GS SCORE

An Institute for Civil Services

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GIST OF

ECONOMIC SURVEY 2019-20

VOL-2

CONTENT

CHAPTER

1

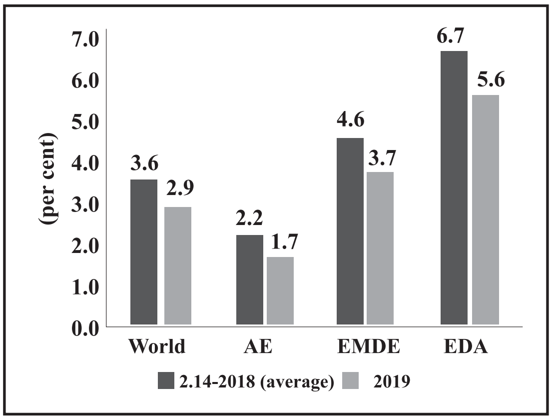
STATE OF THE ECONOMY

GLOBAL ECONOMIC DEVELOPMENT AND ITS IMPACT ON INDIA

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% since the global financial crisis of 2009, declining from a subdued 3.6% in 2018 and 3.8% in 2017. Uncertainties, although declining, are still elevated due to the protectionist tendencies of China and the USA and rising USA-Iran geopolitical tensions.

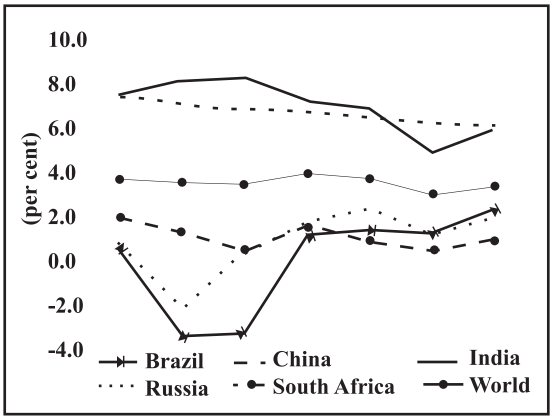
The deceleration in GDP growth can be understood within the framework of a slowing cycle of growth with the financial sector acting as a drag on the real sector. In an attempt to boost demand, 2019-20 has witnessed significant easing of monetary policy with the repo rate having been cut by RBI by 110 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.

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

Table 1.1: Top 10 Economics in the world in terms of GDP at current US$ Trillion

Sr. 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		-

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

Table 1.2: 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

The World Economic Outlook 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 the United Kingdom and France.

The size of the economy is estimated at US$ 2.9 trillion in 2019.

- The National Statistical Office (NSO) has estimated India's GDP to have grown at 4.8% in the first half (H1) (April-September) of 2019-20, lower than 6.2% recorded in the second half (H2) (October-March) of 2018-19.

Table 1.3: Real growth of GDP (per cent)

	2017-18	2018-19	2019-20	
		(PE)	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

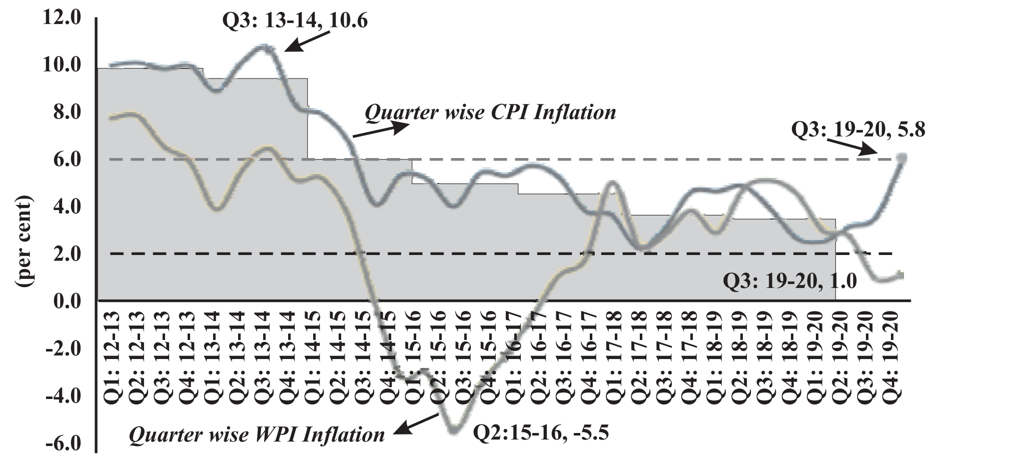
Data Source: National Statistical Office

Note: PE - Provisional Estimates.

INFLATION

In H1 of 2019-20, CPI (Headline) inflation was estimated at 3.3%, 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.

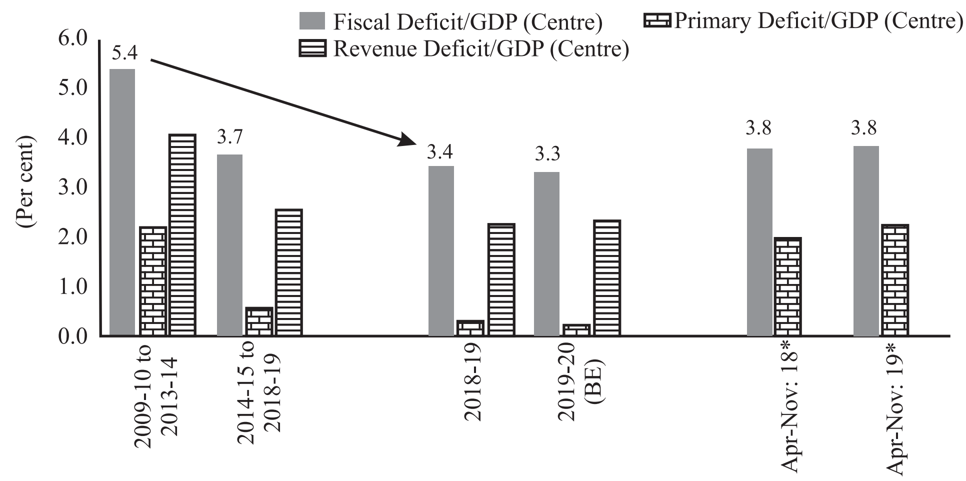
- The food prices spiked following unseasonal rainfall and a flood-like situation in many parts of the country, which affected agricultural crop production.
- The Wholesale Price Index (WPI) inflation, on the other hand, declined sharply from 3.2 per cent in April 2019 to 2.6 per cent in December 2019, reflecting the weakening of demand pressure in the economy.



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

EMPLOYMENT

Figure 1.4: Gross Fiscal Deficit (Centre) as percentage of GDP



Data Source: Union Budget and CGA
Notice: *: 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.

As per the latest available data one mployment, there has been an increase in the share of formal employment, as captured by 'Regular wage/salaried', from 17.9 percent in 2011-12 to 22.8 per cent in 2017-18.

- This 5 percentage points increase in the share of the '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 8percentage points (from 13 percent in 2011-12 to 21 per cent in 2017-18) with the 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 the urban regions, there has been a shift in employment from self- employed to salaried jobs.

Table 1.4: Real growth of GDP (per cent)

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]

FISCAL SITUATION

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

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

MONETARY POLICY

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.

- **Monetary Policy Transmission**

  Monetary transmission refers to the process by which a central bank's monetary policy signals (like repo rate) are passed on, through the financial system to influence the businesses and households.

  There are many monetary policy signals by the RBI; the most powerful one is the repo rate. When the repo rate is changed, it brings changes in the overall interest rate in the economy as well. As a result of a decrease in repo rate, the interest rate on loans by banks also changes and this encourages consumption and investment activities of businesses and households. In an economy, both consumption and investment are often financed by borrowings from banks. As the repo rate brings changes in the market interest rate, the repo rate channel is often referred to as the interest rate channel of monetary transmission.

- **Repo rate↓ → Interest rate ↓→Consumption, Investment↑ →Output↑→ Growth↑**

  The interest rate is the main channel of monetary policy transmission. Similarly, there is a credit channel, asset price channel, confidence channel etc.

  An interesting development in recent times is that an often central bank gives certain communications in the form of guidelines that are aimed to create certain effects in the financial market.

- **Monetary policy transmission mechanism in India**

  In the Indian scenario, the momentary policy transmission is heavily dependent upon the repo rate. The repo rate is the anchor rate in determining the interest rate in the economy (of the banking system). Now, how far a change in repo rate can bring a corresponding change in interest rate by banks depends upon the financial conditions of the banking system as well. In this respect, the banking system holds the center stage in India's monetary policy transmission.

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 mostly in the services sector. Credit growth to the industry also witnessed a significant decline in recent months, both for the MSME sector as well as large industries. Agriculture and allied activities benefited from a higher growth of credit.

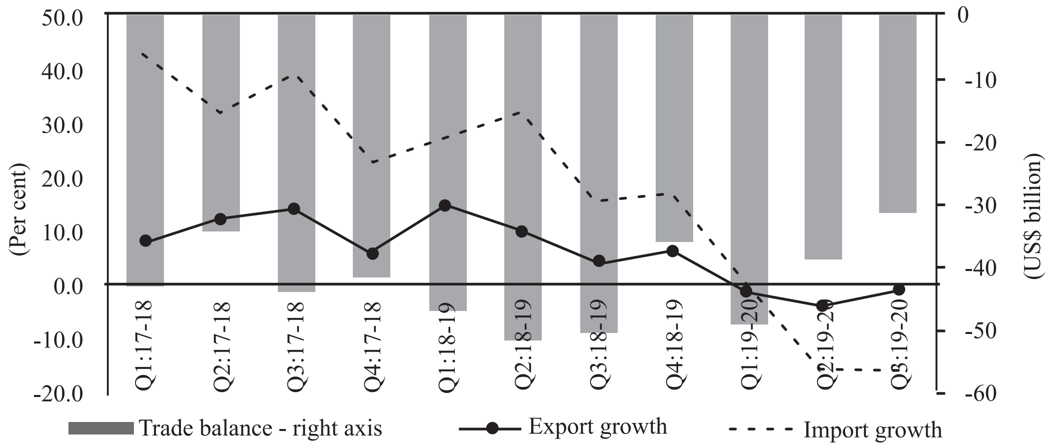
The decline in credit growth has been attributed to the growing risk aversion of banks that continue to apprehend the build-up of Non-Performing Assets (NPAs). This is despite the admission of more than 2000 corporate insolvency resolution processes between December 2016 and June 2019. The IBC process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

EXTERNAL SECTOR

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 a significant reduction in the trade deficit. 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 the corresponding period of 2018- 19. Net FPI inflow in H1 of 2019-20 was also robust at US$ 7.3 billion as against an out flow of US$ 7.9 billion in H1 of 2018-19 (Figure 22).

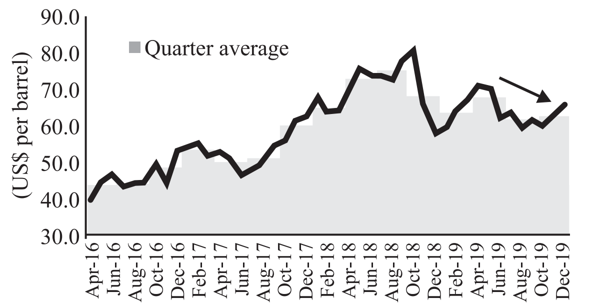
Consequent to the improvement in the current account and higher capital flows into the country, the Balance of Payments (Bop) position of the country has improved from foreign exchange reserves of US$ 302 billion in end-March, 2019 to US$ 461.2 billion as on 10th January 2020.

Figure - 1.5: Growth of merchandise exports and imports



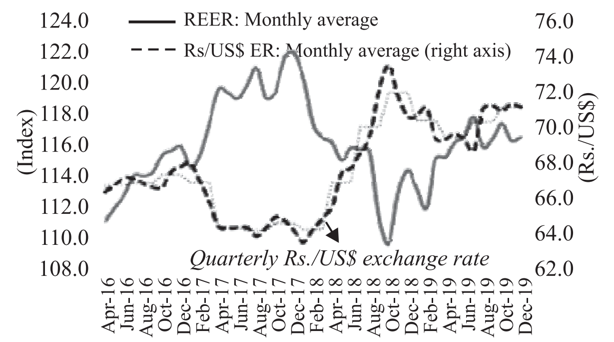
Data Source: Department of Commerce, Ministry of Commerce and Industry

Figure 1.6: Crude oil prices (Indian Basket) - US$ per barrel



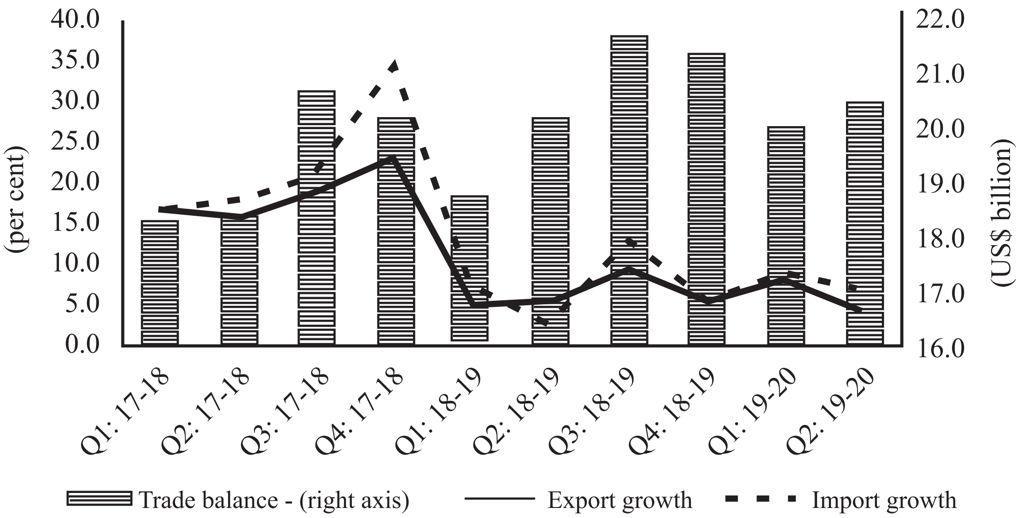
Data Source: Petroleum Planning and Analysis Cell

Figure 1.7: Exchange Rate of Indian Rupee



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

Figure:1.8: Growth of services exports and imports



Data Source: RBI

Figure-1.9: Current Account Deficit as percentage of GDP

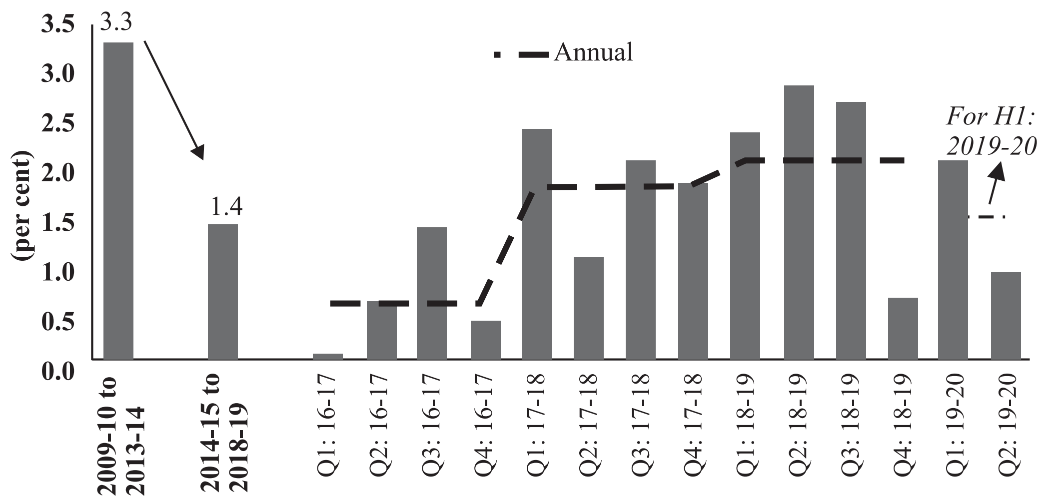
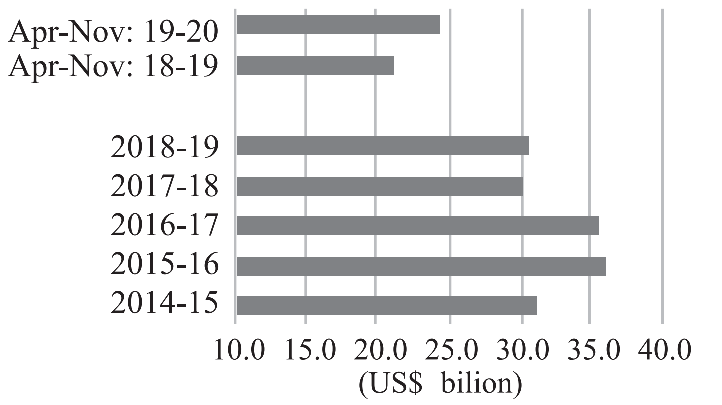
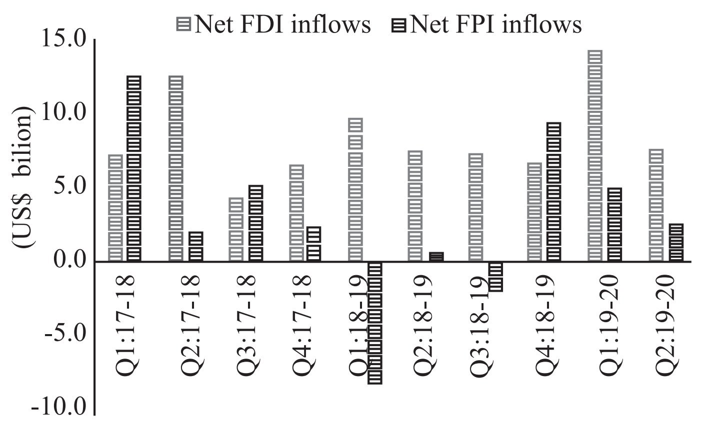


Figure-1.10: Net annual FDI inflows



Data Source: RBI's monthly bulletins

Figure-1.11: Quarterly trends in capital inflows



Data Source: RBI

AGRICULTURE

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. 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.

INDUSTRY

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

SERVICES

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

Table 1.5: 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

Table 1.6: 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 [Increase (+) Decrease (-)]
	1^{H}RE	PE	1^{H}AE	
GVA at basic prices	6.9	6.6	4.9	-1.7
Agricutlture & 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, Waster supply & Other utility services	8.6	7.0	5.4	-1.6
Construction	5.6	8.7	3.2	-5.6

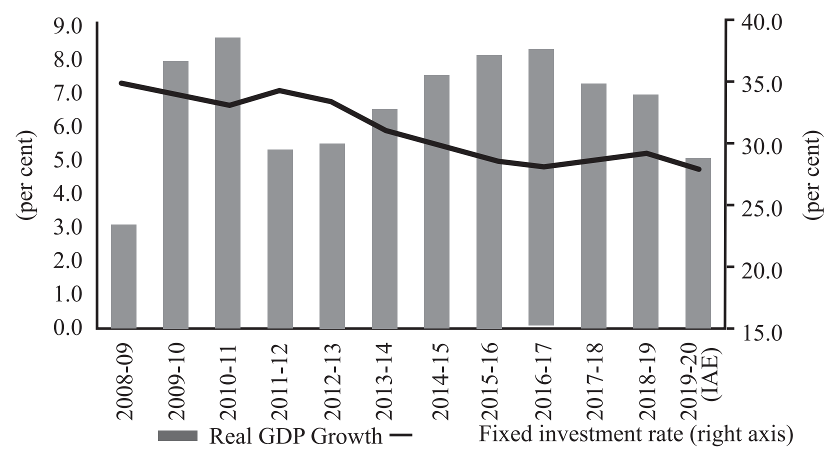
Services	8.1	7.5	6.9	-0.7
Trade, hotel, transport, communication and services related to broadcasting	7.8	6.9	5.9	-1.0
Financial, real estate & professional services	6.2	7.4	6.4	-1.1
Public administration, defence and other services	11.9	8.6	9.1	0.5
GDP at Market prices	7.2	6.8	5.0	-1.8

Source: National Statistical Office
Note: RE - Revised Estimates, PE - Provisional Estimates, AE - Advance Estimates

GROWTH & INVESTMENT

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 (with the effect being most pronounced after four years), the deceleration in growth since 2017-18 is consistent with the framework. 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 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.

Figure 1.12: Real GDP Growth and Investment - Annual movement



Data Source: Notional Statistical Office

WAY FORWARD

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. 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 the 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.
- The escalation in US-Iran geopolitical 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 the 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, an increase in short-term interest rates may happen earlier and weaken the growth impulse in EMEs including India.
- The implementation of the 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 a 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 a renewed initiative to boost exports through various reform measures including scaling up of logistics infrastructure that may increase export competitiveness.
- The 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 favour 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 the 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 labour 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.
- The 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.

CHAPTER

2

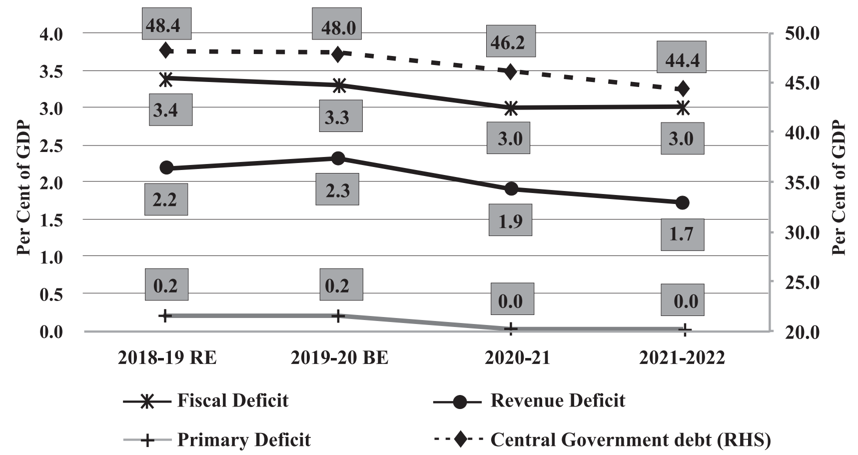
FISCAL DEVELOPMENTS

The fiscal policy 2019-20 was characterized by sluggish growth in Tax revenue relative to the budget estimates. The Non-Tax revenue registered 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 from April to November2019-20 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.

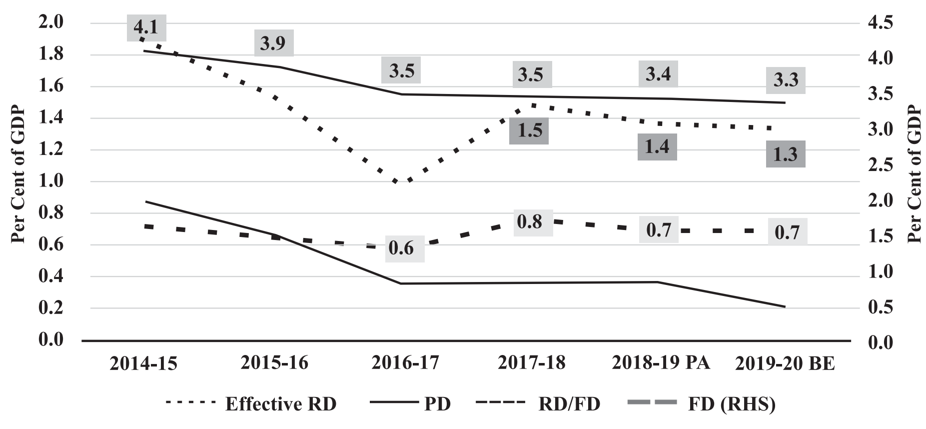
Going forward, considering the urgent priority of the Government to revive growth in the economy, the fiscal deficit target may have to be relaxed for the current year.

Figure 1: Medium Term Fiscal Policy Statement: Fiscal Indicators



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

Figure: 2 Trends in Deficits



Soruce: 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.

- The Union Budget 2019-20 sought to contain the fiscal deficit, which is reflective of the total borrowing requirements of Government, at 3.3 per cent of the GDP, as against3.4 per cent of GDP in 2018-19.
- The ratio of revenue deficit to fiscal deficit broadly measures the extent of borrowings used for financing the current expenditure of the Government. In 2019-20 BE, it was pegged at roughly the same level as in 2018-19.

Government Receipts

- 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 2019-20targeted a high growth in Non-debt receipts of the Central Government, which was driven by high expected growth in Net Tax revenue and Non-Tax revenue.

Table: 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-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)

TAX REVENUE

Budget 2019-20 estimated the Gross Tax Revenue (GTR) to be INR 24.61 lakh crore which is 11.7 per cent of GDP.

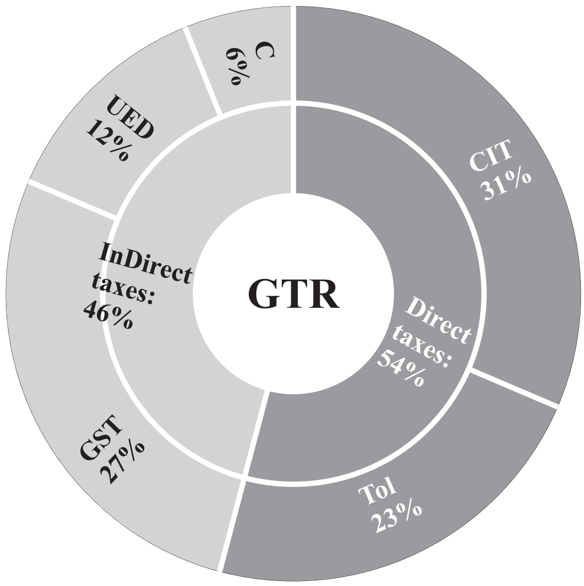
Direct taxes

The direct taxes, comprising mainly of corporate and personal income tax, constitute around 54 per cent of GTR. These were envisaged to grow at11.3 per cent relative to 2018-19.

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 taxpayers base have contributed to direct tax buoyancy. Widening of the tax base due to an 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.

Indirect Taxes

On the other hand, the **indirect taxes** were expected to grow at 7.3 per cent vis-à-vis 2018-19.



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

Non-Tax revenue

Non-Tax revenue comprises mainly of interest receipts on loans to States and Union Territories, dividends and profits from Public Sector Enterprises including a 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 INR 3.13 lakh crore of Non-Tax revenue, 1.5 per cent of the GDP.

Non-debt Capital receipts

Non-debt Capital receipts Non-debt Capital receipts mainly consist of recovery of loans and advances, and disinvestment receipts. The major component of Non-debt Capital receipts is disinvestment receipts that accrue to the government on the sale of public sector enterprises owned by the government (including the sale of strategic assets).

Over the last few years, the contribution of Non-debt Capital receipts has improved in the total pool of Non-debt receipts. They have been pegged at INR 1.20 lakh crore, 0.6 per cent of GDP, in 2019-20.

Expenditure

As India's tax to GDP ratio is low, the 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.

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.

Table: Major Items of Revenue Expenditure

	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	2.5
	(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)

Expenditures on salaries, pensions, and interest payments are, generally speaking, committed in nature and therefore have limited headroom for the creation of additional fiscal space.

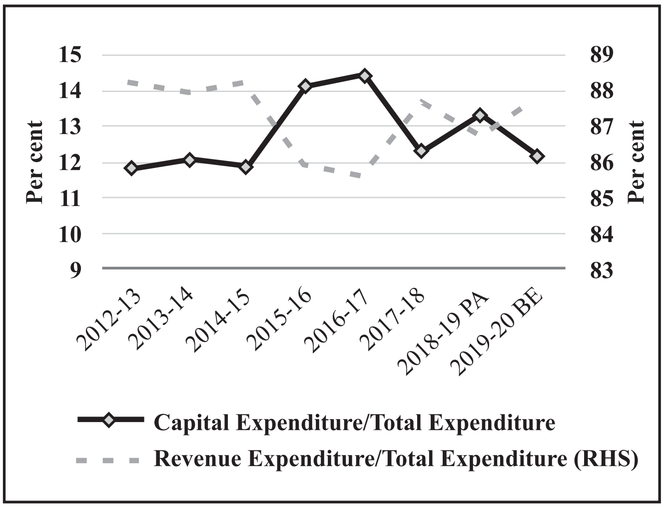
Budgetary expenditure on subsidies has seen significant moderation through improved targeting. There is still headroom available for further rationalization of subsidies especially food subsidy. There has been considerable restructuring and reclassification of the Central Sector and Centrally Sponsored Schemes in recent years.

Budget 2019-20 estimated total expenditure at INR 27.86 lakh crore, comprising revenue expenditure of INR 24.48 lakh crore and capital expenditure of INR 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.

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 INR 3.02 lakh crore owing to requirements for food, fertilizer and petroleum subsidies.

The quality of expenditure is captured by the share of capital expenditure in total expenditure. Share of capital expenditure in total expenditure is envisaged to decline roughly by a percentage point in 2019-20 BE over 2018-19.

Apart from budgetary spending, Extra Budgetary Resources (EBR) have also been mobilized to finance infrastructure investment since 2016-17.

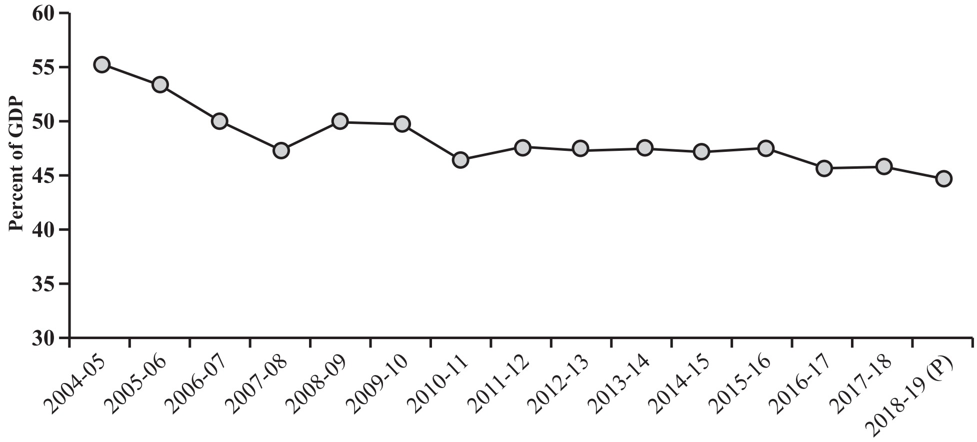


EBRs are those financial liabilities that are raised by public sector undertakings for which repayment of the entire principal and interest is done from the Central Government Budget. The government has raised EBRs of INR 88,454 crores for three years from 2016- 17 to 2018-19. It proposes to raise EBR of INR 57,004 crores 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 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.

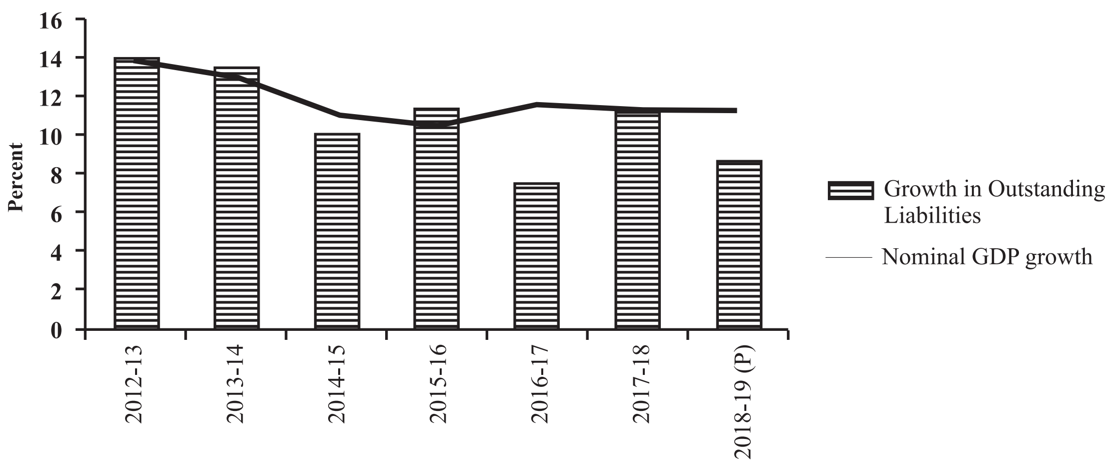
Both in absolute terms, and as a percentage of GDP, total transfers to States have risen between 2014-15 and 2018- 19 RE by 1.2 percentage points of GDP.

Figure: Trend in Centre's Debt-GDP ratio



Soruce: Various issues of Status Paper and Government Debt; P: Proviosional

Figure: GDP growth and growth in Outstanding Liabilities



Soruce: Various issues of Status Paper and Government Debt; P: Provisional

Reforms in the GST system to improve compliance

- E-way bill
- PIN code to PIN code distance mapping in e-way bill system
- Return filing status of a GSTIN visible in public domain on the GST Portal
- Caution against a mismatch in GSTR-2A & GSTR-3B; and GSTR-1 & GSTR-3B, above a certain

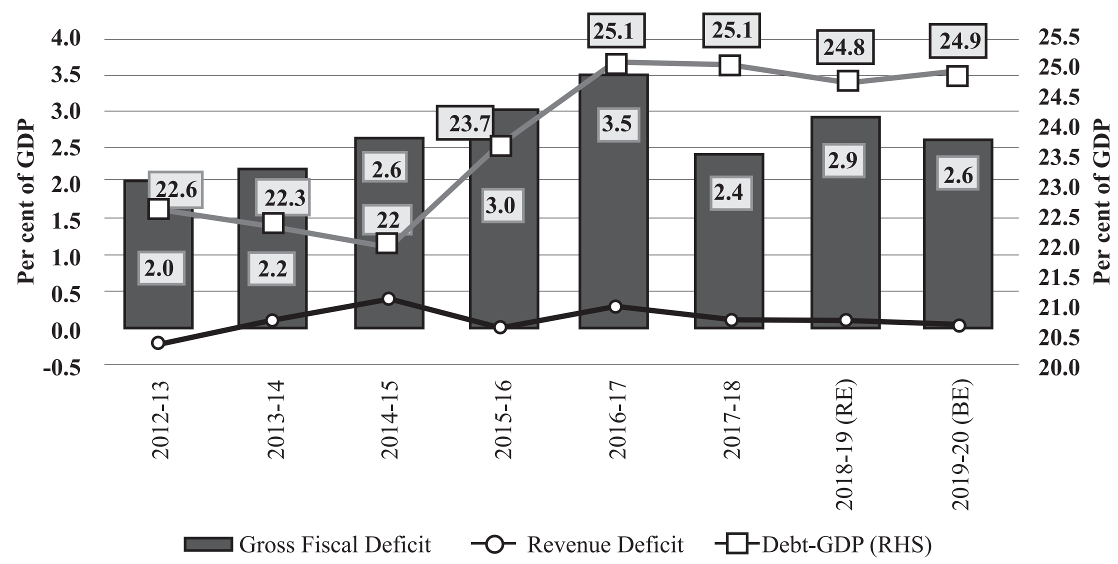
- SMSs for reminders of the due date of the monthly return (On 10th, 13th, and 15th of every month) and non-filing of return.
- Free accounting & billing software provided to small taxpayers
- Questionnaire-based filing of return and showing the relevant tables to ease up the filing system
- The compliance rating score of the taxpayers available in the public domain
- Acknowledging the contribution of compliant taxpayers through certificates

STATE FINANCES

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 rising trend in revenue expenditure is driven by the 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.
- 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 a gross fiscal deficit of 2.6 per cent of GDP as against an estimate of 2.9 per cent in 2018-19 RE
- 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 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.

Figure: Major deficit and debt indicators of States



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

Practice Question

- **Analyse the creation of a Fintech hub in the quest of making Public Sector Banks more efficient.**
- **Highlight the causes of the weakening of public sector banks. Also, suggest some measures to improve their efficiency according to the recently released Economic Survey of India.**

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CHAPTER

3

EXTERNAL SECTOR

IMPORTANT TERMS:

- Import elasticity of exports: An analysis of the relationship between exports of finished goods and imports of raw materials and intermediate goods for India is being undertaken.
- Net International Investment Position (NIIP): 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.
- Foreign Exchange Reserves: The FOREX is reserve assets held by a central bank in foreign currencies. It acts as a buffer to be used in challenging times and used to back liabilities on their own issued currency as well as to influence monetary policy.
- Components of Indian FOREX Reserves: Foreign currency assets (FCAs), Gold, Special Drawing Rights (SDRs) and RBI's Reserve position with International Monetary Fund (IMF). FCAs constitute the largest component of Indian FOREX Reserves.
- External Debt: It is owed to creditors outside the country. The outsider creditors can be foreign governments, International Financial Institutions like WB, IMF, etc., corporate and foreign private households. External debt may be of several kinds such as multilateral, bilateral, IMF loans, Trade credits, External commercial borrowings, etc.

KEY FACTS

- India's BoP position improved from US$ 412.9 bn of forex reserves in end-March, 2019 to US$ 433.7 bn in end-September 2019.
- Current account deficit (CAD) narrowed from 2.1% in 2018-19 to 1.5% of GDP in H1 of 2019-20.
- Top export items: Petroleum products, precious stones, drug formulations & biologicals, gold, and other precious metals.
- Largest export destinations in 2019-20 (April-November): United States of America (USA), followed by the United Arab Emirates (UAE), China and Hong Kong.
- Top import items: Crude petroleum, gold, petroleum products, coal, coke & briquittes.
- India's imports continue to be the largest from China, followed by the USA, UAE and Saudi Arabia.
- According to the World Bank's Logistics Performance Index, India ranks 44thin 2018 globally, up from 54thrank in 2014.
- Net FDI inflows continued to be buoyant in 2019-20 attracting US$ 24.4 bn 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 bn.
- Net remittances from Indians employed overseas continued to increase, receiving US$ 38.4 billion in H1 of 2019-20 which is more than 50% of the previous year level.

INTRODUCTION:

- India's external sector gained further stability in the first half of 2019-20, witnessing improvement in the Balance of Payments (BoP) position. India's foreign reserves are comfortably placed at US$ 461.2 billion as of 10thJanuary 2020.

- The improvement in BoP was anchored by the narrowing of current account deficit (CAD) from 2.1% in 2018-19 to 1.5% of GDP in H1 of 2019-20.
  - Export growth remains subdued with external demand weakened by the slowdown in global investment, output, and heightened trade tensions, notwithstanding resilient service exports.
  - An increase in service imports is inevitable with increasing foreign direct investment (FDI) and 'Make in India'.
  - India's Net International Investment Position (NIIP) to GDP ratio has also improved compared to 2018-19. After witnessing a significant decline since 2014-15, India's external liabilities (debt and equity) to GDP have increased at the end of June 2019 primarily driven by an increase in FDI, portfolio flows and external commercial borrowings (ECBs).

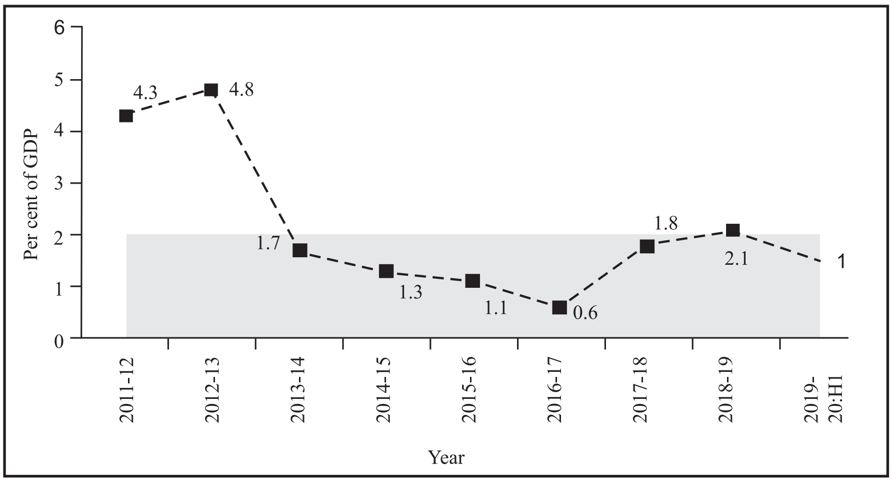
GLOBAL ECONOMIC ENVIRONMENT:

Increasing Trade Protectionism and Slowing down of Global Output:

- 2019-20 has closed with growth in world output on a downward trajectory. The World Economic Outlook (WEO) has projected growth in world output at 2.7% in 2020, down from 3.3 in 2019.
- Heightened US-China trade tensions have been stated as one of the reasons behind the global slowdown that has spilled into other economies including India through the channel of exports.
- The WEO also clarifies that trade-protectionism will only divert bilateral trade imbalances from one country to another as the root cause of trade deficits is the macroeconomic imbalance.
- US-Iran relations have also affected the trajectory of global economic growth.
- The WEO accordingly advises that at the multi-lateral level, the main priority is for countries to resolve trade disagreements cooperatively, without raising distortionary barriers that would further destabilize a slowing global economy.
- These developments increase the vulnerability of the external sector of emerging market economies like India, which are dependent on crude imports for fuelling their economic growth.

India's Balance of Payments (BoP):

- India's BoP position improved from US$ 412.9 bn of forex reserves in end-March, 2019 to US$ 433.7 bn in end September 2019.
- Current Account Deficit (CAD) narrowed from 2.1% in 2018-19 to 1.5% of GDP in H1 of 2019-20.



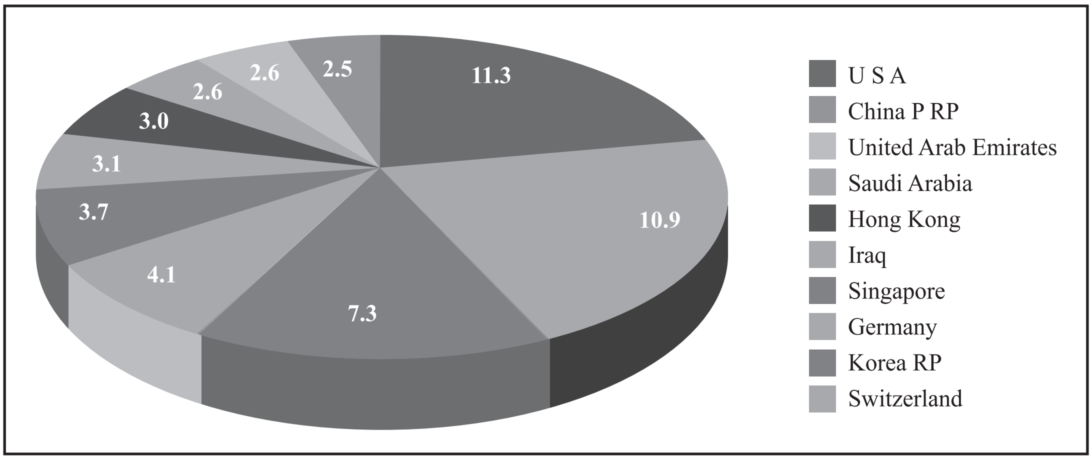
Current account deficit (CAD)

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

- Foreign reserves stood at US$ 461.2 bn as of10th January 2020.

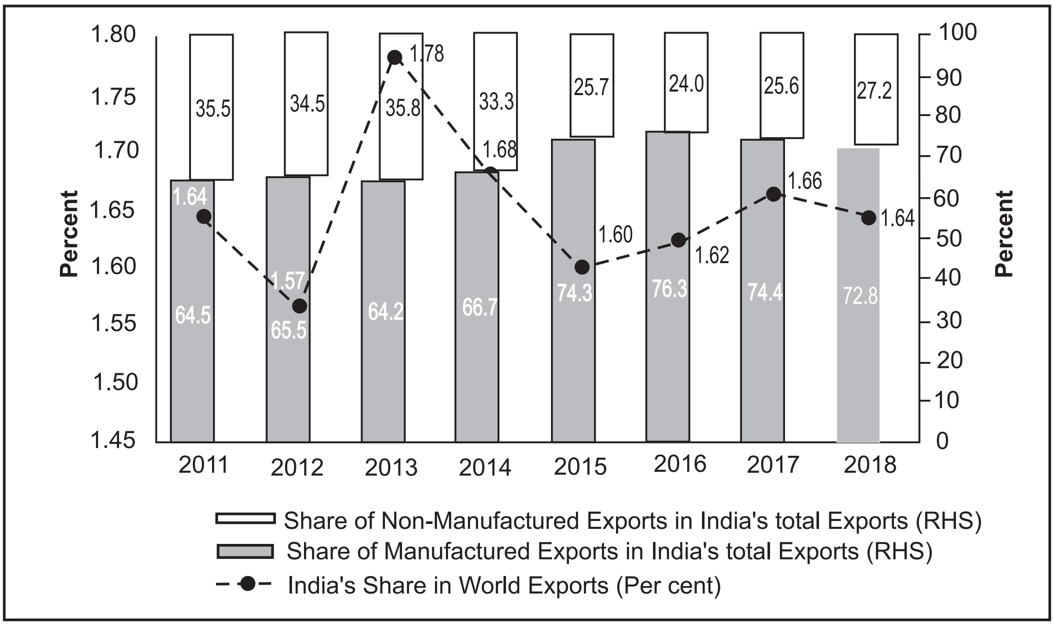
GLOBAL TRADE:

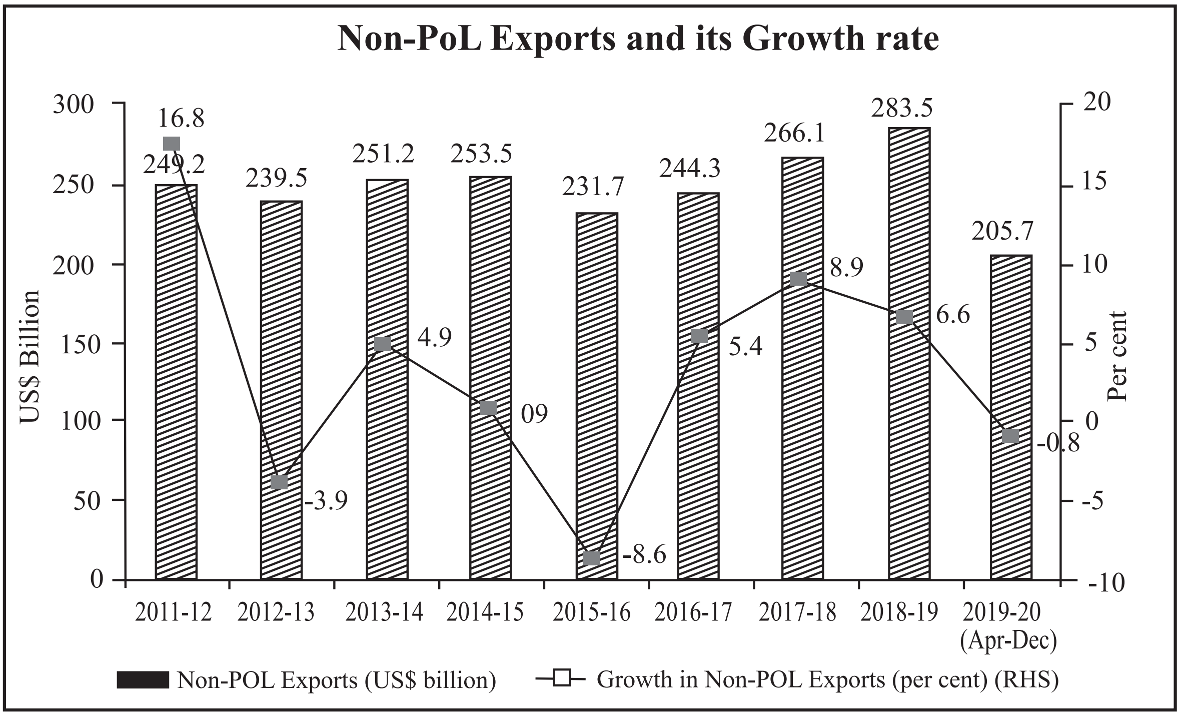
- In sync with an estimated 2.9% growth in global output in 2019, global trade is estimated to grow at 1.0% after having peaked in 2017 at 5.7%.
- However, it is projected to recover to 2.9% in 2020 with a recovery in global economic activity.
- India's merchandise trade balance improved from 2009-14 to 2014-19, although most of the improvement in the latter period was due to more than 50% decline in crude prices in 2016-17.
- India's top five trading partners continue to be the USA, China, UAE, Saudi Arabia, and Hong Kong.



EXPORTS:

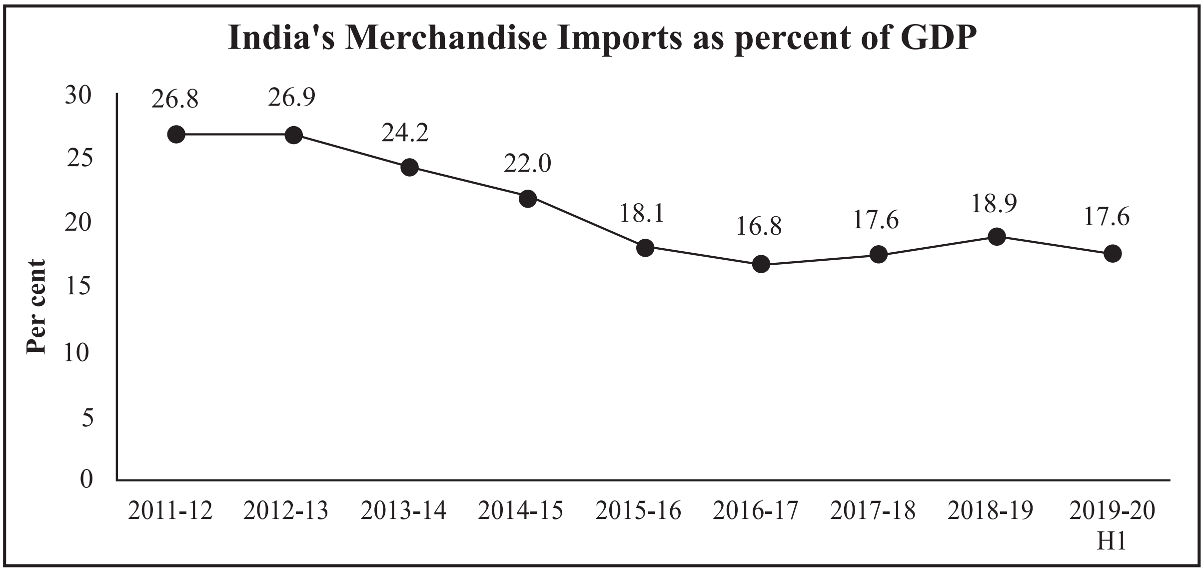
- **Top export items: Petroleum products, precious stones, drug formulations & biologicals, gold, and other precious metals.**
- **Largest export destinations in 2019-20 (April-November): United States of America (USA), followed by the United Arab Emirates (UAE), China and Hong Kong.**
- The merchandise exports to GDP ratio declined, entailing a negative impact on the BoP position.
- The slowdown of world output had an impact on reducing the export to GDP ratio, particularly from 2018-19 to H1 of 2019-20.





IMPORTS:

- **Top import items: Crude petroleum, gold, petroleum products, coal, coke &briquettes.**
- **India's imports continue to be the largest from China, followed by the USA, UAE and Saudi Arabia.**
- Merchandise imports to GDP ratio declined for India, entailing a net positive impact on BoP.
- Large Crude oil imports in the import basket correlate India's total imports with crude prices. As crude price raises so does the share of crude in total imports, increasing imports to GDP ratio.



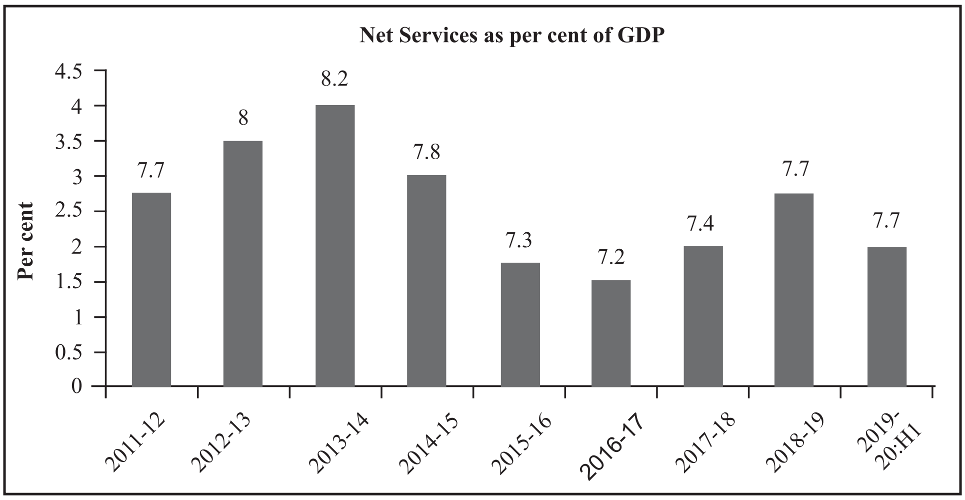
India's merchandise Imports as percent of GDP

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

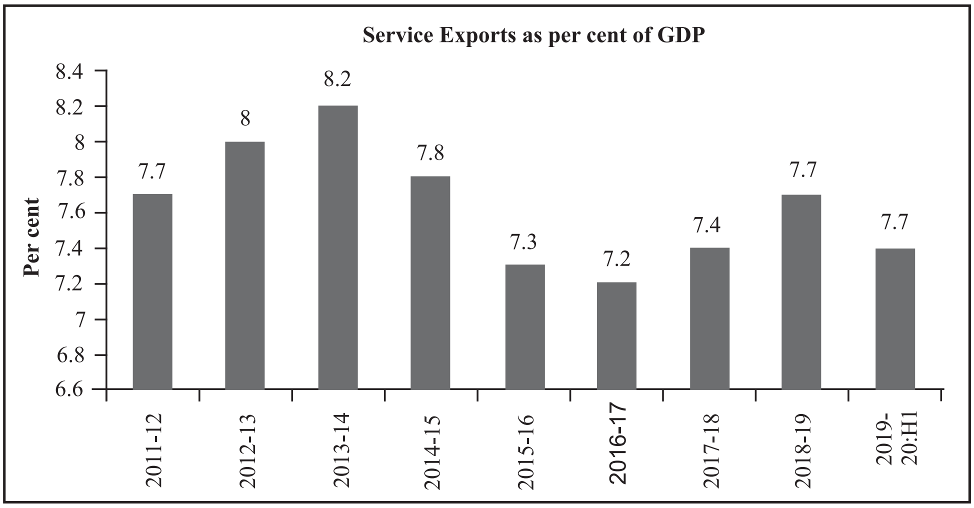
Share of POL Import in Total Imports and Crude Oil Price (Indian Basket)				
Item	2009-14	2014-19	2018-19	2019-20 H1
Share of POL imports in total imports (per cent)	24.3	18.7	18.9	17.6
Crude oil price of Indian Basket (U$$bbl.)	96.0	60.8	69.9	64.7
Merchandise Imports as percent of GDP	24.3	18.07	18.9	17.6

NET SERVICES:

- 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.



- **Service Exports**: An increase in service exports to GDP ratio has a net positive impact on the BoP position. India's service exports have however consistently hovered between 7.4% to 7.7% of the GDP, reflecting the steadiness of this source in contributing to the stability of BoP.



LOGISTICS INDUSTRY OF INDIA:

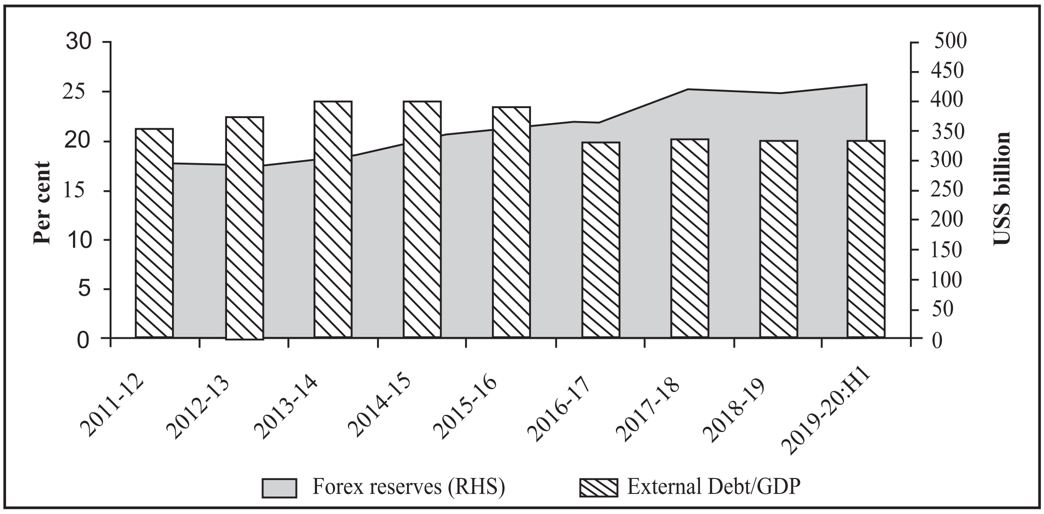
- Currently estimated to be around US$ 160 billion.
- Expected to touch US$ 215 billion by 2020.
- **According to the World Bank's Logistics Performance Index, India ranks 44th in 2018 globally, up from 54th rank in 2014.**

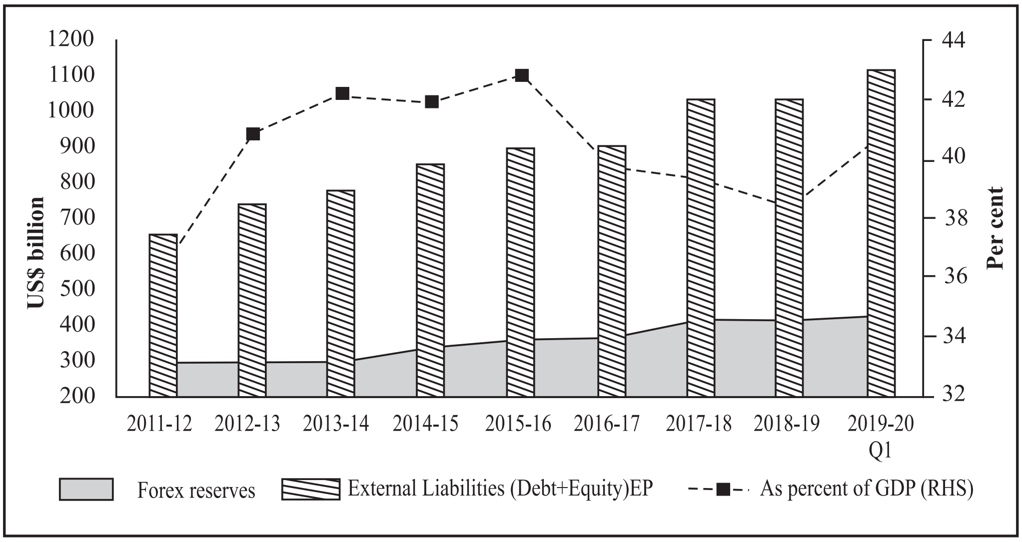
FDI & FPI

- **Net FDI inflows continued to be buoyant in 2019-20 attracting US$ 24.4 bn 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 bn.**
- **Net remittances from Indians employed overseas continued to increase, receiving US$ 38.4 billion in H1 of 2019-20 which is more than 50% of the previous year level.**
- An increase in net remittances improves the BoP position. Net remittances from Indians employed overseas has been constantly increasing year after year and have continued doing so with the amount received in the first half of 2019-20 being more than 50% of the total receivables in 2018-19.

EXTERNAL DEBT:

- **Remains low at 20.1% of GDP at the end of September 2019.**
- After a significant decline since 2014-15, India's external liabilities (debt and equity) to GDP increased at the end of June 2019 primarily by an increase in FDI, portfolio flows and external commercial borrowings (ECBs).

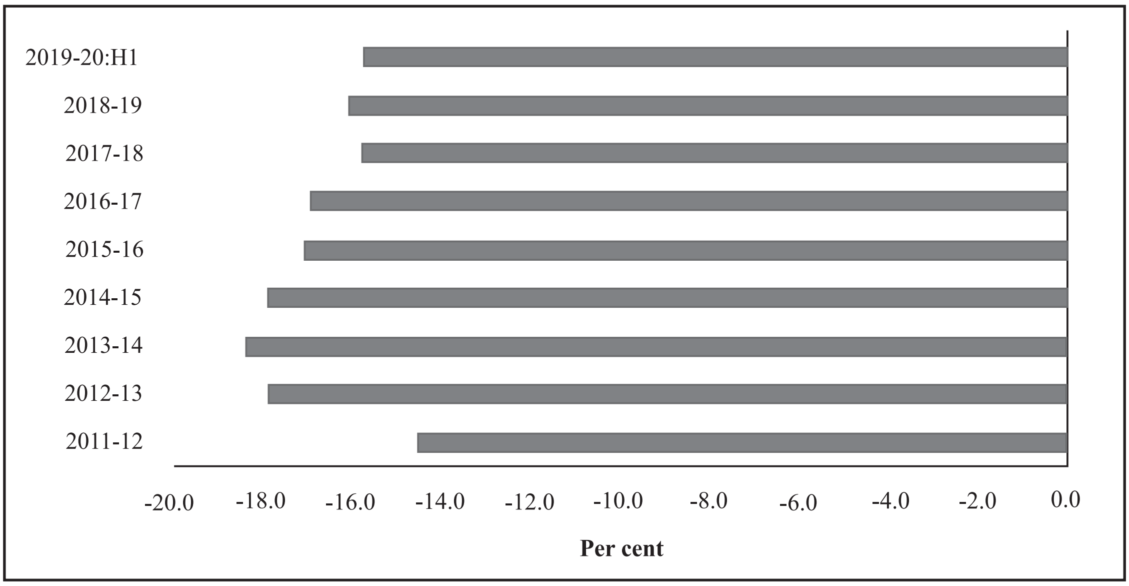




NET INTERNATIONAL INVESTMENT POSITION (NIIP):

- 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 the NIIP/GDP ratio nets out the impact of an 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.



CONCLUSION:

- Government policies are expected to further lift restrictions on FDI inflows, which will continue to increase the stability of sources funding the current account deficit.
- From a macroeconomic perspective, the deterioration of CAD may be contained if consumption slows down in the economy, while an increase in investment and exports become the new drivers of the Indian economy.

Practice Question

- **The vibrant and dynamic external sector is the panacea to the current Sustainable development processes taking place in the developing nations. Discuss, keeping in view, the Indian development pace and path.**

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CHAPTER 4

MONETARY MANAGEMENT AND FINANCIAL INTERMEDIATION

IMPORTANT TERMS:

- **Neutral Monetary policy:** Neutral Monetary policy refers to the central bank (read RBI) keeping such rate or range of rates, which are consistent with full employment, trend growth, and stable prices. **An economy in this state doesn't need to be stimulated** or slowed by monetary policy.
- **Accommodative Monetary policy**: An Accommodative monetary policy occurs when a central bank attempts to **expand the overall money supply to boost the economy** when growth is slowing (as measured by GDP).
- **Repo rate**: Repo rate is the rate at which the central bank of a country lends money to commercial banks in exchange of commercial banks selling their securities to the central bank.
  - RBI lends money to commercial banks in the event of any shortfall of funds.
  - A lower repo rate will reduce the cost of borrowing for commercial banks.
  - A low cost of borrowing will incentivise commercial banks to lend money to investors/businesses at a lower interest rate.
  - **At a lower rate of interest, businesses will borrow more.**
  - More money will be injected into the system, and businesses will undertake more investment activities.
  - Higher investment will generate higher economic activity and higher employment.
  - This will increase the GDP of the economy.
- **Repo rate as a measure to control inflation**: A reduced repo rate will increase the money supply in the economy, increase demand, and if not matched by adequate supply, it will increase inflation.
  - Alternatively, **in the event of inflation, central banks increase the repo rate** as this acts as a disincentive for banks to borrow from the central bank. This ultimately reduces the money supply in the economy and thus helps in arresting inflation.
- Why did MPC cut repo rates?

  Repo rates were cut four times, and an accommodative monetary policy was followed by RBI, **to strengthen domestic growth by spurring private investment in the economy.**
  - RBI was able to reduce repo rates because there was already low inflation in the economy, and the risk of inflation increasing because of lowering repo rate was not there.
  - Why did MPC not cut repo rate the 5th time?
- MPC decided to keep the repo rate unchanged at 5.15%, because **by this time the consumer price inflation had already started rising.** MPC also wanted to give time for the effects of earlier rate cuts to work out in the economy, i.e., **waiting until effective monetary policy transmission happens**.

- **An Accommodative Monetary policy during 2019-20**: Monetary Policy during 2019-20 was conducted under the revised statutory framework.
  - As at the end of January 2020, the **Monetary Policy Committee (MPC), cut the repo rate by 110 basis points** in four consecutive meetings.

- The decision to cut the policy repo rate reflects the **changing stance of monetary policy from neutral to accommodative.**
- In its 5th meeting, MPC kept the repo rate unchanged.

- **Trends in monetary aggregates**: During 2018-19, the growth rates of monetary aggregates witnessed **reversion to their long-term trend** after experiencing unusual behaviour in 2016-17 due to demonetization and again in 2017-18 due to the process of remonetisation.
  - **Reserve Money (M0):** Reserve Money **dipped significantly during the demonetisation** period. It **bounced back after remonetisation**. Expansion in M0 was due to increase in the following:
    - Currency in Circulation (CIC)
    - RBI's Net Foreign Assets (NFA)
    - RBI credit to government (a component within Net Domestic Assets (NDA))
  - **Broad Money (M3):** Broad money growth has been on a **declining trend since 2009.** Its **marginal pick-up in 2018-19** was driven by growth in aggregate deposits (demand deposits and time deposits).
    - Bank's credit to the government also contributed to M3 expansion.
  - **Money Multiplier (M3/M0)**: Between mid- 1990's to 2016-17, the money multiplier was mostly increasing.
    - However, it has been **declining since 2017-18**.

Monetary aggregates and Economic explanation:

- **Narrow Money (M1) =** Currency with the public + Demand Deposits of the public in Banks
  - Narrow money is the most liquid part of the money supply because demand deposits can be withdrawn anytime during the banking hours.
- **M2** = M1 + Post Office Savings
- **Broad Money (M3)** = Narrow money + Time deposits of the public in Banks
- **M4 =** M3 + Post Office Savings
- **Reserve Money (M0)** = Currency in circulation + Bankers' deposits with the RBI + 'Other' deposits with the RBI + Cash reserves of banks with themselves
  - Reserve Money is all the Cash in the economy.
  - It's also called High Powered Money.
- **M2 and M4** are relatively irrelevant indicators, due to less prominence of Post Office Savings.
- **Factors affecting the Money supply:**
  - **Monetary Base**: Monetary Base depends on Reserve Money. Money supply moves in the same direction as Reserve Money.
  - **Money Multiplier (m)**: Measured as a ratio of M3/M0.
  - Money supply is the **product of Money multiplier and Reserve money.**

- **Liquidity condition in the economy**: Systemic liquidity in 2019-20 has been largely **in surplus since June 2019**. Liquidity was injected into the economy through the following measures:
  - Four Open Market Operations **(OMOs)**
  - One US$ 5 billion **buy/sell swap auction** for three-year term
  - **RBI's forex operations**, augmenting domestic rupee liquidity
  - Reducing the Statutory Liquidity Ratio **(SLR)**
  - **Moderation in currency demand** after two years of high demand following demonetization.

Economic interpretation and explanation

- **OMO** is the sale and purchase of government securities (G-Sec) and treasury bills by RBI. **The purchase of G-Sec by RBI increases liquidity**, as it releases money in return.

- OMO raise G-Sec bond prices. As bond prices go up, the yields go down.
- RBI also conducted a '**Special OMO'** where there was a simultaneous sale (of short term securities) and purchase (of long term securities).
- This was done to reduce the difference between short and long term yields.

- **A foreign exchange Buy/Sell swap** comes under RBI's Liquidity Management Framework (LMF).
  - **Banks sell dollars to the RBI at a dollar-rupee exchange rate** fixed by the central bank. **In turn, the RBI will pay rupees** to the participating banks at the current spot rate (thereby increasing liquidity in the system).
  - Three years later, the banks would buy back the dollars, in rupee terms, at an exchange rate that includes the cut-off premium.
- **A net forex purchase by the RBI** results in the **return of currency to the banking system**.
- **SLR** is the portion of net demand and time liabilities (NDTL) which banks are required to park in treasury bills and other instruments. By **reducing the level of SLR,** RBI can **increase funds available with commercial banks**, resulting in increased investment. This can fuel growth and demand.

- **Developments in the Banking sector**:
  - **Gross Non-Performing Advances (GNPA) ratio** (i.e., GNPAs as a percentage of Gross Advances) of Scheduled Commercial Banks (SCBs) remained flat at 9.3% at the end of September 2019, as was at end March 2019.
  - **Restructured Standard Advances (RSA) ratio** of SCBs remained unchanged at 0.4% during the same period.
  - **Stressed Advances (SA) ratio** of SCBs also remained flat at 9.7%.
  - **GNPA ratio of Public Sector Banks (PSBs**) was unchanged at 12.3%.
  - **SA ratios of PSBs** increased from 12.7 to 12.9%.
  - **Capital to risk-weighted asset ratio (CRAR)** of SCBs increased from 14.3 to 15.1%, largely due to improvement in CRAR of PSBs.
  - Many PSBs have continued to record negative profitability ratios.

Economic interpretation and explanation

- **NPA:** A loan whose interest and/or instalment of the principal have remained **overdue for a period of 90 days** is considered as NPA.

  Gross NPA consists of the following types:
  - **Substandard Assets**– If a loan account remains NPA for a period less than or equal to **12 months.**
  - **Doubtful Assets**– An asset is doubtful if it has remained in the sub-standard category for 12 months.
  - **Loss Asset**– A loan account is declared as a loss asset when the bank's internal or external auditors declare it so or RBI inspection declares it as one.
- **Restructuring** of a loan means **changing its terms and conditions** to mitigate the difficulties encountered by the borrower due to genuine reasons. Changes may include:
  - Extended repayment period
  - Reduced interest rate
  - Converting a part of loan into equity, etc.
- **Stressed assets** = NPAs + Restructured loans + Written off assets
- **Capital to risk-weighted asset ratio:** CRAR is also known as **'Capital Adequacy Ratio'**, the ratio of a bank's capital to its risk.
  - It is calculated to ensure that the bank can absorb a reasonable amount of loss and complies with statutory Capital requirements.

- **Monetary Transmission, a**s mentioned earlier, has been weak in 2019 on all three accounts:
  - **Rate Structure:** The Weighted Average Lending Rate **(WALR) of SCBs has not declined** at all in 2019 despite the reduction of repo rate by 135 bps since January 2019.
    - The **credit spread** (the difference between repo rate and WALR) **is at the highest level in this decade.**
    - This suggests that there has been **no transmission of the cut in repo rate to lending rates of the banks** in 2019.
  - **Term structure**: RBI's monetary easing and Liquidity Adjustment Facility (LAF) has had **some impact on short term interest rates**. However, the same has not been the case for longer-term maturities.
  - **Credit growth**: Despite a decrease in policy rates, **credit growth in the economy has been declining** since the beginning of this year.
    - Credit growth **moderated across all major segments** of non-food credit, **except personal loans,** which continued to grow at a steady pace.
    - Credit growth **to theservices sector decelerated** sharply.
    - Credit growth **inthe industry has also been very low** in recent months.
    - The main contributor to this slowdown has been a **negative growth of credit** to Micro, Small and Medium Enterprises (**MSME) and the Textile sector.**

Major Policy Changes related to Banking Regulations

- Permitting **One-time Restructuring of Existing Loans to MSMEs,** classified as 'Standard', without a downgrade in the Asset Classification.
- Bank Lending to Infrastructure Investment Trusts (InvITs).
- **New Prudential Framework** for Resolution of Stressed Assets.
- **External Benchmark Based Lending**.
- **Revised guidelines on the compensation** of Whole Time Directors/Chief Executive Officers/ Material Risk Takers and Control Function Staff for all Private Sector Banks.

- **Non-Banking Financial Sector (NBFC)**: **After growing very fast in 2017-18** and in the first half of 2018-19, the sector has **decelerated sharply** since then.
  - The **growth of loans from NBFCs declined** from 27.6% in September 2018 to 9.9% at the end of September 2019.
  - The **cost of funds for NBFCs declined** by March 2019.
  - The third quarter of 2018-19 witnessed **liquidity stress.**
  - There is an observable **shift in the sources of funding of NBFCs**, among other signs of stress in the sector:
    - **Bank borrowings increased.**
    - Deployment of **credit by mutual funds to NBFCs has been contracting.**
    - **Market borrowings increased.**
    - Among instruments of market borrowing, the share of Commercial Papers decreased, while the share of Non-Convertible Debentures (NCDs) increased.
    - **CRAR of the NBFC sector stood at 19.5%**at the end of September 2019, as against the regulatory requirement of 15%.
    - The **gross NPAs ratio** of the NBFC sector **increased.**
    - The net NPAs ratio also marginally increased.
    - The **Return on Assets (RoA)** of the sector **decreased.**
    - The **Return on Equity (RoE) also moderated.**

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

- Amendment to the RBI Act, 1934 to **strengthen the Regulation and Supervision of the NBFC** Sector, vesting **additional powers with the Reserve Bank**.
- Reserve Bank allowed non-deposit taking systemically important NBFC-ICCs to obtain **AD-Category II license.**
- **Liquidity Risk Framework for NBFCs.**
- **Increase of lending limits** for NBFC-Micro Finance Institutions **(NBFC-MFIs).**
- Regulation of Housing Finance Companies **(HFCs) transferred from National Housing Bank (NHB) to the RBI.**

- **Developments in Capital market**:
  - Primary Market Resource Mobilisation through **public and rights issues had declined** as compared to 2017-18.
    - **Public issues (equity)** decreased.
    - **Rights issues (equity)** increased sharply.
    - **Public Issue (Debt securities)** declined significantly.
  - Primary Market Resource Mobilisation through **Private Placements was a preferred route** to gear up the capital by Indian corporates.
  - There was a **net inflow into the mutual funds' industry** during April-December 2019.
  - There was **net inflow on account of Foreign Portfolio Investors (FPIs)** in the Indian capital market during April-December 2019, as compared to net outflows in the previous corresponding period. It stood at **US$ 259.5 billion** as on December 31, 2019.

Important Terms:

- **Capital markets** refer to the places where savings and investments are moved between suppliers of capital and those who are in need of capital.
  - It consists of the **primary market**, where new securities are issued and sold, and the **secondary market**, where already-issued securities are traded between investors.
  - The most common capital markets are the **stock market** and **bond market.**
- **Equity** represents shareholders' stake in the company. The calculation of equity is a company's total assets minus its total liabilities.
- **Debt security** refers to a debt instrument, such as a government bond, corporate bond, certificate of deposit (CD), municipal bond, etc. that can be bought or sold between two parties and has basic terms defined, such as amount borrowed, interest rate, maturity and renewal date. It also includes collateralized and mortgage-backed securities.
- **Mutual fund** is a type of financial vehicle made up of a pool of money collected from many investors to invest in securities like stocks, bonds, money market instruments, and other assets.
- **Foreign Portfolio Investment** is the entry of funds into a country where foreigners deposit money in a country's bank or make purchases in the country's stock and bond markets.
  - **FPI does not provide the investor with direct ownership** of a company's assets and is relatively liquid depending on the volatility of the market.
  - Along with foreign direct investment (FDI), FPI is one of the common ways to invest in an overseas economy.
  - **FDI provides ownership control** in a business based in another country.
- **Issues made in the primary market** can be classified as public, rights, bonuses, and private placement.
  - Public issue

- Initial Public Offer (IPO)
- Follow on Public Offer (FPO)
- Rights issue
- Bonus issue
- Private placement
  - Preferential issue
  - Qualified Institutional Placement (QIP)

- **Movement of Indian Benchmark Indices**: India's benchmark indices, namely, Nifty50 and S&P BSE Sensex, **reached record highs** during 2019-20.
- **Developments in the Insurance sector**: The level of development of the insurance sector in a country is generally assessed on the basis of two parameters viz insurance penetration and insurance density.
  - **Both, insurance penetration and insurance density have increased in India**, compared to the levels in 2001.
  - **Insurance density is more in case of Life insurance** vis-à-vis Non-life insurance.
  - **Insurance penetration for Life insurance has declined** from 2011, whereas for the Non-life insurance has increased.

National Pension System

- The **New Pension Scheme**, **now renamed** as National Pension System (NPS) was introduced in 2003 and it was made mandatory for Central Government employees **(except armed forces).**
- The Scheme was **extended to 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 a **voluntary basis** from May 2009.
- **Atal Pension Yojana** falls under NPS and is a guaranteed pension scheme for workers in the unorganised sector.
- **Assets Under Management (AUM**) includes returns on the corpus, under NPS.
- During FY 2019-20, the following options were provided for Central Government NPS subscribers:
  - Choice of Pension Fund
  - Choice of Investment pattern
- NPS is administered by the **Pension Fund Regulatory and Development Authority (PFRDA).**

- **Developments in the Insolvency and Bankruptcy Code (IBC)**: IBC has been in operation for the past three years now. **Insolvency and Bankruptcy Board of India (IBBI)** is the adjudicating authority for insolvency proceedings.
  - **IBC recovered 42.5% of the total bad loans** filed with the National Company Law Tribunal (NCLAT).
  - The proceedings under **IBC take on average about 340 days**, compared to 4.3 years in the previous regime.
  - **41.2 per cent of the cases** admitted by NCLT for Corporate Insolvency Resolution Processes (CIRP) **is in the manufacturing sector** followed by 19% in Real Estate, Renting and Business Activities sector.

Amendments under Insolvency and Bankruptcy Code (IBC)

- Since its enactment in 2016, the Code has been **amended three times.**
- 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.
- **While promoters of MSMEs are allowed** to bid for their companies as long as they are not wilful defaulters.

- The second amendment introduced **Section 12A** to provide creditors the option to **withdraw the insolvency application within 30 days** of filing the petition. **Homebuyers shall be treated as financial creditors**, 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 of the resolution process.

Practice Question

- **During 2019-20, the monetary policy stance changed from neutral to accommodative. Explain.**
- **The monetary management and financial intermediation will lead to an increase in the economic growth and development of enterprises. Discuss, taking in view the factor of Insolvency and Bankruptcy Code?**

CHAPTER 5

PRICES AND INFLATION

IMPORTANT TERMS:

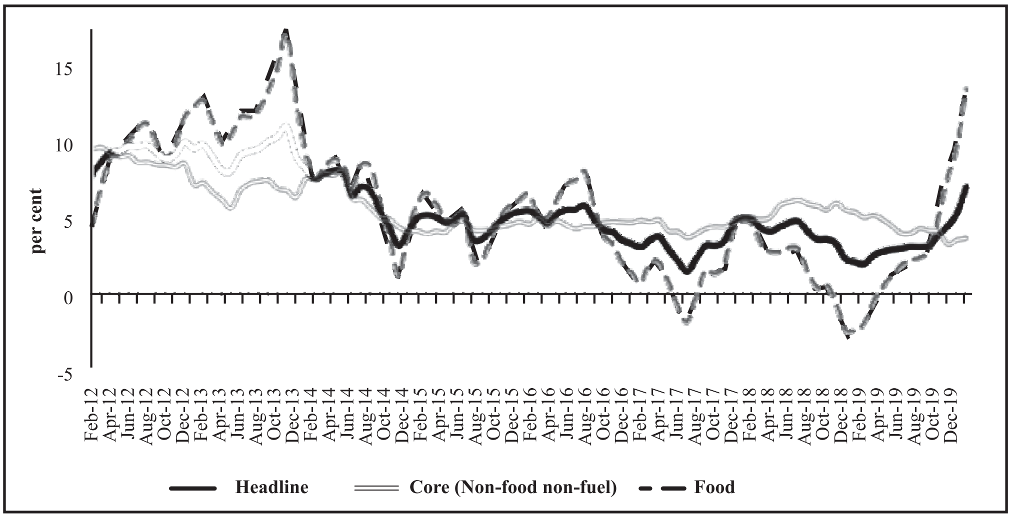
- **Cobweb theory:** The idea that price fluctuations can lead to fluctuations in supply which causes a cycle of rising and falling prices.
- **Inflation:**A general increase in prices and fall in the purchasing value of money.
- **Headline inflation:** Headline Inflation refers to the overall change in price level and is susceptible to supply shocks.
- **Core inflation**: Core inflation gives the underlying trend of inflation by exempting goods and services whose prices are highly volatile.

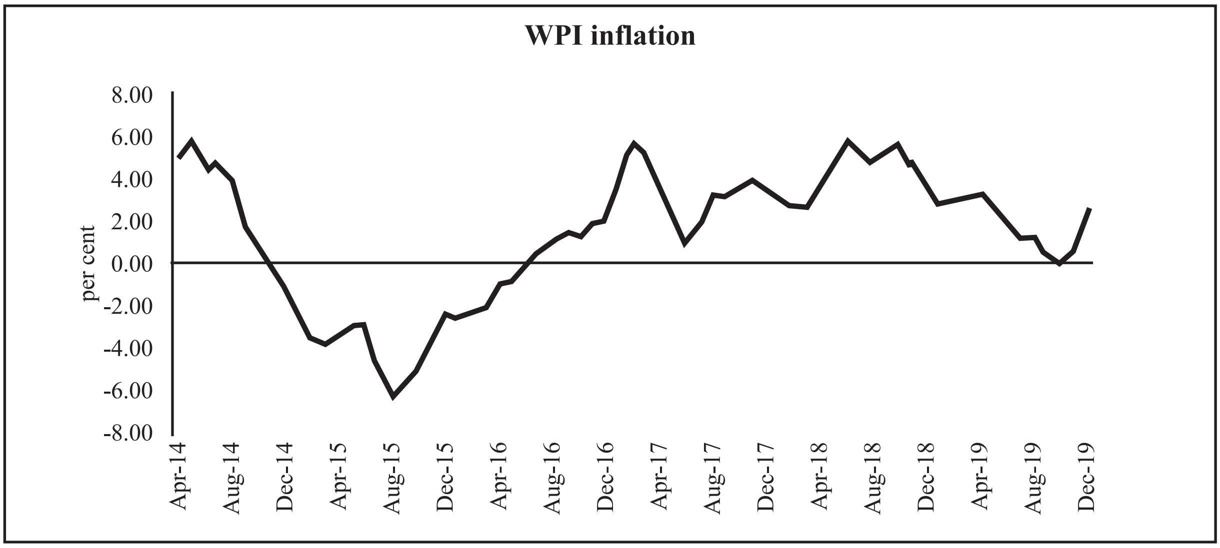
INTRODUCTION:

- Inflation has been witnessing moderation since 2014 backed by low food inflation. During the current financial year, however, food and beverage inflation have been trending differently.
- Food inflation has been on an upward trend mainly backed by the 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 an 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.

CURRENT TRENDS IN INFLATION:

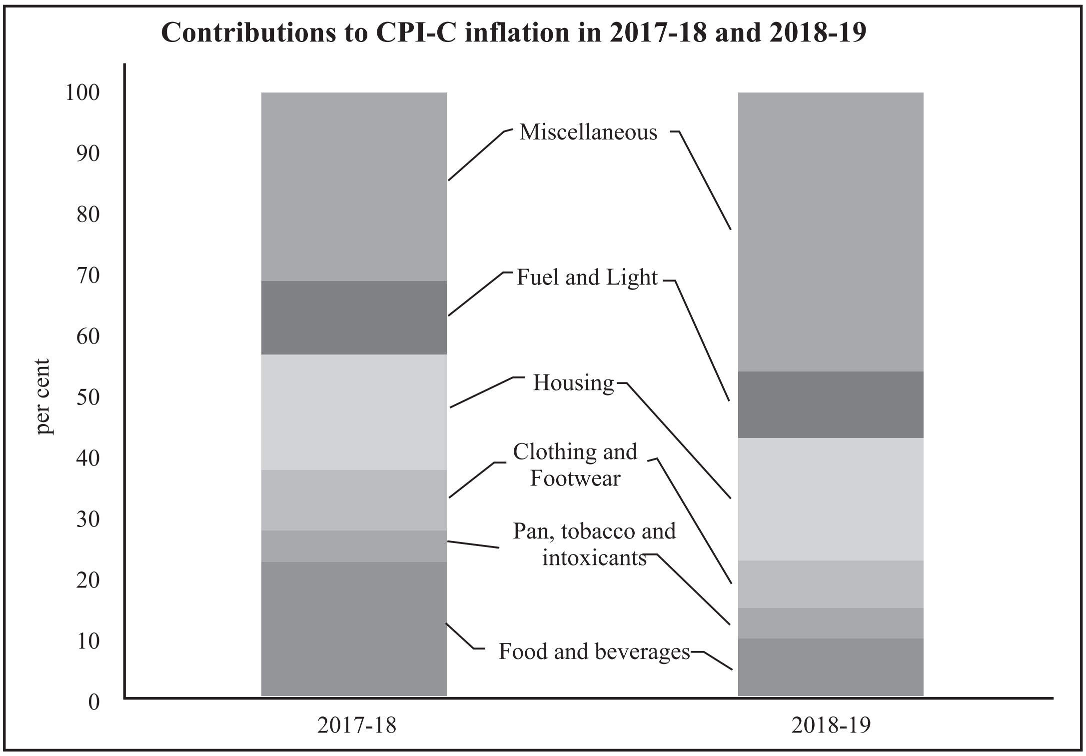
- Inflation witnessing moderation since 2014.
- Consumer Price Index (CPI) inflation increased from 3.7% in 2018-19 (April to December 2018) to 4.1% in 2019-20 (April to December 2019).
- WPI inflation fell from 4.7% in 2018-19 (April to December 2018) to 1.5%during 2019-20 (April to December 2019).





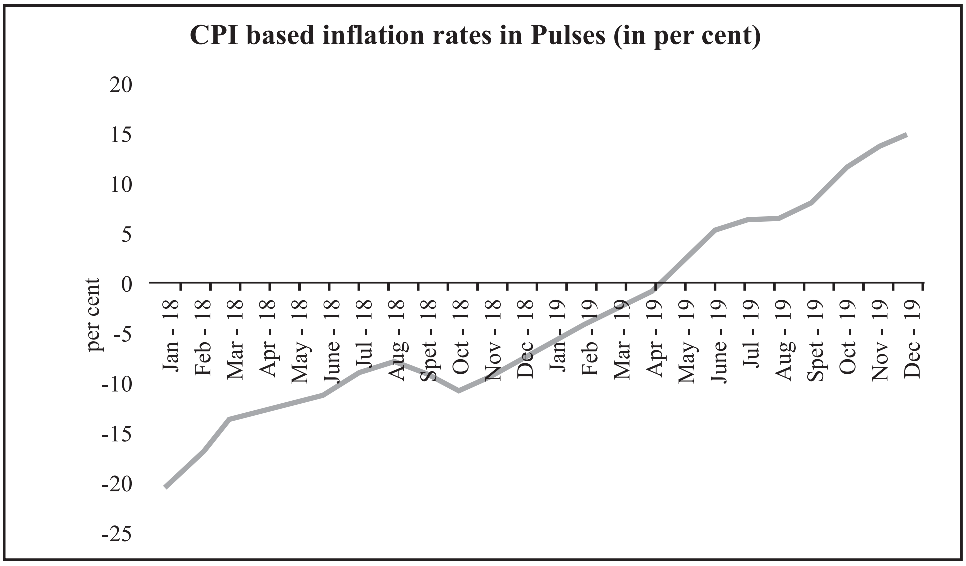
DRIVERS OF CPI:

- Combined (C) inflation has been the main driver of inflation:
- During 2018-19, the major driver was the miscellaneous group.
- During 2019-20 (April-December), food and beverages were the main contributors.
- Among food and beverages, inflation in vegetables and pulses was particularly high due to low base effect and production side disruptions like untimely rain.



COB-WEB PHENOMENON FOR PULSES:

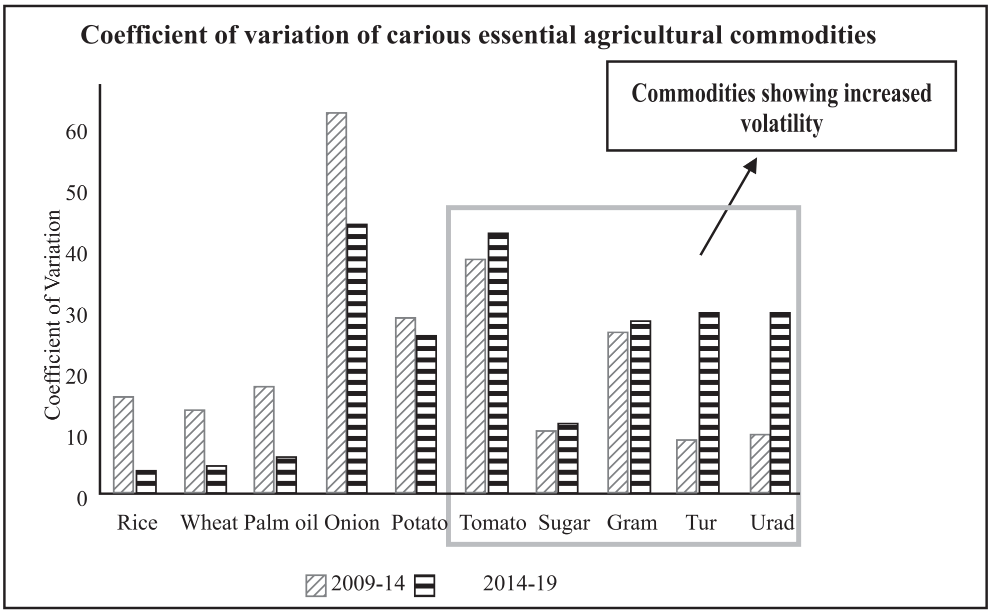
- Cobweb theory is the idea that price fluctuations can lead to fluctuations in supply, which causes a cycle of rising and falling prices.
- Farmers base their sowing decisions on prices witnessed in the previous marketing period.
- Measures to safeguard farmers like procurement under Price Stabilisation Fund (PSF), Minimum Support Price (MSP) need to be made more effective.



The divergence between retail and wholesale prices:

- Observed for essential agricultural commodities in four metropolitan cities of the country from 2014 to 2019.
- Divergence particularly high for vegetables like onion and tomato. This may be due to the presence of intermediaries and high transaction costs.

The volatility of prices:

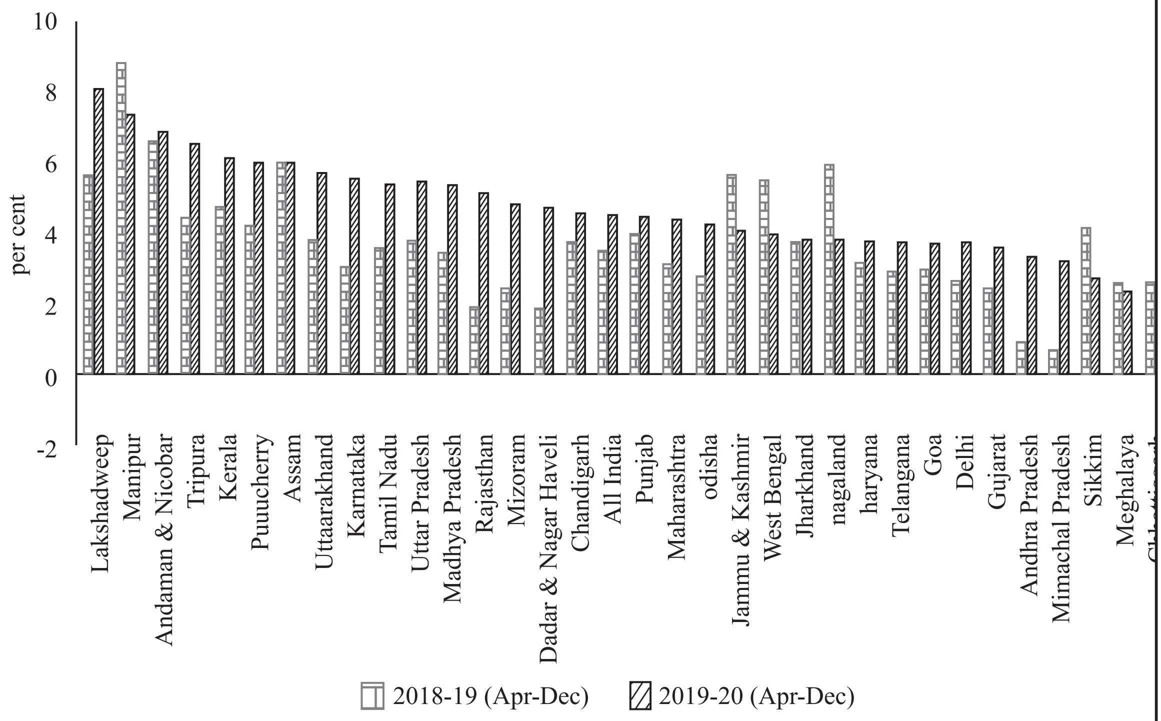


- The coefficient of variation is a statistical measure of the dispersion of data points in a data series around the mean.
- Prices of rice and wheat remained stable since 2014 due to adequate supply arising out of sufficient domestic production and also due to the maintenance of adequate buffer stock 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.
- 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.
- The volatility of prices for most of the essential food commodities with the exception of some of the pulses has actually come down in the period 2014-19 as compared to the period 2009-14.
- Lower volatility might indicate the presence of better marketing channels, storage facilities and an effective MSP system.

REGIONAL VARIATIONS:

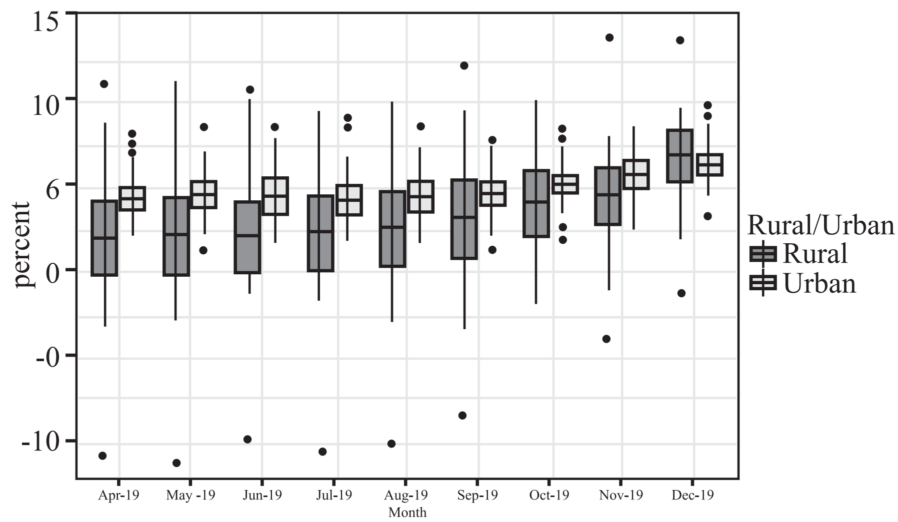
- CPI-C inflation has been highly variable across states ranging between (-)0.04% to 8.1% across States/UTs in the financial year (FY) 2019-20 (April-December).

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

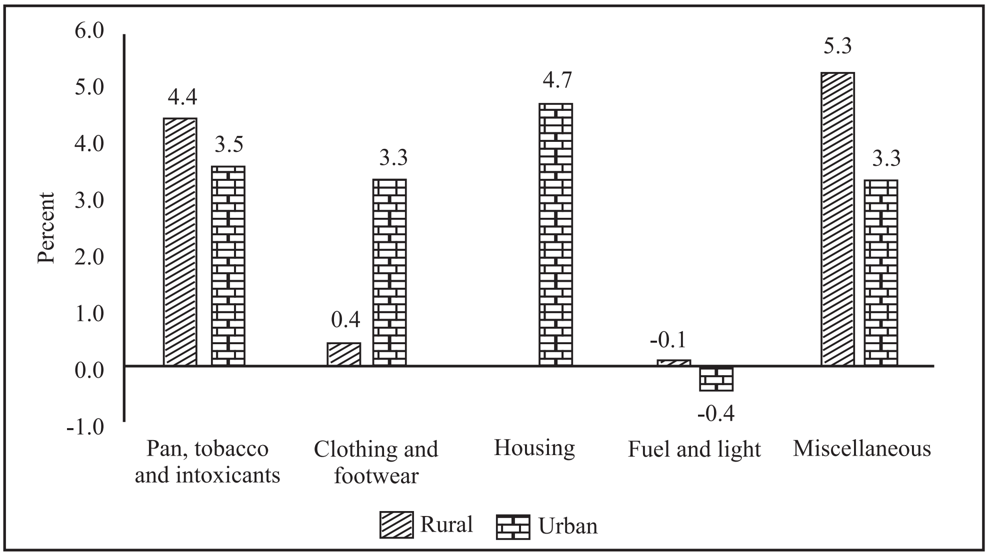


- In most states, CPI-C inflation in rural areas is lower than the CPI-C inflation in urban areas.

Varibility in rural and urban inflation across States in 2019-20 (April-December)



- Rural inflation has been more variable across states than urban inflation.



Inflation dynamics:

- Convergence of headline inflation towards core inflation as per the CPI-C data from 2012 onwards.

Efforts to contain Inflation:

- Central Government monitors the price situation on a regular basis as controlling inflation remains a key area of policy focus.
- The government has taken a number of measures to control inflation especially food inflation, which includes both general and specific measures.

General Measures	Specific Measures
Advisories are being issued, as and when required, to State Governments to take strict action against hoarding & black marketing, especially for commodities in short supply.	During lean periods of 2017-18 and 2018- 19, to control the rise in onion prices, onions were released at reasonable prices from the stock procured under PSF.
These measures are taken to effectively enforce the Essential Commodities Act, 1955 & the Prevention of Black-marketing and Maintenance of Supplies of Essential Commodities Act, 1980.	The order empowering States/ UTs to impose controls including Stock Limits on Edible Oils and Edible Oil seeds has been withdrawn in June 2018.
Regular review meetings on prices and availability of key commodities are held at thehighest level, including at the level of Ministers, Committee of Secretaries, Inter-Ministerial Committee, Price Stabilization Fund Management Committee (PSFMC), and other Departmental level review meetings to take stock of the prevailing price and availability situation and recommend appropriate policy intervention.	Pulses from the buffer are utilized for strategic market intervention for price management, meeting institutional requirements like supplies to State Governments/UTs for Mid-Day Meal Scheme (MDM), Integrated Child Development Services (ICDS) Scheme, and Public Distribution System (PDS), and through Open Market Sale, etc. In addition, pulses from the buffer are being utilized to meet the requirement of Army and Central Para-Military Forces.
Higher Minimum Support Price (MSP) for pulses and other crops have been announced so as to incentivize production and there by enhance the availability of food items, which may help moderate prices.	Prohibition on export has been withdrawn in April 2018 on all varieties of edible oils, except mustard oil. The export of mustard oil in branded consumer packs of up to 5 kgs is permitted with a Minimum Export Price (MEP) of United States Dollar (USD) 900 per million ton (MT).

The government has set up Price Stabilization Fund (PSF) for procurement of Agri-horticultural commodities including potatoes, onions and pulses for its release during the lean period to improve availability and moderate their prices.	Import of food products from foreign countries in case of inflationary trends.

CONCLUSION:

- 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.
- Inflation expectations have declined thereby indicating that the inflation targeting framework has started influencing expectations of inflation in the economy.

Practice Question

- **Inflation, especially in the emerging economies, is affected by global economic growth and its trends. Discuss, considering the Indian context.**
- **The Indian states having higher GSDPs have higher inflationary trends as compared to states having lower inflationary trends. Critically analyze and put suggestive ways forward to curbthe increase in inflation.**

CHAPTER 6

SUSTAINABLE DEVELOPMENT AND CLIMATE CHANGE

INTRODUCTION

Sustainable Development Goals (SDGs) aims to achieve a sustainable future, free from social, economic, and environmental inequalities and ensure a greener and healthy planet for future generations. **India's performance in the composite SDG index has improved from 57 in 2018 to 60 in 2019.** The SDG nexus approach helped India to attain these achievements. India is among the few countries in the world where the forest cover has increased considerably. **The forest and tree cover has reached 80.73 million hectares which are 24.56 percent of the geographical area of the country.**

SDG India Index

- 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.

SDG INDIA INDEX 2019

- The **SDG India Index2019** is more comprehensive than the first edition and highlights the progress being made by the States/UTs on a wider set of 100 indicators spread across 16 goals.
- The Index includes a **qualitative assessment** on the SDG goal and has a new section on profiles of States/UTs.
- As per the SDG Index 2019, Kerala, Himachal Pradesh, Tamil Nadu, Andhra Pradesh, Telangana, Karnataka, Goa, Sikkim, Chandigarh, and Puducherry are the front runners. **None of the States/ UTs falls in the Aspirant category in 2019.**
- The composite score for India has improved from **57 in 2018 to 60 in 2019.** This is due to countrywide performance in **five goals where India has scored between 65 and 99. They are:**
  - Goal 6 (Clean Water and Sanitation); Goal 7 (Affordable and Clean Energy); Goal 9 (Industry, Innovation, and Infrastructure); Goal 15 (Life on Land) and Goal 16 (Peace, Justice and Social Institutions).
- The goals that demand special attention are:
  - Goal 2 (Zero Hunger) and Goal 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.

SDG NEXUS APPROACH

- **The target-based approach** can help reinforcement of policies and their implementation. 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 aims to achieve the balance between environmental, social, and economic boundaries while simultaneously ensuring the well-being of the people.

EXAMPLES OF NEXUS IN SELECT SECTORS

Education and Electricity Nexus

- Electricity in schools is a part of basic infrastructure requirements to provide quality education. It is observed that with electricity, the schools' access to modern methods and techniques of teaching helps the holistic development of students and increases their attraction towards learning. It is observed that States with lower literacy rates have low electricity rates at the schools and vice-versa.
- Globally it is observed that schools with electricity outperform the non-electrified schools in terms of staff-retention, drop-outs, and other educational indicators.
- Health and Energy Nexus
  - 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.

CLIMATE CHANGE

- 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 percent below 2005 levels by the year 2030;
  - 40 percent of cumulative electric power installed capacity 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 the post-2020 period in line with the guidelines adopted under the Paris Agreement Work Programme.
- **Swachh Bharat Mission (Urban)** was launched in 2014 with the twin objectives of **ensuring 100% scientific solid waste management and making urban India open defecation free (ODF),** to achieve total environmental improvement.
- India in the year 2019 had undertaken one of the world's largest renewable energy expansion programmes in the world by announcing 175 Gigawatt (GW) targets for renewables by 2022 and has already achieved 83 GW.
- As per the Second Biennial Update Report (BUR), **the emission intensity of India's GDP has reduced by 21% over the period of 2005-2014.**

INDIA'S CLIMATE CHANGE POLICIES

- India has decided to revise **the National Action Plan on Climate Change (NAPCC) launched in 2008** in line with the NDCs under the Paris Agreement to make it more comprehensive in terms of priority areas.
- **Climate Change Action Program (CCAP) of 2014is a central sector scheme** that aims to build and support capacity at central and state levels, strengthening scientific and analytical capacity for climate change assessment, establishing an appropriate institutional framework and implementing climate actions.
- The **Energy Conservation Building Code (ECBC) 2017** prescribes energy performance standards for new commercial buildings to be constructed in India to achieve a 50 percent reduction in energy use by 2030.
- The **National Biofuels Policy 2018** targets 20% blending of ethanol in petrol and 5% blending of biodiesel in a diesel by 2030.
- **National Adaptation Fund on Climate Change (2015)is a Central Sector Scheme** with **National Bank for Agriculture and Rural Development (NABARD) as the National Implementing Entity.**

National Missions

- **The Perform, Achieve and Trade (PAT)** scheme under National Mission for Enhanced Energy Efficiency (NMEEE) is designed on the concept of reduction in Specific Energy Consumption.

- **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.
- **National Water Mission** focuses on monitoring of ground water, aquifer mapping, capacity building, water quality monitoring and other baseline studies.
- **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.
- **National Mission on Sustainable Habitat** is being implemented through three programmes: Atal Mission on Rejuvenation and Urban Transformation (AMRUT), Swachh Bharat Mission, and Smart Cities Mission.
- **National Mission for Sustainable Agriculture** aims at enhancing food security and protection of resources.
- **National Mission for Sustaining the Himalayan Ecosystem** aims to evolve suitable management and policy measures for sustaining and safeguarding the Himalayan Ecosystem.
- **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.

ALIGNING FINANCIAL SYSTEM WITH SUSTAINABILITY

- Green bonds are debt securities issued by financial, non-financial or public entities where the proceeds are used to finance 100% green projects and assets.
- Climate Bonds remain 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.**
- 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.

GREEN CLIMATE FUND

- Under the UNFCCC and theParis Agreement, the intent and obligation of climate finance are unambiguous, that developed country Parties shall provide financial resources to developing countries to undertake adaptation and mitigation actions in accordance with the country's 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.

India and COP 25

- **COP 25 to the UNFCCC was held at Madrid, Spain** under the Chilean Presidency.
- 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 recalls the goal of developed countries of mobilizing jointly US$ 100 billion a year by 2020.
  - 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.

- 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.

INTERNATIONAL SOLAR ALLIANCE (ISA)

- It is the first treaty-based inter-governmental organization **headquartered in India.** With 83 signatory countries, ISA creates a multi-stake holder ecosystem where sovereign nations, multilateral organizations, industry, policy makers and innovators work together to promote the common and shared goal of meeting energy demands of a secure and sustainable world.
- 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;
  - A **'facilitator'** by getting the lines of credit from EXIM Bank of India and from Agence Francaise de Development (AfD), France.
  - An **'incubator'** by nurturing initiatives like the Solar Risk Mitigation Initiative
  - 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.
- The ISA's Programme on **Scaling Solar Applications for Agriculture** use focuses on providing greater energy access and a sustainable irrigation solution through the deployment of Solar Water Pumping Systems in member countries.
- In the field of innovative financing instruments, **the Solar Risk Mitigation Initiative, launched by the 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.

COALITION FOR DISASTER RESILIENT INFRASTRUCTURE

- India launched the **Coalition for Disaster Resilient Infrastructure (CDRI)** on the sidelines of UN Secretary General's Climate Action Summit in September 2019.
- It is an international partnership of national governments, UN agencies, multilateral development banks, private sector, and knowledge institutions that will promote the resilience of new and existing infrastructure systems to climate and disaster risks, thereby ensuring sustainable development.
- It 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.**

INDIA AND THE UNCCD

- India hosted the 14thsession of the Conference of Parties (COP 14) to the United Nations Convention to Combat Desertification (UNCCD) in 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 reiterated its support, 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 raising its ambition of the total area that would be restored from its land degradation status, **from21 million to 26 million hectares between now and 2030.**
- COP 14 adopted the **New Delhi Declaration:** Investing in Land and Unlocking Opportunities. Attention was also drawn to the role of the private sector in land restoration, including through promoting sustainable value chains.

INDIA AND ITS FORESTS

- India's forest and tree cover are increasing considerably. The States/UTs showing a significant gain in forest cover are Karnataka, Andhra Pradesh, Kerala and Jammu & Kashmir whereas States showing a loss in forest cover are Manipur, Meghalaya, Arunachal Pradesh, and Mizoram.
- **India is one of the 17 megadiverse countries in the world.** This is evident in the **Shannon-Weiner Index for Diversity** which is used for measuring species richness and abundance.
- **India State of the Forest Report 2019 assessed Shannon-Weiner Index** for 16 biodiverse areas.
- 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 forests are high in Karnataka.
  - Tropical Littoral and swamp forests are high in UP and
  - Tropical thorn forests are seen widely in Andhra Pradesh.
- Forests help to store more carbon than any other terrestrial ecosystem **(India State of Forest Report, 2019)**.
- The net change in carbon stock in India shows that **net change is highest in soil organic carbon** followed by Above Ground Biomass (AGB) and Deadwood.
- Litter carbon registered negative growth rate as compared to the 2017 assessment.

AGRICULTURE RESIDUE BURNING: A MAJOR CONCERN

- 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 percent of all crops residue burnt in the country are residues of rice crop.**
- Agricultural burning contributes significantly to PM2.5 concentrations.
- The stubble burning incidents in the month of October and November 2019 has led to an increase in PM 2.5 and PM10 in Delhi in these months as compared to that of September 2019.
- Various studies suggest ways to address this issue, which include:
  - Promote the practice of conservation of agriculture with low lingo-cellulosic crop residues like rice, wheat, maize, etc.
  - Create markets for crop residue-based briquettes and mandate nearby thermal power plants to undertake co-firing of crop residues with coal.
  - Create infrastructure for setting up biomass depots for the storage of bailed crop residues.
  - Create a special credit line for financing farm equipment and working capital for private sector participation.
  - **Promote the 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.
- 'Promotion of Agricultural Mechanization for In-Situ Management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi' is a central sector scheme implemented for the period from 2018-19 to 2019-20.
- Under this Scheme, the agricultural machines and equipment for in-situ crop residue management with **50 percent subsidy to the individual farmers and 80 percent subsidy for the establishment of Custom Hiring Centres.**

CONSTRUCTION AND DEMOLITION (C&D) WASTE: ITS IMPACT

- Unscientific disposal of C&D waste is one of the key contributors to air and water pollution.
- C&D is a key contributor to particulate matter emissions in Delhi. Therefore, investing in a circular economy driven approach in C&D waste management shall have a large payoff in terms of avoiding health and environmental damage.

WAY FORWARD

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 the Central Government should walk together to bring a change that India needs.

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.

Practice Question

- **Discuss the SDG Nexus approach, discussed in the Economic Survey 2019-20, with suitable examples.**
- **Explain the reasons behind a high concentration of PM 2.5 in the National Capital Region during the harvest season of Kharif crop. Also, discuss the possible measures.**

CHAPTER 7

AGRICULTURE & FOOD MANAGEMENT

MAJOR HIGHLIGHTS

- Agriculture and its allied sectors play a significant role in the economic transformation of our country especially in the arena of rural livelihood, employment and national food security.
- It is still the largest source of livelihoods in India as 70% of its rural households still depend primarily on agriculture for their livelihood (including 82% of farmers being small and marginal).
- Its contribution to national income has gradually declined from 18.2% in 2014-15 to 16.5 in 2019-20, reflecting the development process and the structural transformation taking place in the economy.
- The livestock sector is one of the largest in the world which has grown at a compound annual growth rate of nearly 8% over the last five years. It assumes an important role in income, employment and nutritional security.
- The food processing sector plays a significant role in reducing post-harvest losses and creation of additional market for farm outputs thus it require more focused attention. It is growing at an average annual growth rate of more than 5% over the last six years ending 2017-18.
- India's food management should focus on rationalisation of food subsidy (which has increased from INR 113171.2 crore in 2014-15 to INR 171127.5 crore in 2018-19) while addressing the challenges of food security, especially of the most vulnerable sections.
- Indian Agriculture is suffering from the issue of lower farm mechanisation which is only about 40% as compared to about 60% in China and around 75% in Brazil.
- To realise the goal of doubling the farmers income, it is needed that the challenges of the sector such as access to credit, income support scheme, mechanization, agriculture marketing reform, insurance coverage, irrigation facilities, etc. are addressed.

OVERVIEW OF AGRICULTURE

- The share of agriculture and allied sectors in the total Gross Value Added (GVA) of the country has been declining (from 18.2 per cent in 2014-15 to 16.5 per cent in 2019-20) on account of relatively higher growth performance of non-agricultural sectors because of structural changes taking place in the economy.
- The growth of GVA & Gross Capital Formation (GCF) of agriculture and allied sectors has witnessed a fluctuating trend.

AGRICULTURE INPUTS

Mechanization in Agriculture

- **Significance:**
  - Agriculture mechanization is an essential input to modern agriculture to increase the productivity by making judicious use of other inputs and natural resources (land and water), etc., besides reducing the human menial labour and cost of cultivation.

- Mechanization also improves cropping intensity by raising a second crop or multi-crops from the same land and make agricultural land commercially more viable.
- The farm yield increases with increases in availability of farm power thus government has taken a target of Increasing farm power availability from 2.02 kW per ha (2016-17) to 4.0 kW per ha by the end of 2030.

- **Current Status:**
  - 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).
  - 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 (Indian tractor industry is the largest in the world, accounting for one-third of the total global production).
  - However, there are disparities in intra-national levels of mechanization where northern India has higher levels of mechanization compared to other regions.

- **Reason for Low level of Mechanization:**
  - Economies of operation due to small holdings, access to power, credit cost and procedures, uninsured markets and low awareness are some of the important reasons (As per study by NABARD 2018) for lower rate of agricultural mechanization in India.

- **Government's Initiative:**
  - Under Sub Mission on Agricultural Mechanization 2014-15, assistance is provided to State governments to impart training and demonstration of agricultural machinery (like laser leveller, happy seeder technology, combine harvesters and small equipment like power weeders), provides assistance to farmers for procurement of various agricultural machineries and equipment and for setting up of Custom Hiring Centre.
  - 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.

- **Way forward**
  - 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.

MICRO IRRIGATION

Micro Irrigation (drip and sprinkler irrigation) is a proven technology to improve water use efficiency. 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 and 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.

- **Benefits of micro irrigation technique:**
  - Efficient deployment of inputs (saving on inputs) such as water (20-48%), electricity (10-17%), fertilizers (11-19%), labour (30-40%), increase in crop productivity (20-38%).
  - 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 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.

- A dedicated Micro Irrigation Fund (MIF), created with NABARD, has been approved in 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.
- 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.

AGRICULTURAL CREDIT

- The agricultural credit flow target for 2019-20 has been fixed at Rs.13,50,000 crore, and till 30th November, 2019, a sum of Rs. 9,07,843.37 crore has been disbursed.
- The regional distribution of agricultural credit in India is highly skewed. 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.

FERTILIZERS

- The New Urea Policy-2015 (NUP- 2015) was 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. Total fertilizer subsidy stands near Rs. 80000 Crores in 2019-20 as per estimates.
- Direct Benefit Transfer (DBT) System (w.e.f. October, 2016) in Fertilizers:
  - 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 Voter Identity card, etc.

AGRICULTURAL RESEARCH AND EDUCATION

- 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: ICAR develops the 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.
- Research & Education in Livestock and Fisheries Development 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.
  - 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.
  - 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: 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. On-farm trail, Frontline Demonstration, Training of farmers, and making availability of quality seeds, planting material of horticulture crops, improved livestock strain ensuring the trafer of technology from Lab to field.

AGRICULTURE MARKETING

Minimum Support Prices

- The objective of announcement of MSP for different crops by government is to encourage higher investment and production in agriculture. 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 (All India weighted average cost of production for the season). 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.

Income/Investment Support Schemes

Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)

- PM-KISAN is a Central Sector scheme (effective from 1.12.2018) with 100 per cent funding from Government of India. Under the Scheme an income support of Rs. 6000 per year is provided to all farmer families across the country in three equal instalments of Rs. 2000 at an interval of every four months.

Krushak Assistance for Livelihood and Income Augmentation (KALIA) Scheme of Odisha

- A Government of Odisha (since 2018-19 Rabi season onwards) scheme, to accelerate agricultural prosperity and elimination of poverty in the State. Benefits provisioned under different components are: financial support of `Rs.25,000 per farm family over five seasons will be provided to small and marginal farmers for farm input , financial assistance of Rs.12500 will be provided to each landless agricultural household for agricultural allied activities and financial assistance of Rs.10,000 per family per year to Vulnerable cultivators/landless agricultural labourers 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 Rs. 5000 / - per acre per year (two installments through Direct Benefit Transfer) , which will help them reduce their dependence on loans. This is in addition to PM Kisan Nidhi Yojana.

Rythu Bandhu of Telangana

- Government of Telangana has come up with a new concept of providing Investment Support at the rate of Rs 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. 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. During 2019-20, Government has enhanced the amount under Investment Support Scheme from `Rs. 4,000 to `Rs. 5,000 per acre per season.

AGRICULTURAL TRADE

- 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. India has remained consistently a net exporter of agri-products since the economic reforms in 1991, touching Rs.2.7 lakh crore exports and imports at Rs.1.37 lakh crore in 2018-19.
- 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:
  - **Import duty has been raised** on several imports (from 0 to 10% on tur, 0 to 50% on peas, 0 to 60 %on gram (chana) and 0 to 30%on lentils).
  - **Imposition of Quantitative restrictions** on imports (4 lakh tonnes per year on tur and 1.5 lakh tonnes on peas, urad & moong per year).
  - **Exports 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.
  - **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.
  - Government has imposed Minimum Import Price (MIP) on pepper and arecanut 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.
  - **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.
  - 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.
  - **Created Agri cells in many Indian embassies abroad** to take care of agricultural trade related issues.

MITIGATING RISKS IN AGRICULTURE: CROP INSURANCE

- To mitigate the risk of crop failure, Pradhan Mantri Fasal Bima Yojana (PMFBY) has been under implementation since kharif 2016 season, it provides comprehensive coverage of risks from pre-sowing to post harvest against natural non-preventable risks. PMFBY envisages increase in coverage from the existing 23 per cent to 50 per cent of Gross Cropped Area (GCA) in the country. 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.
- 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.
- 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. The Government has also created a National Crop Insurance Portal that provides interface among all stakeholders.
- 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 Rs. 2,35,642 crore.
- 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:
  - 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;
  - 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;
  - 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;

- Time for intimation of loss due to localized calamities and post-harvest losses has been increased from 48 hours to 72 hours;
- 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;
- Inclusions of perennial crops and add on coverage for damage by wild animals on pilot basis.

FOOD MANAGEMENT

- 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.
- The NFSA 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 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.
- 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: -
  - State Governments, particularly those undertaking Decentralized Procurement (DCP), are encouraged to maximize procurement of wheat and rice.
  - Strategic reserves of 5 million tonnes of food grains over the operational stocks are maintained to be used in extreme situations.
  - Sale of wheat and rice is undertaken through Open Market Sale Scheme (OMSS) (Domestic) so as to check inflationary trend in prices of foodgrains.
  - There are good examples of PDS reforms such as One Nation - One Ration Card, Aadhaar authenticated distribution through e-POS machines.
- Food grains Stocking Norms for the Central Pool : The objective of Foodgrain Stocking Norms (revised from jan 2015)
  - 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 market intervention to augment supply so as to help moderate the open market prices.
  - The stock between 20-30 million tonnes is maintained which also include the strategic reserve of 50 LMT.
- Economic Cost of Food Grains to FCI: The Economic Cost of foodgrains is determined by 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.
  - An examination of the determinants of the real economic cost of wheat suggests that MSP, 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

- **Food subsidy comprises of**
  - 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
  - subsidy provided to States for undertaking decentralized procurement.
- 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 Rs 200/ quintal in case of wheat and Rs. 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.
- 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 categorizations 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.
- 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.

- **Storage**
  - 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.
  - 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.
  - 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.
  - 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.
  - 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.
- 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.

FOOD PROCESSING SECTOR

- **Significance:** 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 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.
- 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.
- 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 (PMKSY): it 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.
  - It 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 benefit about 46.37 lakh farmers and generate about 5.6 lakh direct/ indirect employment in the country on completion of the projects.

ALLIED SECTORS: ANIMAL HUSBANDRY, DAIRYING & FISHERIES

- Allied sector 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 Sector:** 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". 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. 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 .
  - The per capita availability of milk has reached a level of 394 grams per day during 2018-19.
  - Egg production in the country, increased to 103318 million numbers in 2018-19.

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:** 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.
  - 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. 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.
  - 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 contributed 9.71 million metric tonnes.
  - Fisheries and Aquaculture Infrastructure Development Fund: 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 Rs.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.
- 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.

WAY FORWARD

- The realisation of the objective of doubling farmers' income necessitates 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.
- 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.
- 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.

Practice Question

- **Discuss how MSP can help bring more income stability to the farmers and what are the challenges in ensuring that farmers receive the MSP on most crops?**
- **Examine the major challenges for FCI to ensure adequate stocks and supply of food grains for various PDS schemes.**

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CHAPTER

8

INDUSTRY & INFRASTRUCTURE

INDUSTRY

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 (namely; agriculture and services). It contributes close to 30 per cent of total gross value added (GVA).

- Industrial sector performance in terms of its contribution in GVA improved in 2018-19 over 2017-18.
- However, for 2019-20, industrial sector performance has slowed. The low growth is primarily due to manufacturing sector which registered a negative growth of 0.2 per cent in 2019-20 H1.

Economic interpretation and explanation

- Forward and backward linkages: Hirschman introduces the concept of backward and forward linkages. A forward linkage is created when investment in a particular project encourages investment in subsequent stages of production. A backward linkage is created when a project encourages investment in the back-end facilities of a project through which the product navigates.
- Gross Value Added (GVA): GVA is the measure of value of goods and services produced in an area, industry or sector of an economy. GVA does not include intermediate consumption.

Index of Industrial Production (IIP)

- **Moderation in growth:** IIP growth moderated to 3.8 per cent in 2018-19 compared to 4.4 per cent in 2017-18. (The outlook doesn't look very positive for FY20 either).
  - All segments of use-based classification of IIP registered decline in the current financial year 2019-20 (April-November) as compared to previous corresponding period.
- **Reasons for moderation:** Moderation in industrial growth rose mainly 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 (FY 20).

Economic interpretation and explanation

- **Index of Industrial Production:** 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.
- **Use based classification of IIP:** A use-based classification of IIP includes these subheadings>Primary goods, Capital goods, Intermediate goods, Infrastructure/construction goods, Consumer durables, Consumer nondurables.

Index of Eight Core Industries

- **No growth:** Growth of Eight Core Industries was 0 per cent during the current financial year (April November, 2019) compared to 5.1 per cent growth in corresponding period of previous year.
- **Industry wise growth:** While fertilizers, steel and coal have seen expansion in their production, production of crude oil, natural gas, refinery products and electricity have contracted during the current financial year.
  - **Coal:** Excessive rainfall during monsoon, law and order problem prevailing in mining areas and strike during September 2019 impacted the coal sector.
  - **Crude oil:** Crude oil industry continued to show contractionary trend owing to operational issues like power shutdowns, electrical faults due to rains/winds/ thunderstorms, etc.

Economic interpretation and explanation

- Index of Eight Core Industries: Measures performance of eight core industries i.e., Coal, Crude Oil, Natural Gas, Refinery Products, Fertilizers, Steel, Cement and Electricity. These industries comprise 40.27 per cent weight in IIP.

Central Public Sector Enterprises (CPSEs)

- **Number of CPSEs:** 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.
- **Performance of CPSEs:** The overall net profit of the 249 operating CPSEs went up by 15.52 per cent in 2018-19. During this period;
  - The contribution of CPSEs to Central Exchequer increased by 4.67 per cent.
  - The increase in investment in all CPSEs was 14.65 per cent.
  - Capital employed in CPSEs went up by 11.71 per cent.

Corporate Sector

- **Corporate performance:** As per Reserve Bank of India (RBI) Studies on Corporate Performance, demand conditions for the manufacturing sector weakened, with a contraction (y-o-y) in nominal sales.
  - **Production slowdown:** Petroleum products, iron and steel, motor vehicles and other transport equipment companies were the major contributors to slowdown.

Gross Capital Formation in industrial sector

- **Improvement in GCF:** As per NSO data on January 31, 2019, the rate of growth of GCF in industry registered a sharp rise from (-) 0.7 per cent in 2016-17 to 7.6 per cent in 2017-18.
- **Upward momentum of investment in industry:** Mining & Quarrying, Manufacturing, Electricity, Gas, Water Supply & Other Utility Services and Construction registered growth.

Economic interpretation and explanation

- **Gross Capital Formation:** Capital formation refers to addition of capital goods, such as equipment, tools, transportation assets, and electricity. Replacement of old capital goods is essential for production to continue to grow. Generally, higher the capital formation of an economy, faster the economy can grow its aggregate income.
- Capital accumulation through household savings or based on government policy: Countries with a high rate of household savings can accumulate funds to produce capital goods faster, and a government that runs a surplus can invest the surplus in capital goods.
- **GCF is measured as a percentage of GDP.**

Credit Flow to the Industrial sector

- **Growth in gross bank credit:** Gross bank credit flow to the industrial sector rose to 2.7 per cent in September 2019 as compared to 2.3 per cent in September 2018.
- **Sectors with increased credit flow:** Food processing, chemicals & chemical products, vehicles, vehicles parts & transport equipment, wood & wood products, all engineering, cement & cement products, construction and infrastructure.
- **Sectors where credit flow contracted:** Mining & quarrying, textiles, petroleum, coal products & nuclear fuel, glass & glassware and basic metal & metal products.

Ease of Doing Business

- **Improvement in Ease of Doing Business:** Emphasis has been on simplification and rationalization of existing rules and introduction of IT to make governance more efficient and effective.
  - As a result, India improved its rank in 7 out of 10 indicators related to Ease of Doing Business.
  - India jumped from 77th to 63rd position among 190 countries in World Bank's Doing Business 2020 Report.

Start-up India

- **Start-up India, Stand-up India:** The initiative aims to create an ecosystem that is conductive for growth of start-ups. Start-ups drive economic growth, create employment and foster a culture of innovation.
  - As on January 8, 2020, 27,084 start-ups 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 start-ups have at least one woman director.
  - Eased regulations, such as exemptions from Income tax on investments raised by start-ups.
  - Implementation of 32 regulatory reforms to improve Ease of Doing Business for start-ups.
  - Self-certification regime for six labour laws and three environmental laws.
  - Start-up India Hub as 'One Stop Shop' for the start-up ecosystem.
- **Best performers:** Maharashtra, Karnataka and Delhi are the top three performers in terms of State-wise distribution of recognized start-ups in India.
  - As per industry-wide distribution, IT Services accounted for 13.9 per cent of recognised start-up, followed by Healthcare and Life Sciences (8.3 per cent) and education (7.0 per cent).

Foreign Direct Investment (FDI)

- Investment promotion through a liberal FDI policy: FDI is a major driver of economic growth as it enhances productivity by bringing capital, skills and technology to the host country.
  - For 2019-20, up to September2019, total FDI Equity inflows were US$26.10 billion.
  - 80 per cent of these inflows were from Singapore, Mauritius, Netherlands, USA and Japan.

Steel sector

- India stood at second position in the production of crude steel, after China.
- It is also the third largest consumer of finished steel after China and USA.

Coal sector

- Overall production of raw coal saw a growth of 8.1 per cent during the year 2018-19.
- In the current year 2019-20 (April-November), a growth rate of (-) 5.3 per cent was witnessed due to heavy and unseasonal rains.
- The gap between demand and supply of coal in the country is currently being met through coal imports by consuming sectors.

Micro, Small & Medium Enterprises (MSME)

- **Significant to economic and social development:** MSMEs add to their significance by fostering entrepreneurship and generating largest employment opportunities at comparatively lower capital cost, next only to agriculture.
- Key initiatives for faster growth of the sector:
  - In-principle approval for loans up to 1 crore within 59 minutes through online portal.
  - Interest subvention of 2 per cent for all GST registered MSMEs on credit up to 1 crore.
  - All companies with a turnover of more than 500 crore to be mandatorily on TReDS platform.
  - All CPSEs to compulsorily procure at least 25 per cent of their total purchases from MSEs.
  - Out of the 25 per cent procurement, 3 per cent reserved for women entrepreneurs.
  - All CPSEs to compulsorily procure through GeM portal.
  - GoI to bear 70 per cent of the cost for establishing Pharma clusters.
  - Returns under 8 labour laws and 10 Union regulations to be filed once in a year.
  - Single consent under air and water pollution laws.
  - For minor violations under the Companies Act, entrepreneurs no longer have to approach court but can correct them through simple procedures.

Textile and Apparels sector

- **Textiles contributed 18.0 per cent** of manufacturing and 2.0 per cent of GDP in 2017-18.
- **Share of textiles and clothing** in India's total exports was **12 per cent in 2018.**
- This sector is the **biggest employer after agriculture** and it employs 4.5 crore people directly and 6 crore people in allied sectors.
- **Handicrafts** from India have **increased by 3% in 2018-19.**

Infrastructure

It is well-accepted that investment in infrastructure is necessary for growth. Provision of adequate infrastructure is essential for growth and for making growth inclusive. Following are the reasons how 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 low, negating the fruits of high overall growth performance.

National Infrastructure Pipeline (NIP) 2020-2025

- India recently launched National Infrastructure Pipeline for the period FY 2020-2025.
- To achieve the GDP of $5 trillion by 2024-25, India needs to spend about $1.4 trillion over these years on infrastructure.
- NIP captures the infrastructure vision of the country for the period FY20-25 and is the first ever such exercise undertaken. However, its financing may be a challenging task.
- To draw up the NIP for each years starting 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 intends to facilitate supply side interventions in infrastructure development to boost short-term as well as potential GDP growth.

- Improved infrastructure capacities will also drive competitiveness of Indian economy.
- **Report of the Task Force on NIP 2020-25:**
  - Projected total infrastructure investment of 102 lakh crore during the period.
  - 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.
  - Central Government and State Government are to have an equal share (39 per cent each) in funding of the projects followed by Private Sector (22 per cent).
  - Recommendations to develop 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.

Road Sector

- **Importance of 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.
  - The pace at which roads 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.
  - 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.
- **Share in GVA:** Road transport is the dominant mode of transportation in terms of its contribution GVA and traffic share.
  - Share of transport sector in GVA for 2017-18 was about 4.77 per cent of which share of road transport was 3.06 per cent, followed by Railways (0.75 per cent), air transport (0.15 per cent) and water transport (0.06 per cent).
- **Mandate for roads:** Ministry of Road Transport & Highways (MoRTH) is mandated with the development and maintenance of road networks especially the National Highways (NH) as well as the implementation of the Motor Vehicle Act.

Railways sector

- **Scope of the market:** Indian Railways (IR) with over 68,000 route kms is the third largest network in the world under single management.
  - IR is currently world's largest passenger carrier and 4th largest freight carrier.
- **Safety:** Safety is accorded highest priority by Indian Railways and steps are being undertaken on a continuous basis to prevent accidents and enhance safety of passengers. Consequential train accidents have decreased.
- **Cleanliness:** IR 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. Following are few initiatives:
  - Special Cleanliness Campaigns under Swachh Bharat Abhiyan.
  - Swachh Rail, Swachh Bharat.
  - As on 31.10.2019, 75 railway stations have certification under EMS (Environment Management System) (ISO: 14001).
- **Modernization:** A dedicated SPV, Indian Railway Station Development Corporation (IRSDC) Limited has been set up to carry out modernization of railway stations on PPP mode. Another initiative for modernisation of IR is Adarsh Station Scheme.

Civil Aviation Sector

- **Scope of the market:** 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.
  - India is the third largest domestic market for civil aviation in the world. Second is China.
- **Resilience:** 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.
- **Objective to meet growing demand and improve performance quality:** Capacity utilization is being augmented by way of automation at airports. A total of 43 airports have been operationalized since the scheme for operationalizing un-served airports (Udan). Following are few developments in the field:
  - 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.
  - Using idle airstrips.
  - Development under PPP mode (Ahmedabad, Guwahati, Jaipur, Lucknow, Mangalore, and Thiruvananthapuram).
  - New green-field airports.
- **Financing the sector:** Easing lease and financing from Indian shores in conformance with provisions of Cape Town Convention and Protocol on Aircraft Equipment, efficient use of air traffic rights, encouraging domestic and international passenger and goods transfers, and rationalizing tax regime.

Shipping sector

- **Scope of the sector:** Around 95 per cent of India's trade by volume and 68 per cent in terms of value is transported by sea.
  - 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.
  - The existing Indian fleet is also aging.
- **Performance:** The performance of global shipping industry is generally mirrored by Indian shipping. India's shipping tonnage was low (1.92 lakh Gross Tonnage (GT)) on the eve of independence. It gradually increased thereafter, but remained stagnant at around 70 lakh GT beginning of 2004-05.
  - Tonnage tax regime was introduced in 2004-05 that boosted the growth of Indian fleet and its tonnage.
  - However, the negative after-effects of global economic downturn are still shadowing the global shipping industry in general and Indian Shipping industry in particular.
- **Ports Sector:** Ministry of Shipping has been striving to improve operational efficiencies through mechanization, digitization and process simplification. Key efficiency parameters have improved considerably.

Telecom Sector

- **Scope of the market:** Total telephone connections in India grew by 18.8 per cent in 2014-19. Urban areas have high number of connections.
  - 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; rural being 57.35 per cent and urban being 160.71 per cent at end of September 2019.
  - Private sector dominates with a share of 88.81 per cent.
- **Internet and broadband:** Internet and broadband penetration in India has kept a rapid pace. Total broadband connections increased by about ten times in 2014-19. This accelerated growth in internet traffic, with data usage touching the highest ever level in year 2018.
  - India is now global leader in monthly data consumption. Cost of data has also reduced substantially, enabling affordable internet access.

- **Competition in the sector:** There are 4 major players - 3 in 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. While some operators filed for bankruptcy, others have merged, in their quest to improve viability.
  - Price of data in the country is among lowest in the world.
  - Average Revenue per User (ARPU) for GSM based mobile services has gone down substantially.
- **Revival plans:** BSNL and MTNL are affected by the tariff war that has impacted their cash flow resulting in mounting losses. Government's revival plan of these PSUs consist of:
  - Reduction of staff cost through Voluntary Retirement Scheme.
  - Allotment of 4G spectrum.
  - Asset monetization of land/building, tower and fiber assets of BSNL/MTNL.
  - Debt restructuring through sovereign guarantee bonds.
  - 'In-principle' approval for merger of BSNL and MTNL.

Telecom Infrastructure and Connectivity

- **Bharat Net Programme:** Providing broadband connectivity to all the 2.5 lakh Gram Panchayats (GPs) in the country, in order to meet the goal of developing broadband highways as part of Digital India campaign. Following are few project details:
- Optimal mix of optical fibre, radio and satellite media
- Public Wi-Fi Access/hotspots
- Towers and Mobile Base Transceiver Station (BTS)
- Optical Fibre Cable
- Project for Left Wing Extremism (LWE) Areas and North East Region

Petroleum and Natural Gas

- **Scope of the market:** India is the third largest energy consumer in world after USA and China. With a share of 5.8 per cent of world's primary energy consumption, India's energy requirement is fulfilled primarily by Coal, Crude Oil, Renewable Energy and Natural Gas.
- **Performance in oil production:** India's oil production is one of the lowest among major economies of the world and has been declining over a period of time. There has been decline in both onshore and offshore domestic crude oil production. Reduction in crude oil production may be attributed to natural decline in ageing and matured fields and no major discoveries.
  - Proven reserves of crude oil have decreased concurrently since 2014, with steeper fall in onshore reserves.
  - Some increase was witnessed in 2019, probably resulting from initiatives by Ministry of Petroleum and Natural Gas in exploration and licensing policy.
  - There is a need to augment refining capacity to meet growing demand for petroleum fuels and petrochemicals.
- **Performance in natural gas production:** 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.
  - Production of natural gas is dominated by PSUs, with its share increasing over the period.
- **Government reforms:**
  - Simplified fiscal and contractual terms
  - Bidding without any production or revenue sharing to Government
  - Early monetization of discoveries by extending fiscal incentives
  - Incentivizing gas production through marketing and pricing freedom
  - Induction of latest technology and capital

- More functional freedom to National Oil Companies for collaboration
- Private sector participation

Power sector

- **Progress in power sector:** World Economic Forum (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.
  - India improved its ranking to 76th position in the Energy Transition Index published by WEF.
- **Sector-wise distribution:** Fuel-wise and sector-wise distribution shows that thermal power accounts for about 63 per cent of total installed capacity and roughly half of generation capacity is in the private sector.
  - Peak deficit i.e. 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.
  - Number of hours of electricity supply increased for majority of states.
- **Initiatives:** Access to electricity is necessary for making growth inclusive and for promoting ease of living. Following are few initiatives in the sector:
  - Pradhan Mantri Sahaj Bijli Har Ghar Yojana (Saubhagya) aiming for universal household electrification by providing last mile connectivity.
  - All 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.

Mining Sector

- **Score of the sector:** 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.
- **Performance:** This sector 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.
  - There has been a notable turnaround in mineral production because of policy reforms.
  - Production of major minerals during the year 2018-19 recorded 25 per cent growth when compared to last year in terms of value.

Housing and Urban Infrastructure

- **Scope of the sector:** India is one of the fastest growing countries in the world with rapid urbanization. There were about 37.7 crore people residing in urban habitats of India (Census 2011), comprising about 31 per cent of total population which is expected to reach 60.6 crore by 2030 (2015: UN).
  - Urban habitats and cities are epicentres of economic growth. Over 60 per cent of India's current GDP comes from cities and towns.
- **Smart Cities Mission (SCM):** Achievements of Smart Cities Mission include:
  - Smart command and control centres
  - Vibrant public spaces
  - Public private partnership
  - Smart water
  - Smart roads
  - Smart solar

Pradhan Mantri Awas Yojana Urban (PMAY-U)

- **Mandate:** PMAY-U was launched in 2015 to provide pucca house with basic amenities to all eligible urban poor by 2022. Construction sector accounts for 8.2 per cent of GDP which includes housing and employs about 12 per cent of workforce. Therefore, investment made under PMAY (U) not only provides pucca houses to eligible families to achieve the goal of 'Housing for All' but also triggers multiplier effect on overall economy.
- PMAY-U is one of the largest housing schemes of the world covering complete urban India.
- 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 state/UT-wise demand driven approach carrying forward the ethos of cooperative federalism.
- Ownership of the house will be in name of female of household or in joint name along with male member of the household to enable women's empowerment.
- **Financing:** National Urban Housing Funds (NUHF) approved by Union Cabinet will mobilise resources through Extra Budgetary Resources (EBR). This will provide Central assistance in a time bound manner for uninterrupted progress of projects with States/UTs and Central Nodal Agencies (CNAs).
- The Affordable Housing Fund (AHF) in National Housing Bank (NHB) will meet priority sector lending shortfall of banks/financial institutions. The fund is used for micro financing of HFCs and NBFCs.

CONCLUSION

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.

Practice Question

- **"Volatility of MSME sector and auto sector coupled with a decline in domestic and external demands has led to a slump in India's economic growth" Critically Analyze.**
- **"Amid government's intent to make India a $5 trillion economy, formation of National Infrastructure Pipeline with $1.4 trillion investment is a path-breaking step". Analyze.**

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CHAPTER 9

SERVICES SECTOR

Key Highlights of the Sector

- The services sector's significance in the Indian economy has continued to increase, with the services sector now accounts for:
  - around 55% of GVA and GVA growth;
  - two-thirds of total FDI inflows into India; and
  - about 38 % of total exports.
- The share of services sector now exceeds 50% of Gross State Value Added in 15 out of the 33 states and UTs.
- Gross Value Added growth of the services sector moderated in2019-20.
- Various high-frequency indicators and sectoral data such as air passenger traffic, rail freight traffic, port traffic, bank credit to the services sector and foreign tourist arrivals suggest moderation in services sector activity during 2019-20.
- Gross FDI equity inflows into the services sector have witnessed a strong recovery and services exports have maintained their momentum during April-September2019.
- Services exports have outperformed goods exports in recent years, due to which India's share in the world's commercial services exports has risen steadily over the past decade to reach 3.5% in 2018, twice the share in the world's merchandise exports at 1.7%.
- India's education services imports have increased markedly in recent years, up from about US$ 2.3 billionin2013-14toUS$5.0billionin2018-19.
- The shipping turn around time at port shasal most halved from 4.67 days in 2010-11to2.48 days in 2018-19.However, this is still more than twice the global median.
- India has launched around 5-7 satellites per year in recent years with no failures, barring one in 2017.

SERVICE SECTOR PERFORMANCE: AN OVERVIEW

Gross Value Added in the Services Sector

- As per the First Advance Estimates for Gross Value Added (GVA), Services Sector growth (YoY) continued to moderate and **reached 6.9%during 2019-20 from 7.5%in 2018-19.**
- 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 the services sector was 4.8% as on November 2019 as compared to 28.1% a year ago.
- 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'.

- 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.

Services Sector Performance in GVA

SECTOR	Share in GVA (per cent)	Growth (per cent YoY)				
	2019-20	2017-18	2018-19	2019-20	2019-20	
	(1st AE)	(RE)	(PE)	(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

SERVICE SECTOR PERFORMANCE AT THE STATE AND UTS LEVEL

- Services sector performance at the State and UT levels show that the services sector now ***accounts for more than 50% of the Gross State Value Added (GSVA) in 15 out of the 33 states and UTs.***
- In 8 states, the services sector accounts for more than 60% of GSVA.
- Chandigarh and Delhi stand out with a particularly high share of services in GSVA of more than 80% while Sikkim's share remains the lowest at 26.8%.
- Even states with a 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 recentyears.

FDI INFLOWS INTO SERVICES SECTOR

- 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 witnessed a strong recovery during April-September 2019 following a declinein2018-19.
- Gross FDI equity in flows jumped by 33% 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.
- The jump in FDI equity inflows was driven by strong in flows into sub-sectors such as' Information & Broadcasting', 'Air Transport', 'Telecommunications', 'Consultancy Services' and 'Hotel & Tourism'.
- Gross FDI Equity Inflows into Services Sector

Services Sub-Sectors	Share in FDI EquityInflows into Services Sector in2018-19 (percent)	Gross FDI Equity Inflows (US$ million)	
		2017-18	2018-19
Financial, Business, Outsourcing, R&D, Courier, Tech Testing & Analysis	20.6	6,709	9,158
Computer Software & Hardware	14.5	6,153	6,415
Trading	10.1	4,348	4,462

Telecommunications	6.0	6,212	2,668
Information & Broadcasting	2.8	639	1,252

Source: DIPP

TRADE IN SERVICES SECTOR

- RBI's Balance of Payments data suggests that services exports during April-September 2019 maintained their momentum from 2018-19,withagrowth(YoY)of6.4%. 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.).
- 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.
- 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% 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.
- This has made the software sector, and therefore over all services exports, susceptible to changes in the 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.
- Services import growth (YoY) during April-September 2019 was 7.9%. 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.
- 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%YoY. The services trade surplus, largely driven by the surplus in software services, financed about 48% of India's merchandise deficit during April-September 2019, partially offsetting the impact on the current account deficit.
- 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$3billionin2018-19.
- Adding to the other payments for education purposes, such as fees paid for correspondence courses abroad, which constitute payments for receiving education services abroad, there has been a marked increase in India's education services imports in recent years, amounting to US$ 5.0 billion in 2018-19.
- **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.**

INDIA IN WORLD COMMERCIAL SERVICES EXPORTS

- World trade volume for goods and services is 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.
- The increasing role of services in economic activity is well 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 exports and

goods exports have slowed in India and globally in recent years.

- 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.
- ***According to WTO data, India's share in the world's commercial services exports has risen steadily over thepastdecadetoreach3.5%in2018,twicetheshareinthe world'smerchandiseexportsat1.7%.***
- 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.

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, India's financial services exports have remained stagnant, averaging about US$ 5 billion in recent years.
- As a result, the share of financial services exports in overall services exports has almost halved from 4.2% in 2011-12 to 2.3% in 2018-19.
- One type of financial service 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.
- 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 recent years.
  - The Asset Managers Roundtable of India (AMRI) estimates that fund management activity of almost 25% of FPI, PE and FVCI funds' total Assets Under Management (AUM) could be potentially on-shored to India by2020,andpotentiallyagreatershareofAUMinthecomingyears.
  - 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.

MAJOR SERVICES: SUB- SECTOR WISE PERFORMANCE AND RECENT POLICIES

Most of the sub-sectors of the services sector witnessed a moderation in growth during 2019-20. The growth in the tourism sector decelerated in 2019-20 with weaker growth in foreign touristarrivals and consequently in foreign exchange earnings from tourism. In the ports sector, growth in port traffic softened in2019-20 from the previous year. The number of wireless phone subscriptions and wireless internet subscriptions increased in2019-20.

Developments in some key sub-sectors of the services sector are:

- **Tourism Sector**
  - 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% in 2018 and 2.7% in January-October 2019. This trend, however,is not unique to India, as the

growth (YoY) in international tourist arrivals globally also slowed from 7.1% in 2017 to 5.4% in 2018.

- Correspondingly, growth in foreign exchange earnings from the tourism sector has slowed in 2018 and 2019 after registering strong growth until 2017. Foreign exchange earnings totaled US$ 24 billion in January-October 2019, with a growth (YoY) of 2%.
- ***India ranked 22nd in the world in terms of international tourist arrivals in 2018, improving from the 26th position in 2017.***
- Indianowaccountsfor1.24%oftheworld's international tourist arrivals and 5%of Asia &Pacific's international tourist arrivals.Indiaranks13th intheworldand7th in Asia & Pacific in terms of tourism foreign exchange earnings, accounting for close to 2% of the world's tourism foreign exchange earnings.
- Foreign tourists from the top 10 countries visiting India - ***Bangladesh, the USA, the UK, Sri Lanka, Canada, Australia, Malaysia, China, Germany, and Russia*** -accounted for65%ofthetotalforeigntourist arrivals in India in 2018.
- Among the foreign tourists, 62.4%of tourists visited for leisure, holiday and recreation, 16.3% for business purposes, and 13.5% was Indian diaspora.
- **Looking at tourism trends at the state level:** The top five states attracting **domestic tourists** are ***Tamil Nadu, Uttar Pradesh, Karnataka, Andhra Pradeshand Maharashtra***, accounting for nearly 65% of the total domestic tourist visits in the country in2018. The top five states attracting **foreign tourists** are ***Tamil Nadu, Maharashtra, Uttar Pradesh, Delhi and Rajasthan***, accounting for about67% of the total foreign tourist visits in the country in 2018.
- To facilitate international tourism, India introduced the ***e-Tourist Visaregime*** 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 visaregimein2016,renamingittoan 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%year-on-year growth from the previous year.

Information Technology and Business Process Management (IT-BPM) Services

- 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% of the IT-BPM sector in 2018-19, followed by Software & Engineering Services (20.6% share) and BPM Services (19.7% share).
- 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% to reach US$ 33 billion.
- A significant part (about 83%) of the IT-BPM industry (excluding hardware) continues to be export-driven, with export revenues in excess of US$ 135 billion in 2018-19. During 2018-19, the revenue growth (YoY) for the IT-BPM sector (excluding hardware) softened to 6.8% from 8.2% in 2017-18. This was driven by a contraction of 0.3% in domestic revenue growth even a sex port revenue growth accelerated to 8.3%.
- Out of the total US$ 135.5 billion in exports of the IT-BPMsectorin2018-19, IT services accounted for 55% of the exports, and BPM and Software Products & Engineering services accounted for the remaining 45% with each accounting for almost half of the share. All three sub-sectors witnessed a pickup in export revenuesin2018-19,withITservicesgrowing (YoY) by 7.3%, BPM services by 8.3% and Software Products & Engineering Services by 11.2%.
- Looking at export revenues by destination, the USA accounts for the bulk of exports, amounting to US$ 84 billion, which is 62% of total IT-BPM exports (excluding hardware) in 2018-19.
- This is much larger than the share of exports going to the UK, which is the second-largest export market for IT-BPM services, with a share of around 17%. Europe (excluding the UK) and Asia-Pacific

accountsfor11.4% and 7.6% of the export earnings, respectively.

- Overthepast2-3years,anumberof 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% of the total startups in India (Source: NASSCOM study).

Port and Shipping Services

- India has a 0.9% share in the 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)attheendofMarch2019,morethan 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.
- Growth in overall port traffic witnessed an acceleration between 2013-14 and 2016-17 but has decelerated since 2017-18.Traffichandledatmajorportsgrew(YoY) atcloseto1%inApril-December2019.
- The turnaround time of ships, which is a key indicator of the 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.
- 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.

Space Sector

- India's space programme has grown exponentially since its modest beginnings five decades ago, moving from providing simplemappingservicesinthe1960stomany more uses currently. This includes the 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.
- India spent about US$ 1.5 billion on spaceprogrammesin2018.However,India's government space expenditure still lags behind that of the major players in the space sector, such as the USA, which spent about 13 times more than India in the space sector in 2018. China, which has become a key player in the space sector in recent years, also spent about seven times more than India in 2018.

GOVERNMENT BUDGET FOR SPACE SECTOR IN 2018

Country	Expenditure (US$ billion)
1. USA (NASA)	19.5
2. China (CNSA)	11.0
3. Russia (Roskosmos)	3.3
4. **India (ISRO)**	1.5

Source: ISRO (which sourced from Statista).

- India has launched around 5-7 satellites per year in recent years with no failures, barring one in 2017. On the other hand, Russia, the USA and China dominate the satellite launching services with 20, 31 and 39 satellites respectively in 2018.
- 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 fore casting, 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.
- Globally, space activity is undergoing tremendous changes in 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.
- 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:
  - Production of Polar Satellite Launch Vehicle (PSLV):
  - Satellite integration and assembly;
  - Production of composite materials;
  - Production of solid, liquid, cryogenic and semi-cryogenic propellants; and
  - Production of electronic packages, Testing & Evaluation for avionics and satellite subsystems.

Practice Question

- **Briefly discuss the trend of FDI inflow into the Services Sector?**
- **Discuss the global as well as national changes undergoing in the space sector in recent years.**

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CHAPTER 10

SOCIAL INFRASTRUCTURE, EMPLOYMENT AND HUMAN DEVELOPMENT

TRENDS IN SOCIAL SECTOR EXPENDITURE

The increase in expenditure on the social services sector affirms the commitment of the government towards social well-being.

- The expenditure on social services by Centre and States as a proportion of Gross Domestic Product (GDP) **increased by 1.5 percentage** points from **6.2% to 7.7%**, 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% in 2014-15 to 3.1% in 2019-20** and for health **from 1.2 to 1.6%.**
- The share of expenditure on social services out of total budgetary expenditure increased to **26% in 2019-20 (BE) from 23.4% in 2014-15.**

Human Development

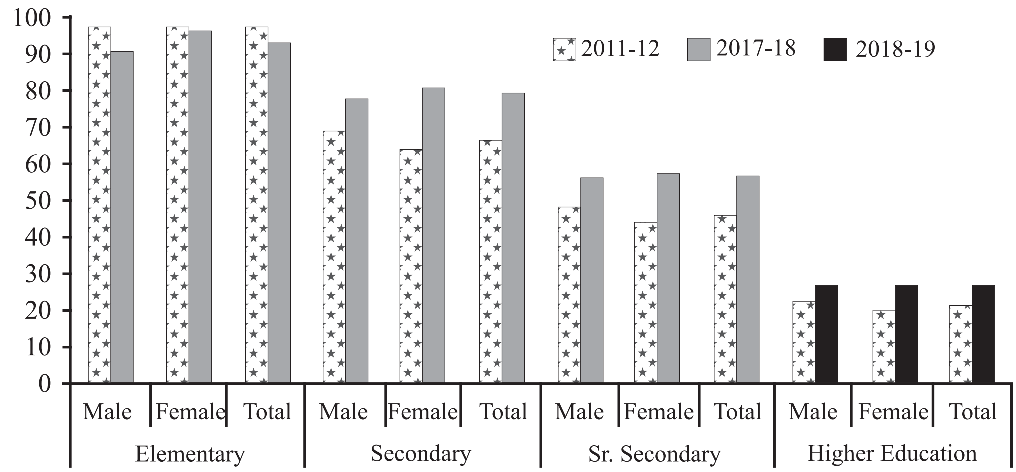
- India's rank in the Human Development Index (HDI) **improved to 129 in 2018 from 130 in 2017,** out of a total of 189 countries. The value of HDI for India reached to **0.647 in 2018**.
- With **1.34 percent average annual HDI growth**, India is among the fastest-improving countries, and ahead of China (0.95), South Africa (0.78), Russian Federation (0.69) and Brazil (0.59).

EDUCATION FOR ALL

Sustainable Development Goal(SDG)-4 seeks 'to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all' **by 2030**.

- 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.**
- 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.
- **As per U-DISE, 2017-18** (provisional), **98.38%**of Government elementary schools have girls' toilet, **96.23%**of Government elementary schools have boys' toilet, **97.13%** of Government elementary schools have provision of drinking water facility, **38.62%**of Government elementary schools have ramps, **58.88%**of Government elementary schools have boundary wall, **56.72%**of Government elementary schools have playground facility, **79.23%**of Government elementary schools have library and 61.75% schools are having electricity connection.

Figure 1: Gross Enrolment Ration (GER) at all India level (in per cent)



- **As per the National Sample Survey (NSS) Report** on 'Key Indicators of Household Social Consumption on Education in India 2017-18:
    - In 2017-18 there were about **13.6% 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, the **drop-out rate was as high as 10% at the primary level**, **17.5% at upper primary/middle and 19.8% at the secondary level.**
    - The **poor and underprivileged sections** of people prefer to engage themselves in **economic activities for their survival.**
    - The composition of various components of expenditure on education indicates that the **course fees which is 50.8% at all India leve**l (including tuition, examination, developmental fees, and other compulsory payments) among others contribute about half of the average expenditure of a basic course.
    - The second-largest component of average expenditure on education by the student books, stationery, and uniform where an average **student in the rural areas is surprisingly spending more than 10 percentage points as compared to urban areas**.
    - Students pursuing education in private aided institutions are spending significantly higher as compared to government institutions across rural-urban India.
    - Also, due to the **absence of competition in government schools/institutions**, the quality of education in government schools/institutions is low. As a result, more and more students prefer to enroll in private institutions.
- 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.

Programmes and Schemes in School education

- **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).
- **Central RTE Rules have been amended to include a reference on class-wise and subject-wise Learning Outcomes**.
- The **Navodaya Vidyalaya Scheme** provides for the opening of one Jawahar Navodaya Vidyalaya (JNV) in each district of the country to bring out the best of rural talent.

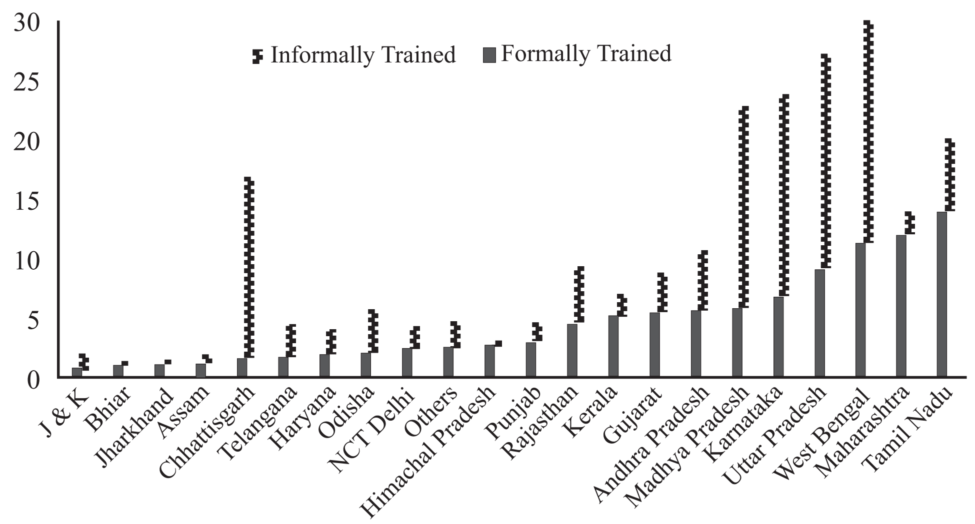
- **NISHTHA** – National Initiative for School Heads' and Teachers' Holistic Advancement, under the Centrally Sponsored Scheme of **Samagra Shiksha** in 2019-20 is being launched to improve learning outcomes at the elementary level
- **Pradhan Mantri Innovative Learning Program (DHRUV)** was launched to identify and encourage talented students to enrich their skills and knowledge.
- To broad-base technology-aided teaching and learning, States and UTs are being actively involved to contribute and use the Digital Infrastructure for Knowledge Sharing **(DIKSHA) platform)**.

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.
- **Higher Education Financing Agency (HEFA)** was established to provide a 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.
- **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.
- 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).**
- **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

Figure 10.2: State-wise workforce (15-29 years) who received training through formal/informal sources (per cent)



General education improves knowledge of the people while **skill training enhances their employability** and equip them to tackle requirements of the labour market.

- **According to the Periodic Labour Force Survey (PLFS), 2017-18only 13.53% of the workforce in the productive age-group of 15-59 years has received training (2.26% formal vocational/technical training and 11.27% informal training).**
- A large section among informally trained workers, about 55.9% received it either through self-learning (28.66%) or hereditary (27.24%) and about 38.51% have received it on-the-job.
- **Under the Skill India Mission**, the Government implements the **Pradhan Mantri Kaushal Vikas Yojana (PMKVY) 2016-20, under which, 69.03 lakh (appx.) (38.01 lakh STT + 31.02 lakh RPL)** candidates have been trained throughout the country as on 11thNovember 2019.
- A wide range of reforms has been introduced to the **Apprenticeship Rules, 1992** for expansion and outreach of apprenticeship policy.

STATUS OF EMPLOYMENT IN INDIA

As per PLFS estimates

- **The share of regular wage/salaried employees has increased by 5 percentage points from 18% in 2011-12 to 23% in 2017- 18 as per usual status**.
- 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.
- Remarkably, the proportion **of women workers** in regular wage/salaried employees category has **increased by 8 percentage points** (from 13% in 2011-12 to 21% in 2017- 18) with the addition of 0.71 crore new jobs for female workers in this category.
  - 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 between 2011-12 and 2017-18. The proportion of total self-employed workers, however, remained unchanged at 52% during this period.
- **The distribution of workers** in casual labour category decreased **by 5 percentage points from 30% in 2011-12 to 25% in 2017-18** with the decline being in rural areas.

Formalization of Jobs

- **According to the Annual Survey of Industries (ASI)** 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**.
- To indicate the extent of formalization of workforce by extending coverage of organized social security, the Government since September 2017 publishes the monthly 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 at least one-month contribution during the year). EPFO manages social security funds of workers in the organized/semi-organized sector in India. The payroll 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.
- The estimates of share of workers in **informal sector in non-agricultures and AGEGC** (Agricultural sector excluding only growing of crops, market gardening, horticulture and growing of crops combined with farming of animals) sectors obtained from the NSO-EUS and PLFS 2017-18, also **show a decline from77.5% in 2004-05 to 68.4% in 2017-18,** with the decline being more pronounced among females.
- To get a holistic picture of the extent of formal-informal employment in the economy the **NCEUS (2007) definition was applied**, It was observed that the proportion of workers in the organized sector **increased from 17.3% in 2011- 12 to 19.2% in 2017-18.**

GENDER DIMENSION OF EMPLOYMENT

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

- **According to NSO-EUS and PLFS estimates**, the **female labour force participation rate (LFPR)** for productive age-group (15-59 years) as per the 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.**
- The **ratio of female to male labour force** also **remained constant between 2011-12 and 2017-18.**
- **As per PLFS**, **female WPR** for the productive age group (15-59 ages) stood at **23.8%**(25.5% in rural areas and 19.8% in urban areas) in 2017-18 as compared to **32.3% in 2011-12.**
- **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% in 2004-05 to 5.7% in 2017-18)** as compared to females engaged as per principal status.

Factors Influencing Female Labour Force Participation

- 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:
  - **In 2017-18**, a higher proportion of **young males (10.5%)** were unemployed compared to **young females (3%).**
  - Among **young females,** around **52.3%**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**.
  - For the **productive age group (15-59 years)** as compared to less than 1 per cent of males, about **60% of working-age females were outside labour market attending to domestic duties only**.
  - 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),** o**nly 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.
- A considerable amount of research work has been done to identify the **reasons behind low and declining female labour force participation rates for India**:
  - **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).**
    - 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**
    - **The absence of job opportunities and quality jobs** and the significant gender wage gap are restraining factors **(World Bank, 2010).**
    - **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.
    - **Decline in animal husbandry, and in urban areas, a fall in international demand** for products of labour-intensive industries hasled to the lowering of female LFPR in India.

- **Low female wages in the agriculture sector** were driving out females engaged as unpaid labour.
- The **fall in employment in agriculture** has **not shown a 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).**

Initiatives to Improve Female Work Participation

To encourage female participation in the economy, various programmes/ legislative reforms are in place:

- **Safety of Women at Workplace: 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.
- **Mahila Shakti Kendra Scheme:** This scheme aims to **empower rural women** through **community participation.**
- **Provision of safe and affordable accommodation:** To provide safe and affordable accommodation to working women, **Working Women Hostels have been established.**
- **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.
- **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).**
- **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.
- 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.
- **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

HEALTH FOR ALL

- The introduction of **National Health Policy, 2017** for universal access to good quality health care services, and the subsequent launch of Ayushman Bharat, with its two components:
  - **Health & Wellness Centres** to provide comprehensive primary health care.
  - **Pradhan Mantri Jan ArogyaYojana (PMJAY)** to provide health cover to 10.74 crore poor & vulnerable families up to INR 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-communicable diseases.

Table 1: India-Select Health Indicators

Si 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	3.1 (2001-03)	167 (2011-13)	122 (2015-17)
5	Infant Mortality Rate (per 1000 live birthds)	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

Preventive Health Care

- To promote preventive healthcare, **one and a 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.
- 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 the 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.
- 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**.
- Recognising the threat of nicotine addiction among youth and children government recently **banned all commercial operations in e-cigarettes**. **Large pictorial warnings** and quitline numbers on tobacco packs and the resulting increased call volumes from **20,000 to 2.50 lakh calls per month at the quitline services.**

Health Care Affordability

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 spending at least two-thirds of the Government's health expenditure on primary healthcare.
- **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.
- Under the **Free Drugs Service initiative**, substantial funds have been given to States for the provision of free drugs.
- **Free Diagnostics Service initiative** was launched to address the high OoPE on diagnostics and improve the quality of healthcare services.
- **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

- 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**
  - In the last 5 years, the government has sanctioned **141 new medical colleges**.
  - **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.
- As a result, the number of MBBS and PG seats has **increased by 27,235 and 15,000 respectively.**
- **The Pradhan Mantri Swasthya Suraksha Yojana (PMSSY)** was launched to augment the tertiary healthcare capacity.
- **National Medical Commission Act, 2019 was promulgated** to enable constitution of National Medical Commission.
- Introduction of **a common entrance test NEET-UG** for admission to all MBBS courses including AIIMS and JIPMER.
- **The government of India supports States** in Health Systems Strengthening under the umbrella programme of **National Health Mission (NHM).**
- 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 Midwives (ANMs), 42,031 Paramedics, 414 Public Health Managers and 17,265 Programme Management staff on contractual basis.

Table 2: 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	297333 (as on 1.4.2014)	31986 (as on 1.4.2014)
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 26.6.2014)	1125222 (as on 27.3.2019)
Doctors (Modern System)*	747109 (upto 2014)	923479 (upto 31.12.2018)
AYUSH Doctors	736538 (as on 1.1.2014)	799879 (as on 31.1.2018)

Mission Mode Interventions

- In order to intensify efforts towards the achievement of SDGs, the Government has launched ambitious programmes such as **Ayushman Bharat,** marking a paradigm shift in the way health care is delivered.
- 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 **Surakshit Matritva Aashwasan (SUMAN), Social Awareness** and **Action to Neutralise Pneumonia Successfully (SAANS) and TB Harega Desh Jeetega**.

HOUSING FOR ALL

- **As per the 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.**
- More than four times the increase in the number of houses completed in a year under **PMAY-G**, from **11.95 lakh in 2014-15 to 47.33 lakh in 2018-19.**
- **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**.

DRINKING WATER AND SANITATION

- The Department of Drinking Water and Sanitation (DDWS), Ministry of Jal Shakti launched the **10 Year Rural Sanitation Strategy (2019-2029).**
- 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).**
- **Swachh Survekshan Grameen 2019**survey covered **17,450 villages in 698 districts across India and includes 87,250 public places** and around **2.5 lakh citizens** were interviewed for their feedback as part of the survey.
- **Jal Shakti Abhiyan (JSA)** has delivered over **3.5 lakh water conservation measures in 256 districts**. An estimated **2.64 crore people** have already participated.

CONCLUSION

The efforts of the government with the motto of ***Sabka Saath, Sabka Vikas, and Sabka Vishwas*** have improved access to social services. **Scaling up development programmes for improving connectivity, providing housing, and bridging gender gaps in socio-economic indicators is of paramount importance for sustainable development. India's march towards achieving SDGs is firmly anchored in investing in human capital and inclusive growth.**

Practice Question

- **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 rounds of the survey. Discuss**
- **Investment in social infrastructure is a pre-requisite for inclusive growth and employment". In this context, discuss the trends in social sector expenditure in India.**