedging costs and liquidity needs for banks, primary dealers and other market-makers, thereby encouraging participation in the OTC derivatives market to hedge against risk. Increased market participation in the CDS market would also provide an impetus for corporate bond market development; (c) establish an efficient recovery mechanism for financial contracts under instances of default by a counterparty; and (d) adhere to India's G20 and FSB commitment to implement global regulatory reforms in the OTC derivatives market.

INSURANCE SECTOR

4.36. Internationally, 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).

4.37. The insurance density in India which was US$ 11.5 in 2001, reached to US$ 74 in 2018 (Life- US$ 55 and Non-Life – US$ 19). The comparative figures for Malaysia, Thailand and China during the same period were US$ 518, US$ 385 and US$ 406 respectively. Penetration

4. The post-crisis G20, Basel and International Organization of Securities Commissions (IOSCO) reforms in the OTC derivatives market require counterparties to exchange 'margin' (collateral) for non-centrally cleared derivative transactions.

5. There are two types of margins based on two kinds of counterparty exposure in OTC derivative transactions. Variation margin protects a counterparty from current exposure based on the MTM value of the derivative at any point in time. Initial marginprotects a counterparty from potential future exposure due to changes in the MTM value of the derivative contract during the time it takes to close out and replace the position in the event of default by the counterparty.

6. These estimates are for initial margin. Capital needs would be much higher if variation margin estimates are included.

Box 4: Defined Contributory Pension Scheme: National Pension System

The New Pension Scheme, now renamed as National Pension System (NPS) was introduced by the Government on December 22, 2003 and it was made mandatory for Central Government employees (except armed forces) who join service w.e.f. January 1, 2004. The Scheme was extended to the State Governments and as of now 28 State Governments have notified NPS for their employees. The Scheme was extended to all citizens of the country on voluntary basis from May 2009.

Till September 30, 2019, a total of around 3.06 crore subscribers (including Atal Pension Yojana) have been enrolled under NPS. Assets Under Management (AUM) which includes the returns on the corpus, under the NPS have witnessed an increase from ₹ 3.18 lakh crore as on 31st March 2019 to ₹ 3.71 lakh crore as on September 30, 2019, registering an increase of 16.71 per cent. The APY has a total of 1.78 crore subscribers and AUM of ₹ 8,743 crore as on September 30, 2019 (Table 1).

Table 1: Number of Subscribers, Corpus and Assets Under Management under NPS/APY (As on 30th September 2019)

Sector	Number of Subscribers		Contribution* (₹ Crore)		Asset Under Management (₹ Crore)	
	Absolute	%	Absolute	%	Absolute	%
Central Government	18,31,307	14	75,504	28	1,07,409	30
Central Autonomous Bodies (CAB)	1,94,419	2	12,796	5	17,294	5
State Government	38,56,844	30	1,26,668	46	1,68,547	46
State Autonomous Bodies	7,01,274	5	17,229	6	18,412	5
Corporate	9,68,019	8	28,307	10	36,580	10
Unorganised Sector	9,25,810	7	10,986	4	10,777	3
NPS Lite	43,39,836	34	2,624	1	3,631	1
Total	1,28,17,509	100	2,74,115	100	3,62,650	100
APY	1,78,21,441		7,927		8,743	
Total	3,06,38,950		2,82,042		3,71,393	

Source: CRA Report
Note: *Matched and Booked.

Within the government, Uttar Pradesh has maximum number of subscribers followed by Madhya Pradesh, Rajasthan, and Maharashtra. The largest Assets under Management are with Rajasthan followed by Uttar Pradesh, Madhya Pradesh and Maharashtra (Table 2).

Table 2: Geographical Coverage under NPS (Govt Sector)

Sl. No.	State Govt.	Total No. of Subscribers	Contribution (₹ Crore)	AUM (₹ Crore)
1.	Andhra Pradesh	1,85,951	7,946.11	10,408.51
2.	Arunachal Pradesh	17,411	406.50	485.19
3.	Assam	1,55,251	5,296.16	6,814.88
4.	Bihar	1,68,073	5,423.78	7,297.47
5.	Chandigarh**	10,968	630.45	836.18

6.	Chhattisgarh	2,96,468	7,317.75	9,428.50
7.	Goa	32,450	1,394.32	1,756.79
8.	Gujarat	2,17,338	7,331.63	9,531.89
9.	Haryana	1,71,028	6,807.18	9,071.93
10.	Himachal Pradesh	93,260	3,865.18	4,716.86
11.	J & K	1,22,831	3,541.61	4,525.77
12.	Jharkhand	1,08,136	4,226.41	5,814.52
13.	Karnataka	2,40,767	8,304.64	11,426.90
14.	Kerala	1,25,480	2,164.48	2,558.24
15.	Madhya Pradesh	4,87,695	12,703.13	16,465.36
16.	Maharashtra	3,14,158	12,019.46	14,936.13
17.	Manipur	41,973	971.69	1,252.80
18.	Meghalaya	14,554	333.18	411.49
19.	Mizoram	7,985	211.56	250.44
20.	Nagaland	21,073	402.80	476.23
21.	Odisha	1,64,378	4,406.22	5,662.72
22.	Puducherry**	13,207	729.50	970.02
23.	Punjab	1,82,190	6,740.35	8,931.20
24.	Rajasthan	4,81,493	16,897.74	22,118.90
25.	Sikkim	15,344	443.08	577.30
26.	Telangana	1,53,764	5,449.12	7,372.21
27.	Uttarakhand	80,962	4,005.84	5,410.68
28.	Uttar Pradesh	6,26,116	13,800.19	17,280.20
29.	Tamil Nadu*	187	18.25	20.75
30.	Tripura	652	3.76	4.47
31.	West Bengal*	330	23.47	34.09
	Total	45,51,473	1,43,815.54	1,86,848.62

Source: PFRDA.

Note: *: Executed agreement with CRA and NPS trust only for All India Service officer.
**: Status included under the State Government.

Major steps taken during FY 2019-20

It has been decided to introduce the following options for Central Government NPS subscribers (change in the Pension Funds or investment pattern is allowed in respect of incremental flows only):

a. **Choice of Pension Fund**: As in the case of subscribers in the private sector, the Government subscribers shall also be allowed to choose any one of the pension funds including Private sector pension funds. They could change their option once in a year. However, the current provision of combination of the Public-Sector Pension Funds will be available as the default option for both existing as well as new Government subscribers.

b. **Choice of Investment pattern**: Government employees may exercise one of the following choices of Investment Pattern twice in a financial year :

- The existing scheme in which funds are allocated by the PFRDA among the three Public Sector Undertaking fund managers based on their past performance in accordance with the guidelines of PFRDA for Government employees shall continue as default scheme for both existing and new subscribers.

- Government employees who prefer a fixed return with minimum amount of risk shall be given an option to invest 100 per cent of the funds in Government securities.
- Government employees who prefer higher returns shall be given the options of the following two Life Cycle based schemes:
  - ➢ Conservative Life Cycle Fund with maximum exposure to equity capped at 25 per cent.
  - ➢ Moderate Life Cycle Fund with maximum exposure to equity capped at 50 per cent.

for Life insurance has declined from 2011, whereas for the non-life insurance has increased consistently and is 2.74 per cent for Life Insurance and 0.97 per cent for Non-Life insurance in 2018 (Table 8 and 9). Globally insurance penetration and density were 3.31 per cent and US$ 370 for the life segment and 2.78 per cent and US$ 312 for the non-life segment respectively in 2018.

4.38. During 2018-19, the gross direct premium of Non-Life insurers was ₹ 1.69 lakh crore, as against ₹1.51 lakh crore in 2017-18, registering a growth of 12.47 per cent. Motor and health segments primarily helped the industry report this growth. Life insurance industry recorded a premium income of ₹ 5.08 lakh crore in 2018-19 as against ₹ 4.59 lakh crore in the previous financial year, registering a growth of 10.75 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

Important Developments

4.39. Three years into operation, the regime under the Insolvency and Bankruptcy Code (IBC) boasts of a strong ecosystem, comprising the Adjudicating Authority, the IBBI, three insolvency professional agencies, 11 registered valuer organisations and 2,374 registered valuers[7] and 2,911 insolvency professionals (as on December 31, 2019). The debtors and

Table 8: Penetration in Life Insurance

Particulars	2011	2012	2013	2014	2015	2016	2017	2018
Insurance Penetration (in per cent)	3.40	3.17	3.10	2.60	2.72	2.72	2.76	2.74
Insurance Density (in US$)	49.0	42.7	41.0	44.0	43.2	46.5	55.0	55.0

Source: SwissRe, Sigma various issues.

Table 9: Penetration in Non-Life Insurance

Particulars	2011	2012	2013	2014	2015	2016	2017	2018
Insurance Penetration (in per cent)	0.70	0.78	0.80	0.70	0.72	0.77	0.93	0.97
Insurance Density (in US$)	10.0	10.5	11.0	11.0	12.0	13.2	18.0	19.0

Source: SwissRe, Sigma various issues.

7. Data as on September 30, 2019, published in IBBI Quarterly Newsletter for the quarter July-September, 2019.

creditors alike are initiating the processes under the Code with 2,542 corporates, some of them having very large non-performing assets account, and undergoing corporate insolvency resolution process. Upto September 2019, about 743 of them have completed the process yielding either resolution or liquidation and 498 corporates have commenced voluntary liquidation process[8]. Out of the 562 Corporate Insolvency Resolution Process (CIRPs) initiated in October-December 2019, 132 are under liquidation, and 14 have been already settled (Table 10). As on end December 2019, ₹1.58 lakh crore were realizable in cases resolved (Table 11).

4.40. These cases have been filed under various sectors. 41.2 per cent of the cases admitted by NCLT for CIRP are in

Table 10: Quarterly trends of cases

Quarterly trends of cases	April-Jun 2019	July-Sep 2019	Oct-Dec 2019
Total No. of CIRPs initiated/admitted during the quarter	300	565	562
Total No. of cases in which resolution plan has been approved during the quarter	27	32	30
Total No. of cases withdrawn during the quarter	24	18	5
Total No. of cases settled during the quarter	22	24	14
Total No. of cases under liquidation during the quarter	96	153	132
Category wise distribution (Financial creditor, Operational Creditor, Corporate Debtor) of all the admitted cases in which CIRP has been initiated.	Financial Creditor-129 Operational Creditor- 154 Corporate Debtor-17	Financial Creditor-265 Operational Creditor-291 Corporate Debtor-9	Financial Creditor-245 Operational Creditor-301 Corporate Debtor-16

Source: IBBI.

Table 11: Realisable value for cases resolved under Corporate Insolvency Resolution Processes (Amount in ₹ Crore)

	April-June 2019	July-September 2019#	October-December 2019##
Overall realisable value by Financial Creditors and Operational Creditors in cases resolved	7,331.90	27,534.48	1,900.52
Total realisable value till the end of respective quarters	1,28,095.16	1,55,861.99	1,57,762.51

Source: IBBI.

Note: # : Data of 1 case awaited.

: Data of 8 cases awaited.

Cases are included as per the date of NCLT orders rather than date of final payment.

8. Data as on September 30, 2019, published in IBBI Quarterly Newsletter for the quarter July-September, 2019.

manufacturing sector followed by 19 per cent in Real Estate, Renting and Business Activities sector (Table 12).

4.41. The Government has been proactively addressing the issues that come up in implementation of the reform. Since its enactment in 2016, the Code has been amended three times, within a short span of time, mainly to streamline the processes and address any lacuna to ensure proper operationalizing of the provisions of the Code.

4.42. The first amendment introduced section 29A, which deals with the provision introduced to bar promoters from bidding for their own companies. It prevented defaulters from regaining control of their companies at a cheaper value. The second amendment introduced section 12A to provide creditors option to withdraw insolvency application within 30 days of filing the petition. The amendment also stated that home buyers shall be treated as financial creditors to give home buyers a voice in the insolvency proceedings as they, also provide funding for projects by making advance payments, and to discourage real estate developers from defaulting on commitments not only to banks but also to their customers. The third amendment primarily focused upon the revival of a CD by ensuring timely admission and completion

Table 12: Sector-wise breakup of the total cases admitted by NCLT for CIRP during the quarter

Sector*	April-Jun 2019	July-Sep 2019	Oct-Dec 2019
Extraterritorial organizations and bodies	1	4	3
Agriculture, Hunting and Forestry	9	18	15
Construction	28	64	65
Education	2	1	2
Electricity, Gas And Water Supply	7	23	22
Financial Intermediation	4	6	5
Health And Social Work	3	5	9
Hotels And Restaurants	8	12	12
Manufacturing	125	208	232
Mining and Quarrying	2	5	5
Other Community, Social And Personal Service Activities	4	5	7
Others	4	8	8
Real Estate, Renting And Business Activities	62	125	109
Transport, Storage And Communications	8	22	12
Wholesale And Retail Trade; Repair Of Motor Vehicles, Motorcycles And Personal And Household Goods	33	59	55
Fishing	0	0	1
Grand Total	**300**	**565**	**562**

Source: IBBI.

Note: *The distribution is based on the CIN of Corporate Debtors (CDs) as per the National Industrial Classification 2004.

of the resolution process. The amendment ensures that 14 days period deadline given to the NCLT for admitting or rejecting a resolution application shall be strictly adhered to. The amendment further specifying the mandatory time frame of 330 days to complete the Corporate Insolvency Resolution Process (CIRP) without exception, tries to instill discipline amongst the stakeholders to avoid inordinate delays in the insolvency resolution process. The Government also reaffirms its stance as a facilitator in the third amendment by specifically making a resolution plan binding on the Central Government, State Governments or a local authority to whom debt in respect of payment of dues is owed.

4.43. IBBI has conceptualized a 24-month Graduate Insolvency Programme. There are 2,911 Insolvency Professionals registered as on December 31, 2019 (Table 13). The Indian Institute of Corporate Affairs commenced the first batch of GIP on July 1, 2019.

4.44. The resolution under IBC has been much higher as compared to other processes. As per the data provided in Report on Trend and Progress of Banking in India 2018-19, the amount recovered as a percentage of amount involved in 2017-18 and 2018-19 has been much higher as compared to Lok Adalat, DRTs etc (Table 14). The Code provides a timeline of 330 days to conclude a CIRP. This push has meant that proceedings under the Code take on average about 340 days, including time spent on litigation, in contrast with the previous regime where processes took about 4.3 years.

Table 13: Insolvency Professionals registered as on December 31, 2019

City / Region	Indian Institute of Insolvency Professionals of ICAI	ICSI Institute of Insolvency Professionals	Insolvency Professional Agency of Institute of Cost Accountants of India	Total
New Delhi	355	223	60	638
Rest of Northern Region	287	161	46	494
Mumbai	340	114	31	485
Rest of Western Region	208	89	29	326
Chennai	113	72	11	196
Rest of Southern Region	288	153	43	484
Kolkata	169	34	16	219
Rest of Eastern Region	50	18	5	73
Total Registered	**1,810**	**864**	**241**	**2,915**
Cancellations	1	3	0	4
Registered as on 31st December 2019	**1,809**	**861**	**241**	**2,911**

Source: IBBI.

Table 14: NPAs of SCBs recovered through various channels

Amount in ₹crore

Recovery Channel	2017-18				2018-19(P)			
	No. of cases referred	Amount in-volved	Amount recov-ered*	Col. (4) as per cent of Col. (3)	No. of cases referred	Amount involved	Amount recov-ered*	Col. (8) as percent of Col. (7)
1	2	3	4	5	6	7	8	9
Lok Adalats	33,17,897	45,728	1,811	4.0	40,80,947	53,506	2,816	5.3
DRTs	29,345	1,33,095	7,235	5.4	52,175	30,66,499	10,574	3.5
SARFAESI Act	91,330	81,897	26,380	32.2	2,48,312	2,89,073	41,876	14.5
IBC	704@	9,929	4,926	49.6	1,135@	1,66,600	70,819	42.5
Total	**34,39,276**	**2,70,631**	**40,352**	**14.9**	**43,82,569**	**8,15,678**	**1,26,085**	**15.5**

Source: Report on Trend and Progress of Banking in India 2018-19 (which sourced from Off-site returns, RBI and IBBI).

Notes: P : Provisional.
* : Refers to the amount recovered during the given year, which could be with reference to the cases referred during the given year as during the earlier year.
DRTs: Debt Recovery Tribunals; SARFAESI Act: The Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest Act, 2002.
@ : Cases admitted by National Company Law Tribunals (NCLTs).
Figures relating to IBC for 2017-18 and 2018-19 are calculated by adding quarterly numbers from IBBI newsletters.

CHAPTER AT A GLANCE

- Monetary policy remained accommodative in 2019-20.
- The repo rate was cut in four out of five meetings held in 2019-20 (till December). The repo rate has been cut by 110 bps in 2019-20 so far.
- Bank credit growth slowed down in 2019-20 and stands at 7.1 per cent (YoY) as of December 20, 2019, as compared to a growth of 12.9 per cent in April 2019.
- The growth (YoY) of loans from NBFCs declined from 27.6 per cent in September 2018 and 21.6 per cent in December 2018 to 9.9 per cent at end September 2019.
- Gross NPA ratio of SCBs remained unchanged at 9.1 per cent between March and September 2019.
- Systemic liquidity has been largely in surplus in 2019-20. Weighted Average Call Money Rate remeined mostly close to repo rate within the Liquidity Adjustment Facility (LAF) corridor.

- Nifty50 and S&P BSE Sensex indices reached record high closing of 12,355 and 41,952 respectively during 2019-20 (upto January 16, 2020).
- The total money raised by public issue and rights increased to ₹ 73,896 crore in 2019-20 (up to December 31, 2019) from ₹ 44,355 crore in the corresponding period last year. ₹ 6.29 lakh crore was raised through private placements in 2019-20 (up to December 31, 2019) as compared to ₹ 5.3 lakh crore in the corresponding period of previous year.
- As on end December 2019, ₹1.58 lakh crore were realizable in cases resolved under Corporate Insolvency Resolution Processes. The proceedings under IBC take on average about 340 days, including time spent on litigation, in contrast with the previous regime where processes took about 4.3 years.

Prices and Inflation

05

CHAPTER

Inflation has been witnessing moderation since 2014 backed by low food inflation. During the current financial year, however, food and beverages inflation has been trending differently. Food inflation has been on an upward trend mainly backed by rising vegetables, fruits and pulses prices. However, the volatility in prices of most of the essential agricultural commodities with some exceptions like pulses has been on a downward trend. Since July 2018, CPI-Urban inflation has been consistently higher than CPI-Rural inflation, which is in contrast to earlier trend where rural inflation was higher than urban inflation. Inflation has been declining in most of the States, however, the variability of inflation has been increasing. Since 2012, there has been a change in inflation dynamics. There is evidence for a strong reversion of headline inflation to core inflation. Transmission of inflation from non-core components to core components is minimal.

INTRODUCTION

5.1 The global economy has been witnessing a steep decline in inflation over the past five decades (World Bank, 2019). Inflation has declined in almost all the countries around the world. Emerging market economies have also experienced a remarkable decline in inflation over the same period. Inflation peaked in 1993 at 118.7 percent and then declined to 4.8 per cent in 2018 in emerging market and developing economies (World Economic Outlook, October 2019). There can be many reasons that could have contributed to the steep decline in inflation in the emerging market economies like the adoption of a more resilient monetary and fiscal policy frameworks, structural reforms of labour and product markets that strengthen competition, and adoption of monetary policy framework for inflation targeting. Twenty-four emerging market and developing economies have introduced monetary policy frameworks for inflation targeting, since the late 1990s (World Bank, 2019). India introduced inflation targeting on 5th August, 2016 for a period of five years ending on 31st March, 2021.

5.2 In India, inflation has been witnessing moderation since 2014. However, recently inflation has shown an uptick. Headline Consumer Price Index-Combined (CPI-C) inflation increased to 4.1 per cent in 2019-20 (April to December, 2019) as compared to 3.7 per cent in 2018-19 (April to December, 2018). Though, Wholesale Price Index (WPI) inflation has seen an increase between 2015-16 and 2018-19, it fell from 4.7 per cent in 2018-19 (April to December, 2018) to 1.5 per cent during 2019-20 (April to December, 2019) (Table 1). Fall in food inflation has been a major contributing factor in the drastic reductions observed in inflation between

Table 1: General inflation based on different price indices (in per cent)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2018-19*	2019-20*
WPI	5.2	1.2	-3.7	1.7	3.0	4.3	4.7	1.5 (P)
CPI - C	9.4	5.9	4.9	4.5	3.6	3.4	3.7	4.1 (P)
CPI - IW	9.7	6.3	5.6	4.1	3.1	5.4	4.9	7.6
CPI - AL	11.6	6.6	4.4	4.2	2.2	2.1	1.7	7.3
CPI - RL	11.5	6.9	4.6	4.2	2.3	2.2	1.9	7.1

Source: Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade (DPIIT) for Wholesale Price Index, National Statistical Office (NSO) for CPI-C and Labour Bureau for CPI-IW, CPI-AL and CPI-RL.

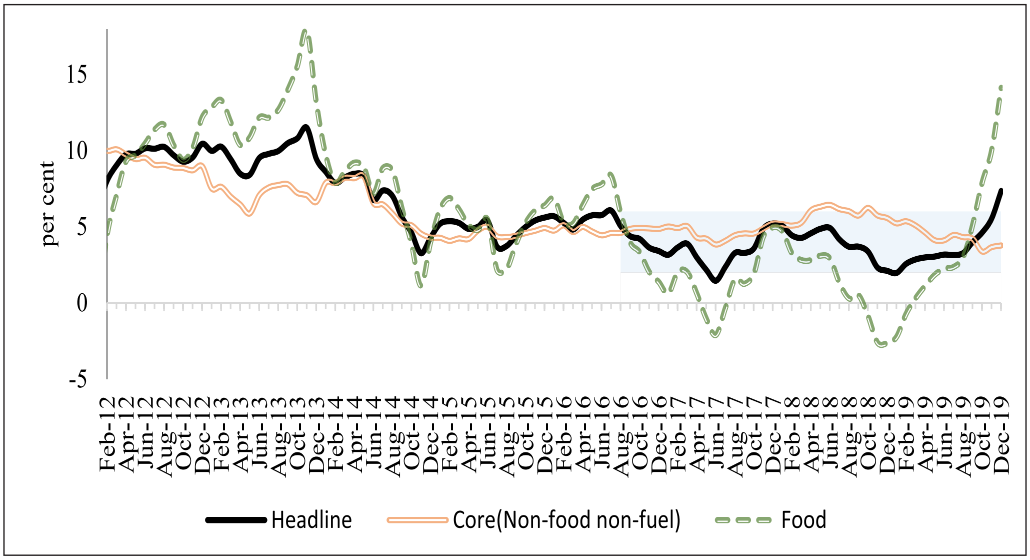
Note: CPI-C inflation for 2013-14 is based on old series 2010=100; (P) - Provisional; C stands for Combined, IW stands for Industrial Workers, AL stands for Agricultural Labourers and RL stands for Rural Labourers.
* 2019-20 refers to April to December 2019 for CPI-C, WPI, CPI-AL, CPI-RL and April to November 2019 for CPI-IW.

2014-15 and 2018-19. Also, it has been observed that there has been a shift in inflation dynamics. The average levels of inflation have fallen considerably since 2013-14. Not only have the average levels of inflation come down, the peak levels of inflation during the financial year are now much lower. Further, observe that there is convergence of headline towards core inflation from 2012 onwards as per CPI-C.

CURRENT TRENDS IN INFLATION

5.3 Headline inflation based on CPI-C has been sliding on a downward path since 2014 (Figure 1). The average CPI-C headline inflation, which was 5.9 per cent in 2014-15, has fallen continuously to around 3.4 per cent in 2018-19. This has been led by a drastic fall in food inflation, which has fallen from 6.4 per cent in 2014-15 to 0.1 per cent in

Figure 1: Trends in CPI-C Headline, Core and Food inflation



Source: NSO.

Table 2: Inflation in selected groups of CPI-C Base 2012 (in per cent)

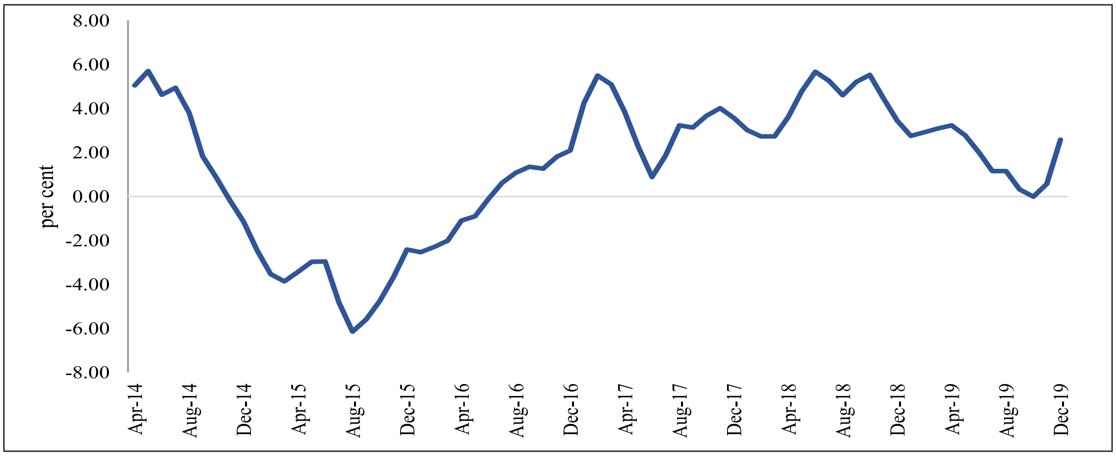
Description	Weights	2017-18	2018-19	2019-20#	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19 (P)
All Groups	100	3.6	3.4	4.1	3.2	3.3	4.0	4.6	5.5	7.4
CFPI*	39.1	1.8	0.1	5.3	2.4	3.0	5.1	7.9	10.0	14.1
Food & beverages	45.9	2.2	0.7	4.8	2.3	3.0	4.7	6.9	8.7	12.2
Cereals & products	9.7	3.5	2.1	2.0	1.3	1.3	1.7	2.2	3.7	4.4
Meat & fish	3.6	3.2	4.0	9.0	9.1	8.5	10.3	9.8	9.4	9.6
Egg	0.4	3.6	2.3	3.4	0.6	0.3	3.3	6.3	6.2	8.8
Milk & products	6.6	4.1	1.8	1.8	1.1	1.5	1.8	3.1	3.5	4.2
Oils & fats	3.6	1.6	2.1	1.4	0.9	0.6	1.2	2.0	2.6	3.1
Fruits	2.9	4.6	2.3	-0.5	-0.9	-0.8	0.8	4.1	3.2	4.4
Vegetables	6.0	5.8	-5.2	17.6	2.8	6.9	15.5	26.1	36.1	60.5
Pulses & products	2.4	-21.0	-8.3	7.8	6.8	6.9	8.4	11.7	13.9	15.4
Sugar & confectionery	1.4	6.1	-7.0	-0.2	-2.1	-2.4	-0.4	1.3	2.1	3.4
Fuel & Light	6.8	6.2	5.7	-0.1	-0.3	-1.7	-2.2	-2.0	-1.9	0.7
CPI excl. food and fuel group (Core)	47.3	4.6	5.8	4.1	4.5	4.3	4.2	3.4	3.6	3.8

Source: NSO.
Note: P: Provisional, * Consumer Food Price Index (CFPI), # April to December 2019.

2018-19. In 2019-20, there has been slight uptick in the headline and food inflation numbers since August, 2019. Overall, CPI -C headline inflation in December, 2019 stood at 7.4 per cent, while CPI-food inflation increased to 14.1 per cent mainly driven by the rise in vegetable prices. Core (non-food non-fuel) inflation has also increased to 3.8 per cent in December, 2019. (Table 2)

5.4 During 2019-20, WPI based inflation has been on a continuous fall declining from 3.2 per cent in April 2019 to 0.6 per cent in November 2019, but increased to 2.6 per cent in December 2019 (Figure 2). Food index which declined on an annual basis between 2017-18 and 2018-19, saw an uptick during the current financial year (April-December, 2019) (Table 3).

Figure 2: WPI inflation



Source: Office of Economic Adviser, DPIIT.

Table 3: Inflation in selected groups of WPI- Base 2011-12 (in per cent)

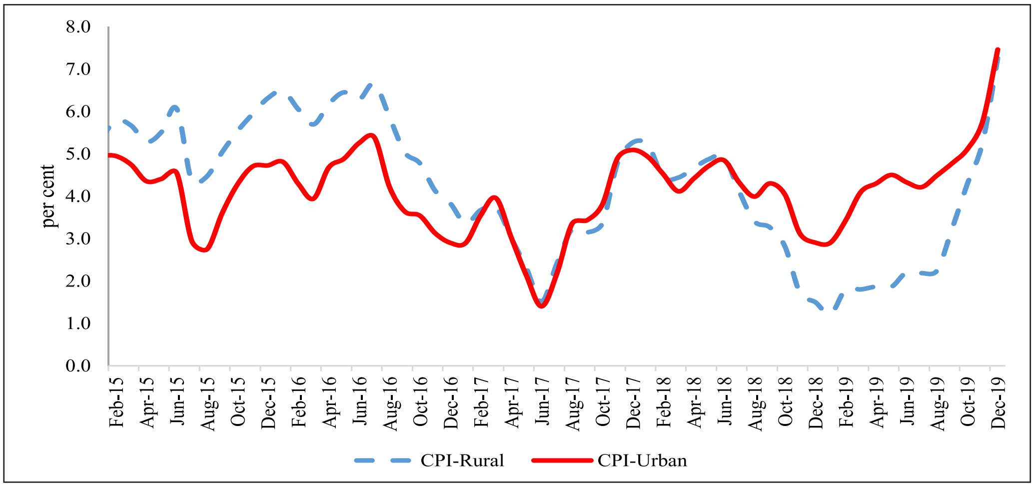
	Weight	2017-18	2018-19	2019-20*	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19(P)	Dec-19(P)
All Commodities	100	3.0	4.3	1.5	1.2	1.2	0.3	0.0	0.6	2.6
Food Index	24.4	1.9	0.6	6.7	4.9	5.9	6.1	7.6	9.0	11.0
Food articles	*15.3*	*2.1*	*0.4*	8.6	*6.6*	7.8	7.5	9.8	11.1	13.2
Cereals	2.8	0.3	5.5	8.2	8.7	8.5	8.7	8.3	7.9	7.7
Pulses	0.6	-27.1	-9.4	17.3	20.0	16.4	17.9	16.6	16.6	13.1
Vegetables	1.9	18.8	-8.4	31.4	10.5	12.9	19.3	39.0	45.3	69.7
Fruits	1.6	5.0	-1.7	4.4	*15.4*	*19.8*	*6.7*	*2.7*	*4.3*	*3.5*
Milk	4.4	4.0	2.4	1.7	1.5	1.5	1.5	1.5	1.6	2.6
Egg, meat & fish	2.4	2.0	1.7	6.6	3.6	7.0	7.7	7.6	8.2	6.2
Food products	*9.1*	*1.6*	*0.9*	3.2	1.8	2.2	3.6	3.8	5.0	6.9
Vegetable and animal oils and fats	2.6	2.2	7.5	-2.4	*-6.6*	*-4.1*	*-2.8*	*-1.9*	*2.2*	*9.7*
Sugar	1.1	3.4	-10.7	4.0	-1.0	1.4	4.7	3.2	3.1	4.7
Fuel & power	13.2	8.1	11.6	-3.1	-3.6	-3.5	-6.7	-8.1	-7.3	-1.5
Non-Food manu-factured products (Core)	*55.1*	*3.0*	*4.2*	-0.3	0.0	-0.4	-1.2	-1.8	-1.9	-1.6

Source: Office of the Economic Adviser, DPIIT.

Note: P: Provisional, *April to December 2019.

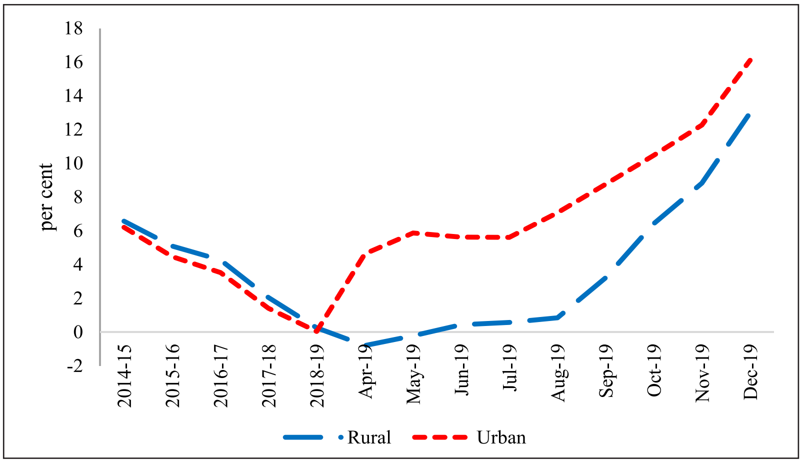
5.5 Since July 2018, CPI-Urban inflation, has been consistently above CPI-Rural inflation (Figure 3). This is in contrast to earlier experience where rural inflation has been mostly higher than urban inflation. The divergence has been mainly on account of the differential rates of food inflation between rural and urban areas witnessed during this period. In 2019-20, there has been sudden change in the trend. Since July 2019, urban areas have registered much higher food inflation when compared to rural areas (Figure 4). Divergence in rural-urban food inflation in 2019-20 was mainly led by cereals, eggs, fruits, vegetables etc. (Figures 5 (a) to (d)).

Figure 3: CPI Rural and Urban inflation



Source: NSO.

Figure 4: Rural Urban CPI food inflation



Source: NSO.

Figure 5 (a): CPI inflation rate of cereals

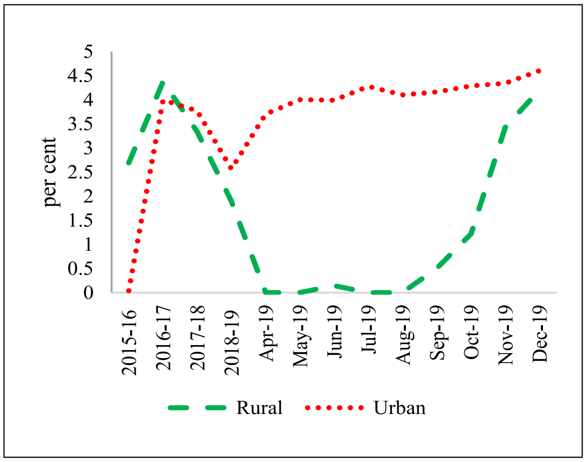


Figure 5 (b): CPI inflation rate of vegetables

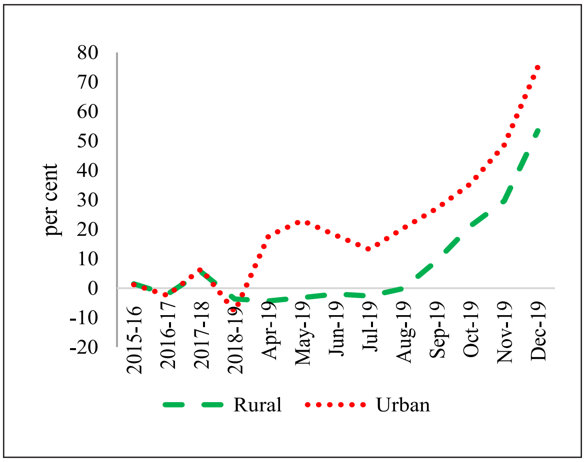


Figure 5 (c): CPI inflation rate of fruits

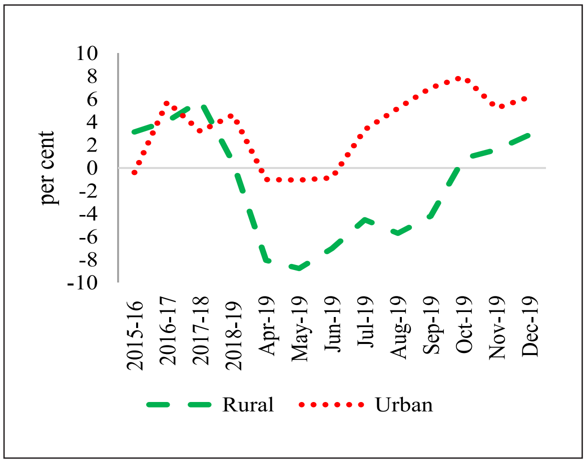
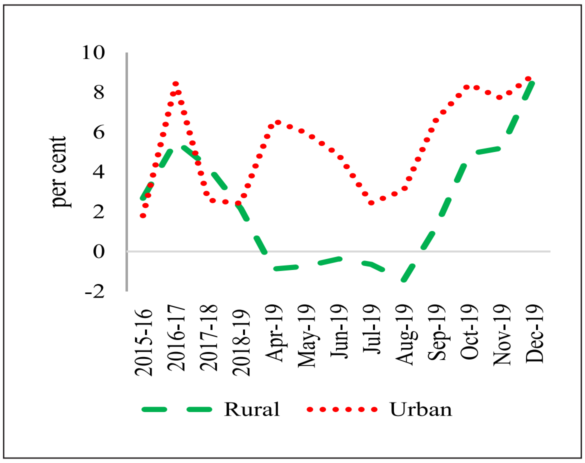
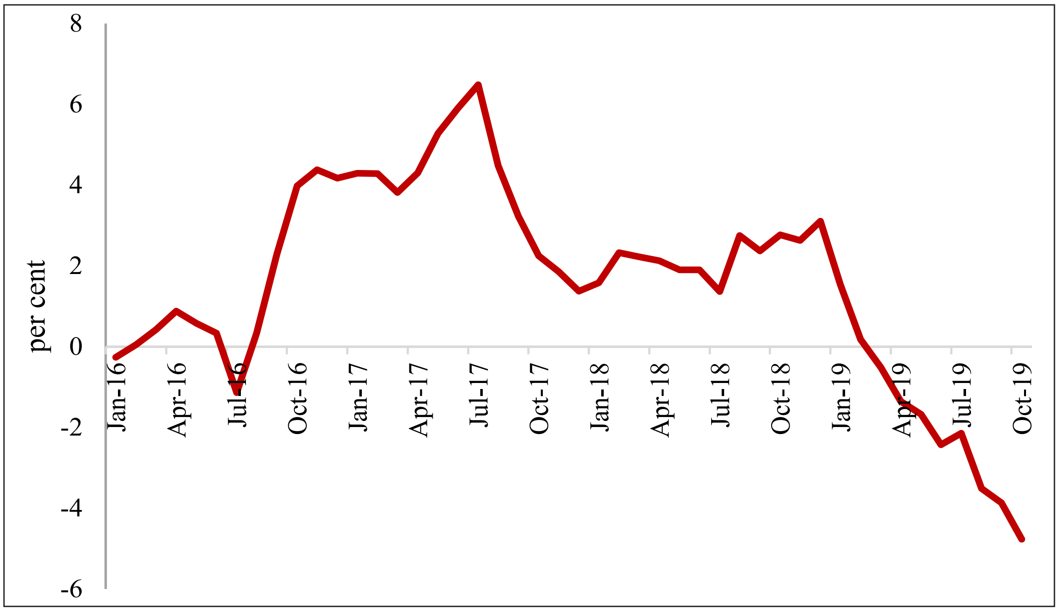


Figure 5 (d): CPI inflation rate of eggs



Source: NSO.

Figure 6: Year on year growth of average real wage rate for agricultural workers during 2016 to 2019 (upto October, 2019)



Source: Labour Bureau, Ministry of Labour and Employment.

Note : Real wage rate is calculated by dividing Nominal general agriculture workers wage rate by CPI AL.

5.6 The slide in rural inflation could be because of fall in the growth of real rural wages (Figure 6).

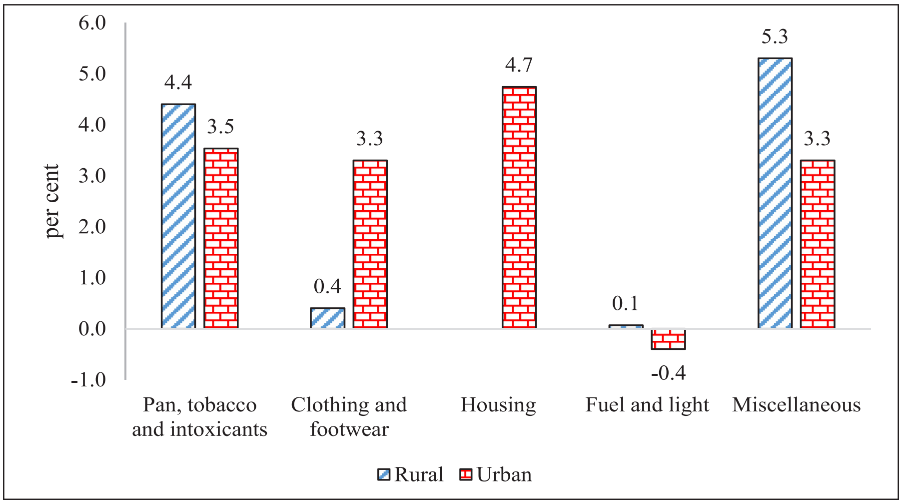
5.7 The divergence in rural-urban inflation is not just observed in the food component but in other components also. Figure 7 shows the component wise rural and urban inflation. In clothing and footwear, inflation in urban areas is 3.3 per cent in 2019-20 (April-December), approximately 3 percentage points higher than that observed in rural areas. For Pan, tobacco and intoxicants, Fuel and light and Miscellaneous groups, inflation observed in rural areas was higher than that in the urban areas. Miscellaneous basket comprises of household goods and services, health, transport and communication, recreation and amusement, education, personal care and effects. However, due to the high overall weight attached to the food and clothing & footwear groups in the rural index, the overall inflation observed in rural areas at 3.4 per cent was lower than the overall inflation observed in urban areas which was at 5.0 per cent in 2019-20 (April-December). The decline in rural inflation in items like clothing and footwear, fuel and light could be due to fall in growth of real rural wages, while rise in rural price index for items like education, health, personal care etc. also raises the question of affordability of these items to the rural segment.

INFLATION IN STATES

5.8 CPI-C inflation has continued to be highly variable across States. Inflation ranged between (-)0.04 per cent to 8.1 per cent across States/UTs in financial year (FY) 2019-20 (April-December) compared to (-)1.3 per cent to 9.1 per cent in FY 2018-19 (April-December). However, the overall inflation rate has been quite low in almost all the States. Inflation in fifteen States/UTs was below 4 per cent in FY 2019-20 (April- December). Comparing FY 2018-19 (April- December) with FY 2019-20 (April- December), it was observed that inflation has actually decreased in eight States. Nineteen States/UTs had inflation rate lower than All India average for FY 2019-20 (April-December) with Daman & Diu having the lowest inflation followed by Bihar and Chhattisgarh (Figure 8).

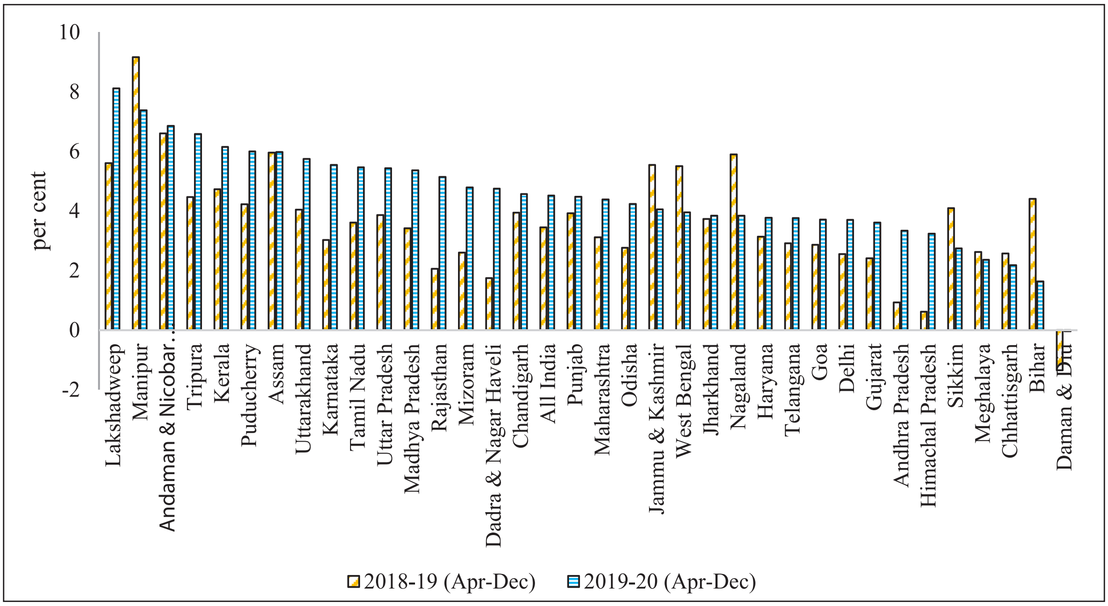
5.9 Though in most of the states the overall inflation rate in rural areas is lower than the overall inflation rate in urban areas, the overall variability of rural inflation in a particular month across States was higher than the variability of urban inflation across states. Figure 9 looks at the variability of rural and urban inflation and it was observed that the variability of rural inflation to be very high as compared to variability of urban inflation. (Figure 9 and 10).

Figure 7: Component-wise rural and urban inflation in 2019-20 (April- December)



Source: NSO.

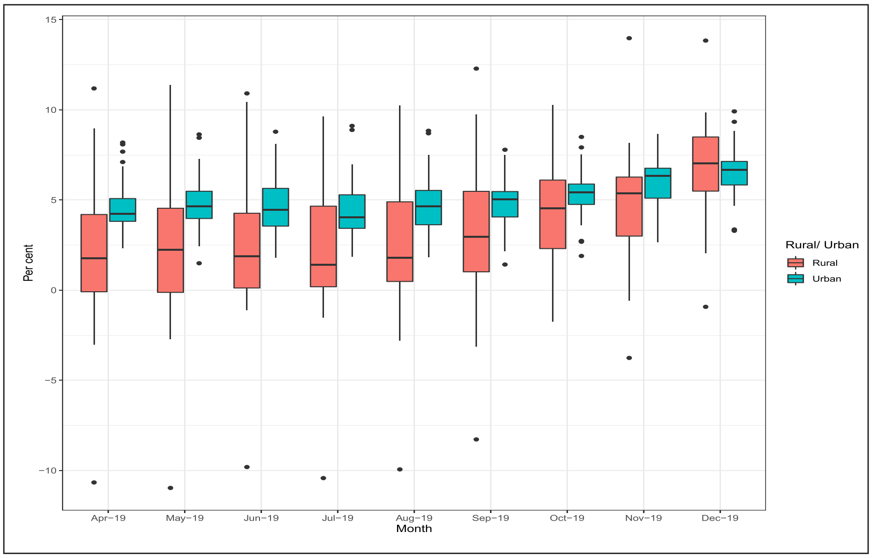
Figure 8: CPI- Combined inflation for States/Union Territories (in per cent)



Source: NSO.

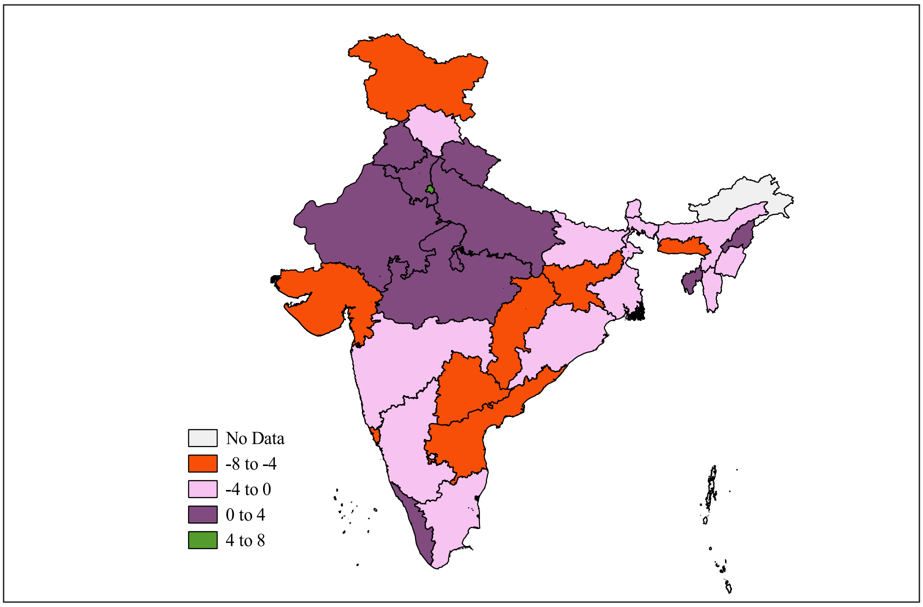
5.10 Figure 3 and 9 indicate that though the overall inflation in rural areas is lower at an All India level but due to the high variability across states some states might actually have inflation in rural areas higher than inflation in urban areas. Figure 10 shows that in Punjab, Haryana, Uttarakhand, Delhi, Rajasthan, Uttar Pradesh, Madhya Pradesh, Nagaland, Tripura and Kerala rural inflation was indeed higher than urban inflation during April-December, 2019.

Figure 9: Variability in rural and urban inflation across States in 2019-20 (April- December)



Source: NSO.

Figure 10: Difference in rural and urban CPI inflation across States 2019-20 (April-December)



Source: NSO.

DRIVERS OF INFLATION

5.11 During 2018-19, the major driver of CPI-C inflation was the miscellaneous group. Compared to 2017-18, the contribution of food and beverages to total inflation was lower in 2018-19 (Figure 11). However, during 2019-20 (April- December), food and beverages emerged as the main contributor to CPI-C inflation, with 54 per cent of the inflation during this period attributable to this group. Miscellaneous group was the second largest contributor to inflation during this period (Figure 12).

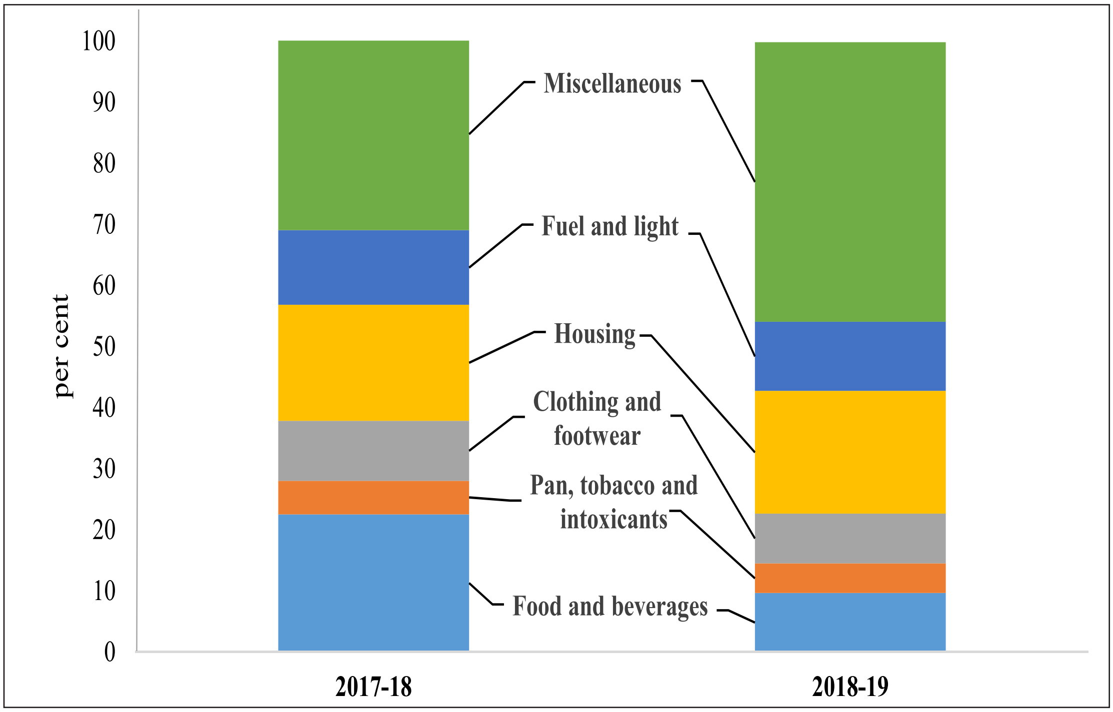
CRUDE OIL AND FUEL INFLATION

5.12 During April-December 2019, world crude oil prices declined owing to weak global demand. As oil has a major share in the country's import basket, it impacts considerably domestic prices of petroleum products. The mineral oils group in WPI saw an inflation of 5.8 per cent in April 2019, thereafter saw continuous decline to end at (-)3.2 per cent in December 2019 (Figure 13). Actually, this group in WPI closely tracks the direction of movements in the Indian Crude Basket. The fuel components of CPI also show a movement in a similar direction (Figure 13).

DRUG PRICING

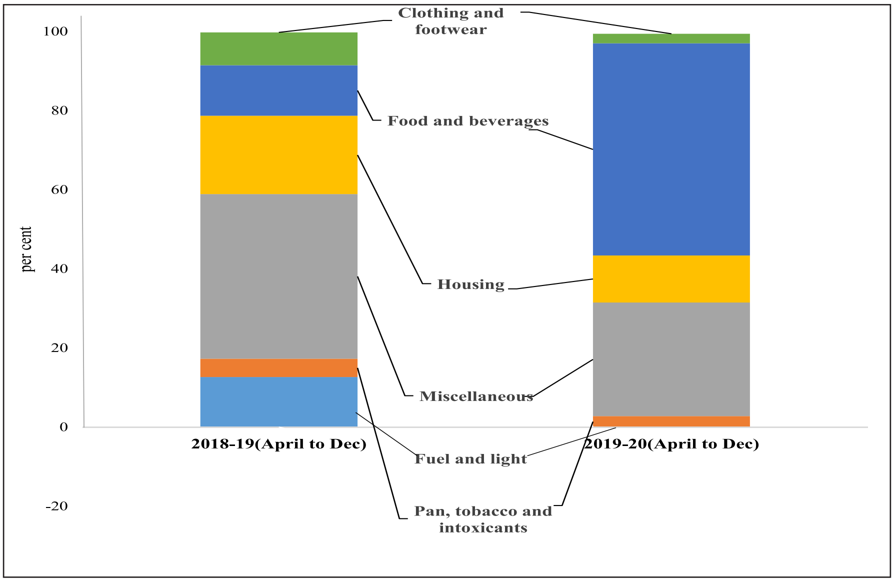
5.13 Ensuring access to affordable health care is one of the primary focus of the Government of India. Out of the total out of pocket expenditure of individuals on health, the major portion is that of medicines. This makes the provision of affordable drugs an imperative. Indian pharmaceutical sector is an important sector not only because of the welfare implications it has, but also because of its economic importance as a sector with a proven record of technical capability and global standing. The sector has grown considerably in the recent years and has potential for further development in the coming years.

Figure 11: Contributions to CPI-C inflation in 2017-18 and 2018-19



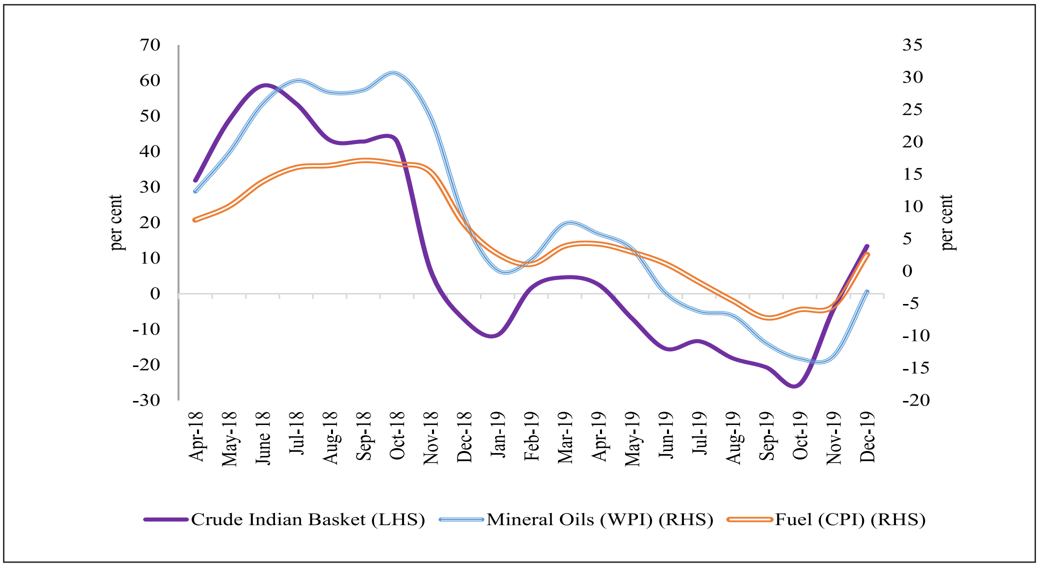
Source: NSO.

Figure 12: Contributions to CPI-C inflation in 2018-19 (April to December) and 2019-20 (April to December)



Source: NSO.

Figure 13: Year-on-year growth in price of Indian Crude Basket, inflation in Mineral oils in WPI and Fuel in CPI-C



Source: CPI data from NSO, Price of Indian Crude Basket from Petroleum Planning and Analysis Cell and WPI data Office of Economic Adviser, DPIIT; Survey calculations.

Note: Inflation for fuel in CPI has been calculated based on LPG, kerosene, diesel, other fuel, petrol for vehicle, diesel for vehicle, lubricants & other fuels for vehicle.

5.14 The Government came out with National Pharmaceutical Pricing Policy, 2012 with an objective to put in place a regulatory framework for pricing of drugs so as to ensure availability of required medicines – "essential medicines" – at reasonable prices even while providing sufficient opportunity for innovation and competition to support the growth of industry, thereby meeting the goals of employment and shared economic well-being for all.

5.15 The essential drugs and medicines are placed under the National List of Essential Medicines 2011 (NLEM) and included in the First Schedule of Drug Price Control Order (DPCO), 2013 and then brought under price control. National Pharmaceutical Pricing Authority (NPPA) has so far fixed the ceiling prices of 860 formulations/packs of drugs included in First Schedule up to December 2019. The details of reduction in prices of scheduled formulations effected under DPCO, 2013 as compared to the highest price prevailing prior to the announcement of DPCO, 2013 for formulation of NLEM 2015 are shown in Table 4.

5.16 The fixation of ceiling prices/Maximum Retail Price (MRP) has resulted in a total saving of ₹12,447 crores to the public after implementation of DPCO, 2013. This includes the saving of ₹4,547 crores on account of fixation of ceiling price of coronary stents, ₹1,500 crores on account of price fixation of Knee implants and ₹984 crores on account of Trade Margin Rationalisation (TMR) on Anti-cancer drugs.

5.17 In case of cardiac stents, in the post price capping period (2017) over the period of two years, it has been observed that there is 26 per cent increase in the sales of the cardiac stents in the Indian market. It has also been observed that indigenous manufacturers have benefited from the price capping of the cardiac stents as their share in the production has increased by 10 per cent in post price capping period.

FOOD INFLATION

5.18 As discussed in para 5.3, food inflation has been the major driver of inflation during the current financial year, 2019-20. Some commodities such as onion, tomato and pulses have shown high inflation since August 2019. Untimely rains have caused lower production as well as constricted the movement of onion and tomato to the markets. In the case of pulses, the progress in sowing has been at much lower levels than in the previous year.

Table 4: Statement showing range of reduction in ceiling price of scheduled formulation with respect to the highest price prevailing prior to announcement of DPCO, 2013

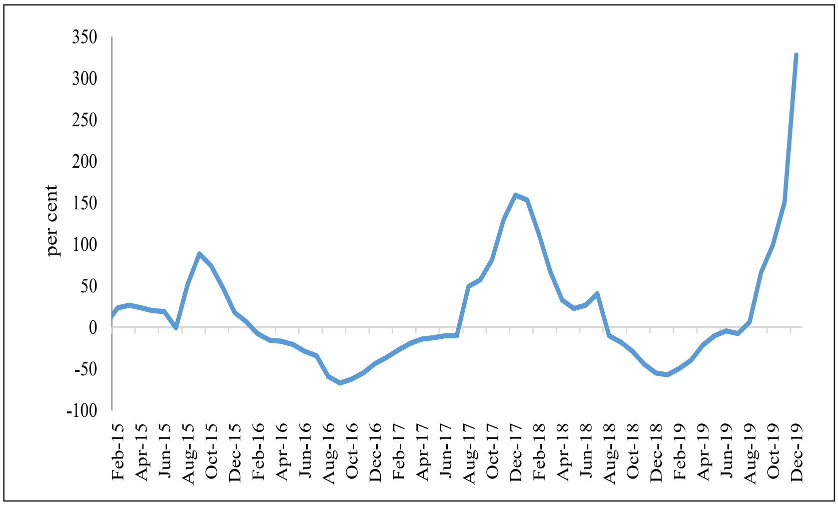
Per cent reduction with respect to Maximum Price	No. of formulations
0<= 5%*	236
5<=10%	138
10<=15%	98
15<=20%	100
20<=25%	92
25<=30%	65
30<=35%	46
35<=40%	26
Above 40%	59
Total formulations in NLEM 2015	860

Source: NPPA, Department of Pharmaceuticals.

(a) Onion

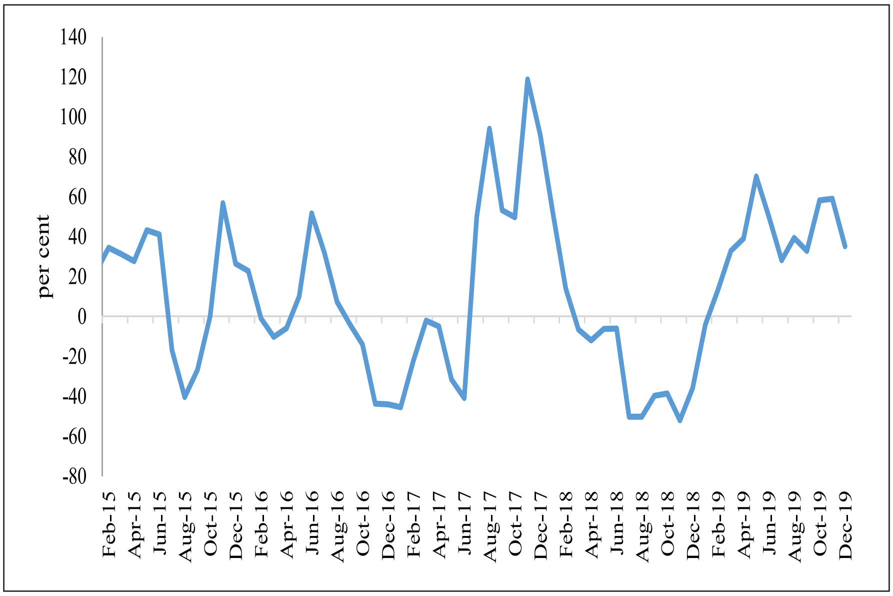
5.19 CPI based Inflation rate of onion showed an increasing trend since April, 2019 and rose up by 328.0 per cent during the month of December, 2019 as compared to December, 2018 on a Year on Year (YoY basis) (Figure 14). The WPI based inflation rate of onion during the month of December, 2019 also increased to 455.8 per cent as compared to a decline of (-) 63.8 per cent in December, 2018 on a Year on Year (YoY) basis.

Figure-14: Month-wise trends in CPI (Combined) inflation rate of Onion (in per cent during 2015-2019



Source: NSO.

Figure 15: Month-wise trends in CPI (Combined) inflation rate of Tomato (in per cent) during 2015-2019



Source: NSO.

Table-5: All India monthly arrivals of Onion

Month	All India Arrivals (in Lakh Tonnes)		
	Five Year Average (2013-2017)	2018	2019
January	12.9	11.1	13.0
February	10.5	11.0	13.6
March	9.9	9.5	12.0
April	10.0	8.9	12.8
May	11.6	12.5	11.6
June	10.5	12.9	13.5
July	8.0	9.8	11.0
August	7.2	10.3	10.0
September	7.1	10.0	7.4
October	8.0	10.8	7.4
November	8.7	8.3	6.1
December	11.1	10.6	N.A.

Source: Monthly Report Onion, November 2019, Horticulture Statistics Division.

5.20 There can be many reasons for the rise in onion prices. One of the primary reasons that is observed every year is driven by demand-supply mismatch which can be primarily attributed to the seasonal factors. Other reasons that further exacerbated this demand supply mismatch are the fall in area sown and damage to Kharif onion due to rain. As reported from major Kharif growing States (Maharashtra, Karnataka, Madhya Pradesh, Andhra Pradesh, Gujarat and Rajasthan), area sown/transplanted is around 7 per cent less as compared to previous year. Damage to Kharif onion crop also occurred due to heavy rains in September/October, 2019. As reported by State Directorates of Horticulture, damage in Madhya Pradesh was 58 per cent, Karnataka 18 per cent and Andhra Pradesh 2 per cent. The crop in Maharashtra was ready for harvest but got delayed due to continuous rains which was reflected in the low market arrivals of onion during the months from July to November 2019 (Table 5).

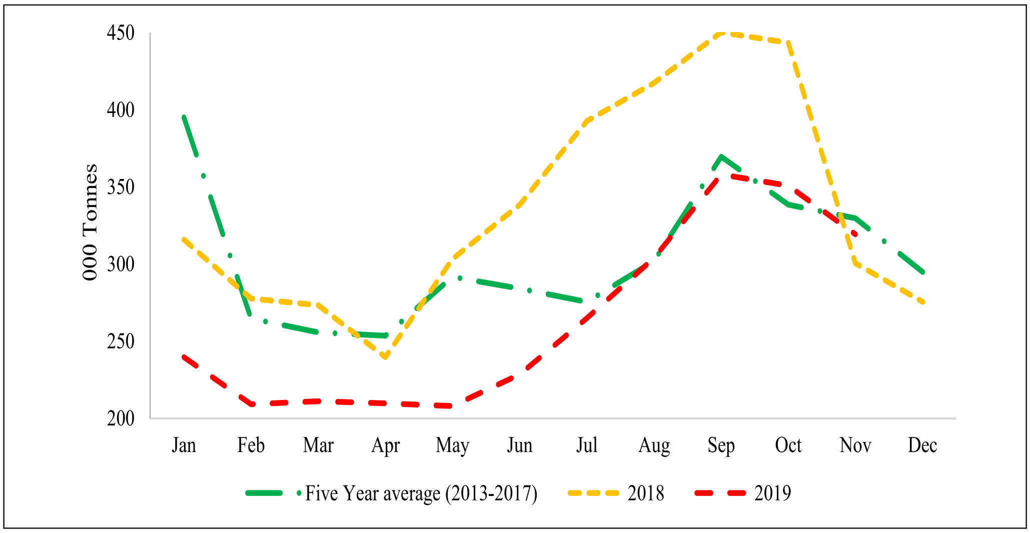
(b) Tomato

5.21 CPI based Inflation rate of Tomato showed an increasing trend since July, 2019 and rose up by 35.2 per cent during the month of December, 2019 as compared to December, 2018 on a Year on Year (YoY basis) (Figure 15).

5.22 The price rise in tomato during July-December, 2019 was relatively lower than that observed during 2017. The current spike in the tomato prices in 2019 is mainly due to the excess rains in Maharashtra and Karnataka etc. which are major producers of tomato thus disrupting the supply of tomato.

The market arrivals of tomato in November, 2019 were lower than October, 2019 and also lower than average of five years (2013-17), but higher than corresponding month of last year. As the market arrivals of tomato declines, the wholesale prices of tomato tend to spike due to demand-supply mismatch as seen since September, 2019. The All India Monthly Arrivals of tomato are shown in Figure 16.

Figure 16: Month wise All India monthly arrivals of Tomato

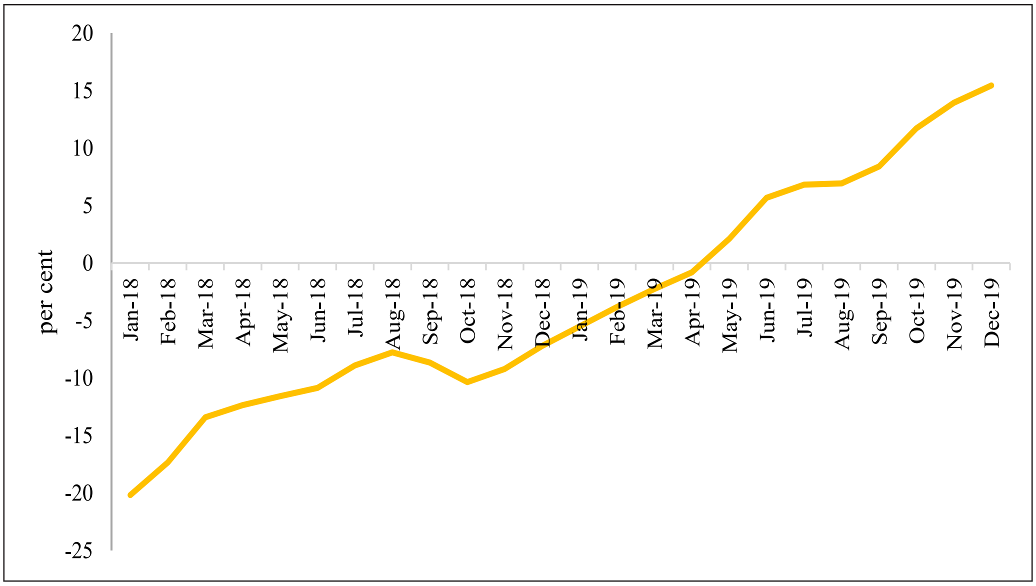


Source: AGMARKETNET, Ministry of Agriculture, Cooperation and Farmers Welfare.

(c) Pulses

5.23 The CPI inflation rate of pulses increased from -20.2 per cent in January 2018 to 15.4 per cent in December 2019. The overall rate of inflation, based on CPI, for Pulses during the month of December 2019 stood at 15.4 per cent as compared to -7.2 per cent during December 2018 (Figure 17).

Figure 17: CPI based inflation rates in Pulses (in per cent)

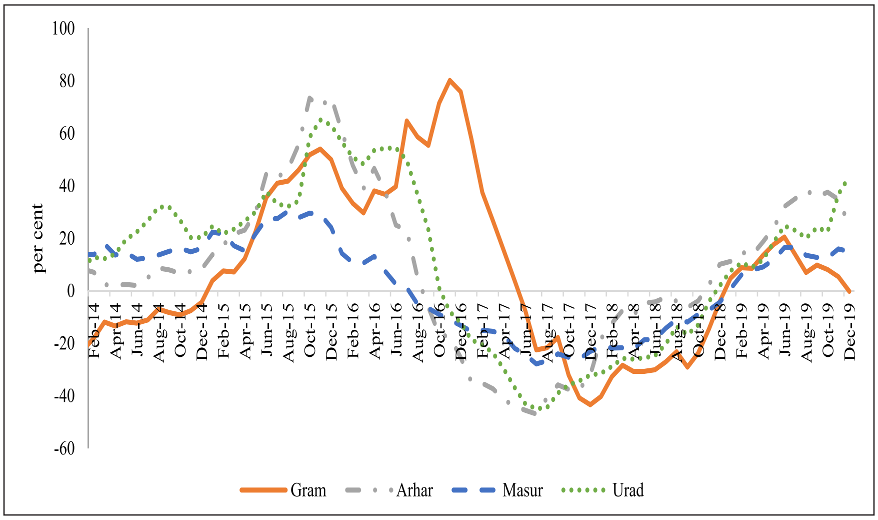


Source: NSO.

5.24 However, a comparison of the inflation trend of pulses item-wise reveals that the current hike in prices of various pulses compared to their long-term trends is not very high (Figure 18).

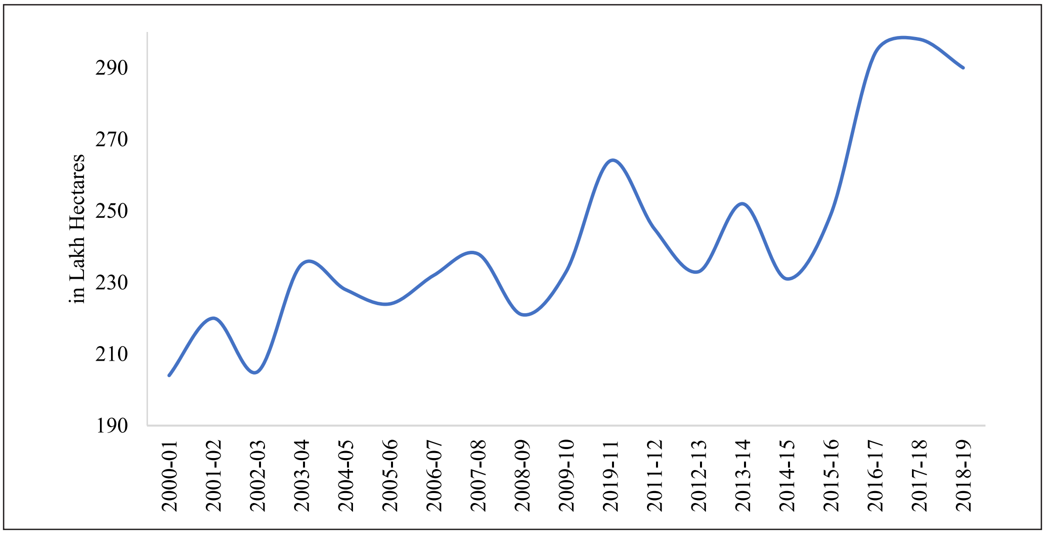
5.25 The phase of price rise during 2019 could be due to fall in acreage resulting from rains in the growing states and also because of low price realisation due to glut in the market following increased production of earlier years. It may be noted here that the production of pulses increased to 231.3 mn tonnes in 2016-17 from 163.5 mn tonnes in 2015-16 – a jump of 41 per cent in a span of one year. In 2018-19 the acreage marginally declined to 290 lakh ha as compared to 298 lakh ha and 294 lakh ha in 2017-18 and 2016-17 (Figure 19). Low market prices during 2018-19 may have resulted in significant reduction in acreage of some pulses.

Figure 18: Long term inflation trend of various Pulses



Source: Office of the Economic Adviser, DPIIT.

Figure 19: Area under Pulses in India

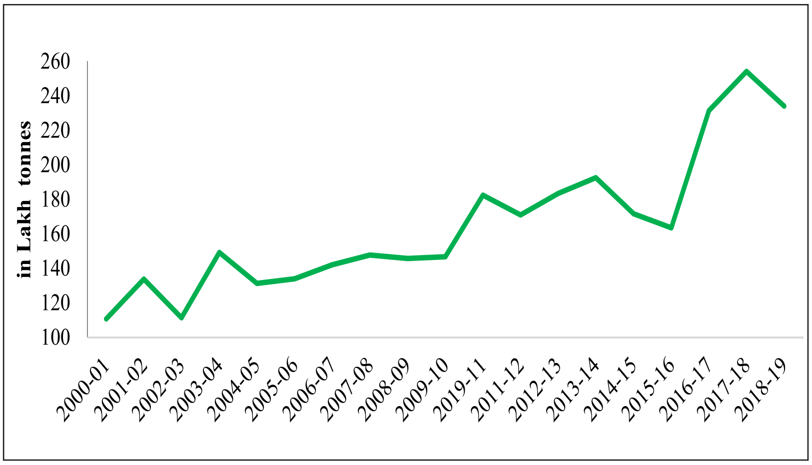


Source: Pocket Book of Agricultural Statistics, Ministry of Agriculture and Farmers Welfare.

5.26 Production of pulses in which there was a steady increase in production since 2015-16 shows a steady decline from 2017-18 to 2018-19- a decline of 7.9 per cent during 2018-19 over the previous year (Figure 20).

Box 1 presents the analysis to check for the possibility of presence of cobweb phenomenon in Pulses.

Figure 20: Production of Pulses in India (in Lakh Tonnes)



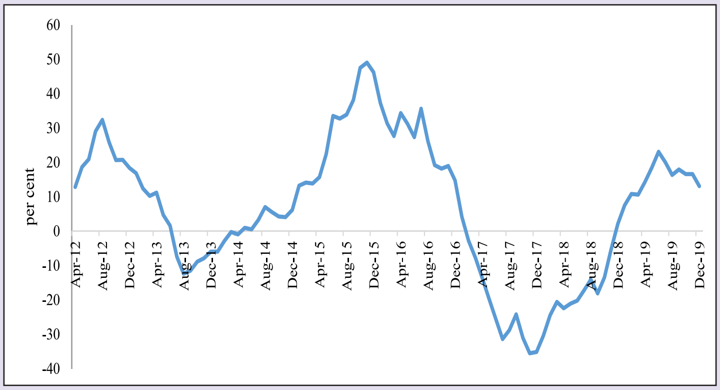
Source: Pocket Book of Agricultural Statistics, Ministry of Agriculture and Farmers Welfare

BOX 1: The cobweb phenomeon in Pulses

Cobweb theory is the idea that price fluctuations can lead to fluctuations in supply which cause a cycle of rising and falling prices. The farmers are caught in the cobweb phenomenon when they base their sowing decisions on prices witnessed in the previous marketing period. So, if the farmer observes a higher price for a specific crop in period ‘t-1’, he would opt to produce more of it in period ‘t’. However, if the production of the crop exceeds market demand, prices fall in period ‘t’, signalling farmers to produce less of the commodity in period ‘t+1’.

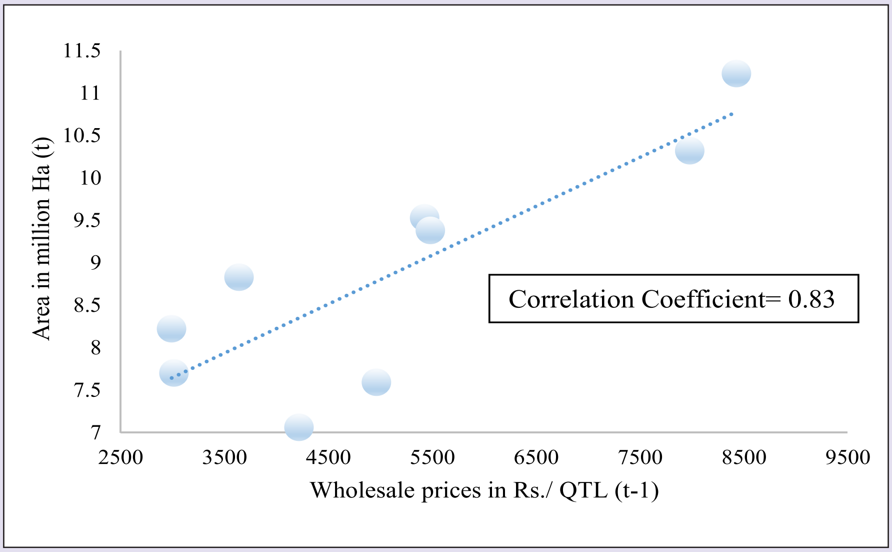
The figure below shows the trend of inflation rate of pulses. High peaks are observed on either side. The current peak observed is less than the peak observed in 2015-16. The presence of peaks might indicate towards the presence of cobweb phenomeon in pulses.

WPI inflation rate of Pulses from April 2012 to December 2019



Source: Office of Economic Advisor, DPIIT.

Relation between wholesale price of Gram in Period (t-1) and area sown in period t



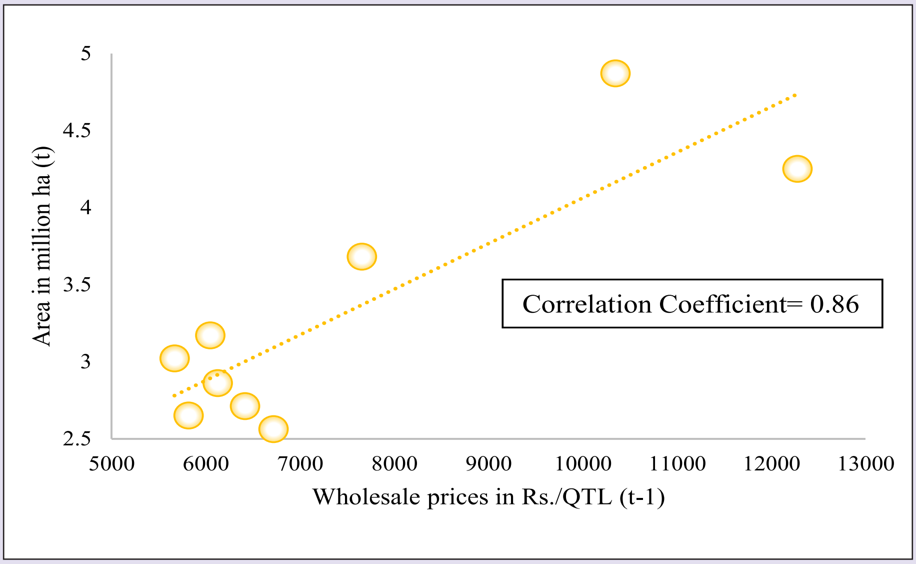
Source: PMC, Department of Consumer Affairs and Ministry of Agriculture.

Analysing the area sown and wholesale prices for Gram, Tur, Urad and Moong for the period 2009-10 to 2017-18. Area sown in period 't' and wholesale prices of period 't-1' are considered.

The figure above shows a positive relation between wholesale prices in period t-1 and area sown in period t. The correlation coefficient measures the strength and direction of relation between the two variables. In the case of Gram the correlation coefficient comes out to be 0.83.

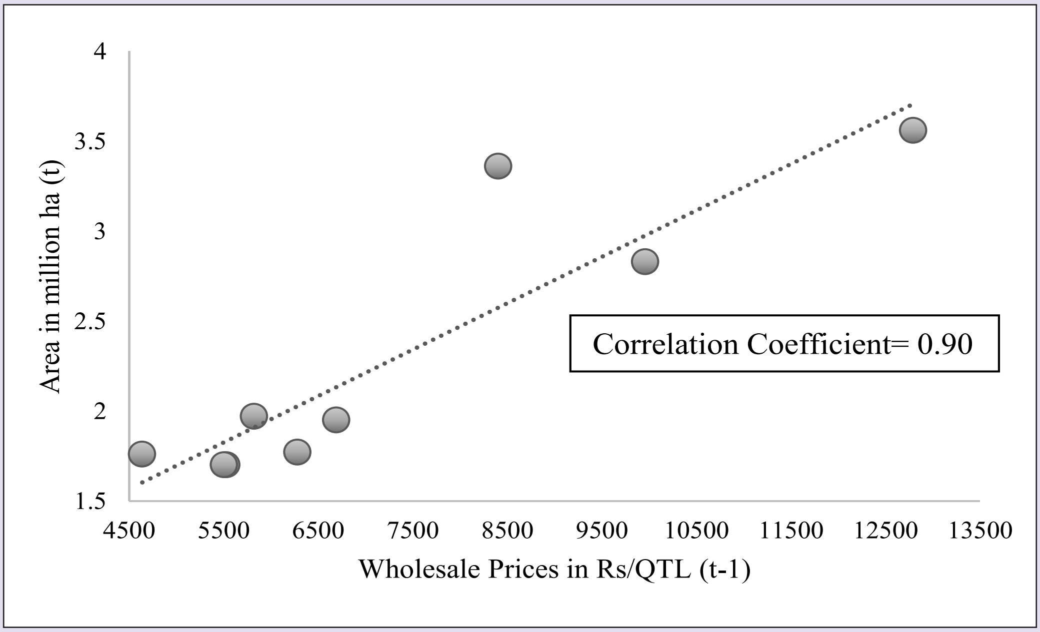
Even in the case of Tur, the association between the two variables is positive and turns out to be even more strong (0.86) as indicated by the value of correlation coefficient.

Relation between wholesale price of Tur in Period (t-1) and area sown in period t



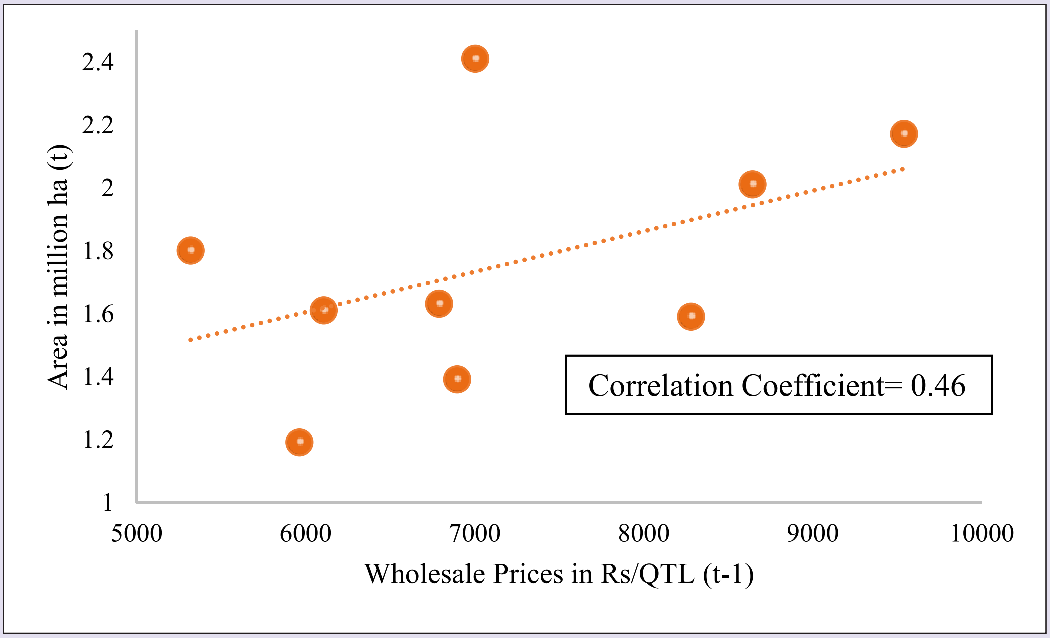
Source: PMC, Department of Consumer Affairs and Ministry of Agriculture.

Relation between wholesale price of Urad in Period (t-1) and area sown in period t



Source: PMC, Department of Consumer Affairs and Ministry of Agriculture.

Relation between wholesale price of Moong in Period (t-1) and area sown in period t.



Source: PMC, Department of Consumer Affairs and Ministry of Agriculture.

In case of Urad, again positive correlation was observed and the correlation coefficient turned out to be 0.90. A similar positive association for Moong was observed as well, however, in case of Moong the correlation coefficient was relatively weak, at 0.46.

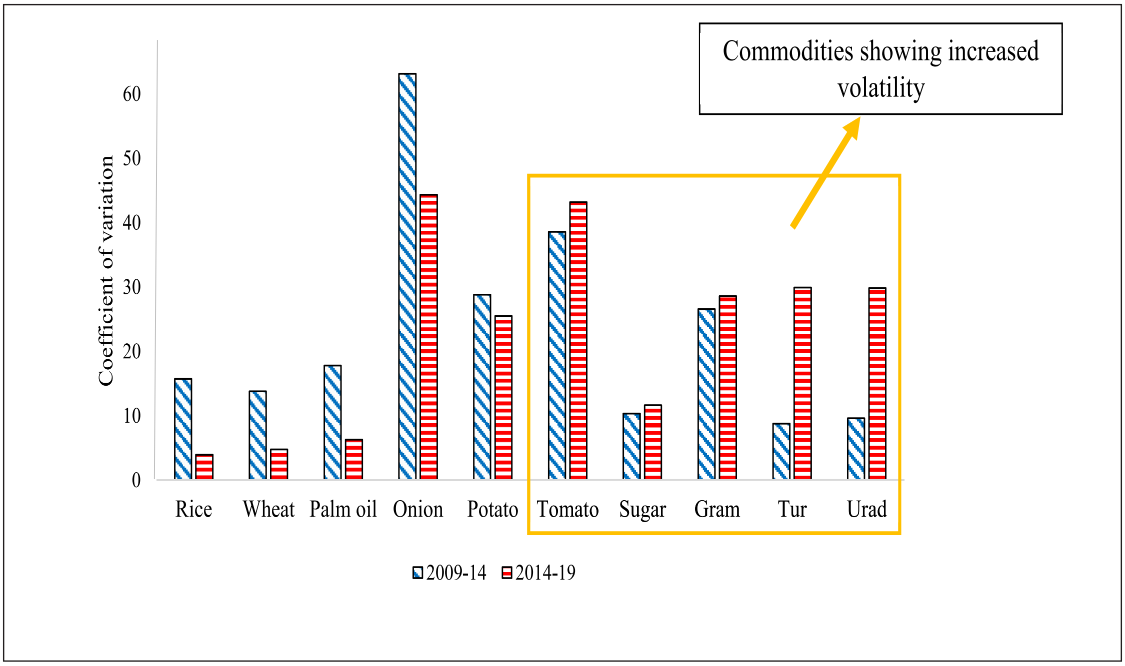
To prevent the occurrence of the cobweb phenomenon, it is essential that apart from existing measures in place to safeguard pulses farmers from crop failure/price shocks like market intervention under Price Stabilization Fund (PSF), coverage under Pradhan Mantri Fasal Bima Yojana, PM-AASHA, providing warehouses, improving transportation, price discovery through e-NAM etc, free export of pulses also needs to be encouraged for India to become self-sufficient in pulses production.

Studies have also suggested that efforts to strengthening procurement by government agencies, increasing openess of external trade, stabilising the prices, reduce transportation cost for farmers by linking them via better roads and effective marketing channels so that production as well as net availability of pulses can be increase thus, leading to improvement in supply of pulses. (CRISIL, 2017)

VOLATILITY IN ESSENTIAL COMMODITY PRICES

5.27 Wholesale price volatility was analysed for various essential commodities over two time periods i.e. 2009-14 and 2014-19. Coefficient of variation has been used as a measure of volatility. The coefficient of variation is a statistical measure of the dispersion of data points in a data series around the mean. Prices of rice and wheat remained stable since 2014 due to adequate supply arising out of sufficient domestic production and also due to maintenance of adequate buffer stock of rice and wheat for meeting the food security requirements. As a result, the price volatility was lower in the case of rice and wheat (Figure 21). It may be seen that overall price volatility was highest for vegetables and lowest for rice, wheat and palm oil. There was a significant rise in volatility for pulses, sugar and tomatoes during 2014 - 2019.

Figure 21: Coefficient of variation of various essential agricultural commodities



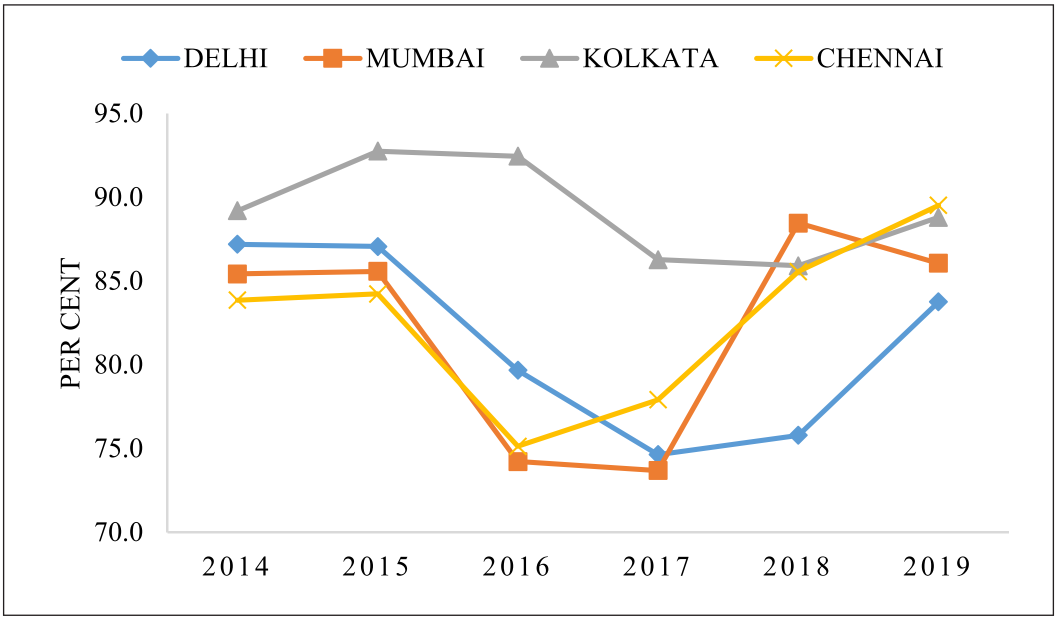
Source: PMC, Department of Consumer Affairs.

5.28 The extent to which given production and consumption shocks translate into price volatility depends on supply and demand elasticities. Stockholding and speculation can have major impact on price variability, either stabilising or destabilising. Perishability of the commodities also adds to price volatility. Presence of marketing channels, storage facilities, effective MSP system can help limit price volatility.

DIVERGENCE IN RETAIL AND WHOLESALE PRICES FOR ESSENTIAL AGRICULTURAL COMMODITIES

5.29 A divergence between the retail and wholesale price of various essential commodities was observed in the four metropolitan cities of the country over the period 2014 to 2019. A price wedge[1] of 10 to 15 per cent per kg is not excessive if one compares this with the marketing costs and margins (Sharma & Pramod, 2001). In 2019 the margins are excessive for some of the commodities, and for all the commodities the margins are highest in Delhi and Mumbai. In case of arhar margins are low at the level of 16 per cent per kg in Delhi and 14 per cent per kg in Mumbai (Figure 22). In case of gram, the margin in Delhi turns out to be around 28 per cent per kg and around 20 per cent per kg in case of Mumbai (Figure 23). In the case of groundnut oil, margins between the wholesale and the retail prices were around 15 per cent in Delhi, while in Kolkata and Chennai margins were at 5-7 per cent. The margins were highest in Mumbai at around 26 per cent for groundnut oil (Figure 24). In the case of vegetables, onion and tomato are analysed. For both price wedge was excessive especially in Delhi and Mumbai. In Delhi, the price margin was 51 per cent for onion and in the case of tomatoes it was 59 per cent (Figure 25 and 26). This implies that vertical spreads in prices is maximum for vegetables that are perishable, then for pulses and the least for edible oils.

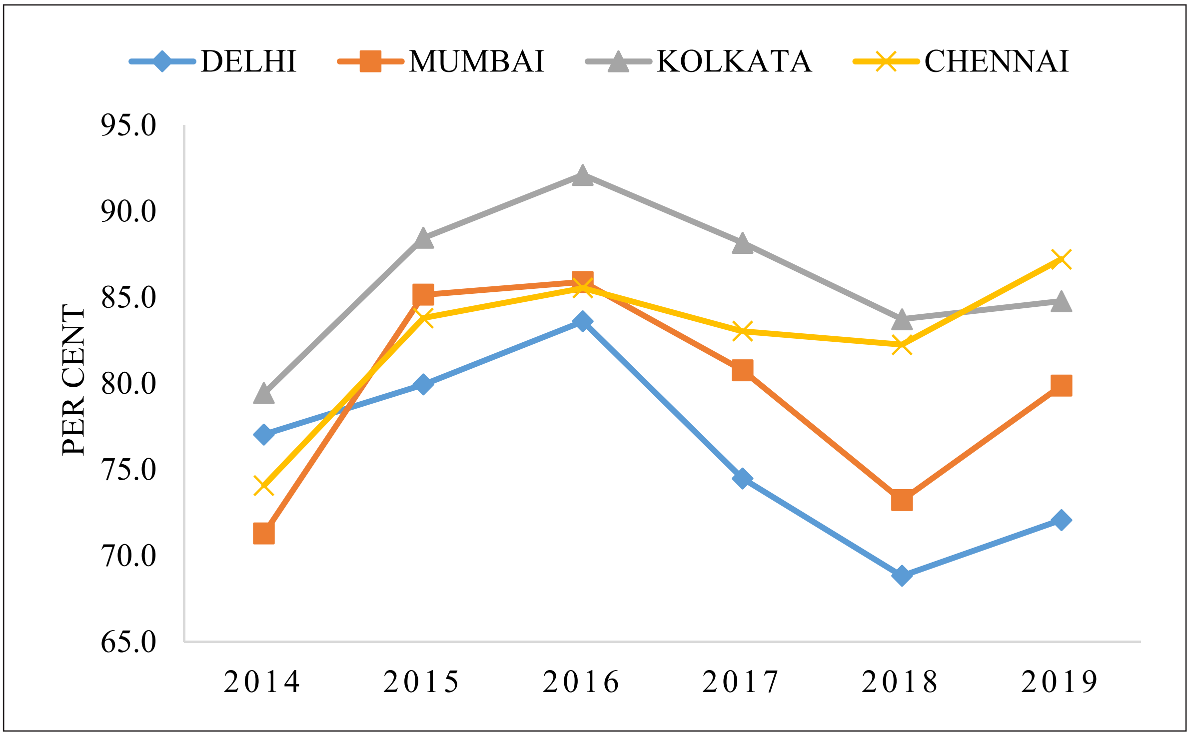
Figure 22: Arhar wholesale to retail prices ratio



Source: PMC, Department of Consumer Affairs.

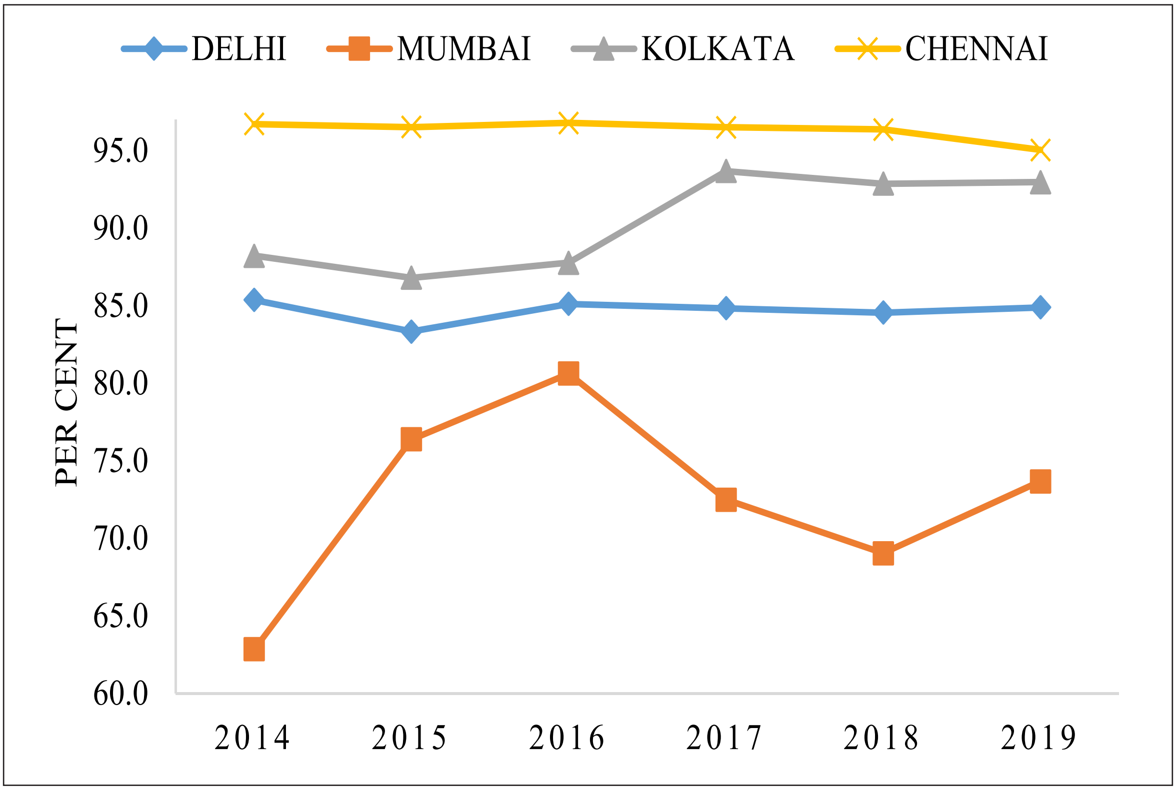
[1] Wedge= [1- (Wholesale price per kg/Retail price per kg)]*100.

Figure 23: Gram wholesale to retail prices ratio



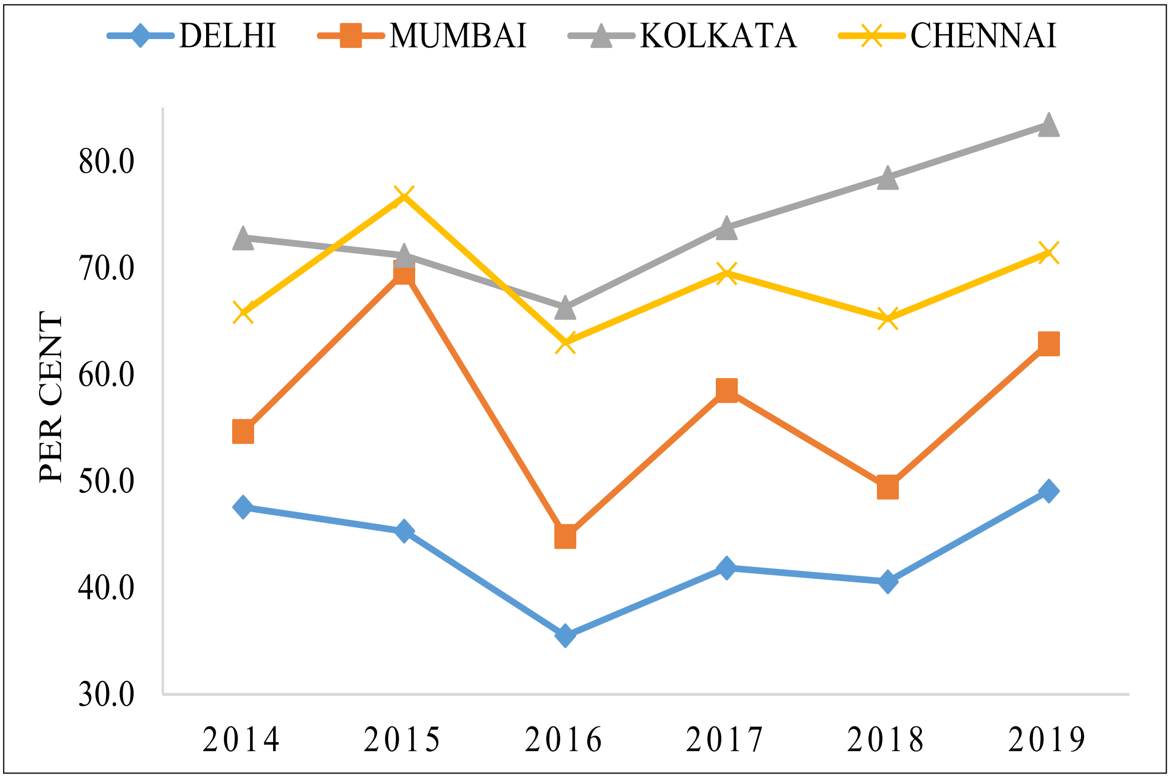
Source: PMC, Department of Consumer Affairs.

Figure 24: Groundnut oil wholesale to retail prices ratio



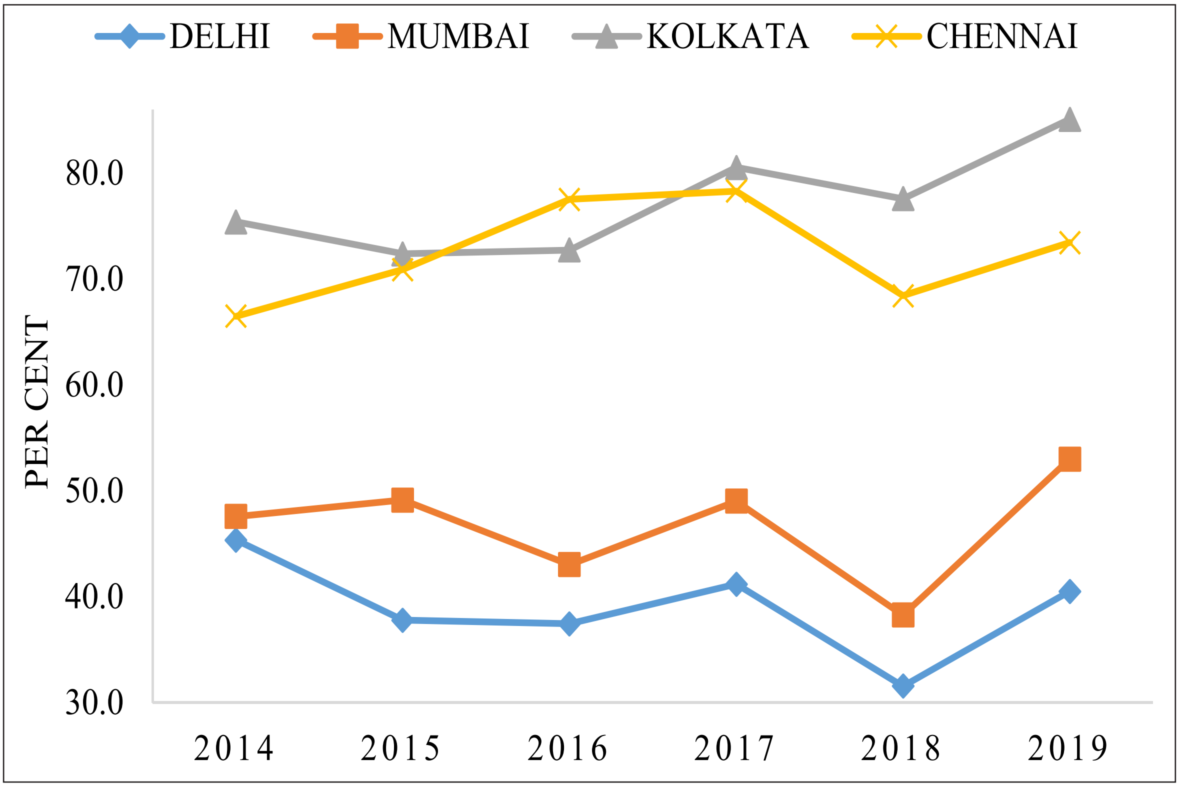
Source: PMC, Department of Consumer Affairs.

Figure 25: Onion wholesale to retail prices ratio



Source: PMC, Department of Consumer Affairs.

Figure 26: Tomato wholesale to retail prices ratio



Source: PMC, Department of Consumer Affairs.

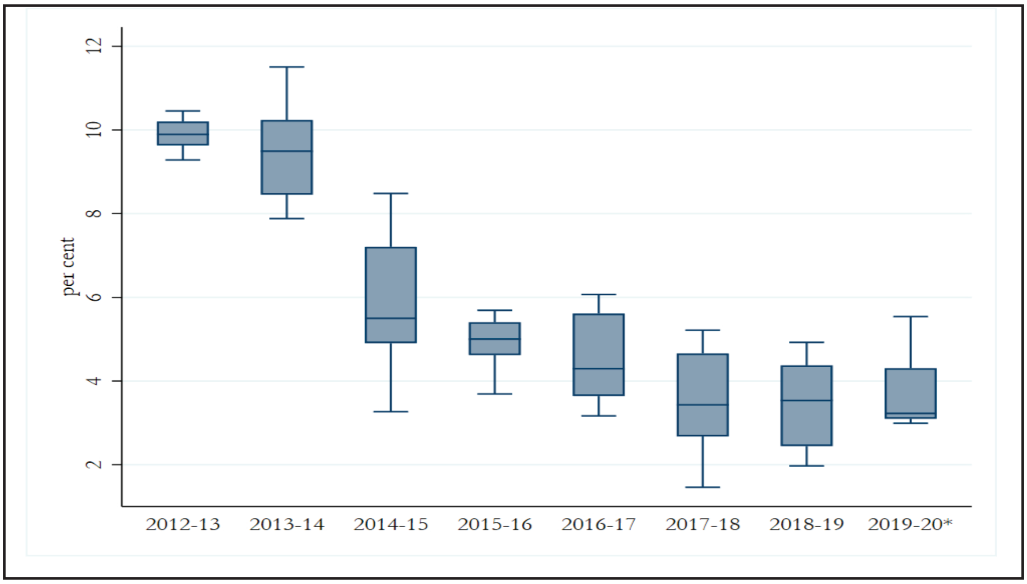
5.30 The reasons for such a high spread between the wholesale and retail prices could be due to several reasons such as high transaction costs, weak infrastructure and information systems, poor marketing facilities, huge margins of middleman etc. It is a fact that transaction costs in the northern states of the country are high compared to other States (Sharma & Pramod, 2001). The market structure is also different across States. If there is a fair amount of competition in the market between traders, price wedge will not be very high. On the other hand, if traders collude, price wedge will be much higher. Another possible reason for this could be asymmetry in the transmission of price signals from wholesale to retail prices and vice versa, this can happen due to action of intermediaries. Therefore, to reduce the wedge it is important that market barriers and structural rigidities in the system that lead to higher transaction costs are removed.

HAS THERE BEEN A SHIFT IN INFLATION DYNAMICS?

5.31 As discussed earlier in the para No. 5.3, after witnessing high levels of inflation during 2012-13, CPI-C inflation fell in 2013-14 and witnessed a drastic fall from 2014-15 onwards. Given the falling trend in inflation in the recent years, it is pertinent to ask whether there has been a shift in the inflationary process. Figure 27 presents the financial year-wise box-plots[2] for CPI-C series for the periods 2012-13 to 2019-20 (Apr-Nov). The average levels of inflation have fallen considerably during this period. Not only have the average levels of inflation come down, the peak levels of inflation during the financial year are now much lower.

5.32 It has been generally believed that, food and fuel inflation in India have had strong

Figure 27: Distribution of CPI-C inflation from 2012-13 to 2019-20*



Source: Calculations based on CPI-C data from MoSPI.
Note *: 2019-20 corresponds to April – November, 2019.

[2] Box and whisker plots enable us to study the characteristics of a distribution. The box shows the inter-quartile range, that is the 75th and 25th points on the distribution. The horizontal line in the box indicates median of the distribution and the whiskers are lines running from the box to the maximum and minimum values.

secondary effects leading to persistence in household inflation expectations. This feeds into core inflation and therefore prolongs the effects on headline inflation (Anand et. al, 2014; Raj and Misra, 2011). One way to check for the presence of secondary effects of food and fuel inflation is to look at the swiftness with which headline inflation converges to core inflation after the occurrence of a food or fuel price shock. If headline inflation does not completely revert back to core inflation within a reasonably short span of time, it may indicate the presence of strong secondary effects. The reversion of headline inflation to core inflation has considerable implications for the conduct of monetary policy in an inflation targeting framework. In an economy with strong secondary effects, monetary policy may have to be tighter in an event of a food or fuel price shock compared to an economy where such effects are minimal.

5.33 It was observed that from 2012, there is convergence of headline towards core inflation as per the CPI-C data. The analysis for monthly CPI-C inflation data between January 2012 and November, 2019 was done. The following commonly used equation to test for reversion of headline to core inflation was estimated.

$$\pi_t^{Headline} - \pi_{t-12}^{Headline} = \alpha_1 + \beta_1(\pi_{t-12}^{Headline} - \pi_{t-12}^{Core}) + e_t$$

where, $\pi_t^{Headline}$ is the headline CPI-C inflation at time point *t*, $\pi_{t-12}^{Headline}$ is the headline CPI-C inflation 12 months prior to *t* and π_{t-12}^{Core} is the core inflation 12 months prior to *t*.

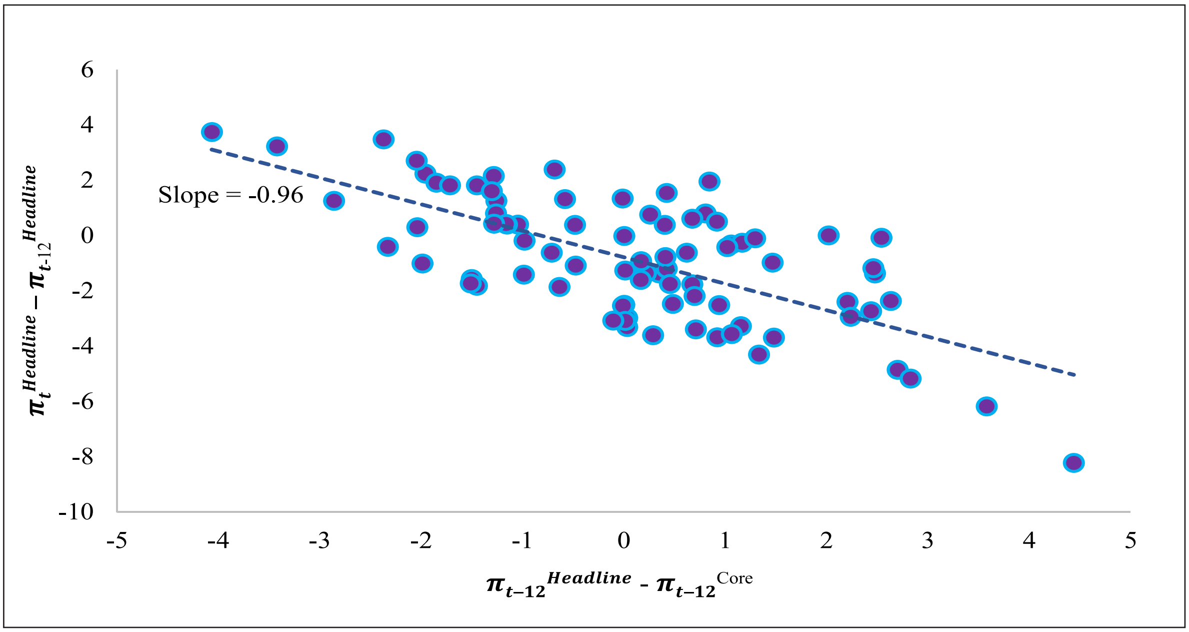
5.34 The results (Table 6 and Figure 28) indicate that in the period under consideration there is evidence of strong reversion of headline inflation to core inflation. The slope for the regression for the period is negative and close to -1, indicating complete reversion of headline inflation to core within a period of 12 months. A similar regression to test for the reversion of core to headline inflation does not provide evidence for the same (Table 6). This implies that secondary effects from non-core components to core components are minimal. This may have implications for the response of monetary policy to food and fuel price shocks: monetary policy need not become tighter in face of short-term, transitory price shocks in non-core components. However, owning to the large weightage of food and fuel in the consumption basket of consumers in India and the fact that demand-side pressures (and not just supply side factors) are important for food and fuel inflation-focus on headline inflation for monetary policy decisions may be warranted.

Table 6: Testing for reversion of CPI-C Headline to Core inflation

January 2012 to November 2019 Dependent Variable: $\pi_t^{Headline} - \pi_{t-12}^{Headline}$			
	Slope Coefficient	**p-value for F statistic**	**R^2**
$\pi_{t-12}^{Headline} - \pi_{t-12}^{Core}$	-0.96***	0.000	0.47
Dependent Variable: $\pi_t^{Core} - \pi_{t-12}^{Core}$			
$\pi_{t-12}^{Headline} - \pi_{t-12}^{Core}$	-0.045	0.6865	0.002

*** p<0.01, ** p<0.05.

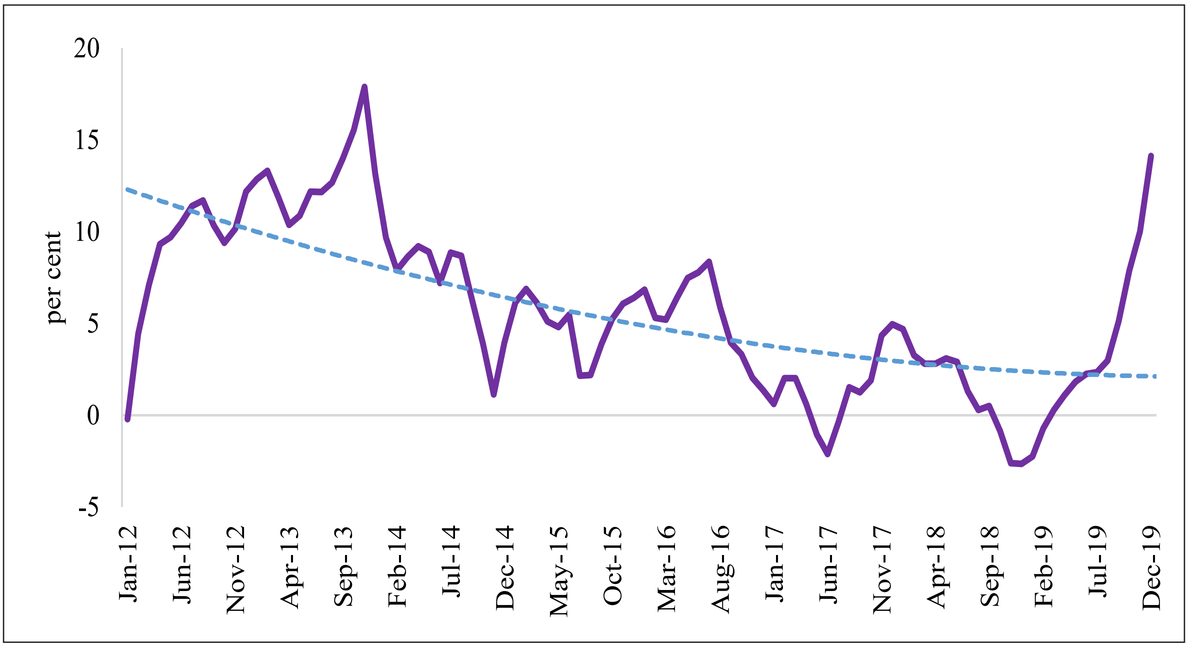
Figure 28: Reversion of CPI-C Headline to Core inflation



Source: Calculations based on CPI-C data for the period Jan 2012-Nov 2019.

5.35 Two major factors could have contributed to the changing dynamics of inflation in India. First, it was observed that food inflation has seen a declining trend during the period under consideration (Figure 29). The decline in inflation has been witnessed in most categories of food group including those with a high weightage such as cereals and products, fruits, vegetables and pulses and products. Second, inflation expectations have been declining since 2015 (Figure 30). This could be partly because of the success

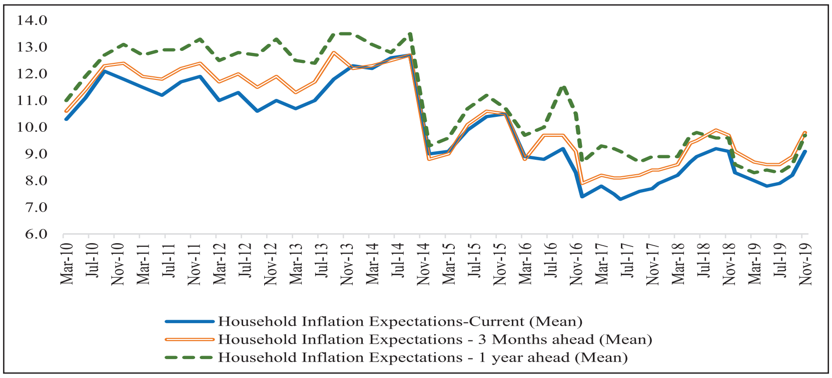
Figure 29: Consumer Food price inflation



Source: NSO.

of inflation targeting approach of monetary policy adopted by RBI in anchoring inflation expectations. On the other hand, household inflation expectations are known to move closely with food inflation. The fall in food inflation during this period could have had the effect of reducing the overall inflation expectations of the households. This is also reflected in the fact that proportion of the households expecting the prices of food products for one year ahead to increase has fallen consistently between September 2013 and November 2019.

Figure 30: Inflation Expectations Survey of Households

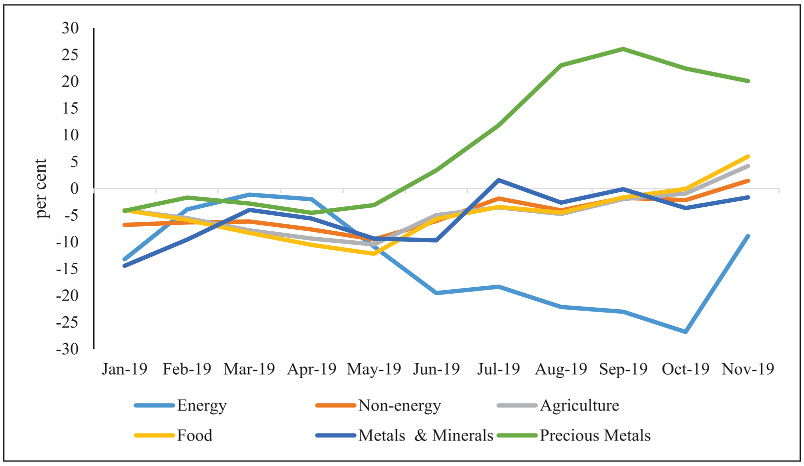


Source: Reserve Bank of India.

TRENDS IN GLOBAL COMMODITY PRICES

5.36 As per the commodity prices published by the World Bank, energy commodity prices have shown a decreasing trend in 2019-20 (April-November). They recorded average inflation of (-)16.8 per cent in 2019-20 (April-November) as compared to 35.5 per cent in 2018-19 (April-November). In terms of food prices, the deflationary trend continued with inflation of (-)4.3 per cent in 2019-20 (April-November) compared to 0.3 per cent in 2018-19 (April-November). The metals and minerals index also showed a deflationary trend, indicative of the gloomy global economic scenario prevalent during the year (Figure 31).

Figure 31: Inflation trend in global commodity prices (Jan 2019-Nov 2019)



Source: World Bank.

MEASURES TO CONTAIN PRICE RISE OF ESSENTIAL COMMODITIES

5.37 Government takes various measures from time to time to stabilize prices of essential food items which, inter-alia, include utilizing trade and fiscal policy instruments like import duty, Minimum Export Price, export restrictions, imposition of stock limits and advising States for effective action against hoarders & black marketers etc. to regulate domestic availability and moderate prices. Also, Government incentivizes farmers by announcing Minimum Support Prices for increasing production and is implementing Schemes which, inter alia, include Mission for Integrated Development of Horticulture (MIDH), National Food Security Mission (NFSM), National Mission on Oilseeds and Oil Palm (NMOOP), etc. for increasing production and productivity through appropriate interventions. Besides, Government is also implementing Price Stabilization Fund (PSF) to help moderate the volatility in prices of agri-horticultural commodities like pulses, onion, and potato. Onion prices saw a hike during 2019-20 starting from August, 2019, and various measures were taken by the Government to ease the situation which included:

- During 2019-20, buffer stock of 57,373 metric tonnes (MT) Rabi onion was created under Price Stabilization Fund (PSF) through procurement from Maharashtra (48,184 MT) and Gujarat (9,189 MT) which was distributed to various State Governments, other agencies and also sold in various mandis through open auction.

- Onions were supplied to State Governments of Haryana, Kerala, Andhra Pradesh and Uttar Pradesh at no-profit no-loss basis to improve prices and availability situation. During July-Oct., 2019, onions were supplied from the buffer stock for direct retailing in Delhi-NCR through Mother Dairy, NCCF, NAFED and Govt. of NCT of Delhi at regulated retail rates to ensure availability of onions at reasonable prices.

- The benefit to exporters of onions under Merchandise Exports from India Scheme (MEIS) was withdrawn w.e.f. 11th June 2019.

- Minimum Export Price (MEP) of $850/MT was imposed on onion on 13th September 2019, and subsequently its export was banned by Government on 29th September 2019 in view of its continued high prices.

- Government, on 29th September 2019, imposed stock limits on traders across the country – 100 quintals on retail traders and 500 quintals on wholesale traders under the Essential Commodities Act, 1955, which was subsequently, revised to 20 quintals (2 MT) for retailers and 250 quintals (25 MT) for wholesalers. Further, Government of India urged State Governments to hold regular meetings with the traders of Onions at State and District level to prevent hoarding, speculative trading and profiteering, unfair and illegal trade practices like cartelling, etc.

- Facilitated private imports of onions by relaxing its fumigation norms and exempting importers from stock limits.

- Government imported onions through MMTC from countries like Egypt and Turkey and directed NAFED to procure surplus Kharif onion from producing States like Rajasthan, Maharashtra and undertake distribution in deficit States.

CONCLUSION

5.38 Overall, while the WPI inflation remained low during the financial year 2019-20, CPI-C inflation saw a slight uptick, driven mainly by food prices. Supply-side shocks in agricultural commodities such as onion due to erratic rains led to the sudden spike in the prices of these commodities. The Government has been taking necessary measures to tackle the rising prices in these commodities. The volatility in inflation of most of the essential agricultural commodities with the exception of pulses has also come down over time. However, one major issue that still remains is the high wedge between retail and wholesale prices of some of the commodities like onion and tomato. The price wedge also varies between different centres indicating presence of large number of intermediaries and high transportation costs. Analysing inflation figures at State level, a divergence is observed in inflation across the States and also between the rural and urban areas within each state. The inflation dynamics have also been changing over time. In the current period, there is evidence for a strong reversion of headline inflation to core inflation. Future inflationary prospects and inflation dynamics crucially depend on the overall macroeconomic scenario as well as the containment of rising prices in certain agricultural commodities.

CHAPTER AT A GLANCE

- Headline Consumer Price Index (CPI) inflation was 3.7 per cent in 2018-19 (April to December, 2018), compared to 4.1 per cent in 2019-20 (April to December, 2019).
- During 2019-20, WPI based inflation has been on a continuous fall declining from 3.2 per cent in April 2019, only marginally rising in November and December to end at 2.6 per cent in December 2019.
- Food index which declined on an annual basis between 2017-18 and 2018-19, saw an uptick during the current financial year (April-December, 2019).
- Since July 2018, CPI-Urban inflation has been consistently higher than CPI-Rural inflation, which is in contrast to earlier trend where rural inflation was higher than urban inflation.
- During 2019-20 (April- December), food and beverages emerged as the main contributor to CPI-C inflation, with 54 per cent of the inflation during this period attributable to this group.
- In the four metropolitan cities of the country, retail prices of various essential commodities have diverged from wholesale prices over the years.
- Since 2012, there has been a change in inflation dynamics. There is evidence for a strong reversion of headline inflation to core inflation. However, transmission of inflation from non-core components to core components is minimal. Therefore, there may be a case for monetary policy to not respond to transitory shocks in non-core components of inflation.
- Inflation in fifteen States/Union Territories (UTs) was below 4 percent in FY 2019-20 (April-December). Comparing FY 2018-19 (April- December) with FY 2019-20 (April- December), inflation has actually decreased in eight states.
- Inflation expectations have declined thereby indicating that the inflation targeting framework has started influencing expectations of inflation in the economy.

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Sustainable Development and Climate Change

06

CHAPTER

The Sustainable Development Goals (SDGs) constitute a befitting framework to answer the developmental challenges to achieve a sustainable future, free from social, economic, and environmental inequalities and thereby ensuring a greener and healthy Planet for future generations. India's achievement in the composite SDG index is commendable as the score has improved from 57 in 2018 to 60 in 2019. Along with following the holistic approach for achieving the SDGs by implementing a comprehensive array of schemes, India's progress in adopting, implementing, and monitoring SDGs stands noteworthy. The SDG indicator linked reporting and monitoring framework helped in exploring the nexus approach to attain development goals of India. As a responsible nation, with the introduction of various schemes, India has been continuously moving towards economic growth, keeping in mind the imperatives of sustainable development. India is among a few countries in the world where forest and tree cover have increased considerably. The forest and tree cover have reached 80.73 million hectare which is 24.56 per cent of the geographical area of the country. Increased focus on sustainability requires various actions towards building individual and institutional capacity, accelerating knowledge and enhancing technology transfer and deployment, enabling financial mechanisms, implementing early warning systems, undertaking risk management and addressing gaps in implementation and upscaling. These fair and justified demands have been discussed in various multilateral negotiations but remain largely unresolved. Global agenda of delivering sustainable development and addressing climate change can be delivered only if all nations act upon their fair share of responsibilities including the fulfillment on means of implementation by the developed world to the developing countries. Therefore, enhanced ambition and enhanced support should be on equal footing.

INTRODUCTION

6.1 The year 2019 marked the fourth anniversary of adoption of 2030 Agenda for Sustainable Development and the Paris Agreement. India is striving to combine the element of 'sustainability' to economic development through well-designed initiatives for inclusive development enshrined in its policies: electrify rural households, augment the usage of renewable sources, eliminate malnutrition, eradicate poverty, access to primary education to all girls, provide sanitation and housing for all, equip young people with skills to compete in the global labor market, enable access to finance and financial services. India's efforts towards the achievement of SDGs will contribute to their success at the global level. India is moving forward on the path of SDG implementation. India is among a few countries in the world where, despite ongoing developmental efforts, forest and tree cover are increasing considerably. A comparison with some other emerging economies shows that India's growth in forest cover has been in positive territory. Simultaneously, India's sustained actions on addressing climate change have helped her to achieve great strides which are reflected in reduction in the emission intensity of India's GDP by 21 per cent during 2005-2014. While India is on the path of sustained progress, global agenda of delivering sustainable development and addressing climate change can be delivered if and only if all nations exhibit the requisite momentum to act upon their fair share of responsibilities including the fulfillment of financial obligation by the developed world to the developing countries.

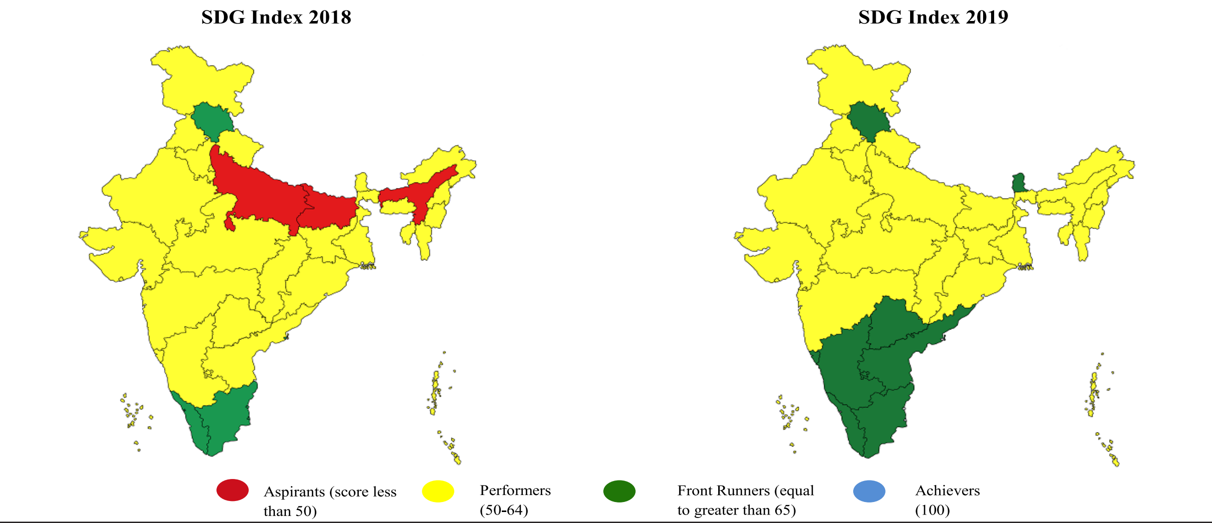
INDIA AND THE SDGs

6.2 India follows a holistic approach for achieving the SDGs by implementing a comprehensive array of schemes. The progress towards SDGs has been assessed by SDG India Index 2019. The salient features of the SDG India Index Report, 2018 have been discussed in detail in the previous Economic Survey 2018-19, Volume II, Chapter 5. While the first edition measured progress of the States/ Union Territories (UTs) on a set of 62 indicators across 13 goals, the 2019 Index is more comprehensive and highlights the progress being made by the States/UTs on a wider set of 100 indicators spread across 16 goals. The Index also includes a qualitative assessment on SDG goal 17. Additionally, this year the SDG India Index 2019 report has a new section on profiles of States/UTs.

6.3 The States/UTs are ranked based on their aggregate performance across the 16 SDGs. The SDG score varies from 0 to 100. A score of 100 implies that the States/UTs have achieved the targets set for 2030; a score of 0 implies that the particular State/UT is at the bottom of the table. 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. As per the SDG Index, Kerala, Himachal Pradesh, Tamil Nadu, Andhra Pradesh, Telangana, Karnataka, Goa, Sikkim, Chandigarh and Puducherry are the front runners (Map 1). It is noteworthy that none of the States/ UTs fall in the Aspirant category in 2019.

6.4 Overall, it is encouraging to note that the composite score for India has improved from 57 in 2018 to 60 in 2019, indicating the impressive progress made by the country in its journey towards achieving the SDGs. This positive stride towards achieving the target is largely driven by commendable country wide performance in five goals - 6 (Clean Water and Sanitation), 7 (Affordable and Clean Energy), 9 (Industry, Innovation and Infrastructure), 15 (Life on Land) and 16 (Peace, Justice and Social Institutions) - where India has scored between 65 and 99. The goals that demand special attention are – 2 (Zero Hunger) and 5 (Gender Equality) – where the overall country score is below 50. The overall country score lies between 50 and 64, indicates the scope for improvement in the coming years.

Map 1: India SDG Index 2018 & 2019



Source: NITI Aayog.

SDG Nexus: A New Paradigm Approach

6.5 There exist interlinkages among SDGs and targets. Target-based approach can help reinforcement of policies and its implementation. With the adoption of SDGs, the aim of the government is to reinforce its development priorities with SDG indicators. There are linkages among the various SDGs and have strong impacts on reinforcement of policies. However, this approach needs to be further explored. The 'nexus' approach employs the principles of integrating management and governance across sectors and scales. It necessitates looking at systems instead of individual components or short-term outcomes; looking at the inter-related feedbacks from other sectors; and promoting cooperation among sectors while reducing competition for scarce resources. This approach recognizes the various socio-ecological processes that are inter-linked, and pressures felt on certain resources can get further exacerbated leading to serious long-term challenges due to demands from other 'nexus' sector activities. This demands greater co-ordination across institutions at local, national and international levels. This approach aims to achieve the balance between environmental, social, and economic boundaries and simultaneously ensure well-being of the people. To follow this basic concept in India, the SDG goals are used as a medium which allows for interlinkages of different sectors and thematic areas. Since, a few SDGs have overlapping objectives with one another, the policies developed and aligned to achieve the goals must consider and identify these linkages and in-turn identify the potential trade-offs that might limit the physical achievement of the target under a goal.

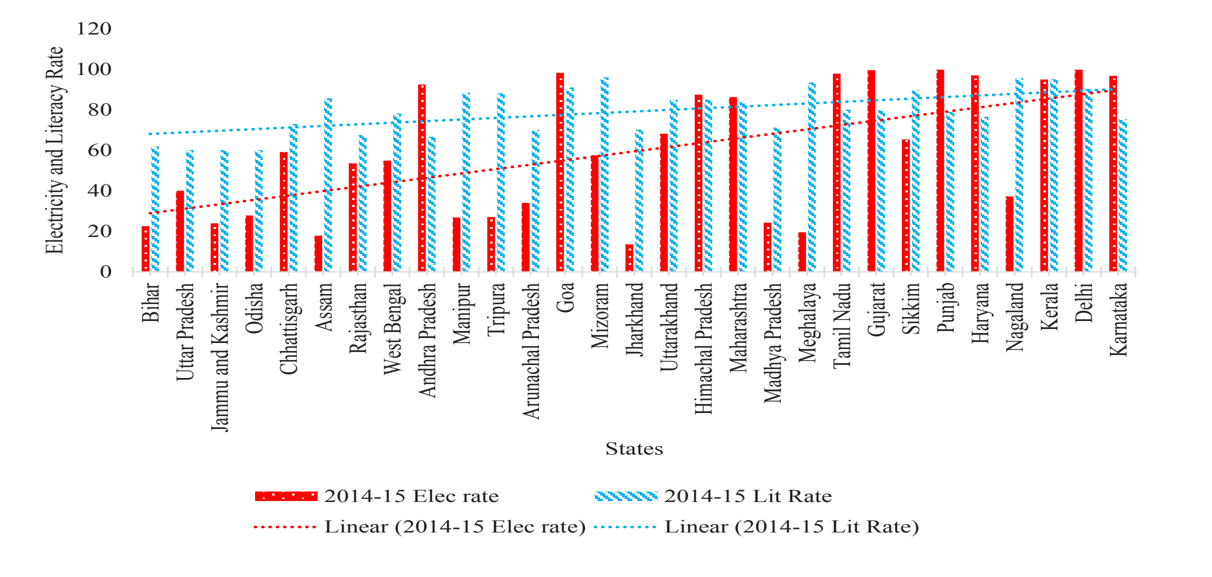
Examples of Nexus in Select Sectors

Education and Electricity Nexus

6.6 Electricity in schools is a part of basic infrastructure requirements to provide quality education. It has been observed that basic infrastructure like electricity, separate toilets for girls and boys in schools create a healthy and positive environment at schools (UNDESA, 2014). It is observed that with electricity, the schools' access to modern methods and techniques of teaching helps holistic development of students and increase their attraction towards learning. Access to

Information and Communication Technologies (ICTs) methods and imparting knowledge of computer at schools requires reliable electricity connections. It then becomes obvious that schools having quality and reliable power would generally tend to have the facilities that the Government is providing under its Sarva Shiksha Abhiyan programme. Globally it is observed that schools with electricity outperform the non-electrified schools in terms of staff-retention, drop-outs and other educational indicators. It is observed that States with lower literacy rates have low electricity rates at the schools and vice-versa (Figures 1a and 1b).

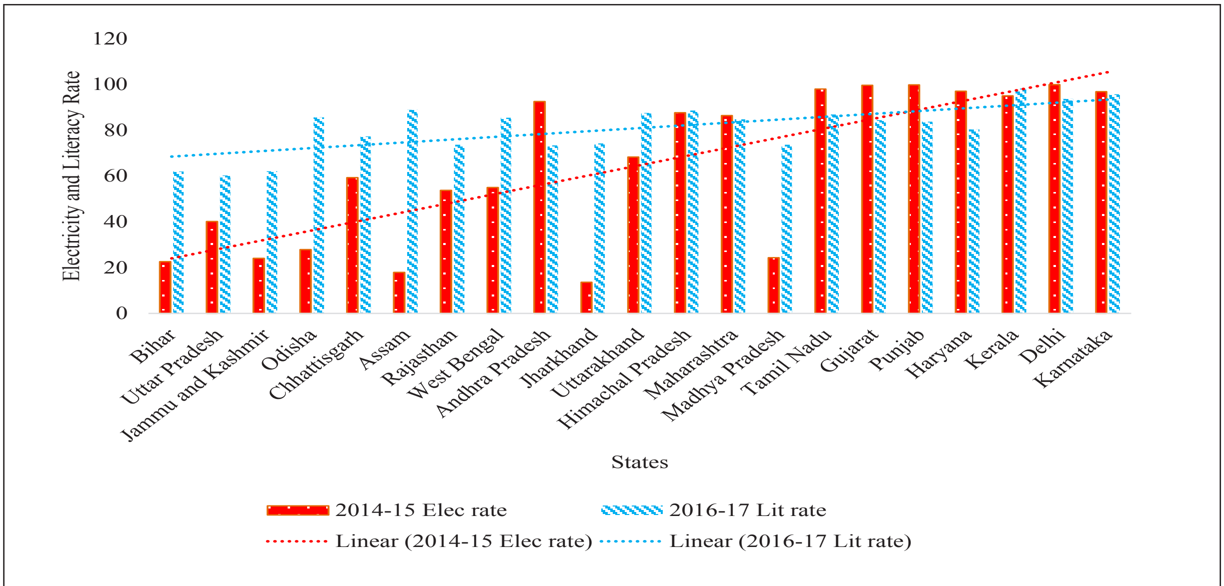
Figure 1 (a) : Electricity Rate and Literacy rate nexus in Schools (all States) (in per cent)



Source: DISE database for electricity rate & NSSO for literacy rate.

* Electricity Rate = No. of school electrified / Total No. of school getting constructed (in particular year).

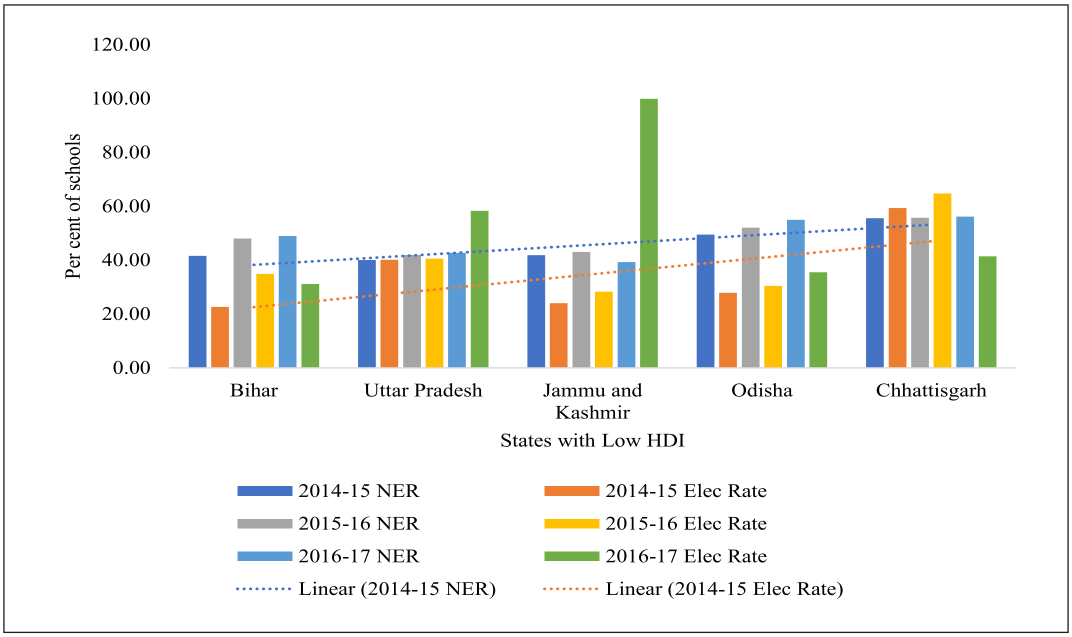
Figure 1 (b): Electricity Rate and Literacy rate nexus in Schools (all States)



Source: DISE database for electricity rate & NSSO for literacy rate.

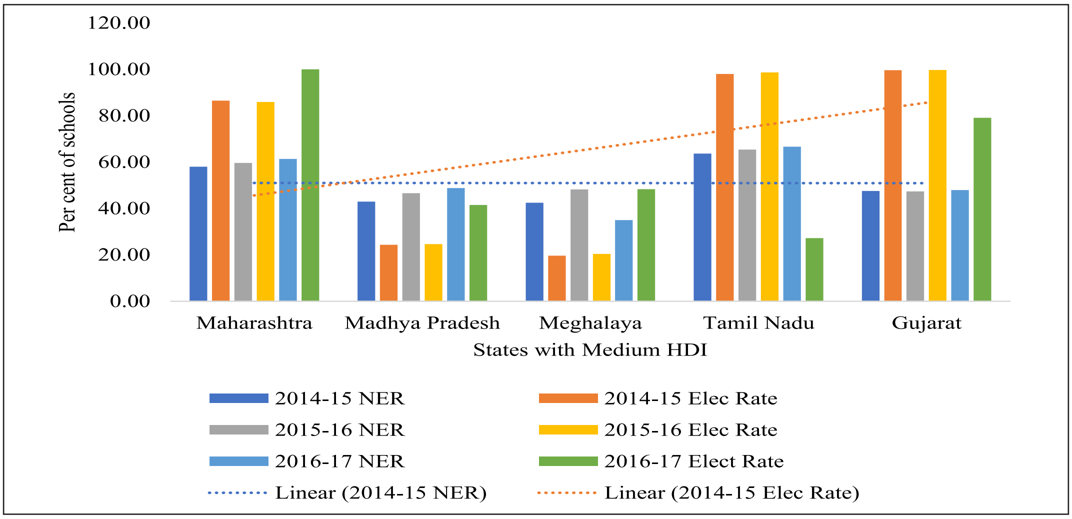
6.7 Figure 2, 3 and 4 showcase nexus between Net Enrolment Ratio (NER) and electrification of schools for selected States with low, medium and high Human Development Index (HDI) respectively. In case low and high HDI states, NER and electricity rate shows positive trend during 2014 to 2017. In case of medium HDI states, there is no conclusive trend because of the rate of growth of electrified school is not so high to the of number of schools getting constructed as compared to high and low HDI states during the same time period.

Figure 2: NER and Electricity Rate Nexus for selected States in India



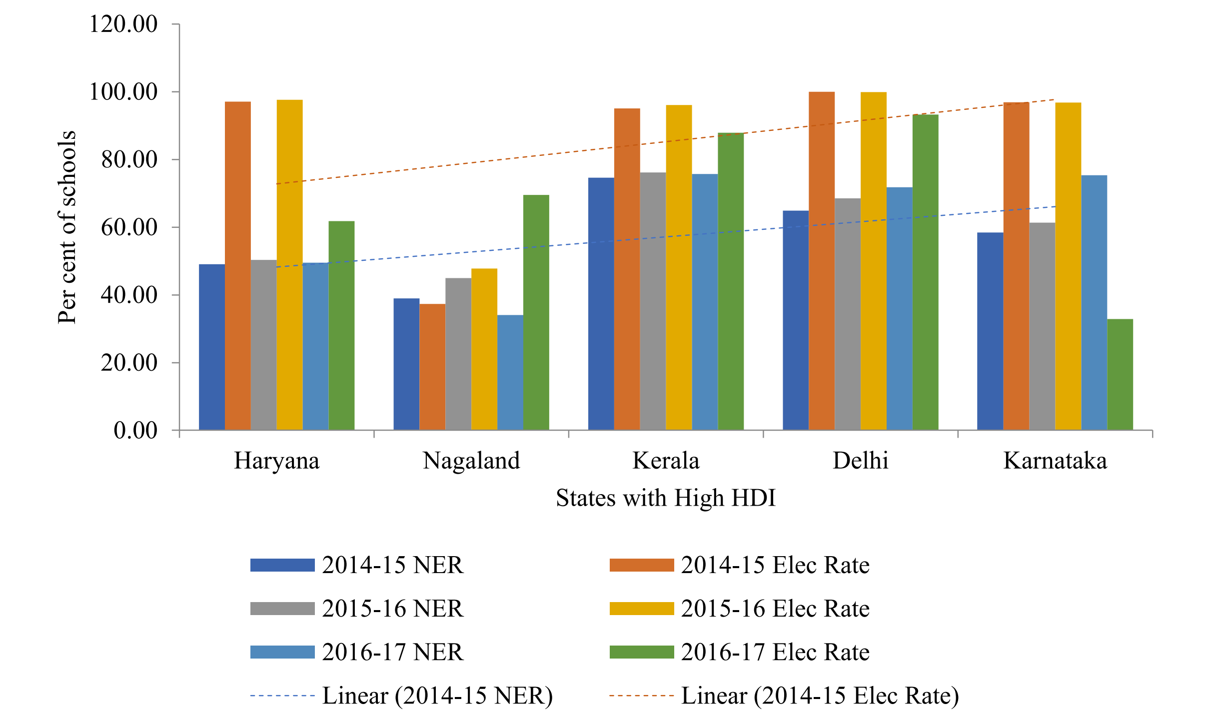
Source: DISE database.

Figure 3: NER and Electricity Rate Nexus for selected States in India



Source: DISE database.

Figure 4: NER and Electricity Rate Nexus for selected States in India

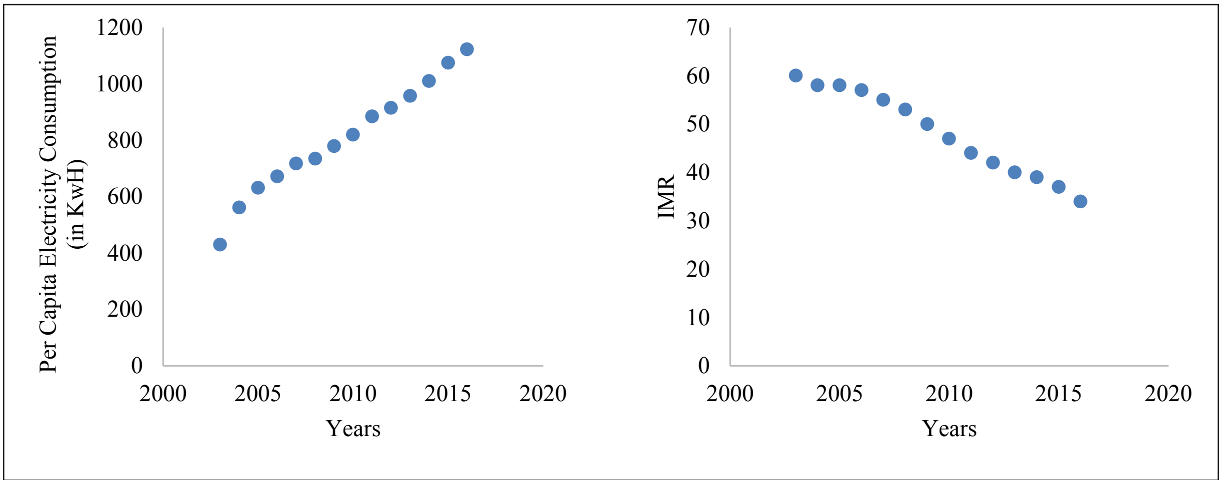


Source: DISE database.

Health and Energy Nexus

6.8 Many of the health improvement schemes- providing pediatric care, new-born emergency services, and successful vaccination rely heavily on the availability of electricity at the health centers. With the growing importance of the indicators under the SDG goals, it is important that reliable electricity connections are provided at the health care centers. As witnessed, there is a positive relationship between the electricity consumption and fall in the Infant Mortality Rate (IMR) in the country (Figure 5).

Figure 5: Nexus between Energy and Health



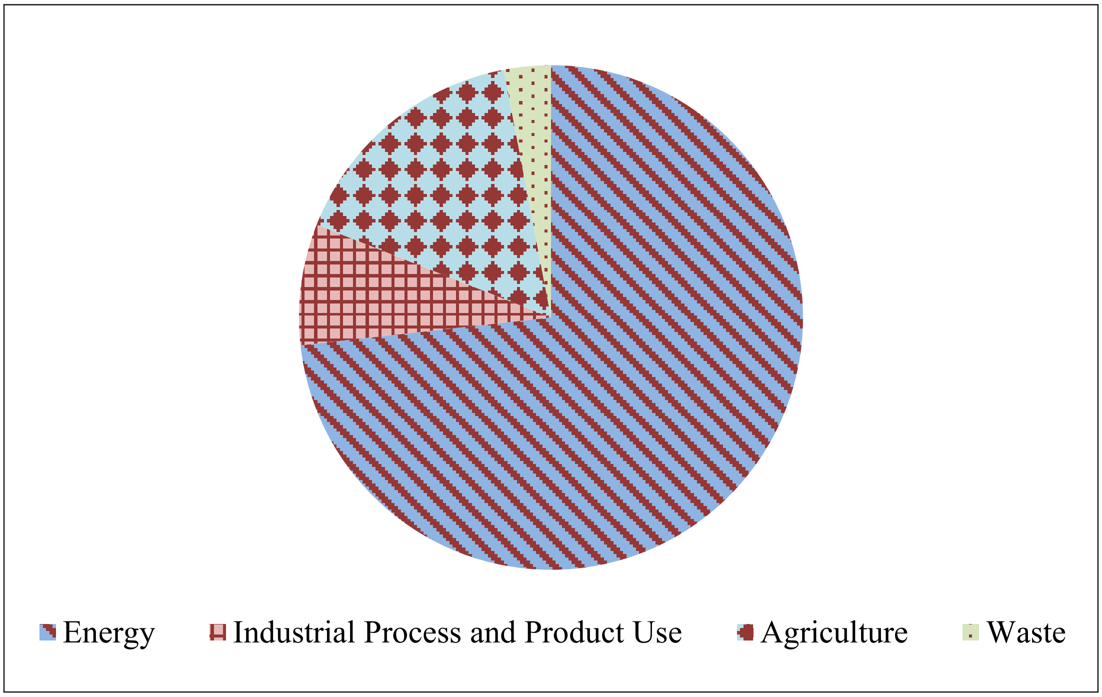
Source: Electricity Consumption: CEA various years, IMR: NITI Aayog various years.

CLIMATE CHANGE

6.9 India submitted its Nationally Determined Contribution (NDC) under the Paris Agreement on a "best effort basis" keeping in mind the developmental imperatives of the country. In its NDC, India promised to reduce its emission intensity of GDP by 33 to 35 per cent below 2005 levels by the year 2030; 40 per cent of cumulative electric power installed capacity would be from non-fossil fuel sources by 2030 and increase its forest cover and additional carbon sink equivalent to 2.5 to 3 billion tons of carbon dioxide by 2030. The Paris Agreement is to be implemented in post-2020 period in line with the guidelines adopted under Paris Agreement Work Programme.

6.10 India has strived to ensure that it follows a growth path that delivers sustainable development and protects the environment by investing in various schemes aligned with its NDC, like Swachh Bharat Mission, National Smart Grid Mission, Atal Mission for Rejuvenation and Urban Transformation etc. Notwithstanding the economic actualities, India's mitigation strategies have emphasized on clean and efficient energy system, enhanced energy efficiency, resilient urban infrastructure, safe, smart and sustainable green transportation network, planned afforestation, as well as holistic participation across all sectors. Swachh Bharat Mission (Urban) was launched in 2014 with the twin objectives of ensuring 100 per cent scientific solid waste management and making urban India open defecation free (ODF), to achieve

Figure 6: India's national GHG inventory (2014)* (Gigagram)



Source: Ministry of Environment, Forest and Climate Change, Government of India.
1 Gigagram (Gg) = 10^9 grams; Greenhouse gases are converted to CO_2 equivalent (CO_2e or CO_2eq) using their respective Global Warming Potentials. *TOTAL without LULUCF.

total environmental improvement. In a span of five years, the Mission has made significant progress- all urban areas of 35 States/ UTs have become ODF and the percentage of waste processing rose from around 18 per cent in 2014 to 60 per cent. The year 2019 has seen a significant leap forward for renewable energy with India undertaking one of the world's largest renewable energy expansion programmes in the world. India had announced 175 Gigawatt (GW) targets for renewables by 2022 and has already achieved 83 GW. Further, Hon'ble Prime Minister in his address at the UN Climate Action Summit in September 2019 has stated that "India's renewable energy capacity would be increased to much beyond 175 GW and later till 450 GW". As a Party to the UNFCCC, India submitted its Second Biennial Update Report (BUR) to the UNFCCC towards fulfillment of the reporting obligation under the Convention. As per the BUR, the emission intensity of India's GDP has reduced by 21 per cent over the period of 2005-2014 which is the result of India's proactive and sustained actions on climate change. India is on track to achieve its nationally determined targets. In 2014, the net national GHG emissions after including LULUCF (Land Use, Land Use Change and Forestry) were 23,06,295Gg CO_2 equivalent (around 2.306 billion tons of CO_2 equivalent) (Figure 6).

Progress in India's Climate Change Policies

6.11 Launched in 2008, India's National Action Plan on Climate Change (NAPCC) identifies a number of measures that simultaneously advance the country's development and climate change related objectives of adaptation and mitigation through focused National Missions. It was also meant to focus on key adaptation requirements and creation of scientific knowledge and preparedness as climate change acts as a "risk multiplier" for the vulnerable groups, worsening existing social, economic and environmental stresses. India has decided to revise the NAPCC in line with the NDCs under the Paris Agreement to make it more comprehensive in terms of priority areas. The progress of implementation of eight national missions is briefly explained in Box 1.

Box 1: National Missions and Progress

The Perform, Achieve and Trade (PAT) scheme under National Mission for Enhanced Energy Efficiency (NMEEE) designed on the concept of reduction in Specific Energy Consumption. In PAT cycle –V (April 2019), 110 Designated Customers (DC) from the existing sectors have been notified. The total energy consumption of these DCs comes out to be 15.244 Million Tons of Oil Equivalent (Mtoe) and it is expected to get a total energy savings of 0.5130 Mtoe. It is envisaged that by 2020, about 20 Mtoe of energy savings will be achieved through the implementation of this scheme.

National Solar Mission aims to increase the share of solar energy in the total energy mix. The cumulative targets under the mission for Grid Connected Solar Power Projects consists of 40 GW Grid connected Rooftop projects and 60 GW large and medium size land based solar power projects. The combined target is now set at 100 GW. The total investment in setting up 100 GW will be around ₹ 6,00,000 crore. A cumulative 32.5 GW of solar electric generation capacity has been installed

National Water Mission focuses on monitoring of ground water, aquifer mapping, capacity building, water quality monitoring and other baseline studies. There are 1071 assessment units categorized as over exploited as per 2011 assessment of Central Ground Water Authority (CGWA). Directions have been issued by CGWA under Section 5 of "The Environment Protection Act, 1986" for mandatory Rain Water Harvesting / Roof Top Rain Water Harvesting for all target areas in the country including UTs. While granting 'No Objection Certificate' for drawing ground water, CGWA insists for mandatory rain water harvesting as per the guidelines issued.

National Mission for a Green India envisages a holistic view of greening and focuses on multiple ecosystem services along with carbon sequestration and emission reduction. The mission emphasized the landscape approach to treat large contiguous areas of both forest and non-forest, public and private lands with a key role of the local communities in planning, implementation and monitoring. A sum of ₹ 343.08 crore has so far been released under the mission for undertaking afforestation activities over an area of 126916.32 ha in 13 states. Energy efficient devices have been provided to 56,319 households to promote alternative energy sources in project areas. Convergence Guidelines with Mahatma Gandhi National Rural Employment Guarantee Scheme and Compensatory Afforestation Fund Management and Planning Authority have been issued.

National Mission on Sustainable Habitat is being implemented through three programmes: Atal Mission on Rejuvenation and Urban Transformation, Swachh Bharat Mission, and Smart Cities Mission. Energy Conservation Building Rules 2018 for commercial buildings having connected load of 100 KW or above has been made mandatory. Mass Rapid Transit Systems are being implemented across the country and standards have been developed for six sub-sectors namely, solid waste management, water and sanitation, storm water drainage, urban planning, energy efficiency and urban transport. Under Mass Rapid Transit System, 585 km of metro rail is in operation; 620 km is under construction. Under the Bus Rapid Transit System (BRT), 223 kms of BRT corridors operational in 8 cities and 505 kilometers of BRT corridors are under construction in 14 cities.

National Mission for Sustainable Agriculture aims at enhancing food security and protection of resources. Key targets include covering 3.5 lakh hectare of area under organic farming, 3.70 under precision irrigation, 4.0 lakh hectare under System of Rice Intensification, 3.41 lakh hectare under diversification to less water consuming crop, 3.09 lakh hectare additional area under plantation in arable land and 7 bypass protein feed making. The mission has resulted in the formation of National Innovations on Climate Resilient Agriculture, a network project.

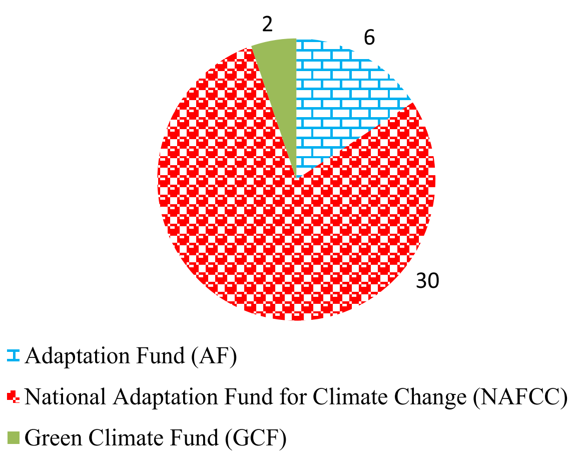
National Mission for Sustaining the Himalayan Ecosystem aims to evolve suitable management and policy measures for sustaining and safeguarding the Himalayan Ecosystem. The key achievements include setting up of: - Centre of Glaciology at Wadia Institute of Himalayan Geology, thematic task forces in 6 lead institutions, State Climate Change Centers in 11 out of 12 Himalayan States, 40 Training Programmes under State Climate Change Centres organized with 5500 people trained, formation of Inter-University Consortium of 4 universities on Himalayan Cryosphere and Climate Change.

National Mission on Strategic Knowledge for Climate Change seeks to build a knowledge system that would inform and support national action for ecologically sustainable development. Key achievements include setting up of 11 Centres of Excellence and 10 State Climate Change

Centres. 116 Training programmes have been launched and 14000 people have been trained; a total of 23 major R&D programmes have been spread over the country; 7 Human Capacity Building and National Knowledge Network programmes in the areas of climate change science, adaptation and mitigation have been launched. 8 Global Technology Watch Groups in the areas of Renewable Energy Technology, Advance Coal Technology, Enhanced Energy Efficiency, Green Forest, Sustainable Habitat, Water, Sustainable Agriculture and Manufacturing have been set up.

6.12 Another major initiative is launching of Climate Change Action Program (CCAP) in 2014, a central sector scheme, with a total cost of ₹ 290 crore for five years, 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 actions. Energy Audit Studies have revealed savings potential to the extent of 40 per cent in end use. The Energy Conservation Building Code (ECBC) sets minimum energy performance standards. It resulted in estimated energy saving of 84.34 million kWh, reduction in GHG emission of 69,154 tons of CO_2 per year. The same is also launched for residential sector. ECBC 2017 prescribes energy performance standards for new commercial buildings to be constructed across India to achieve a 50 per cent reduction in energy use by 2030 translating to energy savings of about 300 Billion Units by 2030 and peak demand reduction of over 15 GW in a year. Schemes like UJALA for LED bulb distribution has crossed 360 million whereas under street light national program, 10 million conventional streetlights have been replaced by LED street lights thus cumulatively saving 43 million tons of CO_2 emission. As part of the National Electric Mobility Mission Plan (NEMMP) 2020, Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) scheme was formulated in 2015 to promote manufacturing and sustainable growth of electric and hybrid vehicle technology. As of November 2019, a total of 280,994 vehicles have been sold. The National Bio-fuels Policy 2018 targets 20 per cent blending of ethanol in petrol and 5 per cent blending of biodiesel in diesel by 2030. National Adaptation Fund on Climate Change (2015) supports concrete adaptation activities for the States/UTs that are particularly vulnerable to the adverse effects of climate change and are not covered under on-going schemes. The allocation for the period 2017-18 to 2019-20 is of ₹ 364 crores. The Scheme has been taken as Central Sector Scheme with National Bank for Agriculture and Rural Development (NABARD) as the National Implementing Entity. Till date 30 projects on adaptation in agriculture, water, forestry, ecosystem & biodiversity, etc. have been approved. NABARD is implementing a number of climate adaptation and mitigation projects involving a total financial support of ₹ 1819.62 Crore across India, supported under both multilateral and domestic national funds (Figure 7).

Figure 7: Climate Change Projects (as on 31 December 2019) by NABARD (In Number)



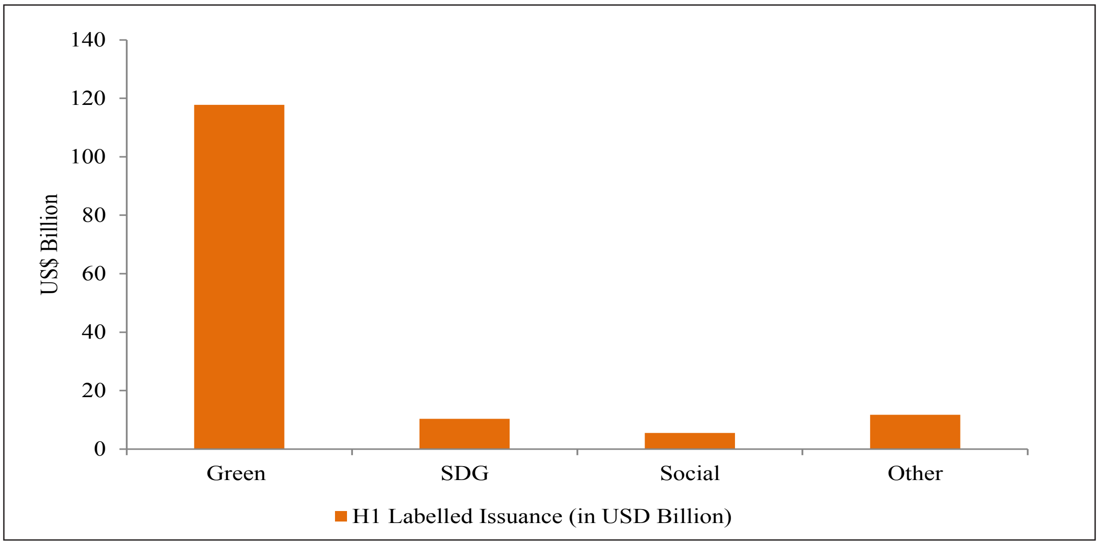
Source: NABARD.

Aligning Financial System with Sustainability

6.13 Cleaner forms of production essentially require a sound financial system. This is more so as estimates points towards requirement of trillions of dollars to achieve SDGs globally. Hence, the spotlight is now on aligning the financial system with sustainable development. In December 2007, RBI had sensitized banks in India to the various international initiatives and was asked to keep abreast of the developments in the field of sustainability and dovetail/modify their lending strategies/plans in the light of such developments. In 2012, the Securities and Exchange Board of India (SEBI), mandated the Annual Business Responsibility Reporting (ABRR), a reporting framework based on the National Voluntary Guidelines (NVGs) on Social, Environmental and Economic Responsibilities of Business released by the Ministry of Corporate Affairs. These guidelines serve as a driver to pursue sustainable management practices. Indian Institute of Corporate Affairs in 2011 developed a concept of NVG for adoption by the corporate sector. SEBI mandated adoption of NVGs by the listed Indian companies including banks. In 2014-15, a Working Group was set up by Indian Banks' Association (IBA) to generate the concept of responsible financing. The Working Group finalized the guidelines on 'NVGs for Responsible Financing'. These guidelines lay down 8 principles, which cover different aspects of environmental, social and governance (ESG) responsibilities to informed business action. Each principle details its 'Description and Applicability' and 'Areas of Disclosure' which would enable Financial Institutions to integrate the ESG principles in their business decision making, structure and processes.

6.14 Green bonds are debt securities issued by financial, non-financial or public entities where the proceeds are used to finance 100 per cent green projects and assets. The first half of 2019 saw sustainability/SDG bonds maintaining their place in a wider labeled market with US$ 10.3 billion of transactions (Figure 8) as issuers and investors continues to adopt policies and strategies linked to

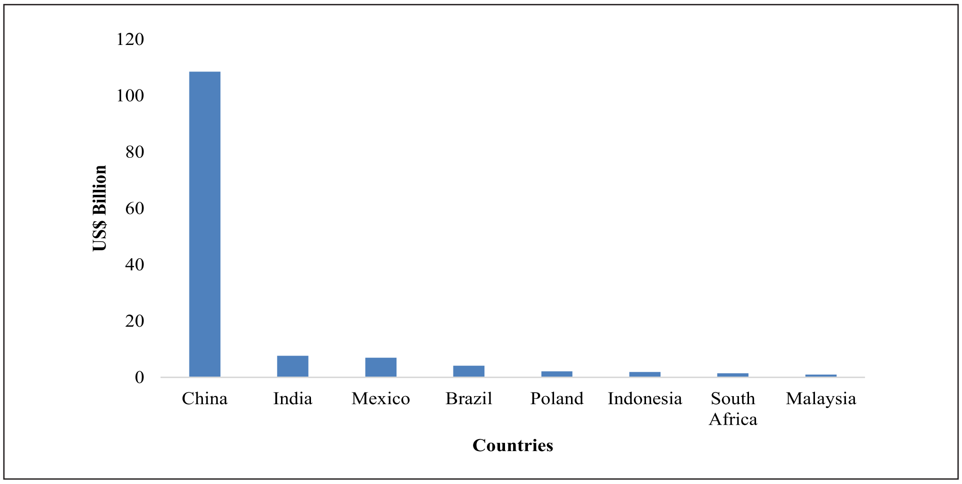
Figure 8: H1* 2019 Labeled Issuance of Bonds (in US$ Billion)



Source: Climate Bonds Initiative (as on 19.12.2019).
*H1: January - June

SDGs. Social bonds also maintained visibility with US$ 5.5 billion of issuance within the labeled market which totals a healthy US$ 145.4 billion for the half year. Climate Bonds remains focused on green bonds, which are specifically linked to climate-change mitigation, adaptation and resilience. India has the second largest Emerging green bond market after China (Figure 9). A number of Government agencies have contributed to issuance: Indian Renewable Energy Development Agency (IREDA) and the Indian Railway Finance Corporation (IRFC). In 2018, the SBI entered the market with an US$ 650 million Certified Climate Bond.

Figure 9: Major Emerging Markets for Green Bonds Issuance 2012-18 (US$ Billion)



Source: Emerging Market Green Bonds Report 2018.

6.15 In order to scale up the environmentally sustainable investments, India joined the International Platform on Sustainable Finance (IPSF) in October 2019. The Platform acknowledges the global nature of financial markets which has the potential to help finance the transition to a green, low carbon and climate resilient economy by linking financing needs to the global sources of funding. The main objectives are exchange and disseminate information to promote best practices in environmentally sustainable finance; compare the different initiatives and identify barriers and opportunities to help scale up environmentally sustainable finance internationally while respecting national and regional contexts.

Green Climate Fund

6.16 Under the UNFCCC and also Paris Agreement, the intent and obligation of climate finance is unambiguous, that developed country Parties shall provide financial resources to developing countries to undertake adaptation and mitigation actions in accordance with the country needs and priorities. In 2009, developed countries committed to a goal of mobilizing jointly US$ 100 billion a year by 2020 to address the needs of developing countries and decided that a significant portion of such funding should flow through the GCF. In contrast, the total pledges to the GCF in the Initial Resource Mobilization (IRM) in 2014, the largest dedicated climate fund, are a meagre US$ 10.3 billion. Approximately US$ 10.2 billion of the pledges had been converted into contribution agreements/arrangements. The GCF Board has approved US$ 5.2 billion to support the implementation of 111 climate change adaptation and mitigation projects and programmes in 99 developing countries. GCF's first replenishment (2020-2023) process so far witnessed 28 countries pledging resources to replenish the Fund for an amount of US$ 9.7 billion, which is even quantitatively lower than the IRM period. While the calls for raising of the ambition level of all countries and closing the emissions gap to limit temperature rise by 1.5 – 2 degree C above pre-industrial level were very intense at the recent climate talks, the key enabler, the climate finance, the major crunch issue remained unresolved (Box 2).

Box 2: India and COP 25

The 25th session of the Conference of the Parties (COP 25) to the UNFCCC was held at Madrid, Spain under the Chilean Presidency. India reiterated its commitment to implement the Paris Agreement in its letter and spirit and to act collectively to address climate change including consideration of principles of equity and common but differentiated responsibilities and respective capabilities. The COP 25 decision, titled Chile Madrid Time for Action, emphasizes the continued challenges that developing countries face in accessing financial, technology and capacity-building support, and recognizes the urgent need to enhance the provision of support to developing country Parties for strengthening their national adaptation and mitigation efforts. The decision also recalls the commitment made by developed country Parties to a goal of mobilizing jointly US$ 100 billion per year by 2020 to address the needs of developing countries. On the issue of global ambition for combating climate change, the decision adopted provides for a balanced and integrated view of ambition that includes not only efforts for climate change mitigation, but also for adaptation and means of implementation support from developed country parties to developing country parties.

Under the review of Warsaw International Mechanism (WIM) for Loss and Damage, the decision recognizes urgency of scaling-up of action and support, including finance, technology and capacity-building, for developing countries for averting, minimizing and addressing loss and damage. The decision also established the Santiago network for catalyzing technical assistance for implementation of relevant approaches in developing countries. On adaptation matters, the COP 25 decision recalls that the provision of scaled-up financial resources should aim to achieve a balance between adaptation and mitigation, taking into account country-driven strategies, and the priorities and needs of developing country Parties, considering the need for public and grant-based resources for adaptation. On technology matters, the adopted decision requests the Technology Executive Committee (TEC) and the Climate Technology Centre and Network (CTCN) to continue to implement their mandates with strengthened efforts on all themes of the technology framework. GCF has also been requested to collaborate with CTCN and TEC for strengthening cooperative action on technology development and transfer at different stages of the technology cycle. India hosted 'India Pavilion' at COP-25 with the theme '150 years of celebrating the Mahatma', designed to depict Mahatma Gandhi's life and messages around sustainable living.

INDIA'S INITIATIVES AT THE INTERNATIONAL STAGE

International Solar Alliance (ISA)

6.17 ISA is the first treaty based inter-governmental organization headquartered in India. With 83 signatory countries, ISA creates a multi-stakeholder ecosystem where sovereign nations, multilateral organizations, industry, policymakers and innovators work together to promote the common and shared goal of meeting energy demands of a secure and sustainable world. The ISA aims to pave the way for future solar generation, storage and technologies for Member countries' needs by mobilizing over US$ 1000 billion by 2030. Achievement of ISA's objectives will also strengthen the climate action in Member countries, helping them fulfill the commitments expressed in their NDCs.

6.18 In 2019, ISA has taken up the role of an 'enabler' by institutionalizing 30 Fellowships from the Member countries with a premier institution (IIT Delhi) in the host country, and training 200 Master Trainers from ISA Member countries; of a 'facilitator' by getting the lines of credit worth US$ 2 Billion from EXIM Bank of India and US$ 1.5 Billion from Agence Francaise de Development (AfD), France, by ensuring MDB investments in solar, and garnering project preparation support; of an 'incubator' by nurturing initiatives like the Solar Risk Mitigation Initiative and of an 'accelerator' by developing tools to aggregate demand for more than 1000 MW solar rooftop, 10,000 MW of Solar Mini-Grid and 270,000 solar water pumping systems.

6.19 The ISA's Programme on Scaling Solar Applications for Agriculture Use focuses on providing greater energy access and a sustainable irrigation solution through deployment of Solar Water Pumping Systems in member countries. To make the projects viable and affordable, the ISA aggregated demand for solar water pumps from various countries in an effort to substantially reduce the system costs. The ISA received a cumulative demand of approx. 2.72 lakhs of solar water pumping systems from 22 member countries. The discovered prices through the tender would serve as the benchmark or reference prices for these member countries for procuring pumps.

6.20 In the field of innovative financing instruments, the Solar Risk Mitigation Initiative, launched by World Bank and AfD in support of the ISA, aims at supporting the development of bankable solar programs in developing countries leveraging private sector investments. World Bank has also committed US$ 337 million Risk Mitigation Fund for 23 member countries in off grid sector in Africa in partnership with ISA. The European Investment Bank has started working on a 60 Million Euros grant project to create a concessional financial facility and risk mitigation Fund to promote off grid applications in Africa. The ISA secretariat is also developing a robust implementation plan for the Scaling Solar Mini-grids Programme. The Asian Development Bank is providing a US$ 2 Million Knowledge Support and Technical Assistance (KSTA) to Six South Asian Countries in partnership with the ISA. The KSTA will facilitate deployment of Solar Energy at scale via three pillars: Identification and preliminary development of Solar Project Pipeline; Identification of Financial Instruments and mobilization of low-cost finance; and Knowledge support & Capacity Building.

6.21 To strengthen ISA's partnership with the UN and its agencies and responding to the mandate received from the first Assembly of the ISA, the Secretariat has initiated follow-up actions for requesting a Permanent Observer Status of the ISA at the UN General Assembly and for negotiating a cooperation agreement with the UN for establishing institutional linkages between the ISA and the UN. ISA has also signed MoU with UNESCAP in May 2019 and with Sustainable Energy (SE4) All in June 2019, institutionalized solar awards in collaboration with Government of Haryana (Kalpana Chawla Solar Award), Government of Madhya Pradesh (Acharya Vinoba Bhave international award) and Government of Karnataka (Sri Visveswaraya Award) to strengthen the institution.

Coalition for Disaster Resilient Infrastructure

6.22 India launched the Coalition for Disaster Resilient Infrastructure (CDRI) on the sidelines of UN Secretary General's Climate Action Summit in September, 2019. This international partnership of national governments, UN agencies, multilateral development banks, private sector, and knowledge institutions will promote the resilience of new and existing infrastructure systems to climate and disaster risks, thereby ensuring sustainable development. Developed through consultations with more than 35 countries, CDRI envisions enabling measurable reduction in infrastructure losses from disasters, including extreme climate events. CDRI aims to enable the achievement of objectives of expanding universal access to basic services and enabling prosperity as enshrined in the SDGs, while also working at the intersection of the Sendai Framework for Disaster Risk Reduction and the Paris Climate Agreement.

6.23 CDRI will conduct country-specific and global activities and provide member countries technical support and capacity development, partnerships to facilitate and encourage investment in disaster resilient infrastructure systems. In its formative stage, CDRI will focus on developing resilience in ecological infrastructure, social infrastructure with a concerted emphasis on health and education, and economic infrastructure with special attention to transportation, telecommunications, energy, and water. Within 2-3 years, the coalition aims to have a 3-fold impact of achieving considerable changes in member countries' policy frameworks, future infrastructure investments and high reduction in economic losses from climate-related events and natural disasters across sectors.

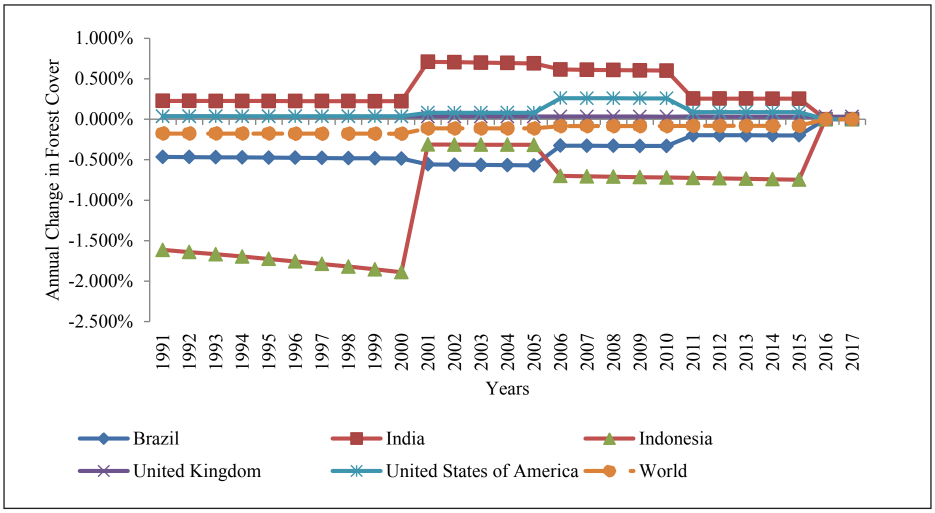
India and the UNCCD

6.24 India hosted 14th session of the Conference of Parties (COP 14) to the United Nations Convention to Combat Desertification (UNCCD) from 2-13 September, 2019. The commemoration of World Day to Combat Desertification 2019 envisaged the release of COP 14 Logo with the Slogan "Restore Land, Sustain Future". India, as President of COP to UNCCD stated that human actions have contributed to accelerating climate change, land degradation, and biodiversity loss and that, similarly, strong human intent, intelligence as well as technology will be needed to reverse the damage. Hon'ble Prime Minister of India while addressing the High-Level Segment on 9th September, 2019 announced India's support for, among other actions, for enhanced South-South Cooperation that aims to share India's experiences with cost-effective and sustainable land management strategies; and a "Global Water Action Agenda" to maximize synergies through holistic land and water management. As a party to the UNCCD, India has voluntarily committed to raise its ambition of the total area that would be restored from its land degradation status, from 21 million to 26 million hectares between now and 2030. His announcement, inter-alia, include, to set up a centre for excellence in India at the Indian Council of Forestry Research and Education; and has offered its resources in space and remote sensing technology to member countries who wish to manage their land degradation programmes through cutting-edge technology. COP 14 adopted the New Delhi Declaration: Investing in Land and Unlocking Opportunities. Through the Declaration, Ministers expressed support for new initiatives or coalitions aiming to improve human health and well-being, the health of ecosystems, and to advance peace and security. Attention was also drawn to the role of private sector in land restoration, including through promoting sustainable value chains.

INDIA AND ITS FORESTS

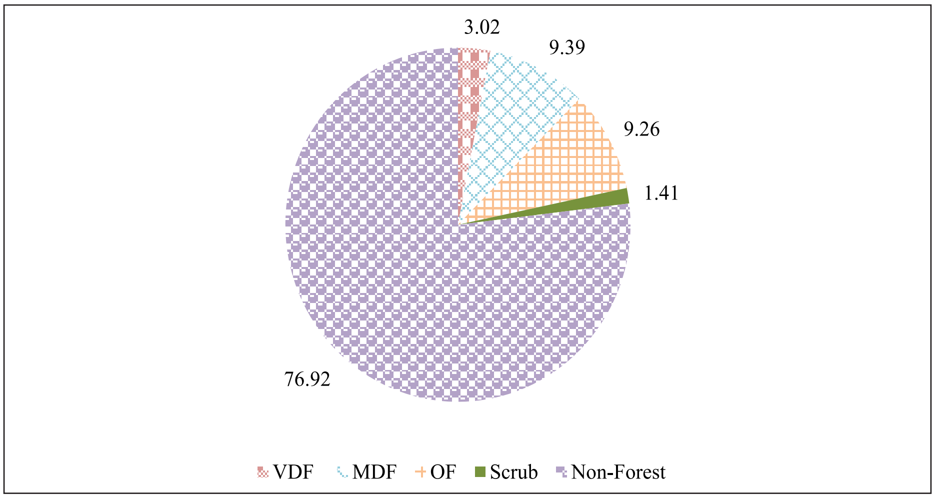
6.25 India is among a few countries in the world where, despite ongoing developmental efforts, forest and tree cover are increasing considerably. A comparison with some other emerging and advanced economies shows that India's growth in forest cover has been in positive territory (Figure 10). In terms of canopy density classes, area covered by Very Dense Forest (VDF) is 99,278 sq. km (3.02 per cent), Moderately Dense Forest (MDF) is 3,08,472 sq. km (9.39 per cent) and Open Forest (OF) is 3,04,499 sq. km (9.26 per cent) (Figure 11). The forest and tree cover have reached 80.73 million hectare which is 24.56 per cent of the geographical area of the country. The total forest cover of the country, as per current assessment 2019 is 7,12,249 sq. km which is 21.67 per cent of the total geographic area of the country. There has been an increase of 3,976 sq. km (0.56 per cent) of forest cover, 1,212 sq. km (1.29 per cent) of tree cover and 5,188 sq. km (0.65 per cent) of forest and tree cover put together, at the national level as compared to the previous assessment 2017.

Figure 10: Annual change in forest cover (per cent)



Source: World Development Indicators.

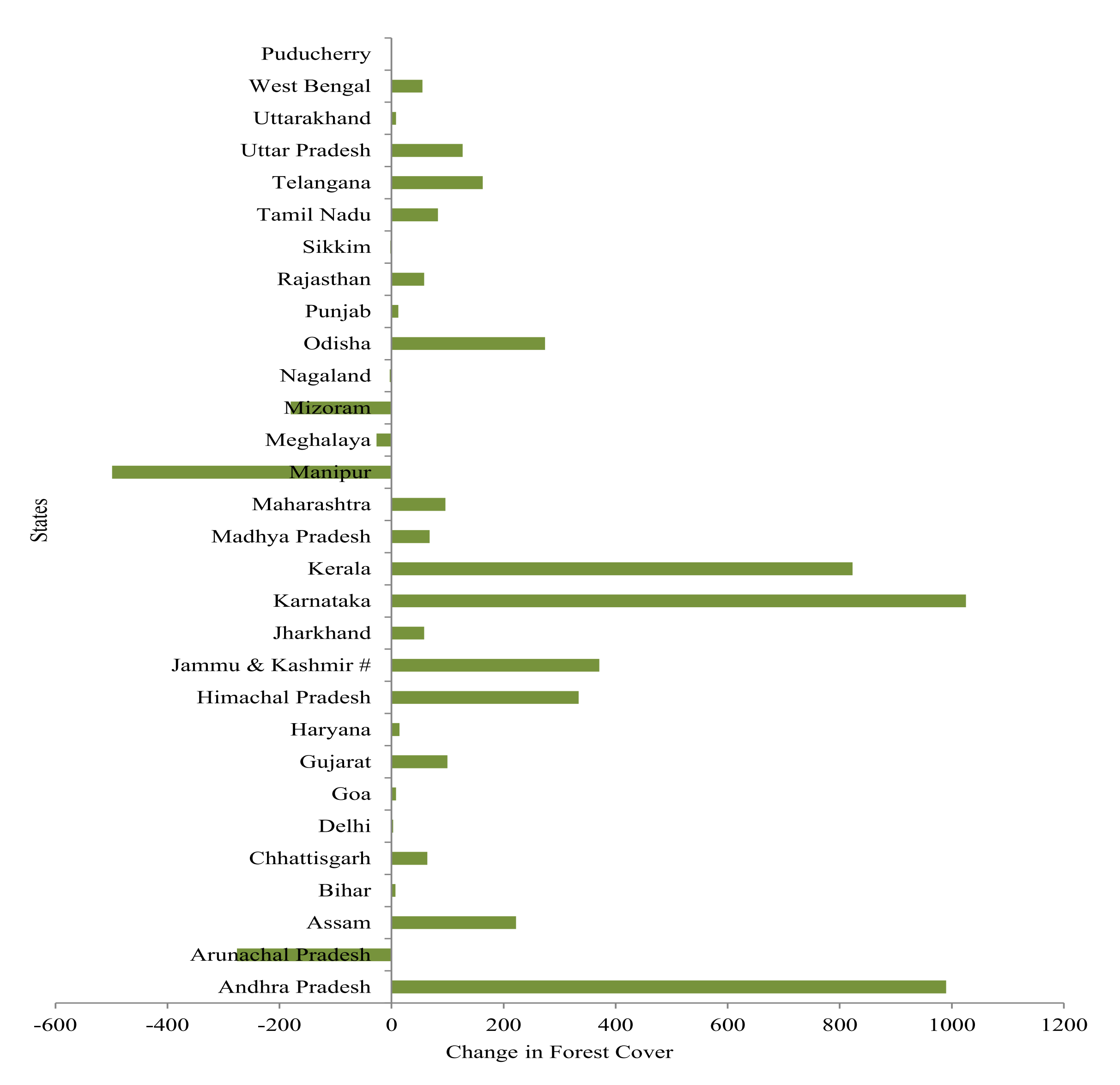
Figure 11: Forest Cover of India (2019) (per cent)



Source: India State of Forest Report 2019.

6.26 The States/UTs showing significant gain in forest cover are Karnataka (1,025 sq. km), Andhra Pradesh (990 sq. km), Kerala (823 sq. km) and Jammu & Kashmir (371 sq. km) whereas States showing loss in forest cover are Manipur, Meghalaya, Arunachal Pradesh and Mizoram (Figure 12).

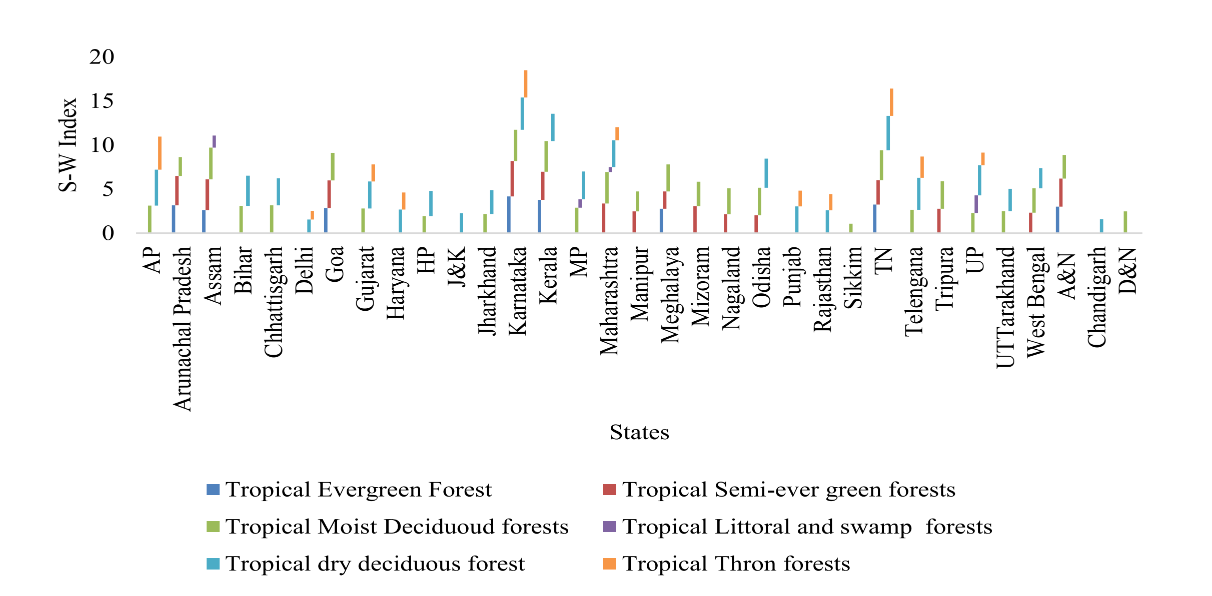
Figure 12: Change in the forest cover for India in 2019 as compared to 2017(area in sq. km)



Source: World Development Indicators.

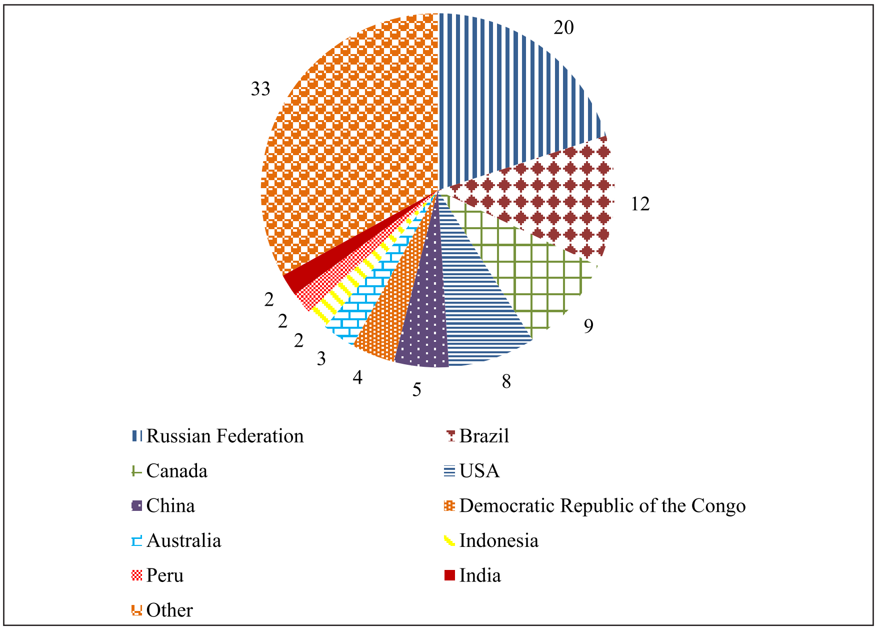
6.27 India is one of the 17 mega diverse countries in the world. This is evident in the Shannon-Weiner Index for Diversity which is used for measuring species richness and abundance. The index also compares diversity of species among various habitats. India State of the Forest Report 2019 assessed Shannon-Weiner Index for 16 bio-diverse areas. The index for six bio-diverse areas such as Tropical wet evergreen forest, Tropical semi-evergreen forest, Tropical moist deciduous forest, Littoral and Swamp forest, Tropical dry deciduous forest and Tropical Thorn forests are given in Figure 13. The Index shows that Tropical Evergreen forest is high in Karnataka followed by Kerala. Tropical moist deciduous forests cover is high in Arunachal Pradesh, Karnataka and Maharashtra. Tropical dry deciduous forest is high in Arunachal Pradesh and semi-evergreen forest are high in Karnataka. Tropical Littoral and swamp forests are high in UP and tropical thorn forests are seen widely in Andhra Pradesh.

Figure 13: Shannon-Weiner Index for Trees



Source: India State of Forest Report 2019.

Figure 14: Forest area for top ten countries (per cent)

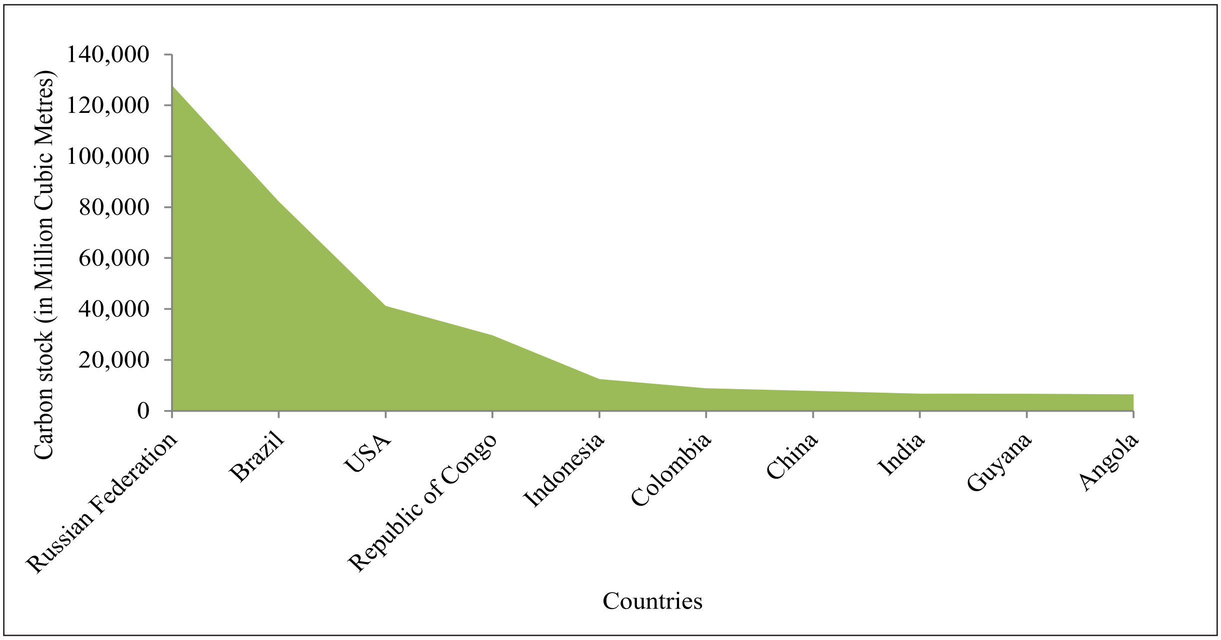


Source: India State of Forest Report 2019.

India accounts for 2 per cent of the total global forest area in 2015 (Figure 14) as per the Global Forest Resource Assessment (FRA) by FAO**.**

6.28 Forest plays a crucial role in adaptation and mitigation to climate change. Forests help to store more carbon than any other terrestrial ecosystem (India State of Forest Report, 2019). In the Forest Report, 2019, the total carbon stock in forest is estimated as 7,124.6 million tons. There is an increase of 42.6 million tons in the carbon stock of the country as compared to the last assessment 2017. The carbon stock of the top 10 countries is given at Figure 15.

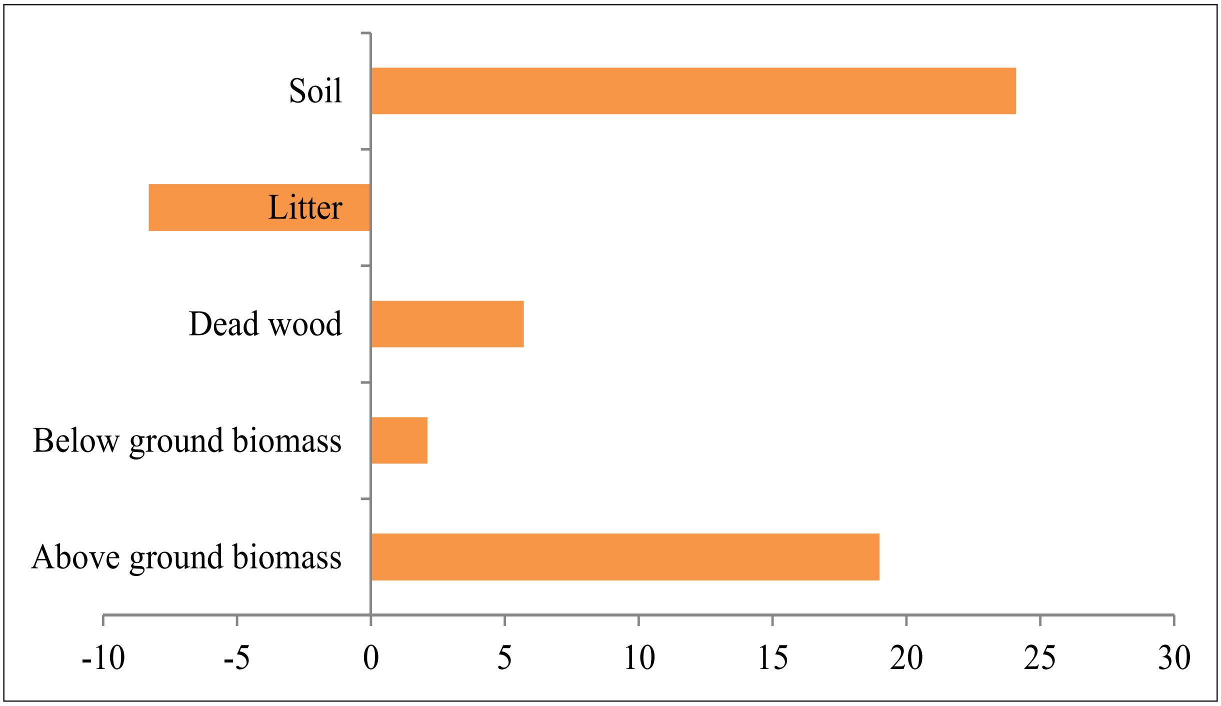
Figure 15: Carbon Stock (Million Cubic Metres)



Source: India State of Forest Report 2019.

6.29 Net change in carbon stock in India shows that net change is highest in soil organic carbon followed by Above Ground Biomass (AGB) and Dead wood. Litter carbon registered negative growth rate as compared to 2017 assessment. (Figure 16)

Figure 16: Net Change in Carbon Stock in forest in 2019 as compared to 2017 assessment (in per cent)



Source: India State of Forest Report 2019.

AGRICULTURAL RESIDUE BURNING – A MAJOR CONCERN

6.30 Burning of agricultural wastes in the fields is a practice that results in a number of environmental problems. India, being the second largest agro-based economy with year-round crop cultivation, generates a large amount of agricultural waste, including crop residues. Open burning of crop residues in the agricultural fields has become an environmental concern in India, particularly during paddy harvesting season. Varieties of surplus crop residues are burnt especially in northern States of Punjab, Haryana, UP, and Rajasthan depending on the agro-climatic region; however, about 50 per cent of all crop residue burnt in the country are residues of rice crop (TIFAC, 2018). Use of combine harvesters leaves the crop residues in field, and in order to clear the fields for the next crop in easiest way, farmers' burn the residues. About 178 million tonnes of surplus crop residues are available in the country (TIFAC, 2018). Burning of these residues leads to rise in pollutant levels and deterioration of air quality.

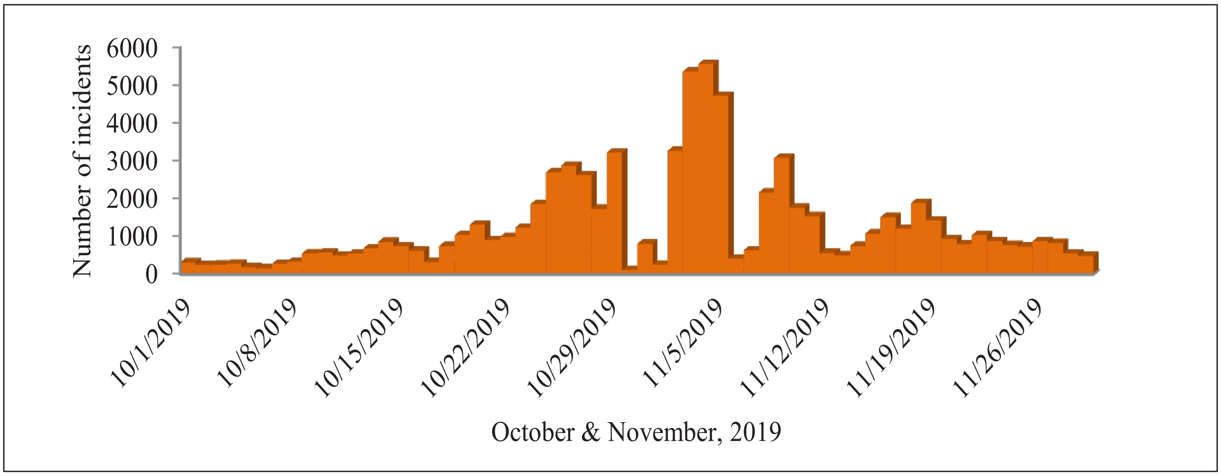
6.31 Various source apportionment studies at city scales have shown that agricultural burning contributes significantly in PM2.5 (particulate matter, diameter measurements of 2.5 micrometers or less) concentrations. Because huge volumes of residues are burnt in a very short duration (of few weeks), it leads to significant contributions in pollutant levels like PM2.5 (TERI, 2018, SAFAR 2019). The effect of stagnant atmospheric condition over Delhi during the harvest season of kharif crop has aggravated the deterioration of the ambient air quality in the region (Kanawade et al., 2019). Emission pollutants released due to burning depends on the type of crop residue e.g. PM2.5 emission (g/Kg) from the burning of different crop residues followed this order; Sugarcane (12.0), Maize (11.2), Cotton (9.8), Rice (9.3), wheat (8.5) (TERI, 2019). There are studies which have reported that open burning of crop residues has ill effects on soil organic carbon and soil fertility (Hesammi et al. 2014).

6.32 The stubble burning incidents in the month of October and November, 2019 are given in Figure 17 which shows the fire hot spot detected by NASA NPP-VIIRS satellite over North India during October-November, 2019. This satellite overpass India sometime around 1:30 local solar time (afternoon). As the figure shows, number of fire events are high from the mid of October till the first week of November, 2019. This has led to an increase in PM 2.5 and PM10 in Delhi in the month of October and November as compared to that of September, 2019 (Figure 18). In the month of September, the highest level of PM10 and PM2.5 was 134 and 80.34 respectively. In the month of October, the highest level of PM10 was 384 which is more than double as compared to the maximum PM10 of September, 2019. Similarly, the highest level of PM2.5 in the month of October was 306 which is higher than the September assessment. In the month of November, PM10 crossed 550 and PM2.5 crossed 510. PM10 and PM2.5 started falling in December, 2019 and the lowest level of PM10 and PM2.5 was 188 and 153 respectively.

6.33 Various studies suggest ways to address this issue, which include:

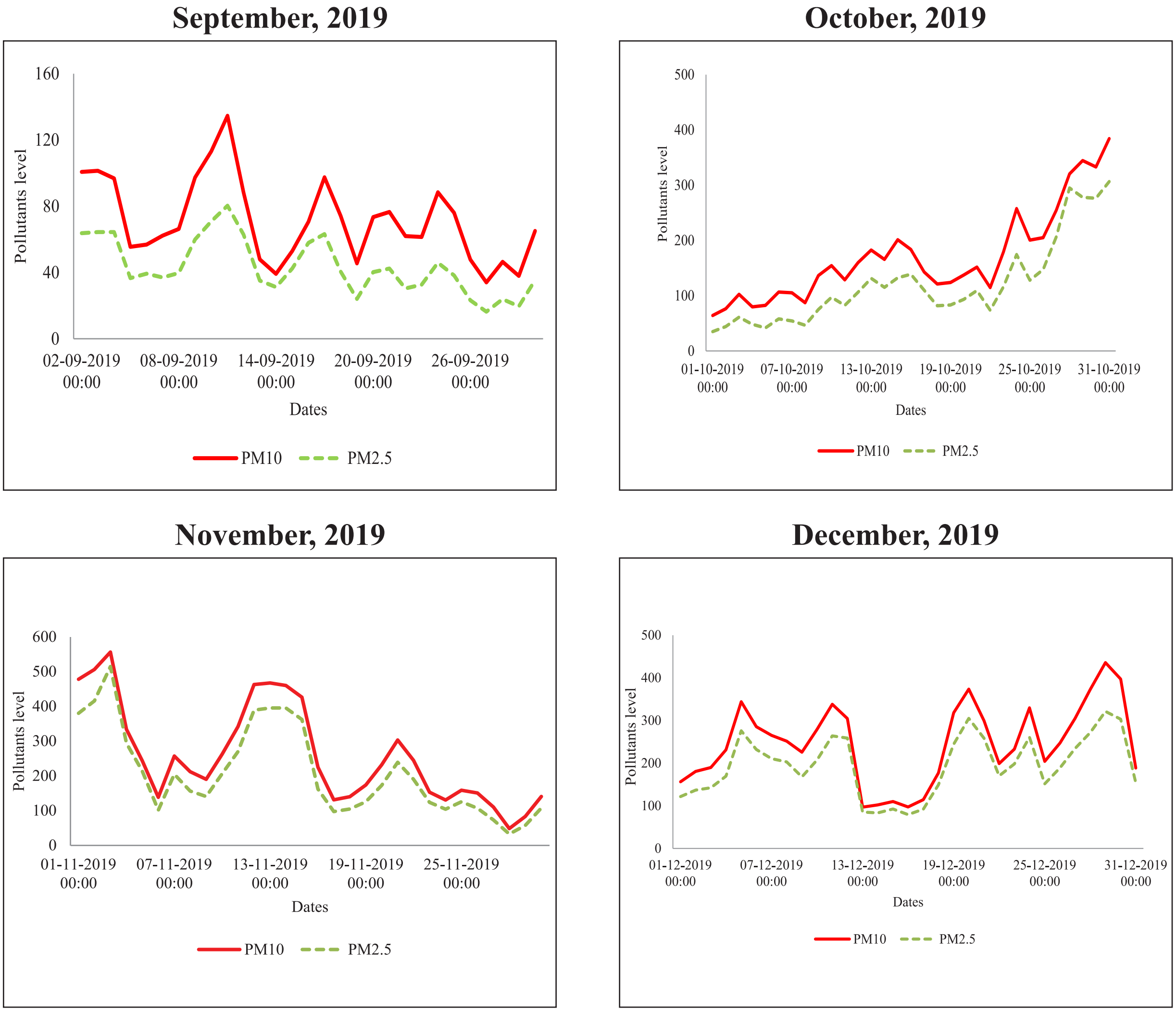
- Promote the practice of conservation of agriculture with low lignocellulosic crop residues like rice, wheat, maize etc. Agricultural machineries can help farmers to sow the seeds of the next crop without any problem associated

Figure 17: Stubble burning incidents during October- November, 2019



Source: NASA.

Figure 18: Ambient Air Quality of Delhi (ITO) in the month of September, October, November and December, 2019.



Source: Central Pollution Control Board.

with residues of the previous crops and also without affecting the crop productivity. This can improve or sustain the productivity of the crop land in the long term, as in-situ management. Apart from this, there are other options to utilize the crop residues ex situ from the crop land and some efforts have already been made for ex situ utilization of the crop residues.

- Create markets for crop residue-based briquettes and mandate nearby thermal power plants to undertake co-firing of crop residues with coal. It is also important to create infrastructure for setting up biomass depots for storage of bailed crop residues in areas that have shown high fire incidents or high production of a particular crop.
- Create special credit line for financing farm equipment and working capital for private sector participation.
- Promote use of crop residue-based biochar briquettes in local industries, brick kiln and hotel/dhaba as an alternate fuel.
- Pollution control as a parameter for deciding incentives and allocation to States/UTs.

6.34 National Green Tribunal in the order passed on 10.12.2015, directed and prohibited agricultural residue burning in any part of the NCT of Delhi, State of Rajasthan, State of Punjab, State of Uttar Pradesh and State of Haryana. Any person or body that is found violating the directions of National Green Tribunal is liable to pay Environmental Compensation which is collected by the concerned State Governments. In 2014, the Union government had released the National Policy for Management of Crop Residue, which NGT directed the States to implement. Burning crop residue is a crime under Section 188 of the IPC and under the Air and Pollution Control Act of 1981.

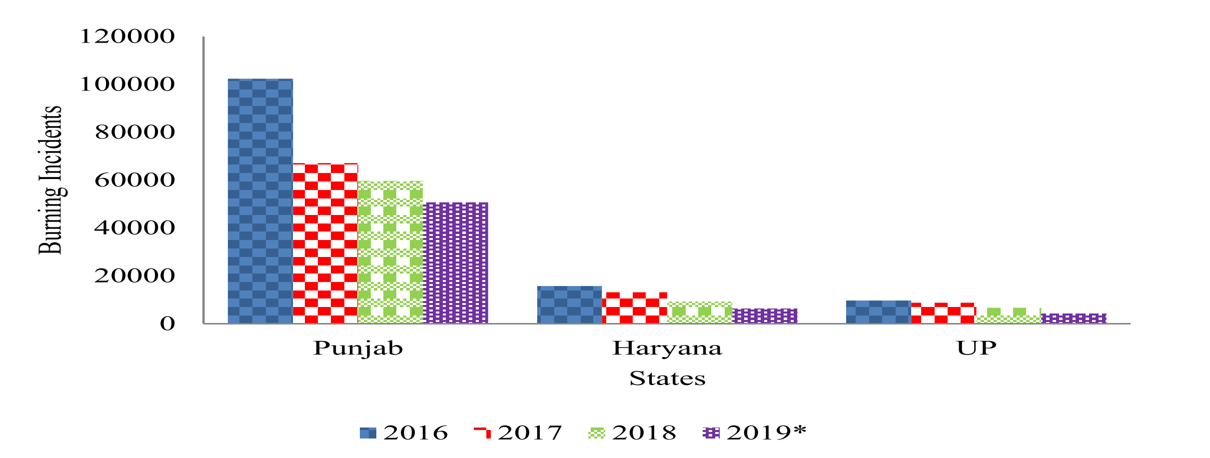
6.35 A new Central Sector Scheme on 'Promotion of Agricultural Mechanization for In-Situ Management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi' for the period from 2018-19 to 2019-20 is being implemented with the total outgo from the Central funds of ₹ 1151.80 crore (₹ 591.65 crore in 2018-19 and ₹ 560.15 crore in 2019-20). Under this Scheme, the agricultural machines and equipment for in-situ crop residue management such as Super Straw Management System for Combine Harvesters, Happy Seeders, Hydraulically Reversible MB Plough, Paddy Straw Chopper, Mulcher, Rotary Slasher, Zero Till Seed Drill and Rotavators are provided with 50 per cent subsidy to the individual farmers and 80 per cent subsidy for establishment of Custom Hiring Centres.

6.36 With various efforts, overall, the total number of burning events recorded significant reduction (Figure 19). However, continuation of this practice by farmers is reported every year starting winter and the serious concerns about its impact on air quality are raised.

Construction and Demolition (C&D) Waste: Its Impact

6.37 Unscientific disposal of C&D waste is one of the key contributors to the air and water pollution. Annual consumption of

Figure 19: Stubble burning incidents (in numbers)



Source: Report of the Committee on 'Promotion of Agricultural Mechanization for in-situ management of crop residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi', 2019, * Source: Consortium for Research on Agroecosystem Monitoring and Modelling from Space (CREAMS), ICAR.

construction materials (sand, soil & stone) in India is estimated to be 3,100 million tonnes. As per a study conducted by IIT Kanpur in 2015, C&D is a key contributor towards particulate matter emissions in Delhi. Therefore, investing in a circular economy driven approach in C&D waste management shall have large payoff in terms of avoiding health and environmental damage (Box 3).

Box 3: Public Private Partnership experience in C&D waste management: The Circular Economy approach in Delhi

In 2009, the Municipal Corporation of Delhi and IL&FS Environmental Infrastructure and Services Ltd. (IEISL) pioneered setting up a project to recycle 500 Tonnes Per Day (TPD) of C&D waste at Burari, Delhi (first of its kind facility in the country) to address the waste generated during Commonwealth Games preparations. Since then, the Burari facility along with two other C&D recycling facilities (under East Delhi Municipal Corporation and Delhi Metro Rail Corporation respectively) in Delhi are together recycling over 2,650 TPD C&D waste. The pioneering facility of Burari also helped in paving the way forward in formulating the C&D Waste Management Rules, 2016. All three Delhi plants have together processed over 5 million tonnes C&D waste.

Application of recycled C&D products: Standards for utilization of manufactured Coarse and Fine Aggregates have been prescribed by Bureau of Indian Standards (BIS). The recycled products have been included in the Delhi Schedule of Rates issued by CPWD. The civic bodies of Delhi and other Government Departments such as CPWD, DDA, DMRC, NBCC, PWD, Delhi State Industrial and Infrastructure Development Corporation Ltd., Irrigation & Flood Control (I&FC) are actively using the recycled C&D materials & products for ongoing civil works. Among the landmark projects where it has been used are the Supreme Court Annex building and MP flats, where over 2.3 million bricks were used. The material has also been used in the construction of a 100m wide road connecting NH-1 and Bakkarwala, Delhi.

Source: IL&FS Environment.

WAY FORWARD

6.38 India very well understands that action towards sustainability is an undeniable concern for humanity. India's National agenda mirrors the SDGs and its policies ensuring the balance among three pillars of development- economic, social and environmental. SDGs can be achieved through high standards of governance, monitoring and implementation at all levels. In the spirit of cooperative federalism, the States and Central Government are walking together to bring a change that India needs.

6.39 India has reduced emissions intensity of GDP by 21 per cent during 2005-2014 and is on track to achieve the goals announced. India had announced 175 GW targets for renewables by 2022. Further, Hon'ble Prime Minister in his address at the UN Climate Action Summit in September 2019 has stated that "India's renewable energy capacity would be increased to much beyond 175 GW and later till 450 GW". India has also taken up a voluntary target for restoration of 26 million of degraded land by 2030 during the 14th COP of UNCCD in Delhi. This is one of the largest programs in the world to ensure carbon sink in land resources. Internationally, CDRI which is a partnership to support countries through knowledge exchange and provide technical support on developing disaster and climate resilient infrastructure was launched.

6.40 India is among a few countries in the world where, despite ongoing developmental efforts, forest and tree cover is increasing considerably. The forest and tree cover have reached 80.73 million hectare which is 24.56 per cent of the geographical area of the country. In 2019, total carbon stock in forest is estimated as 7,124.6 million tons, There is an increase of 42.6 million tons in the carbon stock of the country as compared to 2017.

6.41 Agriculture crop residue burning and construction and demolition waste continues to be major concerns. Many countries are already using recycled C&D products in construction. In India, the Delhi PPP model in C&D waste management can be a beacon for the other States/ cities to replicate, enabling the Swachch Bharat Mission and supporting the SDGs.

6.42 Despite the continuous and definitive efforts of stakeholders from various walks of life, scarce financial resources continue to be the biggest constraint. Developed countries should honor their financial obligations and promises under the multilateral environmental agreements. The world that benefited from carbon emissions that made them developed, must repay. Technology development and transfer at affordable costs is also crucial for developing countries. Hence, adequate provision of finance, technology transfer, and capacity building to developing countries to facilitate the effective implementation of the SDGs and Paris Agreement on climate change are critical. India has and will continue to do its fair share of responsibilities while strongly calling for developed countries to take the lead.

CHAPTER AT A GLANCE

- India is moving forward on the path of SDG implementation through well-designed initiatives for inclusive development which is enshrined in its policies. India's achievement in the composite SDG index is commendable as the score has improved from 57 in 2018 to 60 in 2019.
- As per the SDG Index, Kerala, Himachal Pradesh, Tamil Nadu, Andhra Pradesh, Telangana, Karnataka, Goa, Sikkim, Chandigarh and Puducherry are the front runners.
- India is the second largest Emerging Green Bond Market after China.
- GCF's first replenishment (2020-2023) witnessed 28 countries pledging resources to replenish the Fund for an amount of US$ 9.7 billion, which is even quantitatively lower than the IRM period.
- At COP 25 of UNFCCC at Madrid, India reiterated its commitment to implement Paris Agreement in accordance with the principles of equity and common but differentiated responsibilities. COP 25 decision provides for balanced and integrated view of ambition that includes efforts for climate change mitigation, adaptation and means of implementation from developed country parties to developing country parties.
- ISA has taken up the role of an 'enabler' by institutionalizing 30 Fellowships from the Member countries; of a 'facilitator' by getting the lines of credit worth US$ 2 Billion from EXIM Bank of India and US$ 1.5 Billion from AfD, France; of an 'incubator' by nurturing initiatives like the Solar Risk Mitigation Initiative and of an 'accelerator' by developing tools to aggregate demand for 1000 MW solar and 270,000 solar water pumps.
- India launched the CDRI, focus on developing resilience in ecological, social and economic infrastructure.
- Government of India hosted COP 14 to UNCCD from 2-13 September, 2019. COP 14 adopted the Delhi Declaration: Investing in Land and Unlocking Opportunities.
- India is among a few countries in the world where, despite ongoing developmental efforts, forest and tree cover is increasing considerably. The forest and tree cover have reached 80.73 million hectare which is 24.56 per cent of the geographical area of the country.
- Burning of agricultural residues, leading to rise in pollutant levels and deterioration of air quality, is still a major concern though the total number of burning events recorded reduced due to various efforts taken.

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Agriculture and Food Management

07
CHAPTER

Agriculture and its allied sectors still remain an important sector because of its continued role in employment, income and most importantly in national food security. Its contribution to national income has gradually declined from 18.2 per cent in 2014-15 to 16.5 in 2019-20, reflecting the development process and the structural transformation taking place in the economy. The realisation of the objective of doubling farmer's income requires that the challenges of the sector such as access to credit, insurance coverage, irrigation facilities, etc. are addressed. There is also a need to address the issue of lower farm mechanisation in India which is only about 40 per cent as compared to about 60 per cent in China and around 75 per cent in Brazil. Given the fact that the livestock sector has grown at a compound annual growth rate of nearly 8 per cent over the last five years, it assumes an important role in income, employment and nutritional security. Though, the food processing sector is growing at an average annual growth rate of more than 5 per cent over the last six years ending 2017-18, more focussed attention to the sector is required due to its significant role in reducing post-harvest losses and creation of additional market for farm outputs. With the implementation of the National Food Security Act from July 2013, the food subsidy bill has increased from ₹ 113171.2 crore in 2014-15 to ₹ 171127.5 crore in 2018-19. India's food management should focus on rationalisation of food subsidy while addressing the challenges of food security, especially of the most vulnerable sections.

INTRODUCTION

7.1 Economic transformation of a developing country like India crucially depends on the performance of its agriculture and allied sector. This sector plays a significant role in rural livelihood, employment and national food security. It happens to be the largest source of livelihoods in India. Proportion of Indian population depending directly or indirectly on agriculture for employment opportunities is more than that of any other sector in India. As high as 70 percent of its rural households still depend primarily on agriculture for their livelihood, with 82 percent of farmers being small and marginal[1]. The objective of inclusiveness in development has to be realised through a focus on rural development where agriculture can deliver significantly. For Government's focus on doubling farmers' income, a number of measures are being undertaken ranging from income support schemes, crop insurance, water conservation, waste management techniques to agriculture marketing reforms.

1. FAO, India at a glance, http://www.fao.org/india/fao-in-india/india-at-a-glance/en/.

OVERVIEW OF AGRICULTURE

Share in Gross Value Added in Agriculture

7.2 The share of agriculture and allied sectors in the Gross Value Added (GVA) of the country at current prices has declined from 18.2 per cent in 2014-15 to 16.5 per cent in 2019-20 (Table 1). The share of agriculture and allied sectors in the total GVA of the country has been declining on account of relatively higher growth performance of non-agricultural sectors. This is a natural outcome of development process that leads to faster growth of non-agricultural sectors owing to structural changes taking place in the economy.

Table 1: Share of Agriculture and Allied Sectors in total GVA of the Country at Current Prices

Items	Year					
	2014-15	2015-16*	2016-17#	2017-18@	2018-19**	2019-20$
GVA of agriculture and allied sectors (₹ in Crore)	2093612	2227533	2496358	2670147	2775852	3,047,187
Share of GVA of agriculture & allied sectors in GVA of total economy (per cent)	18.2	17.7	17.9	17.2	16.1	16.5
Share of crops	11.2	10.6	10.6	10.0	-	-
Share of livestock	4.4	4.6	4.8	4.9	-	-
Share of forestry & logging	1.5	1.5	1.4	1.2	-	-
Share of fishing	1.0	1.1	1.1	1.1	-	-

Source: Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation (MoSPI)
Note: **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.
@ As per the First Revised Estimates of National Income, Consumption Expenditure, Saving and Capital Formation for 2017-18 released on 31st January, 2019. # Second Revised Estimate. * Third Revised Estimate
$ First Advance Estimate 2019-20.

Growth in Agriculture & Allied Sectors

7.3 The growth of GVA of agriculture and allied sectors has witnessed a fluctuating trend. GVA at constant (2011-12) prices for 2019-20 from 'Agriculture, Forestry and Fishing' sector is estimated to grow by 2.8 per cent as compared to growth of 2.9 per cent in 2018-19 (Table 2).

Table 2: Agriculture sector – Key indicators of Growth at constant (2011-12) prices (in per cent)

Year	Growth of GVA of total economy	Growth of GVA of agriculture & allied sectors
2013-14	6.1	5.6
2014-15	7.2	-0.2
2015-16*	8.0	0.6
2016-17#	7.9	6.3
2017-18@	6.9	5.0

2018-19**	6.6	2.9
2019-20$	4.9	2.8

Source: CSO, MoSPI

Note: **As per the press note on Provisional Estimates of Annual National Income 2018-19 and Quarterly Estimates of GDP for Q4 of 2018-19 released by CSO on 31st May 2019.

@ As per the First Revised Estimates of National Income, Consumption Expenditure, Saving and Capital Formation for 2017-18 released on 31st January, 2019. # Second Revised Estimate. * Third Revised Estimate.

$ First Advance Estimate 2019-20.

Gross Capital Formation (GCF) in Agriculture

7.4 The GCF in agriculture and allied sectors relative to GVA in this sector has been showing a fluctuating trend from 16.5 per cent in 2012-13 to 15.2 per cent in 2017-18 (Table 3).

Table 3: Gross Capital Formation (GCF) in Agriculture and Allied Sectors relative to Gross Value Added (GVA) at constant (2011-12) prices

Year	GCF of agriculture & allied sector (₹ in Crore)	GVA of agriculture & allied sector (₹ in Crore)	GCF of agriculture & allied sector as percentage of GVA (in percentage)
2012-13	2,51,094	15,24,288	16.5
2013-14	2,84,424	16,09,198	17.7
2014-15	2,72,663	16,05,715	17.0
2015-16*	2,37,648	16,16,146	14.7
2016-17#	2,67,836	17,17,467	15.6
2017-18@	2,73,755	18,03,039	15.2

Source: CSO, MoSPI

Note: @As per the First Revised Estimates of National Income, Consumption Expenditure, Saving and Capital Formation for 2017-18 released on 31st January, 2019.

Second Revised Estimate * Third Revised Estimate

MINIMUM SUPPORT PRICES

7.5 With a view to encourage higher investment and production, the Government announces Minimum Support Prices (MSPs) for twenty-two mandated crops; and Fair and Remunerative Price for Sugarcane. The Union Budget, 2018-19 had announced pre-determined principle to keep MSPs at levels of one and half times of the cost of production. Accordingly, Government had increased MSPs for all mandated kharif, rabi and other commercial crops with a return of 1.5 times over all India weighted average cost of production for the season 2018-19. Government has recently increased the MSPs for all mandated kharif and rabi crops for 2019-20 season in line with this principle. Further, direct income/investment support schemes have been introduced (Box 1).

Box 1: Income/Investment Support Schemes

Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)

PM-KISAN is a Central Sector scheme with 100 per cent funding from Government of India. The Scheme is effective from 1.12.2018 and covers all the farmers (subject to certain exclusion criteria). Under the Scheme an income support of ₹ 6000 per year is provided to all farmer families across the country in three equal installments of ₹ 2000 at an interval of every four months.

Krushak Assistance for Livelihood and Income Augmentation (KALIA) Scheme of Odisha
This scheme was launched by Government of Odisha in 2018-19 Rabi season onwards, to accelerate agricultural prosperity and elimination of poverty in the State. Benefits provisioned under different components are: financial support of ₹ 25,000 per farm family over five seasons will be provided to small and marginal farmers so that farmers can purchase inputs like seeds, fertilizers, pesticides, labour & other investments. For landless agriculture households, financial assistance of ₹ 12500 will be provided to each landless agricultural household for agricultural allied activities such as small goat rearing unit, mini-layer unit, duckery units, fishery kits for fisherman, mushroom cultivation and bee-keeping, etc. Vulnerable cultivators/landless agricultural labourers will get financial assistance of ₹10,000 per family per year to enable them to take care of their sustenance. The scheme also has life and accident insurance covers for the farmers at very nominal premiums.

Mukhya Mantri Krishi Ashirwad Yojana of Jharkhand
Under the scheme, all the small and marginal farmers of the State, who have arable land up to a maximum of 5 acres, will be given a grant-in-aid at the rate of ₹ 5000 / - per acre per year, which will help them reduce their dependence on loans. This amount would be given in two installments through Direct Benefit Transfer to the beneficiary's bank account. This is in addition to PM Kisan Nidhi Yojana under which each small & marginal farmer's family having combined landholding/ownership of up to two hectares is paid ₹ 6,000 per year.

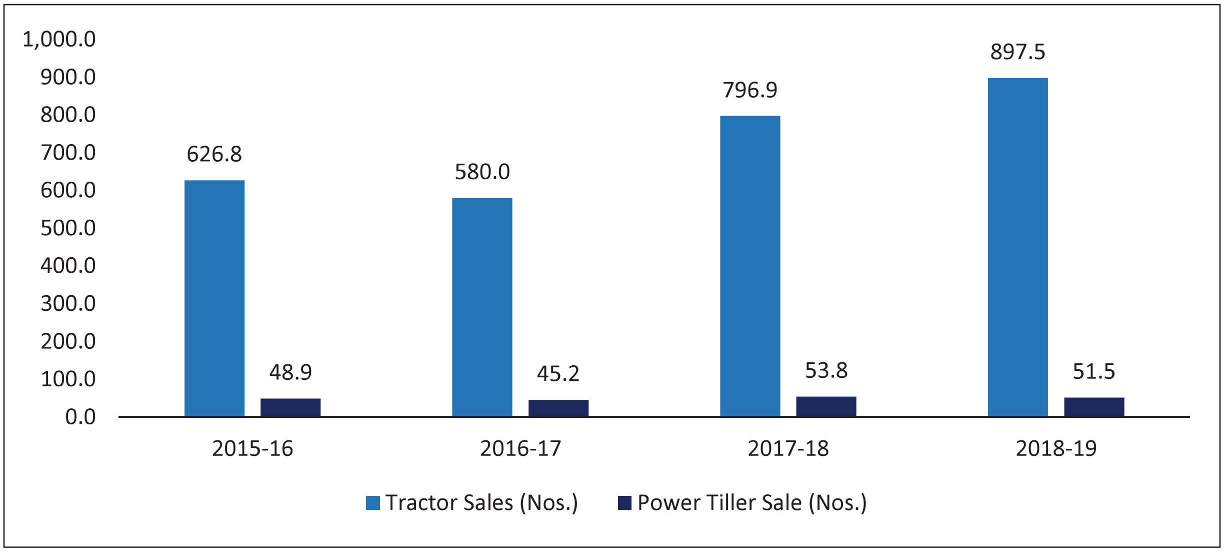
Rythu Bandhu of Telangana
Government of Telangana has come up with a new concept of providing Investment Support at the rate of ₹ 4,000 per acre per season to all the farmers (Pattadars) in the State towards purchase of various inputs like seeds, fertilizers etc., as initial investment before the crop season. The scheme is being implemented from Kharif 2018 onwards. A financial outlay of ₹ 12,000 crore has been allocated during 2018-19. During Kharif 2018-19, 51.50 lakh farmers were benefitted to the tune of ₹ 5,260.94 crore and it was disbursed by way of cheques. During Rabi 2018-19, the Government has taken a decision to transfer the amount through treasury e-Kuber to deposit money into the accounts of the farmers. An amount of ₹ 5,244.26 crore was transferred into the accounts of 49.03 Lakh farmers. During 2019-20, Government of Telangana has enhanced the amount under Investment Support Scheme from ₹ 4,000 to ₹ 5,000 per acre per season.

MECHANIZATION IN AGRICULTURE

7.6 Agriculture mechanization is an essential input to modern agriculture to increase the productivity by making judicious use of other inputs and natural resources etc., besides reducing the human drudgery and cost of cultivation. With the shrinking land and water resources and labour force, the onus rests on mechanization of production and post harvesting operations. There is a linear relationship between availability of farm power and farm yield and Government has decided to enhance farm power availability from 2.02 kW per ha (2016-17) to 4.0 kW per ha by the end of 2030 to cope up with increasing demand for food grains.

7.7 Indian tractor industry is the largest in the world, accounting for one-third of the total global production. During the past four decades, the tractor industry grew at a compounded annual growth rate (CAGR) of 10 per cent. Farm mechanization market in India has been growing at a CAGR of 7.53 per cent during 2016-2018 due to thrust given by various government policies (Figure 1).

Figure 1: Year Wise Sale of Tractors and Power Tillers (in '000).



Source: Department of Agriculture, Cooperation & Farmers Welfare (DAC & FW).

7.8 Recognizing the need for inclusive growth of farm mechanization sector in the country, a Sub Mission on Agricultural Mechanization was launched in 2014-15. Under the scheme, assistance is provided to State governments to impart training and demonstration of agricultural machinery, provides assistance to farmers for procurement of various agricultural machineries and equipment and for setting up of Custom Hiring Centre. Under the scheme, total funds allocated during 2014-15 to 2018-19 was ₹ 3377.07 crore and during 2018-19 it was ₹ 1027.46 crore. During the last four years, Government has given massive thrust to promoting latest agricultural machineries, like laser leveller, happy seeder technology, combine harvesters and small equipment like power weeders. Under new Central Sector Scheme on 'Promotion of Agricultural Mechanization for In-Situ Management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi' (2018-19 to 2019-20), the agricultural machines and equipment for in-situ crop residue management are provided with 50 per cent subsidy to the individual farmers and 80 per cent subsidy for establishment of Custom Hiring Centres.

Crop-wise Mechanisation Level in Agriculture

7.9 Effective use of agricultural machinery helps to increase productivity and production of farm output along with timely farm operations for quick rotation of crops on the same land. By raising a second crop or multi-crops from the same land, there is improvement in the cropping intensity and making agricultural land commercially more viable (NABARD, 2018). However, overall farm mechanization in India has rather been lower (40-45 per cent) compared to other countries such as USA (95 per cent), Brazil (75 per cent) and China (57 per cent). A significant share of India's tractor production is also exported. India, on average, exports 79,000 tractors annually; the primary markets being the African countries and ASEAN countries, having similar soil and agro climatic conditions. There are disparities visible in intra-national levels of mechanization as well where northern India has higher levels of mechanization compared to other regions. A study by NABARD in 2018 on farm mechanization has identified that economies of operation due to small holdings, access to power, credit cost and procedures, uninsured markets and low awareness being some of the important reasons for lower rate of agricultural mechanization in India. The mechanization levels for major crops in India in 2018-19 is presented in Table 4.

MICRO IRRIGATION

7.10 Focus on water use efficiency at farm level through precision or micro Irrigation (drip and sprinkler irrigation) has become a farm imperative to ensure a sustainable agricultural practice. Considering this, the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) was launched on 1st July, 2015 with the motto of 'Har Khet Ko Paani' for providing end-to end solutions in irrigation supply chain, viz. water sources, distribution network and farm level applications. Per Drop More Crop component of PMKSY (PMKSY-PDMC) is operational from 2015-16 in the country focussing on water use efficiency at farm level. Performance of micro irrigation component in terms of area is presented in Figure 2.

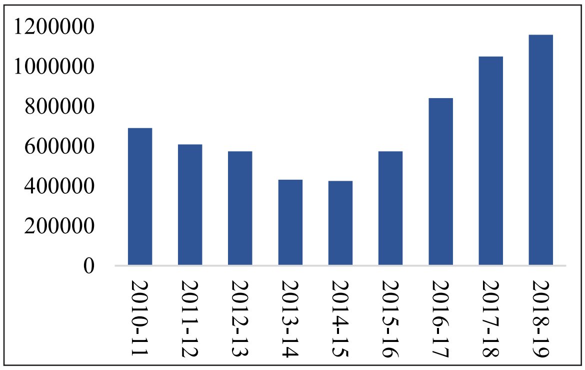
Table 4: Mechanization Levels for Major Crops in India in 2018-19

Major crops	Mechanization Levels for Field Operations (in per cent)			
	Seed bed preparation	Sowing/ planting/ transplanting	Weeding and interculture and plant protection	Harvesting and threshing
Rice	70	20	30	60
Wheat	70	60	50	70
Maize	60	40	30	30
Sorghum and millets	50	30	15	10
Pulses	50	40	20	25
Oilseed	50	40	20	25
Cotton	50	30	25	0
Sugarcane	55	10	20	10

Source: Department of Agricultural Research & Education (DARE).

7.11 Micro Irrigation, which includes drip and sprinkler irrigation, is a proven technology which has gained immense popularity amongst the farmers. Strengths of this technology include - efficient deployment of inputs such as water, electricity, fertilizers, labour, increase in crop productivity, better quality of produce leading to higher realization of sale price resulting in increased income of farmer. With this technology, additional area can be irrigated with the same amount

Figure 2: Year-wise Area Covered under Micro Irrigation through Centrally Sponsored Scheme (in Ha)



Source: DAC&FW

of water compared to conventional method of irrigation. In addition, water deficient, cultivable waste land and undulating land areas can be brought under cultivation due to ease of irrigation. There is also good scope for using this technology in closely spaced crops like rice, wheat, onion, potato etc. In a nutshell, following benefits have accrued to the farmers:

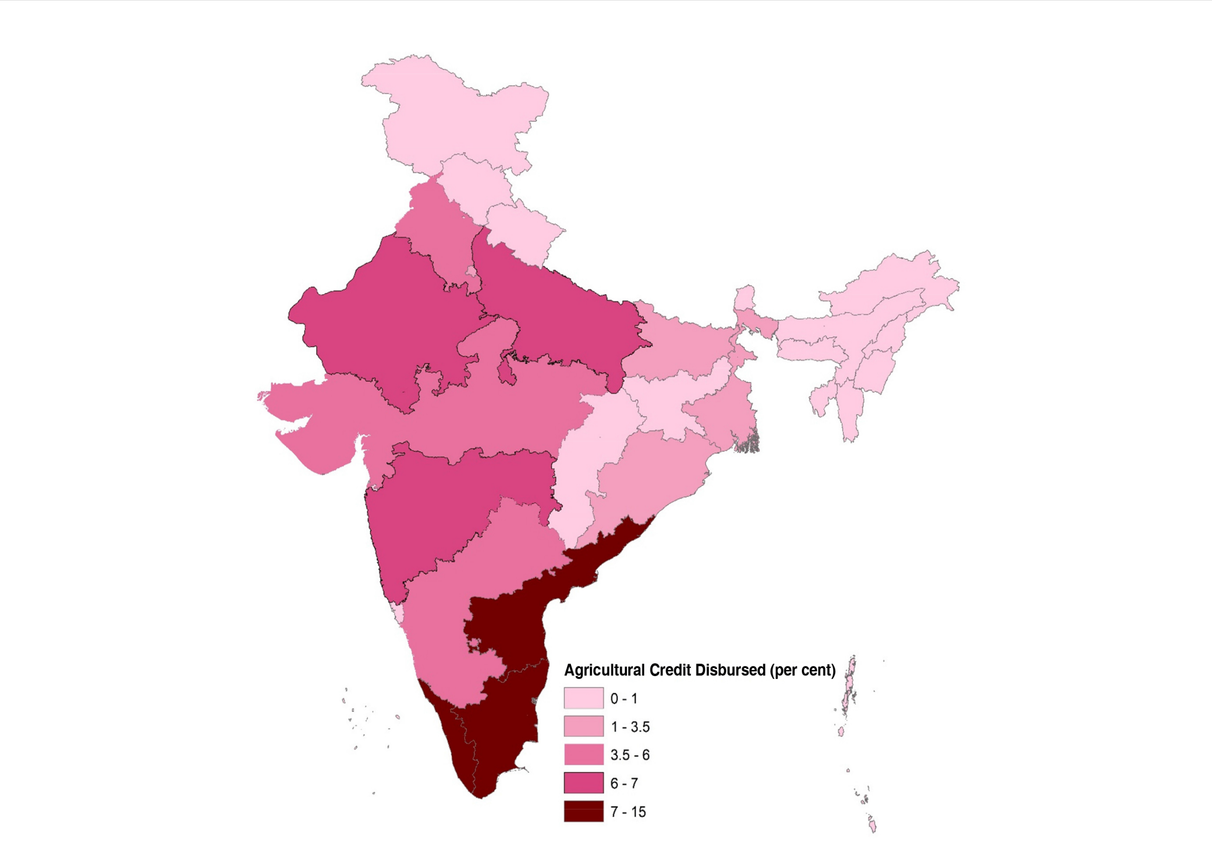
- Saving of irrigation water from 20 to 48 per cent;
- Energy saving from 10 to 17 per cent;
- Saving of labour cost from 30 to 40 per cent;
- Saving of fertilizers from 11 to 19 per cent;
- Increase in crop production from 20 to 38 per cent;
- Increase in net annual income of the farmer beneficiaries.

7.12 A dedicated Micro Irrigation Fund (MIF) created with NABARD has been approved with an initial corpus of ₹ 5000 crore facilitating the States in mobilizing the resources for expanding coverage of Micro Irrigation envisaged under PMKSY-PDMC and also in bringing additional coverage through special and innovative initiatives by State Governments.

AGRICULTURAL CREDIT

7.13 The agricultural credit flow target for 2019-20 has been fixed at ₹ 13,50,000 crore, and till 30th November, 2019, a sum of ₹ 9,07,843.37 crore has been disbursed. The regional distribution of agricultural credit in India is highly skewed (Figure 3). It is observed that credit is low in North Eastern, Hilly and Eastern States. The share of North Eastern States has been less than one percent in total agricultural credit disbursement.

Figure 3: Distribution of Agricultural Credit in India in 2018-19



Source: Based on the data from DAC&FW

MITIGATING RISKS IN AGRICULTURE: CROP INSURANCE

7.14 Pradhan Mantri Fasal Bima Yojana (PMFBY) has been under implementation since kharif 2016 season in the country. It provides comprehensive coverage of risks from pre-sowing to post harvest against natural non-preventable risks. The insurance premium is paid to insurance companies on actuarial/on bidding basis, with very low share contributed by the farmers across the country (2 per cent and 1.5 per cent of the sum insured for food and oilseed crops for kharif and rabi seasons, respectively) and 5 per cent for commercial/horticultural crops and balance premium to be paid upfront and shared equally between Central and State Governments. It also provides better protection for the farmers in terms of sum insured which has been made equal to the scale of finance.

7.15 PMFBY envisages increase in coverage from the existing 23 per cent to 50 per cent of Gross Cropped Area (GCA) in the country. Target for 2016-17 was 30 per cent of GCA. The targets could not be covered due to the announcement of Debt Waiver Scheme in two big States namely, Maharashtra and Uttar Pradesh during 2017-18 and in Madhya Pradesh and Rajasthan in 2018-19. Direct Benefit Transfer (DBT) was introduced by the Government in April 2017 to help farmers receive claims directly in their bank accounts, which made registration through Aadhar number mandatory. This was a deliberate step by the Government to weed out ghost/duplicate beneficiaries and help genuine farmers through Aadhar based verification. Substantial progress with more ground coverage compared to erstwhile crop insurance schemes has been made under PMFBY. The Government has also created a National Crop Insurance Portal that provides interface among all stakeholders (Box 2).

Box 2: National Crop Insurance Portal (NCIP)

National Crop Insurance Portal:(https://pmfby.gov.in) is a web-based integrated IT platform that provides interface among all stakeholders to access/enter data relating to insured farmers under PMFBY and Restructured Weather Based Crop Insurance Scheme (RWBCIS). For this purpose, all stakeholders, viz., States, banks, insurance companies (ICs), farmers (for direct online enrollment) and the Common Service Centre (CSC) involved in the enrolment process have been provided an interface on the NCIP through which the enrolment process is executed. In this manner the data on enrolment for non-loanee farmers through different sources is completely available on the NCIP.

Crop insurance portal envisages creation of demand for Government share of premium subsidy from the portal itself, on the basis of which funds would be released to concerned ICs and as a next step the portal would facilitate that the admissible claims could be settled directly to farmers bank accounts by respective ICs through portal to avoid delay in credit of claim amount to farmers account and for proper monitoring.

7.16 During 2018-19 season, 564.50 lakh farmer applications (tentatively) covering an area of 517.70 lakh ha have been insured for a sum of about ₹ 2,35,642 crore. By October 2019, under PMFBY, total claims of ₹ 17,756 crore have been approved and ₹ 16,763 crore have been paid. Loanee and non-loanee coverage stood at 354 lakh and 210.40 lakh respectively. Substantial progress with more ground coverage compared to erstwhile crop insurance schemes has been made under PMFBY. Though the scheme is voluntary for the States, 26 States/UTs implemented the scheme in 2017-18. In 2018-19, 23 States/ UTs implemented the scheme.

7.17 On the basis of the experience of implementation of PMFBY and with a view to ensuring better transparency, accountability and timely payment of claims to the farmers, Government has comprehensively revised the operational guidelines of the scheme which have become effective from 01.10.2018 and, inter-alia, include the following:

i) Provision of 12 per cent interest rate per annum to be paid by the Insurance Company to farmers for delay in settlement of claims beyond 10 days of prescribed cut-off date for payment of claims;

ii) State Governments have to pay 12 per cent interest rate for delay in release of State share of subsidy beyond three months of prescribed cut-off date/ submission of requisition by Insurance Companies;

iii) Increased time for change of crop name for insurance - upto 2 working days prior to cut-off date for enrolment instead of earlier provision of one month before cut-off date;

iv) Time for intimation of loss due to localized calamities and post-harvest losses has been increased from 48 hours to 72 hours;

v) Detailed Standard Operating Procedures (SOPs) for settlement of claims under localized calamities, post-harvest losses, mid-season adversity and prevented sowing and redressal of disputes regarding yield data including add on features;

vi) Inclusion of perennial crops and add on coverage for damage by wild animals on pilot basis.

AGRICULTURAL TRADE

7.18 India occupies a leading position in global trade of agricultural products. However, its total agricultural export basket accounts for a little over 2.15 per cent of the world agricultural trade. The major export destinations are USA, Saudi Arabia, Iran, Nepal and Bangladesh. What is noteworthy is that since the economic reforms began in 1991, India has remained consistently a net exporter of agri-products, touching ₹ 2.7 lakh crore exports and imports at ₹ 1.37 lakh crore in 2018-19. The export of major agri-allied items for the last 3 years are given in Table 5.

Table 5: India's Export of Principal Agri and allied Commodities (Value in ₹ '000' Crore & Quantity in Lakh Metric Tonnes)

Commodities	2016-17		2017-18		2018-19	
	Value	Qty	Value	Qty	Value	Qty
Rice -Basmati	21.51	39.85	26.87	40.57	32.80	44.15
Spices	19.11	10.14	20.08	10.96	23.22	10.92
Rice (Other than Basmati)	16.93	67.71	23.44	88.19	21.19	76.00
Cotton Raw Including Waste	10.91	9.96	12.20	11.01	14.63	11.43
Oil Meals	5.41	26.32	7.04	35.71	10.58	44.86
Sugar	8.66	25.44	5.23	17.58	9.52	39.88
Castor Oil	4.52	5.99	6.73	6.97	6.17	6.19
Tea	4.91	2.43	5.40	2.73	5.83	2.70
Coffee	5.65	2.89	6.25	3.18	5.72	2.83
Fresh Vegetables	5.79	34.04	5.30	24.48	5.67	29.33
Total Agri and allied exports	227.6		251.56		274.57	

Source: DAC&FW

7.19 A number of trade policy measures have been undertaken by the Government over the past few years to protect the domestic farmers in the country, which include:

i) Import duty has been raised from 0 to 10 per cent on tur, 0 per cent to 50 per cent on peas, 0 per cent to 60 per cent on gram (chana) and 0 per cent to 30 per cent on lentils.

ii) Quantitative restrictions of 4 lakh tonnes per year has also been imposed on import of tur and 1.5 lakh tonnes on import of peas, urad & moong per year.

iii) Export of all varieties of pulses have been allowed with effect from 22.11.2017 to ensure the greater choice in marketing as well as the better remuneration for farmers' produces.

iv) Restriction on export of all types of edible oils (except mustard oil) has been lifted on 06.04.2018 to encourage export of indigenous edible oils and their industries.

v) Government has imposed Minimum Import Price (MIP) on pepper and arecanut. MIP of ₹ 500/kg was fixed on pepper imports on 6th Dec, 2017 and MIP of ₹ 251/kg was fixed on arecanut on 17th Jan, 2017 to protect the domestic growers and their livelihood from cheap import of the commodity as well as to save the domestic industries of pepper and arecanut.

vi) Under Foreign Trade Policy 2015-20, rates of reward under merchandise exports from India (MEIS) were enhanced on export of various agriculture items on 1st November, 2017 to offset high transit cost.

vii) Government has recently initiated a comprehensive "Agriculture Export Policy" aimed at doubling the agricultural exports and integrating Indian farmers and agricultural products with the global value chains.

viii) Created agri cells in many Indian embassies abroad to take care of agricultural trade related issues.

AGRICULTURAL RESEARCH AND EDUCATION

7.20 The Department of Agricultural Research & Education (DARE) provides the necessary government linkages for the Indian Council of Agricultural Research (ICAR), the premier research organisation for co-ordinating, guiding and managing research and education in agriculture, including horticulture, fisheries and animal sciences.

High Yielding Varieties and Breeder Seeds

7.21 The hallmark of ICAR is new crop varieties having specific traits that improve yield and nutritional quality along with tolerance/resistance to various biotic and abiotic stresses besides matching crop production and protection technologies for target agro-ecologies. A total of 220 new varieties/hybrids of field crops and 93 horticultural crops were notified/released during 2019-20. These are tolerant to various biotic and abiotic stresses with enhanced quality and quantity. The Council developed 18 biofortified varieties of crops that are rich in iron, zinc, protein and glucoisnolates and Kunitz Trypsin Inhibitor (KTI) free to ensure nutritional security through the natural food system. During 2018-19, a total of 117772 quintals of breeder seeds of various field crops were produced. Besides, 239 lakh planting material and 1.9 lakh tissue culture plantlets were also produced for vegetative propagated field crops, fruits, vegetables and plantation crops. During 2018-19, six varieties of tolerant to biotic and abiotic stresses and of improved quality have been developed through marker assisted selection.

Research & Education in Livestock and Fisheries Development

7.22 The ICAR also works for the integrated development of all the subsectors as all these are integrated at the farmers' farm. The first gazette notification of 184 registered indigenous breeds was done in 2019. This will provide legal support for Intellectual Property Rights (IPRs) of the registered breed/new varieties released and conservation of threatened breed and indigenous breeds. It will enable placing the genetic information with legal tag in the public domain and help in protection of these bioresources from bio-piracy and other IPR issues. During 2018-19, to increase higher availability of animal and fish products, 15 new indigenous populations of livestock and poultry as breeds were registered. The country possesses 535.78 million livestock population, which includes 192.49 million cattle, 109.85 million buffalo, 74.26 million sheep, 148.88 million goat and 9.06 million pig; and 851.81 million poultry population (Livestock Census, 2019). This vast and varied population of animals is mainly indigenous, while a sizeable population is crossbreds between exotic germplasm and native stock. A very few animals belonging to exotic breeds are maintained mostly in organized farms. In order to make the country animal disease free, the diagnostic kits against Japanese Encephalitis (JE) and Bluetongue (BT) diseases and Subviral Particle based Infectious Bursal Disease Vaccine were developed.

Transferring Technologies from Lab to Farmer's Field

7.23 The 716 Krishi Vigyan Kendras (KVKs) of the country have been linked with 3.37 lakh common service centers to enhance the reach of the KVKs amongst the farmers and provide the demand driven services and information. To take the technologies of the labs to farmers' fields, KVKs conducted 42361 on-farm trials and 2.71 lakh Frontline Demonstrations. These outreach programmes were further strengthened with the production of 1.77 lakh quintals quality seeds of field crops, 365.53 lakh planting materials of horticultural crops and 154.91 lakh livestock strains and finger lings which were made available to farmers on a nominal cost. About 139.67 lakh farmers participated in various extension activities and 15.91 lakh farmers and 1.21 lakh extension personnel were trained to work as peers for further propagation the promising technologies. To harness the benefits of digital development a digital platform has been created (Box 3).

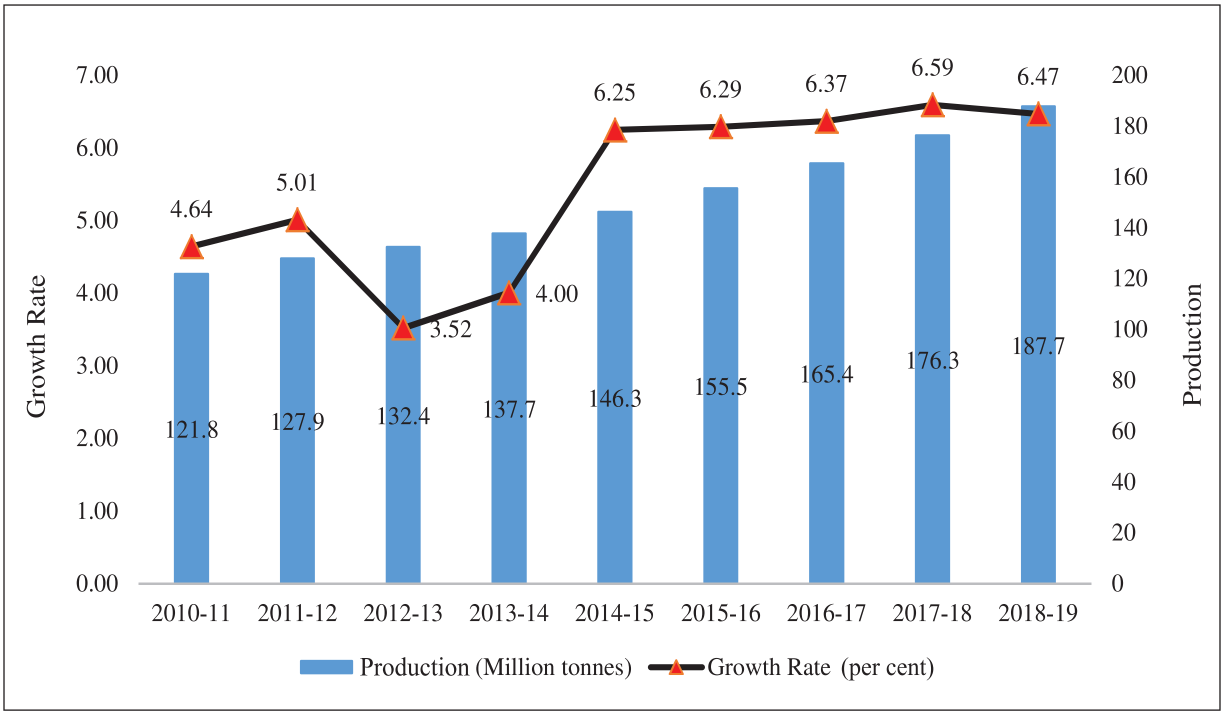
Box 3: Digital Platform in Agriculture

The ICAR with its 113 research institutes and 716 KVKs is geared up to enhance the competitiveness of Indian farming to make farming a viable, self-sustaining and internationally competitive enterprise through digital agricultural platform- Cyber Agro-Physical Systems (CAPS). The CAPS while integrating the use of sensors with computers, satellite imagery, supercomputing facility for research will also help reducing uncertainty and risk in agriculture operations through Artificial Intelligence enabled farmers' advisories for critical agricultural operations and climatic events. Also, New Digital Apps have been developed for making Indian agriculture in line with Digital India theme. The DARE launched the Agricultural Education Portal EKTA (Ekikrit Krishi Shiksha Takniki Ayaam) for integrated online management information system, developed 9 mobile apps such as mango cultivation, e-kalpa, oil palm (English, Hindi and Telugu); pomegranate, onion and garlic, black pepper, mushrooms and 02 mobile Apps for farming community (Kisan Suvidha and Pusa Krishi). KVKs through mKisan portal provided SMS service to 612.95 lakh farmers on improved package of practices of various crops and allied enterprises, weather-based advisories and information on various Government schemes.

ALLIED SECTORS: ANIMAL HUSBANDRY, DAIRYING AND FISHERIES

7.24 Animal Husbandry, Dairying and Fisheries activities, along with agriculture, continue to be an integral part of human life. These activities have contributed to the food basket and draught animal power and maintain ecological balance along with generating gainful employment, particularly among the landless, small and marginal farmers and women, besides providing nutritious food to millions of people. Livestock income has become an important secondary source of income for millions of rural families and has assumed an important role in achieving the goal of doubling farmers' income. Livestock sector has grown at a compound annual growth rate of 7.9 per cent during last five years. Government has launched a new Central Sector Scheme "National Animal Disease Control Programme (NADCP) for control of Foot & Mouth Disease (FMD) and Brucellosis" with a financial outlay of ₹13,343 Crore for five years from 2019 to 2024. This scheme envisages complete control of FMD by 2025 with vaccination and its eventual eradication by 2030. This will result in increased domestic production and increased exports of milk and livestock products.

Figure 4: Milk Production and its Growth Rate



Source: Department of Animal Husbandry & Dairying (DAHD)

7.25 India continues to be the largest producer of milk in the world. Milk production in the country was 187.7 million tonnes in 2018-19 and registered a growth rate of 6.5 per cent over the previous year (Figure 4). The per capita availability of milk has reached a level of 394 grams per day during 2018-19. Egg production in the country, which was 95217 million numbers in 2017-18, increased to 103318 million numbers in 2018-19. Production of major livestock products is given in Table 6.

Table 6: Production of Major Livestock Products

Year	Milk (Million tonnes)	Per Capita availability of Milk(gram/day)	Eggs (Millions Nos.)	Per Capita availability of Egg (number/annum)
2008-09	112.2	266	55562	48
2009-10	116.4	273	60267	51
2010-11	121.8	281	63024	53
2011-12	127.9	290	66450	55
2012-13	132.4	299	69731	58
2013-14	137.7	307	74752	61
2014-15	146.3	322	78484	63
2015-16	155.5	337	82929	66
2016-17	165.4	355	88137	69
2017-18	176.3	375	95217	74
2018-19	187.7	394	103318	79

Source: DAHD

7.26 According to NSSO 66th Round Survey (July 2009-June 2010) on Employment and Unemployment, 15.60 million workers as per usual status (Principal status plus subsidiaries status) were engaged in farming of animals, mixed farming and fishing. As per estimate of 68th Round (July 2011-June 2012), 16.44 million workers were engaged in the activities of farming of animals, mixed farming, fishing and aquaculture.

Fisheries Sector

7.27 Fisheries remain an important source of food, nutrition, employment and income in India. The sector provides livelihood to about 16 million fishers and fish farmers at the primary level and almost twice the number along the value chain. Recognising the importance of the sector, an independent Department of Fisheries has been created in 2019 to provide sustained and focused attention towards the development of fisheries sector.

7.28 The sector has been showing a steady growth in the total GVA and accounts for 6.58 per cent of GDP from agriculture, forestry and fishing. The fish production in India has registered an average annual growth rate of more than 7 per cent in the recent years. The sector has been one of the major contributors of foreign exchange earnings with India being one of the leading seafood exporting nations in the world. During 2018-19, export of marine products stood at 13, 92,559 metric tonnes and valued at ₹ 46,589 crore. USA and South East Asia are the major export markets for Indian seafood with a share of 34.81 per cent and 22.67 per cent respectively. India has rich and diverse fisheries resources. The marine fisheries resources are spread along the country's vast coastline and 2.02 million square km Exclusive Economic Zone (EEZ) and 0.53 million sq.km continental shelf area. The inland resources are in the form of rivers and canals (1.95 lakh km), floodplain lakes (8.12 lakh hectares), ponds and tanks (24.1 lakh hectares), reservoirs (31.5 lakh hectares), brackish water (12.4 lakh hectares), saline/ alkaline affected areas (12 lakh hectares) etc.

7.29 The total fish production in the country stood at 13.42 million metric tonnes (provisional) during 2018-19. Of this, the marine fisheries contributed 3.71 million metric tonnes and the inland fisheries

Table 7: State Wise Inland & Marine Fish Production in 2017-18 (in '000 Tonnes)

States	Inland	Marine	Total
Andhra Pradesh	2844.61	604.95	3449.56
Arunachal Pradesh	4.25	0.00	4.25
Assam	327.26	0.00	327.26
Bihar	587.85	0.00	587.85
Chhattisgarh	457.17	0.00	457.17
Goa	5.54	118.47	124.01
Gujarat	133.79	700.74	834.53
Haryana	190.00	0.00	190.00
Himachal Pradesh	12.77	0.00	12.77
Jammu & Kashmir	20.70	0.00	20.70
Jharkhand	190.00	0.00	190.00
Karnataka	188.17	414.35	602.52
Kerala	148.28	414.34	562.62
Madhya Pradesh	143.42	0.00	143.42
Maharashtra	131.02	474.99	606.01
Manipur	33.00	0.00	33.00
Meghalaya	11.96	0.00	11.96
Mizoram	7.64	0.00	7.64
Nagaland	8.99	0.00	8.99
Odisha	534.12	150.84	684.96
Punjab	136.64	0.00	136.64
Rajasthan	54.04	0.00	54.04
Sikkim	0.38	0.00	0.38
Tamil Nadu	185.05	496.89	681.94
Telengana	270.04	0.00	270.04
Tripura	76.80	0.00	76.80
Uttarakhand	4.58	0.00	4.58
Uttar Pradesh	628.75	0.00	628.75
West Bengal	1556.61	185.48	1742.09
India	**8902.42**	**3687.86**	**12590.28**

Source: Department of Fisheries (DoF)

contributed 9.71 million metric tonnes. During 2018-19, 71 per cent of marine fisheries potential and 58 per cent of the inland fisheries potential have been harnessed. State-wise fish production for 2017-18 is presented in Table 7. A trend in total fish production over the last five years for major producing states may be seen in Figure 5.

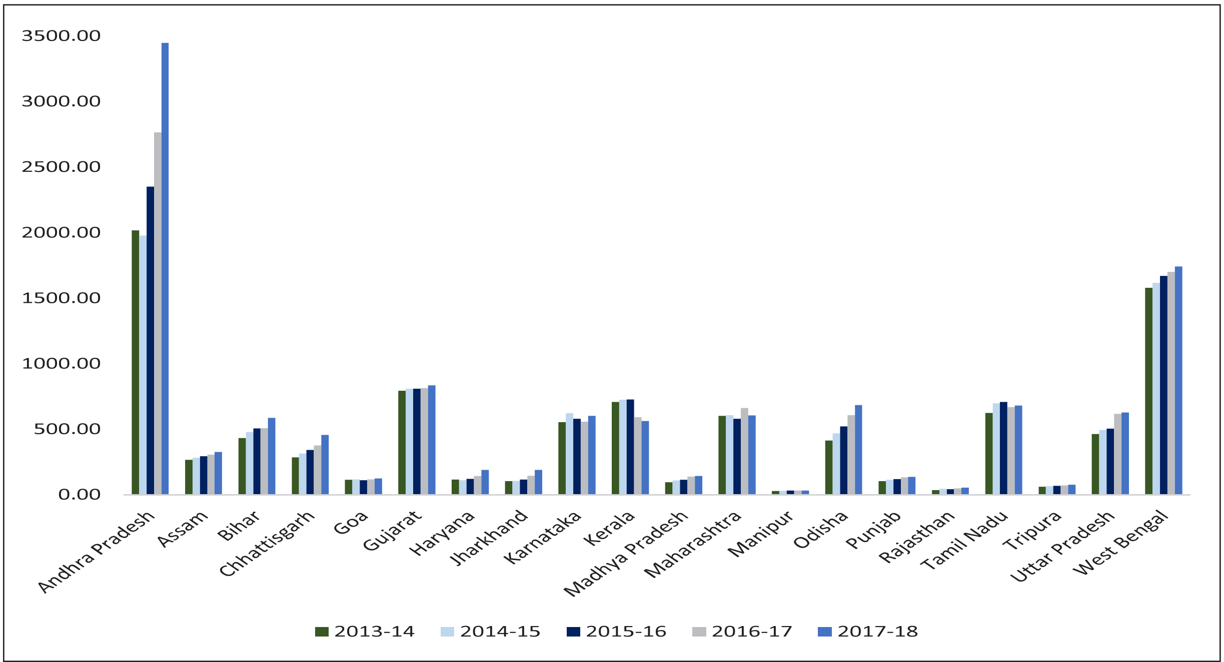
Fisheries and Aquaculture Infrastructure Development Fund

7.30 To address the gaps in fisheries infrastructure, the government has created the Fisheries and Aquaculture Infrastructure Development Fund (FIDF) during 2018-19 with a total fund size of ₹ 7,522.48 crore. The FIDF provides concessional finance/ loan to the Eligible Entities (EEs), including State Governments/Union Territories (UTs) and State entities for development of identified fisheries infrastructure facilities. The concessional finance under the FIDF is provided by the Nodal Loaning Entities (NLEs) namely (i) NABARD, (ii) National Cooperatives Development Corporation (NCDC) and (iii) All scheduled Banks. Till date, proposals to the tune of ₹ 2751.33 crore have been received from the various States and other Eligible Entities. Out of which proposals to the tune of ₹ 1715.04 crores have been recommended and rest are under process.

FOOD PROCESSING SECTOR

7.31 A well-developed food processing sector with higher level of processing helps in the reduction of wastage, improves value addition, promotes crop diversification, ensures better return to the farmers, promotes employment as well as increases export earnings. Growth in the food processing sector is also expected to open up opportunities for players having strong linkages in the agri-value chain. During the last 6 years ending 2017-18, Food Processing Industries sector has been growing at an average annual growth rate of around 5.06 per cent. The sector constituted

Figure 5: Fish Production over the last five years for Major Producing States (in '000 Tonnes)



Source: DoF

as much as 8.83 per cent and 10.66 per cent of GVA in Manufacturing and Agriculture sector respectively in 2017-18 at 2011-12 prices.

7.32 According to the Annual Survey of Industries for 2016-17, the total number of persons engaged in registered food processing sector was 18.54 lakhs.

7.33 Unregistered food processing sector supports employment to 51.11 lakh workers as per the NSSO 73rd Round, 2015-16 and constitutes 14.18 per cent of employment in the unregistered manufacturing sector. The value of processed food exports during 2018-19 was of the order of US $ 35.30 billion accounting for about 10.70 per cent of India's total exports (total exports US $ 330.08 billion). The value of import of processed food during 2018-19 was US $ 19.32 billion which is 3.76 per cent of India's total imports.

Pradhan Mantri Kisan Sampada Yojana

7.34 Government has restructured its schemes under a new central sector scheme of Pradhan Mantri Kisan Sampada Yojana (PMKSY). With a financial allocation of ₹ 6,000/- crore for the period 2016-20, PMKSY provides subsidy-based support to create robust modern infrastructure for agriculture and agro-based industries along the entire value/supply chain. It is expected to reduce wastage of agriculture produce, increase the processing level, enhance the export of the processed foods, enable availability of hygienic and nutritious food to consumers at affordable prices. The scheme components are: Mega Food Parks, Integrated Cold Chain and Value Addition Infrastructure, Creation/Expansion of Food Processing & Preservation Capacities, Infrastructure for Agro-processing Clusters, Creation of Backward and Forward Linkages, Food Safety and Quality Assurance Infrastructure, Human Resources and Institutions, and Operation Greens. The PMKSY envisages to leverage investment of ₹ 31,400 crore, handling of 334 Lakh Metric Tonnes (LMT) agro-produce, valuing ₹ 1,04,125 crore, which will benefit 20 lakh farmers and generate 5,30,500 direct/ indirect employment in the country on completion of sanctioned projects. So far, 701 projects have been sanctioned under different component schemes, which are expected to leverage investment of about ₹12,455 crores, handle about 259 LMT agro-produce valuing about ₹ 67,054 crores, benefit about 46.37 lakh farmers and generate about 5.6 lakh direct/ indirect employment in the country on completion of the projects.

FERTILIZERS

7.35 The New Urea Policy-2015 (NUP-2015) had been notified by Department of Fertilizers on 25th May, 2015 with the objectives of maximizing indigenous urea production; promoting energy efficiency in urea production; and rationalizing subsidy burden on the government. The production of urea during the year 2015-16 was 244.75 LMT, which happens to be the highest ever urea production in the country (Table 8). The imports of fertilizers show fluctuating trend (Figure 6).

Direct Benefit Transfer (DBT) System in Fertilizers

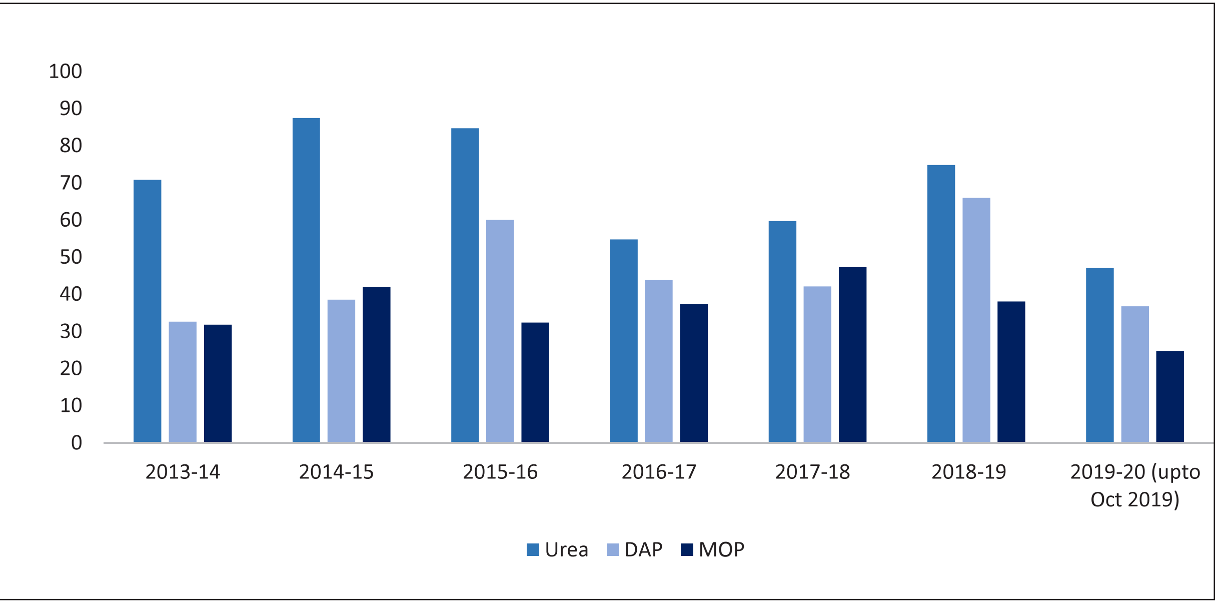
7.36 The Government of India has introduced Direct Benefit Transfer (DBT) system in Fertilizers w.e.f. October, 2016. Under the fertilizer DBT system, 100 per cent subsidy on various fertilizer grades is released to the fertilizer companies on the basis of actual sales made by the retailers to the beneficiaries. Sale of all subsidized fertilizers to farmers/buyers is being made through Point of Sale (PoS) devices installed at each retailer shop and the beneficiaries will be identified through Aadhaar Card, KCC,

Table 8: Production of Urea, DAP and Complex Fertilizers (in LMT)

Year	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20*
Urea	227.15	225.85	244.75	242.01	240.23	240.00	138.28
DAP	36.11	34.44	37.87	43.65	46.50	38.99	25.52
Complex Fertilizers	69.13	78.32	83.01	79.66	82.57	89.98	51.42

Source: Department of Fertilizers
*Upto October, 2019

Figure 6: Import of Urea, DAP and Muriate of Potash (MOP) (in LMT)



Source: Department of Fertilizers

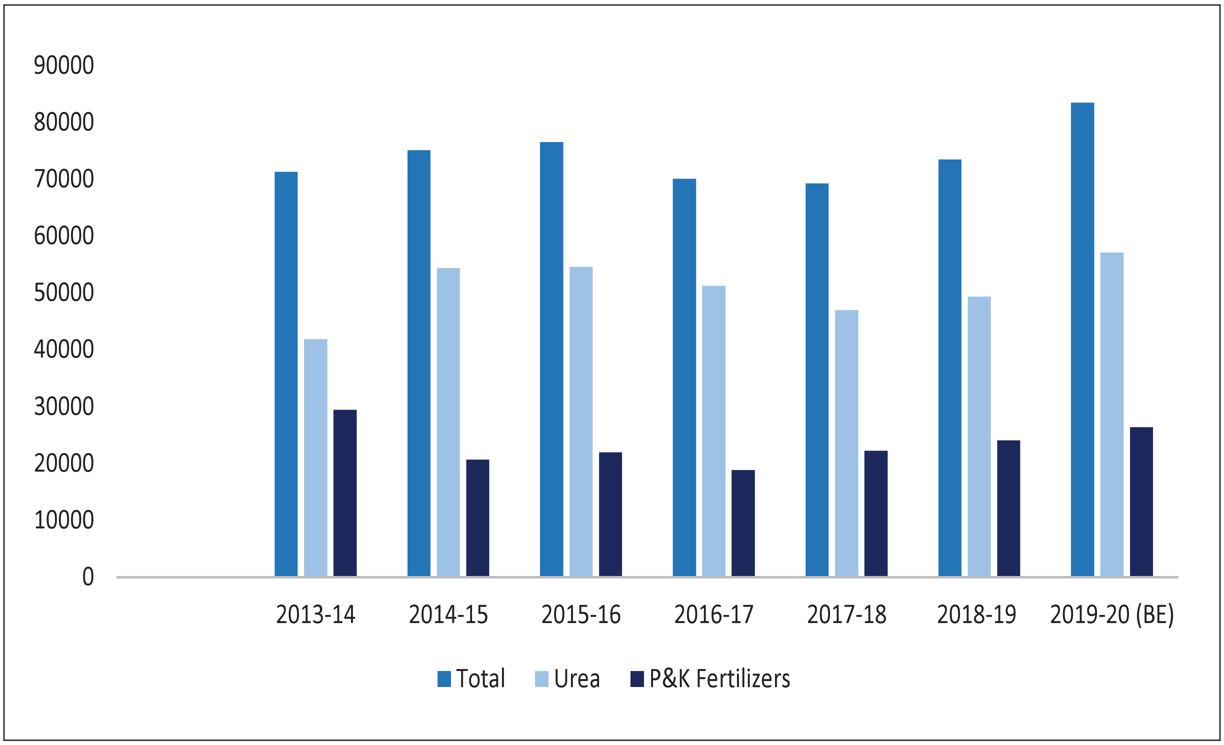
Voter Identity card etc. Trend in fertilizer subsidy may be seen in Figure 7.

FOOD MANAGEMENT

7.37 The main objectives of food management are procurement of foodgrains from farmers at remunerative prices, distribution of foodgrains to consumers, particularly the vulnerable sections of society at affordable prices and maintenance of food buffers for food security and price stability. The nodal agency which undertakes procurement and storage of foodgrain is the Food Corporation of India (FCI). The distribution of foodgrains is primarily under the National Food Security Act, 2013 (NFSA) and other welfare schemes of the Government and is governed by the scale of allocation and its offtake by the beneficiaries.

7.38 The NFSA which came into force in July, 2013, provides for coverage of upto 75 per cent of the rural population and upto 50 per cent of the urban population for receiving foodgrains under Targeted Public Distribution System (TPDS), thus covering about two-thirds of the population of the country for receiving foodgrains at the rate of ₹ 1/2/3 per kg for nutri-cereals/wheat/rice respectively. Identification of beneficiaries under the Act is under two categories- households covered under Antyodaya Anna Yojana (AAY) and Priority Households, within the coverage determined for the State/UT.

Figure 7: Fertilizer Subsidy during 2013-14 to 2019-20 (₹ crores)



Source: Department of Fertilizers.

Priority Households are entitled to receive 5 kg per person per month, AAY households, which constitute the poorest of the poor, continue to receive 35 Kg of foodgrains per household per month. At present, the Act is being implemented in all the States/UTs covering about 80 crore persons to get highly subsidized foodgrains.

7.39 To ensure adequate availability of wheat and rice in central pool, to keep a check on the open market prices and to ensure food security, the Central Government has undertaken a number of measures, which include: -

(a) State Governments, particularly those undertaking Decentralized Procurement (DCP), are encouraged to maximize procurement of wheat and rice.

(b) Strategic reserves of 5 million tonnes of food grains over the operational stocks are maintained to be used in extreme situations.

(c) Sale of wheat and rice is undertaken through Open Market Sale Scheme (OMSS) (Domestic) so as to check inflationary trend in prices of foodgrains.

(d) There are good examples of PDS reforms such as One Nation - One Ration Card, Aadhaar authenticated distribution through e-POS machines (Box 4).

Foodgrains Stocking Norms for the Central Pool

7.40 The Government of India has revised the Buffer Norms w.e.f. January, 2015 and the nomenclature of Buffer Norms has been changed to Foodgrain Stocking Norms to meet the prescribed minimum stocking norms for food security, to ensure monthly releases of foodgrains for supply through the TPDS/ Other Welfare Schemes, to meet emergency situations arising out of unexpected crop failure, natural disasters etc. and to use the foodgrain stock in the Central Pool for

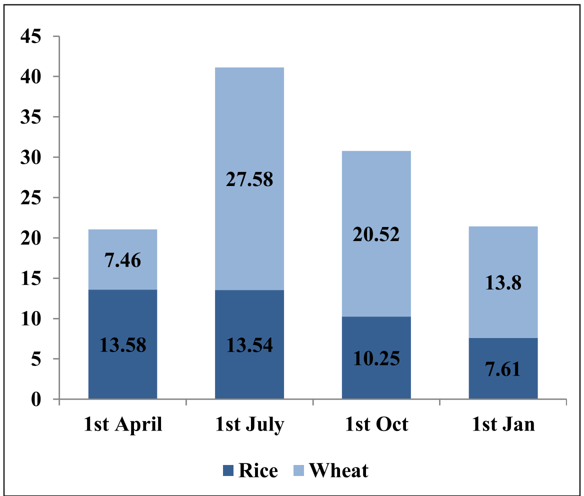
Box 4: One Nation - One Ration Card

The Department of Food & Public Distribution in collaboration with all States/UTs is implementing a Scheme namely "Integrated Management of Public Distribution System (IM-PDS)" during 2018-19 and 2019-20. The main objective of the scheme is to introduce nation-wide portability of ration card holders under NFSA through 'One Nation One Ration Card' System, to lift their entitled foodgrains from any Fair Price Shop (FPS) in the country without the need to obtain a new ration card. This system would largely benefit numerous migratory beneficiaries who frequently change their place of dwelling in search of work/employment or for other reasons across the country and eventually get deprived of their quota of subsidised foodgrains under NFSA due to migration from their native place. Through this system migatory beneficiaries shall be able to access their food security entitlements from any FPS of their choice/convenience by using their same/existing ration cards after biometric/ Aadhaar authentication on electronic Point of Sale (ePoS) devices at the FPS in another State/UT.

At present the facility of inter-State portability is enabled in 8 States i.e. in four clusters of 2-adjoining States of Andhra Pradesh & Telangana, Gujarat & Maharashtra, Haryana & Rajasthan, and Karnataka & Kerala. It is further envisaged that all four clusters, as above, and a few other States having already implemented intra-State portability shall be integrated together into single national platform. Thereafter, rollout of National Portability in other States/UTs shall be done as and when the national de-duplication of all ration cards,beneficiaries under NFSA is completed and biometric/Aadhaar authentication based distribution is enabled in the State/UT.

market intervention to augment supply so as to help moderate the open market prices. The stocking norms of foodgrains in the central Pool, with effect from January, 2015, are given in Figure 8 which also include the strategic reserve of 50 LMT.

Figure 8: Stocking norms of foodgrains in the central pool with effect from January, 2015 (million tonnes)



Source: Department of Food & Public Distribution.

Allocation of Foodgrains Under NFSA/ Targeted Public Distribution System (TPDS)

7.41 NFSA has been implemented in all States/UTs. In Chandigarh, Puducherry and urban areas of Dadra & Nagar Haveli, the NFSA is being implemented in cash transfer mode, under which food subsidy is being transferred into the bank accounts of beneficiaries who then have a choice to buy foodgrains from open market. During the year 2019-20, Government of India has allocated 603.88 lakh tonnes of foodgrains to States/ UTs under NFSA and other Welfare Schemes as on 31st December 2019 (Table 9).

7.42 Government of India also provides assistance to States/UTs to meet the expenditure incurred on intra-State movement of foodgrains and fair price shop dealers' margins. During 2019-20 (up to 31.12.2019), ₹ 1433.25 crore has been released to State Governments/UTs for this purpose.

(i) During Kharif Marketing Season (KMS) 2018-19, 443.99 LMT of paddy in terms of

Table 9: Allocation of Foodgrains to States/UTs under NFSA and Other Welfare Schemes

Category	Quantity (in lakh tonnes)
NFSA (including ICDS & MDM)	596.63
Festival, Natural calamity etc.	2.14
Other Welfare schemes	5.11
Total	603.88

Source: DFPD

rice was procured against an estimated target of 448.00 LMT. In the ongoing KMS 2019-20, a total of 256.10 LMT of paddy in terms of rice has been procured as on 31/12/2019.

(ii) During Rabi Marketing Season (RMS) 2019-2020, 341.33 LMT wheat was procured against 357.95 LMT procured during RMS 2018-19.

(iii) During the KMS 2019-20, procurement of 3,49,250 Metric Tonnes (MT) of coarse grains was approved.

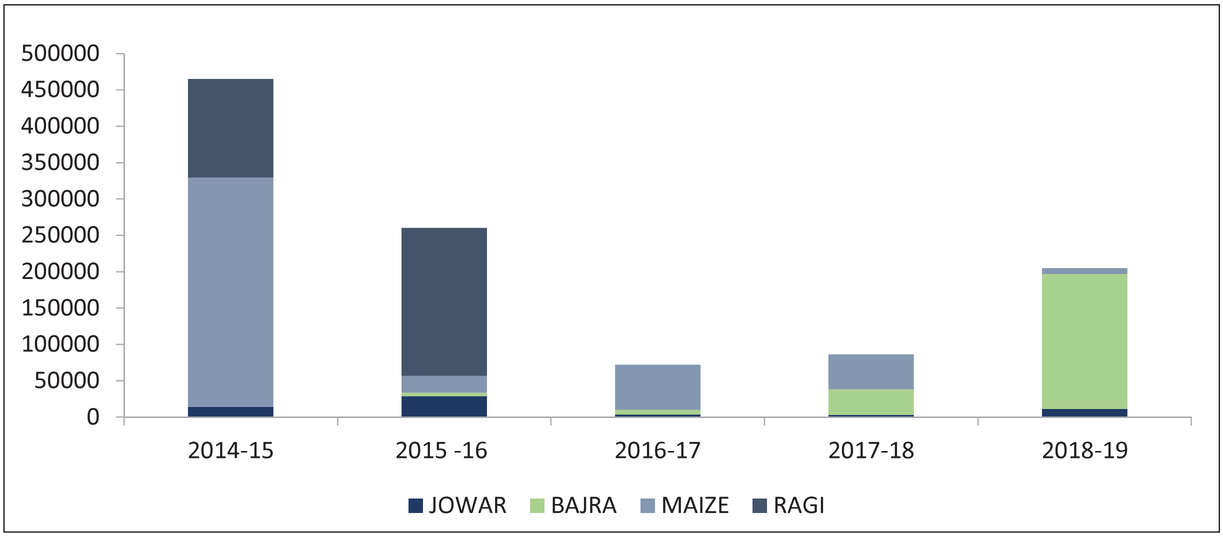
7.43 Procurement of coarse grains during last five years is given in Figure 9. Foodgrains Production, Procurement, Offtake and Stocks is presented in Table 10.

Economic Cost of Food Grains to FCI

7.44 The Economic Cost of foodgrains consists of three components, namely, pooled cost of grains, procurement incidentals and the cost of distribution. The pooled cost of food grains is the weighted MSP of the stock of foodgrains available with FCI at the time of calculating the economic cost. The economic cost for both wheat and rice witnessed significant increase during the last few years due to increase in MSPs and proportionate increase in the incidentals (Figure 10).

7.45 An examination of the determinants of the real economic cost of wheat suggests that MSP,

Figure 9: Procurement of coarse grains (grain-wise) during last five years (metric tonnes)



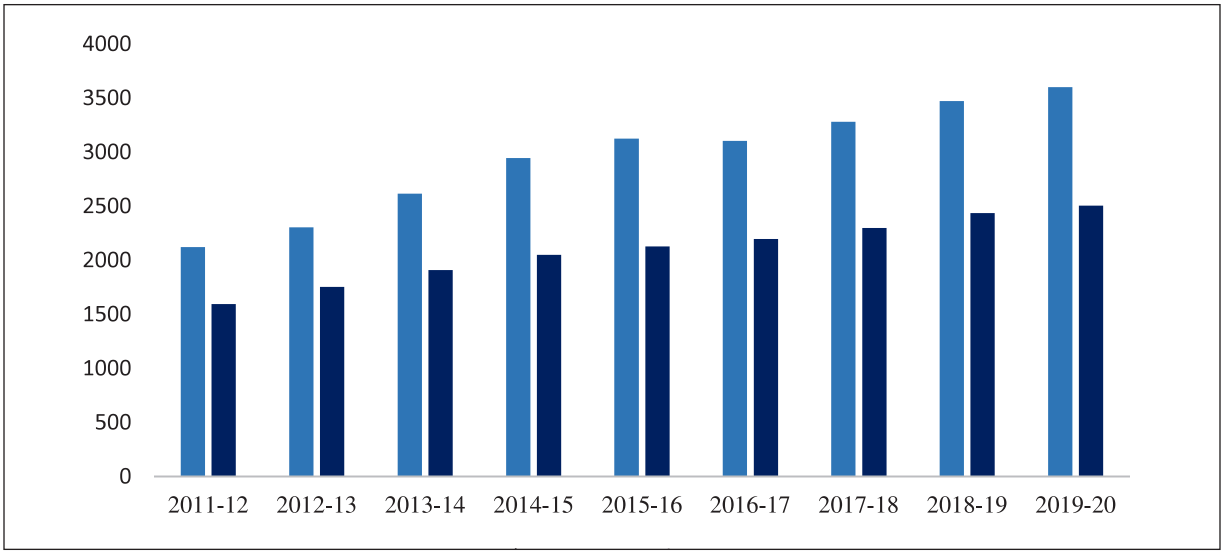
Source: DFPD

Table 10: Foodgrains Production, Procurement, Offtake and Stocks (in million tonnes)

Year	Production of foodgrains minus pulses	Foodgrain Procurement	Procurement as percentage of production	Offtake (TPDS/ NFSA + Welfare schemes)	Stocks as of 1st July
2015-16	235.22	64.91	27.6	53.73	54.72
2016-17	251.98	61.14	24.3	56.58	49.85
2017-18	259.60	69.10	26.6	57.85	53.48
2018-19	261.55*	80.40	30.7	56.40	65.14
2019-20	132.35**	60.06@	45.38@	42.82#	74.40

Source: Directorate of Economics & Statistics, Ministry of Agriculture and Farmers Welfare. Foodgrain bulletin, DFPD.
*As per 4th Advance estimates. ** As per 1st Advance estimates Kharif only.
@ as on 31st December, 2019. # offtake upto December, 2019

Figure 10: Economic Cost of Food Grains to FCI (₹ /quintals)@



Source: FCI Annual Plan, 2019-20.
* Weighted average of common and Grade-A Rice taken together. @ Data from 2014-15 to 2017-18 indicates cost under National Food Security Act (NFSA).

stocks handling charges and average stock of the grain are the significant factors. Increase of one unit in real MSP leads to 0.48 unit increase in real economic cost and the impact is significant.

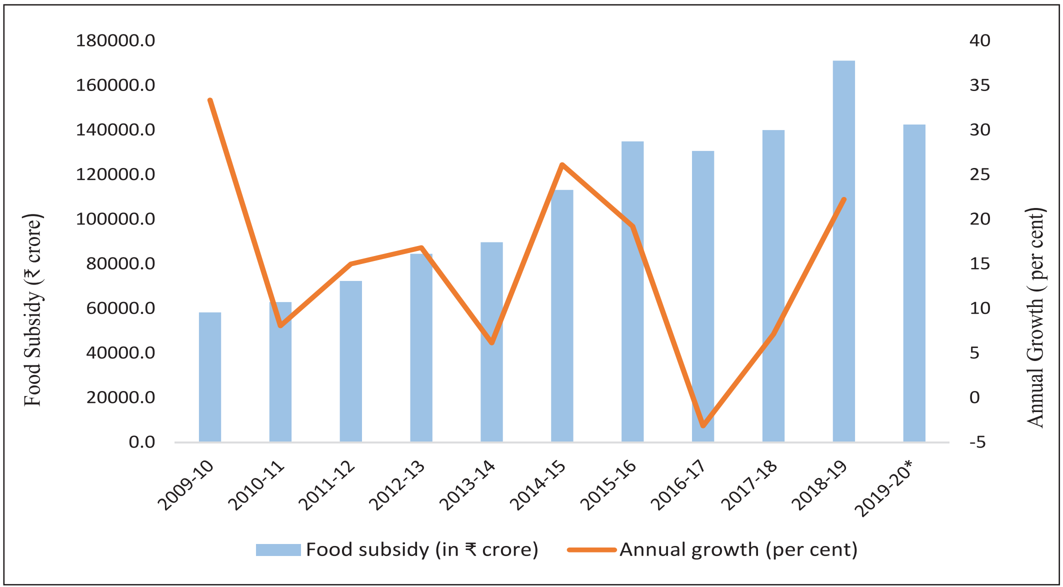
Food Subsidy

7.46 Food subsidy comprises of (i) subsidy provided to FCI for procurement and distribution of wheat and rice under NFSA and other welfare schemes and for maintaining the strategic reserve of foodgrains and (ii) subsidy provided to States for undertaking decentralized procurement. The acquisition and distribution costs of foodgrains for the central pool together constitute the economic cost. The difference between the per quintal economic cost and the per quintal Central Issue Price (CIP) gives the quantum of food subsidy. While the economic cost has increased, the CIP for NFSA beneficiaries has not been revised from ₹ 200/quintal in case of wheat and ₹ 300/quintal in case of rice. These rates were fixed under the Act initially for a period of three years from the date of commencement of the Act (July 13, 2013) and thereafter were to be fixed by the Central Government from time to time, while not exceeding the minimum support price. However, it has not been revised since 2013. This has resulted in widening of the gap between the economic cost and CIP and the food subsidy incurred by the Government has risen substantially over the years (Figure 11).

7.47 The reasons for widenning of the food subsidy have been many. The NFSA while on one hand providing a wider coverage than the erstwhile TPDS, also made the Antyodaya CIPs uniformly applicable to all NFSA beneficiaries. Further, APL/BPL categorization were done away with under NFSA. Coverage under the Act was also delinked from the poverty estimates as it was substantially high to ensure that all the vulnerable and needy sections of the society get its benefit. While retaining the AAY category, the Act covers the rest of the beneficiaries as Priority Households. Moreover, build up of the foodgrain stocks much higher than their norms, increase in economic cost and real MSP and decline in sale realization due to decline in average Central Issue Price for APL households have contributed to the rise in food subsidy.

7.48 While the interests of the vulnerable sections of the population need to be safeguarded, the economic rationale of increasing the CIPs under NFSA also cannot be undermined. For sustainability of food security operations, the issue of burgeoning food subsidy bill needs to be addressed.

Figure 11: Food Subsidy Released and its Annual Growth



Source: Department of Food & Public Distribution
* as on 31.12.2019
Note-I: In Financial Year 2016-17, the total food subsidy released was ₹ 130672.96 crore which included NSSF loan of ₹ 25000 crore to FCI.
Note-II: In Financial Year 2017-18, the total food subsidy released was ₹ 139981.69 crore which included NSSF loan of ₹ 40000 crore to FCI.
Note-III: In Financial Year 2018-19, the total food subsidy released was ₹ 171127.49 crore which included NSSF loan of ₹ 70000 crore to FCI.

Storage

7.49 The storage capacity available with the FCI, a part of warehousing capacity available with the Central Warehousing Corporation (CWC) and State Warehousing Corporations (SWCs) and capacity hired from private sector are used for storage of foodgrains procured for central pool. The total capacity available with FCI and State Agencies for storage of foodgrains as on 30.11.2019 was 750.00 LMT, comprising covered godowns of 617.60 LMT and Cover and Plinth (CAP) facilities of 132.40 LMT. Out of the total available storage capacity of 750.00 LMT the capacity of 401.87 LMT was with FCI and 348.13 LMT with State Agencies. The stock of rice and wheat in the Central Pool on 01.12.2019 was 564.54 LMT.

7.50 Private Entrepreneurs Guarantee Scheme (PEG): To augment the existing storage capacity, construction of godowns has been undertaken in PPP mode in 22 States under Private Entrepreneurs Guarantee (PEG) Scheme through private sector as well as CWC and SWCs. As on 30.11.2019, a capacity of 143.53 LMT has been created under this scheme.

7.51 Central Sector Scheme (erstwhile Plan Scheme): This scheme is implemented in the North Eastern States along with a few other States. Funds from annual budgetary allocation are released by the Government of India to FCI and also to the State Governments for construction of godowns. A total capacity of 1,84,175 MT has been completed by FCI and State Governments during the 12th Five Year Plan (2012-17). This scheme has been extended from 01.04.2017 to 31.03.2022. A capacity of 49,425 MT has been created by FCI & State Governments from 01.04.2017 to 30.11.2019.

7.52 Construction of Steel Silos: Government of India has also approved an action plan for construction of steel silos in the country for a capacity of 100 LMT in Public Private Partnership (PPP) mode for modernizing storage infrastructure and improving shelf life of stored foodgrains. Against this, as on 31.12.2019, a total capacity of 7.25 LMT of silos has been completed.

7.53 Online Depot Management System (ODMS): FCI is implementing an Online Depot Management System (ODMS), also known as Depot Online System (DOS), to automate the entire process of depot operations including receipt of foodgrains at the depot, storage, maintenance activities and issue of foodgrains. It has inbuilt modules for inventory management, quality control, weighbridge integration, storage and transit losses management, gunny inventory etc. This helps in optimizing costs and improving functional efficiency of FCI at the depot level and preventing/ easily detecting any malpractices/lapses. As on 31.12.2019, Depot Online System (DOS) is operational at 533 depots of FCI. While in case of Central Warehousing Corporation (CWC), DOS was installed in 156 depots hired by FCI but 12 depots have since been de-hired. Presently, DOS is installed in all 144 depots of CWC hired by FCI. CWC has also completed roll out of its own Warehouse Management System (WMS) at all 380 warehouses which is proposed to be integrated with DOS.

WAY FORWARD

7.54 The realisation of the objective of doubling farmers' income necessitate addressal of some of the basic challenges of agriculture and allied sector. The issues such as investment in agriculture, water conservation, improved yields through better farming practices, access to market, availability of institutional credit, increasing the linkages between agricultural and non-agricultural sectors, etc. need urgent attention. Allied sectors such as animal husbandry, dairying and fisheries sectors need to be given a boost to provide an assured secondary source of employment and income especially for the small and marginal farmers. Coverage of food processing sector needs to be scaled up to create an additional source of market for agricultural commodities.

7.55 As the proportion of small and marginal holdings is significantly large, land reform measures like freeing up land markets can help farmers in improving their income. Small holdings of India can be better harnessed through appropriate use of farm mechanisation as the degree of farm mechanisation is low as compared to the other major developing countries like Brazil and China. The coverage of irrigation facilities needs to be extended while ensuring an effective water conservation mechanism. An inclusive approach to provision for agricultural credit has to be undertaken to address the issue of skewness in its regional distribution.

7.56 While Government measures are in operation aimed at improving productivity and its marketing, efforts of farmers need to be supplemented with better coverage of direct income/investment support. There is a need to give increased focus on exploring global markets for agricultural commodities to give an additional source of market for the surplus of agricultural produce India currently has.

7.57 There is also a need to reallocate labour resources to other sectors. Though, the structural transformations involved a falling share of agriculture sector and rising share of services sector jobs, more needs to be done to create manufacturing jobs to absorb the large pool of workers.

7.58 Often, FCI stocks are way above buffer norms, which needs to be addressed in time. With a large share of poor people, maintaining food security is still a challenge. The rates fixed under the NFSA initially for a period of three years have not been revised since 2013, resulting in burgeoning food subsidy. The rates under NFSA and the coverage need to be revisited.

CHAPTER AT A GLANCE
➢ Proportion of Indian population depending directly or indirectly on agriculture for employment opportunities is more than that of any other sectors in India.
➢ The share of agriculture and allied sectors in the total GVA of the country has been continuously declining on account of relatively higher growth performance of non-agricultural sectors, a natural outcome of development process.
➢ GVA at constant (2011-12) prices for 2019-20 from 'Agriculture, Forestry and Fishing' sector is estimated to grow by 2.8 per cent.
➢ Agriculture Mechanization helps the Indian farming transform into commercial from the subsistence farming. The overall farm mechanization in India is about 40 per cent, which is lower compared to China (59.5 per cent) and Brazil (75 per cent).
➢ The regional distribution of agricultural credit in India shows a highly skewed pattern. It is seen that credit is low in North Eastern, Hilly and Eastern States. The share of North Eastern States has been less than one percent in total agricultural credit disbursement.
➢ Livestock income has become an important secondary source of income for millions of rural families and has assumed an important role in achieving the goal of doubling farmers' income. Livestock sector has been growing at a CAGR of 7.9 per cent during last five years.
➢ During the last 6 years ending 2017-18, Food Processing Industries sector has been growing at an Average Annual Growth Rate (AAGR) of around 5.06 per cent. The sector constituted as much as 8.83 per cent and 10.66 per cent of GVA in Manufacturing and Agriculture sector respectively in 2017-18 at 2011-12 prices.
➢ With the implementation of the National Food Security Act from July 2013, the food subsidy bill has increased from ₹ 113171.2 crore in 2014-15 to ₹ 171127.5 crore in 2018-19. While the interests of the vulnerable sections of the population need to be safeguarded, for sustainability of food security operations, the issue of burgeoning food subsidy bill needs to be addressed

Industry and Infrastructure

08
CHAPTER

The industrial sector based on Index of Industrial Production (IIP) registered a growth of 0.6 per cent for 2019-20 (April-November) as compared to 5.0 per cent during 2018-19 (April-November). Growth of manufacturing sector was 0.9 per cent during 2019-20 (April-November) as compared to 4.9 per cent during 2018-19 (April-November). Growth of refinery products sector stood at (-)1.1 per cent during 2019-20 (April-November) as compared to 5.3 per cent during 2018-19 (April-November). Steel sector achieved a growth of 5.2 per cent during 2019-20 (April-November) as compared to 3.6 per cent during 2018-19 (April-November). Government has initiated several policies in various infrastructure sectors to enhance their capacity and output. Report of the Task Force on National Infrastructure Pipeline released on 31.12.2019 has projected total infrastructure investment of ₹ 102 lakh crore during the period FY 2020 to 2025 in India.

INTRODUCTION

8.1 Industrial sector performance is critical to achieving the ambitious goal of making India a five-trillion economy. The sector plays a decisive role in determining the overall growth of national output and employment through its backward and forward linkages with the other two sectors of the economy. It contributes close to 30 per cent of total gross value added (GVA). The sector is, however, vulnerable to several internal and external economic challenges which affect its overall performance.

TRENDS IN INDUSTRIAL SECTOR

8.2 Industrial sector performance in terms of its contribution in GVA improved in 2018-19 over 2017-18. However, as per the estimates of Gross Domestic Product by National Statistical Office (NSO), the real GVA of industrial sector grew by 1.6 per cent in first half (H1) (April-September) of 2019-20, as compared to 8.2 per cent in H1 of 2018-19. The low growth in industrial sector is primarily due to manufacturing sector which registered a negative growth of 0.2 per cent in 2019-20 H1. Growth of real GVA at basic prices for industrial sector is given in Table 1.

Index of Industrial Production (IIP)

8.3 The IIP is a measure of industrial performance. It assigns a weight of 77.6 per cent to manufacturing followed by 14.4 per cent to mining and 8.0 per cent to electricity. Overall, IIP growth has moderated to 3.8 per cent in 2018-19 compared to 4.4 per cent in 2017-18. During the current year 2019-20 (April-November), it grew at 0.6 per cent as compared to 5.0 per cent in the corresponding period of previous year (Table 2). The moderation in growth is mainly arising from subdued manufacturing activities 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, prevailing trade related uncertainties, etc. Exports of key labour intensive sectors, such as gems & jewellery, basic metals, leather products and textile products under-performed during the current financial year.

Table 1: Growth rate of Gross Value Added (GVA) in Industry at Constant Prices (in per cent)

	Share in GVA*	2017-18	2018-19 (PE)	2019-20 Q1	2019-20 Q2	2019-20 (1st AE)
Mining & Quarrying	2.4	5.1	1.3	2.7	0.1	1.5
Manufacturing	16.4	5.9	6.9	0.6	-1.0	2.0
Electricity, Gas, Water Supply & other Utility Services	2.8	8.6	7.0	8.6	3.6	5.4
Construction	8.0	5.6	8.7	5.7	3.3	3.2
Industry	**29.6**	**5.9**	**6.9**	**2.7**	**0.5**	**2.5**

Source: NSO

Note: * - Share in GVA is at current prices (2018-19), AE - Advance Estimate, PE- Provisional Estimate.

Table 2: Index of Industrial Production (IIP) Growth Rates (in per cent)

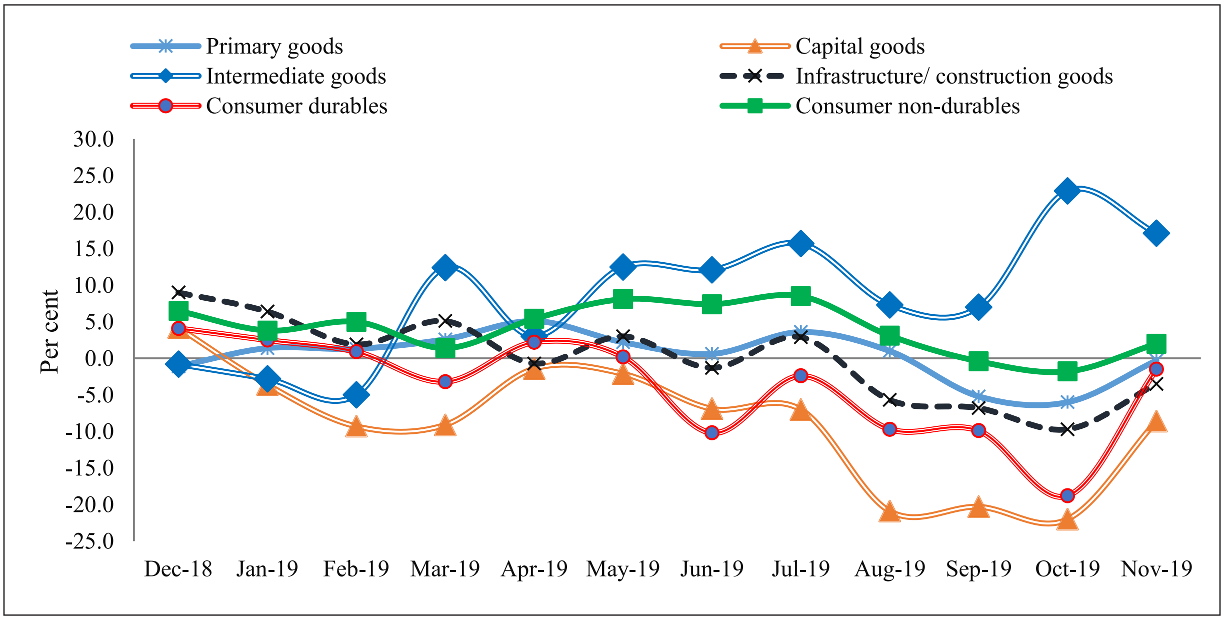
	Weight	2015-16	2016-17	2017-18	2018-19	2018-19 (April-November)	2019-20 (April-November)
General Index	100.0	3.3	4.6	4.4	3.8	5.0	0.6
Sectoral Classification							
Mining	14.4	4.3	5.3	2.3	2.9	3.7	-0.1
Manufacturing	77.6	2.8	4.4	4.6	3.9	4.9	0.9
Electricity	8.0	5.7	5.8	5.4	5.2	6.6	0.8
Use Based Classification							
Primary goods	34.0	5.0	4.9	3.7	3.5	4.8	0.1
Capital goods	8.2	3.0	3.2	4.0	2.7	7.2	-11.6
Intermediate goods	17.2	1.5	3.3	2.3	0.9	0.7	12.2
Infrastructure/ construction goods	12.3	2.8	3.9	5.6	7.3	8.3	-2.7
Consumer durables	12.8	3.4	2.9	0.8	5.5	7.8	-6.5
Consumer non-durables	15.3	2.6	7.9	10.6	4.0	4.0	3.9

Source: NSO.

8.4 As per the use-based classification of IIP, the growth of capital goods and consumer durables declined by 11.6 per cent and 6.5 per cent respectively during the current financial year 2019-20 (April-November). Consumer durables segment was hit mainly due to lack of demand from the household sector especially in Automobile industry.

The growth of infrastructure/ construction goods declined by 2.7 per cent in the current financial year 2019-20 (April-November). However, intermediate goods, consumer non-durable and primary goods registered a growth of 12.2 per cent, 3.9 per cent and 0.1 per cent, respectively, during 2019-20 (April-November) (Table 2). Figure 1 shows the monthly growth of IIP by use-based classification. Intermediate goods and consumer non-durable registered positive growth in November 2019, however, primary goods, capital goods, infrastructure/ construction goods and consumer durables reported negative growth in November 2019.

Figure 1: Monthly growth (in per cent) of IIP (Use based classification)



Source: NSO.

Eight Core Industries

8.5 The Index of Eight Core Industries measures the performance of eight core industries i.e., Coal, Crude Oil, Natural Gas, Refinery Products, Fertilizers, Steel, Cement and Electricity. The industries included in the Index of Eight Core Industries comprise 40.27 per cent weight in the Index of Industrial Production (IIP).

8.6 Growth of Eight Core Industries stood flat during the current financial year (April-November, 2019). During the corresponding period of the previous year, these industries grew at 5.1 per cent. While fertilizers, steel and electricity have seen expansion in their production, procution of coal, crude oil, natural gas and refinery products have contracted during the current financial year (Table 3). Excessive rainfall during monsoon, law and order problem prevailing in mining areas and strike during September 2019 impacted the coal sector. Crude oil industry continued to show contractionary trend with a growth rate of (-) 5.9 per cent in 2019-20 (April-November) owing to operational issues like power shutdowns, electrical faults due to rains/winds/ thunderstorms, etc. Growth rate of 3 Months Moving Average Month-on-Month (M-o-M) of IIP, Eight Core Industries and Manufacturing sector from 2017-18 to 2019-20 shows that the three indicators move in tandem with some occasional deviation (Figure 2).

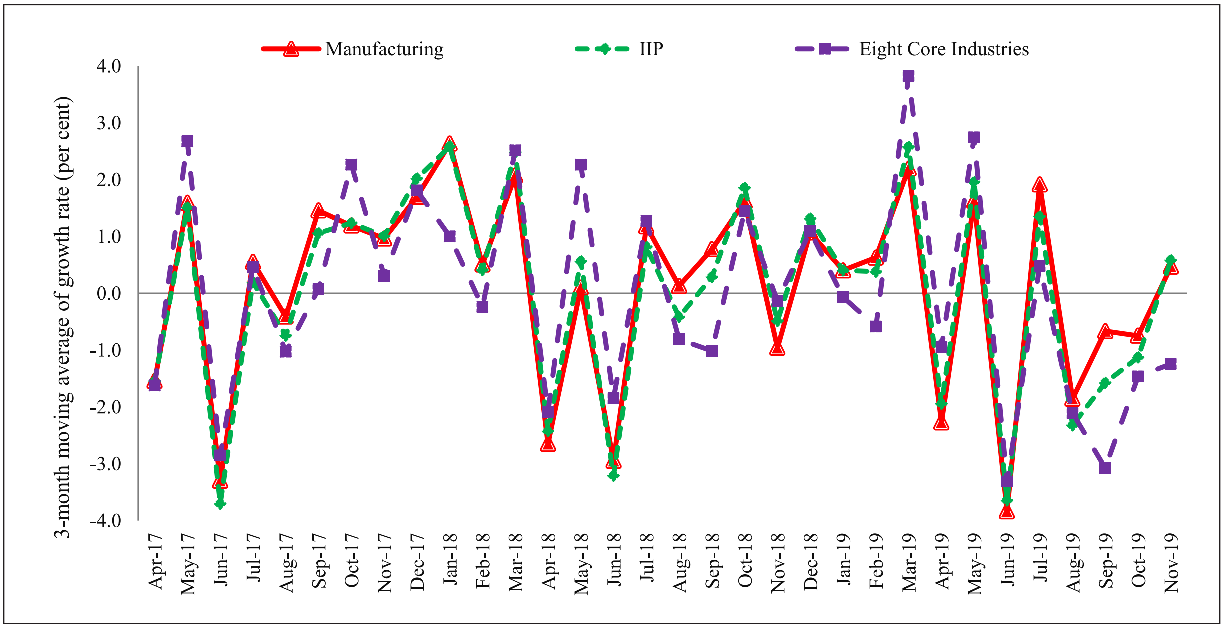
Table 3: Growth in the production of Eight Core Industries (in per cent)

Sector	Weight	2016-17	2017-18	2018-19	2018-19 (April-November)	2019-20 (April-November)
Coal	10.3	3.2	2.6	7.4	9.0	-5.3
Crude Oil	9.0	-2.5	-0.9	-4.1	-3.6	-5.9
Natural Gas	6.9	-1.0	2.9	0.8	-0.7	-3.1
Refinery Products	28.0	4.9	4.6	3.1	5.3	-1.1
Fertilizers	2.6	0.2	0.0	0.3	-1.3	4.0
Steel	17.9	10.7	5.6	5.1	3.6	5.2
Cement	5.4	-1.2	6.3	13.3	14.2	0.0
Electricity	19.9	5.8	5.3	5.2	6.6	0.7
Overall Index	**100**	**4.8**	**4.3**	**4.4**	**5.1**	**0.0**

Source: Office of the Economic Adviser, DPIIT

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 Eight 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 from 2017-18 to 2019-20 (in per cent)



Source: Survey Calculation using Office of the Economic Adviser, DPIIT and NSO data.

Performance of Central Public Sector Enterprises (CPSEs)

8.7 As per the Department of Public Enterprises, there are 348 CPSEs as on 31.03.2019, of this, 249 are in operation, 86 CPSEs are yet to start commercial operations and 13 CPSEs are under closure/liquidation. Out of 249 operating CPSEs, as many as 178

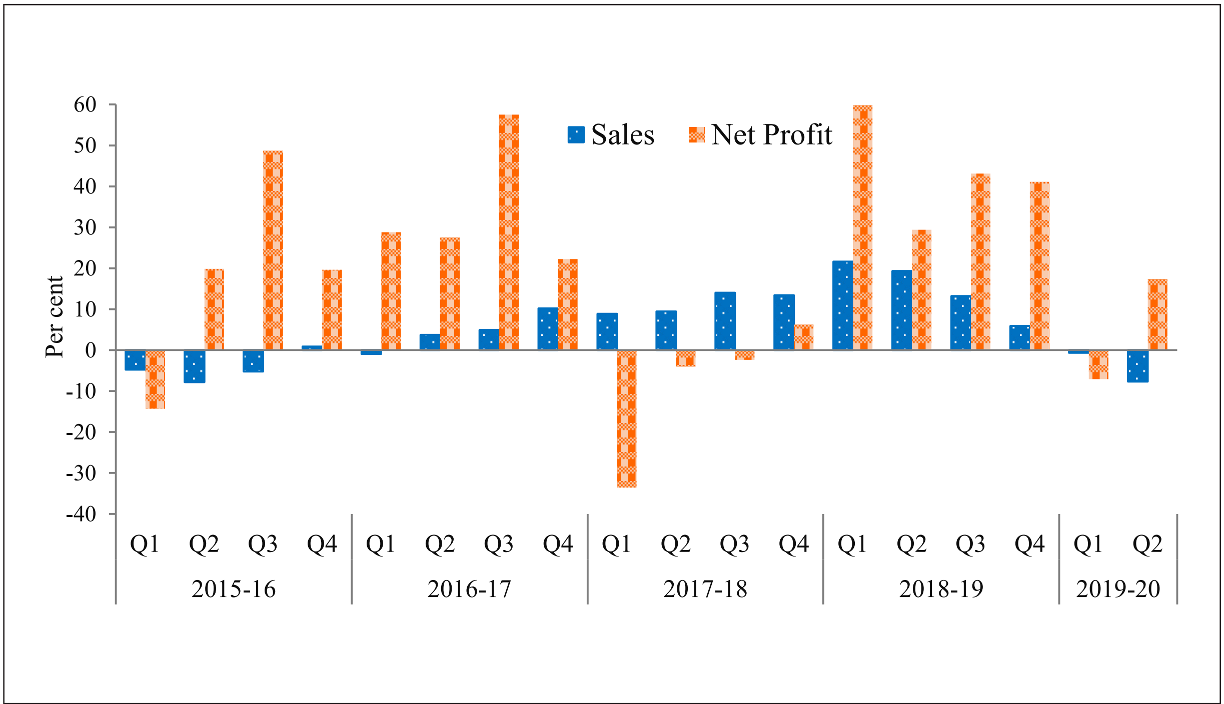
CPSEs showed profit during 2018-19, 70 CPSEs incurred losses during the year and 1 CPSE has shown neither profit nor loss. The total profit of profit making CPSEs (178) was ₹ 1.75 lakh crores in 2018-19. The total loss of loss making enterprises (70) stood at ₹ 31,635 crore during the year. The overall net profit of the 249 operating CPSEs went up by 15.52 per cent to ₹ 1.43 lakh crores in 2018-19 from ₹ 1.24 lakh crores in 2017-18. The contribution of CPSEs to the Central Exchequer increased by 4.67 per cent to ₹ 3.69 lakh crores in 2018-19 as against previous year of ₹ 3.52 lakh crores.

8.8 The cumulative investment (paid up capital plus long terms loans), which was ₹ 29 crores in 5 enterprises as on March 31, 1951, has gone up to ₹ 16.41 lakh crores in 335 CPSEs as on March 31, 2019. The increase in investment in all the CPSEs was 14.65 per cent in 2018-19 over 2017-18, and capital employed went up by 11.71 per cent over the same period.

Corporate Sector Performance

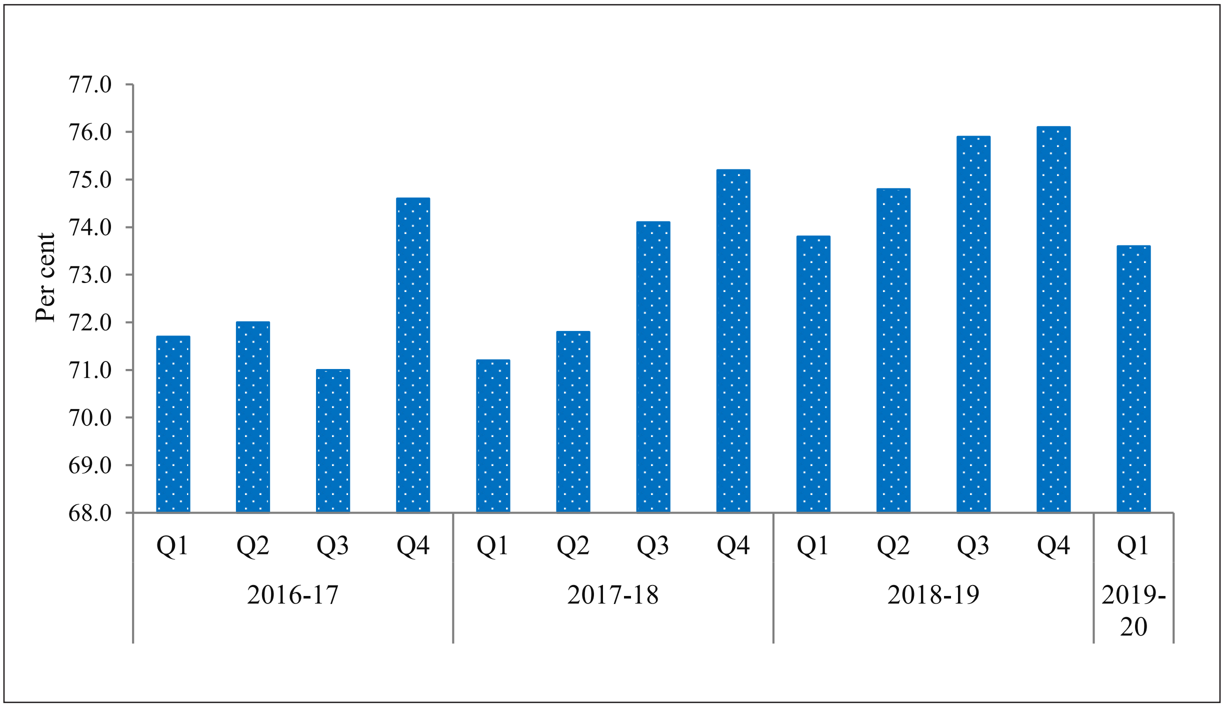
8.9 As per Reserve Bank of India (RBI) Studies on Corporate Performance, demand conditions for the manufacturing sector weakened in Q2 of 2019-20, with a contraction (y-o-y) in nominal sales. Petroleum products, iron and steel, motor vehicles and other transport equipment companies were the major contributors to slowdown. Sales growth (y-o-y) of over 1,700 listed private manufacturing companies contracted by 7.7 per cent in Q2 of 2019-20, after remaining in expansionary zone since Q2 of 2016-17. Net profit for the manufacturing sector contracted in Q1 of 2019-20, mainly due to a production slowdown. Net profit of corporate sector recovered in Q2 of 2019-20 and was 17.4 per cent (Figure 3). The capacity utilisation of India's manufacturing sector remains stable at 73.6 per cent in Q1 of 2019-20 as compared to 73.8 per cent in Q1 of 2018-19 (Figure 4).

Figure 3: Growth in sales and net profit of listed Manufacturing Companies in the Private Corporate Sector (in per cent)



Source: RBI.

Figure 4: Capacity utilisation of India's manufacturing sector (in per cent)



Source: RBI.

Gross Capital Formation in Industrial Sector

8.10 As per the data on national income, consumption expenditure, saving and capital formation released by NSO on January 31, 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. 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 4).

Table 4: 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: NSO.

Note:* - Third Revised Estimates, # - Second Revised Estimates, @ - First Revised Estimates.

Credit Flow to the Industrial sector

8.11 Growth in gross bank credit flow to the industrial sector, on a year-on-year (y-o-y) basis, rose to 2.7 per cent in September 2019 as compared to 2.3 per cent in September 2018. Credit flow to industries like wood & wood products, all engineering, cement & cement products, construction and infrastructure increased in September 2019 as compared to September 2018, while credit flow to mining & quarrying, textiles, petroleum, coal products & nuclear fuel, glass & glassware and basic metal & metal products contracted in the same period. Credit flow to industries like food processing, chemicals & chemical products, vehicles, vehicles parts & transport equipment registered lower growth in September 2019 as compared to September 2018 (Table 5).

Table 5: Growth of Industry-wise deployment of Gross Bank Credit (in Per cent) (Year-on-Year)

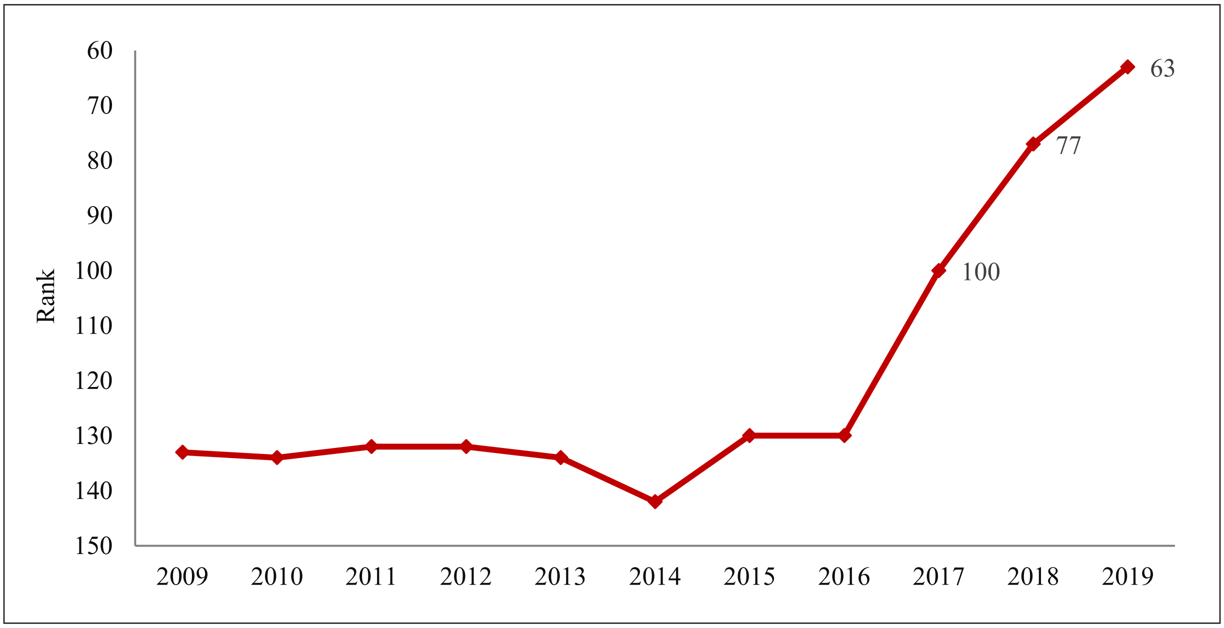
	March 2018	September 2018	March 2019	September 2019
Industry	0.7	2.3	6.9	2.7
Mining & Quarrying (incl. Coal)	19.7	29.8	1.1	-3.0
Food Processing	6.8	2.2	1.1	0.6
Textiles	6.9	1.3	-3.0	-5.7
Petroleum, Coal Products & Nuclear Fuels	9.4	18.5	-3.1	-4.2
Wood & Wood Products	3.3	6.4	10.2	7.1
Chemicals & Chemical Products	-5.5	11.7	17.5	2.6
Glass & Glassware	6.5	30.3	17.0	-8.0
All Engineering	3.8	3.8	8.6	4.4
Cement & Cement Products	-3.1	-10.4	5.9	17.5
Basic Metal & Metal Product	-1.2	-7.9	-10.7	-7.9
Vehicles, Vehicle Parts & Transport Equipment	7.0	9.1	1.4	6.9
Construction	9.5	8.7	10.4	10.5
Infrastructure	-1.7	4.7	18.5	7.2
Other Industries	4.2	-1.8	6.8	7.4

Source: RBI.

Ease of Doing Business

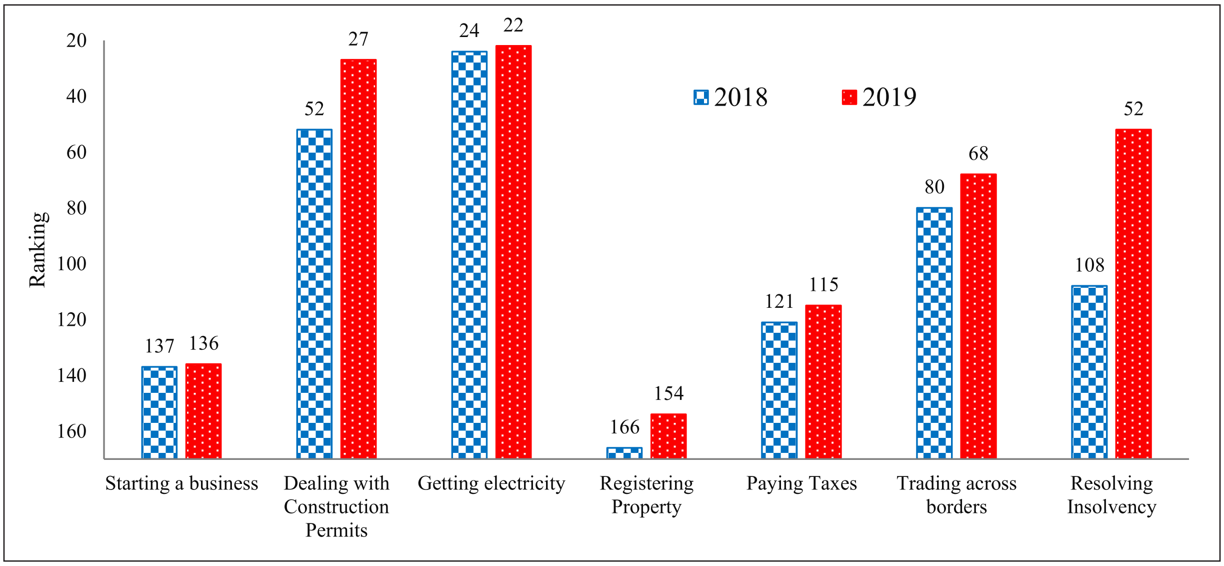
8.12 Government of India has taken several industry specific reform initiatives since 2014 that have significantly improved the overall business environment. In order to improve ease of doing business, the emphasis has been on simplification and rationalization of the existing rules and introduction of information technology to make governance more efficient and effective. The improvement in the business environment as a result of these reforms is reflected in India's considerably improved ranking to 63rd position among the 190 countries in the World Bank's Doing Business 2020 Report. This is a jump of 14 ranks over its previous rank of 77 (Figure 5). The ranking is based on 10 indicators which span the life-cycle of a business. India has improved its rank in 7 out of 10 indicators and has moved closer to international best practices (Figure 6).

Figure 5: India's ranking in World Bank Ease of Doing Business Reports



Source: World Bank.

Figure 6: India's Progress in Ease of Doing Business Reports Rankings

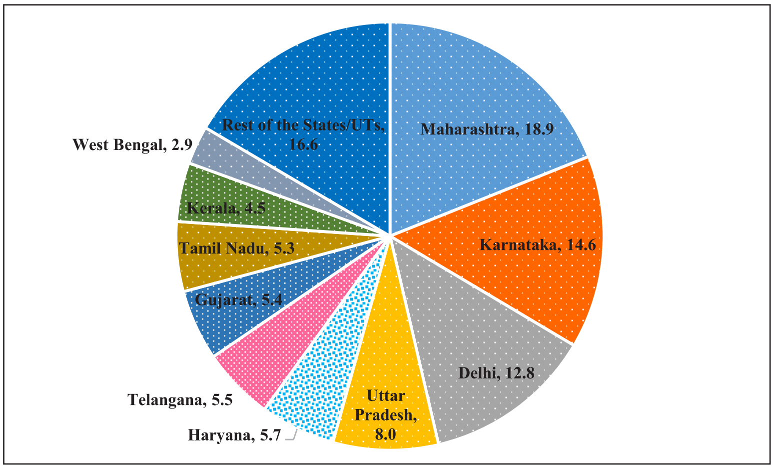


Source: World Bank.

Start-up India

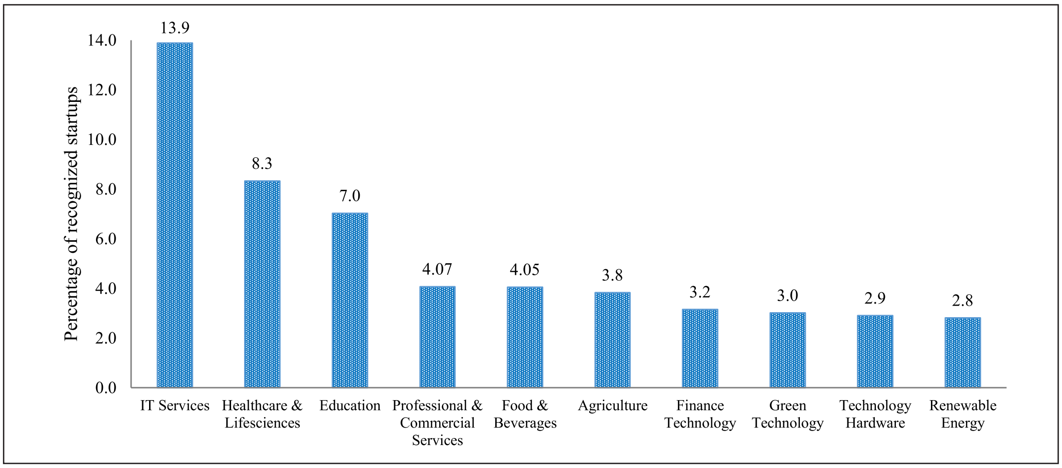
8.13 Startups drive economic growth, create employment and foster a culture of innovation. In order to promote innovation and entrepreneurship among enterprising youth, the Hon'ble Prime Minister of India had announced the "Startup India, Stand-up India" initiative on August 15, 2015. The initiative aims to create an ecosystem that is conductive for the growth of startups. A plan comprising 19 action points was unveiled on January 16, 2016. As on January 8, 2020, 27,084 startups were recognized across 551 districts, 55 per cent of which are from Tier I cities , 45 per cent from Tier II and Tier III cities. 43 per cent of recognized startups have at least one woman director. Steps have been taken for easing regulations such as exemptions from Income tax on investments raised by startups; implementation of 32 regulatory reforms to improve Ease of Doing Business for startups; self-certification regime for six labour laws and three environmental laws; and Startup India Hub as 'One Stop Shop' for the startup ecosystem in which 3,67,773 users have availed free Startup India learning Program to build business plans, etc. Maharashtra, Karnataka and Delhi are the top three performers in terms of State-wise distribution of recognized startups in India (Figure 7). As per industry-wise distribution of recognized startups, IT Services accounted for 13.9 per cent followed by Healthcare and Life Sciences (8.3 per cent) and education (7.0 per cent) (Figure 8).

Figure 7: Major State-wise distribution of recognized startups in India (in per cent)



Source: DPIIT.

Figure 8: Major Industry-wise distribution of recognized startups in India (in per cent)



Source: DPIIT.

Foreign Direct Investment (FDI)

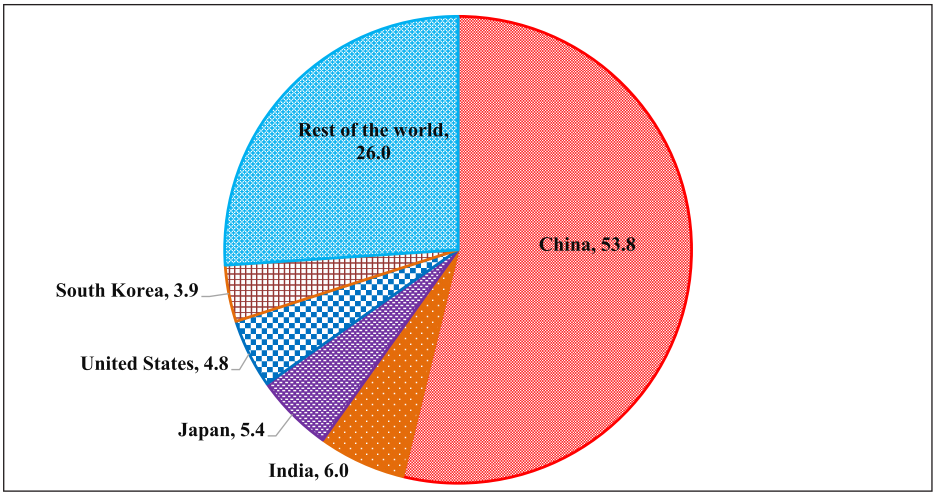
8.14 FDI is a major driver of economic growth as it enhances productivity by bringing capital, skills and technology to the host country. The Government is playing a proactive role in investment promotion through a liberal FDI policy. During 2019-20 (up to September, 2019), total FDI Equity inflows were US$26.10 billion as compared to US$22.66 billion during 2018-19 (up to September, 2019). Out of FDI Equity inflows of US$26.10 billion during 2019-20 (up to September, 2019), nearly 80 per cent have come mainly from Singapore, Mauritius, Netherlands, USA and Japan.

SECTOR WISE ISSUES AND INITIATIVES

Steel

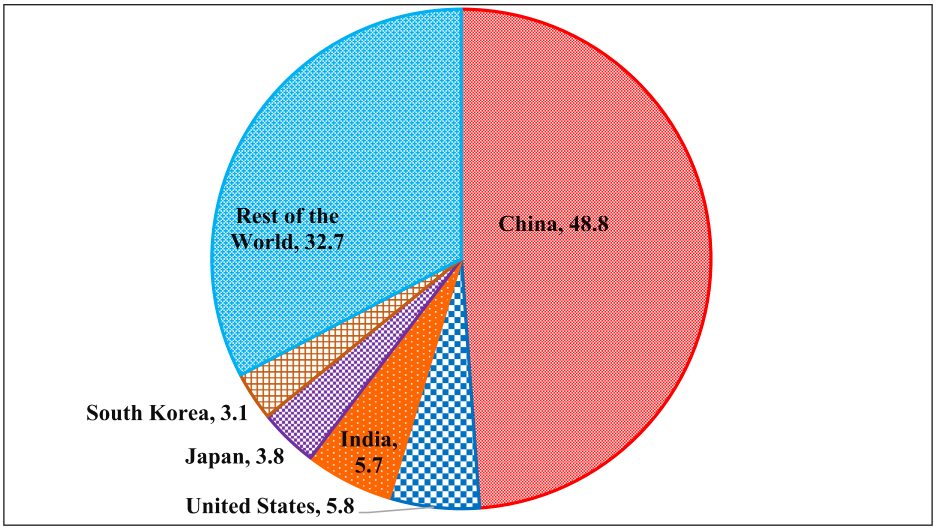
8.15 India stood at second position in the production of crude steel (Figure 9). It is also the third largest consumer of the finished steel after China and USA (Figure 10). However, its per capita consumption was only 74.1 kg during 2018-19 (Figure 11). During 2018-19, India produced 109.2 MT of crude steel and in the current financial year (FY) till October 2019, crude steel production was 64.3 MT, displaying a growth of 1.5 per cent over corresponding period of last year with utilisation capacity of 77.4 per cent. Similarly production of finished steel was 137.2 MT in 2018-19 and 59.73 MT during April-October 2019 (Figure 12).

Figure 9: Country wise share of Crude steel production for 2019 (January-November) (in per cent)



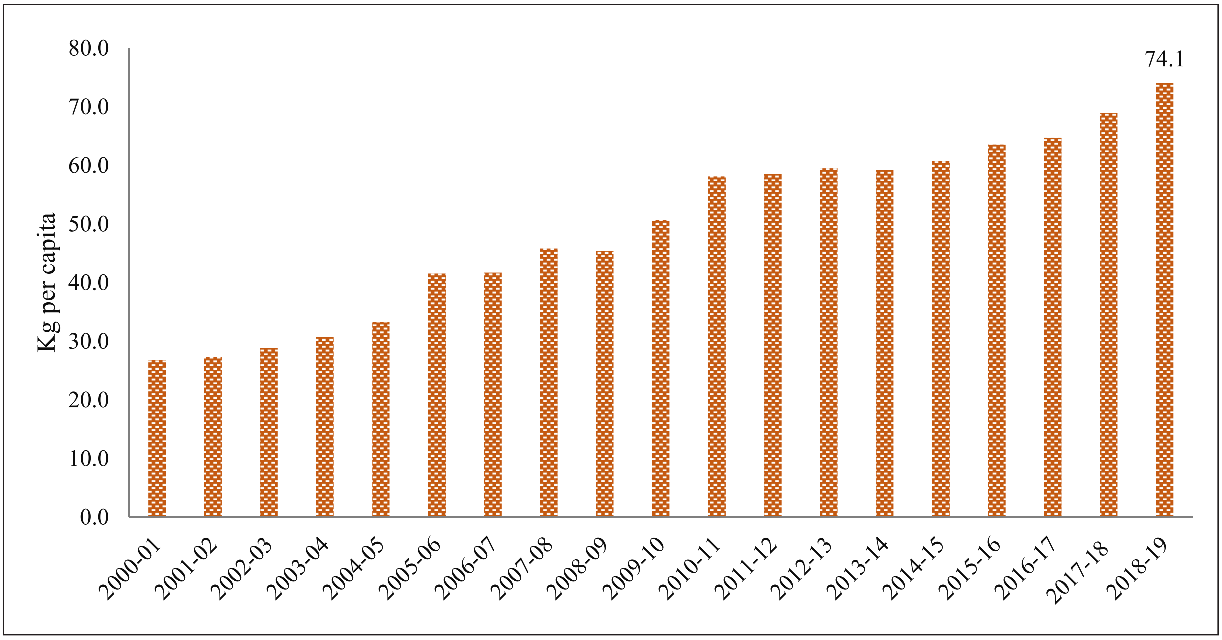
Source: World Steel Association.

Figure 10: Consumption of finished steel (in per cent) for 2018



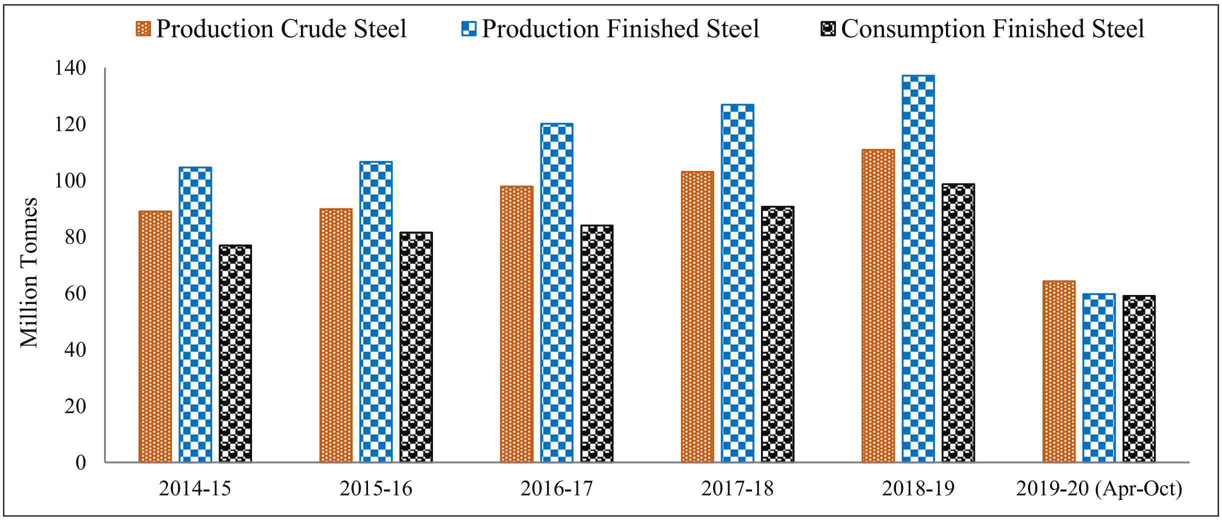
Source: World Steel Association.

Figure 11: Per capita consumption of total finished steel (Kg) for India



Source: Joint Plant Committee.

Figure 12: Production & Consumption of finished steel (Million Tonnes)

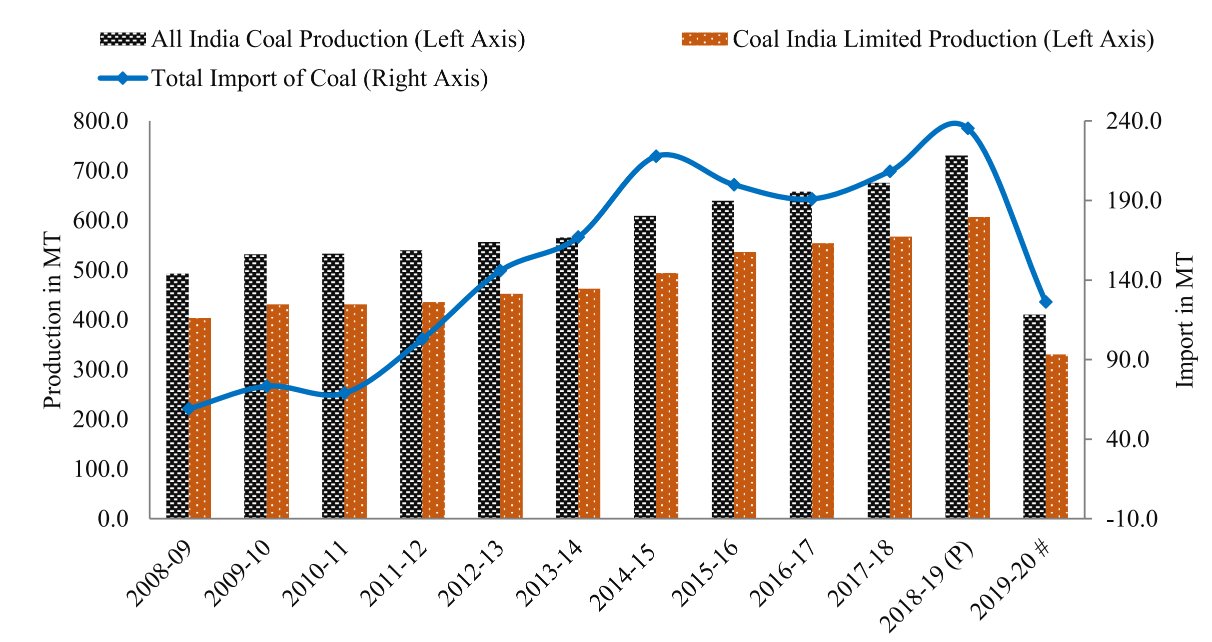


Source: Ministry of Steel.

Coal

8.16 Overall production of raw coal in India during the year 2018-19 was 730.4 million tonnes (MT) displaying a growth of 8.1 per cent. In the current year 2019-20 (April-November), all India coal production was 410.5 MT with a growth rate of (-) 5.3 per cent which is attributable to heavy and unseasonal rains. It is notable that during the first quarter coal production registered a positive growth and then took a dip when the rains set in. The gap between demand and supply of coal in the country is currently being met through coal imports by consuming sectors. As per available data (from Directorate General of Commercial Intelligence and Statistics), 126.20 MT of coal was imported during April 2019 to September 2019 (Figure 13).

Figure 13: Production and import of Coal in India (in million tonnes)



Source: Ministry of Coal.

Note: (P)- Provisional; #-Production figures upto November 2019 and import figures upto September 2019.

Micro, Small & Medium Enterprises (MSME)

8.17 Micro, Small & Medium Enterprises (MSMEs) contribute significantly in the economic and social development of the country by fostering entrepreneurship and generating largest employment opportunities at comparatively lower capital cost, next only to agriculture. Government is committed to supporting this critically important sector for better credit flow, technology upgradation, ease of doing business and market access. On 2nd November 2018, Hon'ble Prime Minister made 12 key announcements for faster growth of this sector and for promoting ease of doing business. These initiatives alongwith their status are given in Table 6.

Table 6: Status of key initiatives for faster growth of MSMEs and promoting ease of doing business.

S.N.	Initiative	Status
1	In-principle approval for loans up to ₹ 1 crore within 59 minutes through online portal.	1,59,422 number of loans, involving ₹ 49,330 crore have been sanctioned and 1,38,646 number of loans, involving ₹ 37,106 crore have been disbursed (up to October 2019).
2	Interest subvention of 2 per cent for all GST registered MSMEs on incremental credit up to ₹ 1 crore.	SIDBI has received and settled the claims of ₹ 18 crore from 43 Banks/NBFCs for the period (02.11.2018 – 31.03.2019).
3	All companies with a turnover of more than ₹ 500 crore to be mandatorily on TReDS platform to enable entrepreneurs to access credit from banks, based on their upcoming receivables.	There were 1881 non-compliant Companies, out of these 1881 non-compliant Companies identified by Ministry of Corporate Affairs for taking action, so far 329 companies have registered themselves on the TReDS portal.

4	All CPSUs to compulsorily procure at least 25 per cent from MSEs instead of 20 per cent of their total purchases.	During 2019-20 (up to October 2019), CPSUs have procured goods and services worth ₹ 15,936.39 crore from 59,903 MSEs and that is 28.26 per cent of the total procurement by CPSUs during the same period.
5	Out of the 25 per cent procurement mandated from MSEs, 3 per cent reserved for women entrepreneurs.	During 2019-20 (up to October 2019) procurement from 1471 women MSEs is of ₹ 242.12 crore and that is 0.43 per cent of the total procurement.
6	All CPSUs to compulsorily procure through GeM portal.	258 CPSUs/CPSBs have been on boarded/ registered on GeM portal post 02.11.2018. Total 57,351 MSE Sellers & Service providers registered on GeM portal and 50.30 per cent of orders value on GeM portal is from MSEs.
7	20 Technology Centers (TCs) and 100 Extension Centers (ECs) to be established at the cost of ₹ 6,000 crore.	Till date, six locations have been identified for TCs, RFP issued for PMC for 20 TCs, DPRs of 20 ECs approved and ₹ 99.30 crore are released. 10 more ECs planned in FY 2019-20.
8	Government of India to bear 70 per cent of the cost for establishing Pharma clusters.	Four districts viz. Solan (Baddi), Indore, Aurangabad and Pune were selected for assisting pharma clusters for developing common facilities. In principle approval was granted for the proposal from Pune on 31.01.2019.
9	Returns under 8 labour laws and 10 Union regulations to be filed once in a year.	All regional Heads were advised to vigorously reach out to the employers in their region to make them aware about the facility of filing Online Unified Annual Return on Shram Suvidha Portal under 8 Labour Laws and 10 Central Rules.
10	Establishments to be visited by an Inspector will be decided through a computerized random allotment.	Total 3080 inspections have been conducted which were assigned through computerized random allotment system and all inspection reports have been uploaded on Shram Suvidha Portal.
11	Single consent under air and water pollution laws. Returns will be accepted through self-certification and only 10 percent MSME units to be inspected.	All the operations were stayed by Hon'ble High court of Delhi. As of now the matter is sub-judice.
12	For minor violations under the Companies Act, entrepreneurs no longer have to approach court but can correct them through simple procedures.	So far action has been taken against two companies which fall in the category of MSME by imposition of penalty instead of filing case in the court as per Ordinance/Amendment Act.

Source: Ministry of Micro, Small and Medium Enterprises

Textile and Apparels

8.18 Textiles contributed 18.0 per cent of manufacturing and 2.0 per cent of GDP in 2017-18. The share of textiles and clothing in India's total exports was 12 per cent in 2018-19. The sector is the biggest employer after agriculture and it employs 4.5 crore people directly and 6 crore people in allied sectors. Estimated man-made fibre and filament yarn production increased by 4 per cent and 8 per cent, respectively, during April-August

2019. Estimated cloth production by mill sector declined by about 4 per cent during April-August 2019 (Table 7). Exports of textile and clothing products including handicrafts from India have increased to US$40.4 billion in 2018-19 from US$ 39.2 billion in 2017-18 registering a growth of 3 per cent (Table 8).

Table 7: Estimated Production of man-made fibre, filament yarn, spun yarn and cloth

Period	Man-made fibre	Man-made filament yarn	Cotton yarn	Blended & 100% Non-cotton yarn	Total Spun Yarn	Cloth		
						Mill sector *	Decen-tralized sector**	Grand Total (Excluding Khadi, Wool & Silk)
	Kg	Kg	Kg	Kg	Kg	Sq. mtr	Sq. mtr	Sq. mtr
2015-16	1347	1164	4138	1527	5665	2315	62269	64584
2016-17	1364	1159	4055	1604	5659	2264	61216	63480
2017-18	1319	1187	4064	1616	5680	2157	64688	66845
2018-19	1443	1159	4182	1680	5862	2012	68034	70046
2018-19#	603	476	1758	695	2453	873	27938	28811
2019-20 (P)#	629	512	1677	710	2387	837	28209	29046
Variation 2019-20 Over 2018-19 (per cent)#	4.3	7.6	-4.6	2.2	-2.7	-4.1	1.0	0.8

Source: Ministry of Textiles.
Note: (P) - Provisional, *- Based on statistical data received from units, ** - Based on set of conversion ratio of yarn to fabric, #- (April-August).

Table 8: Exports of textile and clothing products including handicrafts from India (Million US$)

	2015-16	2016-17	2017-18	2018-19
Textile & Apparel	35,995	35,372	35,666	36,627
Handicrafts	3,293	3,639	3,573	3,804
Total textile & clothing including Handicrafts	39,288	39,011	39,239	40,431
India's overall exports	2,62,290	2,75,852	3,03,376	3,29,536
Share of textile & clothing exports in overall exports (in per cent)	15	14	13	12

Source: Ministry of Textiles.

INFRASTRUCTURE

8.19 It is well-accepted that investment in infrastructure is necessary for growth. Power shortages lead to dependence on expensive captive power, which in turn impels high costs and lack of competitiveness for the economy. Inadequate transport infrastructure leads to bottlenecks both in the supply of raw materials as well as movement of finished goods to the marketplace. The price that farmers get for their produce is depressed if there is no connectivity through good quality rural roads, which in turn keeps rural incomes depressed negating the fruits of high overall growth performance. For all these reasons, provision of adequate infrastructure is essential for growth and for making growth inclusive. India recently launched the National Infrastructure Pipeline for the period FY 2020-2025 (Box 1).

Box 1: National Infrastructure Pipeline 2020-2025

Investment in Infrastructure is necessary for growth. To achieve the GDP of $5 trillion by 2024-25, India needs to spend about $1.4 trillion (₹ 100 lakh crore) over these years on infrastructure. The challenge is to step-up annual infrastructure investment so that lack of infrastructure does not become a binding constraint to the growth of the Indian economy. To implement an infrastructure program of this scale, it is important that projects are adequately prepared and launched.

To draw up the National Infrastructure Pipeline (NIP) for each of the years from FY 2019-20 to FY 2024-25, an inter-ministerial Task Force was set up in September 2019 under the chairmanship of Secretary (DEA), Ministry of Finance.

NIP is expected to enable well-prepared infrastructure projects which will create jobs, improve ease of living, and provide equitable access to infrastructure for all, thereby making growth more inclusive. NIP also intends to facilitate supply side interventions in infrastructure development to boost short-term as well as the potential GDP growth. Improved infrastructure capacities will also drive competitiveness of the Indian economy.

The Finance Minister released the Report of the Task Force on National Infrastructure Pipeline (abridged version) on 31.12.2019. The NIP has projected total infrastructure investment of ₹ 102 lakh crore during the period FY 2020 to 2025 in India. Energy (24 per cent), Roads (19 per cent), Urban (16 per cent), and Railways (13 per cent) amount to over 70 per cent of the projected capital expenditure during the said period.

As per the NIP, Central Government (39 per cent) and State Government (39 per cent) are expected to have equal share in funding of the projects followed by the Private Sector (22 per cent). It is expected that private sector share may increase to 30 per cent by 2025. Out of the total expected capital expenditure of ₹ 102 lakh crore, projects worth ₹ 42.7 lakh crore (42 per cent) are under implementation, projects worth ₹ 32.7 lakh crore (32 per cent) are in conceptualization stage and rest are under development. Hence about two-thirds of the pipeline is already firmed up. It is also expected that projects of certain states would be added to the pipeline in due course. The sector wise break-up of NIP projects is as follows:

Ministry/ Department	FY 20-25 (Amount in ₹ Crore)
Power	11,75,995
Renewable Energy	9,29,500
Atomic Energy	1,54,088

Petroleum and Natural Gas	1,94,666
Total Energy	**2,454,249**
Roads	19,63,943
Railways	13,68,523
Ports	1,00,923
Airports	1,43,398
Urban (AMRUT, SMART Cities, MRTS, Affordable Housing, Jal Jeevan Mission)	16,29,012
Telecommunication	3,20,498
Irrigation	7,72,678
Rural Infrastructure	
Rural Infrastructure	4,10,955
Water and Sanitation	3,61,810
Total Rural Infrastructure	**7,72,765**
Agriculture Infrastructure	54,298
Food Processing Industries	1,255
Food and Public Distribution	5,000
Total Agriculture & Food Processing Infrastructure	**60,553**
Higher Education	1,18,348
School Education	37,791
Health and Family Welfare	1,68,622
Sports	7618
Tourism	24,321
Total Social Infrastructure	**3,56,701**
Industries and Internal Trade	2,99,237
Steel	8,2-25
Total Industrial Infrastructure	**3,07,462**
Total (₹ crore)	**102,50,704#**

Note: #- As on 31.12.2019. Subject to change as more data becomes available.

The Task Force has given its recommendations on required changes to several key sectoral policies and other reform initiatives by the Central and State Governments such as developing a robust bond market for infrastructure companies, speedy resolution of infrastructure disputes, optimal risk sharing through better and balanced PPP contracts, and sanctity and enforceability of contracts.

The NIP captures the infrastructure vision of the country for the period FY20-25. This is the first-ever exercise undertaken in the country. However, it is recognized that financing of the National Infrastructure Pipeline would be a challenge. It is hoped that a bouquet of well-prepared projects would attract investment from Central and State Governments, Urban Local Bodies, Banks and Financial Institution, PE funds, and private investors, both local and foreign.

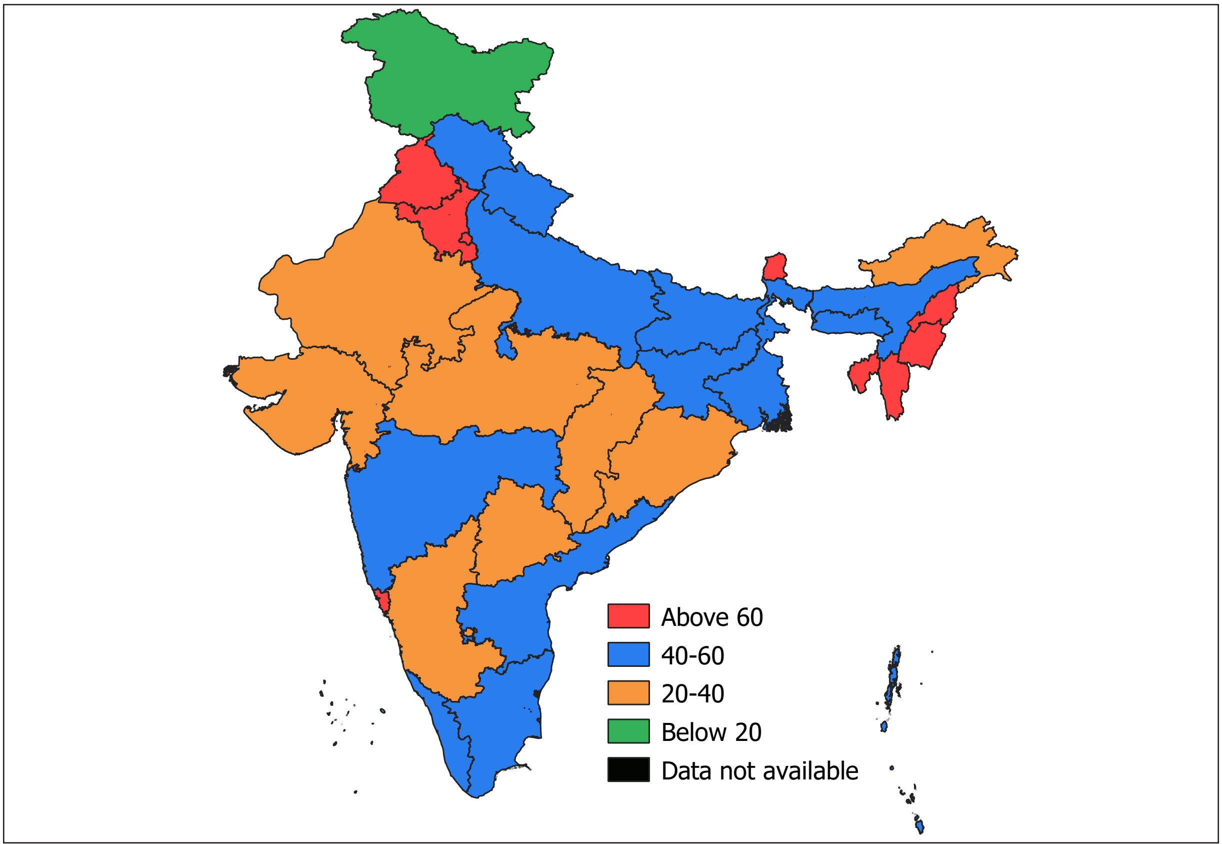
SECTORAL DEVELOPMENTS

Road Sector

8.20 Road transport is the dominant mode of transportation in terms of its contribution to Gross Value Added (GVA) and traffic share. The share of transport sector in the GVA for 2017-18 was about 4.77 per cent of which the share of road transport is the largest at 3.06 per cent, followed by the share of the Railways (0.75 per cent), air transport (0.15 per cent) and water transport (0.06 per cent). Similarly, as per the National Transport Development Policy Committee Report, as of 2011-12, road transport is estimated to handle 69 per cent and 90 per cent of the countrywide freight and passenger traffic, respectively. The Ministry of Road Transport & Highways (MoRTH) is mandated with the development and maintenance of road networks especially the National Highways as well as the implementation of the Motor Vehicle Act under which it formulates broad policies relating to road transport.

8.21 Road Network in the Country: A good road network is an essential requirement for the rapid growth of the economy. Roads provide connectivity to remote areas, open up backward regions and facilitate access to markets, trade and investment. Roads should not be looked at in isolation, but as part of an integrated multi-modal transport system, which provides crucial links with airports, railway stations, ports and other logistical hubs. As on 31.3.2018, India had a road network of about 59.64 lakh km. The total length of National Highways was 1.32 lakh km as on March 1, 2019. Its State-wise density is given in Map 1. The pace at which roads

Map 1: State/ UT-wise density of National Highways (NH) as on 01.03.2019 (in Kms per 1,000 SQ Km of Area)



Source: NHAI website.

have been constructed has grown significantly from 17 kms per day in 2015-16 to 29.7 kms per day in 2018-19. However, the pace seems to have moderated in 2019-20 (Table 9).

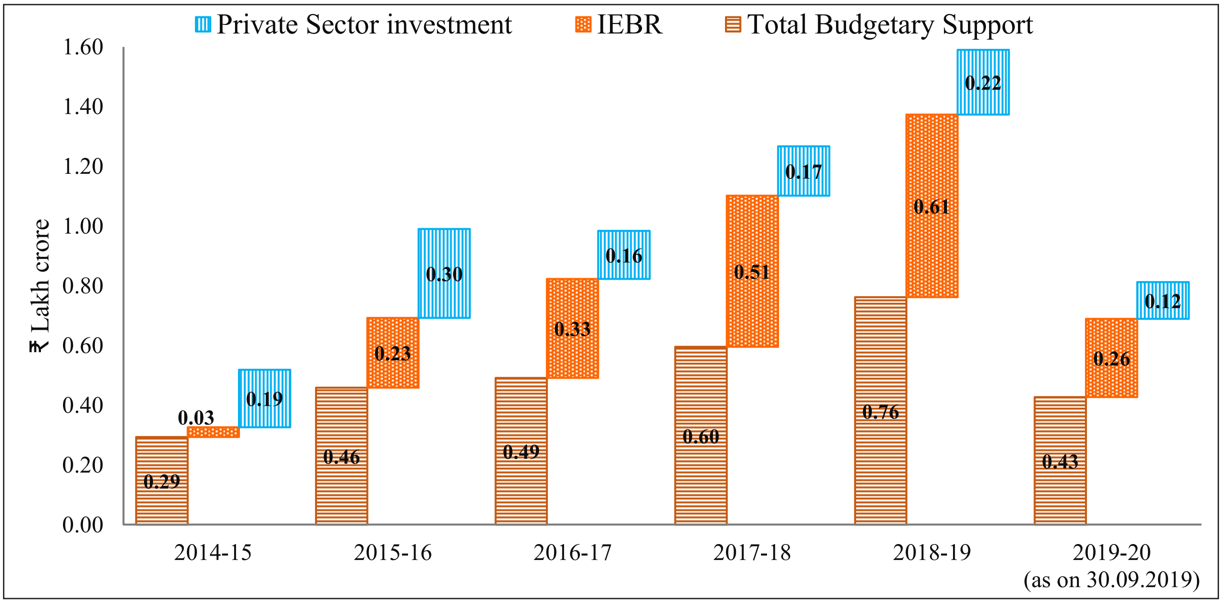
8.22 Total investment in the Roads and Highway sector has gone up more than three times in five year period of 2014-15 to 2018-19 (Figure 14).

Table 9: Road Length Awarded & Constructed (Length in km)

	2015-16	2016-17	2017-18	2018-19	2019-20 #
Award of NHs/Road projects	10,098	15,948	17,054	5,494	2,103
Construction of NHs/Roads	6,061	8,231	9,829	10,855	4,622
Road construction per day	17	23	27	29.65	12.7

Source: MoRTH.
Note: # - As on 30.09.2019.

Figure 14: Investment in Road Sector (in ₹ Lakh crore)



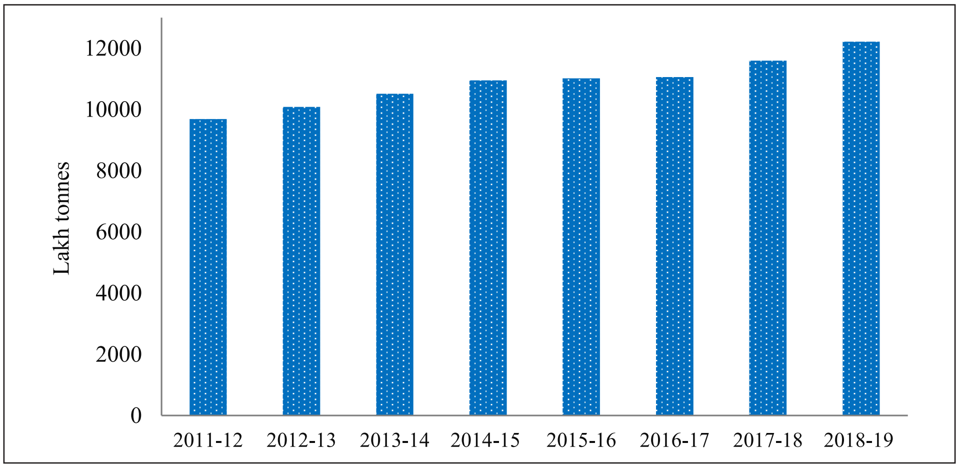
Source: MoRTH, Note: IEBR - Internal and Extra Budgetary Resources.

Railways

8.23 Indian Railways (IR) with over 68,000 route kms is the third largest network in the world under single management. During the year 2018-19, Indian Railways carried 120 crore tonnes of freight and 840 crore passengers making it the world's largest passenger carrier and 4th largest freight carrier. Revenue Earning Freight loading by IR during 2018-19 was 12,215 lakh tonnes as against 11,596 lakh tonnes during 2017-18, registering an increase of 5.34 per cent (Figure 15). Passengers originating was 84,390 lakh in 2018-19 as compared to 82,858 lakh in 2017-18, registering an increase of 1.85 per cent in 2018-19 over the previous year (Figure 16).

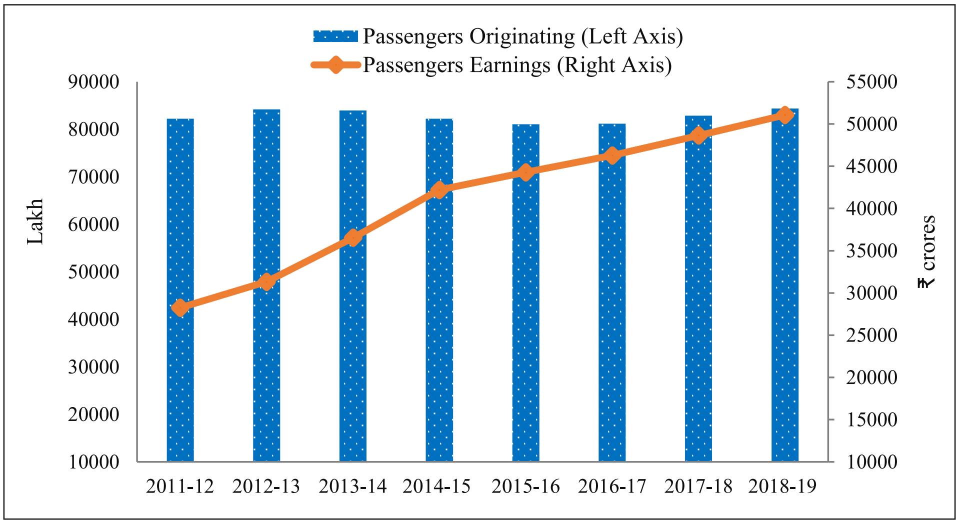
8.24 Rail Safety: Safety is accorded the highest priority by Indian Railways and steps are being undertaken on a continuous basis to prevent accidents and to enhance safety of the passengers. During 2018-19, consequential train accidents decreased from 73 to 59 in comparison to the corresponding period of the previous year. In the year 2019-20 (April - October 2019), 41 consequential train accidents have occurred (Table 10).

Figure 15: Revenue Earning Freight loading Originating traffic (lakh tonnes) (excluding loading by Konkan Railways)



Source: Ministry of Railways.

Figure 16: Passengers originating (in lakh) and Passengers Earnings ₹ Crores) (includes Metro Railway/ Kolkata)



Source: Ministry of Railways.

Table 10: Rate of occurrence of rail accidents

Type of Accident	2016-17	2017-18	2018-19	2019-20 (April to October)
Collision	5	3	0	3
Derailments	78	54	46	29
Manned Level Crossing Accidents	0	3	3	1
Unmanned Level Crossing Accidents	20	10	3	0
Fire in Trains	1	3	6	7
Miscellaneous	0	0	1	1
Total	104	73	59	41

Source: Ministry of Railways.

8.25 Cleanliness and environmental Initiatives by Indian Railway: Indian Railways cover over 8,700 stations and carry around 230 lakh passengers daily with clientele of varied socio-economic backgrounds. Cleanliness is a continuous process and every endeavour is made to keep the stations and coaches in properly maintained and clean condition. Special Cleanliness Campaigns under Swachh Bharat Abhiyan were launched by Indian Railways on October 2, 2014. Regular intensive campaigns/drives have been organized since then by the Indian Railways with the sole objective to achieve significant and sustainable improvements in cleanliness standards. Progress made under Swachh Rail, Swachh Bharat is given in Table 11.

Table 11: Progress of Swachh Rail, Swachh Bharat

Activity	Status as on 31.03.2015	Status as on 31.03.2019	Status as on 31.10.2019
Bio-toilets in passenger Coaches (Numbers)	19,746	1,95,917	2,26,000
Mechanized cleaning contracts at Stations	584 stations	890 stations	940 stations
Plastic bottle crushing machines	Nil	128 stations	215 stations
Rag picking contracts	877 stations	1,280 stations	1,300 stations
Dustbins	Provided at some stations only	Provided at all major stations	Provided (separate for dry/wet waste) at all major stations
EMS(Environment Management System) (ISO: 14001) certification of Railway Stations	Nil	8 stations	75 stations
Funds allocated for station sanitation (₹ crore.)	294	643	643

Source: Ministry of Railways.

8.26 Modernization of stations: Modernization/upgradation of Railway stations in Indian Railways is a continuous and on-going process. 1,253 stations have been identified for development under Adarsh Station Scheme and are planned to be developed by 2019-20. A dedicated SPV, Indian Railway Station Development Corporation (IRSDC) Limited has been set up to carry out modernization of railway stations. IRSDC is working on modernization of many stations on PPP mode.

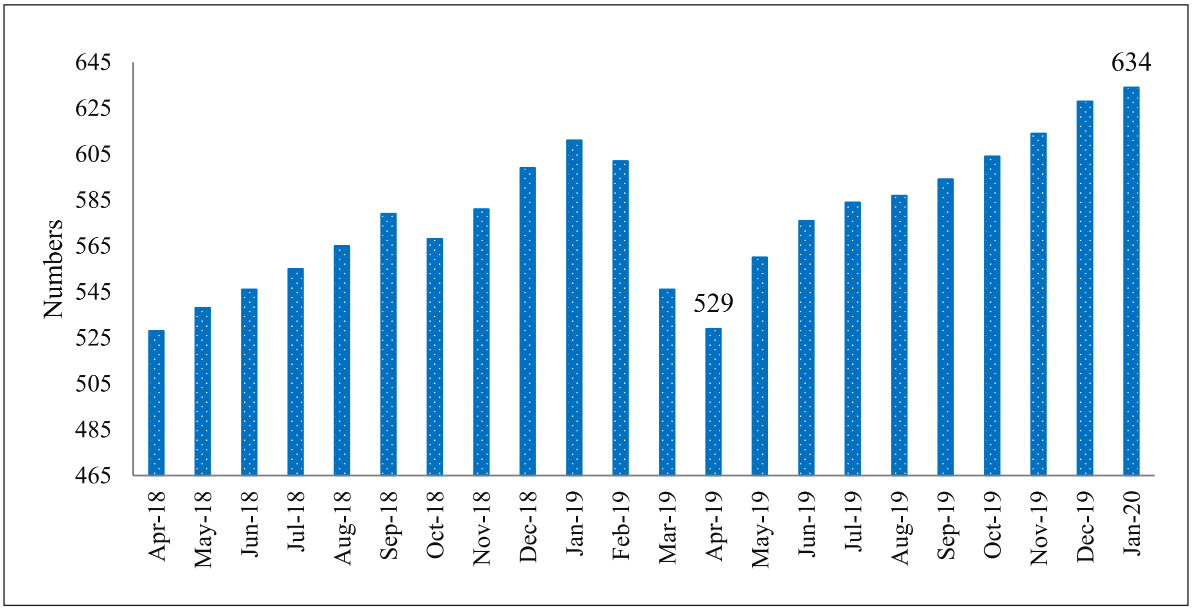
Civil Aviation

8.27 India is the third largest domestic market for civil aviation in the world. India has 136 commercially-managed airports by Airports Authority of India (AAI) and 6 under Public-Private Partnerships (PPP) for Operation, Maintenance and Development of airports. The airline operators in India have scaled up their aircraft seat capacity from an estimated 0.07 annual seats per capita in 2013 to 0.12 in 2018. The comparable estimates for China, the second largest domestic market in the world, over this period were 0.33 in 2013 and 0.49 in 2018, while those of the United States of America, the largest domestic market, were 2.59 in 2013 and 2.95 in 2018.

8.28 Indian aviation re-established its resilience in the year 2019-20. Despite a large airline suspending operations on April 17, 2019, the sector swiftly sprung back to fill the void created in passenger and air cargo capacity (Figure 17). The trends in total passenger (domestic and international) and air cargo handled at airports are depicted in Figure 18 and 19, respectively. Capacity utilization is also being augmented by way of automation at airports. Overall objective is to meet the growing demand and set global best practices and performance quality standards. A total of 43 airports have been operationalized since the scheme for operationalizing unserved airports (Udan) was taken up, of which 4 were done in FY 2019-20. On airport connectivity, India stood first along with 7 others (USA, China, Japan, UK, etc.) in the Global Competitiveness Report 2019 of World Economic Forum.

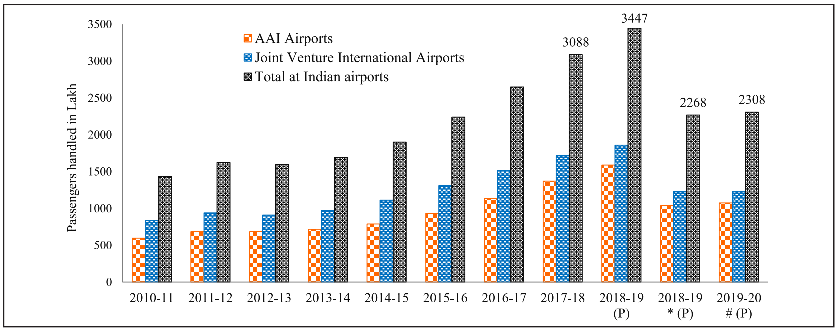
8.29 To ease the strain on existing airport capacities, 100 more airports are to be made operational by FY 2023-24 (Figure 20). Besides using 46 idle airstrips, 16 private greenfield airports, 15 AAI airports, 31 heliports, and 12 waterdromes would be developed. To bring in efficiency and resources, six airports (Ahmedabad, Guwahati, Jaipur, Lucknow, Mangalore, and Thiruvananthapuram) have been taken up for development under PPP mode. Five new greenfield airports [Durgapur (West Bengal), Shirdi (Maharashtra), Pakyong (Sikkim), and Kannur (Kerala) and Kalaburagi/Gulbarga (Karnataka)] were successfully operationalized this year. To continue with the high growth trajectory, the Government has been providing a congenial environment so that the Indian carriers double their fleet from about 680 aircraft (number of aircrafts endorsed on Scheduled Airlines) at the close of November 2019 to over 1,200 by FY 2023-24. This would be achieved by easing leasing and financing from Indian shores in conformance with the provisions of the Cape Town Convention and Protocol on Aircraft Equipment, efficient use of air traffic rights, encouraging domestic and international passenger and goods transfers, and rationalizing the tax regime.

Figure 17: India's Scheduled Operational Commercial Fleet (in Numbers)



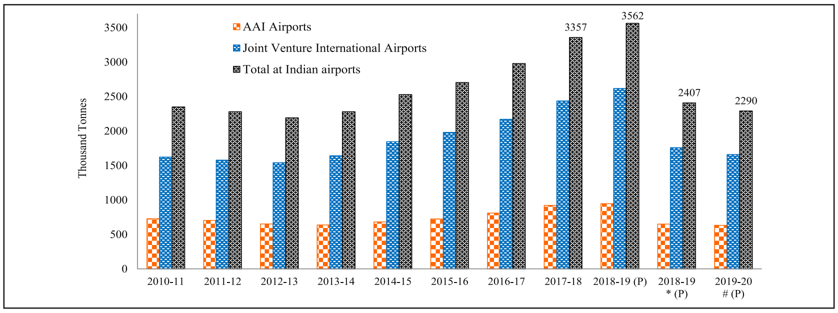
Source: Ministry of Civil Aviation.

Figure 18: Passengers handled by Indian Airports (in lakh)



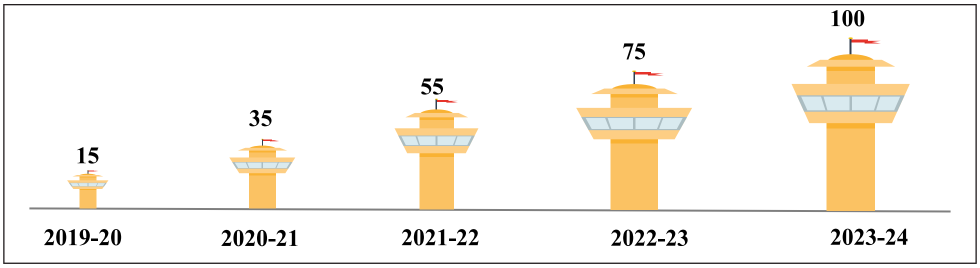
Source: Ministry of Civil Aviation.
Note: (P) - Provisional, * - (April to November 2018), # - (April to November 2019)

Figure 19: Cargo handled by Indian Airports (in thousand tonnes)



Source: Ministry of Civil Aviation.
Note: (P) - Provisional, * - (April to November 2018), # - (April to November 2019)

Figure 20: Additional Airport Capacity to be Developed (cumulative number of airports)



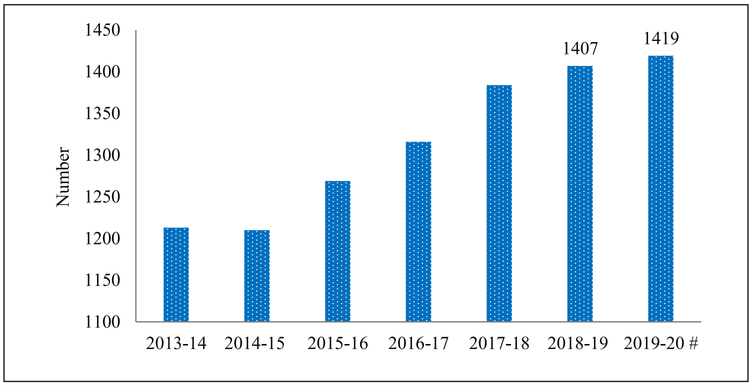
Source: Ministry of Civil Aviation.

Shipping

8.30 Shipping is essential to both commodity and services trade of any country. Around 95 per cent of India's trade by volume and 68 per cent in terms of value is transported by sea. The performance of the global shipping industry is generally mirrored by Indian shipping. India's shipping tonnage was only 1.92 lakh Gross Tonnage (GT) on the eve of independence. It increased gradually thereafter, but was practically stagnant at around 70 lakh GT till the beginning of 2004-05. However, the tonnage tax regime introduced by the Government of India in that year boosted the growth of the Indian fleet as well as its tonnage. However, it is an undeniable fact that the after-effects of the global economic downturn are still having negative effect on the global shipping industry in general and Indian Shipping industry in particular.

8.31 As on 30th September, 2019, India had a fleet strength of 1,419 ships (Figure 21). Despite one of the largest merchant shipping fleet among developing countries, India's share in total world dead weight tonnage (DWT) is only 0.9 per cent as on January 1, 2019 according to Institute of Shipping Economics and Logistics. The existing Indian fleet is also aging, with the average age increasing from 15 years in 1999 to 19.71 years as on October 1, 2019 (42.06 per cent of the fleet is 21 years and above and 12.49 per cent is in the 16 to 20 year age group).

Figure 21: Fleet strength of ships (in number)



Source: Ministry of Shipping.
Note: # - As on 30 September 2019

8.32 Ports Sector: The Major Ports in the country have an installed capacity of 1,514.09 MTPA as in March, 2019 and handled traffic of 699.09 MT during 2018-19. While increasing the capacity of major ports, Ministry of Shipping has been striving to improve the operational efficiencies through mechanization, digitization and process simplification. As a result key efficiency parameters have improved considerably. The Average Turnaround Time in 2018-19 improved to 59.51 Hrs as against 64.43 Hrs in 2017-18. The Average Output Per Ship Berthday has increased from 15,333 Tonnes in 2017-18 to 16541 Tonnes in 2018-19 (Table 12).

Table 12: Performance Indicators of Major Ports in India

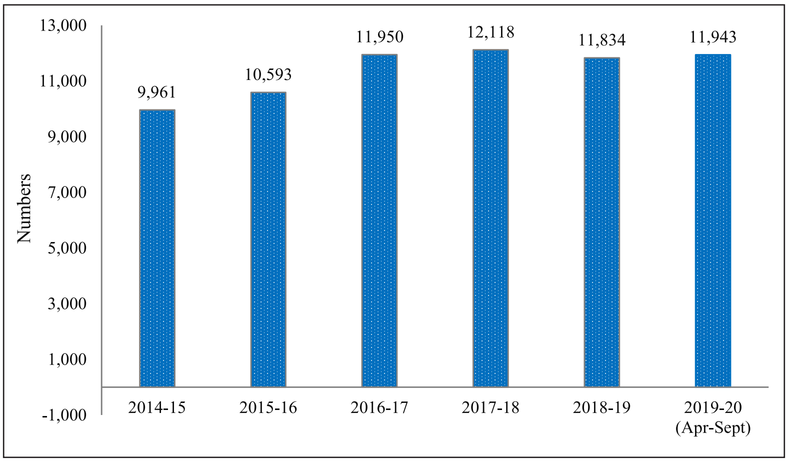
Indicators	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20 (upto September, 2019)
Traffic Handled (in MMT)	545.79	555.49	581.34	606.47	648.4	679.37	699.09	348.45
Average Turn Around Time (in Hrs)	101.76	93.6	96	87.36	82.32	64.32	59.51	64.69
Average Output per-ship per berth day (in tonnes)	11800	12468	12458	13156	14576	15333	16541	16014
Operating surplus ₹ Crore)	1807.43	2518.9	3599.4	4296.56	4979.58	5856.33	6424.36	Not Available

Source: Ministry of Shipping.

Telecom Sector

8.33 Total telephone connections in India grew by 18.8 per cent from 9,961 lakh in 2014-2015 to 11,834 lakh in 2018-19. As on 30 September 2019, the total subscription stood at 11,943 lakh (Figure 22) of which 5,147 lakh connections were in the rural areas and 6,796 lakh in the urban areas. Landline telephone connections were at 206 lakh while the number of wireless telephone connections stood at 11,736 lakh at the end of September 2019. The wireless telephony now constitutes 98.27 per cent of all subscriptions whereas share of landline telephones now stands at only 1.73 per cent. The overall tele-density in India stands at 90.45 per cent, the rural tele-density being 57.35 per cent and urban teledensity being 160.71 per cent at the end of September 2019. The private sector dominates with a share of 88.81 per cent (10,606 lakh connections) at the end of September, 2019 while the share of public sector was 11.19 per cent (1,336 lakh connections).

Figure 22: Total telephone connections from 2014-15 to 2019-20 (April-September) (in lakh)



Source: Department of Telecommunication.

8.34 Internet and broadband penetration in India has kept a rapid pace. The number of internet subscribers (both broadband and narrowband put together) stood at 6,653 lakh at the end of June 2019 as compared to 2,516 lakh in 2014. The number of mobile internet subscribers was 6,436 lakh at the end of June 2019 while the number of wireline internet subscribers was 217 lakh. Total broadband connections increased by about ten times, from 610 lakh in 2014 to 5,946 lakh in June 2019. This has accelerated the growth in internet traffic, with data usage touching the highest ever level of 462 lakh terabytes in the year 2018. India is now the global leader in monthly data consumption, with average consumption per subscriber per month increasing 157 times from 62 MB in 2014 to 9.8 GB in June 2019. The cost of data has also reduced substantially, enabling affordable internet access for millions of citizens.

8.35 Challenges: There are 4 major players in the sector - 3 in the private sector and BSNL & MTNL in the public sector, operating in mutually exclusive zones. Since 2016, the sector has witnessed substantial competition and price cutting by the Telecom Service Providers (TSPs) creating financial stress in the sector. As a result, the sector is experiencing consolidation. While some operators have filed for bankruptcy, others have merged, in their quest to improve viability. The price of data in the country is among the lowest in the world. For the quarter ending June

2019, the price of data was ₹ 7.7 per GB as compared to ₹ 200 per GB in June 2016. The Average Revenue Per User (ARPU) for GSM based mobile services has also gone down substantially from ₹ 126 in June 2016 to ₹ 74.30 in June 2019.

8.36 BSNL and MTNL are also affected by the tariff war that has impacted their cash flow resulting in mounting losses. The Government has drawn up a plan to revive these PSUs. The revival plan consists of several measures including reduction of staff cost through Voluntary Retirement Scheme, allotment of spectrum for 4G services, monetization of land/building, tower and fiber assets of BSNL/MTNL, debt restructuring through sovereign guarantee bonds and 'in-principle' approval for merger of BSNL and MTNL.

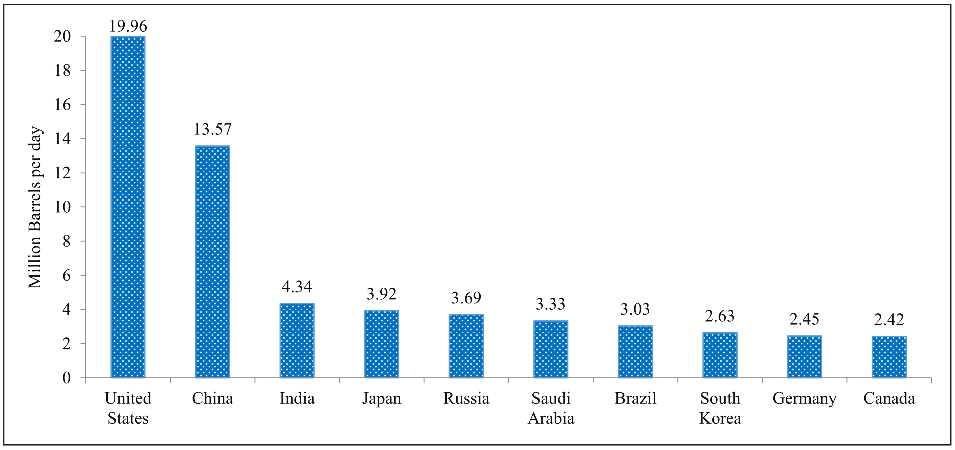
Telecom Infrastructure and Connectivity

8.37 (i) BharatNet: For achieving the goal of developing broadband highways as part of the Digital India campaign, the Government is implementing the flagship BharatNet Programme in a phased manner for providing broadband connectivity to all the 2.5 lakh Gram Panchayats (GPs) in the country. The project envisages an optimal mix of optical fibre, radio and satellite media. The broadband infrastructures created under the project would be available to all categories of service providers on non-discriminatory basis. (ii) Public Wi-Fi Access: Public Wi-Fi hotspots ensure last-mile delivery of broadband to users and are much easier to scale than adding new mobile towers. (iii) Towers and BTS: The number of Mobile Base Transceiver Stations (BTS) has seen a rise from 7.9 lakh in 2014 to 21.8 lakh (in July 2019) while Optical Fibre Cable has increased from 7 lakh km to around 14 lakh km during the period. (iv) Project for Left Wing Extremism (LWE) Areas and North East Region: The Department of Telecom executed a project for providing Mobile Services in 2,335 locations in Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Maharashtra, Madhya Pradesh, Odisha, Telangana, Uttar Pradesh and West Bengal, which are affected by Left Wing Extremism (LWE) with an outlay of ₹ 4,781 crores.

Petroleum and Natural Gas

8.38 India is the third largest energy consumer in the world after USA and China (Figure 23). With a share of 5.8 per cent of the world's primary energy consumption, India's energy requirement is fulfilled primarily by Coal,

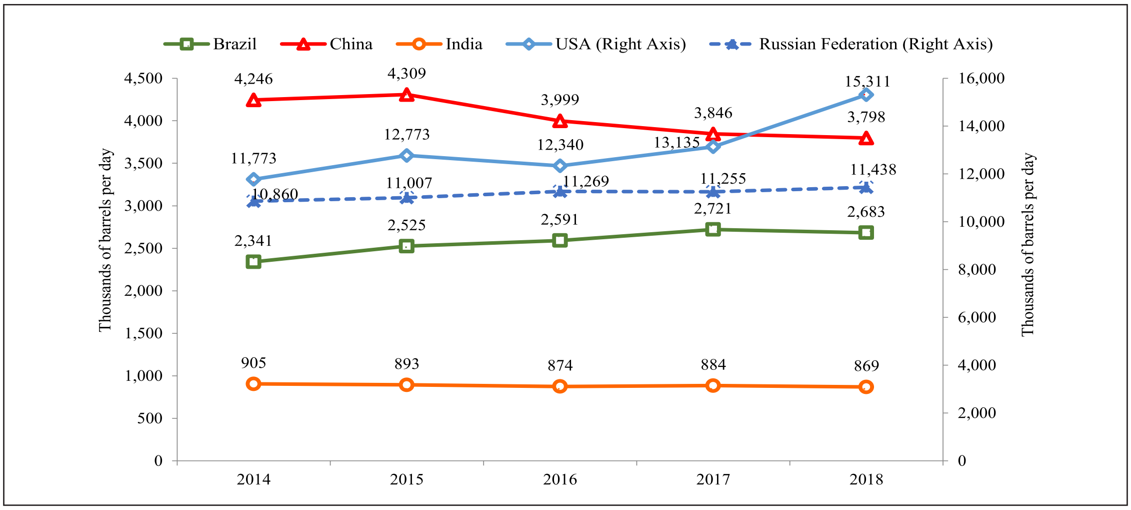
Figure 23: Top 10 Oil consumers of World in 2017



Source: US Energy Information Administration.

Note: Oil includes crude oil, all other petroleum liquids, and biofuels.

Figure 24: Trends of Oil Production of Major Economies



Source: BP Statistical Review of World Energy 2019.

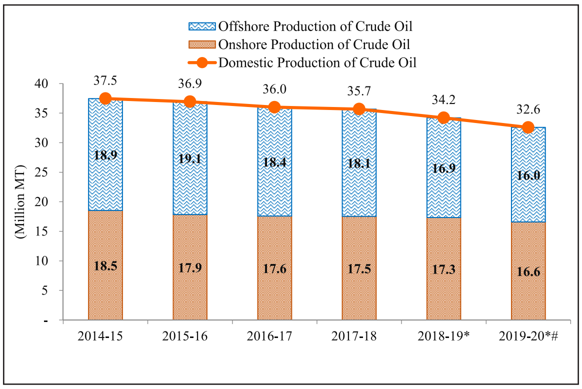
Note: Oil Production Includes crude oil, shale oil, oil sands, condensates and Natural Gas Liquids (NGLs).

Crude Oil, Renewable Energy and Natural Gas. However, India's oil production is one of the lowest among the major economies of the world and has been declining over a period of time (Figure 24).

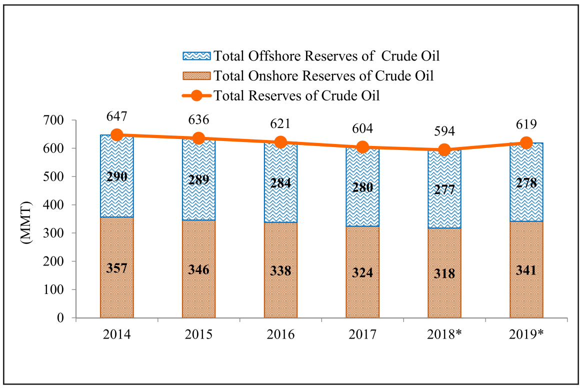
8.39 During 2019-20, the domestic crude oil production is estimated to be 32.6 MMT (Economic Survey calculations). Figure 25(a) shows the trends in crude oil production that has witnessed a secular decline since 2014-15 with corresponding fall in onshore as well as offshore crude oil production. The reduction in crude oil production may be attributed to natural decline in ageing and matured fields and no major discoveries. It is worthwhile to note that the proven reserves of crude oil have decreased concurrently since 2014, with the steeper fall in onshore reserves (Figure 25(b)). However, the decline in reserves till 2018 has seen a reversal in 2019, with reserves rising from 594 MMT in 2018 to 619 MMT in 2019.

Figure 25: Onshore and Offshore Production and Reserves$ of Crude Oil

(a) Production of Crude Oil



(b) Reserves of Crude Oil

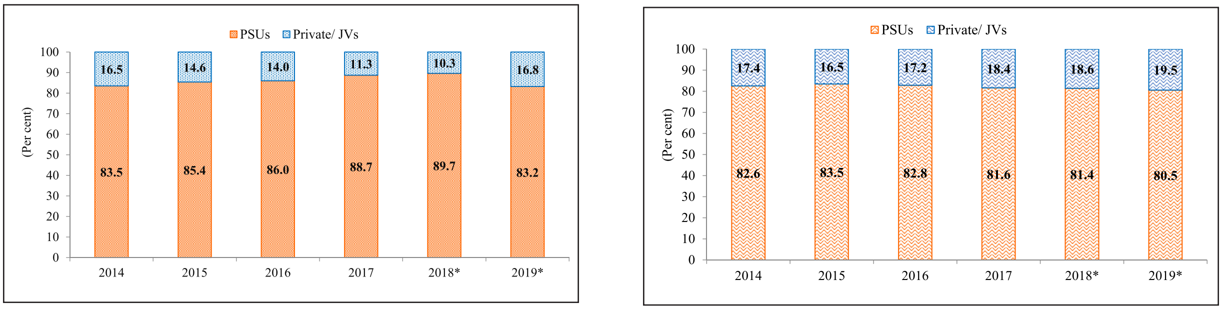


Source: Ministry of Petroleum and Natural Gas and Economic Survey calculations.
Note: *- Provisional.
#- The crude oil production for 2019-20 is estimated on the basis of figures available for 2019-20 (April-November).
$- The reserves are as on 1st April of the year.

8.40 The surge in reserves of crude oil in 2019 is accompanied by corresponding increase in onshore and offshore reserves, with onshore reserves rising at a steeper rate. This may be the result of the major reforms undertaken by Ministry of Petroleum and Natural Gas in exploration and licensing policy to enhance exploration activities, attract domestic and foreign investment and accelerate domestic production of oil and gas from existing fields. It can be seen from Figure 26(a) that the share of private/ joint ventures in onshore crude oil reserves were falling till 2018, but has seen an uptick in 2019. In case of offshore reserves of crude oil, the participation of private sector is steadily rising, with the share of private/ JVs reaching to 19.5 per cent in 2019 (Figure 26(b)).

Figure 26: Share of PSUs and Private/ Joint Ventures (JVs) in Reserves$ of Crude Oil

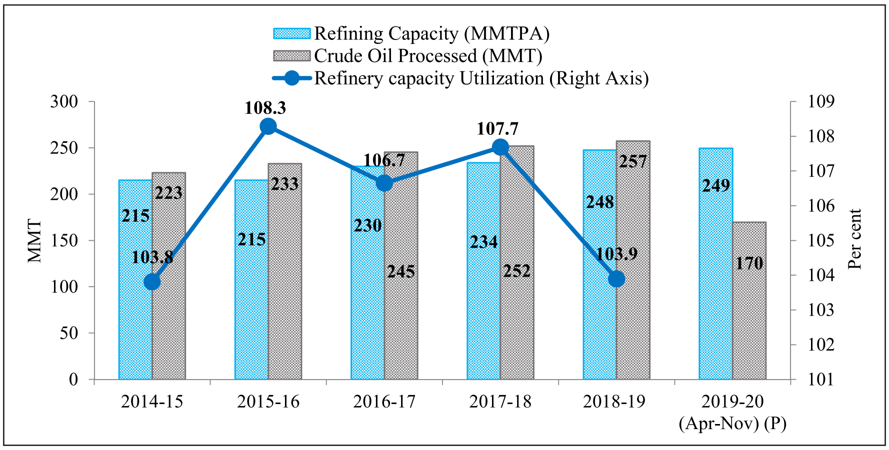
(a): Onshore reserves **(b): Offshore reserves**



Source: Ministry of Petroleum and Natural Gas.
Note: *- Provisional.
$- The reserves are as on 1st April of the year.

8.41 India with a refining capacity of 249.4 MMTPA is the fourth largest in the world after the United States, China and Russia. Refinery capacity increased from 234.0 MMT in 2017-18 to 247.6 MMT in 2018-19, while Crude Oil processed rose to 257.2 MMT in 2018-19 as against 251.9 MMT in 2017-18. However, refinery capacity utilisation fell to 103.9 per cent in 2018-19, compared to 107.7 per cent in 2017-18 (Figure 27). There is a need to augment refining capacity to meet growing demand for petroleum fuels and petrochemicals.

Figure 27: Refinery capacity and Crude Oil Processed (Quantity in Million Metric Tonnes) and Refinery Capacity Utilization (Per cent)

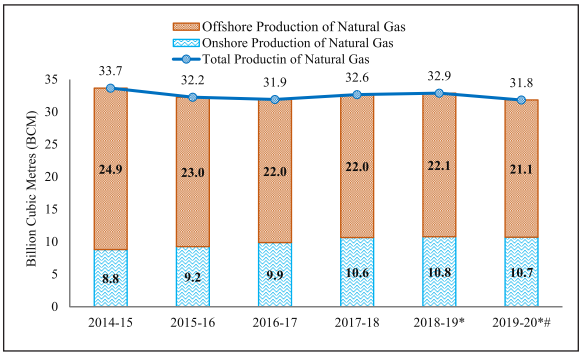


Source: Ministry of Petroleum & Natural Gas.
Note: P- Provisional.

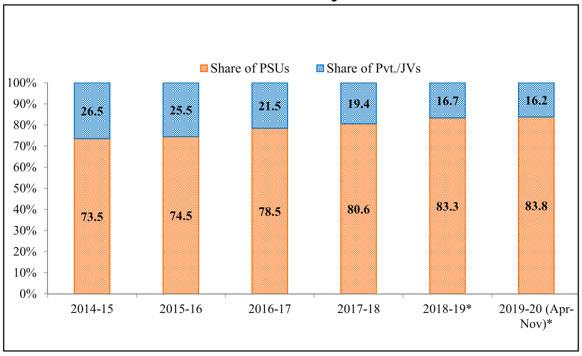
8.42 During 2019-20, the domestic production of natural gas is estimated to be 31.8 billion cubic metres (BCM) (Economic Survey calculations). Figure 28(a) shows that the declining trend in domestic production of natural gas till 2016-17 was arrested in 2017-18 and it rose further in 2018-19. The similar trend can be observed for offshore production of natural gas, while onshore production increased continuously since 2014-15. Figure 28(b) depicts that the production of natural gas is dominated by PSUs, with its share increasing over the period.

Figure 28: Total domestic Production of Natural Gas- Onshore and Offshore wise and PSUs and Private/ Joint Ventures-wise

(a): Production of Natural Gas



(b): Production of Natural Gas dominated by PSUs

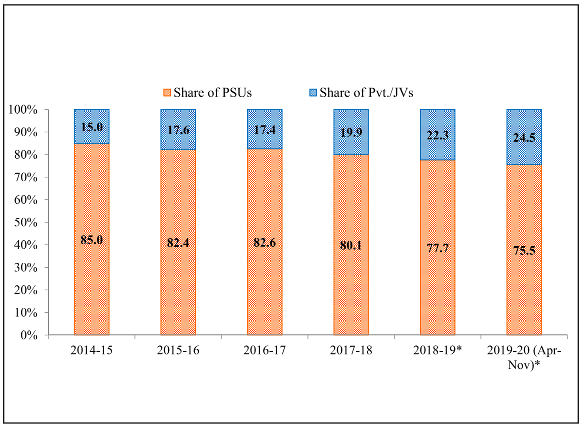


Source: Ministry of Petroleum and Natural Gas and Economic Survey calculations.
Note: *- Provisional.
#- The natural gas production for 2019-20 is estimated on the basis of figures available for 2019-20 (April-November).

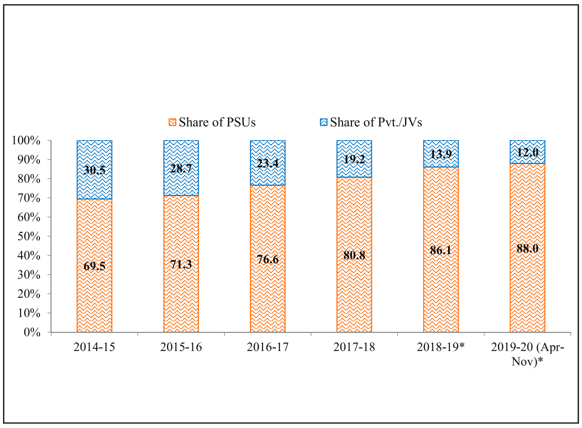
8.43 Further, Figure 29 clearly brings out that the presence of Private/ Joint Ventures has increased in onshore natural gas production over time (Figure 29(a)), while the opposite is true for offshore natural gas production, with the share of PSUs rising steadily (Figure 29(b)).

Figure 29: Share of PSUs and Private/ Joint Ventures (JVs) in Onshore and Offshore Natural Gas Production

(a): Share of PSUs falling for Onshore Natural Gas Production



(b): Share of PSUs rising for Offshore Natural Gas Production



Source: Ministry of Petroleum and Natural Gas.
Note: * - Provisional.

8.44 In order to encourage the participation of private entities in oil and natural gas sector, Government has undertaken several reform measures which, *inter-alia*, include simplified fiscal and contractual terms, bidding of exploration blocks under Category II and III sedimentary basins without any production or revenue sharing to Government, early monetization of discoveries by extending fiscal incentives, incentivizing gas production including marketing and pricing freedom, induction of latest technology and capital, more functional freedom to National Oil Companies for collaboration and private sector participation for production enhancement methods in nomination fields, etc.

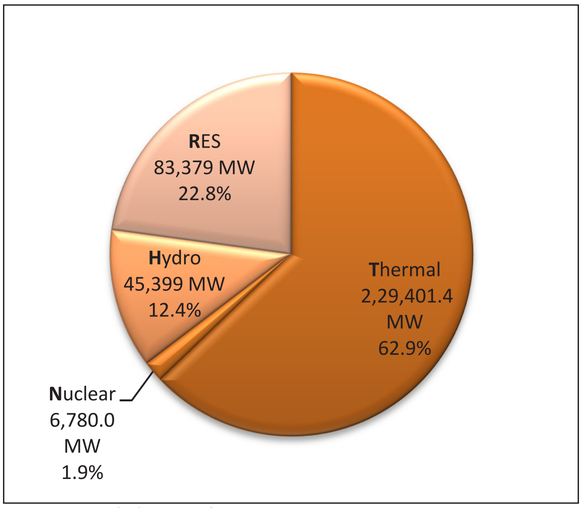
Power

8.45 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 has improved its ranking to 76th position in the Energy Transition Index published by the World Economic Forum (WEF). Fostering Effective Energy Transition, 2019 Report of WEF states, "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."

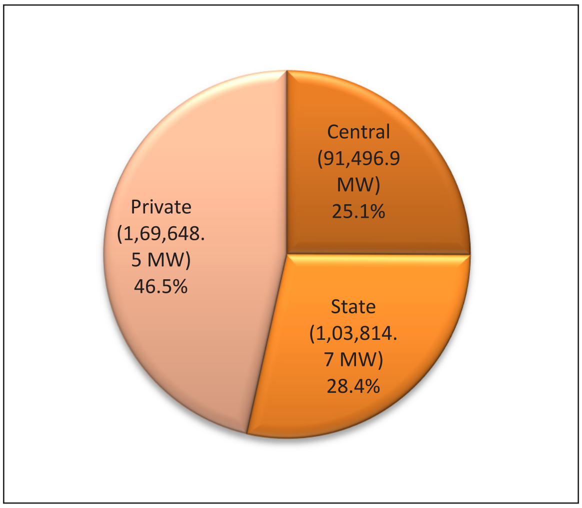
8.46 Along with universal electrification, commendable progress has been made in generation and transmission of electricity. The installed capacity has increased from 3,56,100 MW in March 2019 to 3,64,960 MW as on 31.10.2019. The fuel-wise and sector-wise distribution shows that thermal power accounts for about 63 per cent of total installed capacity (Figure 30(a)) and roughly half of the generation capacity is in the private sector (Figure 30(b)). Total generation of energy (including imports and renewable sources of energy) was 659 BU (as on 30.09.2019). In addition, the peak deficit i.e. the percentage shortfall in peak power supply vis-a-vis peak hour demand has declined from around 9 per cent in 2012-13 to 0.7 per cent during 2019-20 (October 2019).

Figure 30: Total Power Generation Capacity as on October 2019 (Fuel-wise and Sector-wise)

(a) Fuel-wise



(b) Sector-wise

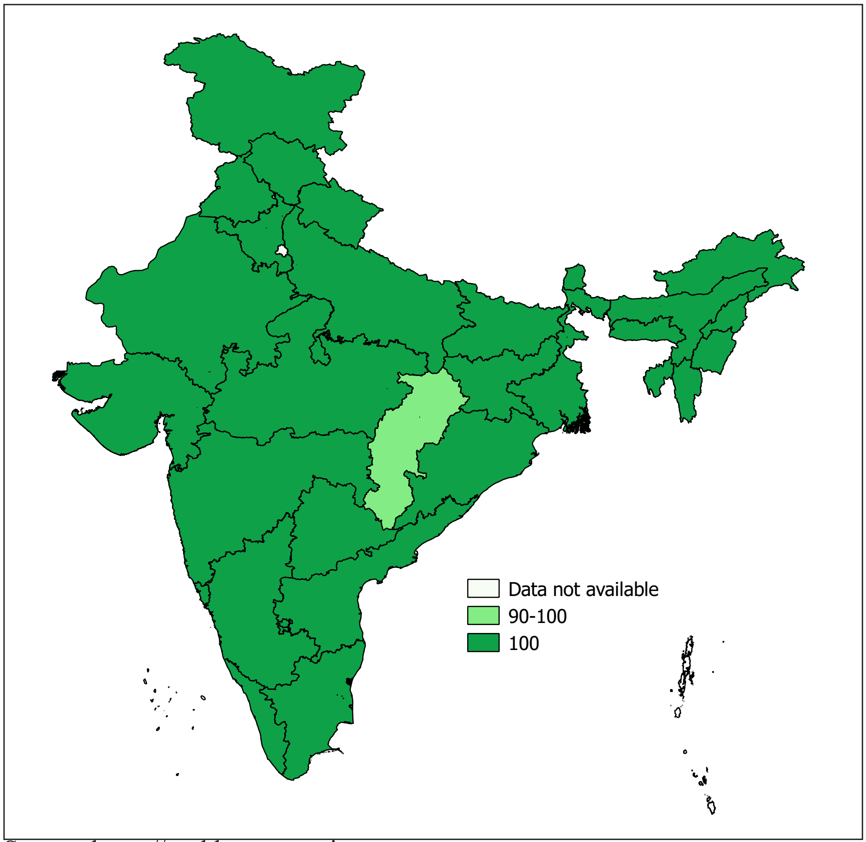


Source: Ministry of Power.
Note: RES- Renewable Energy Sources.

8.47 Access to electricity is necessary for making growth inclusive and for promoting ease of living. Pradhan Mantri Sahaj Bijli Har Ghar Yojana (Saubhagya) was launched on September 25, 2017 with an outlay of ₹ 16,320 crores to achieve universal household electrification by providing last mile connectivity by 31.03.2019. All the States have reported electrification of all households on Saubhagya portal, as on 31.03.2019, except few households in LWE affected Bastar region of Chhattisgarh (Map 2).

8.48 Supply of electricity to the rural domestic consumers is a good indicator of inclusive growth. As a result of various initiatives taken by Government of India along with the State governments, 18 States have reported supply of more than 20 hours of electricity supply while remaining states have reported about 15 or more hours. This is a major achievement compared to yester years when there were regular power cuts.

Map 2: Electrification Status



Source: https://saubhagya.gov.in

Mining Sector

8.49 As per available information, India produces as many as 95 minerals which include 4 hydrocarbon energy minerals (coal, lignite, petroleum & natural gas), 5 atomic minerals (ilmenite, rutile, zircon, uranium, and monazite), 10 metallic, 21 non-metallic and 55 minor minerals. It provides basic raw materials to many important industries. Mining and quarrying sector contribution (at current price) to GVA accounted for about 2.38 per cent during 2018-19 as per provisional estimates of Annual National Income 2018-19 published by NSO. Based on the overall trend, the Index of Mineral

Production (base 2011-12 = 100) for the year 2018-19 is estimated to be 107.9 as compared to 104.9 of previous year.

8.50 There has been a notable turnaround in mineral production because of policy reforms. The production of major minerals during the year 2018-19 has recorded a growth of 25 per cent when compared to last year in terms of value (Table 13).

Table 13: Production of Major Minerals specified under MCDR Act for the years 2016-17 to 2018-19 (Value in ₹ '000)

Minerals	Unit	2016-17		2017-18 (P)		2018-19 (P)	
		Quantity	Value	Quantity	Value	Quantity	Value
Bauxite	T	24745487	14865504	22312681	15020673	23687679	17168251
Chromite	T	3727780	31937475	3480928	32109182	3970688	35836112
Copper Concentrate	T	134787	6506133	141863	7742763	155435	9395244
Gold	Kg	1595	4362410	1648	4763056	1664	5241705
Iron Ore	'000t	194584	252291800	200955	342628915	206446	451854804
Lead Conc.	T	268047	9669267	306399	11429378	358371	16316814
Zinc Conc.	T	1484244	43385599	1539655	49799283	1457171	56083774
Manganese Ore	T	2395134	16248429	2589271	19717530	2820227	22702512
Silver	Kg	460811	18320758	557691	21179042	679376	25824746
Tin Conc.	Kg	12121	8736	16758	10139	21211	13839
Phosphorite	T	1124440	2996711	1534269	3771584	1284580	3547584
Diamond	Crt	36491	639562	39699	410737	38437	581058
Garnet (abrasive)	T	85413	787302	158154	1636667	123404	1568237
Graphite (r.o.m.)	T	122438	94158	33558	25656	39370	37712
Kyanite	T	3253	13458	7818	23002	4889	15228
Sillimanite	T	68131	535949	81638	669340	69033	559792
Limestone	'000t	314669	73878426	338552	74407420	379049	84841855
Limeshell	T	12344	34774	10893	39593	7534	27786
Magnesite	T	299149	749297	195033	503919	146581	396564
Marl	T	2203700	317886	1822514	285095	1890309	325122
Moulding Sand	T	27685	6623	7097	1793	14423	3889
Siliceous Earth	T	77270	55340	58875	57457	77739	51897
Selenite	T	4328	8656	469	939	2906	5812
Sulphur	T	560825	-	825173	-	890400	-
Vermiculite	T	9042	8162	6055	7078	3161	3807
Wollastonite	T	166186	158823	153049	126700	184063	173972

Source: MCDR Returns, IBM.
Note: (P)- Provisional, t- Tonne, Kg- Kilogram, '000t- Thousand Tonnes, crt- Carats.

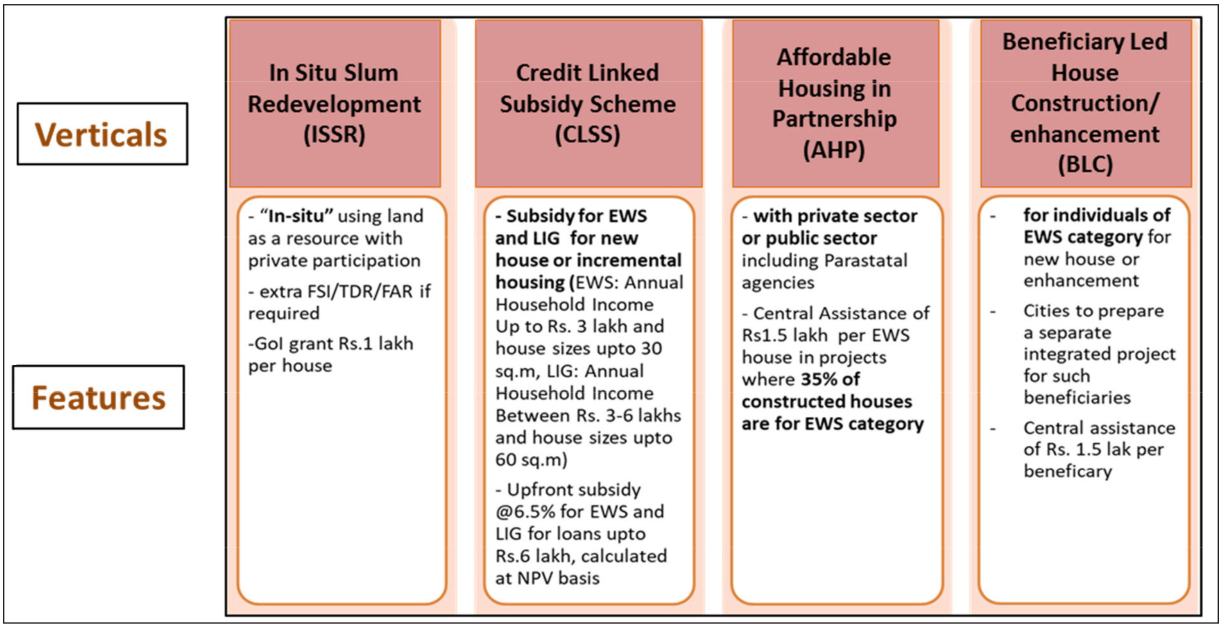
Housing and Urban Infrastructure

8.51 India is one of the fastest growing countries in the world with rapid urbanization. There were about 37.7 crore people residing in the urban habitats of India (Census 2011), comprising about 31 per cent of the total population which is expected to reach 60.6 crore by 2030 (2015:UN).

8.52 The Pradhan Mantri Awas Yojana-Urban (PMAY-U) was launched in June, 2015 to provide pucca house with basic amenities to all eligible urban poor. The States/UTs were mandated to conduct demand survey to estimate the housing demand in their respective cities/towns. So far, a validated demand of 1.12 crore houses has been registered. Urban habitats and cities are the epicentres of economic growth which has contributed significantly to the Indian economy. Over 60 per cent of India's current GDP comes from the cities and towns. The construction sector accounts for 8.2 per cent of GDP which includes housing and employs about 12 per cent of the workforce[1]. Therefore, the investment made under PMAY (U) not only provides pucca houses to the eligible families to achieve the goal of 'Housing for All' but also triggers multiplier effect on the overall economy. PMAY-U is one of the largest housing schemes of the world covering complete urban India. PMAY (U) is being implemented through four verticals (Figure 31).

8.53 The scheme of PMAY (U) is rapidly moving towards achieving the vision for providing a pucca house to every household by 2022. Out of 1.03 crore houses approved, 60 lakhs have been grounded for construction, of which 32 lakh houses have been completed and delivered (Figure 32).

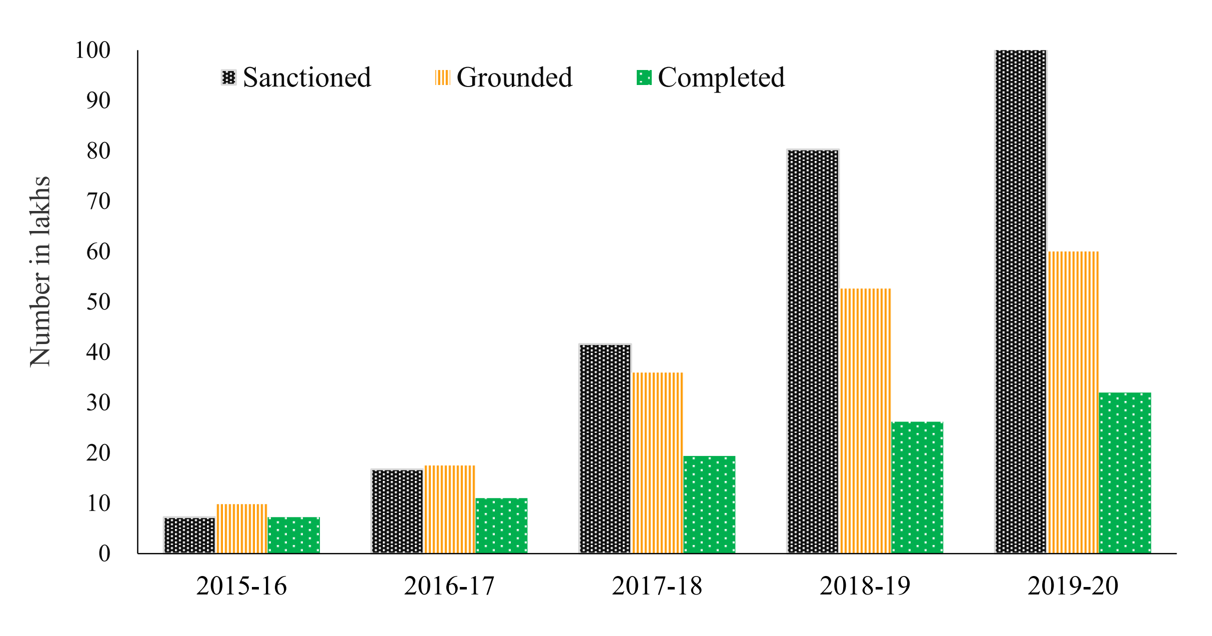
Figure 31: Different verticals of PMAY(U)



Source: Ministry of Housing and Urban Affairs.

1. Source: Study Report on "Impact of Investments in the Housing Sector on GDP and Employment of Indian Economy" (2014), by National Council of Applied Economic Research (NCAER).

Figure 32: Physical progress of PMAY (U) (Number of Houses in lakhs) (As on 01.01.2020)



Source: Ministry of Housing and Urban Affairs.

8.54 The significant progress of PMAY (U) with regard to earlier schemes is an outcome of comprehensive strategy of inclusion, scheme architecture, use of digital/space technology, funding mechanism etc. As a principle, the scheme adopts demand driven approach carrying forward the ethos of cooperative federalism. Unlike the earlier schemes, the States/UTs have been authorised to prepare and approve the projects based on city wise demand survey to meet the requirement of their housing demand. A State Level Appraisal Committee (SLAC) for Technical Appraisal of the Projects and a State Level Sanctioning and Monitoring Committee (SLSMC) under the chairmanship of Chief Secretary of the States/UTs for approval of the projects have been constituted in each State/UT. As land and colonisation is the State subject, the function of beneficiary identification based on eligibility criteria has also been entrusted to States/UTs. Such flexibility has resulted in greater participation of the States/UTs and the citizens. The scheme has mandated ownership of the house in the name of female of household or in the joint name along with male member of the household to enable women's empowerment.

8.55 Given the large number of houses sanctioned under the Mission, arrangement for regular funding for project is vital for grounding and completion of projects. Over and above the year-on-year budgetary provisions, a separate mechanism through creation of National Urban Housing Funds (NUHF) has been approved by Union Cabinet to mobilise resources through Extra Budgetary Resources (EBR) to the tune of ₹ 60,000 crore for funding PMAY(U). Such arrangement has enabled the Ministry to provide Central assistance in a time bound manner for uninterrupted progress of projects with States/UTs and Central Nodal Agencies (CNAs). Government has also created an Affordable Housing Fund (AHF) in the National Housing Bank (NHB) with an initial corpus of ₹ 10,000 crore using priority sector lending shortfall of banks/financial institutions. The fund is used for micro financing of the HFCs and NBFCs which provide loans at reduced interest rate to the individual borrowers for promoting home ownership.

8.56 Current Implementation Status of Smart Cities Mission (SCM): All 100 cities under Smart City Mission have incorporated Special Purpose Vehicles (SPVs), City Level Advisory Forums (CLAFs) and appointed Project Management Consultants (PMCs). Since the launch of the mission, 5,151 projects worth more than ₹ 2 lakh crores are at various stages of implementation in the 100 cities. As on November 14, 2019, 4,154 SCM projects worth ₹ 1.49 lakh crores (72 per cent of the total proposals) have been tendered, of which 3,359 projects worth ₹ 1.05 lakh crores (51 per cent of total proposals) have been issued work orders. 1,290 projects worth ₹ 22,569 crores have been completed and are operational. Major achievements of Smart Cities Mission are given in Figure 33.

Figure 33: Smart Cities Mission: Major achievements (As on 14.11.2019)

Source: Ministry of Housing and Urban Affairs.

WAY FORWARD

8.57 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 development, India needs adequate and timely investment in quality infrastructure.

8.58 To achieve the GDP of $5 trillion by 2024-25, India needs to spend about $1.4 trillion on infrastructure. The challenge is to step-up annual infrastructure investment so that lack of infrastructure does not become a binding constraint on the growth of the Indian economy. The National Infrastructure Pipeline (NIP) captures the infrastructure vision of the country for the period FY20-25. Report of the Task Force on NIP released on 31.12.2019 has projected total infrastructure investment of ₹ 102 lakh crore during the period FY 2020 to 2025 in India.

CHAPTER AT A GLANCE

- The industrial sector as per Index of Industrial Production (IIP) registered a growth of 0.6 per cent in 2019-20 (April-November) as compared to 5.0 per cent during 2018-19 (April-November).
- Fertilizer sector achieved a growth of 4.0 per cent during 2019-20 (April-November) as compared to (-)1.3 per cent during 2018-19 (April-November).
- India has considerably improved its ranking in Ease of Doing Business to 63rd position in 2019 compared to 77th position in 2018.
- Crude steel production witnessed growth of 1.5 per cent during 2019-20 (April-October).
- The installed capacity of power generation has increased to 3,64,960 MW as on 31 October 2019.
- Report of the Task Force on National Infrastructure Pipeline released on 31.12.2019 has projected total infrastructure investment of ₹ 102 lakh crore during the period FY 2020 to 2025 in India.

Services Sector

09

CHAPTER

The services sector's significance in the Indian economy has continued to increase, with the sector now accounting for around 55 per cent of total size of the economy and GVA growth, two-thirds of total FDI inflows into India and about 38 per cent of total exports. The share of services sector now exceeds 50 per cent of Gross State Value Added in 15 out of the 33 states and UTs, with this share more than 80 per cent in Delhi and Chandigarh. However, data on GVA growth, high-frequency indicators and sectoral trends suggest a moderation in services sector activity during 2019-20. Bank credit to services sector, air passenger traffic and rail freight traffic have witnessed a deceleration, while foreign tourist arrivals and port traffic have continued to ease during 2019-20. On the bright side, the very latest readings on most of these indicators suggest a recovery. Moreover, gross FDI equity inflows into services sector have registered a strong recovery and services exports have maintained their momentum during April-September 2019. Services exports have outperformed goods exports in the recent years, due to which India's share in world's commercial services exports has risen steadily over the past decade to reach 3.5 per cent in 2018, twice the share in world's merchandise exports at 1.7 per cent. India's education services imports have increased markedly in the recent years, up from about US$ 2.3 billion in 2013-14 to US$ 5.0 billion in 2018-19. The shipping turnaround time at ports has almost halved from 4.67 days in 2010-11 to 2.48 days in 2018-19. India has launched around 5-7 satellites per year in the recent years with no failures, barring one in 2017.

SERVICES SECTOR PERFORMANCE: AN OVERVIEW

Gross Value Added in Services Sector

9.1 As per the First Advance Estimates for Gross Value Added (GVA) from the Ministry of Statistics and Planning Implementation, services sector growth (YoY) continued to moderate during 2019-20, reaching 6.9 per cent from 7.5 per cent in 2018-19 (Table 1). By sub-sector, growth (YoY) in 'financial services, real estate & professional services' decelerated to 6.4 per cent during 2019-20 and that in 'trade, hotels, transport, communication & broadcasting services' remained on a downward trend, reaching 5.9 per cent in 2019-20. However, 'public administration, defence & other services' witnessed an acceleration in activity during 2019-20, with a growth (YoY) of 9.1 per cent. Notwithstanding the recent underperformance, the services sector continues to outperform agriculture and industry sector growth, contributing around 55 per cent to total GVA as well as to total GVA growth.

Table 1: Services Sector Performance in GVA

Sector	Share in GVA (per cent)	Growth (per cent YoY)				
					2019-20	
	2019-20 (1st AE)	2017-18 (RE)	2018-19 (PE)	2019-20 (1st AE)	Q1	Q2
Total Services	**55.3**	**8.1**	**7.5**	**6.9**	**6.9**	**6.8**
Trade, hotels, transport, communication & services related to broadcasting	18.3	7.8	6.9	5.9	7.1	4.8
Financial, real estate & professional services	21.3	6.2	7.4	6.4	5.9	5.8
Public administration, defence & other services	15.6	11.9	8.6	9.1	8.5	11.6

Source: Ministry of Statistics and Programme Implementation (MoSPI).
Note: Shares are in current prices and growth in constant 2011-12 prices; RE: Revised Estimates. PE: Provisional Estimates, 1st AE: 1st Advance Estimates.

9.2 The moderation in services sector growth during 2019-20 is also reflected in the high-frequency indicators, though some recent data suggests that service sector activity might be bottoming out (Figure 1(a) to (d)). The services Purchasing Managers' Index (PMI) has stabilized in the recent months above the threshold of 50 (above 50 indicates service sector activity is expanding) after having softened during Q4 of 2018-19 and Q1 of 2019-20. Growth in air passenger traffic has begun to show some signs of recovery after having witnessed a slowdown since mid-2018-19. Even the growth in rail freight, which was contracting in the past few months, has picked up in November 2019. In contrast, bank credit to the services sector has continued to decelerate. The growth in bank credit to services sector was 4.8 per cent as on November 2019 as compared to 28.1 per cent a year ago (Table 2).

Figure 1(a): Services PMI Index

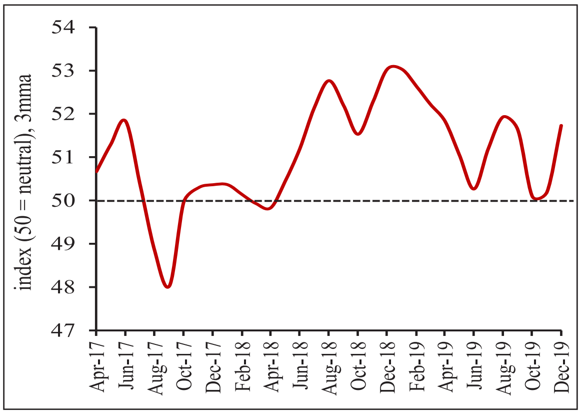
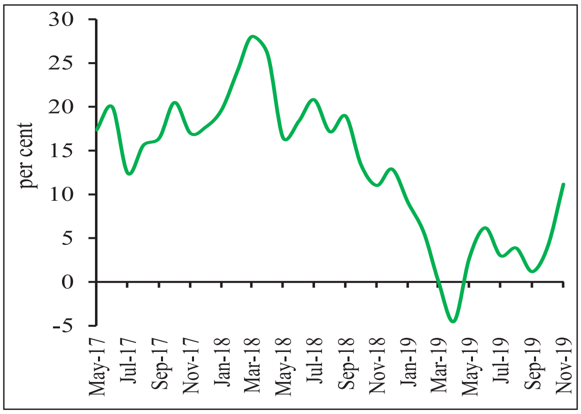


Figure 1(b): Growth (Year on Year (YoY)) in Air Passenger Traffic



Source: IHS Markit Economics, Directorate General of Civil Aviation.

Figure 1(c): Growth (YoY) in Rail Freight Traffic

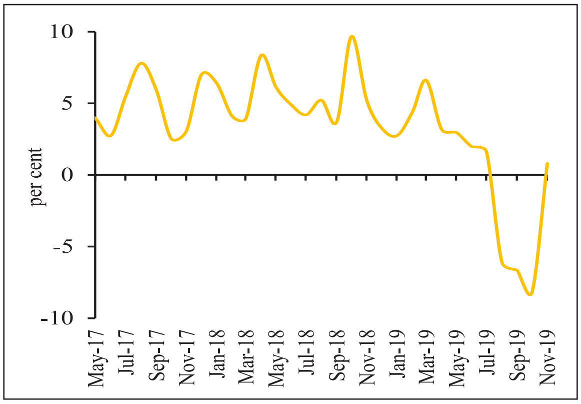
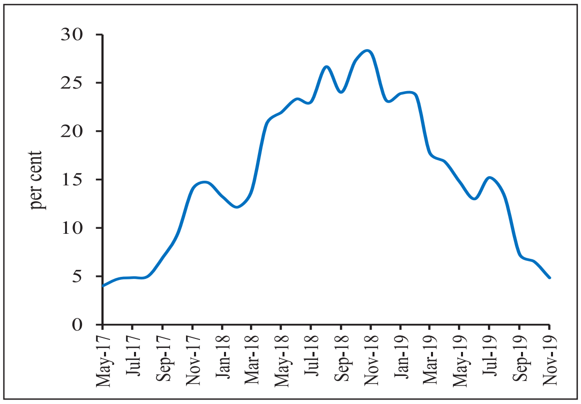


Figure 1(d): Growth (YoY) in Bank Credit to Services Sector



Source: RBI, Indian Railways.

Table 2: Growth (YoY) in Bank Credit to Services Sub-Sectors

Services Sub-Sectors	Fiscal Year-to-Date Apr-Nov 2019 (per cent)	Fiscal Year-to-Date Apr-Nov 2018 (per cent)
Services	**-2.2**	**9.9**
Transport Operators	0.9	6.6
Computer Software	2.8	2.8
Tourism, Hotels & Restaurants	11.4	5.3
Shipping	-13.5	1.1
Professional Services	-0.5	8.4
Commercial Real Estate	9.1	1.0
Bank credit to NBFCs	14.0	14.1
Retail Trade	2.3	2.3
Wholesale Trade*	-13.2	3.1
Other Services	-20.7	16.9

Source: RBI.
Note: *Other than food procurement.

9.3 RBI's data on the allocation of bank credit for services sub-sectors shows that the deceleration in credit growth during April-November 2019 has been driven by 'Professional Services', 'Shipping', 'Transport Operators' and 'Wholesale Trade' (Table 2). Bank credit to 'Tourism, Hotels & Restaurants', 'Commercial Real Estate'and 'Non-Banking Financial Corporations (NBFCs)' remained high as compared to the other sub-sectors during April-November 2019.

9.4 Services sector performance at the state and UT level shows that the services sector now accounts for more than 50 per cent of the Gross State Value Added (GSVA) in 15 out of the 33 states and UTs (Table 3). In 8 states, services sector account for more than 60 per cent of GSVA. Chandigarh and Delhi stand out with a particularly high share of services in GSVA of more than 80 per cent while Sikkim's share remains the lowest at 26.8 per cent. Even states with relatively lower share of services in GSVA, such as Jharkhand, Odisha, Andhra Pradesh, Uttarakhand, Gujarat, Arunachal Pradesh and Goa, have witnessed strong services sector growth in the recent years.

Table 3: Services Sector Performance at the State and UT Level

State	Services Sector Share in GSVA in 2018-19 (per cent)*	Services Sector 5-year Average Growth (per cent YoY)**
Chandigarh*	86.7	7.3
Delhi	84.1	8.8
Andaman and Nicobar Islands*	68.1	8.6
Karnataka	65.4	10.5
Manipur*	65.1	6.3
Telangana	64.7	11.2
Kerala*	62.7	6.4
Bihar	61.1	9.0
Jammu & Kashmir*	58.3	5.5
Meghalaya*	59.0	7.5
Maharashtra*	57.6	8.1
West Bengal	57.5	9.2
Tamil Nadu	54.2	6.9
Nagaland*	54.1	4.9
Haryana	50.8	9.2
Uttar Pradesh	48.8	7.7
Puducherry	48.5	6.0
Assam*	47.8	6.9
Mizoram*	46.8	7.8
Punjab	46.5	7.2
Rajasthan	45.0	7.3
Jharkhand	44.8	8.7
Andhra Pradesh	43.0	9.8
Himachal Pradesh	42.8	7.6
Arunachal Pradesh*	42.5	9.0
Odisha	41.8	8.4
Uttarakhand	40.5	9.5
Tripura*	39.7	3.0
Goa	38.0	8.4
Chhattisgarh	37.1	5.9
Madhya Pradesh	35.9	6.7
Gujarat*	35.7	8.6
Sikkim	26.8	4.4

Source: MoSPI.
Note: *2017-18 data; **Average from 2014-15 to 2018-19, or average from 2013-14 to 2017-18 where the data for 2018-19 is unavailable.

FDI Inflows into Services Sector

9.5 FDI data from the Department for Promotion of Industry and Internal Trade shows that gross FDI equity inflows (excluding re-invested earnings) into the services sector[1] witnessed a strong recovery during April-September 2019 following a decline in 2018-19. Gross FDI equity inflows jumped by 33 per cent YoY during April-September 2019 to reach US$ 17.58 billion, accounting for about two-thirds of the total gross FDI equity inflows into India during this period (Table 4). The jump in FDI equity inflows was driven by strong inflows into sub-sectors such as 'Information & Broadcasting', 'Air Transport', 'Telecommunications', 'Consultancy Services' and 'Hotel & Tourism'.

Table 4: Gross FDI Equity Inflows* into Services Sector

Services Sub-Sectors	Share in FDI Equity Inflows into Services Sector in 2018-19 (per cent)	Gross FDI Equity Inflows (US$ million)			
		2017-18	2018-19	Apr-Sep 2018	Apr-Sep 2019
Financial, Business, Outsourcing, R&D, Courier, Tech Testing & Analysis	20.6	6,709	9,158	4,915	4,455
Computer Software & Hardware	14.5	6,153	6,415	2,541	4,025
Trading	10.1	4,348	4,462	2,143	2,143
Telecommunications	6.0	6,212	2,668	2,178	4,280
Information & Broadcasting	2.8	639	1,252	58	196
Hotel & Tourism	2.4	1,132	1,076	344	859
Hospitals & Diagnostic Centers	2.4	708	1,045	345	376
Education	1.8	286	777	167	216
Retail Trading	1.0	224	443	256	243
Consultancy Services	0.9	760	411	88	473
Sea Transport	0.6	1,051	279	117	173
Air Transport	0.4	629	191	30	114
Agriculture Services	0.2	110	88	29	23
Gross FDI Equity Inflows into Services Sector (US$ million)		**28,960**	**28,264**	**13,209**	**17,577**
Change from Previous Period (per cent YoY)		**15.0**	**-2.4**	**-20.5**	**33.1**
Gross FDI Equity Inflows into India (US$ million)		**44,857**	**44,366**	**22,664**	**26,096**
Share of Services Sector in Gross FDI Equity Inflows into India (per cent)		**64.6**	**63.7**	**58.3**	**67.4**

Source: Department for Promotion of Industry and Internal Trade (DPIIT).
Note: *Excludes re-invested earnings.

[1] Estimated as gross 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, and air transport.

Trade in Services Sector

9.6 RBI's Balance of Payments data suggests that services exports during April-September 2019 maintained their momentum from 2018-19, with a growth (YoY) of 6.4 per cent. The jump in export growth of travel, software, business and financial services offset the contraction in export growth of insurance and other services (including construction, etc.) (Table 5). The robust growth in business services exports was driven by higher receipts for R&D services, professional and management consultancy services, and technical and trade related services.

9.7 Trends in the composition of services exports over the past decade show that the shares of traditional services, such as transport, and value-added services, such as software, financial services and communications, have witnessed a decline. Meanwhile, the share of travel services has increased over the past decade and that of business services has risen slightly. The share of software services has declined by 4 percentage points over the past decade to reach 40 per cent of total services exports in 2018-19. Yet, India's services exports remain concentrated in software services, accounting for twice the share of the second-largest component, business services.

Table 5: Services Trade Performance by Sub-Sector

Commodity Group	Share (per cent)		Value (US$ billion)			Growth (per cent YoY)		
	2008-09	2018-19	2017-18	2018-19	Apr-Sep 2019-20 (P)	2017-18	2018-19	April-Sep 2019-20 (P)
Total Services Exports			**195.1**	**208.0**	**104.6**	**18.8**	**6.6**	**6.4**
Travel	10	14	28.4	28.4	14.6	22.0	0.3	8.2
Transportation	11	9	17.4	19.5	10.5	10.0	11.6	10.8
Insurance	1	1	2.5	2.7	1.2	13.6	6.2	-4.9
GNIE*	0.4	0.3	0.7	0.6	0.3	12.9	-8.1	3.5
Software Services	44	40	77.3	83.5	46.1	4.0	7.9	12.7
Business Services	18	19	37.3	39.1	22.4	13.4	4.7	18.6
Financial Services	4	2	5.2	4.9	2.5	1.3	-5.9	4.3
Communication	2	1	2.1	2.6	1.3	-11.7	22.1	18.3
Total Services Imports			**117.5**	**126.1**	**64.1**	**22.6**	**7.3**	**7.9**
Travel	18	17	19.5	21.7	12.2	18.6	11.2	4.3
Transportation	25	16	17.6	20.5	12.1	24.6	16.6	22.8
Insurance	2	1	1.7	1.8	0.8	13.7	5.3	-0.7
GNIE*	2	1	0.8	1.1	0.6	32.5	40.3	11.9
Software Services	5	5	5.1	5.8	4.0	43.3	13.1	33.7
Business Services	29	32	36.6	40.4	22.9	13.3	10.3	19.6
Financial Services	6	3	5.5	3.5	1.1	-5.4	-37.0	-40.7
Communication	2	1	1.0	1.1	0.6	4.8	18.4	25.1
Services Trade Balance			**77.6**	**81.9**	**40.5**			
Goods Trade Balance			**-160.0**	**-180.3**	**-84.3**			

Source: RBI.

Note: *GNIE = Government not included elsewhere; P: Preliminary.

This has made the software sector, and therefore overall services exports, susceptible to changes in exchange rate, global IT spending, stringent USA visa norms, and rising cost pressures due to increased local hiring in export destinations. Even though global IT spending, as projected by Gartner in October 2019, is expected to accelerate in 2020, rising production costs and uncertainty related to Brexit and USA's visa norms pose downward risks to India's software exports.

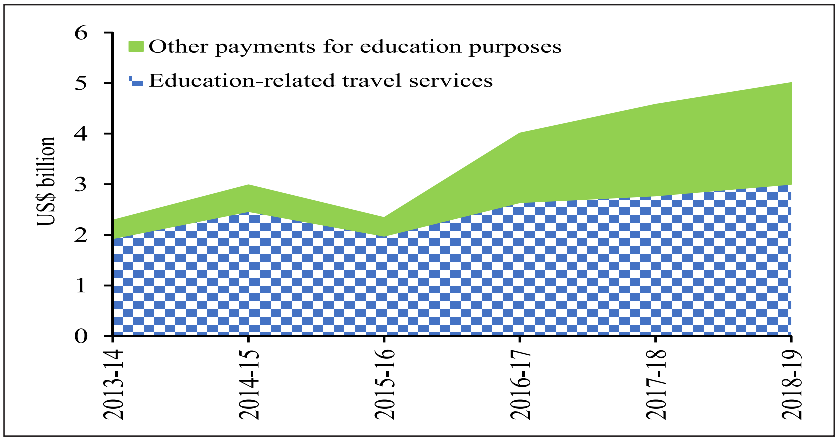
9.8 Services import growth (YoY) during April-September 2019 was 7.9 per cent. An increase in import growth for transport, software, communication and business services offset the contraction in imports of financial and insurance services and the slowdown in imports of travel services. Increased business services payments were primarily driven by professional, management and consultancy services, and technical and trade related services.

9.9 Net exports of services increased from US$ 38.9 billion during April-September 2018 to US$ 40.5 billion during April-September 2019, up 4.1 per cent YoY. The services trade surplus, largely driven by the surplus in software services, financed about 48 per cent of India's merchandise deficit during April-September 2019, partially offsetting the impact on the current account deficit.

9.10 Besides software services, India runs a small trade surplus in travel, insurance and financial services. However, within travel services, India persistently runs a trade deficit in education services with education imports, i.e., expenditure incurred by Indian students traveling abroad for education purposes on tuition, room and boarding, reaching about US$ 3 billion in 2018-19. Adding to this other payments for education purposes such as fees paid for correspondence courses abroad, which constitute as payments for receiving education services abroad, there has been a marked increase in India's education services imports in the recent years amounting to US$ 5.0 billion in 2018-19 (Figure 2).

9.11 From a long-run perspective, India's focus on boosting services exports during bilateral trade negotiations augurs well for mitigating bilateral trade deficits with trading partners. Looking ahead, world trade volume for goods and services are projected to recover in 2020 following a deceleration in 2019. Global uncertainty, protectionism and stricter migration rules would be key factors in shaping India's services trade ahead.

Figure 2: Import of Education Services



Source: RBI
Note: Education travel services includes expenditure incurred by Indian students abroad on tuition, room and boarding.

Box 1: India in World Commercial Services Exports

The increasing role of services in economic activity is also reflected in the growing importance of services in global trade and in India's trade. Looking at two time periods, 2005-11 and 2012-2018, it is evident that both commercial services[2] exports and goods exports have slowed in India and globally in the recent years (Table A). However, while merchandise exports were growing faster than commercial services exports during 2005-11, commercial services exports have outperformed goods exports lately. This has led to an increase in the share of commercial services exports in overall exports both in India and globally.

Table A: Performance of Services and Merchandise Exports in India and World

Country	Growth in merchandise exports (per cent)		Growth in commercial services exports (per cent)		Share of commercial services exports in total exports (per cent)	
	CAGR 2005-11	CAGR 2012-18	CAGR 2005-11	CAGR 2012-18	2005	2018
World	9.7	0.8	8.9	4.4	19.8	22.9
India	20.4	1.5	17.7	5.9	34.2	38.6

Source: WTO.
Note: Calculations are on calendar year basis.

According to WTO data, India's share in world's commercial services exports has risen steadily over the past decade to reach 3.5 per cent in 2018, twice the share in world's merchandise exports at 1.7 per cent. India now ranks 8th among the world's largest commercial services exporters and continues to register strong growth performance relative to the other major services-exporting countries as well as world services export growth (Table B).

Table B: Commercial Services Exports in Top 10 Exporting Countries

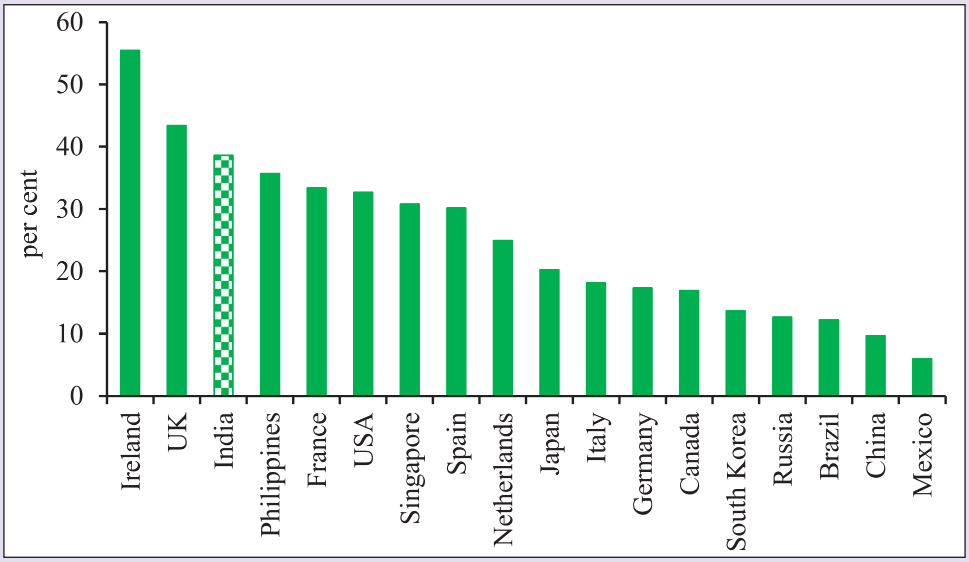
Country	Share in global commercial services exports in 2018	Global ranking in 2018	Growth in Commercial Services Exports (per cent YoY)		
			2017	2018	Jan-June 2019
World			**8.0**	**7.7**	**N.A.**
USA	14.0	1	5.2	3.8	0.7
UK	6.5	2	2.4	5.6	-3.0
Germany	5.6	3	8.0	7.3	-2.4
France	5.0	4	5.7	6.2	-7.0
China	4.6	5	8.7	17.1	4.2
Netherlands	4.2	6	14.3	11.4	3.4
Ireland	3.6	7	20.5	14.3	10.9
India	**3.5**	**8**	**14.5**	**10.7**	**7.1**
Japan	3.2	9	6.4	3.1	3.6
Singapore	3.2	10	10.0	6.6	-2.1

Source: WTO.
Note: Calculations are on calendar year basis; N.A.: not available.

[2] Commercial services exports refer to all services exports excluding government services.

Among the major services-exporting economies, India also has a relatively high share of services exports in overall exports (Figure A).

Figure A: Share of Commercial Services Exports in Total Exports for Major Economies in 2018



Source: Calculations based on WTO data.
Note: Calculations are on calendar year basis.

Box 2: Developing the Offshore Fund Management Industry to Boost Financial Services Exports

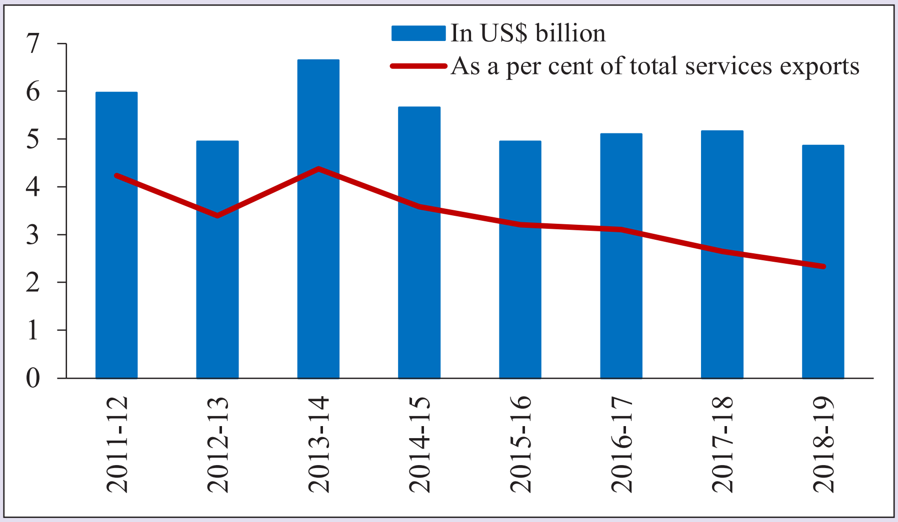
The financial services sector has been identified as one of the Champion Services Sectors by the government to enable on-shoring of the India-related financial services that are currently being rendered from global financial centers. This would provide an impetus to financial services exports and high-skilled employment. Despite India's strong performance in services exports (Box 1), India's financial services exports have remained stagnant, averaging about US$ 5 billion in the recent years. As a result, the share of financial services exports in overall services exports has almost halved from 4.2 per cent in 2011-12 to 2.3 per cent in 2018-19 (Figure B).

One type of financial services that is currently being rendered from global financial centers and could be potentially brought on-shore is the asset management activity of offshore funds. These offshore funds located in tax and regulatory friendly jurisdictions, such as Singapore, Luxembourg, Ireland, Hong Kong and London, pool investments from offshore investors and invest in India via the Foreign Portfolio Investment (FPI), Private Equity (PE) or Foreign Venture Capital Investment (FVCI) route. Such funds include the India-focused offshore funds which invest only in India, and the Regional/ Global diversified funds with partial investment allocation to India (Table C). As foreign investment into India continues to increase in the coming years, on-shoring the fund management activity of offshore funds to India would benefit the economy by:

- Contributing to the continued expansion of India's asset management industry which has been witnessing significant growth in the recent years (Table C). The Asset Managers Roundtable of India (AMRI) estimates that fund management activity of almost 25 per cent of FPI, PE and FVCI funds' total Assets Under Management (AUM) could be potentially on-shored to India by 2020, and potentially a greater share of AUM in the coming years. Assuming total AUM of FPIs at US$ 542 billion and total AUM of PE & FVCIs at US$ 326 billion by 2020, this implies that nearly US$ 136 billion of FPI funds and US$ 82 billion of PE & FVCI funds, i.e., US$ 217 billion in total assets, could be potentially managed on-shore in India by 2020, according to AMRI estimates.

- Generating employment for high-skilled finance professionals, including fund managers and support service providers, such as custodians, fund specialists, fund accountants, fund administrators, risk managers, research analytics professionals and tax advisors. The management fee received by fund managers for managing the offshore funds would constitute as financial services exports. Based on a conservative assumption of 1 per cent management fee (compared to 2 per cent globally), the AMRI estimates that on-shore management of US$ 217 billion in assets of offshore funds could yield about US$ 2.2 billion in fund management fees and therefore financial services exports in 2020.

Figure B: India's Financial Services Exports



Source: RBI.

Table C: Size of India's Domestic Fund Management Industry and Offshore Funds

Domestic Funds (US$ billion)	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
AUM of Asset Management Companies	129	137	173	186	271	328	344
Assets Managed By Portfolio Managers*	12	14	19	21	29	38	41
AUM of Alternative Investment Funds	0.3	2	4	6	13	25	41

FPI Funds** (US$ billion)	2012	2013	2014	2015	2016	2017	2018
AUM of FPIs	243	237	356	351	346	514	451
AUM of India-Focused FPI Offshore Funds***	21	17	23	24	22	31	N.A.

Source: Asset Managers Roundtable of India (AMRI) estimates; calculations based on SEBI, NSDL, Morningstar, VCCEdge, Venture Intelligence data.
Note: *Includes non-EPFO/PFs discretionary assets and non-discretionary assets; **Data is on a calendar year basis; ***Estimates would be higher if AUM for regional/global diversified FPI offshore funds with partial investment allocation to India are included; N.A.: Not Available.

At present, the fund management activity of these offshore funds is being undertaken by fund managers, often of Indian origin, located in offshore jurisdictions since their presence in India would create tax implications for the offshore fund's profits. In April 2016, the government introduced 'safe harbour' provisions as Section 9A, *Income Tax Act (1961)* under which, on satisfying a set of eligibility conditions, the offshore fund would not be considered a 'resident' for tax purposes solely based on its fund manager being located in India. However, most offshore funds have been unable to utilize the 'safe harbour' provisions since they have to satisfy a total of 17 stringent eligibility conditions related to the fund's structure, investor composition, investment activity and fund manager's activity and remuneration. Some of these conditions are not in sync with the structure and investment pattern of offshore funds and nature of FPI inflows into India, and lead to dual compliance burden for offshore investors since they are also required to comply with RBI and SEBI regulations related to end-investors in FPIs and round- tripping.

In comparison, in key fund management jurisdictions such as USA, UK, Singapore and Hong Kong, the eligibility conditions under 'safe harbour' provisions for offshore funds are fewer and less stringent in many cases, with discretion available to tax authorities to evaluate the offshore fund's structure and investment pattern and allow for exceptions on a case-by-case basis.

In view of the above challenges, the Commerce Ministry's *High-Level Advisory Group (HLAG) Report* (September 2019) recommended simplifying the tax framework and removing tax residency risk for offshore funds wanting to on-shore their fund management activity given that the offshore fund and fund manager are registered with SEBI and compliant with SEBI regulations. Operationalizing the 'safe harbour' regime of Section 9A, *Income Tax Act (1961)* would enable on-shoring the fund management activity of India-focused offshore funds, and potentially, regional/global offshore funds with partial allocation to India. It would also enable greater delegation of fund management activity of FPIs to India as FPI inflows continue to rise in the coming years.

MAJOR SERVICES: SUB-SECTOR WISE PERFORMANCE AND RECENT POLICIES

9.12 Most of the sub-sectors of the services sector witnessed a moderation in growth during 2019-20 (Table 6). The growth in tourism sector decelerated in 2019-20 with weaker growth in foreign tourist arrivals and consequently in foreign exchange earnings from tourism. In the ports sector, growth in port traffic softened in 2019-20 from the previous year. The number of wireless phone subscriptions and wireless internet subscriptions increased in 2019-20. This section discusses developments in some key sub-sectors of the services sector in detail.

Table 6: Performance of India's Key Services Sub-Sectors

Sub-Sector	Indicator	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
IT –BPM*	IT-BPM service revenues:	US$ billion	118.6	129.4	139.9	151.4	161.8 (E)	-
	Exports	US$ billion	97.7	107.8	116.1	125.1	135.5 (E)	-
	Domestic	US$ billion	20.9	21.6	23.8	26.3	26.3 (E)	-
Aviation**	Airline passengers:	million	115.8	135.0	158.4	183.9	204.2	-
	Domestic	million	70.1	85.2	103.7	123.3	140.3	95.7[#]
	International	million	45.7	49.8	54.7	60.6	63.9	15.6[@]
Telecom	Wireless phone subscriptions	million	969.9	1033.6	1170.2	1183.4	1161.8	1154.6[$]
	Wireless internet subscriptions	million	283.3	322.2	400.6	472.7	615.0	665.4[%]
Tourism	Foreign tourist arrivals[b]	million	7.7	8.0	8.8	10.0	10.6	8.6[##]
	Foreign exchange earnings from tourism[b]	US$ billion	19.7	21.0	22.9	27.3	28.6	24.0[##]
Shipping	Port traffic	million tonnes	581.3	606.5	648.4	679.4	699.1	524.0[^]

Source: Ministry of Tourism, Indian Ports Association, Ministry of Shipping, Directorate General of Civil Aviation, Telecom Regulatory Authority of India, NASSCOM.
Note: *Excluding hardware & e-commerce; **Domestic passengers carried by Indian carriers and international passengers carried by Indian and foreign carriers; [b] On calendar year basis; #For Apr-Nov 2019 period; @For Apr-Jun 2019 period; $As of Nov 2019; ##For Jan-Oct 2019 period; %As of Sep 2019; ^For Apr-Dec 2019 period; E: Estimate.

Tourism Sector

9.13 The tourism sector is a major engine of growth, contributing to GDP, foreign exchange earnings and employment. In India, the tourism sector witnessed a strong performance from 2015 to 2017, with high growth in foreign tourist arrivals. However, foreign tourist arrivals growth (YoY) has decelerated since then to 5.2 per cent in 2018 and 2.7 per cent in January-October 2019 (Figure 3(a)). This trend, however, is not unique to India, as the growth (YoY) in international tourist arrivals globally also slowed from 7.1 per cent in 2017 to 5.4 per cent in 2018 (Table 7).

9.14 Correspondingly, growth in foreign exchange earnings from tourism sector have slowed in 2018 and 2019 after registering strong growth until 2017 (Figure 3(b)). Foreign exchange earnings totalled US$ 24 billion in January-October 2019, with a growth (YoY) of 2 per cent.

Table 7: Foreign and International Tourist Arrivals and Tourism Receipts in India and the World

Indicator	2014	2015	2016	2017	2018
Foreign Tourist Arrivals (FTA) in India (million)*	7.68	8.03	8.80	10.04	10.56
International Tourist Arrivals (ITAs) in India (million)**	13.11	13.76	15.03	16.81	17.42
International Tourist Arrivals (ITAs) around the World (million)	1137	1195	1241	1329	1401
India's Share in World's ITAs (per cent)	1.15	1.15	1.21	1.26	1.24
India's Rank in World's ITAs	24th	24th	26th	26th	22nd
India's Share in Asia Pacific's ITAs (per cent)	4.86	4.84	4.90	5.19	5.01
India's Rank in Asia Pacific's ITAs	8th	7th	8th	7th	7th
India's Share in World Tourism Receipts (per cent)	1.57	1.73	1.84	2.03	1.97#
India's Rank in World Tourism Receipts	15th	14th	13th	13th	13th#
India's Share in Asia Pacific's Tourism Receipt (per cent)	5.49	5.91	6.18	6.90	6.54#
India's Rank in Asia Pacific's Tourism Receipts	7th	7th	7th	7th	7th#

Source: Ministry of Tourism.
Note: *Based on data from the Bureau of Immigration on tourists entering the country on a foreign passport; **Tourists entering the country on a foreign passport plus non-resident citizens visiting the country; #Provisional. International Tourist Arrivals is the sum of Foreign Tourist Arrivals and NRI arrivals in the country.

Figure 3(a): Growth (YoY) in Foreign Tourist Arrivals to India

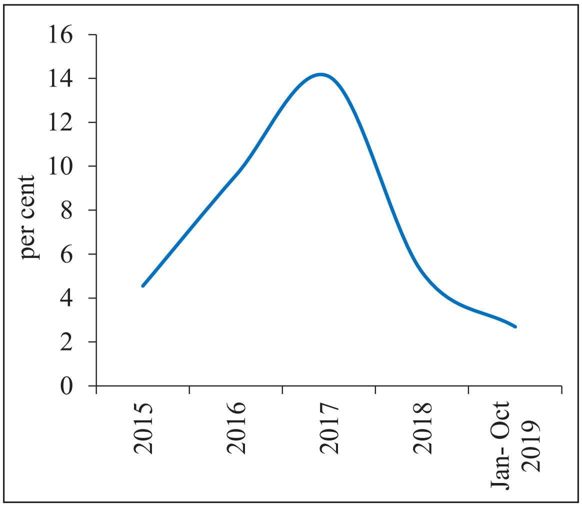
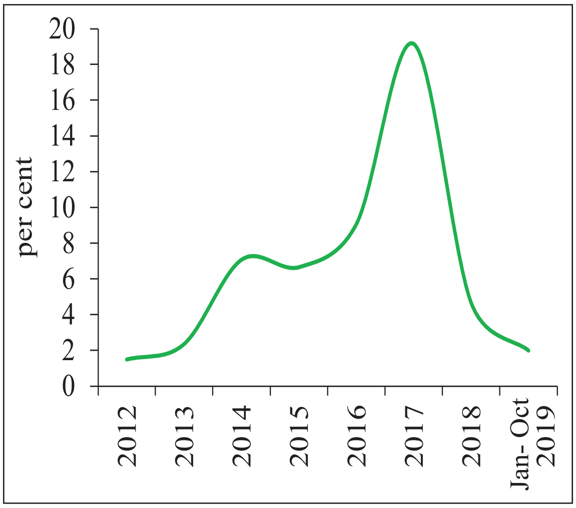


Figure 3(b): Growth (YoY) in Tourism Foreign Exchange Earnings



Source: Ministry of Tourism.
Note: Figures for 2019 are provisional.

9.15 India ranked 22nd in the world in terms of international tourist arrivals in 2018, improving from the 26th position in 2017. India now accounts for 1.24 per cent of world's international tourist arrivals and 5 per cent of Asia & Pacific's international tourist arrivals (Table 7). India ranks 13th in the world and 7th in Asia & Pacific in terms of tourism foreign exchange earnings, accounting for close to 2 per cent of the world's tourism foreign exchange earnings.

9.16 Foreign tourists from the top 10 countries visiting India - Bangladesh, USA, UK, Sri Lanka, Canada, Australia, Malaysia, China, Germany and Russia - accounted for 65 per cent of the total foreign tourist arrivals in India in 2018. Among the foreign tourists, 62.4 per cent tourists visited for leisure, holiday and recreation, 16.3 per cent for business purposes, and 13.5 per cent was Indian diaspora.

9.17 Looking at tourism trends at the state level, the top five states attracting domestic tourists are Tamil Nadu, Uttar Pradesh, Karnataka, Andhra Pradesh and Maharashtra, accounting for nearly 65 per cent of the total domestic tourist visits in the country in 2018. The top five states attracting foreign tourists are Tamil Nadu, Maharashtra, Uttar Pradesh, Delhi and Rajasthan, accounting for about 67 per cent of the total foreign tourist visits in the country in 2018.

9.18 To facilitate international tourism, India introduced the e-Tourist Visa regime in September 2014 for 46 countries. Prior to the launch of the scheme, the e- Visa facility was available for only 12 countries. The government further liberalized the visa regime in 2016, renaming it to e-Visa scheme with five sub-categories i.e. 'e-Tourist Visa', 'e-Business Visa', 'e-Medical Visa', 'e-Conference Visa' and 'e-Medical Attendant Visa'. The e-Visa scheme is now available for 169 countries with valid entry through 28 designated airports and 5 designated seaports. With this, foreign tourist arrivals to India on e-visas have increased from 4.45 lakh in 2015 to 23.69 lakh in 2018 and stood at 21.75 lakh in January-October 2019, recording nearly 21 per cent year-on-year growth from the previous year.

BOX 3: Share of Tourism in GVA and Employment of States

The Ministry of Tourism along with the National Council of Applied Economic Research (NCAER) has prepared a Tourism Satellite Account (TSA) following the methodology recommended by the UN World Tourism Organization. The state-wise share of Tourism Direct Gross Value Added (TDGVA) in state GVA and share of tourism employment in total state employment have been estimated in the Ministry of Tourism and NCEAR's draft report (Table A).

Table A: Share of Tourism in State GVA and Employment

States	Share of TDGVA in State GVA in 2015-16		Share of Tourism Employment in State Employment in 2015-16	
	Direct (per cent)	Direct and Indirect (per cent)	Direct (per cent)	Direct and Indirect (per cent)
Andaman & Nicobar Islands	4.63	10.39	11.09	24.07
Andhra Pradesh	2.29	4.66	5.41	12.84
Arunachal Pradesh	1.21	2.39	2.20	4.76
Assam	2.19	4.32	4.41	8.75
Bihar	2.96	5.99	4.17	10.50
Chandigarh	3.87	9.17	6.70	12.37
Chhattisgarh	2.13	4.44	2.41	7.65

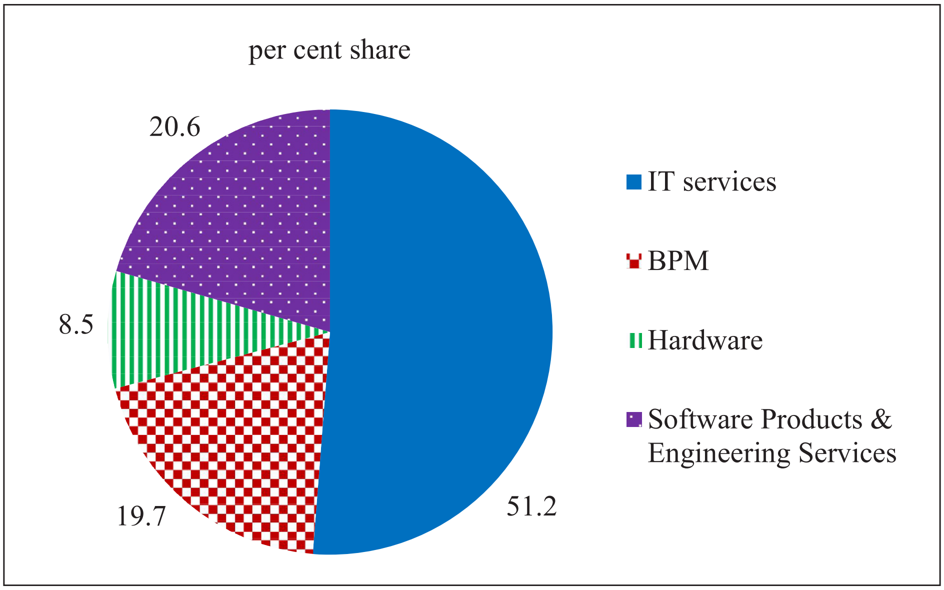
Dadra & Nagar Haveli	0.79	1.79	7.01	23.81
Daman & Diu	0.75	1.36	11.71	29.35
Delhi	4.32	7.78	12.40	21.05
Goa	5.50	11.55	19.38	40.92
Gujarat	1.78	3.96	5.85	15.39
Haryana	1.95	3.88	5.98	10.15
Himachal Pradesh	3.20	6.89	10.23	20.23
Jammu & Kashmir	3.68	7.48	6.74	16.45
Jharkhand	2.10	4.18	3.89	9.12
Karnataka	2.63	5.74	5.46	17.74
Kerala	4.34	8.72	11.20	25.87
Lakshadweep	4.30	9.02	21.95	49.71
Madhya Pradesh	2.39	4.90	3.34	8.45
Maharashtra	3.08	5.52	5.66	12.46
Manipur	2.38	5.50	6.25	12.05
Meghalaya	2.39	5.22	2.87	10.44
Mizoram	1.25	2.55	4.57	10.96
Nagaland	1.87	3.55	3.58	8.34
Odisha	2.43	5.00	5.27	12.11
Puducherry	1.73	4.08	14.25	56.24
Punjab	1.90	3.75	6.69	12.33
Rajasthan	2.73	5.63	5.18	11.26
Sikkim	2.12	4.40	6.84	13.07
Tamil Nadu	2.59	5.37	6.36	15.97
Telengana	2.29	5.07	5.13	17.83
Tripura	1.53	2.99	3.05	5.05
Uttar Pradesh	2.24	4.63	4.46	11.39
Uttarakhand	2.29	5.27	7.99	21.18
West Bengal	2.09	4.30	6.41	14.34

Source: Ministry of Tourism, NCAER.

Information Technology and Business Process Management (IT-BPM) Services

9.19 The Indian IT-BPM Industry has been the flag-bearer of India's exports for the past two decades, with industry size reaching about US$ 177 billion in March 2019. The sector contributes significantly to the economy via employment growth and value addition. IT services constituted 51 per cent of the IT-BPM sector in 2018-19, followed by Software & Engineering Services (20.6 per cent share) and BPM Services (19.7 per cent share) (Figure 4). Within the IT-BPM sector, IT services remained the dominant segment with about US$ 91 billion in revenues in 2018-19. Out of the IT services, digital revenues grew (YoY) more than 30 per cent to reach US$ 33 billion.

Figure 4: Sub-Sector Breakdown of IT-BPM Sector in 2018-19



Source: NASSCOM.

9.20 A significant part (about 83 per cent) of the IT-BPM industry (excluding hardware) continues to be export driven, with export revenues in excess of US$ 135 billion in 2018-19 (Table 8). During 2018-19, the revenue growth (YoY) for IT-BPM sector (excluding hardware) softened to 6.8 per cent from 8.2 per cent in 2017-18. This was driven by a contraction of 0.3 per cent in domestic revenue growth even as export revenue growth accelerated to 8.3 per cent.

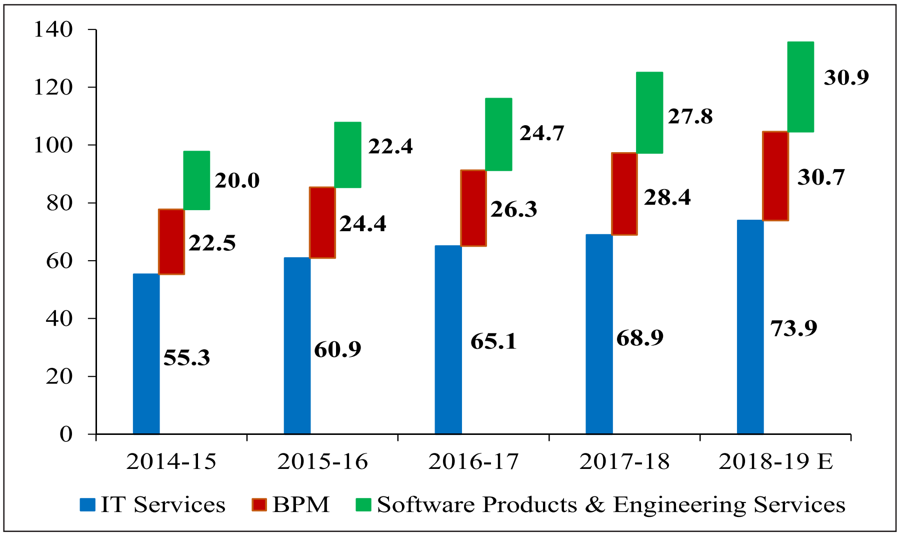
9.21 Out of the total US$ 135.5 billion in exports of the IT-BPM sector in 2018-19, IT services accounted for 55 per cent of the exports, and BPM and Software Products & Engineering services accounted for the remaining 45 per cent with each accounting for almost half of the share (Figure 5). All three sub-sectors witnessed a pickup in export revenues in 2018-19, with IT services growing (YoY) by 7.3 per cent, BPM services by 8.3 per cent and Software Products & Engineering Services by 11.2 per cent.

Table 8: Exports and Domestic Market Size of Indian IT-BPM Industry (Excluding Hardware & E-Commerce)

Year	US$ billion			Growth (per cent YoY)		
	Domestic	Exports	Total	Domestic	Exports	Total
2014-15	20.9	97.7	118.6			
2015-16	21.6	107.8	129.4	3.2	10.3	9.1
2016-17	23.8	116.1	139.9	10.4	7.6	8.1
2017-18	26.3	125.1	151.4	10.4	7.8	8.2
2018-19E	26.3	135.5	161.8	-0.3	8.3	6.8

Source: NASSCOM.
Note: E: Estimate.

Figure 5: Sub-Sector Breakdown of IT-BPM Exports (US $ billion) (Excluding hardware and e-commerce)

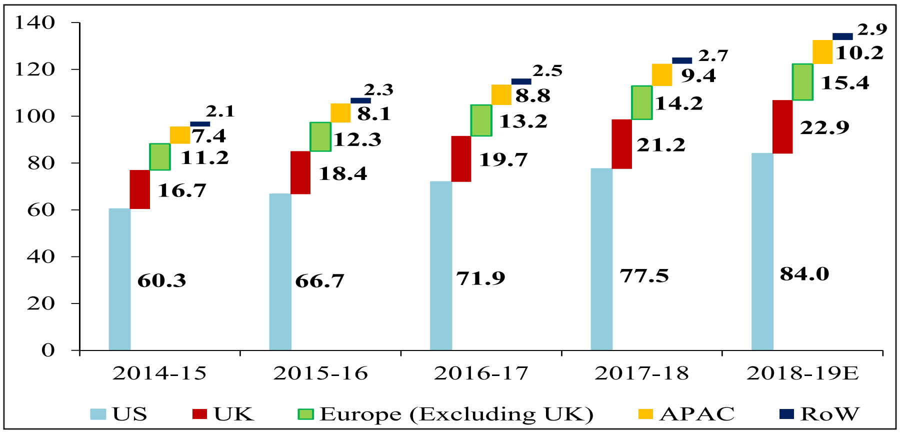


Source: NASSCOM.
Note: E: Estimate.

9.22 Looking at export revenues by destination, USA accounts for the bulk of exports, amounting to US$ 84 billion (Figure 6), which is 62 per cent of total IT-BPM exports (excluding hardware) in 2018-19. This is much larger than the share of exports going to UK, which is the second largest export market for IT-BPM services, with a share of around 17 per cent. Europe (excluding UK) and Asia-Pacific account for 11.4 per cent and 7.6 per cent of the export earnings, respectively.

9.23 Over the past 2-3 years, a number of policy initiatives have been undertaken to drive innovation and technology adoption in the IT-BPM sector, including Start-up India, National Software Product Policy, and removal of issues related to Angel Tax. The Indian start-up ecosystem has been progressing and is now the third largest in the world with 24 unicorns, though the gap with the largest (China: 206) and second largest (USA: 203) markets remains significant. Cities such as Bangalore, Delhi-NCR and Mumbai account for around 55 per cent of the total startups in India (Source: NASSCOM study).

Figure 6: Geographic Break-up of India's IT-BPM Exports (US $ billion) (Excluding hardware and e-commerce)



Source: NASSCOM. Note: E: Estimate.

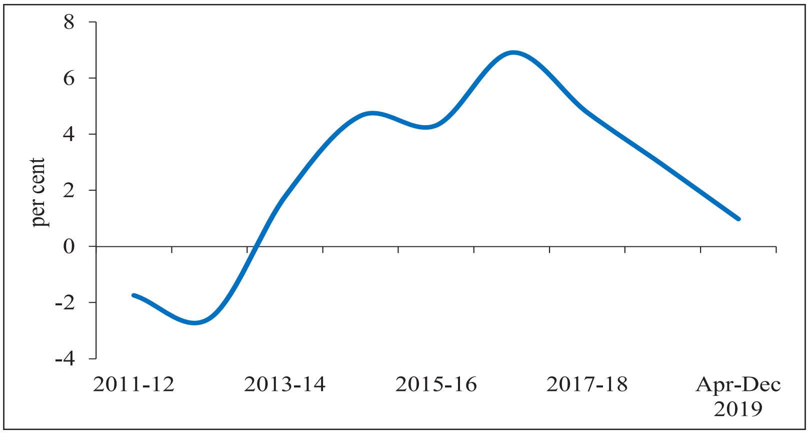
Port and Shipping Services

9.24 India has a 0.9 per cent share in world fleet as on January 2019. India has 13 major ports and about 200 non-major ports. The total cargo capacity of Indian ports stood at 1,452.64 Million Tonnes Per Annum (MTPA) at the end of March 2019, more than doubling from 628.03 MTPA at the end of March 2010. Ports such as Paradip, Chennai, Vishakhapatnam, Deendayal (Kandla) and JNPT had the highest cargo capacities as of March 2019. The total numbers of ships owned by Indian companies stood at 1,414 as of August 2019, up from 1,040 in 2010.

9.25 Growth in overall port traffic witnessed an acceleration between 2013-14 and 2016-17, but has decelerated since 2017-18 (Figure 7). Traffic handled at major ports grew (YoY) at close to 1 per cent in April-December 2019.

9.26 The turnaround time of ships, which is a key indicator of efficiency of the ports sector, has been on a continuous decline, almost halving between 2010-11 and 2018-19 to 2.48 days. The shipping turnaround time has declined across all major ports and is now the lowest at the Cochin, New Mangalore, V.O. Chidambararanar and Chennai ports, and the highest at the Kolkata port (Table 9). As per the latest UNCTAD data, the median ship turnaround time globally is 0.97 days, suggesting that India has room to further improve upon the efficiency at ports.

Figure 7: Growth (YoY) in Port Traffic



Source: Indian Ports Association.

Table 9: Average Ships' Turnaround Time at Major Indian Ports (in days)

Port Name	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Kolkata	5.37	4.95	4.49	4.22	4.18	3.98	4.73	4.11	3.84
Haldia	4.53	3.66	3.99	3.80	3.37	3.27	3.45	3.76	3.04
Paradip	7.73	6.33	4.39	4.62	7.01	4.50	4.99	3.31	2.51
Visakhapatnam	5.84	5.68	5.39	4.73	5.67	3.84	3.75	2.58	2.51
Kamarajar (Ennore)	2.78	2.17	2.95	4.24	4.32	6.53	2.70	2.20	1.97
Chennai	4.36	3.91	3.24	2.46	2.54	2.53	2.51	2.21	1.98
V.O.Chidambararanar	4.11	4.89	4.31	3.92	3.55	3.73	4.40	2.69	1.96
Cochin	2.20	1.82	1.58	1.76	1.69	2.18	1.99	1.54	1.47
New Mangalore	2.71	2.95	3.29	3.18	2.46	2.63	2.35	2.04	1.93
Momugao	6.15	4.80	3.93	4.34	4.15	3.65	4.51	2.63	2.63
Mumbai	4.96	5.22	5.58	5.31	5.28	4.61	3.27	3.72	2.52
JNPT	2.67	2.46	2.54	2.44	2.24	2.44	2.01	2.24	2.13
Deendayal (Kandla)	5.90	6.42	6.40	5.66	5.38	4.66	4.40	2.52	3.01
All Ports	**4.67**	**4.47**	**4.24**	**3.90**	**4.00**	**3.64**	**3.43**	**2.68**	**2.48**

Source: Indian Ports Association.

Space Sector

9.27 India's space programme has grown exponentially since its modest beginnings five decades ago, moving from providing simple mapping services in the 1960s to many more uses currently. This includes design and development of a series of launch vehicles and related technologies, satellites and related technologies for earth observation, telecommunication and broadband, navigation, meteorology and space science, R&D in space sciences, and most recently, planetary exploration.

9.28 India spent about US$ 1.5 billion on space programmes in 2018. However, India's government space expenditure still lags behind that of the major players in the space sector, such as USA, which spent about 13 times more than India in the space sector in 2018 (Table 10). China, which has become a key player in the space sector in the recent years, also spent about seven times more than India in 2018.

Table 10: Government Budget for Space Sector in 2018

Country	Expenditure (US$ billion)
USA (NASA)	19.5
China (CNSA)	11.0
Russia (Roskosmos)	3.3
India (ISRO)	**1.5**

Source: ISRO (which sourced from statista).

9.29 India has launched around 5-7 satellites per year in the recent years with no failures, barring one in 2017. On the other hand, Russia, USA and China dominate the satellite launching services with 20, 31 and 39 satellites respectively in 2018 (Table 11).

9.30 Among the key areas of focus in the space programme, the first area has been satellite communication, with INSAT/GSAT system as the backbone to address the needs for telecommunication, broadcasting and satellite-based broadband infrastructure in the country. The second area of focus has been earth observation and using space-based information for weather forecasting, disaster management, national resource mapping and governance. The third focus area has been satellite-aided navigation including GAGAN and NavIC. GAGAN, a joint project between ISRO and the Airports Authority of India (AAI), augments GPS coverage of the region to improve accuracy and integrity for civil aviation applications and better air traffic management over Indian airspace. NavIC, a regional Navigation system has also been established for providing Position, Navigation and Timing (PNT) Services.

Table 11: Number of Satellite Launches by Country

Country	2013	2014	2015	2016	2017	2018
USA	19(0)	23(1)	20(2)	22(0)	29(0)	31(0)
Russia	34(2)	37(3)	29(3)	19(1)	20(1)	20(1)
China	15(1)	16(0)	19(0)	22(2)	18(2)	39(1)
European Space Agency	6(0)	7(0)	9(0)	9(0)	9(0)	8(1)
India	**3(0)**	**4(0)**	**5(0)**	**7(0)**	**5(1)**	**7(0)**
Japan	3(0)	4(0)	4(0)	4(0)	7(1)	6(0)
Others	1(0)	1(0)	3(0)	2(0)	2(1)	3(0)
Total	**81(3)**	**92(4)**	**86(5)**	**85(3)**	**90(6)**	**114(3)**

Source: ISRO.
Note: The numbers in brackets show satellite launch failures.

9.31 Globally, space activity is undergoing tremendous changes in the recent years in terms of players and applications. This has been marked by a shift in engagement of space activities - from government agencies pursuing national needs and space exploration activities to non-governmental/ private sector agencies aggressively pursuing commercial needs. Space systems are also being actively used for national security purposes by most countries. The global space economy for 2018 tallied about US$ 360 billion, which includes space systems manufacturing and space-based services.

9.32 ISRO has been pursuing the policy of engaging Indian industries in delivering space related goods and services, especially in light of the growing number of satellite and launch vehicle missions and application programmes. In this direction, the following areas have been identified for attracting private investments in the space sector: (i) Production of Polar Satellite Launch Vehicle (PSLV); (ii) Satellite integration and assembly; (iii) Production of composite materials; (iv) Production of solid, liquid, cryogenic and semi-cryogenic propellants; and (v) Production of electronic packages, Testing & Evaluation for avionics and satellite subsystems.

CHAPTER AT A GLANCE

- The services sector's significance in the Indian economy has continued to increase, with the sector now accounting for around 55 per cent of GVA and GVA growth, two-thirds of total FDI inflows into India and about 38 per cent of total exports.
- The services sector now accounts for more than 50 per cent of Gross State Value Added in 15 out of the 33 states and UTs.
- Gross Value Added growth of the services sector moderated in 2019-20.
- Various high-frequency indicators and sectoral data such as air passenger traffic, rail freight traffic, port traffic, bank credit to services sector and foreign tourist arrivals suggest a moderation in services sector activity during 2019-20.
- Gross FDI equity inflows into services sector have witnessed a strong recovery and services exports have maintained their momentum during April-September 2019.
- Services exports have outperformed goods exports in the recent years, due to which India's share in world's commercial services exports has risen steadily over the past decade to reach 3.5 per cent in 2018, twice the share in world's merchandise exports at 1.7 per cent.
- The shipping turnaround time at ports has almost halved from 4.67 days in 2010-11 to 2.48 days in 2018-19. However, this is still more than twice the global median.
- India has launched around 5-7 satellites per year in the recent years with no failures, barring one in 2017.

Social Infrastructure, Employment and Human Development

10
CHAPTER

Considering India's demographic advantage of a large young population in the productive age group, improvements in the social sectors like education, health care, water supply and sanitation leaves a profound impact on the quality of life of the people as well as to the productivity of the economy. Interventions made to reach out to all sections of the society includes fundamental changes in design of the policies/schemes, expanding the reach through people's participation, awareness generation, technology use, and direct benefit transfer. Expenditure on social services, as a proportion of GDP, has increased by 1.5 percentage points during the period 2014-15 to 2019-20. Access to education has improved the participation in education system at all levels both in rural and urban areas. Scaling up of the efforts to impart necessary skills through a wide network of ITIs focusing on women has pushed the skill development up. Total formal employment in the economy increased from 8 per cent in 2011-12 to 9.98 per cent in 2017-18. Access to health services, inter-alia, through Ayushman Bharat and Mission Indradhanush across the country has improved. About 76.7 per cent of the households in the rural and about 96 per cent in the urban areas had houses of pucca structure. Jal Shakti Abhiyan launched to accelerate progress on water conservation activities in water stressed districts of India.

INTRODUCTION

10.1 Investment in social infrastructure is a pre-requisite for inclusive growth and employment. In the interim Budget of 2019-20, the Government had laid down the vision for the decade which among other things emphasized upon building of social infrastructure; a healthy society-Ayushman Bharat, well-nourished women & children and safety of citizens. Some of the milestones to be achieved in this journey are access to electricity, a clean cooking facility, and housing for all by 2022. Imparting the required skills and creating enabling environment for employment generation are important priorities. Moreover, efforts are continuously being made to ensure piped water supply to all rural households by 2024, and solid waste management in every village. Emphasis has been laid on quality of higher education, promotion of women entrepreneurship, nutrition to the women and children and overall human development. The chapter highlights the important developments, takes stock of the outcomes and churn-out issues relevant for the policy in the social sector.

TRENDS IN SOCIAL SECTOR EXPENDITURE

10.2 The increase in expenditure on social services sector affirms the commitment of the government towards social well-being. The expenditure on social services (education, health and others) by Centre and States as a proportion of Gross Domestic Product (GDP) increased by 1.5 percentage points from 6.2 to 7.7 per cent, during the period 2014-15 to 2019-20 (Budget Estimates-BE). An increase was witnessed across all social sectors during this period. For education, it increased from 2.8 per cent in 2014-15 to 3.1 per cent in 2019-20 and for health from 1.2 to 1.6 per cent. The share of expenditure on social services out of total budgetary expenditure increased to 26 per cent in 2019-20 (BE) from 23.4 per cent in 2014-15 (Table 1).

Table 1: Trends in Social Service Sector Expenditure by General Government (Combined Centre and States)

Item	2014-15	2015-16	2016-17	2017-18	2018-19 RE	2019-20 BE
(₹ in Lakh crore)						
Total Budgetary Expenditure	32.85	37.61	42.66	45.16	55.17	60.72
Expenditure on Social Services	7.68	9.16	10.41	11.40	14.47	15.79
of which:						
i) Education	3.54	3.92	4.35	4.83	5.81	6.43
ii) Health	1.49	1.75	2.13	2.43	2.92	3.24
iii) Others	2.65	3.48	3.93	4.13	5.74	6.12
As percentage to GDP						
Expenditure on Social Services	6.2	6.6	6.8	6.7	7.6	7.7
of which						
i) Education	2.8	2.8	2.8	2.8	3.1	3.1
ii) Health	1.2	1.3	1.4	1.4	1.5	1.6
iii) Others	2.1	2.5	2.6	2.4	3.0	3.0
As percentage to total expenditure						
Expenditure on Social Services	23.4	24.3	24.4	25.2	26.2	26.0
of which						
i) Education	10.8	10.4	10.2	10.7	10.5	10.6
ii) Health	4.5	4.7	5.0	5.4	5.3	5.3
iii) Others	8.1	9.3	9.2	9.1	10.4	10.1
As percentage to social services						
i) Education	46.1	42.8	41.8	42.4	40.1	40.7
ii) Health	19.4	19.1	20.5	21.4	20.2	20.5
iii) Others	34.6	38.0	37.7	36.2	39.7	38.8

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. GDP for 2019-20 is First Advance Estimates released by National Statistical Office (NSO) on January 07, 2020.

Table 2: India's Position in the Global Human Development Index 2018

Country	HDI 2018 Value	HDI 2018 Rank	HDI Rank 2017	GNI per capita 2018 $	Life expectancy at birth (years) 2018	Expected years of schooling (years) 2018 [a]	Mean years of schooling (years) 2018[a]
Norway	0.954	1	1	68059	82.3	18.1	12.6
United Kingdom	0.920	15	14	39507	81.2	17.4	13.0
United States	0.920	15	13	56140	78.9	16.3	13.4
Russian Federation	0.824	49	49	25036	72.4	15.5	12.0
Sri Lanka	0.780	71	76	11611	76.8	14.0	11.1
Brazil	0.761	79	79	14068	75.7	15.4	7.8
China	0.758	85	86	16127	76.7	13.9	7.9
Indonesia	0.707	111	116	11256	71.5	12.9	8.0
South Africa	0.705	113	113	11756	63.9	13.7	10.2
India	**0.647**	**129**	**130**	**6829**	**69.4**	**12.3**	**6.5**
Bangladesh	0.614	135	136	4057	72.3	11.2	6.1
Myanmar	0.584	145	148	5764	66.9	10.3	5.0
Pakistan	0.560	152	150	5190	67.1	8.5	5.2
World	**0.731**			**15745**	**72.6**	**12.7**	**8.4**

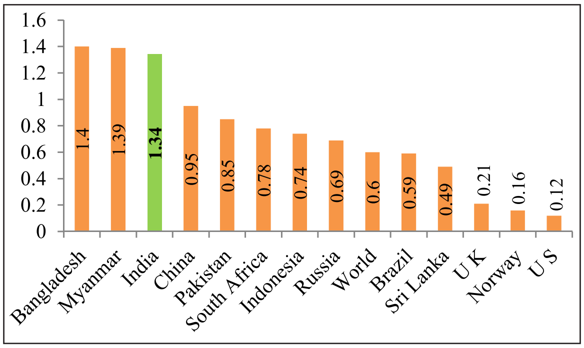
Source: Human Development Report (HDR), 2019
Note: a -Data refers to 2018 or the most recent year available, $-Gross National Income (GNI) is based on 2011 dollar purchasing power parity (PPP).

HUMAN DEVELOPMENT

10.3 India's rank in the Human Development Index (HDI)[1] improved to 129 in 2018 from 130 in 2017, out of a total of 189 countries. The value of HDI for India reached to 0.647 in 2018 (Table 2).

10.4 With 1.34 per cent average annual HDI growth, India is among the fastest improving countries, and ahead of China (0.95), South Africa (0.78), Russian Fedreation (0.69) and Brazil (0.59) (Figure 1). To sustain this momentum in human development and to further accelerate it, the role of public sector in delivery of social services such as education and health is critical.

Figure 1: Average annual HDI growth rate during 2010-2018 (per cent)



Source: HDR, 2019

EDUCATION FOR ALL

10.5 Sustainable Development Goal (SDG)-4 seeks 'to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all' by 2030.

1. The Human Development Report published by the United Nations Development Programme estimates the HDI in terms of three basic parameters: to live a long and healthy life, to be educated and knowledgeable, and to enjoy a decent economic standard of living.

In India, free and compulsory education starts at the age of 6 and ends at the age of 14 years under the ambit of the Right of Children to Free and Compulsory Education (RTE) Act, 2009 which stipulates norms and standards for a recognized school imparting elementary education. The RTE norms provide for an all-weather building in elementary schools. The school building should, *inter-alia*, consist of at least one classroom for every teacher and an office-cum-store-cum-Head teacher's room, barrier free access, separate toilets for boys and girls, safe and adequate drinking water facility to all children and playground.

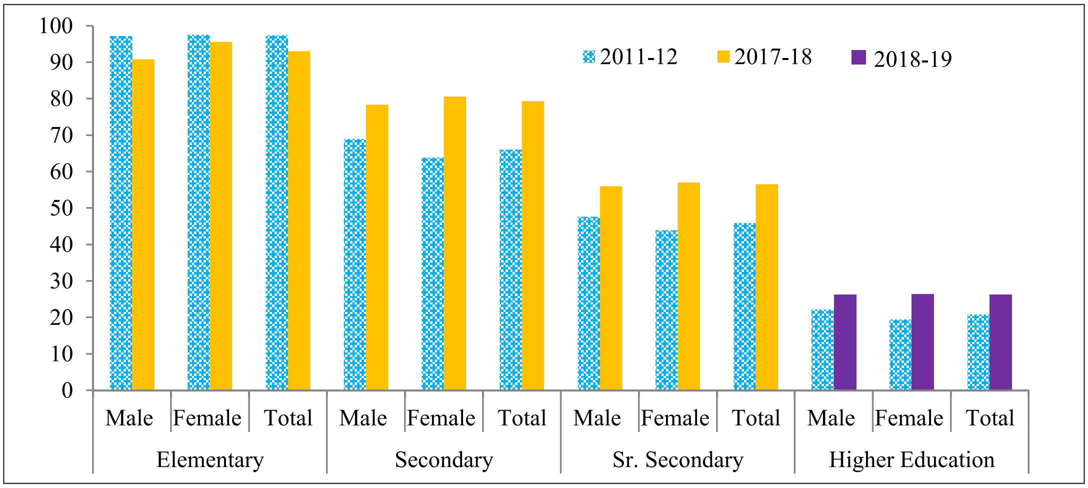
10.6 Unified District Information System for Education (U-DISE) collects data on various indicators on school education. As per U-DISE, 2017-18 (provisional), 98.38 per cent of Government elementary schools have girls' toilet, 96.23 per cent of Government elementary schools have boys' toilet, 97.13 per cent of Government elementary schools have provision of drinking water facility, 38.62 per cent of Government elementary schools have ramps, 58.88 per cent of Government elementary schools have boundary wall, 56.72 per cent of Government elementary schools have playground facility, 79.23 per cent of Government elementary schools have library and 61.75 per cent schools are having electricity connection. The progress in school and higher education infrastructure and gross enrolment at all levels as may be seen in Table 3 and Figure 2 respectively.

Table 3: Number of Schools, Colleges and Universities at all India level

Year	Primary & Upper Primary schools (in lakhs)	Sr. Secondary Schools (in lakhs)	Year	Colleges	Universities
2011-12	11.93	0.84	2011-12	34852	642
2017-18	14.85	1.24	2018-19	39931	993

Source: Educational Statistics at a Glance 2018, U-DISE, 2017-18 (Provisional) and All India Survey on Higher Education Report 2018-19, M/o Human Resource Development

Figure 2: Gross Enrolment Ratio (GER) at all India level (in per cent)



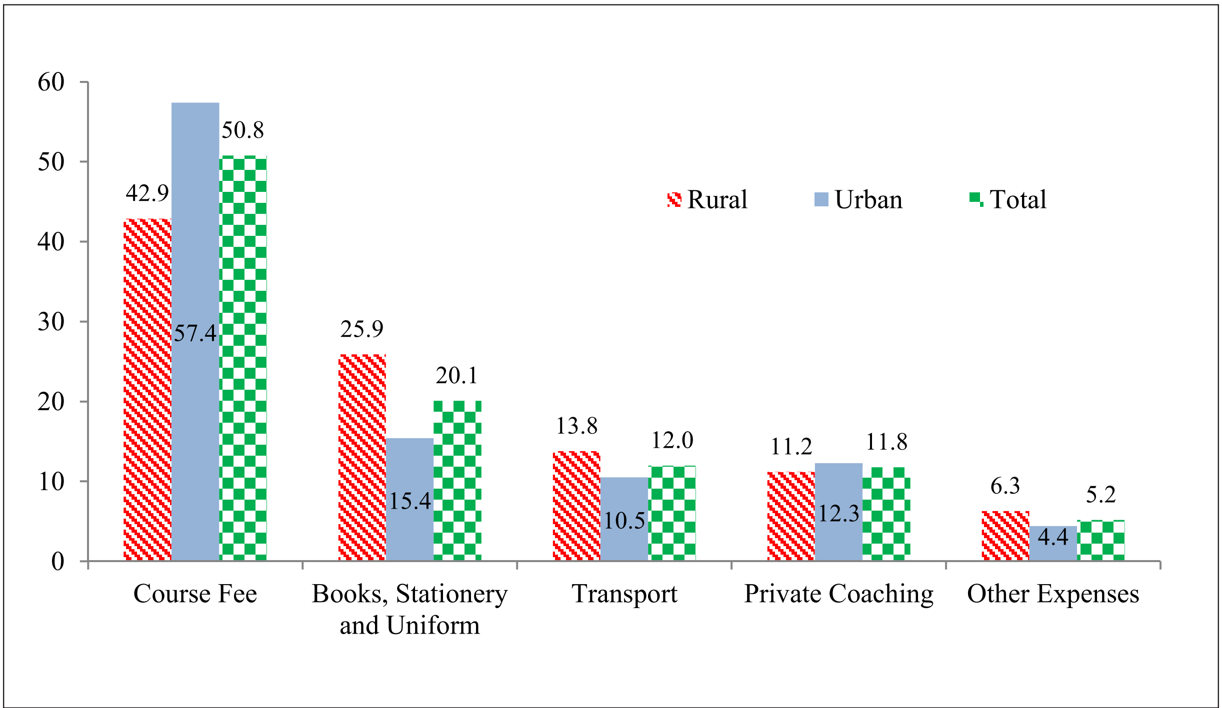
Source: Educational Statistics at a Glance 2018, U-DISE, 2017-18 (Provisional) and All India Survey on Higher Education Report 2018-19, M/o Human Resource Development
Note: GER of Higher Education is for 2018-19 and calculated for 18-23 age group.

10.7 The National Sample Survey (NSS) Report on 'Key Indicators of Household Social Consumption on Education in India 2017-18' also reflects the increased participation in education system across various indicators and highlights some challenges in terms of affordability, quality, distribution of educational infrastructure etc. In 2017-18, as reflected in NSS Survey, there were about 13.6 per cent persons of age 3 to 35 years who were never enrolled. The reasons they cite for not enrolling were 'not interested in education' and 'financial constraints.' Among those who were enrolled, drop-out rate was as high as 10 per cent at primary level, 17.5 per cent at upper primary/middle and 19.8 per cent at secondary level.

10.8 The poor and underprivileged section of people prefer to engage themselves in economic activities for their survival. In the absence of suitable financial support system and high burden of course fee especially in higher education pushes them out of the education system. The composition of various components of expenditure on education indicates that the course fees which is 50.8 per cent at all India level (including tuition, examination, developmental fees and other compulsory payments) among others contributes about half of the average expenditure of a basic course (Figure 3). The proportion of course fee is also high in rural and urban areas. The second largest component of average expenditure on education by student is books, stationary and uniform where an average student in the rural areas is surprisingly spending more than 10 percentage points as compared to urban areas.

10.9 The NSS Report also throws interesting findings on the challenges faced in affordability in higher education sector.

Figure 3: Distribution of average expenditure relating to basic course per student pursuing general course during the current academic year (2017-18) by item of expenditure (per cent)



Source: Key Indicators of Household Social Consumption on Education in India, NSS 75th Round (2017-18).

Students pursuing education in private aided institutions are spending significantly higher as compared to government institutions across rural-urban India (Table 4). Also, due to absence of competition in government schools/institutions, quality of education in government schools/institutions is low. As a result, more and more students prefer to enrol themselves in private institutions.

10.10 The initiatives taken to provide the quality education in government schools and institutions in affordable and competitive manner may be seen in Box-1.

Table 4: Average expenditure (₹) per student pursuing general education by level of current attendance and type of institution (2017-18)

Institution	Pre-primary	Primary	Secondary	Higher Secondary	Graduate	PG & above	All
Government institutions							
Rural	822	1092	3678	6144	9516	13117	2586
Urban	2126	2413	5978	10074	12448	15974	5954
Total	**1030**	**1253**	**4078**	**7001**	**10501**	**14656**	**3135**
Private aided institutions							
Rural	9589	9603	7361	10371	12820	17483	9723
Urban	16401	15800	20324	26905	22949	22594	19545
Total	**13223**	**12889**	**12487**	**16415**	**16769**	**19388**	**14155**

Source: Key Indicators of Household Social Consumption on Education in India, NSS 75th Round (2017-18).

Box 1: Programmes and Scheme for School Education

- Earlier, Sarva Shiksha Abhiyan (SSA) effective till 2017-18 was the designated Centrally Sponsored Scheme to meet the objectives of the RTE Act in elementary schools, provided assistance to State Governments and UTs for universalization of elementary education in the country. The Department of School Education and Literacy has launched an Integrated Scheme for School Education - Samagra Shiksha w.e.f. 2018-19, which subsumes three erstwhile Centrally Sponsored Schemes of Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE). The new integrated scheme envisages school education as a continuum from pre-school to senior secondary level and aims to ensure inclusive and equitable quality education. Under Samagra Shiksha, States and UTs are supported for strengthening of existing government schools, and for creation and augmentation of infrastructure facilities based on proposals received from respective States/UTs. The scheme also envisages an annual recurring composite school grant varying from ₹ 25,000/- to ₹ 1,00,000/- per annum depending upon the enrollment of students, for all government schools. Each school is required to spend at least 10 per cent of the composite school grant on activities related to Swachhata Action Plan. The scheme also provides for annual maintenance and repair of existing school building, toilets and other facilities to upkeep the infrastructure in good condition besides various interventions for improvement of quality of education such as induction and in-service training of teachers and school heads, learning enhancement programmes, use of ICT in education, assessment of learning outcomes, provision of libraries and supplementary graded material to schools etc.

- To further focus on quality education, the Central RTE Rules have been amended to include reference on class-wise and subject-wise Learning Outcomes. The Learning Outcomes for each class in Languages (Hindi, English and Urdu), Mathematics, Environmental Studies, Science and Social Science up to the elementary stage have, accordingly, been finalized and shared with all States/UTs. These would serve as a guidelines for States and UTs to ensure that all children acquire appropriate learning level. The RTE Act, 2009 was amended in 2017 to ensure that all teachers acquire the minimum qualifications prescribed under the Act by 31st March, 2019 to reinforce the Government's emphasis on improvement of quality of elementary education.
- The Navodaya Vidyalaya Scheme provides for opening of one Jawahar Navodaya Vidyalaya (JNV) in each district of the country to bring out the best of rural talent. Its significance lies in the selection of talented rural children as the target group and aims to provide them quality education comparable to the best in a residential school system.
- A National Mission called NISHTHA – National Initiative for School Heads' and Teachers' Holistic Advancement under the Centrally Sponsored Scheme of Samagra Shiksha in 2019-20 is being launched to improve learning outcomes at the elementary level. The Integrated Teacher Training Programme envisages to build the capacities of around 42 lakh teachers and head of schools, faculty members of SCERTs, DIETs, Block Resource Coordinators, and Cluster Resource Coordinators. The aim of this training is to motivate and equip teachers to encourage and foster critical thinking in students, handle diverse situations and act as first level counsellors.
- Promoting joyful learning through cultural activities including art, music, dance and theatre is playing a very critical role in a student's life and school activities. The National Curriculum Framework emphasized the importance of such activities and how they helped to enhance learning.
- Pradhan Mantri Innovative Learning Program (DHRUV) was launched to identify and encourage talented students to enrich their skills and knowledge.
- To broadbase technology aided teaching and learning, States and UTs are being actively involved to contribute and use the Digital Infrastructure for Knowledge Sharing (DIKSHA) platform. Steps are also being taken to improve the quality and diversify the nature of e-content on DIKSHA. Other e-content sites like e-pathsala, National Repository of Open Educational Resources (NROER) are also being integrated with DIKSHA to ensure easy access.

10.11 The Government has initiated the process of formulating a New Education Policy to meet the changing dynamics of the requirements of the population with regard to quality education, innovation and research, aiming to make India a knowledge superpower by equipping its students with the necessary skills and knowledge and to eliminate the shortage of manpower in science, technology, academics and industry.

10.12 The initiatives taken for improving the quality of learning and teaching in higher education including technical education are mentioned in Box 2.

Box 2: Programmes and Schemes in Higher Education

- The government launched Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) which aims at building a strong professional cadre of teachers by setting performance standards and creating top class institutional facilities for innovative teaching and professional development of teachers in higher education. Teachers of existing

Central, State Universities/Educational Institutions including private institutions can participate in capacity building programmes as well as induction training.

- Higher Education Financing Agency (HEFA) was established to provide sustainable financial model for higher education institutions, Kendriya Vidyalayas, Navodaya Vidyalayas, AIIMS and other educational institutions of the Ministry of Health with the objective to fund projects to the tune of ₹ 1 lakh crore by 2022. As on 11th December, 2019, projects worth ₹ 37,001.21 crore have been approved and the number of educational institutions that have availed funding through HEFA stands at 75.
- National Educational Alliance for Technology (NEAT) announced a PPP Scheme for using technology for better learning outcomes in Higher Education. The objective is to use Artificial Intelligence to make learning more personalised and customised as per the requirements of the learner. This requires development of technologies in Adaptive Learning to address the diversity of learners. EdTech companies would be responsible for developing solutions and manage registration of learners through the NEAT portal.
- The Department of Higher Education, in the Ministry of Human Resource Development has finalized and released a five-year vision plan named Education Quality Upgradation and Inclusion Programme (EQUIP). EQUIP is a vision plan aiming at ushering transformation in India's higher education system by implementing strategic interventions in the sector over the next five years (2019-2024).
- SWAYAM 2.0 was launched to offer online degree programmes with enhanced features and facilities by top ranking universities. 'Deeksharambh' a guide to student induction programme and 'PARAMARSH' scheme is to mentor institutions seeking National Assessment and Accreditation Council accreditation are some of the other major schemes of Department of Higher Education launched in 2019.

SKILL DEVELOPMENT

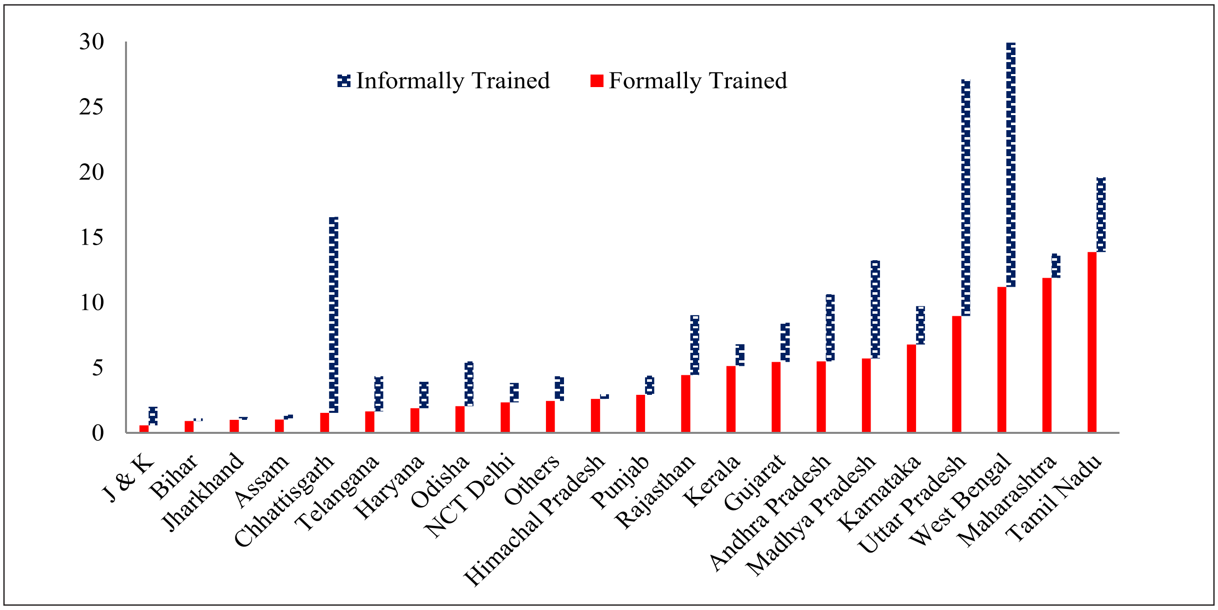
10.13 The future labour market situation of young persons is highly influenced by their initial experiences, including how quickly and how well they are able to access the labour market, and the skills and competencies acquired through education and training (ILO, 2019). General education improves knowledge of the people while skill training enhances their employability and equip them to tackle requirements of labour market.

10.14 According to the Periodic Labour Force Survey (PLFS) 2017-18 only 13.53 per cent of the workforce in the productive age-group of 15-59 years has received training (2.26 per cent formal vocational/technical training and 11.27 per cent informal training). A large section among informally trained workers, about 55.9 per cent received it either through self-learning (28.66 per cent) or hereditary (27.24 per cent) and about 38.51 per cent have received it on-the-job. State-wise percentage of trained workers may be seen in Figure 4.

10.15 Under the Skill India Mission, the Government implements the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) 2016-20 which enables large number of prospective youth to take up Short Term Training (STT) and Recognition of Prior Learning (RPL) through empanelled training centers /training providers (TCs/TPs) throughout the country. Under PMKVY (2016-20), 69.03 lakh (appx.) (38.01 lakh STT + 31.02 lakh RPL) candidates have been trained throughout the country as on 11th November, 2019.

10.16 Under PMKVY 2016-20, TCs/TPs are required to have dedicated mentorship-cum-placement cells for industry linkage and placement of candidates. TPs are mandated

Figure 4: State-wise workforce (15-59 years) who received training through formal/ informal sources (per cent)



Source: Annual Report, PLFS (2017-18)

to organize Placement/Rozgar Melas every six months with support from the Sector Skill Councils (SSCs) and to ensure the participation of local industry. The reimbursement of last 20 per cent of training payout to TCs is linked with the placement (wage employment or self-employment) of the candidate. Additionally, post placement support of ₹ 1500 per month per trainee is applicable for special group and special areas for 2 or 3 months post training depending on placement within or outside the district of the domicile of the candidate. Under STT, as per data reported on Skill Development Management System (SDMS), 30.21 lakh candidates were certified out of which, 15.4 lakh candidates were reported to be placed in various sectors across the country.

10.17 A wide range of reforms has been introduced to the Apprenticeship Rules, 1992 for expansion and outreach of apprenticeship policy. The comprehensive reforms under Apprenticeship Rules 1992 are given in Box 3.

Box 3: Reforms under Apprenticeship Rules 1992

- Increasing upper limit for engaging apprentices from 10 to 15 per cent of total strength of establishment;
- Decreasing the size limit of an establishment with mandatory obligation to engage apprentices from 40 to 30;
- Payment of stipend for 1st year has been fixed rather than linking it to minimum wages;
- 10 to 15 per cent hike in stipend for 2nd and 3rd year of apprenticeship;
- Duration of apprenticeship training for optional trade can be from 6 months to 3 years.
- The minimum amount of stipend prescribed ranges from ₹ 5,000 per month - for school pass outs between Class 5th- 9th, to ₹ 9,000 per month to graduate or degree apprentices in any stream.

STATUS OF EMPLOYMENT IN INDIA

10.18 Employment generation coupled with improving employability has been the priority of the Government. Various steps are being taken for generating employment in the country like encouraging private sector of economy, fast-tracking various projects involving substantial investment and increasing public expenditure on schemes such as Prime Minister's Employment Generation Programme (PMEGP), Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Pt. Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) and Deendayal Antodaya Yojana-National Urban Livelihoods Mission (DAY-NULM). As a result of these policy interventions, the nature of employment has changed significantly.

10.19 As per PLFS estimates[2], the share of regular wage/salaried employees has increased by 5 percentage points from 18 per cent in 2011-12 to 23 per cent in 2017-18 as per usual status[3] (Figure 5). In absolute terms, there was a significant jump of around 2.62 crore new jobs in this category with 1.21 crore in rural areas and 1.39 crore in urban areas (Table 5)[4]. Remarkably, the proportion of women workers in regular wage/salaried employees category have increased by 8 percentage points (from 13 per cent in 2011-12 to 21 per cent in 2017-18) with addition of 0.71 crore new jobs for female workers in this category (Table 5 & Figure 5)

10.20 Among the self-employed category (consists of employers, own account workers and unpaid family labour), while the proportion of own account workers and employers increased, the proportion of unpaid family labour (helper) has declined, especially for females[5] between 2011-12 and 2017-18. The proportion of total self-employed workers however remained

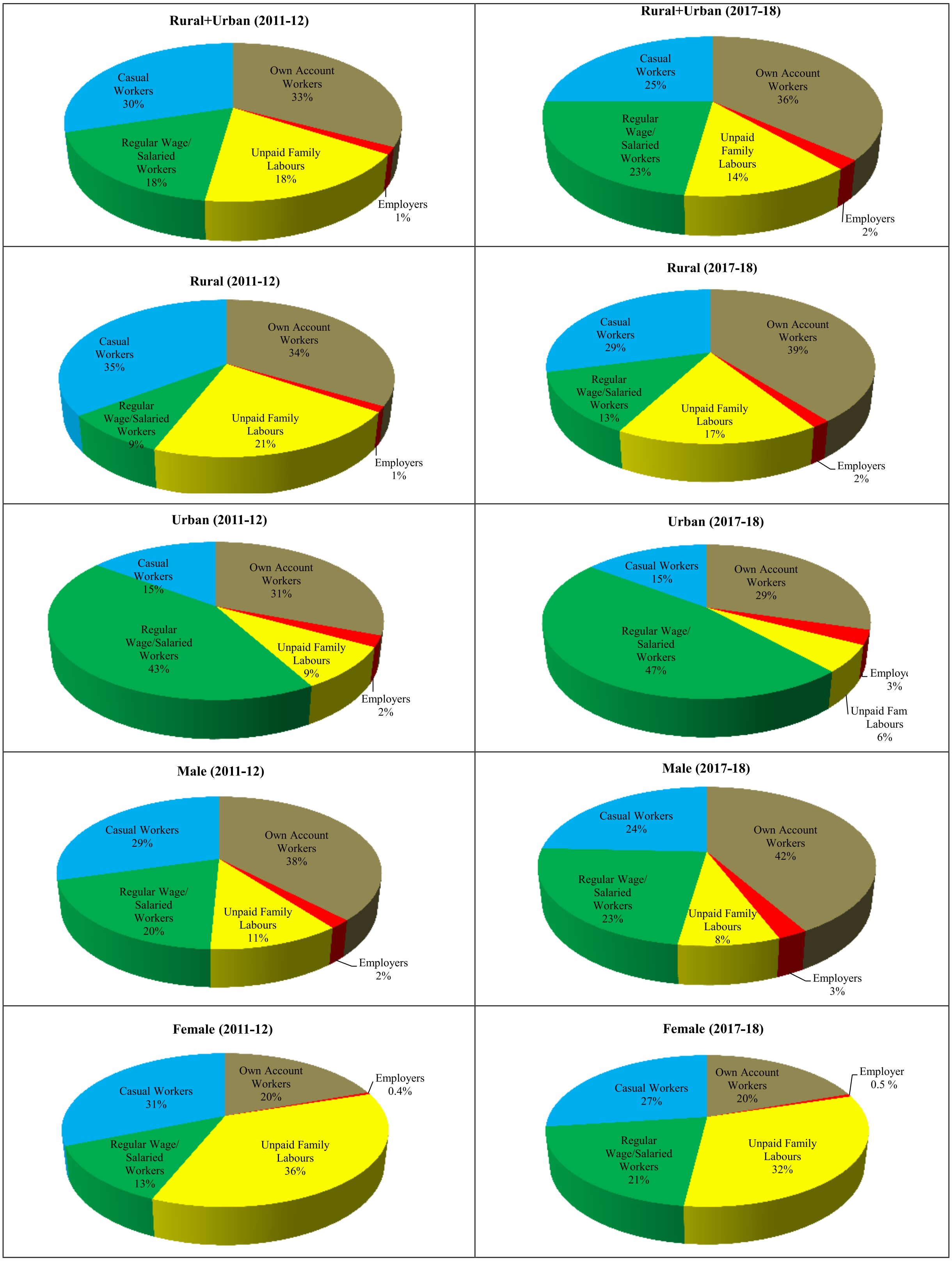
2 The Government launched a new regular employment-unemployment survey, namely, annual Periodic Labour Force Survey (PLFS), 2017-18 with certain changes in survey methodology, data collection mechanism and sampling design vis-à-vis the earlier quinquennial (once in every five years) Employment and Unemployment Surveys (EUS) of NSO. Under the PLFS, households are selected in both rural and urban areas by providing 75 per cent weightage to households where at least one member has secondary education (Class 10) or above. In the EUS, affluence level and earning from non agricultural activities in rural areas and Monthly Per Capita Consumption Expenditure (MPCE) of household in selected blocks in urban areas were used for stratification of households. Due to the changes in methodology and sampling design, labour market estimates based on PLFS are not strictly comparable with the results of earlier quinquennial surveys on Employment-Unemployment conducted by NSO. The results of the PLFS with earlier rounds of NSO-EUS need to be read along with explanatory notes on survey methodology and sampling design. PLFS estimates and previous round estimates are juxtaposed only for making analytical reasoning and is not a comparison in the strictest sense of the term.

3 Usual status (ps+ss) gives an idea about average working condition of an individual for entire reference year. It can further be subdivided in to two categories. One is principal status (ps) and other is subsidiary status (ss). Principal status (ps) measures the activity in which an individual has spent relatively longer time of a reference year (major time criterion) while subsidiary status (ss) measures the activity status of an individual who has spent majority of days out of work force but have worked for short period of time (more than 30 days) (Annual Report, PLFS 2017-18).

4 The NSO data classifies the workers on the basis of employment status into three categories *viz*., self-employed workers; regular wage/salaried employees; and casual labourers. The self-employed category includes those who work for themselves and do not sell their labour power to anyone else in return for wage. This category of workers includes all those workers who operated their enterprises or are engaged in a profession or trade, either on own account, individually or with partners, or as home-based workers (NCEUS; 2009). However, regular wage/salaried employees are those who receive predetermined wages/salary on regular basis. Moreover, casual worker includes those who are hired for very short time period on daily or monthly basis. Out of these three categories, regular wage/salaried employees are better in qualitative terms as they receive pre-determined wages/salary with or without other benefits like social/job security.

5. Own account workers include those who operated their enterprises on their own account or with one or a few partners and ran their enterprise without hiring any labour during the reference period while employers are those own account workers who ran their enterprise by hiring labourers. However, unpaid family labourers/helpers included those who were engaged in their household enterprises, working full or part time and did not receive any regular salary or wages in return for the work performed during the reference period. (Annual Report, PLFS 2017-18).

Figure-5: Distribution of Workers (principal status plus subsidiary status, all ages) by Sector, Sex and Employment Status in India



Source: Estimated from unit level data of NSO 68th Round Employment-Unemployment Survey (EUS) 2011-12 and Periodic Labour Force Survey (PLFS), 2017-18.
Note: The figures are to be read along with explanatory note for comparability.

Table 5: Number of Workers (principal status plus subsidiary status, all ages) by Sector, Sex and Employment Status in India (in crore)

Employment Status	Male		Female		Rural		Urban		Total	
	2011-12	2017- 18	2011-12	2017-18	2011-12	2017-18	2011-12	2017-18	2011-12	2017-18
Self Employed	17.33	18.68	7.20	5.54	18.81	18.26	5.73	5.95	24.54	24.21
Own Account Workers	*12.94*	*14.90*	*2.55*	*2.15*	*11.26*	*12.45*	*4.21*	*4.60*	*15.47*	*17.05*
Employers	*0.64*	*0.9*	*0.06*	*0.06*	*0.39*	*0.49*	*0.31*	*0.47*	*0.7*	*0.96*
Unpaid Family Labour	*3.75*	*2.88*	*4.6*	*3.33*	*7.16*	*5.32*	*1.21*	*0.88*	*8.37*	*6.20*
Regular Wage/ Salaried Employees	7.10	9.00	1.74	2.45	2.93	4.14	5.91	7.30	8.83	11.45
Casual labourer	9.95	8.61	3.97	2.86	11.91	9.18	2.02	2.28	13.92	11.46
Total	**34.38**	**36.29**	**12.91**	**10.85**	**33.64**	**31.59**	**13.65**	**15.53**	**47.29**	**47.12**

Source: Estimated from unit level data of NSO 68th Round EUS 2011-12 and NSO PLFS, 2017-18

Note: 1. Projected population as on 1st January, 2018 was 135.74 crore which has been derived using the NSO-EUS (2011-12) formula, $A = A1 * [1 + \frac{R}{100}]^{82/120}$, where A1 is the census population as on 1st March 2011, R is the percentage decadal change in population between census 2001 and 2011 and A is the projected population as on 1st January, 2018.

2. The figures are to be read along with explanatory note for comparability.

unchanged at 52 per cent during this period (Table 5 & Figure 5).

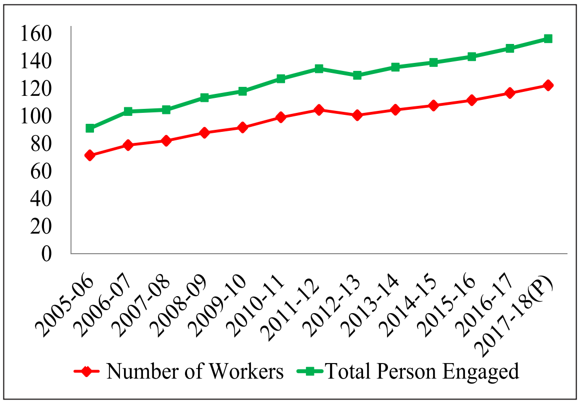
10.21 The distribution of workers in casual labour category decreased by 5 percentage points from 30 per cent in 2011-12 to 25 per cent in 2017-18 with the decline being in rural areas (Figure 5 & Table 5).

Formalization of Jobs

10.22 With introduction of GST, digitization of payments, direct benefit transfer of subsidies/ scholarships/wages & salaries to bank accounts, opening of Jan Dhan accounts, extending social security coverage to more workers, the government has been making efforts to formalize the economy (Box 4). As a result of these initiatives, an increase in formal employment is evident as is shown through multiple data sources.

10.23 According to the Annual Survey of Industries (ASI), there has been an increase in employment in the organized manufacturing sector. Between 2014-15 and 2017-18, the total number of workers engaged in the sector increased by 14.69 lakh while total persons engaged (inclusive of employees and employers) increased by 17.33 lakh (Figure 6).

Figure 6 : Employment in Organized Manufacturing in India (in lakh)



Source: Annual Survey of Industries various issue (P: Provisional Estimates), MoSPI

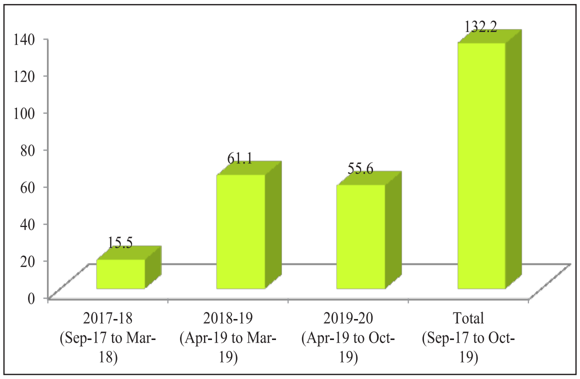
10.24 To indicate the extent of formalization of workforce by extending coverage of organized social security, the Government since September, 2017 publishes the monthly

Box 4: Steps Taken Towards Formalisation of the Labour Market

- For portability of Provident Fund accounts, EPFO launched a "Universal Account Number" service for contributing members.
- Government is paying 12 per cent of employer contribution to EPFO in respect of the new employees drawing salary up to ₹15,000 per month for the first three years of their employment, under Pradhan Mantri Rozgar Protsahan Yojana (PMRPY). The scheme has ended on 31st March, 2019.
- Mandatory wage ceiling of subscription to EPS increased from ₹ 6,500 to ₹ 15,000 per month. The Code on Wages Act, 2019 to ensure minimum wages to all and timely payment of wages to all employees irrespective of the sector of employment without any wage ceiling, except MGNREGA.
- MUDRA and STAND-UP India for creating formal credit to businesses.
- Rate of ESI contribution reduced from 6.5 per cent to 4 per cent with effect from 1st July, 2019. Employer's share of contribution reduced from 4.75 per cent to 3.25 per cent and employees' share from 1.75 per cent to 0.75 per cent.
- National Career Service (NCS) Project launched in 2015, provides a host of career-related services such as dynamic job matching, career counselling, job notifications and information on skill development courses and rich career content on a digital platform (www.ncs.gov.in). NCS works towards bridging the gap between job-seekers and employers candidates seeking training and career guidance, agencies providing training and career counselling by transforming the National Employment Service.

payroll data indicating the number of new subscribers who have availed benefits under three major social security schemes, viz; the Employees' Provident Fund (EPFO), Employees' State Insurance Scheme (ESIC) and the National Pension Scheme (NPS). Of these, EPFO has more than 6 crore active members (with atleast one-month contribution during the year). EPFO manages social security funds of workers in the organized/semi-organized sector in India. The pay roll data of EPFO for 2019-20 as on 20th December 2019 shows a net increase of 55.6 lakhs as EPFO subscriber compared to 61.12 lakhs in 2018-19 (Figure 7). These estimates are net of the members newly enrolled, exited and rejoined during the year as per records of the EPFO.

Figure 7: Net Employees' Provident Fund Subscriber (in lakh)



Source: EPFO

Note: Data is provisional as updation of employees' records is a continuous process and gets updated in subsequent month/s.

10.25 The estimates of share of workers in informal sector in non-agricultures and AGEGC (Agricultural sector excluding only growing of crops, market gardning, horticulture and growing of crops combined with farming of animals) sectors obtained from the NSO-EUS and PLFS 2017-18, also show a decline from 77.5 per cent in 2004-05 to 68.4 per cent in 2017-18, with the decline being more pronounced among females (Table 6).

10.26 To get a holistic picture of the extent of formal-informal employment in the economy,

Table 6: Employment in Informal Sector Enterprises among usual status Workers engaged in Non-agriculture and AGEGC Sectors (in per cent)

Category of Workers	EUS 61st Round 2004-05	EUS 66th Round 2009-10	EUS 68th Round 2011-12	PLFS 2017-18
Male	76.7	71.5	73.4	71.1
Female	79.7	69.8	69.2	54.8
Person	77.5	71.1	72.4	68.4

Source: NSO (EUS) various rounds and PLFS (2017-18)
Note: The figures are to be read along with explanatory note for comparability.

the NCEUS (2007a)[6] definition was applied upon the workforce estimates of PLFS to identify the total number of formal and informal workers employed in the organized and unorganized sector. It was observed that the proportion of workers in organized sector increased from 17.3 per cent in 2011-12 to 19.2 per cent in 2017-18 (Table 7). In actual terms, the number of workers in the organized sector increased to about 9.05 crore workers in 2017-18, an increase of 0.87 crore over 2011-12. This was mainly due to the increase in formal employment, the share of which in organized sector increased from 45 per cent in 2011-12 to 49 per cent in 2017-18. Total formal employment increased from 8 per cent to 9.98 per cent during this period. In absolute terms, the number of workers with formal employment increased from 3.8 crore in 2011-12 to 4.7 crore in 2017-18 (Table 7).

Table 7: Formal-Informal Employment across Organized and Unorganized Sector

Employment	Organized (in per cent)	Unorganized (in per cent)	Total (in per cent)	Organized (in crore)	Unorganized (in crore)	Total (in crore)
			2004-05			
Formal	53.42	0.36	7.46	3.34	0.14	3.41
Informal	46.58	99.64	92.38	2.91	39.35	42.26
Total	**13.68**	**86.32**	**100**	**6.25**	**39.49**	**45.67**
			2011-12			
Formal	45.4	0.40	8.1	3.71	0.16	3.83
Informal	54.6	99.6	91.9	4.47	38.95	43.46
Total	**17.3**	**82.7**	**100**	**8.18**	**39.11**	**47.29**
			2017-18			
Formal	48.91	0.74	9.98	4.43	0.28	4.70
Informal	51.09	99.26	90.02	4.62	37.79	42.43
Total	**19.2**	**80.8**	**100**	**9.05**	**38.07**	**47.13**

Source: Estimated from unit level data of NSO (EUS) various rounds and PLFS (2017-18)
Note: The figures are to be read along with explanatory note for comparability.

6. As per National Commission for Enterprises in Unorganized Sector (NCEUS) classification, "The unorganised sector consists of all unincorporated private enterprises owned by individuals or households engaged in the sale and production of goods and services operated on a proprietary or partnership basis and with less than ten total workers." However, "informal workers consist of those working in the unorganised enterprises or households, excluding regular workers with social security benefits, and the workers in the formal sector without any employment benefits /social security provided by the employers." (NCEUS, 2007a, p.3).

GENDER DIMENSION OF EMPLOYMENT

10.27 Gender equality in labour market is considered to be smart economics to achieve faster economic growth and wealth creation as it has the potential to impact upon poverty, inequality and economic well-being of a country through increase in income of the household, spending on health and education of children, improvement in saving, investment and consumption growth. In an era of globalization, no country can develop and achieve its full potential if half of its population is locked in non-remunerative, less productive and non-economic activities (World Bank, 2011).

Female Participation in Labour Market

10.28 According to NSO-EUS and PLFS estimates, female labour force participation rate (LFPR) for productive age-group (15-59 years) as per usual status (ps+ss) shows a declining trend. Female labour force participation declined by 7.8 percentage points from 33.1 per cent in 2011-12 to 25.3 per cent in 2017-18. Though female LFPR is higher in rural areas as compared to urban areas, the rate of decline was also sharper in rural areas compared to urban areas (Figure 8A). As a result of this, gender disparity in India's labour market has increased which is reflected from declining trend in ratio of female to male labour force participation rate except for urban females. In urban areas, female labour force participation more or less remained constant. Therefore, ratio of female to male labour force also remained constant between 2011-12 and 2017-18 (Figure 8B).

10.29 Female Worker Population Ratio (WPR) also shows a similar trend[7]. As per PLFS, female WPR for productive age group (15-59 ages) stood at 23.8 per cent (25.5 per

Figure 8 A: Female Labour Force Participation Rate (ps+ss, 15-59 ages) by Location (per cent)

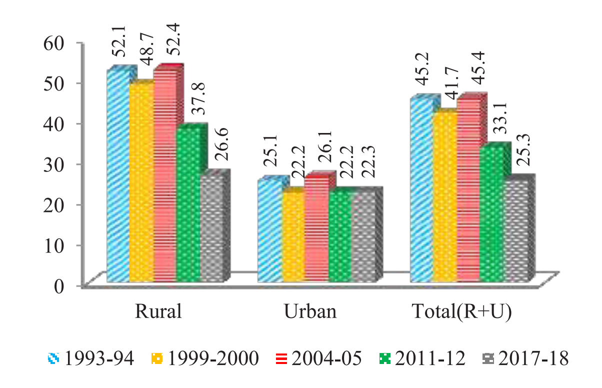
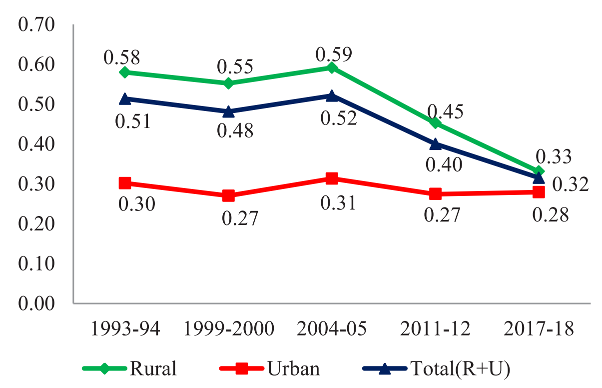


Figure 8 B: Ratio of Female to Male Labour Force Participation Rate (ps+ss, 15-59 ages)



Source: Estimated from unit level data of NSO (EUS) various rounds and PLFS (2017-18)
Note: The figures are to be read along with explanatory note for comparability.

7. Labour force refers to those who are either engaged in any economic activities or are willing to pursue an economic activity in a reference period. It includes both (1) those who are in workforce; and (ii) unemployed. Of these, workforce refers to the population who are actively engaged in any economic activities and producing goods and services in a reference period while unemployed refers to all those who are seeking and available for work but had not worked in a reference year due to lack of work. Hence, Labour force participation rate (LFPR) can be defined as the proportion of population in the labour force to the total population. Similarly, Worker population ratio (WPR) can be defined as the proportion of employed persons to the total population (Annual Report, PLFS 2017-18).

cent in rural areas and 19.8 per cent in urban areas) in 2017-18 as compared to 32.3 percent in 2011-12 (Figure 9A). As a result of this, ratio of female to male work participation rate has also shown consistent declining trend in India except for urban females (Figure 9 B).

10.30 Based on the activity status - principal (ps) and subsidiary (ss)- indicates that participation of females, especially in rural areas, who were engaged in subsidiary activities has drastically declined (from 25 per cent in 2004-05 to 5.7 per cent in 2017-18) (Figure 9 D) as compared to females engaged as per principal status (Figure 9 C). This clearly indicates that those female workers who had stable jobs continued while those who were not full time workers are dropping out of the labour market.

Factors Influencing Female Labour Force Participation

10.31 While women account for almost half of India's population, their participation in the labour market is almost one-third as well as declining over several Survey Rounds. To understand this declining trend, the activity status of females outside the workforce was examined separately for youth (15-29) as well as for the age groups (30-59 & 15-59). As seen in Table 8, in 2017-18, higher proportion of young males (10.5 per cent) were unemployed

Figure 9 A: Female Worker Population Ratio (ps+ss, 15-59 ages) by Location (per cent)

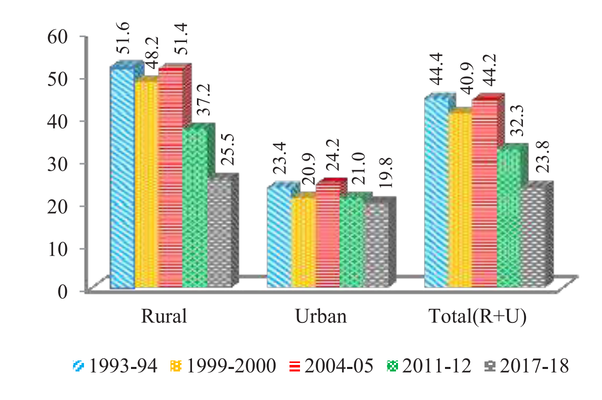


Figure 9 B: Ratio of Female to Male Work Participation Rate (ps+ss, 15-59 ages)

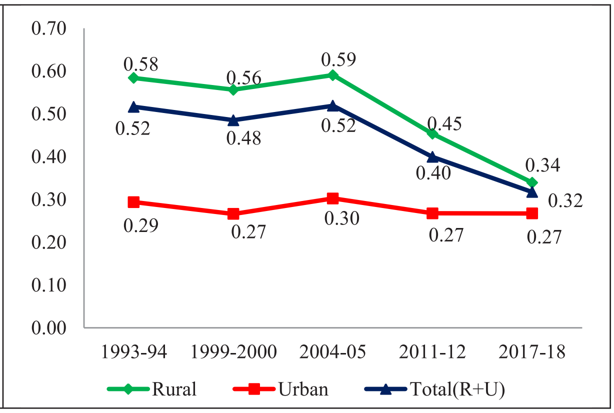


Figure 9 C: Female Worker Population Ratio (principal status, 15-59 ages) by Location (per cent)

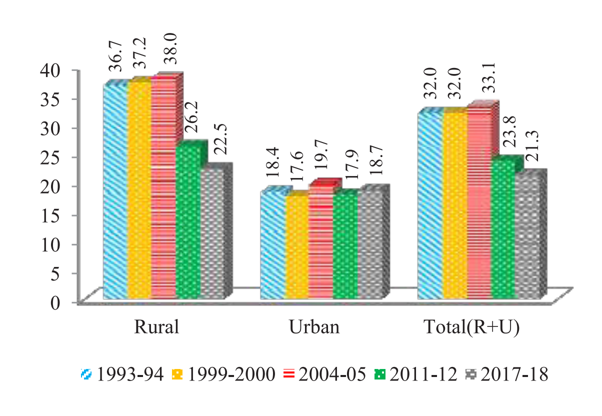
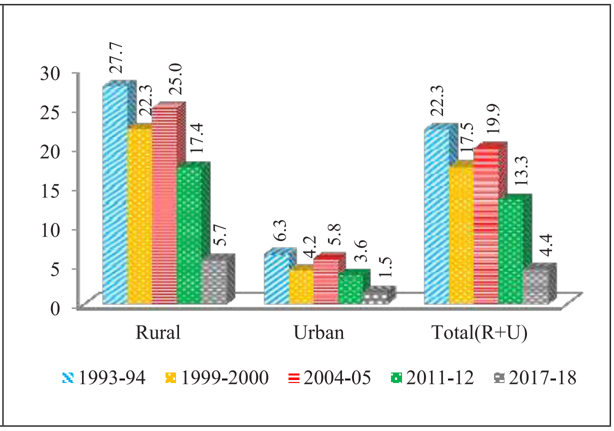


Figure 9 D: Female Worker Population Ratio (subsidiary status, 15-59 ages) by Location (per cent)



Source: Estimated from unit level data of NSO (EUS) various rounds and PLFS (2017-18)
Note: The figures are to be read along with explanatory note for comparability.

compared to young females (3 per cent). The proportion of youth attending educational institutions has increased at a faster rate from 23 per cent in 2004-05 to 38.5 per cent in 2017-18 for young males, while for young females the proportion almost doubled from 15.8 per cent in 2004-05 to 30.3 per cent in 2017-18. It may be considered a remarkable achievement that around one-third of youth were engaged in acquiring skills and delayed their entry into labour market. However, among young females around 52.3 per cent were engaged in domestic activities in 2017-18 and this proportion has increased over the last two decades. Similarly, in the productive age group 30-59, where females were out of education, the proportion of females attending domestic duties increased from 46 per cent in 2004-05 to 65.4 per cent in 2017-18 (Table 8). For the productive age group (15-59 years) as compared to less than 1 per cent of males, about 60 per cent of working age females were outside labour market attending to domestic duties only.

10.32 The educational attainment of out of workforce productive age group females

Table 8: Distribution of Out-of-Work Force (principal status + subsidiary status, 15-59 age) population into major activities by Sex (per cent)

Activities	2004-05		2011-12		2017-18	
	Male	Female	Male	Female	Male	Female
			15-29 Age group			
Unemployed (A)	3.91	2.18	3.77	1.62	10.45	2.94
Out of labour force (B)						
Attending Education Institutes	23.19	15.88	34.33	25.44	38.47	30.30
Attending domestic Duties	0.47	45.92	0.51	49.25	1.03	52.29
Others	1.72	1.12	1.60	0.91	1.72	1.00
Total Out-of-Work Force (A + B)	**29.28**	**65.09**	**40.21**	**77.25**	**51.68**	**86.53**
			30-59 Age group			
Unemployed (A)	0.43	0.49	0.36	0.24	1.29	0.48
Out of labour force (B)						
Attending Education Institutes	0.03	0.05	0.03	0.05	0.10	0.11
Attending domestic Duties	0.24	46.03	0.22	58.52	0.37	65.39
Others	2.26	1.89	1.96	1.84	2.69	2.84
Total Out-of-Work Force (A + B)	**2.96**	**48.47**	**2.57**	**60.63**	**4.45**	**68.82**
			15-59 Age group			
Unemployed (A)	2.01	1.24	1.86	0.83	5.30	1.51
Out of labour force (B)						
Attending Education Institutes	10.50	7.07	15.11	10.89	16.90	12.75
Attending domestic Duties	0.34	45.98	0.35	54.57	0.66	59.90
Others	2.01	1.55	1.81	1.44	2.27	2.07
Total Out-of-Work Force (A + B)	**14.86**	**55.83**	**19.12**	**67.72**	**25.13**	**76.24**

Source: Estimated from unit level data of NSO (EUS) various rounds and PLFS (2017-18)

Note: The figures are to be read along with explanatory note for comparability; and 'Others' includes recipient of remittances, disabled and others.

shows interesting results. It was found that those with middle level and secondary level education were engaged in domestic duties compared to highly educated women for all age sub-groups. For the productive age group (15-59 years), only 5.3 per cent of highly educated women are engaged in full time domestic duties while remaining 54.6 per cent of women attending domestic duties are up to secondary level educated (Table 9). Thus, it is lack of attainment of appropriate education level /skill sets that are confining women to domestic duties.

Table 9: Distribution of female attending domestic duties (ps+ss) by Age Group and Level of Education in India, 2017-18 (per cent)

Level of Education	Age Groups		
	15-29	30-59	15-59
Illiterate	8.0	26.1	18.5
Up to Middle Level	23.9	24.7	24.4
Secondary	14.3	9.8	11.7
Graduate and above	6.0	4.7	5.3
Total	**52.3**	**65.4**	**59.9**

Source: Annual Report, PLFS 2017-18

Note: Graduate and above includes diploma/certificate courses

10.33 Considerable amount of research work has been done to identify the reasons behind low and declining female labour force participation rates for India. The arguments advanced in support of the declining and low female LFPR are from both supply and demand side. On the supply side, it was argued that as more women in rural areas are now pursuing higher education has delayed their entry into the labour market (Rangarajan *et. al.,* 2011). It could also be because the household incomes have risen in rural areas on account of higher wage levels which is dragging women out of the labour market (Himanshu, 2011). The female LFPR could be low also due to cultural factors, social constraints and patriarchal norms restricting mobility and freedom of women (Das, 2006, Banu, 2016). The relatively higher responsibilities of unpaid work and unpaid care work could also be constraining women participation in the labour market (World Economic Forum, 2018). On the demand side, absence of job opportunities and quality jobs and significant gender wage gap are restraining factors (World Bank, 2010; Chowdhury, 2011; Kapsos *et. al,* 2014). Sanghi *et. al.* (2015) using NSSO-EUS data concluded that besides income effect, education effect and the problem of underestimation, what is left unnoticed is the structural transformation of the economy and its resultant impact on the female labour market. Mehrotra and Sinha (2017) also pointed out that structural shift away from agricultural employment, and increased mechanization of agriculture were factors behind declining female employment trends in rural areas. In addition, it was also observed that the decline in animal husbandry, and in urban areas a fall in international demand for products of labour-intensive industries have led to lowering of female LFPR in India.

10.34 Low female wages in agriculture sector were driving out females engaged as unpaid labour. The structural transformation of the economy did not change the labour market commensurately. The fall in employment in agriculture has not shown concomitant increase in opportunities for women in the manufacturing sector where most women with middle to secondary levels of education and from middle income groups are likely to look for employment (Chandrasekhar and Ghosh, 2011). Withdrawal of men from agriculture and shift to the construction sector in urban areas, led to loss of jobs for rural women who were engaged as unpaid labour along with the men. The loss of jobs as casual labour in agriculture also led to withdrawal of women from labour force (Kannan and Raveendran, 2012). Thus, the achievements in female education and the subsequent loss of female dominated jobs in agriculture and manufacturing sector could have contributed to the continued decline in female LFPR. Though substantial exploration has been undertaken to explain declining female work participation from demand as well as supply side but there is still no consensus among the scholars regarding the declining trend in female employment in recent decades.

Initiatives to Improve Female Work Participation

10.35 To encourage female participation in the economy, various programmes/ legislative reforms are in place. A number of protective provisions have been incorporated in various labour laws for creating congenial work environment for women workers such as child care centers, time-off for feeding children, enhancement in paid maternity leave from 12 weeks to 26 weeks, provisions for mandatory crèche facility in the establishments having 50 or more employees, permitting women workers in the night shifts with adequate safety measures, etc. The Equal Remuneration Act, 1976 provides for payment of equal remuneration to men and women workers for same work or work of similar nature without any discrimination. Under the provisions of the Minimum Wages Act, 1948, the wages fixed by the appropriate Government are equally applicable to both male and female workers without any gender discrimination. In order to enhance the employability of female workers, the Government is providing training to them through a network of women Industrial Training Institutes, National Vocational Training Institutes and Regional Vocational Training Institutes. Besides these, various initiatives have been implemented for empowerment of women across the country. The details of these major schemes are as under:

i. **Safety of Women at Workplace:** Safety and security of women in the country is of utmost priority for the Government. The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 covers all women, irrespective of their age or employment status and protects them against sexual harassment at all workplaces both in public and private sector, whether organized or unorganized. The Act mandates all the workplace having more than 10 workers to constitute Internal Complaint Committee (ICC) for receiving complaints of sexual harassment. Similarly, the appropriate Government is authorized to constitute Local Complaint Committee (LCC) in every district which will receive complaints from organizations having less than 10 workers or if the complaint is against the employer himself.

ii. **Mahila Shakti Kendra Scheme**: This scheme aims to empower rural women through community participation. The scheme envisages community engagement through College Student Volunteers to empower rural women in 115 aspirational districts as part of block level initiatives.

iii. **Provision of safe and affordable accommodation:** To provide safe and affordable accommodation to working women, Working Women Hostels have been established. These hostels have day care facility for the children of inmates too.

iv. **Women Helpline Scheme (WHL):** WHL implemented since 1st April, 2015 to provide 24 hours emergency and non-emergency response to women affected by violence through referral and information about women related government schemes/programmes across the country through a single uniform number (181).

v. **One Stop Centre (OSC):** This scheme facilitates access to an integrated range of services including police, medical, legal, psychological support and temporary shelter to women affected by violence. One Stop Centres are being set up in all districts of the country.

vi. **Female Entrepreneurship:** To promote female entrepreneurship, the Government has initiated schemes like: MUDRA, Stand Up India and Mahila e-Haat (online marketing platform to support women entrepreneurs/ SHGs/NGOs). Pradhan Mantri Mudra Yojana (PMMY) provides access to institutional finance to micro/small business units upto ₹ 10 lakh. Out of total beneficiaries, almost 75 per cent were women borrowers. To encourage further coverage of women borrowers, the Micro Units Development and Refinance Agency Ltd. (MUDRA) extends a rebate of 0.25 per cent on its refinance interest rate for PMMY loans given by Micro Finance Institutions to women borrowers. Stand-UP India, the Government provides bank loans between ₹ 10 lakh and ₹ 1 crore to at least one Scheduled Caste (SC)/ Scheduled Tribe (ST) borrower and at least one-woman borrower per bank branch for setting up greenfield enterprises in the manufacturing, services or the trading sector.

vii. **Rashtriya Mahila Kosh (RMK)** is an apex micro-finance organization that provides micro-credit at concessional terms to poor women for various livelihood and income generating activities. Among other things, RMK also promotes and supports expansion of entrepreneurship skills among women.

viii. **Prime Minister's Employment Generation Programme (PMEGP):** Under the scheme, women entrepreneurs are provided 25 per cent and 35 per cent subsidies for the project set up in urban and rural areas respectively. For women beneficiaries, own contribution is only 5 per cent of the project cost while for general category it is 10 per cent. All the entrepreneurs including women are eligible for 2 weeks Entrepreneurship Development Programme (EDP) after the sanction of their projects from banks for financial assistance to setup their unit and also imparting training under EDP.

ix. **Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM)** - seeks to reach out to 8-9 crore rural poor households and organize one-woman member from each household into affinity-based women SHGs and federations at village and at higher levels. Support is provided to the women for employment and self-employment venture under the scheme to enhance their farm livelihoods and non-farm livelihood through various components of schemes such as organic farming, Krishi Sakhi, Pashu Sakhi, dairy value chain interventions, Aajeevika Grameen Express Yojana, Start-up Village Entrepreneurship Programme etc. DAY-NRLM provides Revolving Funds (RF) at the rate of ₹ 10,000-15,000 per SHG and Community Investment Support Fund

(CISF) to the extent of ₹ 2.5 lakh per SHG to support their income generating and livelihood activities.

HEALTH FOR ALL

10.36 The introduction of National Health Policy, 2017 for universal access to good quality health care services, and subsequent launch of Ayushman Bharat, with its two components: 1) Health & Wellness Centres to provide comprehensive primary health care, and 2) Pradhan Mantri Jan ArogyaYojana (PMJAY) to provide health cover to 10.74 crore poor & vulnerable families upto ₹ 5 lakh per family per year for secondary & tertiary hospitalization, speaks about Government's efforts for a healthy India. The focus of healthcare is on four important pillars - preventive healthcare, providing affordable healthcare, building medical infrastructure and mission mode interventions for maternal health, child health and to combat communicable and non-communicab-g the marked increase in burden of non-communicable diseases, the Government is now focused on addressing this epidemiological transition from communicable diseases (CDs) to non-communicable diseases (NCDs).

Preventive Health Care

10.37 To promote preventive healthcare, one and half lakh Ayushman Bharat-Health & Wellness Centres (AB-HWCs) are proposed to be set up by 2022. A total of 28,005 have already been set up (as on 14 Jan 2020) to deliver comprehensive Primary Health Care services with focus on universal high quality screening, prevention, control and management of common

Table 10: India- Select Health Indicators

Sl. No	Parameter	1991	2001	2011	Current level
1.	Crude Birth Rate (per 1000 population)	29.5	25.4	21.8	20.2 (2017)
2.	Crude Death Rate (per 1000 population)	9.8	8.4	7.1	6.3 (2017)
3.	Total Fertility Rate	3.6	3.1	2.4	2.2 (2017)
4.	Maternal Mortality Ratio (per 1,00,000 live births)	NA	301 (2001-03)	167 (2011-13)	122 (2015-17)
5.	Infant Mortality Rate (per 1000 live births)	80	66	44	33 (2017)
	Rural	87	72	48	37
	Urban	53	42	29	23
6.	Child (0-4 years) Mortality Rate (per 1000 children)	26.5	19.3	12.2	8.9 (2017)
7.	Life Expectancy at Birth	(1991-95)	(2001-05)	(2009-13)	(2013-17)
	Total	60.3	64.3	67.5	69.0
	Rural	58.9	63.0	66.3	67.7
	Urban	65.9	68.6	71.2	72.4

Sources: Sample Registration Survey (SRS) and SRS based Abridged Life Tables, Registrar General of India (RGI)

NCDs such as Hypertension, Diabetes, and the three common Cancers – Oral Cavity, Breast and Cervical Cancer, while continuing to provide services for Reproductive, Maternal, Adolescent and Child health (RMNCH+A) and for communicable diseases.

10.38 Under Mission Indradhanush, 3.39 crore children and 87.18 lakh pregnant women in 680 districts across the country (including Gram Swaraj Abhiyan [GSA] & extended GSA) have been vaccinated. New vaccines such as Measles-Rubella (MR), Pneumococcal Conjugate Vaccine (PCV), Rotavirus Vaccine (RVV) and Inactivated Polio Vaccine (IPV) have been introduced. As on 31st December 2019, 32.42 crore children have been vaccinated with MR. A total of 218.96 lakh doses of PCV have been administered (till November 2019), since introduction. RVV was introduced in 11 States and around 7.44 crore doses have been administered to children, till November 2019. Moreover, nearly 11.73 crore doses of IPV have been administered (as in November 2019) to children across the country since its introduction.

10.39 Apart from the above, recognizing the need for addressing the social determinants of health, the government has adopted a multi-sectoral approach and is increasingly synergizing its efforts with other Mission Mode initiatives of the Government such as Eat Right & Eat Safe, Fit India, Anaemia Mukt Bharat, Poshan Abhiyan and Swacch Bharat Abhiyaan etc.

10.40 Recognising the threat of nicotine addiction among youth and children through gateway products such as e-cigarettes, the government recently banned all commercial operations in e-cigarettes. Large pictorial warnings and quitline number on tobacco packs and the resulting increased call volumes from 20,000 to 2.50 lakh calls per month at the quitline services, indicate that government's efforts to reduce tobacco use are starting to bear fruit.

Health Care Affordability

10.41 Access to healthcare has improved over the years in India. As per the latest National Health Accounts (NHA) 2016-17, the out of pocket expenditure (OoPE) as a percentage of total health expenditure has declined from 64.2 per cent in 2013-14 to 58.7 per cent in 2016-17. Primary healthcare accounts for 52.1 per cent of India's current public expenditure on health as per the National Health Estimates, 2016-17. The National Health Policy, 2017 recommended to spend at least two third of Government's health expenditure on primary healthcare.

10.42 Ayushman Bharat- Pradhan Mantri Jan Arogya Yojana (PM-JAY), the world's largest health insurance scheme, is a major step towards providing affordable healthcare to the identified poor. The Scheme has been rolled out based on the deprivation and occupational criteria of the Socio-Economic Caste Census for rural and urban areas respectively. In addition, AB-HWCs will provide free essential medicines and diagnostic services closer to the community for their primary healthcare needs thereby aiming to reduce OoPE.

10.43 Under Free Drugs Service initiative, substantial funds have been given to States for provision of free drugs. All States/UTs have notified policy to provide essential drugs free in health facilities. Drugs procurement, quality system and distribution has been streamlined through IT based Drug Distribution Management Systems in 29 States.

10.44 Free Diagnostics Service initiative was launched to address the high OoPE on diagnostics and improve quality of healthcare services. The guidance document for implementation of Free Laboratory Services in States/ UTs was released in August 2019 to guide States/ UTs on planning and implementing Labs services in Hub and Spoke model, and the range of diagnostics tests have been expanded from earlier 7 tests to 14 tests at Sub Centre/ Health & Wellness Centre level, 19 tests to 63 tests at PHC level, 39 tests to 97 tests at CHC level and 56 tests to 134 tests at DH level. The tests encompass hematology, serology, bio-chemistry, clinical pathology, microbiology, radiology, and cardiology. As on 1st November 2019, FDI Laboratory services have been implemented in 33 States/UTs (PPP mode in 11 States/UTs and In-house mode in 22 States/UTs); FDI CT Scan services have been implemented in 23 States/UTs (PPP mode in 13 States/ UTs and In-house mode in 10 States/UTs) and FDI Teleradiology services have been implemented in 10 States in PPP mode.

10.45 In addition to the above, Pradhan Mantri Bharatiya Jan Aushadi Pariyojana (PMBJP) and Pradhan Mantri National Dialysis Programme (PMNDP) are some of the new initiatives that address the issue of high OoPE on account of drugs and hospital care.

Medical Infrastructure

10.46 The doctor-population ratio in India is 1:1456 (population estimated to be 1.35 billion) against the WHO recommendation of 1:1000. To address the shortage of doctors, the government has embarked on an ambitious programme for upgradation of district hospitals into medical colleges. In last 5 years, government has sanctioned 141 new medical colleges.

10.47 The norms for graduate and post graduate seats in medical colleges have also been revised. The maximum intake capacity at MBBS level has been increased from 150 to 250, the norms for setting up of Medical colleges in terms of requirement of land, faculty, staff bed strength etc have been rationalized. The Government operates Centrally Sponsored Scheme–establishment of New Medical Colleges attached with existing District/Referral Hospitals' with fund sharing between Centre and States. As a result, the number MBBS and PG seats have increased by 27,235 and 15,000 respectively. These efforts would go a long way in addressing the shortage of doctors.

10.48 The Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) was launched to augment the tertiary healthcare capacity in clinical care, medical education and research in underserved areas of the country, under which AIIMS like institutions are built and Government Medical Colleges are upgraded by setting-up Super Speciality Blocks.

10.49 National Medical Commission Act, 2019 was promulgated to enable constitution of National Medical Commission. Reforms have also been brought about with the introduction of a common entrance test NEET-UG for admission to all MBBS courses including AIIMS and JIPMER.

10.50 With the continuous efforts by the Government in the area of health care system, the progress in development of health care infrastructure along with availability of human resources has remarkably grown over the years (Table 11).

10.51 Government of India supports States in Health Systems Strengthening under the umbrella programme of National Health Mission (NHM). This has resulted in striking improvements in health infrastructure of public health facilities in States also. Apart from setting up AB-HWCs, work of new

Table 11: Health Care Infrastructure

Facilities	2014	2018
SC/PHC/CHC	182709 (as on 31.3.2014)	189784 (as on 31.3.2018)
Government Hospital (rural & urban areas, including CHC)	20306	25778
AYUSH Hospital & Dispensaries	29733 (as on 1.4.2014)	31986 (as on 1.4.2018)
Medical Colleges	398 (2014-15)	539 (2019-20)
Nursing Personnel	2621981 (as on 31.12.2014)	2966375 (as on 31.12.2017)
Pharmacists	664176 (as on 27.6.2014)	1125222 (as on 27.3.2019)
Doctors (Modern System)*	747109 (upto 2014)	923749 (upto 31.12.2018)
AYUSH Doctors	736538 (as on 1.1.2014)	799879 (as on1.1.2018)

Source: National Health Profile 2015 and 2019.
Notes: 1: SC: Sub Centre; PHC: Primary Health Centre; CHC: Community Health Centre; AYUSH: Ayurveda, Yoga, Unani, Siddha and Homeopathy
2: *Assuming 80 per cent of registered doctors are available.

construction/renovation of sub-centres, Primary Health Centre, Community Health Centres, Sub-District Hospitals, and District Hospitals has been undertaken across the country (Table12).

10.52 The Government has also supported States to add nearly 2.51 lakh additional health human resources including 10,767 General Duty Medical Officers, 3062 Specialists, 61,660 Staff Nurses, 84,077 Auxiliary Nurse Midwifes (ANMs), 42,031 Paramedics, 414 Public Health Managers and 17,265 Programme Management staff on contractual basis. Significant progress has also been made in multi-skilling of doctors at strategically located facilities identified by the States where there is shortage of specialists e.g. MBBS doctors are trained in Emergency Obstetric Care, Life Saving Anesthesia Skills

Table 12: Public Health Infrastructure under National Health Mission

Facility	New Construction		Renovation/Upgradation	
	Sanctioned	Completed	Sanctioned	Completed
Sub Center	27573	21014	18707	15345
Primary Health Centre	2920	2264	13324	11462
Community Health Centre	604	473	6692	5771
Sub District Hospital	240	139	1150	963
District Hospital	172	129	3201	2325
Total	**31509**	**24019**	**43074**	**35866**

Source: Department of Health & FW (as on 30.6.2019) and Laparoscopic Surgery. Similarly, due importance is given to capacity building of nursing staff and ANMs. The mission also supports co-location of AYUSH services in health facilities such as PHCs, CHCs and DHs. There are 10.42 lakh Accredited Social Health Workers (ASHAs) across the country in rural and urban areas under the NHM, who act as a link between the community and the public health system.

Mission Mode Interventions

10.53 In order to intensify efforts towards achievement of SDGs, the Government has launched ambitious programmes such as Ayushman Bharat, marking a paradigm shift in the way health care is delivered. Ayushman Bharat targets universal health coverage by focusing on preventive, promotive and palliative care apart from ambulatory care; and by providing protection against catastrophic health expenditure for secondary and tertiary hospital care. The new paradigm recognizes and addresses the emerging challenges of NCDs due to changing epidemiology and also targets to sustain the efforts for RMNCH+A and communicable diseases through initiatives such as as Surakshit Matritva Aashwasan (SUMAN), Social Awareness and Action to Neutralise Pneumonia Successfully (SAANS) and TB Harega Desh Jeetega.

10.54 The AB-HWCs would follow a well-defined referral and return linkages to ensure continuum of care. At all levels, tele-consultation would be used to improve referral advice and undertake virtual consultation including case management support by doctors and specialists. Several states have also initiated the use of digital platforms such as ECHO for continuous capacity building of the primary health team.

10.55 More than 7.78 crore people have visited these centres and individuals over 30 years of age have been screened for common NCDs. 2.94 crore individuals screened for hypertension and 2.51 crore screened for diabetes, conditions which cause majority of premature morbidity and mortality. The screening for NCDs is also being done for 3 common cancers, wherein as on 11.1.2020, individuals screened for oral cancer (1.52 crore), women for breast cancer (92 lakhs) and cervical cancer (62 lakhs).

HOUSING FOR ALL

10.56 As per recent NSO survey on Drinking Water, Sanitation, Hygiene and Housing Condition in India 2018, about 76.7 per cent of the households in the rural and about 96.0 per cent in the urban areas had the house of pucca structure. Pradhan Mantri Awaas Yojana-Gramin (PMAY-G) and Pradhan Mantri Awaas Yojana-Urban (PMAY-U) are two important schemes for achieving the target of housing for all by 2022.

10.57 More than four times increase in number of houses completed in a year under PMAY-G, from 11.95 lakh in 2014-15 to 47.33 lakh in 2018-19, signifies government's commitment of housing for all. Under its Phase-I from 2016-17 to 2018-19, the scheme has delivered 86.59 lakh completed houses against the target of 1 crore as on 17th January, 2020. Under Phase-II (2019-20 to 2021-22), against the cumulative target of 1.95 crore houses, a total of 5,27,878 houses have been delivered under PMAY-G (as on 17th January, 2020).

10.58 Under PMAY-U, against assessed demand of 1.12 crore, 1.03 crore houses were sanctioned, 61 lakh grounded for construction and 32 lakh have been delivered as on 1st January, 2020. Covering a range of social groups, comprising senior citizens, construction workers, domestic workers, artisans, differently-abled (Divyang), transgender and leprosy patients, the scheme has promoted social inclusiveness, and improved upon women empowerment by giving them ownership of the house.

DRINKING WATER AND SANITATION

10.59 The Department of Drinking Water and Sanitation (DDWS), Ministry of Jal Shakti launched the 10 Year Rural Sanitation Strategy (2019-2029), which focus on sustaining the sanitation behaviour change that has been achieved under the Swachh Bharat Mission Grameen (SBM-G), ensuring that no one is left behind, and increasing access to solid and liquid waste management. Since the launch of the SBM-G in 2014, over 10 crore toilets have been built in rural areas; over 5.9 lakh villages, 699 districts, and 35 States/UTs have declared themselves Open Defecation Free (ODF). This strategy has been prepared by DDWS, in consultation with State Governments and other stakeholders, and it lays down a framework to guide local governments, policy makers, implementers and other relevant stakeholders in their planning for ODF Plus, where everyone uses a toilet, and every village has access to solid and liquid waste management.

10.60 Swachh Survekshan Grameen 2019 survey covered 17,450 villages in 698 districts across India and include 87,250 public places namely schools, anganwadi centers, public health centres, haat/bazaars/religious places, making it India's largest rural sanitation survey. Around 2.5 lakh citizens were interviewed for their feedback as part of the survey. Citizens will also be mobilised to provide feedback on sanitation related issues online using an application developed for the purpose.

10.61 Jal Shakti Abhiyan was launched to accelerate progress on water conservation activities in the most water stressed blocks and districts of India. Jal Shakti Abhiyan (JSA) has delivered over 3.5 lakh water conservation measures in 256 districts. Out of these, 1.54 lakh are of water conservation and rain water harvesting measures, 20,000 relate to the rejuvenation of traditional water bodies, over 65,000 are reuse and recharge structures and 1.23 lakh are watershed development projects. An estimated 2.64 crore people have already participated in the Abhiyan making it a Jan Andolan.

CONCLUSION

10.62 The efforts of the government with the motto of *Sabka Saath, Sabka Vikas and Sabka Vishwas* have improved the access to social services. Over the years, the participation in education at all levels has improved both in rural and urban areas. Scaling up of the skill training through a wide network of ITIs and significant rise in women trainees. Under Ayushman Bharat, free diagnostic services are being made available at HWCs, PHCs, CHCs, and DHs and free drug services are provided in health facilities. New Health facilities as well as renovation of existing health facilities being undertaken under NHM. Under Mission *Indradhanush,* 3.39 crore children and 87.18 lakh pregnant women in 680 districts across the country (including GSA & extended GSA) has been vaccinated. Total formal employment in the economy increased from 8 per cent in 2011-12 to 9.98 per cent in 2017-18. Access to health services, inter-alia, through Ayushman Bharat and Mission Indradhanush across the country has improved. About 76.7 per cent of the households in the rural and about 96 per cent in the urban areas had houses of pucca structure. Jal Shakti Abhiyan launched to accelerate progress on water conservation activities in water stressed districts of India.

CHAPTER AT A GLANCE

- The expenditure on social services (health, education and others) by the Centre and States as a proportion of GDP increased from 6.2 per cent in 2014-15 to 7.7 per cent in 2019-20 (BE).
- India's ranking in Human Development Index improved to 129 in 2018 from 130 in 2017.
- Gross Enrolment Ratio at secondary, higher secondary and higher education level needs to be improved.
- Total formal employment in the economy increased from 8 per cent in 2011-12 to 9.98 per cent in 2017-18.
- Gender disparity in India's labour market widened due to decline in female labour force participation especially in rural areas and around 60 per cent of productive age (15-59) group are engaged in full time domestic duties.
- Mission Indradhanush has vaccinated 3.39 crore children and 87.18 lakh pregnant women of 681 districts across the country.
- Access to health services inter-alia through Ayushman Bharat and Mission Indradhanush across the country has improved. About 76.7 per cent of the households in the rural and about 96 per cent in the urban areas had houses of pucca structure.
- Jal Shakti Abhiyan launched to accelerate progress on water conservation activities in water stressed districts of India.

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