An Overview of India's Economic Performance in 2017-18

01
CHAPTER

After registering GDP growth of over 7 per cent for the third year in succession in 2016-17, the Indian economy is headed for somewhat slower growth, estimated to be 6.5 per cent in 2017-18, as per first Advance Estimates released by CSO. This is slightly lower than the range of 6.5 per cent to 6.75 per cent being currently projected based on recent developments. Even with this lower growth for 2017-18, GDP growth has averaged 7.3 per cent for the period from 2014-15 to 2017-18, which is the highest among the major economies of the world. That this growth has been achieved in a milieu of lower inflation, improved current account balance and notable reduction in the fiscal deficit to GDP ratio makes it all the more creditable. In addition to the introduction of GST, the year also witnessed significant steps being undertaken towards resolution of problems associated with non-performing assets of the banks, further liberalization of FDI, etc., thus strengthening the momentum of reforms. After remaining in negative territory for a couple of years, growth of exports rebounded into positive one during 2016-17 and strengthened further in 2017-18. There was an augmentation in the spot levels of foreign exchange reserves to close to US$ 414 billion, as on 12th January 2018.

Concerns have been expressed about growing protectionist tendencies in some countries and it remains to be seen as to how the situation unfolds. Additionally, average crude oil (Indian basket) prices have risen by around 14 per cent so far in 2017-18 (mid January 2018) vis-à-vis 2016-17. Going by the recent trends, the average crude oil prices could be in the vicinity of US$ 56-57 per barrel in the current financial year and could rise further by another 10-15 per cent in 2018-19. Some of these factors could have dampening effect on GDP growth in the coming year. However, with world growth likely to witness moderate improvement in 2018, expectation of greater stability in GST, likely recovery in investment levels, and ongoing structural reforms, among others, should be supporting higher growth. On balance, country's economic performance should witness an improvement in 2018-19.

GDP GROWTH IN 2017-18

1.1 With Gross Domestic Product (GDP) growth averaging 7.5 per cent between 2014-15 and 2016-17, India can be rated as among the best performing economies in the world on this parameter. Although growth is expected to decline to 6.5 per cent in 2017-18, bringing the 4-year average to 7.3 per cent, the broad story of India's GDP growth to be significantly higher than most economies of the world does not alter. The growth is around 4 percentage points higher than global growth average of last 3 years and nearly 3 percentage points more than the average growth achieved by emerging market & developing economies (EMDE) (Figure 1).

Table 0.1 : Key Indicators

Data categories	Unit	2014-15	2015-16	2016-17	2017-18
GDP and Related Indicators					
GDP at constant market prices	₹ Crore	10536984	11381002	12189854[PE]	12985363[AE]
Growth Rate	%	7.5	8.0	7.1	6.5
GVA at constant basic prices	₹ Crore	9719023	10490514	11185440[PE]	11871321[AE]
Growth Rate	%	7.2	7.9	6.6	6.1
Gross Savings	% of GDP	33.1	32.3	na	na
Gross Capital Formation	% of GDP	34.4	33.3	na	na
Per Capita Net National Income (at current prices)	₹	86454	94130	103219	111782
Production					
Food grains	Million tonnes	252.0	251.6	275.7*	134.7[#]
Index of Industrial Production[a] (growth)	%	4.0	3.3	4.6	3.2[b]
Electricity Generation (growth)	%	14.8	5.7	5.8	4.9[b]
Prices					
WPI Inflation (average)	% change	1.2	-3.7	1.7	2.9[c]
CPI (Combined) Inflation (average)	% change	5.9	4.9	4.5	3.3[c]
External Sector					
Export Growth (US$)	% change	-1.3	-15.5	5.2	12.1[c]
Import Growth (US$)	% change	-0.5	-15.0	0.9	21.8[c]
Current Account Balance (CAB)/GDP	%	-1.3	-1.1	-0.7	-1.8[d]
Foreign Exchange Reserves	US$ Billion	341.6	360.2	370.0	409.4[e]
Average Exchange Rate	₹ /US$	61.14	65.46	67.07	64.49[c]
Money and Credit					
Broad Money (M3) (annual)	% change	10.9	10.1	10.1	10.5[f]
Scheduled Commercial Bank Credit (growth)	% change	9.0	10.9	8.2	9.3[g]
Fiscal Indicators (Centre)					
Gross Fiscal Deficit	% of GDP	4.1	3.9	3.5	3.2[BE]
Revenue Deficit	% of GDP	2.9	2.5	2.1	1.9[BE]
Primary Deficit	% of GDP	0.9	0.7	0.4	0.1[BE]

Notes:

na: Not Available

PE : Provisional Estimates

AE : First Advance Estimates

BE : Budget Estimates

* : 4th Advance Estimates

: 1st Advance Estimates, Kharif crops only

a : Base (2011-12=100)

b : April-November 2017

c : April-December 2017

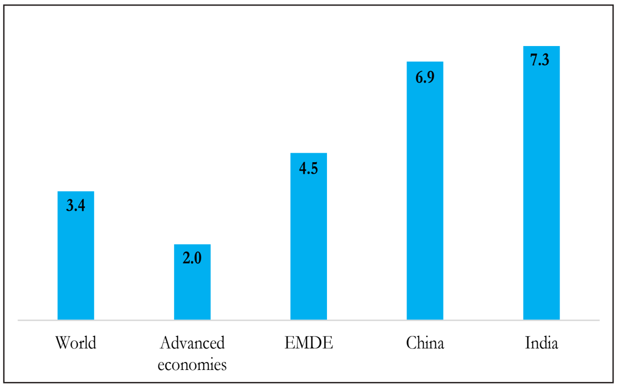
d : April-September 2017

e : As on end 29th December 2017

f : As on 22nd December 2017

g : As on November 2017

Figure 1 : Average growth of GDP during 2014-17 (per cent)



Source: **Based on IMF's World Economic Outlook Database (October 2017)**

1.2 As per the first Advance Estimates (1st AE), released by Central Statistics Office (CSO), growth rate of Gross Value of Added (GVA) at constant basic prices is estimated at 6.1 per cent in 2017-18, as compared to 6.6 per cent in 2016-17. This is on account of lower growth in 'Agriculture & allied', and 'Industry' sector, which are expected to grow at 2.1 per cent and 4.4 per cent respectively. In 2017-18, service sector is expected to grow at 8.3 per cent, as compared to 7.7 per cent in 2016-17. Within the services sector, only the growth of 'Public administration, defence & other services' sector is expected to decline in 2017-18 (Table 1).

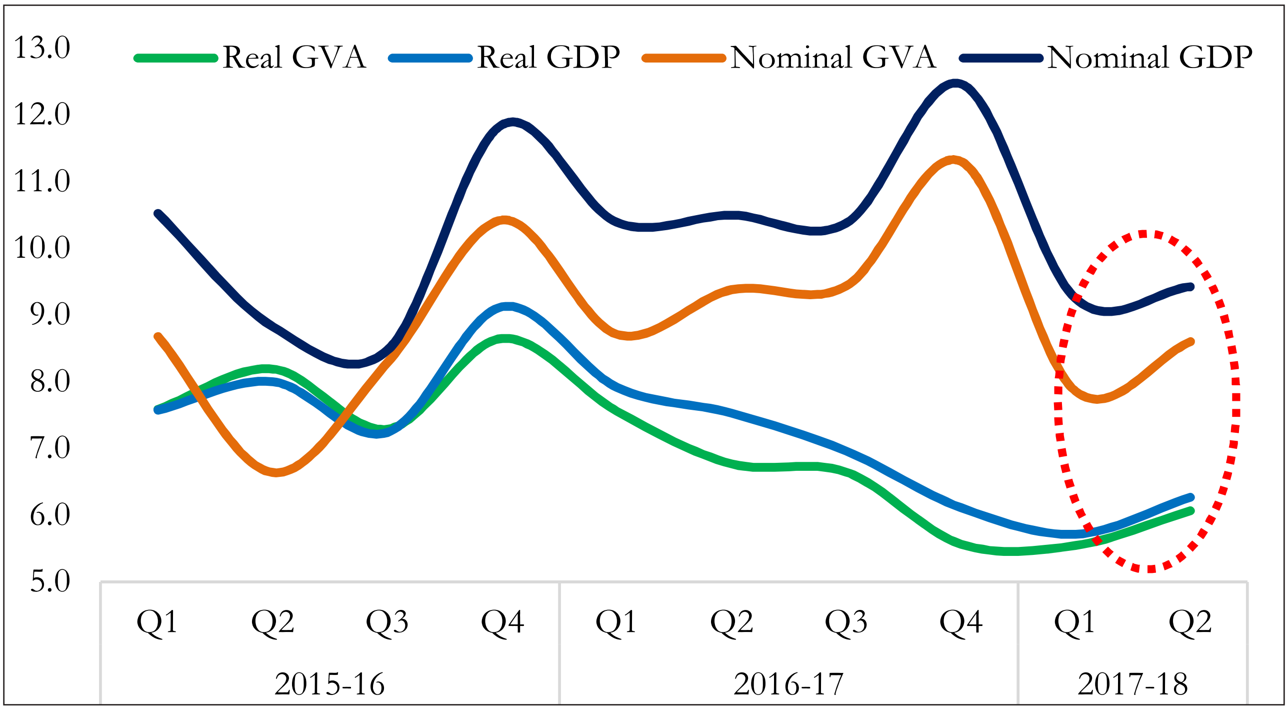
1.3 From a low of 5.5 per cent in 2012-13, growth in GDP steadily improved for 3 years and peaked in 2015-16, particularly in fourth quarter (Q4) when it printed 9.1 per cent (GVA growth also peaked in Q4 of 2015-16). However, growth started slowing down from first quarter (Q1) of 2016-17. GDP and GVA growth slowed to 6.1 per cent and 5.6 per cent respectively in Q4 of 2016-17. GDP growth further declined to 5.7 per cent in Q1 of 2017-18. However, the second quarter (Q2) of 2017-18 witnessed reversal of declining trend of GDP growth, with growth increasing to 6.3 per cent. The nominal GDP and GVA growth also picked up to 9.4 per cent and 8.6 per cent respectively in Q2 of 2017-18 (Figure 2).

Table 1 : Annual real GVA and GDP growth (per cent)

GVA at basic prices from	2014-15	2015-16	2016-17	2017-18 (1st AE)
Agriculture, forestry & fishing	**-0.2**	**0.7**	**4.9**	**2.1**
Industry	**7.5**	**8.8**	**5.6**	**4.4**
Mining & quarrying	11.7	10.5	1.8	2.9
Manufacturing	8.3	10.8	7.9	4.6
Electricity, gas, water supply & other utility services	7.1	5.0	7.2	7.5
Construction	4.7	5.0	1.7	3.6
Services	**9.7**	**9.7**	**7.7**	**8.3**
Trade, Hotel, Transport, Storage, communication & services related to broadcasting	9.0	10.5	7.8	8.7
Financial, real estate & professional services	11.1	10.8	5.7	7.3
Public administration, defence & other services	8.1	6.9	11.3	9.4
GVA at basic prices	**7.2**	**7.9**	**6.6**	**6.1**
GDP at market prices	**7.5**	**8.0**	**7.1**	**6.5**

Source: **Based on data from CSO**

Figure 2 : Quarterly growth in GDP and GVA (per cent)



Source: **Central Statistics Office (CSO)**

1.4 As per the 1st AE, the real GDP growth is expected to be 6.5 per cent in 2017-18, while the real GVA at basic prices is expected to register a growth of 6.1 per cent. With GDP and GVA growth of 6.0 per cent and 5.8 per cent respectively in the first half (H1) of the current financial year, the implicit growth for the second half (H2) of the year works out to be 7.0 per cent and 6.4 per cent respectively, indicating further recovery of the economy that began in the Q2 of 2017-18. Major macro indicators viz. gross fixed investment and exports are also expected to grow at a faster pace in H2 vis-à-vis H1 of 2017-18.

1.5 In the recent years, the wedge between the real and nominal GDP growth has narrowed significantly. While real GDP growth averaged 6.4 per cent between 2012-13 and 2014-15, the nominal growth was 12.5 per cent in this period. In comparison, during the three-year period from 2015-16 to 2017-18, the real and nominal GDP average growth is estimated to be 7.2 per cent and 10.1 per cent respectively, pointing to higher differences in the former period than latter. This is not surprising given that the fact that inflation in the earlier period (particularly in 2012-13 and 2013-14) was significantly higher than the latter.

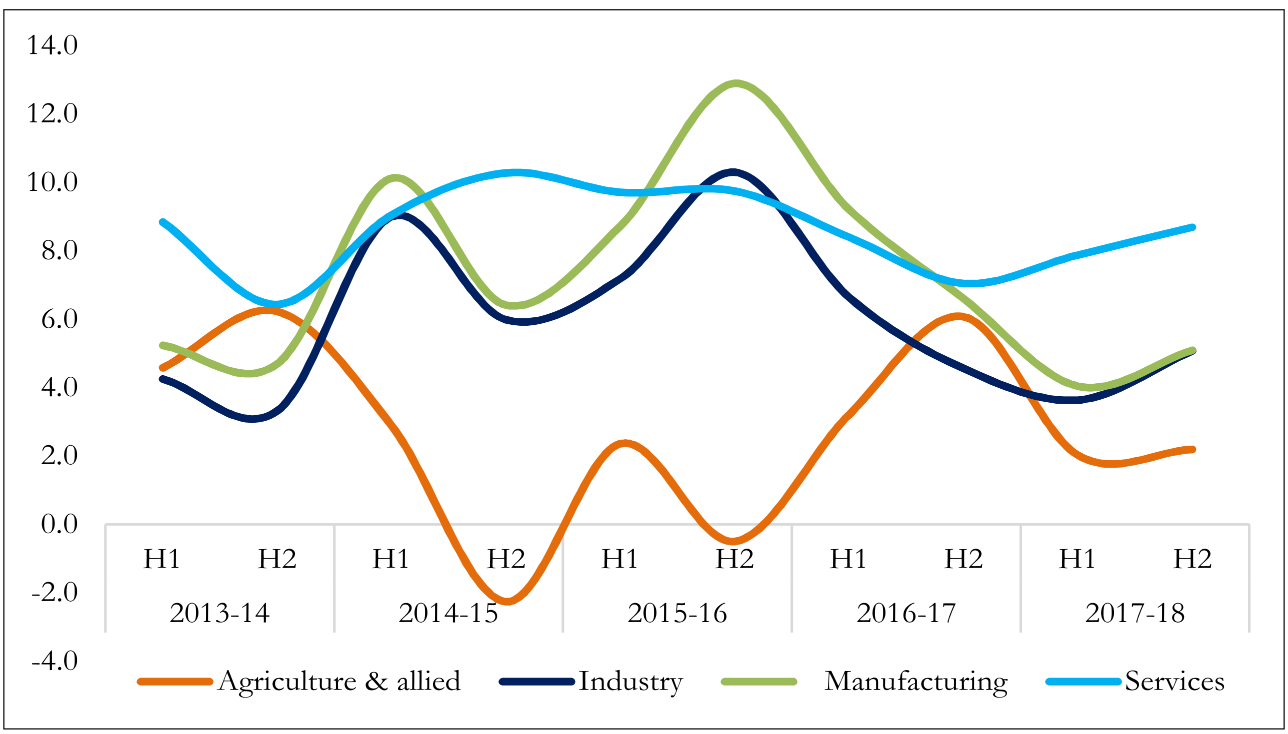
1.6 The growth in nominal GDP in 2016-17 is estimated to be 11 per cent and it is expected at 9.5 per cent in 2017-18 on account of both lower real growth as well as lower value of deflator in 2017-18. The growth of nominal GVA in these two years is estimated to the 9.7 per cent and 9.0 per cent respectively. The differences in the nominal growth between GVA and GDP have also increased in the last few years. This is indicative of an increase in the share of net indirect taxes in GDP.

GVA growth of major sectors

1.7 As expected, the agriculture sector registered significantly higher growth in 2016-17 than the previous two years on the back of normal monsoon. As per the fourth advance estimates of food grains production, it was estimated that the output of food grains would be of the order of 275.7 million tonnes in 2016-17, with both cereals and pulses achieving record levels of production. Most other crops and non-crop agriculture sector also showed significant growth. 'Public administration, defence & other services' sector also registered double-digit growth in 2016-17 that largely owed to higher payouts in salaries and arrears on account of implementation of the recommendations of the Seventh Pay Commission. However, growth of industry sector declined by over 3 percentage points in the last financial year.

1.8 GVA growth in H1 of 2017-18 was 5.8 per cent, with the two quarters depicting different picture. The declining trend seen in the previous few quarters in GVA growth was arrested in Q1 of 2017-18, which registered the same rate of growth as in Q4 of 2016-17. There was a reversal of this declining trend in Q2 of 2017-18 with GVA growth of 6.1 per cent, an improvement of 0.5 percentage points vis-à-vis Q1. This was basically led by the industry sector. The growth of manufacturing sector, in particular, showed an improvement from 1.2 per cent in Q1 to 7.0 per cent in Q2 of 2017-18. The implicit growth of GVA for H2 of 2017-18 is estimated to be 6.4 per cent. The implicit growth in H2 of all three major sectors of the economy viz. agriculture & allied, industries, and services sectors being 2.2 per cent, 5.1 per cent and 8.7 per cent respectively is better than H1 of 2017-18 (Figure 3). The growth of manufacturing sector is expected to improve from 4.0 per cent in H1 to 5.1 per cent in H2 of 2017-18. 'Trade, transport, hotels, storage, communications and services relating to broadcasting', which is a part of services sector is the only sector that is likely to register a decline in growth in H2 vis-à-vis H1 of 2017-18.

Figure 3 : Half-yearly growth in GVA at (2011-12) basic prices (per cent)



Source: **Based on data from CSO**

Note: **H2 of 2017-18 is calculated based on 1st AE and quaterly estimates upto Q2 of 2017-18.**

1.9 One of the salient features of GVA growth in 2016-17 has been that two sectors viz. 'Agriculture & allied', and 'Public administration, defence & other services[1], contributed nearly one-third of the total growth of the economy. These sectors on an average contributed to about one-sixth of the GVA growth in the period 2012-13 to 2015-16 (Figure 4). The higher contribution of these sectors in 2016-17, mainly owed to higher growth in both of these sectors. Services (excluding public administration, defence, etc.) accounted for nearly 57 per cent of the total GVA growth between 2012-13 and 2015-16. It declined to 41 per cent in 2016-17, mainly on account of lower growth in 'Financial, real estate & professional services' sector. The contribution of 'Public administration, defence & other services' to total growth during 2016-17 was nearly twice its average contribution to growth between 2012-13 and 2015-16. On the other hand, the contribution of 'Financial services, real estate and professional services' to GVA growth progressively declined since 2013-14. It declined from an average of 32.7 per cent of GVA growth during 2012-13 to 2015-16 to 18.8 per cent in 2016-17.

1.10 In 2017-18, the contribution of agriculture sector to GVA growth reverted to the mean of the period between 2011-12 to 2015-16. Contribution of 'Public administration, defence & other services' declined somewhat in 2017-18 as the growth of this sector decelerated. The contribution of industry sector to GVA growth declined in 2017-18, primarily on account of lower growth in this sector in H1 and particularly in Q1.

Quarter wise GVA growth

1.11 After declining in previous few quarters, GVA growth picked up to 6.1 per cent in Q2 of 2017-18. The increasing trend of GVA growth of 'Agriculture & allied' sector since last quarter of 2015-16 was reversed from Q4 of 2016-17. The decline in growth of industry had started in the Q1 of 2016-17 and the growth was particularly low in Q4. However, the growth of industry picked up in Q2 of 2017-18. GVA growth of manufacturing sector declined in each of the successive quarters from Q4 of 2015-16 (barring third quater (Q3) of 2016-17) till Q1 of 2017-18, when it reached 1.2 per cent. It recovered sharply to 7.0 per cent in Q2 of 2017-18 (Table 2).

Figure 4 : Percentage contributionto GVA growth

Source: **Based on data from CSO**

1 Other services comprise community services e.g. coaching centres, education, personal services, etc.

One reason why industry growth might have decelerated could be the slowdown in credit growth. Growth of credit deployed (outstanding) to industry slowed significantly in 2015-16, turned negative in 2016-17, and has continued to remain so in H1 of 2017-18. This decline may be due to lower demand for credit or greater recognition of the problem of non-performing assets (NPAs) that might have led the banks to become more cautious on lending. However, as on November 24, 2017, credit outstanding to industry sector was 1 per cent higher than what was on November 25, 2016. Although, the value added in construction sector contracted in Q4 of 2016-17, it recovered in the subsequent quarters.

Table 2 : Quarter wise real GVA and GDP growth (per cent)

Sector	2016-17				2017-18	
	Q1	Q2	Q3	Q4	Q1	Q2
GVA at basic prices	**7.6**	**6.8**	**6.7**	**5.6**	**5.6**	**6.1**
Agriculture & allied	2.5	4.1	6.9	5.2	2.3	1.7
Industry	7.4	5.9	6.2	3.1	1.6	5.8
of which, Manufacturing	10.7	7.7	8.2	5.3	1.2	7.0
Services	9.0	7.8	6.9	7.2	8.7	7.1
GDP at market prices	**7.9**	**7.5**	**7.0**	**6.1**	**5.7**	**6.3**

Source: **Based on data from CSO**

1.12 Growth of services sector, which had declined in Q3 of 2016-17, picked up slightly in Q4, primarily due to 17 per cent growth in real terms in 'Public administration, defence & other services' sector. The growth of 'Trade, transport, storage, communications etc.' sector was low, at 6.5 per cent in Q4 of 2016-17, partly due to high base effect (growth of this sector was 12.8 per cent in Q4 of 2015-16).There has been some recovery in the services growth in the H1 of 2017-18, vis-a-vis H2 of 2016-17, on the strength of higher growth in 'Financial services, real estate & professional services' and 'Trade, hotels, transport, communication & broadcasting services' sector. On the other hand, growth in 'Public administration, defence & other services' has been lower in first two quarters of 2017-18, as compared to Q3 and Q4 of 2016-17

Per-capita Income

1.13 The real per capita income (measured in terms of per capita net national income at constant (2011-12) prices is one of the important indicators representing the welfare of people of a country. It is expected to increase from Rs. 77,803 in 2015-16 to Rs. 86,660 in 2017-18, growing at an annual average rate of 5.5 per cent. In nominal terms it increased by an average of 9.0 per cent per annum from Rs. 94,130 in 2015-16 to Rs. 111,782 in 2017-18.

GDP AND ITS COMPONENTS

1.14 Consumption expenditure has been the major driver, accounting for nearly sixty per cent of the total GDP growth between 2012-13 and 2015-16. This contribution increased to over 95 per cent in 2016-17, which is attributed to higher growth of both Private Final Consumption Expenditure (PFCE) and Government Final Consumption Expenditure (GFCE), particularly the latter. Growth of GFCE was nearly 21 per cent in 2016-17, against an average growth of 3.5 per cent during 2012-13 to 2015-16. This owed mainly to the payment of higher wages and salaries to the government staff that followed the implementation of the recommendations of the Seventh Pay Commission. The growth of both

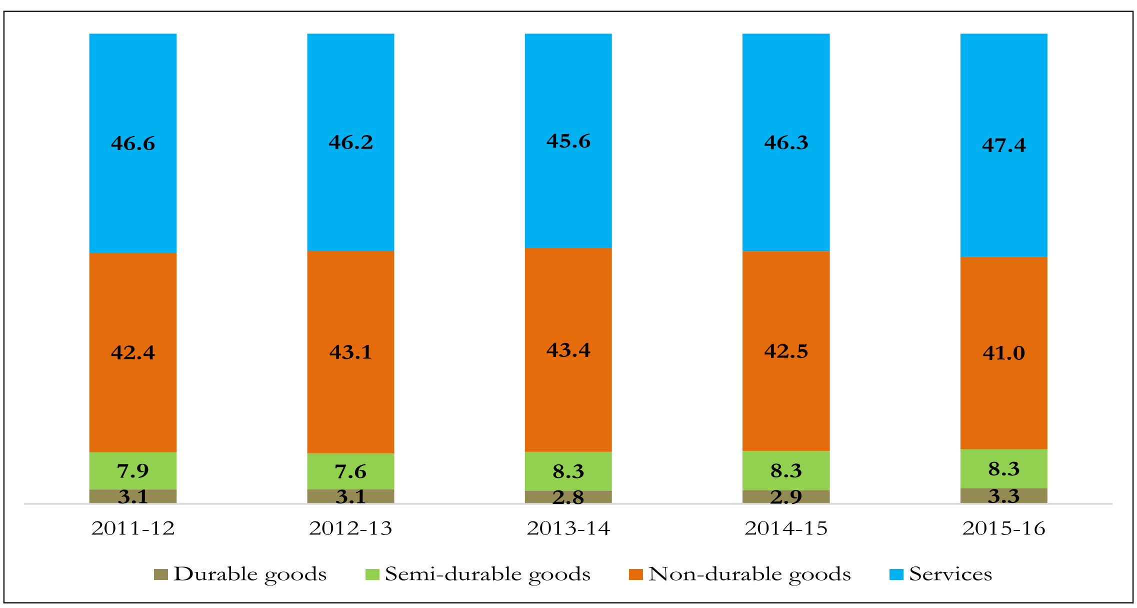
PFCE and GFCE is expected to be lower in 2017-18 as compared to 2016-17. The share of investment, and in particular that of fixed investment in the GDP continuously declined between 2011-12 and 2016-17. While fixed investment was 34.3 per cent of GDP in 2011-12, it declined to 27.1 per cent in 2016-17. Although fixed investment is expected to grow at a faster rate in 2017-18 than in 2016-17 (thus pointing to some recovery in investment), it is still not high enough to prevent a further reduction in the share of fixed investment in GDP. After nearly stagnating in 2014-15 and declining in 2015-16, exports of goods and services began to pick up in 2016-17. Imports also increased but at a slower pace, thus helping in narrowing the current account deficit in 2016-17. Exports are expected to grow at 4.5 per cent in 2017-18, while imports are expected to grow at a faster rate. As a result, the share of net exports of goods and services (as reflected in National Accounts Statistics) in GDP is expected to decline from (-) 0.7 per cent in 2016-17 to (-) 1.8 per cent in 2017-18.

Final Consumption Expenditure

1.15 In the 6 years between 2011-12 and 2016-17, the share of PFCE averaged 57.5 per cent in total GDP and its growth averaged 6.8 per cent. PFCE has been the single most important driver of GDP growth and particularly so in 2016-17, when it contributed nearly two-thirds to GDP growth. Added to this, the contribution of GFCE was 29 per cent. As per the 1st AE of 2017-18, the contribution of PFCE and GFCE to GDP growth is estimated to be 54.3 per cent and 14.4 per cent respectively. While PFCE contribution reverted to the average levels achieved in 2011-12 to 2015-16, the contribution of GFCE continues to be higher than that average.

1.16 Further disaggregation of PFCE (details of which are available only upto 2015-16) reveals that the share of non-durable goods (bulk of which is food products) declined somewhat between 2011-12 and 2015-16 (after 2013-14) (Figure 5). This reduction is on expected lines, as with an increase in income levels, the share of food products and in particular food grains tends to decline (For analysis based on Engel's elasticities, see Box 1.1). There was a faster reduction in this share in terms of constant prices, which is associated with lower value of deflator (implying higher price rise) for some of food products viz. fish & seafood, fruits, etc. as compared to other commodity groups during this period.

Figure 5 : Share in Private Consumption Expenditure at current prices (per cent)



Source: **Based on data from CSO**

Box 1.1 : Engel's elasticity of major commodity groups with respect to PFCE

One of the ways to analyse the consumer's behaviour is through Engel's elasticity. Table 1 below gives the Engel's elasticity for some selected group of commodities. It may be mentioned that Engel elasticities calculated here refer to the responsiveness of PFCE of a particular commodity group to the aggregate PFCE, at constant 2011-12 prices.

Table 1 : CAGR of Private Final Consumption Expenditure in domestic market and Engel Elasticity

Item Description	CAGR (per cent) 2011-12 to 2015-16	Elasticity with respect to PFCE
Food and non-alcoholic beverages	4.1	0.61
Clothing and footwear	9.6	1.44
Housing, water, electricity, gas and other fuels	5.2	0.78
Furnishing, household equipment and routine household maintenance	9.3	1.39
Health	13.1	1.95
Transport	6.5	0.98
Communication	7.3	1.09
Education	6.3	0.93
Private Final Consumption Expenditure in domestic market	6.7	

Source: **National Accounts Statistics (NAS), CSO**

As expected, the Engel elasticity of food items is significantly less than one, confirming the hypothesis that as the income levels rise, the expenditure on food increases less than proportionately. Within food, the elasticity of products like eggs, meat and fish, vegetables, etc. is higher than that on items like bread, cereals and pulses, etc. While the elasticity of expenditure on health is significantly higher than unity, surprisingly that of education is a little less than unity.

SAVINGS AND INVESTMENT

1.17 Despite the fact that Indian economy has registered a fairly robust growth in the 4 years between 2014-15 and 2017-18, story on savings and investment in the economy has not been so heartening. The investment rate (Gross Capital Formation (GCF) as a share of GDP) in the economy declined by nearly 5.6 percentage points between 2011-12 and 2015-16. As can be seen from Table 3, the major reduction occurred in the year 2013-14, when investment rate declined by nearly 5 percentage points. This was on account of number of factors viz. difficulties in acquiring land, delayed and cumbersome environmental clearances, problems on infrastructure front, etc. Although many of these problems have been addressed, resulting in improved power situation, lessening of infrastructure bottlenecks, etc., the investment rate (mainly fixed investment) has not picked up. Savings rate (Gross saving as a share of GDP) also declined by two and half percentage points between 2011-12 and 2013-14 and has remained rangebound thereafter. The faster decline in investment rate vis-à-vis the savings rate has led to lower level of current account deficit (Savings Investment gap) from 2013-14 to 2015-16.

Savings

1.18 Savings in an economy originate from households, private corporate sector and public sector (including general government). In line with

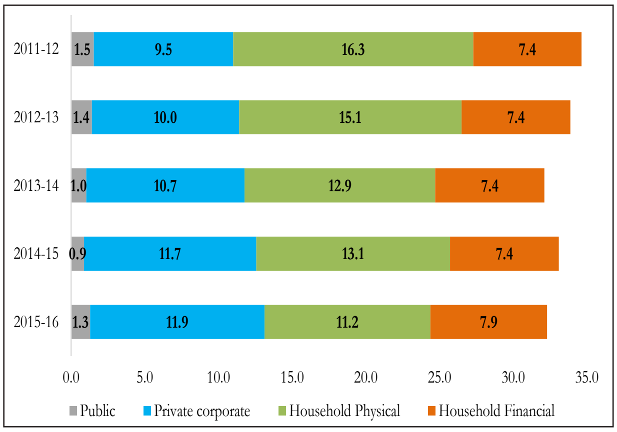
Table 3 : Saving, Investment rate (per cent)

	2011-12	2012-13	2013-14	2014-15	2015-16
Investment rate	39.0	38.7	33.8	34.4	33.3
Savings rate	34.6	33.9	32.1	33.1	32.3
Saving Investment gap	-4.3	-4.8	-1.7	-1.3	-1.0

Source: **Based on data from CSO**

overall savings of the economy, the savings of household sector as a ratio of GDP have declined from 23.6 per cent in 2011-12 to 19.2 per cent in 2015-16, while that of private corporate sector have increased (Figure 6). With the general government savings showing an improvement, (although it continued to be in negative territory), the reduction in the public savings up to 2014-15 can be ascribed to lower level of savings of public sector undertakings.

Fig 6 : Gross Savings as a share of GDP (per cent)



Source: **Based on data from CSO**

Note: **Public sector includes general government, public sector undertakings and departmental enterprises**

1.19 Household sector accounts for the bulk of the savings. However, the share of household savings in total savings declined from around 68 per cent in 2011-12 to 59 per cent in 2015-16. Within the households' savings, there has been a substitution away from physical to financial assets, with the share of former declining by over 10 percentage points. Public savings that declined from 1.5 per cent of GDP in 2011-12 to 0.9 per cent in 2014-15, however, increased again in 2015-16. This could be partly explained by higher collection of union excise duties, particularly from petroleum products and reduced level of petroleum subsidy bill of the central government. The share of private corporate sector in the total savings increased from 9.5 per cent of GDP in 2011-12 to about 12 per cent of GDP in 2015-16.

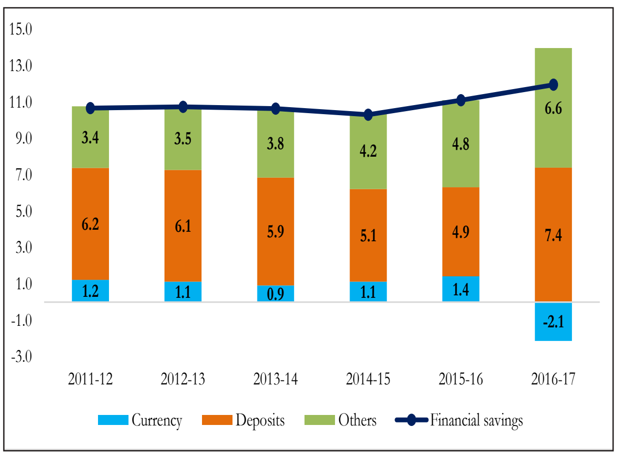
1.20 The data for gross savings is not available beyond 2015-16. However, preliminary information for financial savings of the household sector is available from RBI till 2016-17[2]. Financial savings by the households are held mainly in currency, bank deposits, life insurance funds, provident and pension funds and of late in the form of shares and debentures. Bank deposits accounted for about 50 per cent of the aggregate financial savings between 2011-12 and 2015-16. There was a significant decline in the proportion of deployment of financial savings in bank deposits and life insurance funds and an increase in share of currency, provident and pension funds, claims on government (primarily in small savings) in 2015-16. Savings held in shares and debentures more than doubled, and within this category, mutual funds segment increased by 126 per cent in 2015-16 over the previous year.

1.21 The pattern of household's financial savings was significantly different in 2016-17 vis-à-vis the preceding 5 years. While the overall financial savings of the households registered an increase of over 20 per cent in 2016-17, (significantly higher than the growth witnessed in any of the preceding 5 years), there was a decline in the savings in the form of currency by over 250 per cent (of about Rs. 5 lakh crore). This decline primarily owed to the withdrawal of high denomination currency notes in November 2016 and partial remonetisation by end March 2017. The savings channeled into bank deposits, life insurance funds

[2] CSO will release information on financial savings based on the information available from RBI and its own estimates of physical savings to estimate overall savings of the economy for the year 2016-17 at the end of January 2018.

and shares and debentures increased by 82 per cent, 66 per cent and 345 per cent respectively in 2016-17 (Figure 7). Within the shares and debentures category, the growth of savings in mutual funds registered a phenomenal increase of more than 400 per cent over and above the growth of 126 per cent witnessed in 2015-16. Thus within a span of 2 years, savings in the form of mutual funds registered more than 11-fold increase. That this happened in a period when the BSE Sensex increased by an average of just about 1.5 per cent per annum needs to be analyzed in more detail.

Fig 7 : Household financial savings as a share of GDP (per cent)



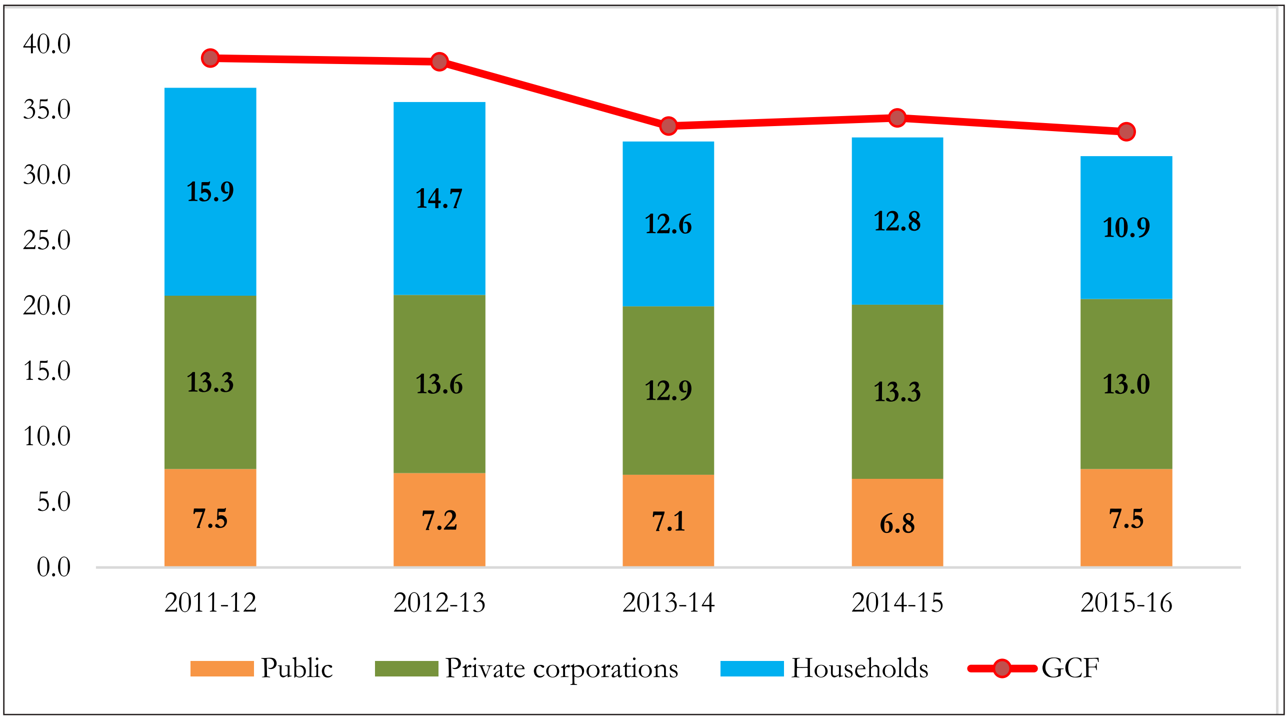
Source: **Based on data from RBI**

Investment

1.22 There has been a consistent reduction in investment rate from close to 39 per cent in 2011-12 to 33.3 per cent in 2015-16, the latest year for which the information is available for GCF. However, information is available for the major components of investment viz. gross fixed capital formation (GFCF) which accounts for overwhelming proportion of GCF, changes in stock and valuables, for 2016-17 and 2017-18. Fixed investment rate (GFCF as a share of GDP) declined by 5 percentage points between 2011-12 and 2015-16. It declined by another 2 percentage points in 2016-17. The 1st AE of 2017-18 suggest that although the growth rate of fixed investment is expected to improve to 4.5 per cent from 2.4 per cent in 2016-17, the fixed investment rate would continue its declining trend. The slow growth in fixed investment in the recent years could partly be ascribed to twin-balance sheet problem. This trend of declining fixed investment rate needs to be reversed at the earliest to realise the potential growth of over 8 per cent in the years to come. The share of valuables in GDP has generally been declining since 2011-12. However, it is expected to increase to 1.5 per cent of GDP in 2017-18 from 1.1 per cent in 2016-17.

1.23 The institution-wise break-up of the investment in the economy has undergone significant changes in the last few years. The investment rate of public sector (including general government) consistently declined from 2011-12 to 2014-15. However, it increased to 7.5 per cent of GDP in 2015-16. This is in line with the greater focus on capital expenditure by the central government as well as the state governments during the year. As per information available from National Accounts Statistics, the growth rate of capital expenditure by the general government (at current prices) increased from an average of about 7 per cent in during 2012-13 to 2014-15 to over 21 per cent in 2015-16. The share of private corporate sector in total investment increased from 36 per cent in 2011-12 to 41 per cent in 2015-16 and it has become largest sector for investment in the economy, replacing the household sector. The investment of household sector (including non-profit institutions serving the households) declined by nearly 5 percentage points from 15.9 per cent of GDP in 2011-12 to 10.9 per cent of GDP in 2015-16 (Figure 8).

Figure 8 : Investment by different institutions as percentage of GDP (per cent)



Source : **Based on NAS, CSO**

Note : **Investment across different sectors does not includes valuables and errors & omissions, hence will not add up to GCF.**

Table 4 : Assets-wise fixed investment by institutional sector as a share of total fixed investment (per cent)

		2011-12	2012-13	2013-14	2014-15	2015-16
GFCF	Dwellings	57.5	56.6	57.7	58.6	57.1
	Machinery & Equipment	35.0	34.5	31.9	31.6	32.5
	Others	7.6	9.0	10.5	9.9	10.5
Public Sector (incl. General Government)	Dwellings	12.0	12.3	12.7	13.4	16.1
	Machinery & Equipment	8.1	7.3	8.0	7.4	8.1
	Others	1.4	1.5	2.0	1.3	1.1
Private Corporate Sector	Dwellings	8.0	9.6	9.5	10.0	10.4
	Machinery & Equipment	18.7	18.4	19.6	17.9	18.2
	Others	6.0	7.2	8.3	8.3	9.1
Household Sector	Dwellings	37.4	34.7	35.5	35.2	30.6
	Machinery & Equipment	8.2	8.9	4.3	6.4	6.2
	Others	0.2	0.2	0.2	0.2	0.2

Source : **NAS, CSO**

Note : **'Others' include IPP and CBR**

1.24 Fixed investment accounts for around 90 per cent of total investment. Fixed investment is in various assets including dwellings, machinery & equipment and intellectual property products (IPP), along with small contribution coming from cultivated biological resources (CBR) (Table 4).

1.25 Dwellings account for around 57-58 per cent of fixed investment and this share has remained fairly stable between 2011-12 and 2015-16. However, household's investment in dwellings has declined considerably, which is possibly linked to reduction in the share of household's savings in the form of physical assets. On the other hand, nearly the entire increase in the share of fixed investment of public sector is on dwellings. The reduction in share of machinery segment of fixed investment is primarily accounted for by the household sector. The share of 'Others' (IPP along with CBR) increased on account of higher investment in this category by the private corporate sector.

PUBLIC FINANCE

1.26 Based on the firm footing provided by the discernible improvements in most fiscal indicators, viz. revenue buoyancy, expenditure quality, tax devolution and deficits, the Government, in partnership with the States, ushered in the long-awaited Goods and Service Tax (GST) with effect from July 2017. The GST was unveiled after comprehensive preparations and multi-stage consultations, yet the sheer magnitude of change meant that it needed to be carefully managed. The Government is navigating the change and challenges, including the possibility that a substantial portion of the last-month (March 2018) GST collections may spill over to the next financial year.

1.27 The data on Central Government finances are available till November 2017 from the Controller General of Accounts (CGA). Based on this data, on the revenue front, there are three distinct trends during the first eight months of the current year: direct tax collections are on track; non-tax revenues have under-performed; and non-debt capital receipts, mainly proceeds from disinvestment, are doing well.

1.28 The growth in direct tax[3] collections of the Centre kept pace with the previous year, with a growth of 13.7 per cent. The budgeted growth for indirect taxes for the full year 2017-18 is 7.6 per cent; the actual growth till November is 18.3 per cent. The eventual outcome in indirect taxes during this year will depend on the final settlement of GST accounts between the Centre and the States and the likelihood that only taxes for eleven months (excluding IGST on imports) will be realized. The States' share in taxes grew by about 25 per cent during 2017-18 (Apr-Nov), much higher than the growth in centre's net tax revenue at 12.6 per cent and of gross tax revenue at 16.5 per cent.

1.29 The total expenditure of the Government increased by 14.9 per cent during 2017-18 (Apr-Nov), as compared to 12.6 per cent in the same period of the previous year. The revenue expenditure grew by 13.1 per cent and capital expenditure by 29.3 per cent during the first eight months of the current year. The advancing of the budget cycle and processes by almost a month gave considerable leeway to the spending agencies to plan in advance and start implementation early in the financial year, leading to progression of Central expenditure at a robust pace. This coupled with front-loading of some expenditure and increased interest outgo, exerted pressure on fiscal deficit which stood at 112 per cent of budget

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[3] Direct taxes include personal income tax and corporate tax.

estimates by November 2017. This growth will to an extent, normalize as the year progresses.

1.30 States targeted to consolidate in the current year, after the UDAY-led aberration in their fiscal balances for the previous two years. The position of 21 State Governments that account for about 86 per cent of the total GSDP and for which comparable data are available, shows that their revenue receipts have kept pace with the previous year in terms of growth and in relation to the corresponding budget estimates. If indications till November 2017 are to hold, fiscal deficit target for the current year may be within the reach of States taken together.

1.31 With the expected revenues from GST becoming increasingly clearer, the fiscal balance of the General Government vis-à-vis budget estimates will depend on the emerging patterns of revenue expenditure in the fourth quarter.

PRICES AND MONETARY MANAGEMENT

Prices & Inflation

1.32 Inflation in the country continued to moderate during 2017-18. Headline inflation as per Consumer Price Index – Combined (CPI-C) declined to 3.3 per cent in 2017-18 (Apr-Dec) from 4.8 per cent in the corresponding period of 2016-17. CPI inflation, which was below 3.0 per cent in the first quarter of 2017-18 mainly due to lower food inflation, especially pulses and vegetables, rose marginally and stood at 3.0 per cent in the Q2 of 2017-18. Food inflation in terms of the Consumer Food Price Index (CFPI) declined to 1.2 per cent during 2017-18 (Apr-Dec) from 5.1 per cent in 2016-17 (Apr-Dec). CPI-based core (non-food, non-fuel) inflation also declined to 4.5 per cent in 2017-18 (Apr-Dec) from 4.8 per cent in 2016-17 (Apr-Dec). Inflation for all the major subgroups of CPI-C, except housing and fuel & light groups, declined in 2017-18 (Apr-Dec) over 2016-17 (Apr-Dec). The decline was sharpest for food & beverages.

1.33 Average inflation based on the Wholesale Price Index (WPI) stood at 2.9 per cent in 2017-18 (Apr-Dec) as compared to 0.7 per cent in 2016-17 (Apr-Dec). WPI inflation which remained subdued for several months, surged during February and March 2017 due to sudden spurt in global crude oils prices. Thereafter, with the moderation in the global crude prices, inflation also moderated in the next four months till July, reaching a low of 0.9 per cent in June 2017. As oil prices bounced back and moved upwards in the successive months, coupled with rising food prices, inflation too rose and reached the level of 3.6 per cent in December 2017.

1.34 WPI based food inflation declined to 2.3 per cent in 2017-18 (Apr-Dec) from 6.3 per cent in the corresponding period of 2016-17. WPI fuel & power inflation increased to 9.7 per cent 2017-18 (Apr-Dec) from (-)6.5 per cent in the corresponding period of the previous year. WPI based core (non-food manufactured products) inflation stood at 2.6 per cent in 2017-18 (Apr-Dec) as compared to -0.8 per cent in 2016-17 (Apr-Dec). The inflation of manufactured group, which has the weight of 64.2 per cent in the WPI basket, has however, remained range bound hovering around 2.6 per cent.

Monetary Management and Financial Intermediation

1.35 Monetary policy during 2017-18 was conducted under the revised statutory framework, which became effective from August 5, 2016. In the third bi-monthly Monetary Policy Statement for 2017-18 (in August 2017), the Monetary Policy Committee decided to reduce the policy Repo Rate by 25 basis points to 6.0 per cent. It kept the rates unchanged in both October and December 2017.

1.36 In tandem with the re-monetisation process, from November 17, 2017, as a favourable base effect set in, the Year on Year (YoY) growth of both 'Currency in circulation' and 'Reserve money' (M0) turned sharply positive and higher than their respective growth rates in the previous year. After demonetisation in early November 2016, the Reserve Bank had scaled up its liquidity absorption operations using a mix of both conventional and unconventional instruments. Liquidity conditions remain in surplus mode even as its magnitude moderated gradually with progressive remonetisation.

1.37 The performance of the banking sector, and in particular the Public Sector Banks, continued to be subdued in the current financial year. The gross non-performing advances (GNPA) ratio of Scheduled Commercial Banks increased from 9.6 per cent to 10.2 per cent between March 2017 and September 2017. Non Food Credit (NFC) grew at 8.9 per cent in November 2017, as compared to 4.8 per cent in November 2016. 'Bank credit lending to Services' and 'Personal loans' segments continue to be the major contributor to overall NFC growth.

EXTERNAL SECTOR

1.38 The global economy has been gathering pace and is expected to accelerate from 3.2 per cent in 2016 to 3.7 per cent in 2018. World trade volume growth is projected to increase from 2.4 per cent in 2016 to 4.2 per cent and 4.0 per cent respectively in 2017 and 2018. Commodity prices (fuel and nonfuel) are also expected to grow in contrast to decline in the last few years. India's external sector has continued to be resilient and strong in 2017-18 so far and the balance of payments (BoP) situation continued to be comfortable. Current account deficit (CAD) was 1.8 per cent of GDP, merchandise exports grew by 12 per cent, net services receipts grew by 14.6 per cent, net foreign investment grew by 17.4 per cent, and external debt indicators improved in H1 of 2017-18.

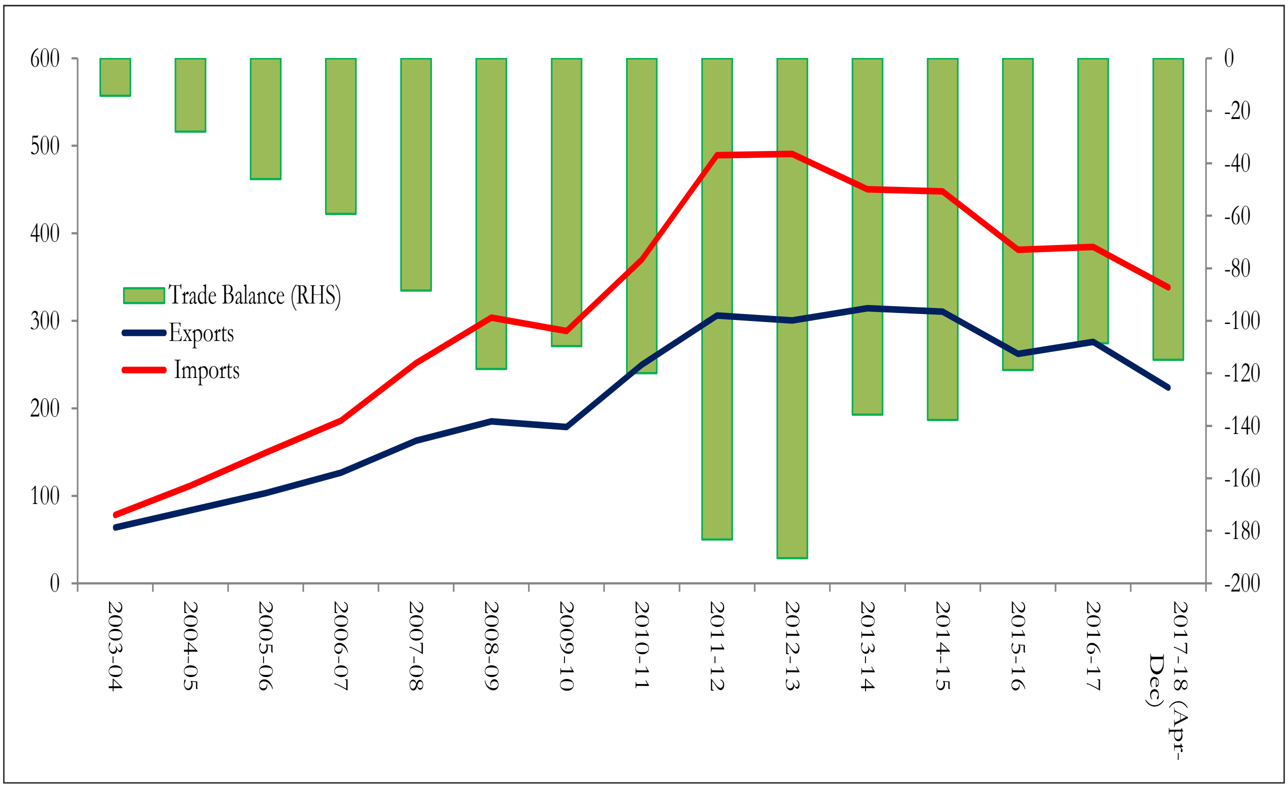
India's Merchandise trade

1.39 The year 2016-17 was characterized by positive growth in merchandise exports after two years of negative growth. Similarly, merchandise imports also printed positive growth in 2016-17 after three years of negative growth. Imports declined by around US $107 billion from US$ 491 billion in 2012-13 to US$ 384 billion in 2016-17. This was mainly due to a reduction in value of imports of crude oil and petroleum products to the tune of US $77 billion along with US $26.4 billion reduction of gold and silver imports during this period. Thus, these two commodity groups accounted for nearly 97 per cent of the reduction in imports. The reduction in oil imports could be mainly attributed to a sharp fall in the prices of crude oil in international market. The import price of Indian basket of crude oil declined from an average of around US $108 per barrel in 2012-13 to US $47.6 per barrel in 2016-17. Reduced prices of petroleum products also resulted in lower value of POL exports from nearly US$ 61 billion in 2012-13 to US$ 32 billion in 2016-17. The non-POL exports increased from US$ 239.5 billion in 2012-13 to US$ 244.3 billion in 2016-17. The total merchandise exports declined by nearly US$ 24.5 billion in these years.

1.40 A larger reduction in value of imports vis-à-vis that of exports helped in significant improvement in the merchandise trade balance, from US$ 190 billion in 2012-13 to US$ 108.5 billion in 2016-17 (Figure 9). The reduction in trade deficit in this period has been the major contributor to bringing about an improvement in the current account deficit that declined from 4.8 per cent of GDP in 2012-13 to around 0.7 per cent of GDP in 2016-17. With capital flows remaining at healthy levels, the foreign exchange reserves steadily increased from US$ 292 billion at the end of March 2013 to US$ 370 billion at the end of March 2017.

imports grew by 21.8 per cent. POL import growth was 24.2 per cent mainly due to the rise in crude oil prices. Non-POL imports registered a growth of 21.1 per cent. Gold & silver imports registered a growth of 52 per cent. Non-POL and non-gold & silver imports grew by 18.1 per cent. India's trade deficit, which had registered continuous decline between 2014-15 and 2016-17, widened to US$ 74.5 billion in H1 of 2017-18 from US$ 43.4 billion in H1 of 2016-17. In 2017-18 (April-December) trade deficit shot up to US$ 114.9 billion.

Figure 9 : Exports, Imports and Trade Deficit (US$ billion)



Note: **For 2016-17 and 2017-18 figures are provisional.**

Source: **Ministry of Commerce and Industry**

1.41 India's export growth continued to be negative in the H1 of 2016-17 at (-)1.3 per cent. However, in the H2 of 2016-17, it started recovering and the year 2016-17 witnessed a growth of 5.2 per cent. In 2017-18 (April – December) export growth picked up further to 12.1 per cent. India's export volume growth which moved to positive territory since March 2016 showed an upward trend till April 2017, but started decelerating afterwards, though it is still in positive territory. In 2017-18 (April-December),

Balance of Payments

1.42 India's balance of payments situation which has been benign since 2013-14, continued to be so in the H1 of 2017-18, despite some rise in CAD in Q1. The CAD increased from US$ 3.8

billion (0.4 per cent of GDP) in H1 of 2016 -17 to US$ 22.2 billion (1.8 per cent of GDP) in H1 of 2017-18, primarily on account of a higher trade deficit brought about by a larger increase in merchandise imports relative to exports. The surge in imports owed to sharp rise in imports of gold and increase in oil prices in the international markets. While trade deficit widened in H1 of 2017-18 as compared to H1 of 2016-17, the improvement in invisibles balance along with the net capital flows dominated by foreign investment and banking capital was more than sufficient to finance the trade deficit leading to accretion in foreign exchange reserves in H1 of 2017-18.

Invisibles

1.43 In H1 of 2017-18, there has been an increase in net invisibles surplus to US$ 52.5 billion from US$ 45.7 billion in H1 of 2016-17, with increase observed in net services and net private transfers. Net services receipts increased by 14.6 per cent on a YoY basis during H1 of 2017-18 primarily because of the rise in net earnings from travel and telecommunications, computer & information services. Private transfer receipts, mainly representing remittances by Indians employed overseas, increased by 10.0 per cent in H1 of 2017-18 over the corresponding period of the previous year. Outflows on account of net investment income which had been increasing in the last two years, continued to rise in H1 of 2017-18 amounting to US$ 15.3 billion from US$ 14.9 billion in H1 of 2016-17.

Capital /Financial account of BoP in H1 of 2017-18

1.44 Notwithstanding a decline in Foreign Direct Investment (FDI) inflows in H1 of 2017-18, net foreign investment recorded a growth of 17.4 per cent owing to a sharp rise in portfolio investment to India. Moderation in FDI flows in Q2 of 2017-18 led to a cumulative decline in FDI flows by 6.3 per cent in H1 of 2017-18 over its level during the corresponding period of the previous year. However, foreign portfolio investment (FPI) increased by 78.0 per cent, from US$ 8.2 billion in H1 of 2016-17 to US$ 14.5 billion in H1 2017-18 reflecting positive outlook about growth potential of Indian economy.

Foreign Exchange Reserves

1.45 India's foreign exchange reserves reached US$ 409.4 billion on December 29, 2017, with a growth of 14.1 per cent on a YoY basis from end-December 2016 and growth of 10.7 per cent from end-March 2017. The foreign exchange reserves were US$ 413.8 billion on 12th January 2018. The foreign exchange reserves in nominal terms (including the valuation effects) increased by US$ 30.3 billion during H1 of 2017 as compared to an increase of US$ 11.8 billion during the same period of preceding year. The import cover of India's foreign exchange reserves increased to 11.1 months at end-September 2017.

Exchange Rate

1.46 During 2017-18 (up to December 2017), the rupee generally traded with an appreciating bias against the US dollar, barring intermittent depreciation in September and October 2017. The rupee strengthened by 2.5 per cent to a level of Rs. 64.24 per US dollar during December 2017 from the level of Rs. 65.88 per US dollar during March 2017 on the back of significant capital flows. The appreciating trend vis-à-vis US$ has continued in January so far. During 2017-18 (April-December), on an average, the rupee has also appreciated against other major currencies besides the US dollar. The appreciation of the rupee (in real effective exchange rate (REER) terms) indicates that India's exports may have become slightly less competitive.

1.47 In the last few years, the value of Rupee has been relatively stable vis-à-vis US$. The rupee depreciated by much higher levels between 2011-12 and 2013-14 than between 2014-15 and 2016-17. Not only this, within year fluctuations have been much less. (See Box 1.2).

Box 1.2 : The Stability of the Rupee vis-à-vis US Dollar

One of the salient features of the external sector developments in the recent years has been the relatively stable rupee dollar exchange rate and much lower level of fluctuations within the year. The average value of the rupee had depreciated by over 21 per cent vis-à-vis the US dollar between 2011-12 and 2013-14, while it depreciated by 8.8 per cent between 2014-15 and 2016-17. The average value of rupee has appreciated with respect to US$ in 2017-18, so far, over 2016-17. Within the year fluctuations have been measured in terms of deviation of average daily rupee-dollar exchange rate from the annual average rate and have been reflected by the coefficient of variation around that annual average. The coefficient of variation is much lower in the last four years (2014-15 to 2017-18 (up to end December)), reflecting a more stable (lower within the year variations) exchange rate.

Table 1 : Rupee Dollar Exchange Rate

	Rupee/Dollar exchange rate (average for the year)	Standard deviation	Coefficient of variation (per cent)
2011-12	47.92	3.03	6.32
2012-13	54.41	1.25	2.29
2013-14	60.50	3.06	5.05
2014-15	61.14	1.19	1.94
2015-16	65.46	1.69	2.57
2016-17	67.07	0.71	1.06
2017-18 (upto December end)	64.49	0.42	0.65

Source: **Estimated from daily exchange rate available from RBI**

External Debt

1.48 India's stock of external debt increased by 5.1 per cent to US$ 495.7 billion at end-September 2017 from end-March, 2017. The increase in long term debt was primarily due to the increase in foreign portfolio investment included under commercial borrowings. Short term debt grew by 5.4 per cent, mainly due to an increase in trade related credits. Share of Government (Sovereign) debt in total debt increased to 21.6 per cent at end-September 2017 from 19.4 per cent at end-March 2017 mainly due to other Government external debt component reflecting the increasing level of foreign portfolio investments in Government securities. Foreign exchange reserves cover to total external debt improved to 80.7 per cent at end-September 2017 as compared to 78.4 per cent at end-March 2017. The ratio of short term debt by original maturity to foreign exchange reserves fell to 23.2 per cent at end-September 2017 from 23.8 per cent at end-March 2017.

Trade Policy

1.49 Two important developments in the trade policy during the year are the mid-term review of Foreign Trade Policy (FTP) and the recent multilateral negotiations of WTO in December 2017. There were some developments on the trade logistics front and anti-dumping measures. MEIS (Merchandise Exports from India Scheme) incentives for two sub-sectors of textiles and SEIS (Service Exports from India Scheme) for notified services have been increased by 2 per cent. Besides this, in December 2017, a special package for employment generation in leather and footwear sector was approved by the Government which is likely to help exports from these sectors. Improved logistics have huge implications on increasing exports. Government has recognized the need for integrated development of logistics sector. The Indian logistics market is expected to reach about US$ 215 billion in 2019-20.

PROSPECTS OF GROWTH FOR 2018-19

1.50 CSO has estimated the GDP growth in 2017-18 to be 6.5 per cent. However, there are indicators that have emerged in the last few days like manufacturing and services PMI, growth of industrial sector as reflected by higher IIP, automobile sales etc. which seem to suggest that the GDP growth could be a little higher than CSO's estimates and for 2017-18, (it could be in the range of 6.5 to 6.75 per cent). The growth during 2018-19 could be higher, depending on a number of factors. On the positive side, as per IMF's World Economic Outlook released in October 2017, the global growth is expected to accelerate to 3.7 per cent in 2018 from 3.6 per cent in 2017. This can be expected to provide further boost to India's exports, which have already shown an acceleration in the current financial year. Remittances have shown signs of revival in the first half of current year and can be expected to pick up, particularly if oil prices maintain their rising trend witnessed in the current year.

1.51 There are signs of revival of investment activity in the economy and the recent pick up in the growth of fixed investment can be expected to maintain momentum in the coming year. The policy rates can be expected to remain fairly stable if the inflation rate does not deviate much from its current levels. This, along with the still favourable interest rate regime prevailing in the global markets could provide greater certainty to the investment climate. The reform measures undertaken in 2017-18 can be expected to strengthen further in 2018-19 and reinforce growth momentum. On the other hand, downside risk to higher growth emanate from higher crude oil prices, which (going by current indications) can be expected to increase by about 10-15 per cent over and above the likely average price of around US$ 56-57 per barrel (for Indian basket) for 2017-18. Protectionist tendencies in some of the countries could have an impact on exports growth, while the possibility of tightening of monetary conditions in the developed countries could lead to lower capital inflows. This monetary tightening could also lead to the possibility of financial stress and therefore can be a downside risk. On balance, there is a strong possibility of growth in 2018-19 to be higher than what it is expected to be in 2017-18. Growth of GDP in 2018-19 could be in the range of 7.0 to 7.5 per cent.

SECTORAL DEVELOPMENTS

Agriculture and allied sectors

1.52 The process of development, *inter-alia,* generally results in decline in share of agriculture in GVA, which is being witnessed in India too. The share of agriculture and allied sectors in GVA declined from 18.2 per cent in 2012-13 to 16.4 per cent in 2017-18(1st AE). However, the declining share does not undermine the significance of the sector for employment, livelihood and food security. Further, the agriculture sector itself has been witnessing a gradual structural change in recent years. The share of livestock in GVA of agriculture has been rising since 2011-12, while that of the crop sector declined from 65 per cent in 2011-12 to 60 per cent in 2015-16.

1.53 As per the fourth Advance Estimates for 2016-17 released by Department of Agriculture, Cooperation and Farmers' Welfare, India achieved a record production of food grains estimated at 275.7 million tonnes during 2016-17. As per the 1st AE released on 22nd September 2017, food grains production for the Kharif Season during 2017-18 is estimated at 134.7 million tonnes, lower by 3.9 million tonnes as compared to 2016-17. The total production of rice during 2017-18 is estimated at

Table 5 : Agriculture Sector – Key indicators

Item	2012-13	2013-14	2014-15	2015-16	2016-17 (PE)	2017-18 (AE)
Growth in GVA in Agriculture & Allied Sectors (at constant 2011-12 prices)	1.5	5.6	-0.2	0.7	4.9	2.1
Share of Agriculture & Allied Sectors in total GVA (at current prices)	18.2	18.6	18.0	17.5	17.4	16.4
Share of Agriculture & Allied Sectors in total GCF, *of which*	7.7	9.0	8.3	7.8	na	na
Share of crops*	6.5	7.7	6.9	6.5	na	na
Share of livestock*	0.8	0.9	0.8	0.8	na	na
Share of forestry and logging*	0.1	0.1	0.1	0.1	na	na
Share of fishing *	0.4	0.5	0.5	0.5	na	na

Note: *** : Shares in total GCF. Based on NAS, 2017 and 1st AE of 2017-18, na : Not Available**

Source: **Central Statistics Office**

94.5 million tonnes vis-a-vis 96.4 million tonnes (4th Advance Estimates) in 2016-17. The production of pulses during 2017-18 is estimated at 8.7 million tonnes, sugarcane at 337.7 million tonnes, oilseeds at 20.7 million tonnes and cotton at 32.3 million bales of 170 kgs each.

1.54 India ranks first, with 9.6 per cent (179.8 Mha) of the global net cropland area according to United States Geological Survey, 2017. Hence, India has tremendous potential for crop diversification and to make farming a sustainable and profitable economic activity. However, the pattern of cropping is determined by various factors like agro-climatic conditions, farm size, prices, profitability and government policies. Towards achieving a more diversified cropping pattern, the government is implementing the Crops Diversification Programme in original green revolution states viz. Punjab, Haryana and in Western UP, to diversify paddy area towards less water requiring crops. It will also help in mitigating the risks faced by farmers in terms of price shocks and production/harvest losses.

1.55 Agricultural productivity is determined by the appropriate use of critical inputs like irrigation, seeds, fertilisers, credit, machines, technology and extension services. As reported in input survey (2011-12), out of total operational holdings, only 9.4 per cent used certified seeds, 27 per cent used seeds of notified variety and only 9.8 per cent used hybrid seeds. The All India percentage of net irrigated area to total cropped area was 34.5 per cent in 2014-15, which makes a large part of agriculture in India dependent on rainfall. Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) is being implemented in mission mode with the help of Command Area Development to complete 99 major and medium irrigation projects covering 76.0 lakh hectares in a phased manner by December 2019 to increase the coverage of irrigated area and thereby agricultural productivity.

1.56 The NSSO Report (July 2012 – June 2013) had indicated that a very small share of agricultural households engaged in crop production activities were insuring their crops. There is a need to raise awareness about crop insurance among agricultural households. In this context the Pradhan Mantri Fasal Bima Yojana (PMFBY) which is a yield index based crop insurance scheme was launched in 2016. It has made substantial progress with more ground coverage compared to erstwhile schemes. During Kharif 2016 season, 23 States implemented PMFBY and during Rabi season of 2016-17, 25 States/Union Territories implemented PMFBY. As on December 2017, total claims of Rs. 13292 crore have been approved for 116 lakhs farmers (applications) and Rs. 12020 crore have been paid under PMFBY.

Industrial, Corporate and Infrastructure Performance

1.57 As per the Index of Industrial Production (IIP), which is a volume index with base year 2011-12, the industrial output increased by 3.2 per cent during April-November 2017-18 vis-à-vis the corresponding period of previous year. This was a composite effect of growth in electricity generation at 5.2 per cent and growth in mining and manufacturing sectors at 3.0 per cent and 3.1 per cent respectively. In November 2017, the IIP registered a growth of 8.4 per cent to take the April-November growth to 3.2 per cent over the corresponding period of previous year. The eight Core infrastructure supportive industries, viz. coal, crude oil, natural gas, petroleum refinery products, fertilizers, steel, cement and electricity that have a total weight of nearly 40 per cent in the IIP attained a cumulative growth of 3.9 per cent during April-November 2017-18 over the corresponding period of previous year. The production growth of coal, natural gas, refinery products, steel, cement and electricity were positive. The steel production increased substantially, while the production of crude oil and fertilizers fell marginally during the period.

1.58 Nominal outstanding credit growth to industry at end November 2017 was 1 per cent higher as compared to end November 2016 as per the latest RBI data. Demand for funds by Indian firms, in the wake of the credit slowdown, has been somewhat met by alternative sources such as corporate bonds, external commercial borrowings and commercial paper.

1.59 India has leapt 30 ranks over its previous rank of 130 in the World Bank's latest Doing Business Report 2018. Moody's Investors Service has also raised India's rating from the lowest investment grade of Baa3 to Baa2. This has been made possible due to a host of measures undertaken by the Government including implementation of GST, Insolvency and Bankruptcy Code, and announcement of bank recapitalization. A number of reforms were undertaken to boost industrial growth including Make in India programme, Start-up India and Intellectual Rights Policy.

1.60 Sectoral Initiatives

- *Steel*: In order to address dumping of cheap steel imports from China, South Korea and Ukraine, the Government raised customs duty and imposed anti-dumping duty. Similarly, Minimum Import Price (MIP) was introduced on a number of items in February 2016, with a sunset clause of one year. These measures helped the domestic producers and exports started recovering. In February 2017, Government notified anti-dumping duties and countervailing duties on various steel products. The Government also rolled out a New Steel Policy in May 2017.
- *Micro, Small and Medium Enterprises (MSME) Sector:* MSMEs play a crucial role in providing large scale employment opportunities at comparatively lower capital cost than large industries and also in industrialization of rural & backward areas. The Government has also initiated the Pradhan Mantri Mudra Yojana for development and refinancing activities relating to micro industrial units.
- *Textiles and Apparels:* To address some of the constraints faced by apparel firms,

Cabinet announced a Rs. 6000 crore package for the apparel sector on June 2016. It was found that since its implementation in June 2016, the package had a positive impact on the exports of Ready Made Garments (RMG) of Man-made fibres, while it did not have a statistically significant impact on the RMG of other natural fibres, except wool. The impact of the package improved over time and did not show any signs of attenuation. Government. In December 2017, the approved the scheme for Capacity Building in Textile Sector with an outlay of ₹1,300 crore for the period from 2017-2018 to 2019-2020.

- *Leather sector:* Leather sector is also highly labour intensive sector. For the purpose of promotion of employment in the leather & footwear sector, a scheme was announced in December 2017 with an outlay of Rs 2600 crore over three financial years from 2017-18 to 2019-2020.
- *Gems and Jewellery:* India is one of the largest exporters of gems and jewellery. Growth of exports from this sector have risen from 0.7 per cent in 2014-15 to 12.8 per cent in 2016-17. The sector faces certain constraints that would require training in jewellery designing, setting up hallmarking centres, etc. and creation of multiple jewellery parks.

Infrastructure Performance

1.61 The Government has been increasing its investment over time on building infrastructure to support India's long-term growth. The performance of some of the key infrastructure sectors is discussed in the following paragraphs.

- *Roads:* The primary agenda of the Government in this sector has been building new National Highways (NHs) and also converting State Highways (SHs) into NHs. As of September 2017, the length of roadways comprises 115,530 km of NHs along with 1,76,166 km of state highways and 53,26,166 km of other roads. In order to expedite completion of delayed projects, various steps have been taken for streamlining of land acquisition & environment clearances. The new umbrella program 'Bharatmala Pariyojana' aims to achieve optimal resource allocation for a holistic highway development.
- *Railways:* During April-September 2017, Indian Railways carried 558.1 million tonnes of revenue earning freight traffic as against 531.2 million tonnes during the corresponding period of previous year, showing an increase of 5.1 per cent during this period. The Government has emphasized on railways infrastructure development. The pace of commissioning Broad Gauge (BG) lines and completion of electrification have been accelerated. With financial assistance from Government of India, 425 km of metro rail systems are operational and about 684 km are under construction in various cities across India as in December 2017.
- *Ports:* In 2017-18 (till 31.12.2017), cargo traffic handled at Major Ports has been 499.4 million tonnes, as compared to 481.8 million tonnes handled during the corresponding period of 2016-17. Under the Sagarmala Programme which aims to promote port-led development along Indian coast line, 289 projects worth Rs. 2.17 lakh crore are under various stages of implementation and development.
- *Telecom:* The programmes including 'Bharat Net' and 'Digital India' aim at converting India into a digital economy. At the end of September 2017, the number of subscribers stood at 1207 million, out of which 502

million connections were in the rural areas and 705 million in the urban areas.

- *Civil Aviation:* In April–September 2017, domestic airlines carried 57.5 million passengers, showing a growth rate of 16 per cent over the corresponding period of previous year. Government is taking initiatives like liberalization of air services, airport development and regional connectivity through UDAN scheme.
- *Power:* All-India installed power generation capacity reached 330,861 MW as on November 30, 2017. As on April 1, 2015, there were 18,542 unelectrified census villages, of these electrification of 15,183 villages has been completed as on November 30, 2017. The Ujjawal DISCOM Assurance Yojana (UDAY) has focused on enhancing the financial health of DISCOMs by reducing interest burden, cost of power and aggregated technical and commercial losses. A new scheme, Saubhagya (Pradhan Mantri Sahaj Bijli Har Ghar Yojana), was launched in September 2017 to ensure electrification of all remaining willing households in the country in rural and urban areas.

Services

1.62 With a share of 55.2 per cent in India's GVA, the services sector continued to be the key driver of India's economic growth, and is expected to contribute almost 72.5 per cent of GVA growth in 2017-18. While the growth of this sector in 2017-18 is expected to be at 8.3 per cent, the growth in services exports and net services were robust at 16.2 per cent and 14.6 per cent respectively in H1 of 2017-18.

1.63 Out of the 32 States and Union Territories (UTs) for which data are released for new base (2011-12 series) by CSO, the services sector is the dominant sector contributing to more than half of the gross state value added (GSVA) in 15 states and UTs. Among these 32 states and UTs, Delhi and Chandigarh are at the top with over 80 per cent and Sikkim is at the bottom with 31.7 per cent, in terms of services sector GVA share.

1.64 In 2016-17, FDI equity inflows to the services sector (top 10 sectors including construction) declined by 0.9 per cent to US$ 26.4 billion, though overall FDI equity inflows grew by 8.7 per cent. However, during 2017-18 (April-October), the FDI equity inflows to these sectors grew by 15.0 per cent, as compared to 0.8 per cent growth in total FDI equity inflows, mainly due to higher FDI in two sectors i.e. telecommunications and computer software and hardware.

1.65 India remained the eighth largest exporter of commercial services in the world in 2016 (WTO, 2017) with a share of 3.4 per cent, which is double the share of India's merchandise exports in the world. India's services export growth returned to positive territory with 5.7 per cent growth in 2016-17 from growth of (-) 2.4 per cent in 2015-16. Services exports recorded a robust growth of 16.2 per cent during April-September 2017, with turnaround observed in some major sectors like travel and software services. India's service sector imports also exhibited a much higher growth of 17.4 per cent in April-September 2017. Net services receipts rose by 14.6 per cent during April-September of 2017-18 as compared to H1 of 2016-17. Net surplus in services financed about 49 per cent of India's merchandise trade deficit in H1 of 2017-18 and cushioned the current account deficit.

1.66 In India, the tourism sector has been performing robustly with Foreign Tourist Arrivals (FTAs) growing to 8.8 million in 2016. Foreign Exchange Earnings (FEEs) from tourism grew at 8.8 per cent to US$ 22.9 billion in 2016. As per the provisional data of Ministry of Tourism, FTAs during 2017 were 10.2 million with a growth of 15.6 per cent, while the FEEs from tourism were US$ 27.7 billion with a growth of 20.8 per cent over 2016. Outbound tourism has also picked up in recent years, with the number of departures of Indian nationals from India growing by 7.3 per cent to 21.9 million during 2016 from 20.4 million in 2015. This is more than double the foreign tourist arrivals in India. Domestic tourist visits grew by 12.7 per cent to 1,614 million in 2016 from 1,432 million in 2015.

1.67 As per NASSCOM data, India's Information Technology –Business Process Management (IT-BPM) industry grew by 8.1 per cent in 2016-17 to US$ 139.9 billion (excluding e-commerce and hardware). IT-BPM exports grew by 7.6 per cent to US$ 116.1 billion in 2016-17. E-commerce market is estimated at US$ 33 billion, with a 19.1 per cent growth in 2016-17. However, as per the RBI data, software exports contracted by 0.7 per cent in 2016-17. In H1 of 2017-18, it grew by 2.3 per cent. USA, UK and EU account for around 90 per cent of the total IT-ITES exports. While, there are new challenges surfacing in these traditional geographies, demand from Asia Pacific Countries (APAC), Latin America and Middle East Asia is growing and new opportunities are emerging for expanding in continental Europe, Japan, China and Africa.

1.68 The share of real estate sector which includes ownership of dwellings accounted for 7.7 per cent in India's overall GVA in 2015-16. The growth of this sector decelerated in the last three years from 7.5 per cent in 2013-14 to 4.4 per cent in 2015-16. This was mainly due to growth of the ownership of dwelling segment decelerating from 7.1 per cent in 2013-14 to 3.2 per cent in 2015-16. As per NHB's RESIDEX Index, housing prices increased in 36 cities during April-June 2017 out of 50 major cities, while 13 cities witnessed a decline.

1.69 The professional scientific & technical activities, which include R&D services, grew by 17.5 per cent and 41.1 per cent in 2014-15 and 2015-16 respectively. India-based R&D services companies, which account for almost 22 per cent of the global market, grew by 12.7 per cent. However, India's gross expenditure on R&D has been low at just around 1 per cent of GDP. India currently ranks 60th out of 127 on the Global Innovation Index (GII) 2017, improving from 66th rank in 2016. According to the Global Competitiveness Report 2017-18, India's capacity for innovation has been lower than that of many countries like the USA, the UK, South Korea, but it is better than that of China. However, in terms of patent applications per million population, India significantly lags behind other BRICS countries and in terms of company spending on R&D, India ranks marginally below China.

1.70 In the case of Satellite Launching, as on March 2017, PSLV had successfully launched 254 satellites. Foreign exchange earnings of India from export of satellite launch services has increased noticeably in the recent years. Consequently, India's share in global satellite launch services revenue have also increased to 1.1 per cent in 2015-16 from 0.3 per cent in 2014-15.

1.71 The Government has taken many initiatives in the different services sector, which include digitization, e-visas, infrastructure status to Logistics, Start-up India, schemes for the housing sector, etc., which could give a further fillip to the services sector. The prospects look bright with good performance of sub sectors like Tourism, Aviation, and Telecom. The downward risk however lies in the external environment for software and business services.

Social Infrastructure

Expenditure on social infrastructure

1.72 The all India expenditure on social services as a percentage of GDP had remained in the range of 6 per cent during 2012-13 to 2014-15; and has increased from 5.8 per cent in 2015-16 to 6.6 per cent in 2017-18 (BE).

1.73 The expenditure on social services as a percentage of GSDP for 29 States during the three years (i.e. from 2014-15 to 2016-17(BE)) indicates an upward trend from 6 per cent to 6.9 per cent.

Status on education

1.74 As per the Right to Education (RTE) indicators which reflect the effectiveness of universalization of education, most of the States have registered an increase in the percentage of schools complying with the PTR (Pupil Teacher Ratio) norms. The GPI (Gender Parity Index) reflects disparity of girls vis-a-vis boys in access to education. With consistent efforts by the government through programmes like *Beti Padhao, Beti Bachao*, the GPI has improved substantially at the primary and secondary levels of enrolment. However, in higher education, gender disparities still prevail in enrolment, for which various programmes are being implemented by the Government to improve net intake rate of women in higher education.

Status on health

1.75 The report 'India: Health of the Nation's States', 2017 has for the first time provided comprehensive set of findings on the distribution of diseases and risk factors across all States of the country from 1990 to 2016. Malnutrition still remains the most important risk factor (14.6 per cent) that results in disease burden in the country, though dropping substantially since 1990. Of the total disease burden in India, 33 per cent was due to communicable, maternal, neonatal, and nutritional diseases (termed infectious and associated diseases) in 2016. The contribution of non-communicable diseases has increased from 30 per cent of the total disease burden in 1990 to 55 per cent in 2016 and that of injuries from 9 per cent to 12 per cent. Around 5 per cent of health loss is attributable to unsafe water, sanitation, and hand-washing practices, which the government is trying to address through the Swachh Bharat Mission (SBM).

Swachh Bharat Mission-Gramin

1.76 Several studies have pointed out that there are health and economic gains from being Open Defecation Free (ODF) areas. According to the World Bank estimates, the lack of sanitation facilities costs India over 6 per cent of GDP. Taking cognizance of the role of cleanliness in healthy living, and to accelerate the efforts to achieve universal sanitation coverage, Government launched the Swachh Bharat Mission on 2nd October, 2014. As per baseline survey conducted by Ministry of Drinking Water & Sanitation, 55 crore persons were defecating in open in October 2014, which declined to 25 crore in January 2018; at a much faster pace compared to the trend observed before 2014.

Labour Reforms

1.77 The employment sector in India poses great challenge in terms of its structure which is dominated by informal workers, high levels of under employment, skill shortages and labour markets with rigid labour laws and institutions. In this context, the Government is in the process of rationalization of the 38 Labour Acts by framing relevant provisions of existing laws into 4 labour codes viz Code on Wages, Code on Industrial Relations, Code on Social Security & Welfare, and Code on Safety & Working conditions.

SUSTAINABLE DEVELOPMENT, ENERGY AND CLIMATE CHANGE

Sustainable Development Goals

1.78 There are many similarities between the path India has chosen for development and the UN goals for Sustainable Development. The UN Sustainable Development Goals (SDGs) adopted by the international community in September 2015 comprehensively cover social, economic and environmental dimensions and build on the Millennium Development Goals (MDGs). There are 17 SDGs which have 169 targets to be achieved by 2030.

1.79 India presented its first Voluntary National Review (VNR) on the implementation of SDGs on 19th July, 2017 at the High Level Political Forum on Sustainable Development (HLPF) at United Nations, New York. The VNR report is based on an analysis of progress under various programmes and initiatives in the country. The VNR report focused on 7 SDGs: SDGs 1 (No Poverty); 2 (Zero Hunger); 3 (Good Health and Well-Being); 5 (Gender Equality); 9 (Industry, Innovation and Infrastructure), 14 (Life below Water) and 17 (Partnerships for the Goals).

Urban India and Sustainable Development

1.80 The SDG 11 states "make cities inclusive, safe, resilient and sustainable". India is now embarking on a fast rural to urban transition. The need of the hour is the provision of public services by the cities to its residents. However, raising resources of the magnitude that is required for a sustainable urban transformation is going to be a daunting challenge. The average cost recovery is less than 50 per cent in most of the Urban Local Bodies (ULBs). The way forward is to encourage the ULBs to raise resources through various innovative financial instruments such as municipal bonds, PPPs, credit risk guarantees, etc.

Access to Sustainable Energy

1.81 Access to affordable, reliable, sustainable and modern energy has deep inter-linkages with all the other goals. It is directly and indirectly linked to other sustainable development objectives such as good health and well-being, gender equality, industry, innovation and infrastructure, sustainable cities and communities.

1.82 In India, the burden of collecting fuel wood and water and cooking falls disproportionately on the female members of households. The adverse impacts of indoor air pollution also fall disproportionately on women and children who are directly involved in cooking or spend a major portion of their time indoors. Although, over the years the country has made considerable progress in providing access to clean cooking options to households, a large number of people still lack access to clean cooking fuels. Access to modern energy sources is of paramount importance, as it can reduce the amount of time spent on collection of firewood thereby leading to a positive impact on girls' education and employment.

1.83 As reported in the previous edition of the Economic Survey, Government of India had launched "Pradhan Mantri Ujjwala Yojana" (PMUY) in May, 2016 and upgraded it to provide 80 million LPG connections by 2020 to BPL households. Complementing the above scheme, Government has come out with other initiatives namely "Ujjawala Plus" which will address the cooking needs of deprived people who are not covered under the Socio-Economic Caste Census

(SECC) 2011. During 2016-17, 3.25 crore new LPG connections were released that includes 2 crore connections released under PMUY.

1.84 In addition, Government of India is committed to provide 24X7 reliable and quality power supply to all its consumers by 2019. The Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) scheme was launched in 2015 to achieve 100 per cent village electrification and Saubhagya scheme was launched on 25th September, 2017, to provide energy access to all by last mile connectivity and electricity connections to all remaining un-electrified households in rural and urban areas to achieve universal household electrification in the country. As per Saubhagya portal of Rural Electrification Corporation, out of 18.1 crore rural household in the country, 14.2 crore (78%) rural households have been electrified (as on January 16, 2018). Out of the total installed capacity of electricity in India, around 18 per cent was from renewable energy sources (as on November 30, 2017).

1.85 International Solar Alliance (ISA), which was launched by Shri Narendra Modi, Hon'ble Prime Minister of India and Mr. François Hollande, former President of France on November 30, 2015 in Paris, entered into force on December 6, 2017. ISA is a coalition of solar resource rich countries lying fully or partially between the Tropics of Cancer and Capricorn and aims to specifically address energy needs by harnessing solar energy. ISA is also the first International inter-governmental treaty-based organization headquartered in India. Currently, 46 countries have signed and out of these, 19 countries have ratified the ISA Framework Agreement. ISA is a trillion-dollar opportunity in solar energy. Economy and industry in turn can get benefitted by the business opportunities available across 121 ISA member countries.

India and Climate Change

1.86 Domestically, India has launched various policies and set up institutional mechanisms to advance its climate actions. Government of India is implementing the National Action Plan on Climate Change (NAPCC), which includes eight national missions covering solar, energy efficiency, agriculture, water, sustainable habitat, forestry, Himalayan eco system and knowledge, apart from various other initiatives. These actions reflect its commitment to address climate change.

Current Multilateral Negotiations on Climate Change

1.87 Currently, the multilateral climate change negotiations are primarily focused on framing the rules and regulations for implementing the Paris Agreement. At the 23rd session of the Conference of Parties to the UNFCCC (COP 23), the Parties advanced the work programme under Paris Agreement. Key takeaways for India from COP 23 have been that the agenda of pre-2020 climate change commitments and implementation has found a significant place in COP 23 outcome in the form of a decision with steps for future action on pre-2020 action and ambition. This decision emphasizes that enhanced pre-2020 actions can lay a solid foundation for enhanced post-2020 ambitions. India has been able to preserve differentiation in informal notes/texts on various elements of Paris Agreement work programme including nationally determined contributions, adaptation communication, transparency framework, compliance, technology framework, finance and capacity building prepared for further work on rules, modalities and guidelines for Paris Agreement.

Review of Fiscal Developments

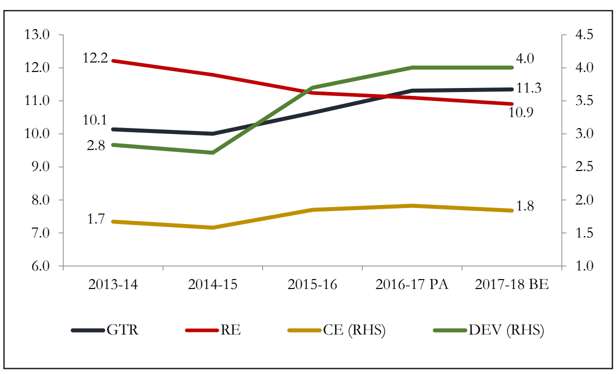
02

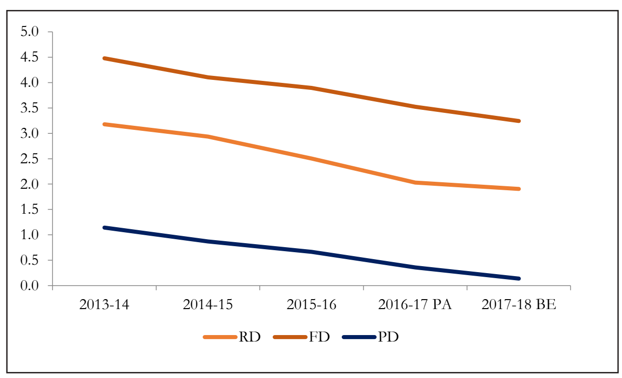
CHAPTER

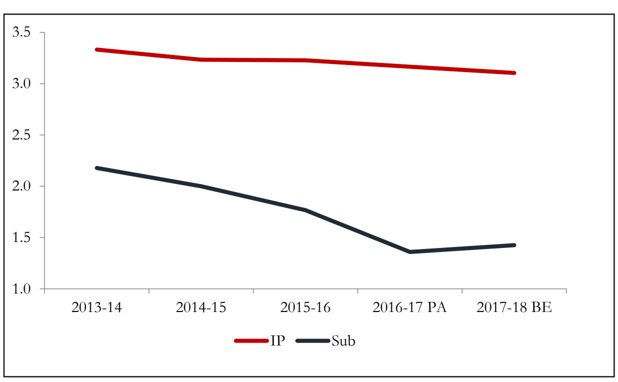
Sound public financial management has been one of the pillars of India's macro-economic stability in the last three years. Based on this firm footing, the Government, in partnership with the States, ushered in the long-awaited GST era. The GST was unveiled after comprehensive preparations, calculations and multi-stage consultations, yet the sheer magnitude of change meant that it needed to be carefully managed. The Government is navigating the change and challenges, including the possibility that a substantial portion of the last-month GST collections may spill over to the next year. Meanwhile, direct tax collections are expected to meet targets. And spending plans are broadly on track.

2.1 The firm footing afforded by the Government to unleash tax reforms in the current year could be perused from the Charts below. Most fiscal indicators-revenue buoyancy, expenditure quality, devolution and deficits-improved discernibly in the last three years. A

Figure 1 (a to c) : Fiscal indicators as percentage of GDP







detailed discussion of the trends in receipts, expenditure and devolution by the Centre and the financial position of the General Government till BE 2017-18 was presented in the Volume 2 of the Economic Survey 2016-17 and hence is largely avoided in the ensuing sections. The trends discussed here relate largely to the first eight months of the current financial year.

Source: **Controller General of Accounts (CGA), Government of India**

Note: **GTR=gross tax revenue; RE=revenue expenditure; CE=capital expenditure; DEV=tax devolution to States; IP=interest payments; Sub=subsidies; RD=revenue deficit; FD=fiscal deficit; PD=primary deficit; PA=provisional actuals; BE=budget estimates**

RECEIPTS AND EXPENDITURE OF THE CENTRAL GOVERNMENT

A. Receipts

2.2 The data on Central Government finances are available till November 2017 from the Controller General of Accounts (CGA). There are three distinct patterns on the revenue front till November 2017 (Table 1), the confluence of which is reflected in the trends in non-debt receipts of the Centre. First, the gross tax collections are reasonably on track. Second, the non-tax revenues have visibly under-performed. Third, non-debt capital receipts, mainly proceeds from disinvestment, are doing well. As against last year's achievement of Rs. 46,247 crore realized from 16 transactions of disinvestment, the budget estimate for 2017-18 was set at Rs. 72,500 crore, split into Rs. 46,500 crore from disinvestment of Central Public Sector Enterprises (CPSEs), Rs. 15,000 crore from strategic disinvestment and Rs. 11,000 crore from listing of insurance companies. An amount of about Rs. 52,378.2 crore has been realized during April-November 2017, that includes Rs.30,867.0 crore through minority stake sale in CPSEs, Rs. 4,153.6 crore through disinvestment of strategic holdings in SUUTI and Rs.17,357.5 crore through listing of insurance companies. This realization generates optimism regarding disinvestment proceeds vis-à-vis the ambitious budgetary targets. Measures taken for investment management in CPSEs are at Appendix 1.

2.3 The trends indicated in Table 1 are confirmed in Table 2. The difference between the gross tax revenue and net tax revenue is mainly the tax devolution to the States. The share of States in taxes grew by 25.2 per cent during April-November 2017, much higher than the growth in net tax revenue (to centre), which is what the Centre has at its disposal to spend from its own taxes. Disinvestment proceeds and non-tax revenues have shown contrasting growth patterns, the former reinforcing the revenue position and the latter dampening it.

2.4 The growth in direct tax collections of the Centre kept pace with the previous year (Figure 3). Considering that more than half of the direct tax collections are normally realized during the last four months of the financial year (Figure 2), the budget targets for the current year are still not out of sight (Figure 3). The indirect tax collections in the previous two years were buoyed by mobilization of additional resources (ARM), prudently apportioning the petroleum price advantage into pass-through to the consumers and raising of development funds. Considering that there are no significant ARM measures in the current year, the pace of growth in indirect taxes

Table 1 : Central Government's Receipts during April-November

	2015-16	2016-17	2017-18	2015-16	2016-17	2017-18
	(Rs. in lakh crore)			Per cent of BE (for full year)		
Gross tax revenue	7.68	9.33	10.87	53.0	57.2	56.9
Net tax revenue (to centre)	4.65	6.21	6.99	50.5	58.9	57.0
Non-tax revenue	1.73	1.75	1.05	78.1	54.2	36.5
Revenue receipts	6.38	7.96	8.05	55.9	57.8	53.1
Non-debt capital receipts	0.21	0.33	0.62	25.8	48.5	73.3
Non debt receipts	6.59	8.29	8.67	53.9	57.4	54.2

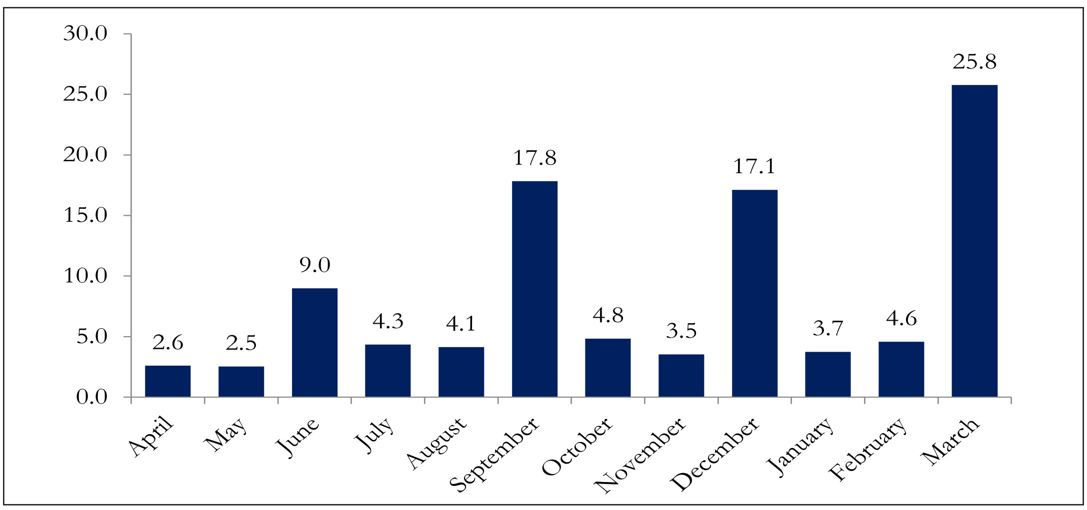
Source: **CGA, Government of India**

Table 2 : Growth in Items of Receipts (per cent)

	2014-15	2015-16	2016-17	2017-18
	April-November			
Gross Tax Revenue	6.5	20.8	21.5	16.5
Net tax revenue	4.3	12.5	33.6	12.6
Non-tax revenue	20.5	34.9	1.0	-39.7
Total revenue receipts	7.8	17.8	24.8	1.1
Non-debt capital receipts	-17.3	180.3	57.1	89.9
Non debt receipts	7.3	20	25.8	4.6

Source: **CGA, Government of India**

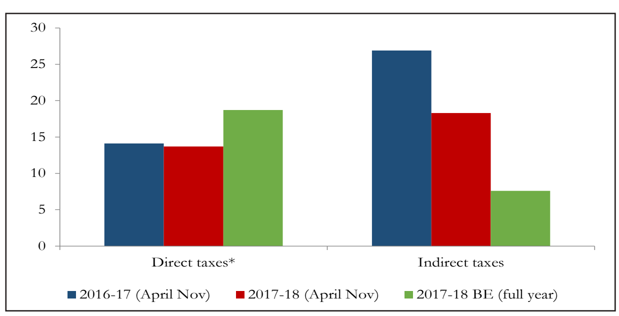
Figure 2 : Monthly share in collection of direct taxes* (in per cent): average 2014-15 to 2016-17



Source: **CGA, Government of India**

*** *Note:* Direct taxes discussed here include only personal income tax and corporate income taxes**

Figure 3 : Growth in Central taxes (per cent)



Source: **CGA, Government of India**

*** *Note:* Direct taxes discussed here include only personal income tax and corporate income taxes**

during the first eight months is comforting. The budgeted growth for indirect taxes for the full year of 2017-18 is only 7.6 per cent; the growth so far is 18.3 per cent. The eventual outcome in indirect taxes during this year will depend on the final settlement of GST accounts between the Centre and the States and the likelihood that only taxes for eleven months (excluding IGST on imports) will be realized.

B. Expenditure and Deficits

2.5 Central Government expenditure progressed at a robust pace during April-November 2017 (Tables 3 & 4). One of the major fiscal reforms in the current year was the advancing of the budget cycle and processes by almost a month. This gave considerable leeway to the spending agencies to plan in advance and start implementation early in the financial year. In this sense, the expenditure trends in the current year at any midpoint—both as percentage of budget estimates and in terms of their growth rates—become not comparable with those of previous years (Tables 3 & 4). This has also partly contributed to greater deficits in the current year so far, compared to corresponding periods in the previous years (Table 5).

2.6 The trends in fiscal and revenue deficits, seen in table 5, are the combined effect of the patterns in non-debt receipts (shown in table 1 and 2) and expenditure. Apart from the early progression of expenditure, the fiscal deficit overshooting the budgetary target during April-November 2017 has also been due to the front-loading of some expenditure, undertaken as part of prudent expenditure management. Notwithstanding this, what table 5 suggests is that there was pressure on both revenue and fiscal deficits during the first eight months of the current year and that marked efforts will be required to meet the budgeted targets for the full year.

Table 3 : Central Government's Expenditure during April-November

	2015-16	2016-17	2017-18	2015-16	2016-17	2017-18
	(Rs. in lakh crore)			Per cent of BE		
Total Expenditure	11.42	12.87	14.79	64.3	65.0	68.9
Revenue Expenditure	9.83	11.44	12.95	64.0	66.1	70.5
Capital Expenditure	1.59	1.42	1.84	65.8	57.7	59.5

Source: **CGA, Government of India**

Table 4 : Growth in Items of Expenditure (per cent)

	2014-15	2015-16	2016-17	2017-18
	April-November			
Total expenditure	5.2	6.3	12.6	14.9
Revenue expenditure	6.4	3.2	16.4	13.1
Capital expenditure	-3.2	30.8	-10.4	29.3

Source: **CGA, Government of India**

Table 5 : Central Government's Deficit Indicators during April-November

	2015-16	2016-17	2017-18	2015-16	2016-17	2017-18
	(Rs. in lakh crore)			Per cent of BE		
Revenue Deficit	3.45	3.48	4.90	87.5	98.6	152.2
Fiscal Deficit	4.84	4.58	6.12	87.0	85.8	112.0

Source: **CGA, Government of India**

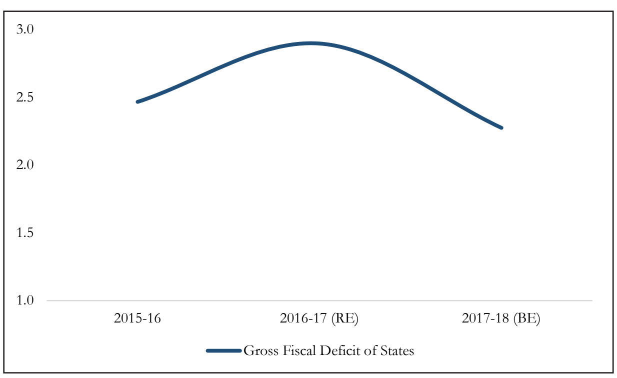
2.7 Movements in revenue expenditure can be majorly explained by changes in interest payment liabilities and subsidy payments (Table 6). Interest payment liabilities have firmed up moderately during April-November 2017, possibly due to outgo on account of servicing the market stabilization bonds issued to reduce excess liquidity, post demonetization. With the loss of price advantage in petroleum products in the international market, the petroleum subsidy has firmed up. On the whole subsidies seem to be within control and target. The outgo on pensions grew strongly during the first eight months reflecting enhanced payments under the Seventh Pay Commission.

Table 6 : Some Major Components of Revenue Expenditure

	2015-16	2016-17	2017-18	2015-16	2016-17	2017-18
	April-November (per cent of BE)			April-November (percentage growth)		
Interest payment	55.4	54.1	59.2	8.6	5.6	16.2
Food subsidy	81.4	91.3	93.1	11.1	21.6	9.9
Fertilizer subsidy	85.4	79.7	70.5	7.6	-10.5	-11.5
Petroleum subsidy	82.6	65.2	85.7	-46.6	-23.8	13.3
Major subsidies	82.9	85.3	85.7	-3.6	5.0	4.2
Salaries and pensions	52.9	52.5	61.6	3.2	28.5	22.5

Source: **CGA, Government of India**

Figure 4 : Fiscal deficits of States (*) as per cent of GDP



Source: **Reserve Bank of India**
*** *Note:* Data relating to deficit pertain to only 26 States: RE=Revised Estimate; BE=Budget Estimate**

STATE AND GENERAL GOVERNMENT

2.8 Figure 4 and table 7 show that States targeted to consolidate in the current year, after the UDAY-led aberration in their fiscal balances for the previous two years. UDAY bonds had an impact of 0.5 and 0.6 percentage points of GDP on the deficits of the 26 States under consideration in 2015-16 and 2016-17 respectively.

2.9 The position of 21 State Governments that account for about 86 per cent of the total GSDP of all states and for which comparable data are available shows that their revenue receipts have kept pace with the previous year in terms of growth and in relation to the corresponding budget estimates for the full year (Figure 5). Further, data on 23 States shows that both revenue and fiscal deficits as percentage of the corresponding budget estimates (Figure 6) is lower in the current year, compared to the previous year.

2.10 The net market borrowings by the State Governments, as reported by the Reserve Bank of India (RBI), during April-December of the current and previous years stood at Rs. 2493.0 billion and Rs. 2351.6 billion respectively. As per the RBI (Press Release dated January 5, 2018), the quantum of total market borrowings by the

Table 7 : Receipts and Disbursements of State Governments (as percent of GDP)

Item	2015-16	2016-17 (RE)	2017-18 (BE)
Tax Receipts	8.3	8.6	8.9
States' Own Tax Revenue	5.3	5.5	5.6
Non Tax Receipts	2.9	3.7	3.7
Total Disbursements	14.3	15.9	16.0
Revenue	11.3	12.6	12.5
Capital (*)	3.0	3.3	3.5

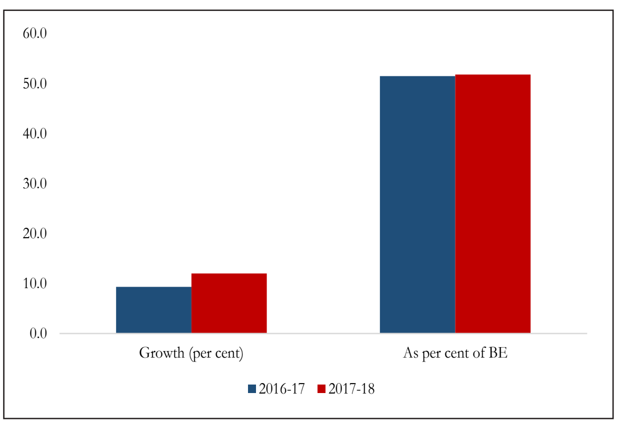
Source: **Reserve Bank of India and Union Budget 2017-18**

Note: **RE : Revised Estimates BE : Budget Estimates; Data are provisional and pertain to budgets of 26 states; (*) Capital disbursements are exclusive of public accounts, but inclusive of loans and advances.**

State Governments and the Union Territory of Puducherry for the fourth quarter is expected to be in the range of Rs. 1,26,2.0 billion to Rs. 1,38,2.0 billion. This, combined with the advance estimates of GDP for 2017-18, means that all the States taken together would possibly be able to meet their targeted level of fiscal deficit (Figure 4), if the borrowing plan for the fourth quarter is adhered to and if no other significant means of financing is resorted to.

2.11 Coupled with the Central Government's target for reducing fiscal deficit by 0.3 percentage points of GDP, the State fiscal targets for 2017-18 (Figure 4) meant that the General Government targeted to achieve an overall improvement in their fiscal position in the current year, boosted by a compression in revenue expenditure and a modest improvement in capital expenditure (Figure 7 and Table 8).

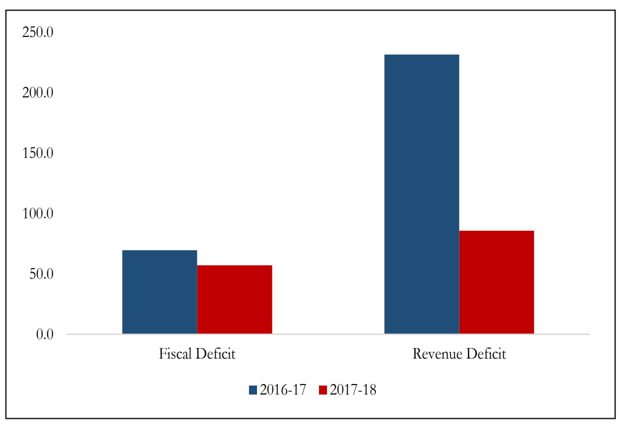
Figure 5 : Revenue receipts of States during April-November



Source: **CAG**

Note: **Information pertains to 21 States.**

Figure 6 : Deficit of States during April November as % of BE



Source: **CAG**

Note: **Information pertains to 23 States.**

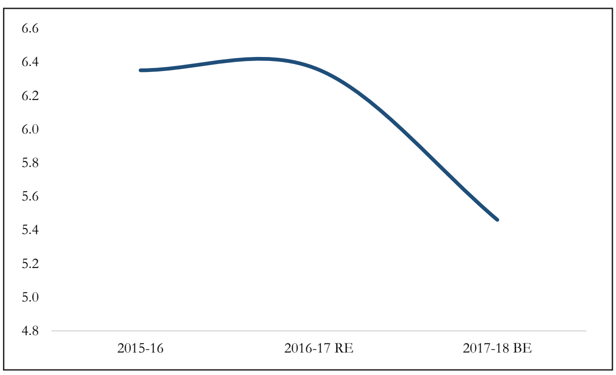
Table 8 : Combined receipts and disbursements of Central and State Governments (per cent of GDP)

Item	2015-16	2016-17 (RE)	2017-18 (BE)
Total non-debt receipts	18.3	20.5	20.6
Tax Revenue	15.2	15.9	16.1
Non Tax Revenue	2.7	4.3	3.8
Non debt Capital receipts	0.4	0.4	0.7
Total Disbursements	24.7	26.9	26.1
Revenue	20.5	22.5	21.7
Capital (*)	4.2	4.4	4.3

Source: **Reserve Bank of India and Union Budget 2017-18**

Note: **RE : Revised Estimates BE : Budget Estimates; Data are provisional and pertain to budgets of 26 states; (*) Capital disbursements are exclusive of public accounts, but inclusive of loans and advances.**

Figure 7 : Gross Fiscal Deficit of the general government (*) as per cent of GDP



Source: **Reserve Bank of India;**

*** *Note:* Data relating to deficit pertain to only 26 States: RE=Revised Estimate; BE=Budget Estimate**

2.12 For the general government as a whole, with the expected revenues from GST becoming increasingly clearer, the fiscal balance vis-à-vis budget estimates will depend on the emerging patterns of revenue expenditure in the fourth quarter. Considering the complexities involved in rolling out the GST, the preliminary assessment should be that the general government is navigating the initial phases of this momentous change reasonably. The difficulties faced by various sections of tax payers are being addressed through various rationalisation measures, including substantive revision in tax rates, which are discussed in Annexure 1.

ANNEXURE 1*

1. SALIENT MEASURES UNDER INDIRECT TAXES DURING 2017-18

A. Customs duty changes to incentivize 'Make in India'

- Basic Customs Duty was reduced on inputs and raw materials like liquefied natural gas, o-Xylene, vegetable tanning extracts, nickel, medium quality terephthalic acid and qualified terephthalic acid, hot rolled coils for use in certain manufacturing processes, Vinyl Polyethylene Glycol for manufacture of Poly Carboxylate Ether, inputs or raw materials for manufacture of specified printers, ink cartridges, ink spray nozzle, cellular mobile phones and base stations, solar tempered glass for the manufacture of solar cells/panels/modules, resin and catalyst for specified manufacturing processes, all parts for manufacture of LED lights or fixtures including LED lamps, etc.
- Basic Customs Duty was increased on specified goods manufactured indigenously in significant quantity, including: ad-valorem Component on 298 items of fabrics on manmade fibres, co-polymer coated MS steel tape / stainless steel tape for manufacture of specified telecommunication grade optical fibre cables, specified printers, ink cartridges, ink spray nozzle, cellular mobile phones and their specified parts, base stations, microwave ovens, televisions, LED lamps, specified lamps and lighting fittings, video recording or reproducing apparatus, electricity meters, television cameras, digital cameras and video camera recorders, LCD, LED or OLED panels for manufacture of television, RO membrane element for household type filters, cashew nut, etc.
- Export Duty of 15% was imposed on other aluminium ores, including laterite.
- Basic Customs Duty was increased on crude and refined palm oil of edible grade, crude sunflower oil, refined sunflower oil of edible grade, crude and refined soya bean oil, crude and refined rapeseed oil including canola oil, mustard oil and colza oil to protect the interest of farmers and local producers of agricultural product.

B. Rollout of GST

In a historic tax reform, the goods and services tax was rolled out on 1st July, 2017, subsuming almost all major indirect taxes like Central Excise Duty, Service Tax, VAT, CST, entertainment tax, Octroi, luxury tax, a large number of cesses/surcharges and various other state and central levies on goods and services.

a. Addressing concerns under GST

The concerns raised by the stakeholders related to business processes (like migration, registration, return filing and refunds on the portal), GST rates, difficulties faced by MSME sector in compliance and cash flow issues of exporters on account of delays in refunds. The GST Council had several meetings and took specific measures to address concerns expeditiously. To address the IT issues, a GOM (Group of Ministers) was constituted which has taken a number of measures. Another GOM looked into the issues of MSMEs. A Committee on exports was constituted to address the concerns of exporters. The GST Council also recommended significant rationalization in rates. Extensive exercises were undertaken for streamlining tax administration, ensuring that taxpayer has single interface (with either Central or State tax authority). Committees of officers examined issues relating to law and processes and sectoral issues like handicrafts. A number of procedural changes have been made to simplify processes. Extensive efforts were made for taxpayer education and facilitation by way of knowledge sharing, dissemination of information and replies to frequently asked questions. These efforts have smoothened the GST implementation and further efforts at simplification are on.

b. Facilitation measures taken in GST

i. Ease of doing business for small traders

GST has significantly raised turnover thresholds of Rs 20 lakh for an entity to be taxable in GST. Threshold for composition was increased in general to Rs. 1 crore (Rs 75 lakh for special category states except Jammu & Kashmir and Uttarakhand). Other measures for MSME sector include:

- Service providers whose annual aggregate turnover is less than Rs. 20 lacs (Rs. 10 lacs in special category states except J & K) were exempted from obtaining registration even if they are making inter-State taxable supplies of services. This measure will significantly reduce the compliance cost of small service providers.
- Small and medium businesses with annual aggregate turnover up to Rs. 1.5 crores would be required to file quarterly return (monthly for other taxpayers)

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* The tax measures and rate changes given in this Annexure are only meant for general readers and will not serve as reference points for tax payers.

- The reverse charge mechanism under sub-section (4) of section 9 of the CGST Act, 2017 and under sub-section (4) of section 5 of the IGST Act, 2017 has been suspended till 31.03.2018.
- The requirement to pay GST on advances received was proving to be burdensome for small dealers and manufacturers. In order to mitigate their inconvenience on this account, it was been decided that taxpayers having annual aggregate turnover up to Rs. 1.5 crores shall not be required to pay GST at the time of receipt of advances on account of supply of goods.

ii. Rationalization of GST rate structure for goods

After implementation of GST, rates were rationalized to address concerns of trade and consumers. The major decisions taken by the GSTSC Council in its meeting on 10thNovember, 2017 are given below.

28% to 18%: The list of 28% GST rated goods was pruned substantially from 228 tariff headings [about 18.5% of total tariff headings at 4-digit] to only 50 tariff headings including 4 headings which were partially reduced to 18% [about 4% of total tariff headings at 4-digit]. The major items whose duty was reduced are; wire, cables, insulated conductors, electrical insulators, electrical plugs, switches, sockets, fuses, relays, electrical connectors; electrical boards, panels, consoles, cabinets etc for electric control or distribution; particle/fibre boards and ply wood. Article of wood, wooden frame, paving block; furniture, mattress, bedding and similar furnishing; trunk, suitcase, vanity cases, brief cases, travelling bags and other hand bags, cases; detergents, washing and cleaning preparations; liquid or cream for washing the skin; shampoos; hair cream, hair dyes (natural, herbal or synthetic) and similar other goods; henna powder or paste, not mixed with any other ingredient; pre-shave, shaving or after-shave preparations, personal deodorants, bath preparations, perfumery, cosmetic or toilet preparations, room deodorisers; perfumes and toilet waters; beauty or make-up preparations; fans, pumps, compressors; lamp and light fitting; primary cell and primary batteries; sanitary ware and parts thereof of all kinds; articles of plastic, floor covering, baths, shower, sinks, washbasins, seats, sanitary ware of plastic; slabs of marbles and granite; goods of marble and granite such as tiles; ceramic tiles of all kinds; chocolates, chewing gum / bubble gum

18% to 12%: GST rates were rationalised to minimise classification disputes, on the following goods: Condensed milk; refined sugar and sugar cubes; pasta; curry paste, mayonnaise and salad dressings, mixed condiments and mixed seasoning; diabetic food; medicinal grade oxygen; printing ink; hand bags and shopping bags of jute and cotton; hats (knitted or crocheted); parts of specified agricultural, horticultural, forestry, harvesting or threshing machinery; specified parts of sewing machine; spectacles frames; furniture wholly made of bamboo or cane

18% to 5%: Puffed rice chikki, peanut chikki, sesame chikki, revdi, tilrevdi, khaza, kazuali, groundnut sweets gatta, kuliya; flour of potatoes put up in unit container bearing a brand name; chutney powder; fly ash; sulphur recovered in refining of crude; fly ash aggregate with 90% or more fly ash content

12% to 5%: Desiccated coconut; narrow woven fabric including cotton newar [with no refund of unutilised input tax credit]; idli, dosa batter; finished leather, chamois and composition leather; coir cordage and ropes, jute twine, coir products; fishing net and fishing hooks; worn clothing; fly ash brick

5% to nil: Guar meal; hop cone (other than grounded, powdered or in pellet form); certain dried vegetables such as sweet potatoes; unworked coconut shell; fish frozen or dried (not put up in unit container bearing a brand name); khandsari sugar

Other significant rationalisation measures in GST rates: reduction of GST rate on dhoopbatti,dhoop, sambhrani and other similar items from 12% to 5%; reduction of GST rate on Khadi fabric, sold through Khadi and Village Industries Commission's outlets and other similar items from 5% to Nil; reduction of GST rate on handicrafts from 28% to 12%; reduction of GST rate on synthetic yarns from 18% to 12%; reduction of GST rate on plastic, glass, paper or rubber scrap from 18% to 5%; reduction of GST rate on E-waste from 18% to 5%.

iii. Rationalization of GST rate structure for services

Reduction from 18% to 12%:

- Composite supply of works contract services:

  (a) supplied to the Central Government, State Government, Union territory, a local authority, a Governmental Authority or a Government Entity by way of construction, erection, commissioning, installation, completion, fitting out, repair, maintenance, renovation, or alteration of; (b) a historical monument, archaeological site or remains of national importance, archaeological excavation, or antiquity specified under the Ancient Monuments and Archaeological Sites and Remains Act, 1958 (24 of 1958); (c) canal, dam or other irrigation works; (d) pipeline, conduit or plant for (i) water supply (ii) water treatment, or (iii) sewerage treatment or disposal; (e) a civil structure or any other original works meant predominantly for use other than for commerce, industry, or any other business or profession; (f) a structure meant predominantly for use as an educational, clinical, or art or cultural establishment; (g) involving predominantly earth work (that is, constituting more than 75per centof the value of the works contract)

Supplied by way of construction, erection, commissioning, installation, completion, fitting out, repair, maintenance, renovation, or alteration of: (a) a road, bridge, tunnel, or terminal for road transportation for use by general public; (b) a pollution control or effluent treatment plant, except located as a part of a factory; or (c) a structure meant for funeral, burial or cremation of deceased

Supplied by way of construction, erection, commissioning, or installation of original works pertaining to: (a) railways, excluding monorail and metro; (b) post-harvest storage infrastructure for agricultural produce including a cold storage for such purposes;(c) mechanised food grain handling system, machinery or equipment for units processing agricultural produce as food stuff excluding alcoholic beverages.

Associated services, in respect of offshore works contract relating to oil and gas exploration and production (E&P) in the offshore area beyond 12 nautical miles from the nearest point of the appropriate base line.

- Services by way of job work in relation to manufacture of umbrella; printing of all goods falling under Chapter 48 or 49, which attract CGST @ 6%
- Transport of passengers by any motor vehicle designed to carry passengers where the cost of fuel is included in the consideration charged from the service recipient.
- Renting of any motor vehicle designed to carry passengers where the cost of fuel is included in the consideration charged from the service recipient.
- Transportation of natural gas through pipeline.
- Services by goods transport agency (GTA) in relation to transportation of goods[those GTAs opting for forward charge].

Reduction from effective rate of 12% to 8%

- *Composite supply of works contract services involving transfer of property in land or undivided share of land*

Supplied by way of construction, erection, commissioning, installation, completion, fitting out, repair, maintenance, renovation, or alteration of: (a) a civil structure or any other original works pertaining to a scheme under Jawaharlal Nehru National Urban Renewal Mission or Rajiv AwaasYojana; (b) a civil structure or any other original works pertaining to the “In-situ rehabilitation of existing slum dwellers using land as a resource through private participation” under the Housing for All (Urban) Mission/PradhanMantriAwasYojana, only for existing slum dwellers; (c) a civil structure or any other original works pertaining to the “Beneficiary led individual house construction / enhancement” under the Housing for All (Urban) Mission/PradhanMantriAwasYojana;

Supplied by way of construction, erection, commissioning, or installation of original works pertaining to: (a) a single residential unit otherwise than as a part of a residential complex; (b) low-cost houses up to a carpet area of 60 square metres per house in a housing project approved by competent authority empowered under the 'Scheme of Affordable Housing in Partnership' framed by the Ministry of Housing and Urban Poverty Alleviation, Government of India; (c) low cost houses up to a carpet area of 60 square metres per house in a housing project approved by the competent authority under- (1) the “Affordable Housing in Partnership” component of the Housing for All (Urban) Mission/ PradhanMantriAwasYojana; (2) any housing scheme of a State Government;

To the Central Government, State Government, Union Territory, a local authority, a Governmental Authority or a Government Entity by way of construction, erection, commissioning, installation, completion, fitting out, repair, maintenance, renovation, or alteration of residential complex predominantly meant for self-use or the use of their employees or other persons specified in paragraph 3 of the Schedule III of the Central Goods and Services Tax Act, 2017.

Reduction from 18% to 5%

- On services by way of job work in relation to:textiles and textile products falling under Chapter 50 to 63 in the First Schedule to the CTA; all products falling under Chapter 71 in the First Schedule to the CTA; printing of all goods falling under Chapter 48 or 49, which attract CGST @ 2.5% or Nil; all food and food products falling under Chapters 1 to 22 in the First Schedule to the CTA; all products falling under Chapter 23 in the First Schedule to the CTA, except dog and cat food put up for retail sale falling under tariff item 23091000 of the said Chapter; manufacture of clay bricks falling under tariff item 69010010 in the First Schedule to the CTA; manufacture of handicraft goods

- **Reduction from 18% with ITC to 5% without ITC:** supply of services by a restaurant not located in the premises of a hotel having unit of accommodation with declared tariff above Rs 7500; transportation of natural gas through pipeline.

ITC in the same line of business was allowed to: transport of passengers by any motor vehicle designed to carry passengers where the cost of fuel is included in the consideration charged from the service recipient; renting of any motor vehicle designed to carry passengers where the cost of fuel is included in the consideration charged from the service recipient.

Other rationalization of GST Rates: GST rate on Leasing of motor vehicles purchased and leased prior to 1st July 2017 reduced to 65 per cent. of the rate of central tax as applicable on supply of like goods involving transfer of title in goods.

Exemption from levy of GST

- Services provided by and to FédérationInternationale de Football Association (FIFA) and its subsidiaries directly or indirectly related to any of the events under FIFA U-17 World Cup 2017 to be hosted in India.
- Supply of services associated with transit cargo to Nepal and Bhutan (landlocked countries).
- Supply of service by a Government Entity to Central Government, State Government, Union territory, local authority or any person specified by Central Government, State Government, Union territory or local authority against consideration received from Central Government, State Government, Union territory or local authority, in the form of grants.
- Service provided by Fair Price Shops to Central Government, State Government or Union territory by way of sale of food grains, kerosene, sugar, edible oil, etc. under Public Distribution System against consideration in the form of commission or margin.
- Services provided by a goods transport agency to an unregistered person, including an unregistered casual taxable person, other than the following recipients, namely: any factory registered under or governed by the Factories Act, 1948(63 of 1948); or any Society registered under the Societies Registration Act, 1860 (21 of 1860) or under any other law for the time being in force in any part of India; or any Co-operative Society established by or under any law for the time being in force; or anybody corporate established, by or under any law for the time being in force; or any partnership firm whether registered or not under any law including association of persons; any casual taxable person registered under the Central Goods and Services Tax Act or the Integrated Goods and Services Tax Act or the State Goods and Services Tax Act or the Union Territory Goods and Services Tax Act.
- Service by way of access to a road or a bridge on payment of annuity.
- Services by way of admission to a protected monument so declared under the Ancient Monuments and Archaeological Sites and Remains Act 1958 (24 of 1958) or any of the State Acts, for the time being in force.
- Services by way of right to admission to the events organised under FIFA U-17 World Cup 2017.

25th Meeting of the GST Council held on 18th January 2018 recommended many relief measures regarding GST rates on goods and services and certain clarifications on issues relating to GST rates and taxability of certain goods and services.

Some of the important changes in the rate of goods recommended by the Council include:

- From 28% to 18% on buses exclusively run on bio fuels.
- From 18% to 12% on, drip irrigation system including laterals (HS Code 8424), sprinklers (HS Code 8424), mechanical sprayer (HS Code 8424), 12 specified bio-pesticides (HS Code 3808), bamboo wood building joinery (HS Code 4418), fertilizer grade phosphoric acid (HS Code 2809), bio-diesel, drinking water packed in 20 litters bottles, (HS Code 2201)
- From 3% to 0.25% on diamonds and precious stone. Rough diamonds and precious stones are already at 0.25%.
- From 28% GST plus applicable cess to 12% on used motor vehicles [other than medium and large cars and SUVs] on the margin of the supplier of such vehicles, subject to condition that no input tax credit of central excise duty/Value Added Tax or GST paid on them has been availed.
- From 28% GST plus applicable cess to 18% on used medium and large cars and SUVs on the margin of the supplier of such vehicles, subject to condition that no input tax credit of central excise duty/Value Added Tax or GST paid on them has been availed.
- From 12% to 5% with no refund of unutilised input tax credit on velvet fabrics (HS Code 58013720)

Some of the important changes recommended on the rate of services include;

- Reduce GST rate on construction of metro and monorail projects (construction, erection, commissioning or installation of original works) from 18 per cent to 12 per cent.
- Reduce GST rate on transportation of petroleum crude and petroleum products (MS, HSD, ATF) from 18 per cent to 5 per cent without ITC and 12 per cent with ITC.
- Exempt reinsurance services in respect of insurance schemes exempted under S.Nos. 35 and 36 of notification No. 12/2017-CT (Rate). [It is expected that the premium amount charged from the government/insured in respect of future insurance services is reduced.]
- Reduce GST to 12 per cent in respect of mining or exploration services of petroleum crude and natural gas and for drilling services in respect of the said goods.
- Extend the concessional rate of GST on houses constructed/ acquired under the Credit Linked Subsidy Scheme for Economically Weaker Section/ Lower Income Group/ Middle Income Group-1/ Middle Income Group-2 under the Housing for All (Urban) Mission/Pradhan Mantri Awas Yojana (Urban) and low-cost houses up to a carpet area of 60 square metres per house in a housing project which has been given infrastructure status under the same concessional rate.

2. SALIENT MEASURES TAKEN ON DIRECT TAXES IN THE BUDGET 2017-18 AND THEREAFTER

- Lowering of tax rate on domestic companies with turnover or gross receipts less than or equal to Rs. 50 Crore in FY 2015-16 to 25 per cent from 30 per cent.
- Lowering of tax rate on individuals between income of Rs. 2.5 lakhs and Rs. 5 lakhs to 5 per cent from 10 per cent.
- Levying of surcharge at 10 per cent on individuals with income between Rs. 50 lakhs and Rs. 1 crore.
- In moving towards a less cash economy and to incentivise small traders/businesses to proactively accept payments by digital means, the existing rate of deemed profit of 8% under section 44AD of the Act was reduced to 6% for amount of total turnover or gross receipts received through banking channel/digital means for the financial year 2016-17 and subsequent years.
- Clarification that provisions for taxation of indirect transfers not to apply in case of certain foreign institutional investor, and those registered as category-I or category II foreign portfolio investor under the SEBI (Foreign Portfolio Investors) Regulations, 2014 made under SEBI Act, 1992.
- Clarification that the condition of maintaining the monthly average of the corpus of the fund at minimum Rs. 100 crore provided in section 9A of the Income-tax Act, 1961 ('the Act') not to apply to the previous year in which the fund is being wound up.
- Exemption provided to Prime Minister's Relief Fund under the Act also extended to Chief Minister's Relief Fund or Lieutenant Governor's Relief Fund.
- Clarification that corpus donations to exempt charitable institutions not to be treated as application of income.
- Exemption from levy of tax extended to income accruing or arising to a foreign company on account of sale of leftover stock of crude oil, if any, from a facility in India after the expiry of an agreement or an arrangement, subject to conditions to be notified.
- Section 12A of the Act amended to make it mandatory for a trust or institution, which has been granted exemption under the Act, to seek fresh registration on adopting or undertaking modifications of the objects such that the modified objects do not conform to the conditions of registration.
- In respect of exempt trusts or institutions, additional condition of furnishing return within due date by the person in receipt of the income chargeable to income-tax provided.
- A new safe harbour regime has been notified for three years with effect from 1st April, 2017 to reduce transfer pricing disputes, provide certainty to taxpayers, align safe harbour margins with industry standards and enlarge the scope of safe harbour transactions.

- Rules for maintaining and furnishing of transfer pricing documentation by multinational enterprises in the Master File and Country-by-Country report were notified.
- Fair market value of the asset to be the cost of acquisition for capital gains purpose if the asset taken into account for computation of accreted income and taxes paid thereon.
- Benefit of lower rate of 5 per cent withholding tax, in respect of interest payable to a non-resident by a specified company on borrowings made by it in foreign currency from sources outside India under a loan agreement or by way of issue of any long-term bond including long-term infrastructure bond, extended till 30.06.2020.
- Appreciation of rupee to be ignored for capital gains calculation at the time of redemption of rupee denominated bond of an Indian company in respect of secondary holders as well.
- Transfer of capital asset, being rupee denominated bond of Indian company issued outside India, by a non-resident to another non-resident not to be regarded as transfer.
- Benefit of lower rate of 5 per cent withholding in respect of interest payable to FIIs and QFIs on their investments in Government securities and rupee denominated corporate bonds, at the rate of interest not exceeding the notified rate, extended to 30.06.2020.
- Period of holding for computation of long term capital gains in the case of immovable property reduced from 36 months to 24 months to give fillip to the housing sector.
- 100 per cent deduction of profit has been made available to an assessee developing and building affordable housing projects if the housing project is approved by the competent authority before the 31st March, 2019 subject to certain conditions.
- Capital gains exemption provided to an individual or Hindu Undivided Family under the land pooling scheme notified under the provisions of Andhra Pradesh Capital Region Development Authority Act, 2014.
- Categories of bond investments under section 54EC of the Act, for the purpose of availing capital gain exemption, have been expanded.
- To remove complexities in chargeability of tax in the case of Joint Development Agreements, it has been provided that the capital gain shall be chargeable to income tax as income of the previous year in the year of the completion of project.
- Base year for fair market value and cost inflation index has been shifted from 1981 to 2001.
- Period of Tax credit available in respect of Minimum Alternate Tax (MAT) and Alternate Minimum Tax (AMT) has been increased from the existing 10 years to 15 years.
- Tax neutrality has been provided on the conversion of preference shares of a company into equity shares of that company.
- The cost of acquisition of share of an Indian company, received in a tax neutral demerger, shall be taken as the cost of acquisition in the hands of resulting foreign company.
- Period of claim of profit-linked deduction by eligible start-ups has been increased from 3 out of 5 years to 3 out of 7 years and conditions for carry forward of loss of such start-up in case of change in shareholding relaxed.
- Limit of cash donations under Section 80G of the Act reduced to Rs. 2000 from Rs. 10,000.
- Self-employed individual shall be eligible for deduction up to 20 per cent of his gross total income in respect of contribution made to National Pension System Trust. Exemption from taxation has been provided to partial withdrawal made by subscriber of New Pension Scheme.
- Scope of section 56 of the Act has been widened to include any money, immovable property or specified movable property received by any person without consideration or with inadequate consideration, subject to certain conditions and exceptions.
- Section 50CA of the Act has been amended to provided that in case of transfer of unquoted equity shares if the consideration received is less than the fair market value, then the fair market value so determined shall be the deemed value of consideration for the purpose of computation of capital gains.

- The exemption from long term capital gains in case of transfer of listed shares by providing that the exemption has been restricted to such shares where they have been acquired after 1st October, 2004, subject to certain conditions.
- In view of the reduction in tax rates for individuals in the income slab up to Rs. 5 lakh, the amount of rebate in income-tax has been reduced from Rs. 5,000/- to Rs. 2,500/- and it has further been provided that rebate shall be available in respect of individuals having income up to Rs. 3.5 lakh.
- Where the amount of foreign tax credit (FTC) allowed against the tax paid under sections 115JB or 115JC of the Act exceeds the amount of FTC admissible against the tax payable by the assessee on his income in accordance with the other provisions of the Act, such excess credit shall be ignored while computing the amount of credit under section 115JAA or section 115JD of the Act.
- The provisions relating to computation of book profit for the purpose of levy of minimum alternate tax (MAT) have been amended so as to align them with the Indian Accounting Standards (Ind-AS).
- The amendment made by the Finance Act, 2016 providing for concessional rate of tax for transfer of share of a private limited company shall be applicable retrospectively from assessment year 2013-14.
- Section 10AA of the Act has been amended to provide that the amount of deduction referred therein shall be allowed from the total income computed in accordance with provisions of the Act before giving effect to provisions of the said section and that the deduction shall not exceed the total income.
- In case of unit in the consolidated plan of a mutual fund scheme received in lieu of unit in the consolidating plan, the actual cost and the period of holding shall be the cost and the period of holding of the unit in the consolidating plan.
- Section 115BBDA of the Act has been amended to widen the scope of taxability of dividends.
- Section 40A of the Act has been amended to provide that the allowable limit for claiming expenditure under the head "Income from Profit & Gains of Business or Profession" on revenue expenditure in cash has been reduced from Rs. 20,000 to Rs.10,000.
- Further, to bring transparency in the source of funding to political parties, the provisions of section 13A of the Act have been amended to provide for the following additional conditions for availing the benefit of the exemption from income-tax: (a) No donations of Rs. 2000/- or more are received otherwise than by an account payee cheque drawn on a bank or an account payee bank draft or use of electronic clearing system through a bank account or through electoral bonds; and (b) Political party furnishes a return of income for the previous year in accordance with the provisions of sub-section (4B) of section 139 of the Act on or before the due date under section 139 of the Act.
- The provisions of sections 32 and 35AD of the Act have been amended to provide that any capital expenditure in cash exceeding rupees ten thousand shall not be eligible for claim of depreciation allowance or investment-linked deduction respectively.
- A new section 94B has been inserted in the Act to provide that interest expenses claimed by an entity to its associated enterprises shall be restricted to 30 per cent of its earnings before interest, taxes, depreciation and amortization (EBITDA) or interest paid or payable to associated enterprise, whichever is less. Carry forward of disallowed interest expense shall be allowed up to eight assessment years immediately succeeding the assessment year for which the disallowance was first made and deduction against the income computed under the head "Income from Profits and Gains of Business or Profession" to the extent of maximum allowable interest expenditure.
- A new section 92CE has been inserted in the Act with effect from 1st April, 2018 to provide for secondary adjustment by attributing income to the excess money lying in the hands of the associated enterprise, in order to make the actual allocation of funds consistent with that of the primary transfer pricing adjustment. The provision shall apply to primary adjustments exceeding Rs. 1 Crore made in respect of Assessment Year 2017-18 onwards.
- In order to strengthen the PAN mechanism a new section 206CC was inserted in Act to provide for collection of tax at source (TCS) at higher rate of 20 per cent in case of non-quoting of Permanent Account Number (PAN).
- To widen the scope of tax deduction at source, a new section 194-IB was inserted in the Act to provide that individuals or a Hindu Undivided Family (other than those covered under section 44AB of the Act) responsible for paying to a resident any income by way of rent exceeding Rs. 50,000 for a month or part of month during the previous year, shall deduct an amount equal to 5 per cent of such income as tax thereon.
- Section 143(1D) has been omitted w.e.f. 1.4.2017. However, to address the concern of recovery of revenue in doubtful

cases, a new section 241A has been inserted, which inter alia provides that refund shall be withheld only in some cases in the manner provided in said section and with the prior approval of the higher authorities. This shall be applicable to returns furnished for assessment year commencing on or after 1st April, 2017.

- An Assessee who declares profits and gains in accordance with presumptive taxation regime provided under section 44ADA of the Act shall now pay advance tax in one instalment on or before the 15th of March. Further, interest under section 234C of the Act shall be levied on such assessee, if the advance tax paid on or before the 15th March, is less than the tax due on the returned income.
- If shortfall in payment of advance tax is on account of under-estimation or failure in estimation of income of the nature referred to in section 115BBDA of the Act, the interest under section 234C of the Act shall not be levied subject to fulfilment of conditions specified therein.
- Section 244A of the Act was amended to provide that where any refund becomes due to the deductor, he shall be entitled to receive simple interest on such refund.
- Section 155 of the Act was amended to provide that where credit for foreign taxes paid is not given for the relevant assessment year on the grounds that the payment of such foreign tax was in dispute, the Assessing Officer shall rectify the assessment order or an intimation under section 143(1) of the Act, subject to the conditions specified therein.
- Necessary amendments have been made to Chapter XIX-B of the Act to enable merger of the Authority for Advance Ruling (AAR) for income-tax, central excise, customs duty and service tax.
- In order to expand the scope of section 253, orders passed by the prescribed authority under section 10(23C)(iv) or (v) of the Act have also been made appealable before the Appellate Tribunal.
- In order to reduce the genuine hardship which may be faced by a person responsible for deduction and collection of tax at source due to levy of penalty under section 271C or 271CA, a reference of said sections has been provided under section 119(2)(a), so as to empower the Central Board of Direct Taxes to issue directions or instructions in respect of the said sections as well.
- Provisions of section 153 and 153B of the Act were amended to reduce the time limit for completion of assessment, reassessment and re-computation of cases mentioned therein. Similarly, section 139(5) was amended to reduce the time limit for furnishing of revised return. These amendments will take effect from 1st April, 2018 and will, apply in relation to assessment year 2018-19 and subsequent years.
- A new section 269ST was inserted in the Act to prohibit cash receipt equal to or exceeding Rs. 2 lakh.
- In order to eliminate bogus/multiple PANs, a new section 139AA was inserted in the Act, which inter alia mandates linking of Aadhaar with PAN database.
- Rule 114 and rule 114A of the Income-tax Rules, 1962 have been amended to enable allotment of PAN and TAN through a common application Form published in Official Gazette.
- Income-tax return (ITR) Forms have been rationalised to make it more objective and taxpayer friendly. viz. a one page ITR-1 (Sahaj) Form has been notified for the assessment year 2017-18 for taxpayers having income uptoRs. 50 Lakh from salary and one house property.

ANNEXURE 2

POLICY INITIATIVES ON INVESTMENT MANAGEMENT IN CPSES

- The thrust of the Government is presently directed towards efficient management of its investment in CPSEs, with the overall focus on higher economic growth through consistent long-term policies as well as efficient and effective allocation of resources.
- Based on this philosophy, Budget 2016-17 focused on the need to migrate from the' disinvestment based approach' to 'investment based approach' for CPSEs. Accordingly, renaming the Department as 'DIPAM' with expanded mandate denotes a paradigm shift in the thinking process of the Government on its strategy to manage its investment in CPSEs.

- As announced, the Department also laid down comprehensive guidelines on "Capital Restructuring of CPSEs:" in May, 2016 for efficient management of Government's investment in CPSEs by addressing various aspects, such as, payment of dividend, buyback of shares, issues of bonus shares and splitting of shares.
- The commitment for time-bound listing of CPSEs has been taken on-board as an integral part of the reforms initiatives of the Government by making an announcement to this effect in the Budget 2017-18. Pursuant to the announcement, the Government put in place a mechanism/procedure alongwith indicative timeless for listing of CPSEs on 17th February, 2017. All Ministries/Departments have been requested to follow the suggested timeless, aimed at time-bound listing of identified CPSEs as per the extant Act, Rules and Regulations.
- In line with the budget announcement, the Government also approved listing of 14 CPSEs (including 2 insurance companies) on the stock exchanges. During the current financial year, 4 IPO issues of Housing and Urban Development Corporation (HUDCO), Cochin Shipyard Ltd. (CSL), General Insurance Corporation and New India Assurance Company Ltd have been successfully listed on the stock exchange.
- Post listing, while disinvestment of Government's shareholding through 'minority stake sale (upto 49%) ' in CPSEs are undertaken as per the extant policy, the focus of the strategic disinvestment is on adopting a pragmatic approach for the Government to exit from non-strategic business to optimize economic potential for business enterprises by promoting efficiency and professional management in the company.
- Keeping in view its inherent benefits, beginning January, 2017 the Government started using index based ETF to offer an investment opportunity in CPSEs to pension funds and retail investors in India. And pursuant to the announcement made in the Budget in this regard, a new ETF, namely BHARAT 22 was announced in August, 2017. The New Fund Offer of Bharat 22 launched in the month of November, 2017 received an overwhelming response across all class of investors and the Government retained a portion of the oversubscription by increasing the issue size of the offer.

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03

CHAPTER

Monetary Management and Financial Intermediation

During 2017-18 (till January), monetary policy remained steady with only one policy rate cut in August. As the Y-o-Y effect of demonetisation wore off, the growth rate of both Currency in Circulation and M0 turned sharply positive. However, bank credit growth remains subdued, especially to the industrial sector. The 10 year G-sec yield, meanwhile, has hardened since September 2017. An ecosystem for the new insolvency and bankruptcy process took shape in 2017-18. The IBC mechanism is being used actively to resolve the NPA problem of the banking sector. The stock markets also hit record highs this financial year.

MONETARY DEVELOPMENTS DURING 2017-18

3.1 Monetary policy during 2017-18 was conducted under the revised statutory framework, which became effective from August 5, 2016[1]. At the time of writing, five meetings of the Monetary Policy Committee (MPC) had been held (till January 2018). In the third bi-monthly Monetary Policy Statement for 2017-18 in August 2017, the MPC decided to reduce the Policy Repo Rate by 25 basis points to 6.0 per cent. It kept the rates unchanged in both October and the latest meeting held in December. Accordingly, the Reverse Repo Rate under the Liquidity Adjustment Facility (LAF) stands at 5.75 per cent, and the Marginal Standing Facility (MSF) rate and the Bank Rate at 6.25 per cent (Table 1).

Table 1 : Revision in Policy Rates

Effective Date	Bank rate/ MSF Rate* (Percent)	Repo Rate (per cent)	Reverse Repo Rate (per cent)	Cash Reserve Ratio (per cent of NDTL)	Statutory Liquidity Ratio (per cent of NDTL)
05/04/16	7	6.5	6	4	21.25
09/08/16	7	6.5	6	4	21
04/10/16	6.75	6.25	5.75	4	20.75
08/02/17	6.75	6.25	5.75	4	20.5
06/04/17	6.5	6.25	6	4	20.5
07/06/17	6.5	6.25	6	4	20.5
02/08/17	6.25	6	5.75	4	20
14/08/17	6.25	6	5.75	4	19.5
04/10/17	6.25	6	5.75	4	19.5
06/12/17	6.25	6	5.75	4	19.5

Source: **RBI.**

Notes: *: **Bank Rate was aligned to MSF rate with effect from February 13, 2012.**

NDTL is Net Demand and Time Liabilities.

1 Refer to Chapter 3 of the Economic Survey 2016-17, Volume II, for details.

Table 2 : Year-on-Year Growth in Monetary Aggregates (end March, %)

Sl. No.	Items	2011	2012	2013	2014	2015	2016	Dec 2016#	2017	Dec 2017*
1	Currency in Circulation	18.8	12.4	11.6	9.2	11.3	14.9	-40.2	-19.7	80.4
2	Cash with Banks	18	15.2	14.6	10.7	12.4	6.6	124.3	4.2	-48.3
3	Currency with the Public	18.8	12.3	11.5	9.2	11.3	15.2	-47.6	-20.8	105.6
4	Bankers' Deposits with RBI	20.2	-15.9	-10	34	8.3	7.8	10.8	8.4	8.1
5	Demand Deposits	0.7	-1.7	6	7.8	9.8	11	26.4	18.4	6.4
6	Time Deposits	18.3	16.1	15	14.9	10.7	9.2	13.2	10.2	3.5
7	Reserve Money (M0)	19.1	3.6	6.2	14.4	11.3	13.1	-28.9	-12.9	55.9
8	Narrow Money(M1)	10	6	9.2	8.5	11.3	13.5	-18.9	-3.9	45.8
9	Broad Money (M3)	16.1	13.5	13.6	13.4	10.9	10.1	6.2	6.9	10.5

Source: RBI

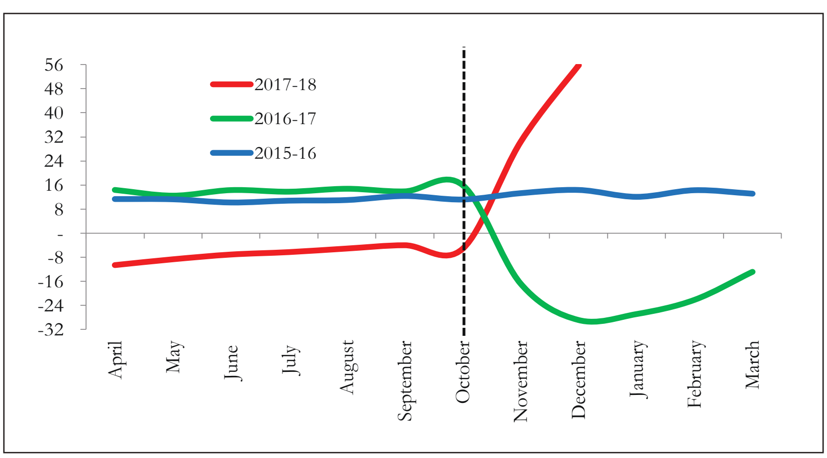
Notes: # : Data relating to items 1, 4 and 7 are as on December 30, 2016; data for the remaining items are as on December 23, 2016.

*** : Data relating to items 1, 4 and 7 are as on December 29, 2017; data for the remaining items are as on December 22, 2017.**

3.2 In tandem with the re-monetisation process, the Y-o-Y growth of Reserve Money (M0) during the financial year 2017-18 up to November 10, 2017 increased sequentially but remained in the negative territory and significantly lower than that in the previous year, reflecting the lingering, though progressively attenuated, impact of demonetisation (Figure 1). From November 17, 2017, as a favourable base effect set in, the Y-o-Y growth of both Currency in Circulation (CIC) and M0 turned sharply positive and higher than their respective growth rates in the previous year. As on December 29, 2017, M0 recorded an expansion of 55.9 per cent as compared with a negative growth of 28.9 per cent in the corresponding period of the previous year, primarily on account of an increase in CIC (80.4 per cent as against a decline of 40.2 per cent in the corresponding period of the previous year) (Table 2); CIC stood at 94.19 per cent of its pre-demonetisation level (Figure 2).

3.3 From the sources side, expansion in M0 during the financial year 2017-18 was driven by the decline in LAF reverse repo (net) and increase in RBI's net foreign assets. However, net RBI credit to government declined owing to net open market sales as well as an increase in government deposits.

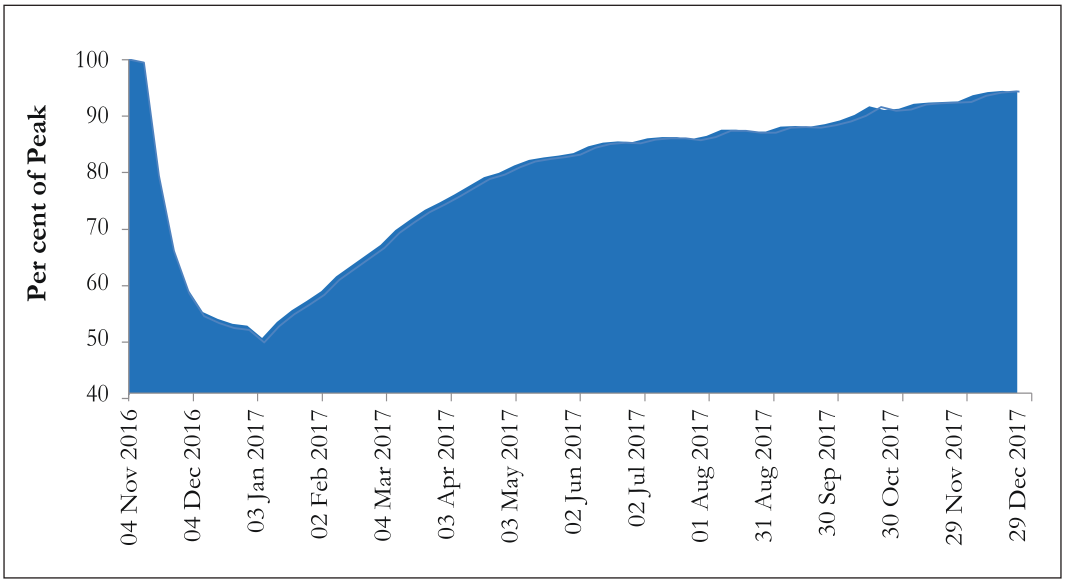
Figure 1 : Reserve Money Y-o-Y Growth (%) - Monthly Trend



Source: **RBI.**

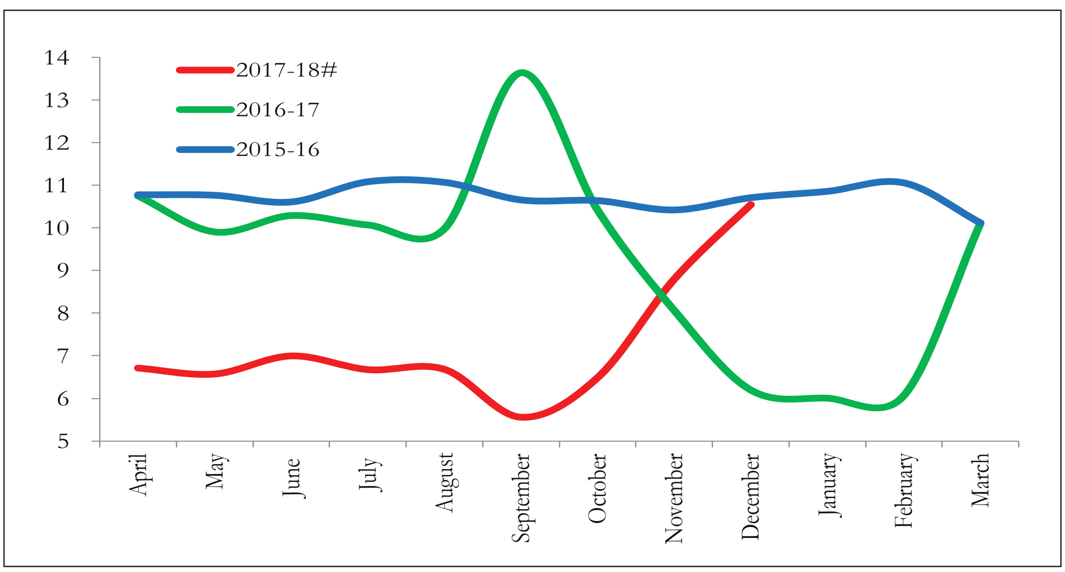
3.4 The Y-o-Y growth of M3 had slackened post-demonetisation, but remained positive– in contrast to the contraction in M0 – because the reduction in Currency with Public (CwP) was partially offset by an upsurge in aggregate deposits. During 2017-18, the Y-o-Y growth of broad money (M3) began picking up distinctly from end-September 2017 and, exceeded that in the previous year for the first time on November 24, 2017 reflecting the favourable base effect (Figure 3). On the same date, the ratio of CIC to M3 was 12.6 per cent as against 9.8 per cent in the corresponding period of the previous year. From the sources side, the expansion, albeit gradual, in credit from Scheduled Commercial Banks (SCBs) to the commercial sector, primarily contributed to M3 growth during 2017-18 so far.

Figure 2 : CIC as per cent of its Peak



Source: **RBI.**

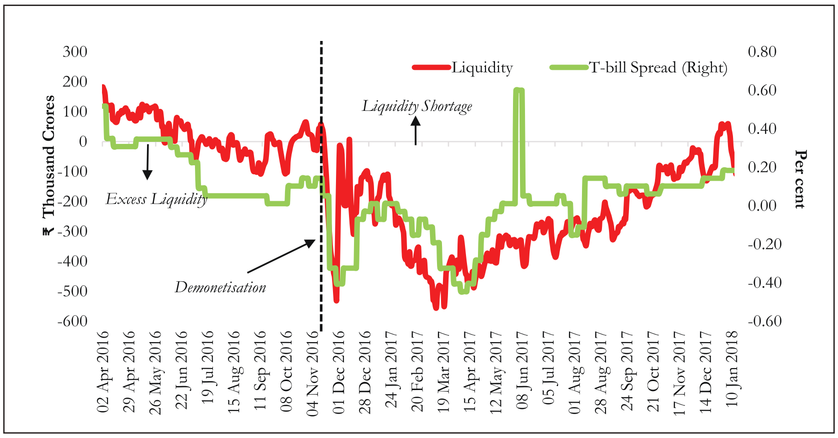
Figure 3 : Broad Money Y-o-Y Growth (%) - Monthly Trend



Source: RBI.

Note: #: **Data relating to December is as on December 22, 2017.**

Figure 4 : Daily Liquidity Management and T Bill Spread*



Source : **RBI.**

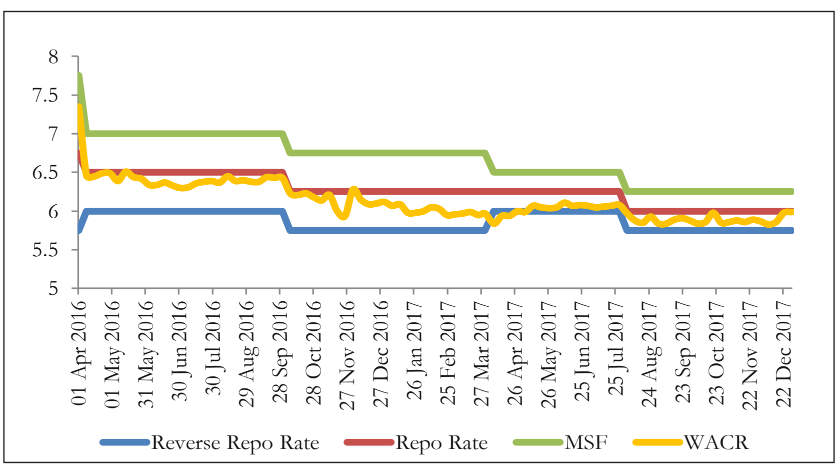
Note: * : **T Bill Spread = Repo Rate minus 91-Day Treasury Bill (Primary) Yield.**

LIQUIDITY CONDITIONS AND ITS MANAGEMENT

3.5 After demonetisation in early November 2016, the Reserve Bank had scaled up its liquidity absorption operations using a mix of both conventional and unconventional instruments. Liquidity conditions remain in surplus mode even as its magnitude moderated gradually with progressive remonetisation. The average daily net liquidity absorption under LAF, declined gradually from ₹419 thousand crores in March 2017 to ₹66 thousand crores in November 2017. In addition to LAF, surplus liquidity of ₹100 thousand crores was absorbed through issuance of Treasury Bills (TBs) under the Market Stabilisation Scheme (MSS) during April-May 2017. Enduring surplus liquidity conditions warranted OMO sale of ₹90 thousand crores during July to November 2017, with two OMO sale auctions of 10 thousand crores each, every month during July-October 2017 and one OMO sale auction in November 2017.As a consequence of these measures, net liquidity declined from an excess of ₹3.1 lakh crores as on March 31, 2017 to ₹47.8 thousand crores as on January 11, 2018 (Figure 4).

3.6 For the first half of 2017-18, the Weighted Average Call Rate (WACR) was closer to the Reverse Repo Rate. However, in recent months it has drifted to the middle of the policy corridor (Figure 5).

Figure 5: Policy Corridor and Call Rate (Per cent)



Source: **RBI.**

DEVELOPMENTS IN THE G-SEC MARKET

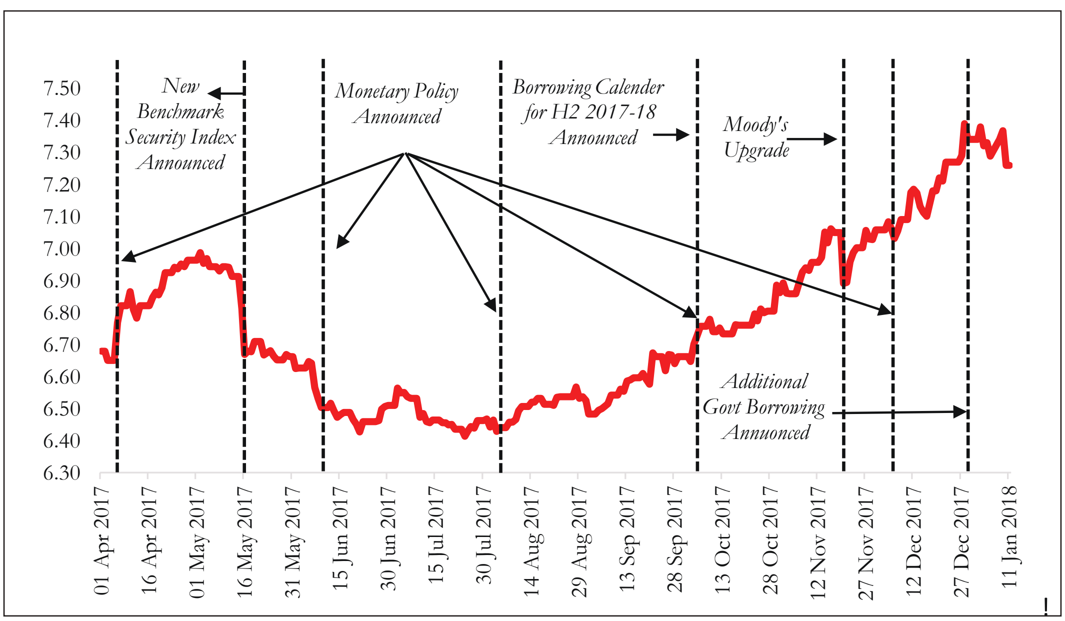
3.7 During 2017-18 (up to 11th January, 2018), the direction of movement of the 10-year generic G-sec yield altered significantly (Figure 6). In April 2017, G-secs traded with a moderate hardening bias, after the release of the minutes of the Monetary Policy Committee meeting on April 20, 2017, which enunciated upside risks to inflation. However, the G-sec yield softened sharply after May 12, 2017 mainly on account of auction of a new benchmark security coupled with lower than expected inflation for April 2017. Between May 2017 and July 2017, G-secs traded with a softening bias on account of better than expected economic data viz., lower inflation, positive monsoon forecast and dovish stance of monetary policy in June 2017. The softening of yield was further supported by robust FPI inflows.

3.8 Later, from mid-July to November 17, 2017, the yield movement was mainly guided by global factors and reflected a hardening bias in the US. Furthermore, domestic factors such as, higher CPI inflation, additional supply of securities through OMO sales, rise in oil prices leading to concerns of higher inflation, and higher government borrowings, exerted upward pressure on yields. India's sovereign rating upgrade by Moody's, however, briefly led to a decline of the 10-year G-sec yield to 7.10 per cent on November 20, 2017, but it went back up later. The G-sec yield as on January 11, 2018 stands at 7.26 per cent.

BANKING SECTOR

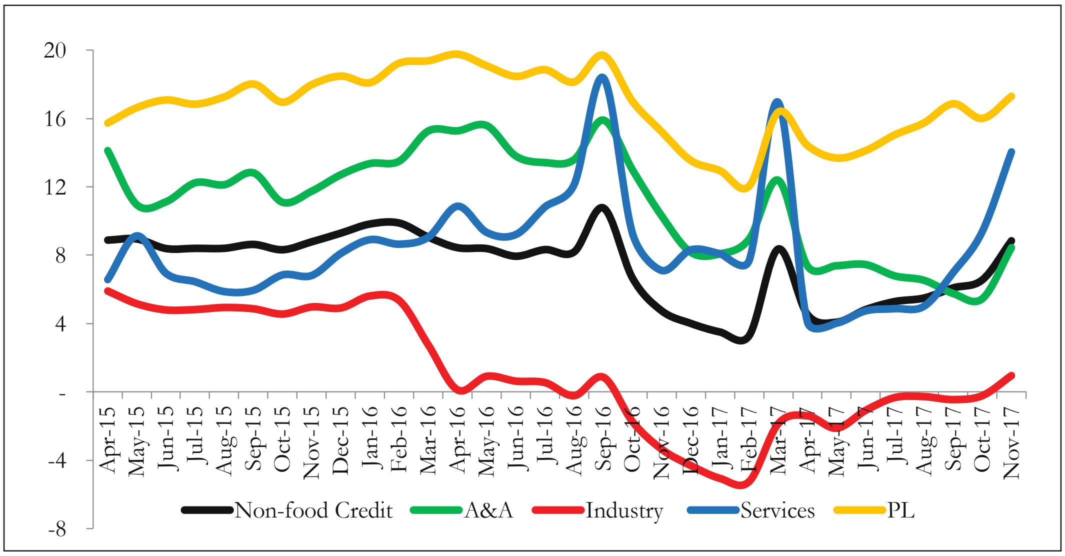
3.9 The performance of the banking sector, Public Sector Banks (PSBs) in particular, continued to be subdued in the current financial year. The Gross Non-Performing Advances (GNPA) ratio of Scheduled Commercial Banks (SCBs) increased from 9.6 per cent to 10.2 per cent between March 2017 and September 2017, whereas, their Restructured Standard Advances (RSA) ratio declined from 2.5 per cent to 2.0 per cent. The Stressed Advances (SA) ratio rose marginally from 12.1 per cent to 12.2 per cent during the same period. GNPA ratio of PSBs increased from 12.5 per cent to 13.5 per cent between March and September 2017. Stressed advances ratio of PSBs rose from 15.6 per cent to 16.2 per cent during the period.

Figure 6 : 10 Year G-Sec Yield (Per cent)



Source: **Bloomberg.**

Figure7 : Sectoral Deployment of Bank Credit Growth (%) - Monthly Trend



Source: **RBI.**

Note: **A&A: Agriculture and Allied Activities, PL: Personal Loans.**

3.10 Capital to Risk-weighted Asset Ratio (CRAR) of SCBs increased from 13.6 per cent to 13.9 per cent between March 2017 and September 2017 largely due to an improvement for private sector banks (PVBs). SCBs' Return on Assets (RoA) remained unchanged at 0.4 per cent between March 2017 and September 2017 while their Return on Equity (RoE) declined from 4.3 per cent to 4.2 per cent. Many PSBs have continued to record negative profitability ratios since March 2016.

CREDIT GROWTH

3.11 Non Food Credit (NFC) grew at 8.85 per cent Y-o-Y in November 2017 as compared to 4.75 per cent in November 2016. Bank credit lending to Services and Personal Loans (PL) segments continue to be the major contributor to overall NFC growth (Figure 7). Credit growth finally picked up in industrial sector after remaining persistently negative from October 2016 to October 2017. However, growth of credit to medium scale industries has remained negative since June 2015 (Table 3).

Table 3 : Industry-Wise Deployment of Bank Credit by Major Sectors (Y-o-Y, %)

Sector	March 2012	March 2013	March 2014	March 2015	March 2016	March 2017	November 2017
Industry	20.7	15.1	12.8	5.6	2.6	-1.9	0.1
• Micro & Small	12.6	20.2	23.6	8.2	-2.3	-0.5	4.6
• Medium	7.1	-0.1	-2.7	2.6	-7.8	-8.7	-8.3
• Textiles	9.9	15.1	10.2	-0.2	1.9	-4.6	4.6
• Infrastructure	20.8	15.9	14.6	10.5	4.4	-6.1	-2.3

Source : **RBI.**

Box 3.1 The New Insolvency and Bankruptcy Regime

The Insolvency and Bankruptcy Code, 2016 (IBC) was passed in May 2016. At the time the previous Economic Survey was issued, the new regime was in its very early days. The regulator had just been set up, and the basic ecosystem, including the rules governing corporate insolvency/ liquidation and certification of insolvency professionals who could run those transactions, had been newly created.

Since then, there has been a significant amount of progress – the entire mechanism for the Corporate Insolvency Resolution Process (CIRP) has been put in place. A number of rules and regulations have been notified to create the institutions and professionals necessary for the process to work. A large number of cases have entered the insolvency process, and a few have even exited the process.

Over 1,300 Insolvency Professionals are registered (under three Insolvency Professional Agencies). The first Information Utility has also started functioning. Over 525 cases of corporate insolvency have been admitted across all the National Company Law Tribunal (NCLT) benches[1]. In addition, 108 Voluntary Liquidation proceedings and one Fast-Track Corporate Insoluency Resolution have also been initiated (see Table 1 and Table 2 for details).

Table 1 : Status of cases admitted for Corporate Insolvency Resolution Process

Sl. No	Status of CIRP		Number of Corporates
1	CIRP in progress		442
	of which*	< 30 days	33
		30-150 days	225
		150-180 days	67
		>180 days	117
2	Resolution plans approved		10
3	Liquidation order passed		30
4	Closed by appeal/review		36
	Total CIRP petitions admitted:		525

Source: **IBBI.**
Note: ***: For a few corporates, orders are still awaited, hence the totals might not be exact.**

Table 2 : Sector-wise Analysis of Admitted Cases under IBC, 2016

Sl. No	Sector	Total Underlying Default (₹ Crores)	Number of Corporates				
			CIRP In Progress	Resolution Plan Approved	Liquidation Order Passed	Closed By Appeal/ Review	Total
1	Steel	57,001	39	2	3	1	45
2	Retail	12,719	12				12
3	Capital Goods-Non Electrical Equipment	4,785	14		2	1	17
4	Textiles	4,679	29		3	1	33
5	Trading	4,560	30	3	4	2	39
6	Chemicals	4,433	18			1	19
7	Ship Building	4,292	2				2
8	Construction	4,004	35		1	4	40
9	Computer Education	2,909	1				1
10	Mining & Mineral Products	2,700	10	1	1	1	13
11	Others	26,727	261	4	16	23	304
	Total	**1,28,810**	**451**	**10**	**30**	**34**	**525**

Source: **IBBI.**

1 The details are from the orders uploaded on the NCLT website on or before 6 January, 2018 for petitions dated till 31 December 2017. This data is tentative, and might change as new orders are updated.

Table 3 : Companies That Underwent Resolution Under IBC

Name of Corporate Debtor	Whether Under Erstwhile BIFR	Insolvency Commencement Date	Approval of Resolution By NCLT	Initiated By	Total Claims Of FCs*	Liquidation Value*	Resolution Amount - FCs*	% Recovery For FCs	% Realisation To Liquidation Value
Synergies Doorey Automotive Ltd.	Yes	23-Jan-17	02-Aug-17	CD	972.2	8.2	54.7	6%	669%
Shree Metalik Ltd.	N.A.	30-Jan-17	07-Nov-17	FC	1,287.20	283	607.3	47%	215%
Kamineni Steel & Power India Pvt. Ltd.#	Yes	10-Feb-17	27-Nov-17	CD	1,508.90	761	600	40%	79%
Chhaparia Industries Pvt. Ltd.	Yes	24-Feb-17	22-Sep-17	CD	49.8	17.2	20.6	41%	120%
Jekpl Private Ltd.	N.A.	17-Mar-17	15-Dec-17	CD	599	222.1	162	27%	73%
Hotel Gaudavan Pvt. Ltd.	N.A.	31-Mar-17	13-Dec-17	FC	76.7	36.1	44.2	58%	122%
Prowess International Pvt. Ltd.	N.A.	20-Apr-17	17-Oct-17	OC	3.4	N.A.	3.4	100%	N.A.
West Bengal Essential Commodities Supply Corp. Ltd.	N.A.	29-May-17	20-Nov-17	FC	359.2	N.A.	185.8	52%	N.A.
Shirdi Industries Ltd.	Yes	18-May-17	12-Dec-17	CD	673.9	103.1	175	26%	170%
Nandan Hotels Ltd.	N.A.	17-Aug-17	14-Dec-17	OC	N.A.	N.A.	1.4	N.A.	N.A.

Source: **IBBI**

Notes: *: **Amounts are in ₹ Crores.**

FC : Financial Creditors

#: **This resolution order was stayed by NCLAT.**

A major factor behind the effectiveness of the new Code has been the adjudication by the Judiciary. The Code prescribes strict time limits for various procedures under it. In spite of the large inflow of cases to NCLT benches across India, these benches have been able to admit or reject applications for CIRP admissions with few delays. In addition, appellate courts, including the NCLAT, High Courts and the Supreme Court have also disposed appeals quickly and decisively. In this process, a rich case-law has evolved, reducing future legal uncertainty.

On 13th June, 2017, the RBI identified 12 large loan defaulters where the Insolvency and Bankruptcy Code (IBC) was initiated. The status of the proceedings against these 12 defaulters, as of November 2017, is shown in table 4 below:

Table 4 : First Twelve Defaulters As Notified By RBI

Sl. No	Company#	Sector	Claims Admitted (₹ Crores)	180 Day Period Ends On	Current Status of CIRP
1	Alok Industries Ltd.	Textiles	29,912	14-01-2018	Applied for extension of 90 days
2	Amtek Auto Ltd.	Auto component	12,586	20-01-2018	Applied for extension of 90 days
3	ABG Shipyard Ltd.	Ship building	18,539	28-01-2018	CoC approved extension of 90 days
4	Bhushan Steel Ltd.	Steel	55,989	22-01-2018	In process
5	Bhushan Power and Steel Ltd.	Steel & Power Generation	48,524	22-01-2018	Extension up to 22 April, 2018
6	Electrosteel Steels Ltd.	Steel	13,302	16-01-2018	Extension up to 17 April, 2018
7	Essar Steel Ltd.	Steel	50,778	29-01-2018	Applied for extension of 90 days
8	Jyoti Structures Ltd.	Power Transmission	8,078	31-12-2018	Extension up to 31st Mar, 2018
9	Jaypee Infratech Ltd.	Infrastructure Development	13,322	04-02-2018	Applied for extension of 90 days
10	Lanco Infratech Ltd.	Power Generation	51,505	03-02-2018	Applied for extension of 90 days
11	Monnet Ispat and Energy Ltd.	Steel	10,412	13-01-2018	Applied for extension of 90 days
	Total		**3,12,947**		

Source: IBBI.
***Note:* # Era Infra Engineering Ltd. has not yet been admitted to CIRP.**

Box 3.2 : The Insolvency and Bankruptcy Code (Amendment) Bill, 2017

The Insolvency and Bankruptcy Code (Amendment) Bill, 2017, was passed by the Lok Sabha on December 29, 2017, and by the Rajya Sabha on January 2, 2018. It replaces the IBC (Amendment) Bill, 2017, which was promulgated on November 23, 2017.

In the CIRP the Committee of Creditors (CoC) invites resolution plans from resolution applicants, and may select one of these plans. The Code originally does not specify any restrictions on who these resolution applicants might be. The Bill has declared that some persons are ineligible to submit resolution plans:

(i) an undischarged insolvent;

(ii) a "wilful defaulter";

(iii) a borrower whose account has been identified as a non-performing asset for over a year and who has not repaid the amount before submitting a plan;

(iv) a person convicted of an offence punishable with two or more years of imprisonment;

(v) a person disqualified as a director under the Companies Act, 2013;

(vi) a person prohibited from trading in securities;

(vii) a person who is the promoter or in the management of a company which has indulged in undervalued, preferential, or fraudulent transactions;

(viii) a person who has given guarantee on a liability of the defaulting company undergoing resolution or liquidation, and has not honoured the guarantee;

(ix) a person who is subject to any of the above disabilities in any jurisdiction outside India; or

(x) a person who has a connected person disqualified in any manner above.

The thrust of the Bill is to prevent a range of undesirable persons from bidding for the debtor. The Bill may prevent promoters from bidding for their own firms. A resolution plan would typically involve significant haircuts on the parts of the financial and operational creditors. Thus, allowing a promoter to bid without restriction would mean countenancing a situation where an owner, having driven a firm into insolvency, is now able to purchase it back at a discount. This can lead to a situation of moral hazard, where incompetent or fraudulent promoters are effectively rewarded with the control of their company, leaving the creditors to write off their debts.

The Bill, thus, seeks to achieve a balanced approach, enabling the CoC to avoid imprudent transactions, while preserving its freedom to choose the best resolution plan from amongst all the applicants.

NON-BANKING FINANCIAL SECTOR

3.12 Non-Banking Financial Companies (NBFCs) bring in diversity and efficiency to the financial sector and make it more responsive to the needs of the customers. Peer to Peer (P2P) and Account Aggregators are the new categories of NBFC that have been introduced recently. To further financial inclusion through direct interaction between small lenders and small borrowers and to address the associated consumer protection issues, the Reserve Bank has introduced a new category of Non-Banking Financial Company (NBFC) called NBFC-P2P (NBFC- Peer to Peer Lending Platform) with light touch regulation and emphasis on adequate disclosures.

3.13 The NBFC sector, as a whole, accounted for 17 per cent of bank assets and 0.26 per cent of bank deposits as on September 30, 2017. The consolidated balance sheet size of the NBFC sector increased by 5 per cent (September 2017 over March 2017) to ₹20.7 lakh crores, as against an increase of 14.2 per cent between March 2016 and March 2017. NBFCs depended largely on public funds for funding their balance sheets. Borrowings through Non-Convertible Debentures (NCDs) witnessed a growth of 3.1 per cent as on end-September 2017 against a 19.8 percent growth during 2016-17 while bank borrowings increased by 5.4 per cent during the first half of the year (March 2017 to September 2017) against a negative growth of 7.0 per cent during 2016-17. On the asset side, loans and advances registered a growth of 6.6 per cent during the first half of the 2017-18 which was 12.7 per cent during the 2016-17.

3.14 The Capital to Risk Weighted Assets Ratio (CRAR) of NBFC sector declined slightly to 22.5 per cent as on end-September 2017 from 22.8 per cent as on March 31, 2017. The gross NPA ratio (per cent to advances) of NBFC sector declined to 5.5 per cent as on end-September 2017 from 6.1 per cent as on March 31, 2017. The net NPA (per cent to net advances) also decreased to 3.4 per cent in September 2017 from 4.1 per cent in March 31, 2017. The Return on Assets (RoA) of the sector increased to 2.0 per cent as on end-September 2017 as compared to 1.6 per cent as on end-March 2017. The Return on Equity (RoE) increased significantly to 9.0 per cent (annualized) as on end September 2017 from 7.0 per cent as on end-March 2017.

DEVELOPMENTS IN CAPITAL MARKET

Primary Market

3.15 The year 2017-18 (April-November) witnessed a steady increase in resource mobilisation in the primary market segment as compared to the corresponding period in the last financial year. During the year (April-November), 134 companies accessed primary market and raised ₹70,316 crores compared to ₹48,325 crores raised through 80 issues during the corresponding period of FY 2016-17, showing 45.5 per cent increase over the year. During 2017-18 (April-November), there were 122 Public Issues which raised ₹66,641 crores and 12 Rights Issues which raised ₹3,675 crores (Table 4).

3.16 The Indian mutual fund industry also registered a robust growth during April 2016 – October 2017. The AUM of Mutual Funds

Table 4 : Primary Market Resource Mobilisation through Public and Rights Issues (₹Crore)

Issue Type	2016-17#		2017-18#	
	No. of Issues	Amount	No. of Issues	Amount
Public issue (Equity)	65	23,134	118	62,745
Rights Issues (Equity)	5	1,297	12	3,675
Total Equity	70	24,431	130	66,420
Public Issue (Debt)	10	23,893	4	3,896
Total	80	48,325	134	70,316

Source: **SEBI.**

Note: **# indicates April-November of the respective financial year.**

Table 5 : Market Resource Mobilisation by Mutual Funds (₹Crore)

Financial Year	No of Folios	Gross Mobilization	Redemption	Net Inflow	Assets at the end of the period
2016-17	5,53,99,631	1,76,15,549	1,72,72,500	3,43,049	17,54,619
2017-18#	6,31,65,739	1,18,83,698	1,16,30,549	2,53,149	21,41,346

Source: **SEBI.**

Note: **#: Up to October 31, 2017.**

Table 6 : Total Resources Mobilized by Corporate Sector (₹Crore)

Year	Equity Issues			Debt Issues			Total Resource Mobilization (4+7)
	Public & Rights	Private Placements	Equity Total	Public	Private Placements	Debt Total	
1	2	3	4	5	6	7	8
April 2016 -Nov 2016	24,429	31,319	55,748	23,901	4,19,387	4,43,288	4,99,036
April 2017 -Nov 2017	66,424	78,344	1,44,767	3,897	4,18,952	4,22,848	5,67,615

Source: **SEBI.**

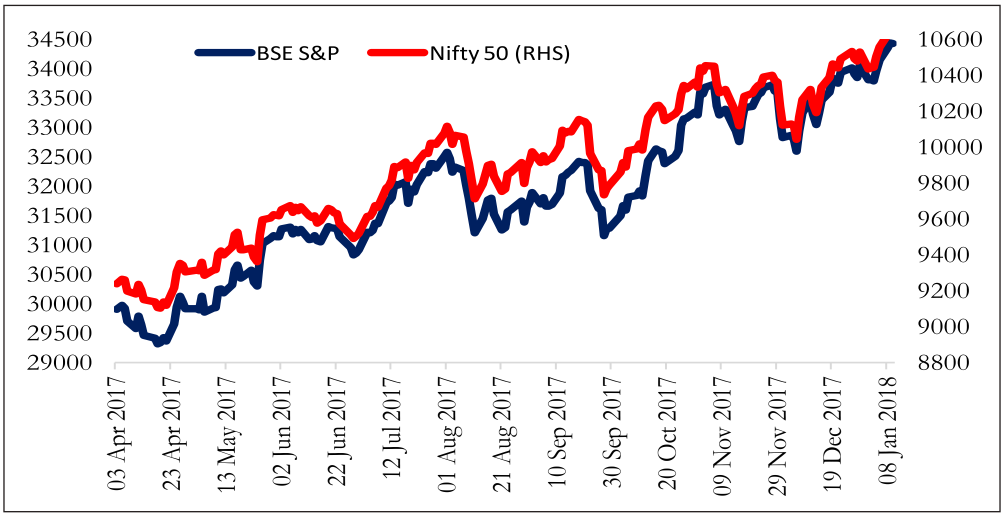
Notes: **1. Private placement of equity includes, amount raised through preferential allotments, QIP and IPP mechanism.**

2. Public equity issues include both IPOs and FPOs.

industry witnessed a constant growth in terms of new investment and increase in value of the existing investments as result of overall good market conditions (Table 5).

3.17 Resource mobilisation through issuance of corporate bonds (public issuance and private placement) rose rapidly during 2017-18 (April-November) as compared to the corresponding period in the previous year, with an amount of ₹4.23 lakh crores raised. Private placements continued to dominate the corporate bond market (Table 6). However, it must be noted that resource mobilized through public and private placement of corporate bonds is not a substitute for bank credit. The maturity period of bonds is much shorter compared to bank credit. Also, if banks subscribe to corporate bonds then it may lead to double counting. Hence, one need to be cautious while comparing such resource mobilization with bank credit.

Figure 8 : Movement of Sensex and Nifty



Sources: **BSE & NSE.**

Secondary Market

3.18 S&P BSE Sensex, the benchmark index of BSE, closed at 34,433 points as on January 10, 2018, witnessing a gain of 16.5 per cent from its closing of 29,621 points on March 31, 2017. During this period, S&P BSE Sensex touched its highest level of 34,443 points on January 9, 2018 and its lowest of 29,319 points on April 18, 2017. Nifty 50, the benchmark index of NSE, closed at 10,632 points on January 10, 2018, witnessing a gain of 15.9 per cent from its closing of 9,174 points as on March 31, 2017. During this period, Nifty 50 touched its highest level of 10,637 points on January 9, 2018 and its lowest of 9,105 points on April 19, 2017.

INSURANCE SECTOR

3.19 Insurance, being an integral part of the financial sector, plays a significant role in India's economy. The potential and performance of the insurance sector should be assessed on the basis of two parameters, viz., Insurance Penetration and Insurance Density. Insurance penetration is defined as the ratio of premium underwritten in a given year to the gross domestic product (GDP). Insurance density is defined as the ratio of premium underwritten in a given year to the total population (measured in US$ for convenience of international comparison).

3.20 The Insurance penetration which was 2.71 per cent in 2001, increased to 3.49 per cent in 2016 (Life 2.72 per cent and General 0.77 per cent). Insurance Penetration in some of the emerging economies in Asia, i.e., Malaysia, Thailand and China during the same year i.e. 2016 was 4.77, 5.42 and 4.15 per cent respectively. Globally insurance penetration and density were 3.47 per cent and US$ 353 for the life segment in 2016 and 2.81 per cent and US$ 285.3 for the non-life segment respectively. The insurance density in India, which was US$ 11.5 in 2001, has increased to US$ 59.7 in 2016 (Life 46.5 and General 13.2). The comparative figures for Malaysia, Thailand and China during the same period i.e. 2016 were US$ 452.2, US$ 323.4 and US$ 337.1 respectively.

3.21 During the fiscal 2016-17, the Gross Direct Premium (GDP) of General Insurers (within India) was ₹130.97 thousand crores, registering 33 per cent growth (highest ever since 2000-01). Crop insurance, motor sales, health insurance etc. helped the industry report this growth. Life insurance industry recorded a premium income of ₹418 thousand crores as against ₹367 thousand crores in the previous financial year, registering a growth of 14.04 per cent.

04

CHAPTER

Prices and Inflation

Inflation in the country continued to moderate during 2017-18. CPI based headline inflation averaged 3.3 per cent during April-December 2017-18, the lowest in the last six financial years. The significant reduction in food inflation, particularly of pulses and vegetables, moderated the general inflation. The average food inflation fell to 1.2 per cent during April-December 2017-18. Core inflation too declined during this period. Many States witnessed reduction in inflation across rural as well as urban areas during the year.

INTRODUCTION

4.1 The economy witnessed a gradual transition from a period of high and variable inflation to more stable prices in the last four years. Headline inflation measured by the Consumer Price Index (CPI) has remained under control for the fourth successive year. Financial year (FY) 2017-18 began with an annual inflation rate of 3.0 per cent. In the first two quarters of FY 2017-18, there was a moderate increase in prices, resulting in a low level of inflation of 2.2 per cent in quarter one and 3.0 per cent in quarter two. Headline inflation rate reached its series low of 1.5 per cent in the month of June 2017. Food inflation measured by the Consumer Food Price Index (CFPI) declined to a low of 1.2 per cent during the FY 2017-18 (April-December).

4.2 The average inflation based on the new series (2011-12) of Wholesale Price Index (WPI) stood at 1.7 per cent in 2016-17 compared to (-)3.7 per cent in 2015-16 and 1.2 per cent in 2014-15. WPI based inflation for FY 2017-18 (Apr-Dec) stood at 2.9 per cent. Inflation based on the major series of the price indices for the last six years is given in Table 1 and the movement of WPI and CPI inflation since April 2014 is at Figure 1.

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

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (Apr-Dec)*
WPI	6.9	5.2	1.2	- 3.7	1.7	2.9 (P)
CPI (combined)	10.2	9.5	5.9	4.9	4.5	3.3 (P)
CPI (IW)	10.4	9.7	6.3	5.6	4.1	2.3#
CPI (AL)	10.0	11.6	6.6	4.4	4.2	2.0#
CPI (RL)	10.2	11.5	6.9	4.6	4.2	2.1#

Source: **Department of Industrial Policy and Promotion (DIPP) for WPI, Central Statistics Office (CSO) for CPI (combined) and Labour Bureau for CPI (IW), CPI (AL) and CPI (RL).**

Notes: **CPI (combined) inflation for 2012-13 and 2013-14 is based on old series 2010=100;**

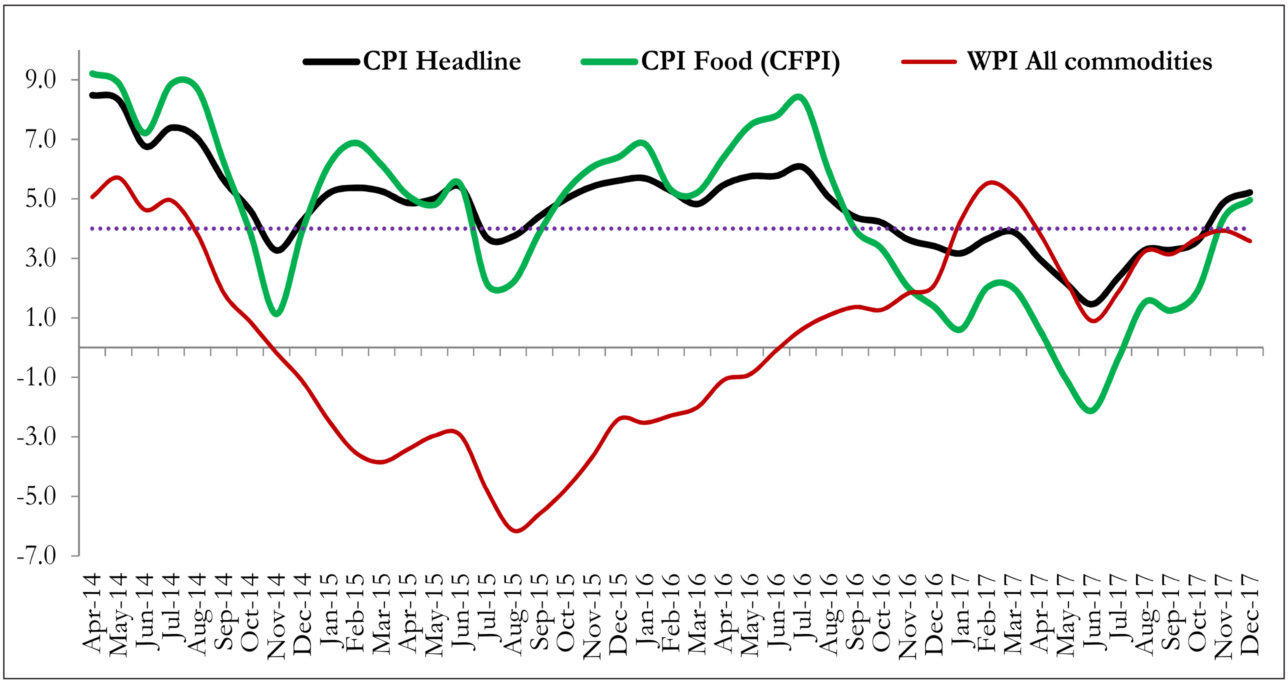
P - Provisional;

 # - For period 2017-18 (April - November);

IW stands for Industrial Workers, AL stands for Agricultural Labourers and RL stands for Rural Labourers;

*** - Inflation during April to December (Apr-Dec) 2017 is percentage change in average of monthly index for nine months from April to December 2017 over average of monthly index for nine months from April to December 2016.**

Figure 1 : Inflation based on WPI and CPI (per cent)



CURRENT TRENDS IN INFLATION

4.3 The average CPI-combined (CPI-C) inflation declined to 4.5 per cent in 2016-17 from 4.9 per cent in 2015-16 and 5.9 per cent in 2014-15. Average inflation for FY 2017-18 (Apr-Dec) stood at 3.3 per cent, below the threshold of 4 per cent. The decline in the inflation in the first half of the current fiscal year was indicative of a benign food inflation which ranged between (-)2.1 to 1.5 per cent. The moderate inflation rate of less than 4 per cent was maintained for straight 12 months up to the end of October 2017 (Figure 1). The CPI-C inflation for the month of December, 2017 stood at 5.2 per cent as compared to 4.9 per cent in November, 2017 and 3.4 per cent in December, 2016.

4.4 Food Inflation: Good agricultural production coupled with regular price monitoring by the Government helped to contain inflation, especially food inflation. CFPI declined to 4.2 per cent in 2016-17 from 4.9 per cent in 2015-16 and 6.4 per cent in 2014-15. Average food inflation for the financial year 2017-18 (Apr- Dec) declined to a low of 1.2 per cent and stood at 5.0 per cent in December, 2017. The rise in food inflation in recent months is mainly due to factors driving prices of vegetables and fruits. Though decline in food inflation is broad-based, major drivers are meat & fish, oil & fats, spices and pulses & products. Pulses & products sub-group with a weight of 2.4 in CPI-C has recorded inflation of (-)22.1 per cent in FY 2017-18 (Apr- Dec) as compared to 16.2 per cent during the same period last year. Vegetables accounting for 6.04 weight in overall CPI-C recorded inflation of 2.4 per cent during 2017-18 (Apr- Dec).

4.5 Food inflation based on WPI has also declined, it averaged 2.3 per cent in FY 2017-18 (Apr-Dec) as compared to 6.3 per cent in FY 2016-17 (Apr- Dec). WPI of Food Articles and Food Products has also shown decline in FY 2017-18 (Apr- Dec) over the corresponding period of the previous FY. WPI Food inflation stood at 2.9 per cent in December, 2017 as compared to 4.1 per cent in November, 2017 and 3.6 per cent in December, 2016.

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

Description	Weight	2016-17	2017-18 (Apr-Dec)	Dec-16	Nov-17	Dec-17 (P)
All Groups	**100**	**4.5**	**3.3**	**3.4**	**4.9**	**5.2**
CFPI*	**39.1**	**4.2**	**1.2**	**1.4**	**4.4**	**5.0**
Food & beverages	45.9	4.4	1.7	2.0	4.4	4.9
Cereals & products	9.7	4.2	3.9	5.3	3.3	2.6
Milk & products	6.6	4.1	4.2	4.4	4.3	4.4
Vegetables	6.0	-2.2	2.4	-14.6	22.5	29.1
Pulses & products	2.4	9.3	-22.1	-1.6	-23.6	-23.5
Fuel & Light	6.8	3.3	6.0	3.8	8.2	7.9
CPI excl. food and fuel group (Core)	47.3	4.8	4.5	4.9	4.9	5.2

***Source:* CSO** **P: Provisional** *** Consumer Food Price Index**

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

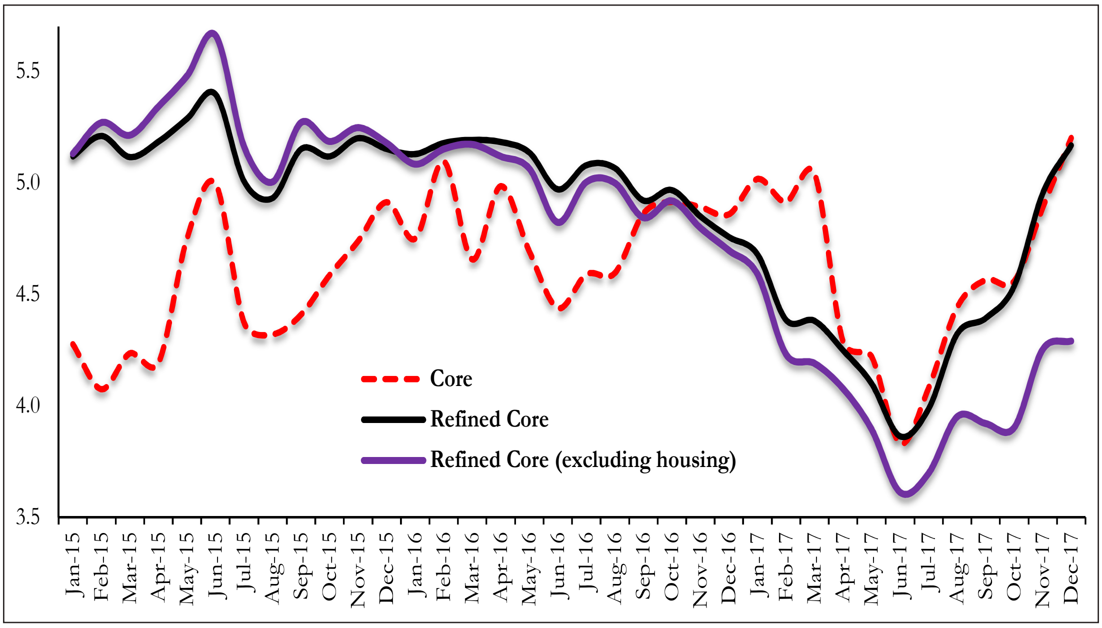
Description	Weight	2016-17	2017-18 (Apr-Dec)	Dec-16	Nov-17 (P)	Dec-17 (P)
All Commodities	**100**	**1.7**	**2.9**	**2.1**	**3.9**	**3.6**
Food Index	**24.4**	**5.8**	**2.3**	**3.6**	**4.1**	**2.9**
Food articles	15.3	4.0	2.3	0.1	6.1	4.7
Cereals	2.8	8.7	0.9	9.9	-2.1	-3.0
Pulses	0.6	17.6	-27.5	14.8	-35.5	-34.6
Vegetables	1.9	-5.3	19.3	-26.9	59.8	56.5
Fruits	1.6	6.0	3.6	0.6	4.2	12.0
Food products	9.1	9.5	2.3	10.7	0.5	-0.2
Fuel & power	13.2	-0.2	9.7	4.2	8.8	9.2
Non-Food manufactured products (Core)	55.1	-0.1	2.6	1.0	3.0	3.2

***Source:* DIPP** **P: Provisional**

4.6 Core Inflation: While significant moderation has been witnessed in the headline and food inflation, the CPI based core[1] inflation has remained above 4 per cent during the last four financial years. However, it has declined from 4.8 per cent in FY 2016-17 (Apr-Dec) to 4.5 per cent in FY 2017-18 (Apr- Dec) and was 5.2 per cent in December, 2017 (Figure 2). Refined core[2] is moving very close to core since the beginning of FY 2017-18, it declined to 4.4 per cent in FY 2017-18 (Apr- Dec) from 5.0 per cent in FY 2016-17 (Apr- Dec). Movements of refined core (excluding housing)[3] track the refined core. However, during the current financial year, the wedge between the two has grown following the implementation of the revised house rent allowance for central government employees based on the recommendation of the 7th Central Pay Commission. Refined core (excluding housing) declined to 4.0 per cent in FY 2017-18 (Apr- Dec) from 4.9 per cent in FY 2016-17 (Apr- Dec) and stood at 4.3 per cent in December 2017.

[1] CPI excluding food and fuel group.
[2] CPI excluding food and fuel group, petrol & diesel.
[3] CPI excluding food, fuel group, petrol, diesel and housing group.

Figure 2 : CPI-C based Core Inflation (per cent)



Box 4.1 : Producer Price Index

The Government had set up a Working Group under the Chairmanship of Professor B. N. Goldar on 21st August, 2014 to suggest the methodology for introducing Producer Price Index (PPI) in India. The Working Group submitted its report on 31.08.2017. The major recommendations of the Working Group on Producer Price Index are as follows:

(i) PPI in India may be compiled based on Supply Use Table 2011-12 using Total Final Use values for higher level weights. Initially indices based on Total Final Use weights should be compiled separately for goods and services. Aggregate index based on goods and services may be compiled and released once the coverage of service sector indices is adequate and the sector-wise indices are robust and stable.

(ii) Two separate sets of input PPIs may be compiled - one including services and the other excluding services.

(iii) An additional set of output PPI based on Final Demand and Intermediate Demand framework may also be compiled for the benefit of the users.

(iv) The PPIs may be initially compiled on an experimental basis and switching over from WPI to PPI should be undertaken after the PPI series stabilizes and due consultation with the stakeholders is done.

(v) For compilation of experimental PPI, price quotations collected for current series of WPI may be used.

(vi) The experimental PPI will be released on monthly basis. Initially, the base year of the experimental PPI would be 2011-12.

(vii) The Working Group recommended inclusion of 15 services in the PPI basket to begin with. The coverage of service sector may be extended to all key sectors on an urgent basis during the experimental phases of PPI.

The Producer Price Index (PPI) measures the average change in the prices of goods and services, either as they leave the place of production called Output PPI or as they enter the production process called Input PPI. Thus, the output indices measure the average change in prices that producers receive for their outputs while the input indices measure the average change in prices that producers pay for their inputs. PPI contrasts with other measures such as the Consumer Price Index (CPI) which measures changes in prices from buyers or consumers perspective.

The Wholesale Price Index (WPI) basket tracks prices of bulk transactions at first stage of all intermediate and final products. Inherent drawback of the aggregate basket of WPI without appropriate segregation of intermediate and final products involves multiple counting which can lead to bias in measures of inflation. Multiple counting occurs when the price for a specific commodity and the inputs used for its production are included in an aggregate index. PPIs significantly reduce the distortion arising from multiple counting by deriving weights from Supply Use Table compiled by the CSO. Further, the scope of PPI extends to services which are not presently covered under WPI. The benefits of migrating from WPI to PPI are to cover bulk transactions of all goods and services, do away with the bias of double counting inherent in WPI and to compile indices that are conceptually consistent with the National Accounts Statistics (NAS) for use as deflators.

The complete report of the Working Group may be accessed from the website of Office of Economic Advisor at *http://eaindustry.nic.in/PPI_Final_Report.pdf.*

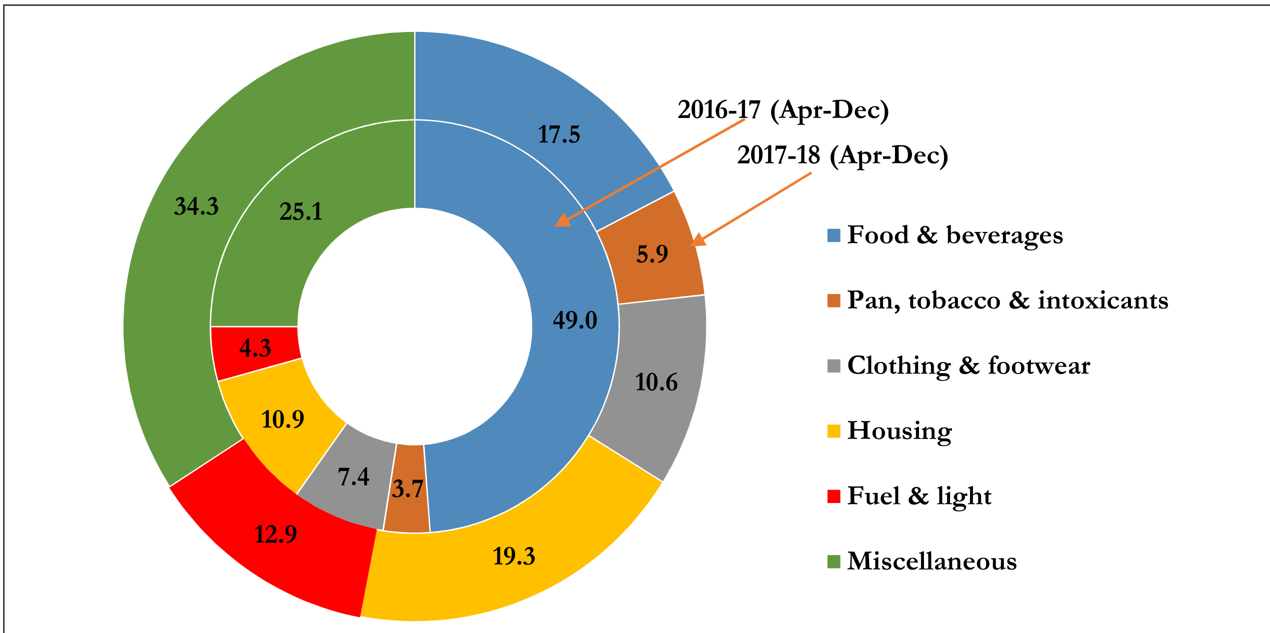
DRIVERS OF INFLATION

4.7 At the all India level, CPI-C inflation was driven mainly by food during FY 2016-17 (Apr-Dec). The miscellaneous[4] group has contributed the most to it during the current FY 2017-18 (Apr-Dec) (Figure 3). As can be seen in Figure 6, goods inflation (weight of 76.6% in CPI-C) is rising since June 2017 while services (with weight of 23.4%) inflation has remained around 5 per cent. Housing group contributed nearly twice as much to inflation in 2017-18 (Apr- Dec) as compared to 2016-17 (Apr- Dec). Excluding housing, services inflation declined to 3.8 per cent in 2017-18 (Apr- Dec) from 5.0 per cent during the corresponding period last financial year. Contribution of fuel and light group in CPI inflation in 2017-18 (Apr- Dec) was thrice of that in 2016-17 (Apr- Dec).

4.8 While food was the main driver of CPI (Rural) inflation in 2016-17 (Apr- Dec), miscellaneous category contributed the most to inflation in rural areas during April-December of the current financial year. The contribution of fuel and light, clothing and footwear and pan, tobacco and intoxicants categories in CPI (Rural) inflation has risen during April to December, 2017 over the same period last year (see Figure 4).

4.9 In urban areas, while food was the main driver of inflation during April-December last year, housing sector has contributed the most to CPI (Urban) inflation during April-December in the current financial year, followed by miscellaneous category (see Figure 5).

Figure 3 : Contribution to CPI (Combined) inflation 2016-17 (Apr-Dec) and 2017-18 (Apr- Dec)



4 Miscellaneous group (weight of 28.32 % in CPI - C) includes household goods & services, health, transport & communication, recreation and amusement, education and personal care and effects.

Figure 4 : Contribution to CPI (Rural) inflation 2016-17 (Apr- Dec) and 2017-18 (Apr- Dec)

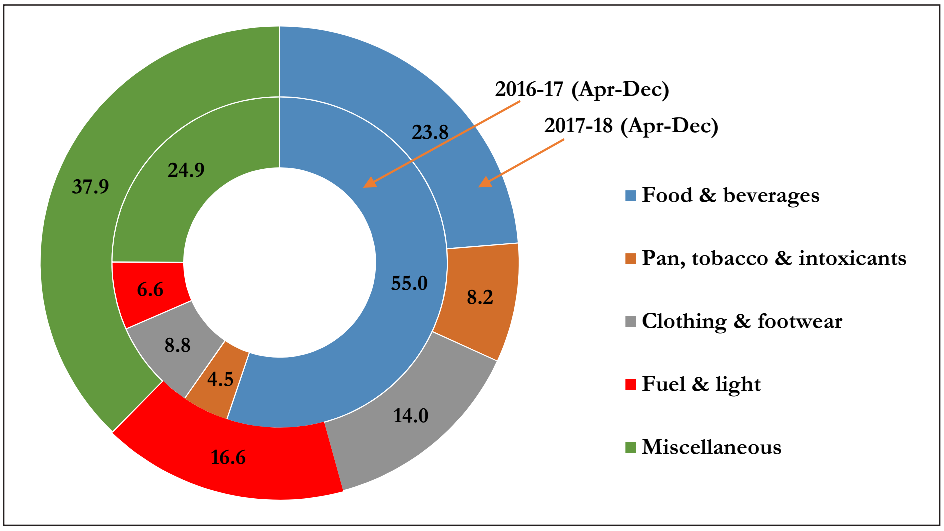


Figure 5 : Contribution to CPI (Urban) inflation 2016-17 (Apr- Dec) and 2017-18 (Apr- Dec)

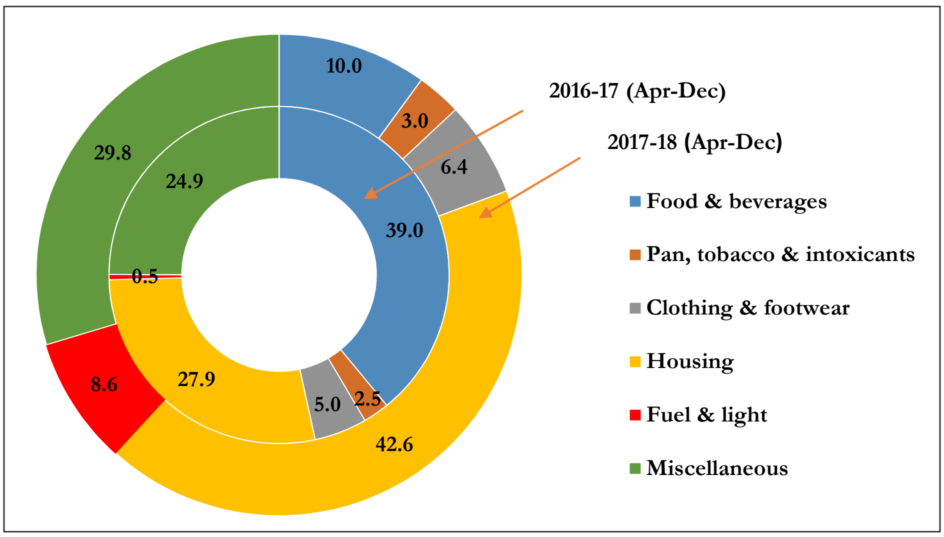
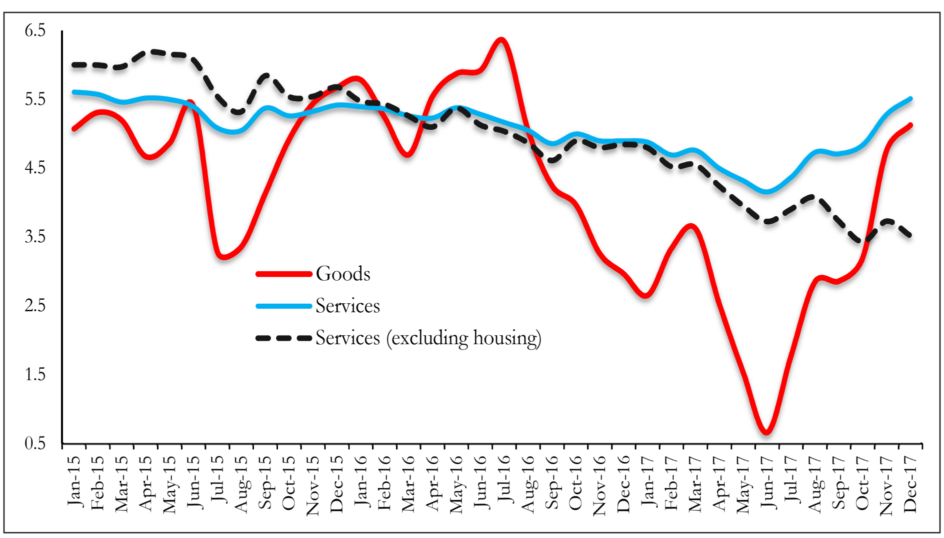


Figure 6 : CPI inflation in goods and services (per cent)

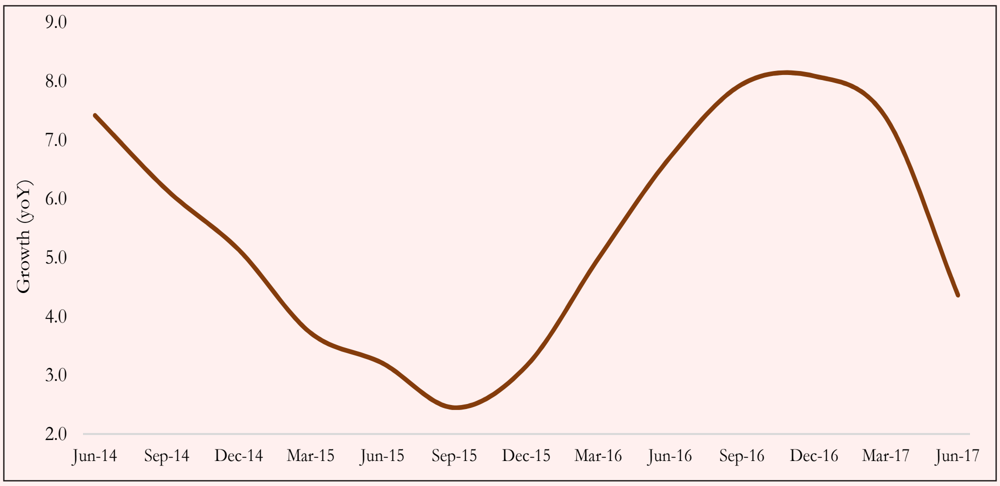


Box 4.2 : Housing Price Index

The Housing Price Indices (HPIs) are a broad measure of movement of residential property prices observed within a geographic boundary. The first official housing price index for the country named 'NHB RESIDEX' was launched in July, 2007 by the National Housing Bank (NHB). Overtime, the base year has been revised to FY 2012-13 to ensure capturing the latest information and accurately reflect the current economic situation in the country. Currently, National Housing Bank is publishing NHB RESIDEX for 50 cities on quarterly basis with FY 2012-13 as base year. Among 50 cities covered are 18 State/UT capitals and 37 Smart Cities.

NHB is not computing the composite all India housing price index as of now. Using population proportion as weights, an all India index as weighted average of city indices has been computed in-house (Figure 1). The figure shows that the rate of growth in housing prices at All India level has started to decline from the quarter ending December, 2016. It has decreased to around 4 per cent in the first quarter of FY 2017-18 from over 8 per cent in the third quarter of FY 2016-17.

Figure 1 : HPI Inflation based on NHB HPI at Assessment Prices (per cent)

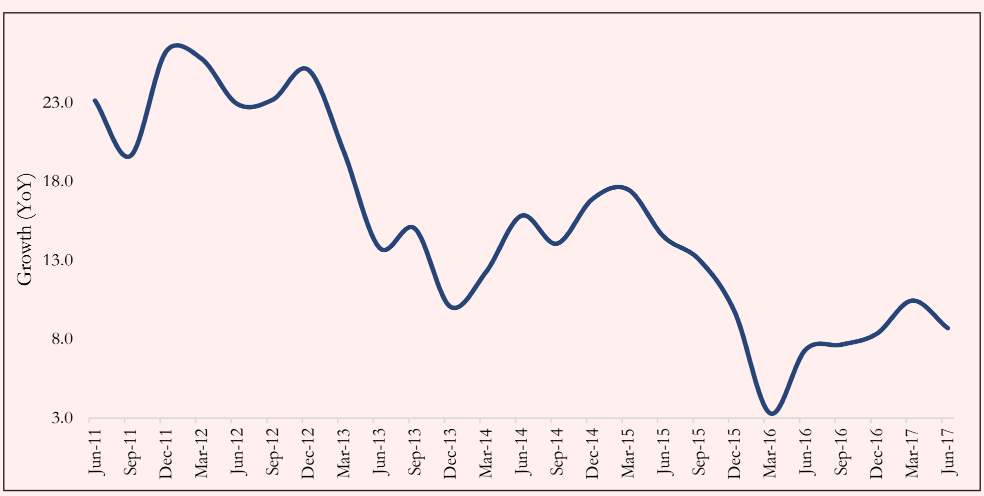


(*Note:* NHB computes HPI at Assessment Prices for each of 50 cities based on valuation data received from Banks/HFCs on a quarterly basis.)

The Reserve Bank of India (RBI) began compiling a house price index (HPI) in 2007 with a quarterly HPI for Mumbai city (Base 2002-03=100). Since then, it has extended its coverage to 9 more cities, revised its base to 2010-11=100, and started publishing a composite All India HPI. RBI's quarterly HPI is based on transactions data received from housing registration authorities in ten major cities.

Growth (YoY) in housing prices, as per RBI's all India HPI, after reaching a low of 3 per cent in quarter ending in March 2016, is showing upturn with mild fluctuation. It rose to 8.7 per cent in the first quarter of 2017-18 (Figure 2).

Figure 2 : HPI Inflation based on RBI's All-India HPI (per cent)



STATE-WISE[5] INFLATION

4.10 Many States have witnessed sharp fall in CPI inflation during 2017-18 (Apr- Dec)[6] (Figure 7). Inflation in seventeen States was below 4 per cent in FY 2017-18 (Apr- Dec) as compared to only three States in 2016-17 (Apr- Dec). Five States, namely, Jammu & Kashmir, Kerala, Delhi, Tamil Nadu and Himachal Pradesh recorded inflation of more than 4 per cent in FY 2017-18 (Apr- Dec) whereas nineteen States had inflation of more than 4 per cent in FY 2016-17 (Apr- Dec). Ten States had inflation rate lower than All India average for FY 2017-18 (Apr- Dec) with Odisha having the lowest inflation followed by Uttar Pradesh, Bihar and Chhattisgarh, respectively.

4.11 In urban areas, fifteen States had inflation of less than 4 per cent in FY 2017-18 (Apr- Dec) as compared to twelve in FY 2016-17 (Apr- Dec) (Figure 8). In the case of CPI-Rural, fifteen States recorded inflation of less than 4 per cent in FY 2017-18 (Apr- Dec) as against only one in 2016-17 (Apr- Dec) (Figure 9).

Figure 7 : CPI (Combined) General Inflation for States (per cent)

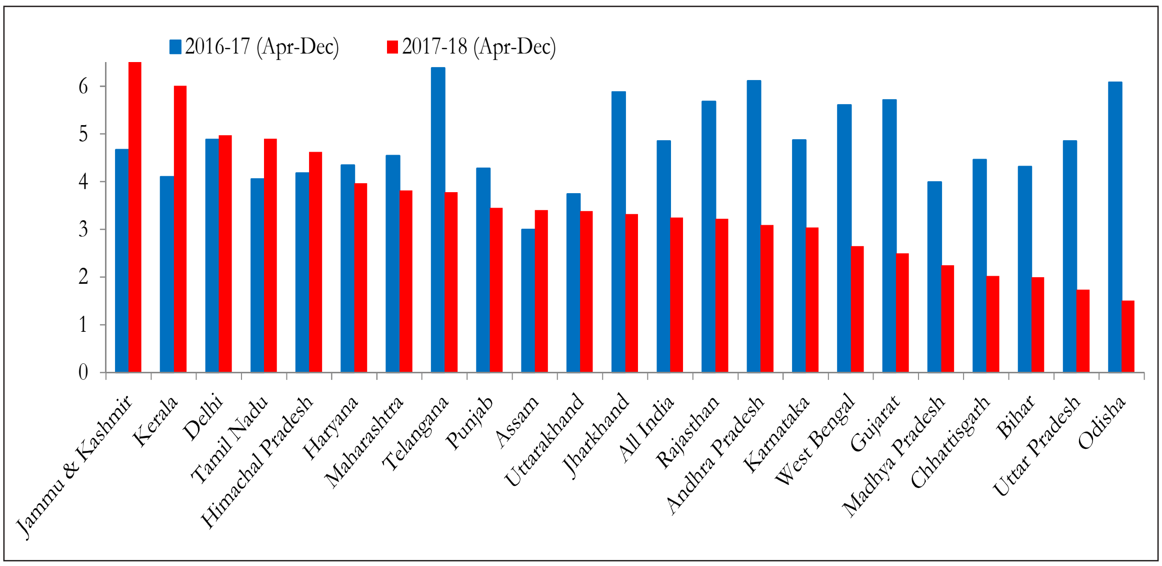
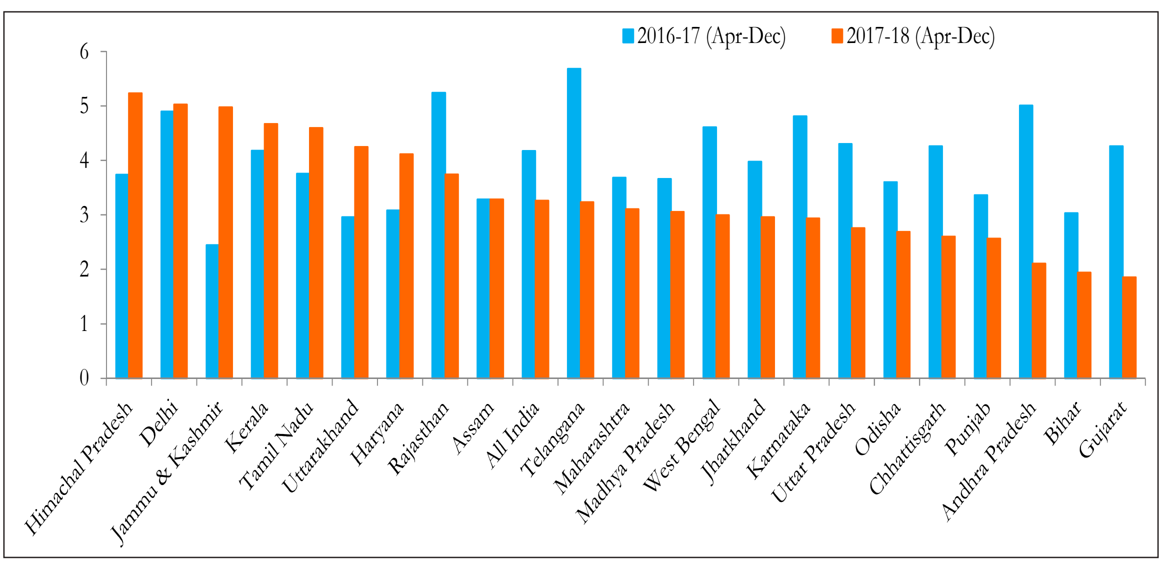


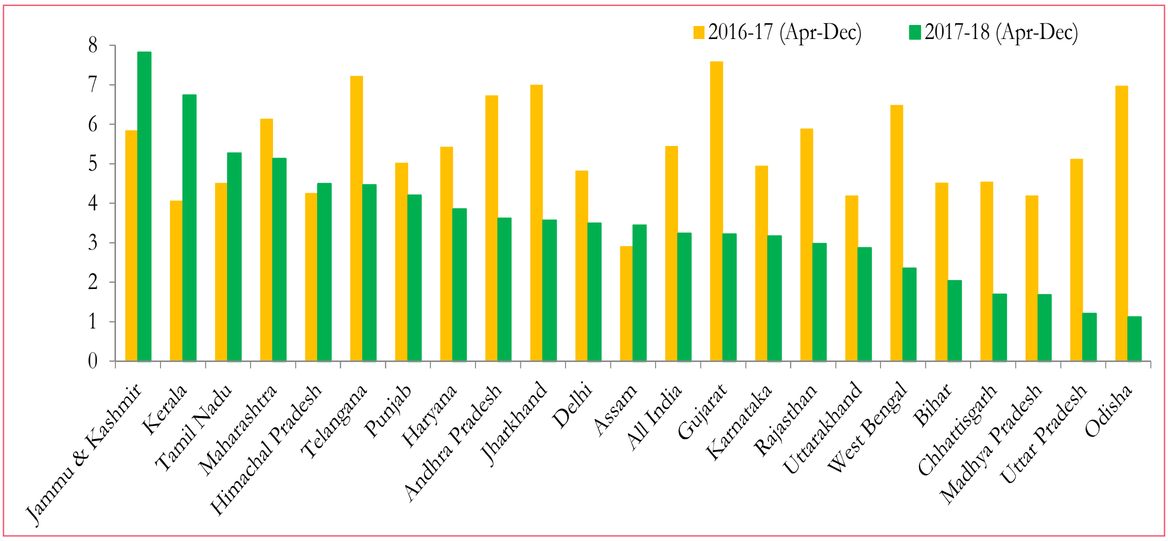
Figure 8 : CPI (Urban) General Inflation for States (per cent)



5 Analysis is limited to 22 States including Delhi.

6 Inflation during April to December 2017 is percentage change in average of monthly index for nine months from April to December 2017 over average of monthly index for nine months from April to December 2016.

Figure 9 : CPI (Rural) General Inflation for States (per cent)



Box 4.3 : Seasonal Movements in CPI-C and its Food components

The price variations/fluctuations in items arising from supply shocks during certain periods of the year are characterized as seasonal in nature. General (Headline) inflation is more volatile than core; it fluctuates more due to large changes in the relative prices of certain food items vulnerable to supply shocks. Food basket which has a large weight in the price indices (particularly in Consumer Price Index) in India is affected by seasonality. Within food basket of the price indices, pulses, fruits and vegetables groups, in particular, have witnessed large changes in prices mainly due to their seasonal nature.

An attempt to examine the seasonality of the price indices has been made to assess the extent and nature of seasonal factors. The analysis is built upon the approach followed by the Internal Technical Group's Report of RBI*. Using the X-12 ARIMA methodology, seasonal factors of the price indices are obtained. Seasonal factors exceeding 1.0 show the period when prices are likely to show some upward shift due to seasonality.

Figures 1 to 3 show the movement of seasonal factors of Headline, Food group, and Vegetables group of CPI-C, respectively. These reflect seasonality starting from July and ending in the month of November for CPI-C (All Groups). Seasonal peak is observed in the month of August for CFPI and Vegetables. Unlike the presence of seasonality in Food groups of CPI-C, its Non-Food groups display negligible seasonality.

Figure 1 : Movement of Seasonal Factors of CPI-C All Groups

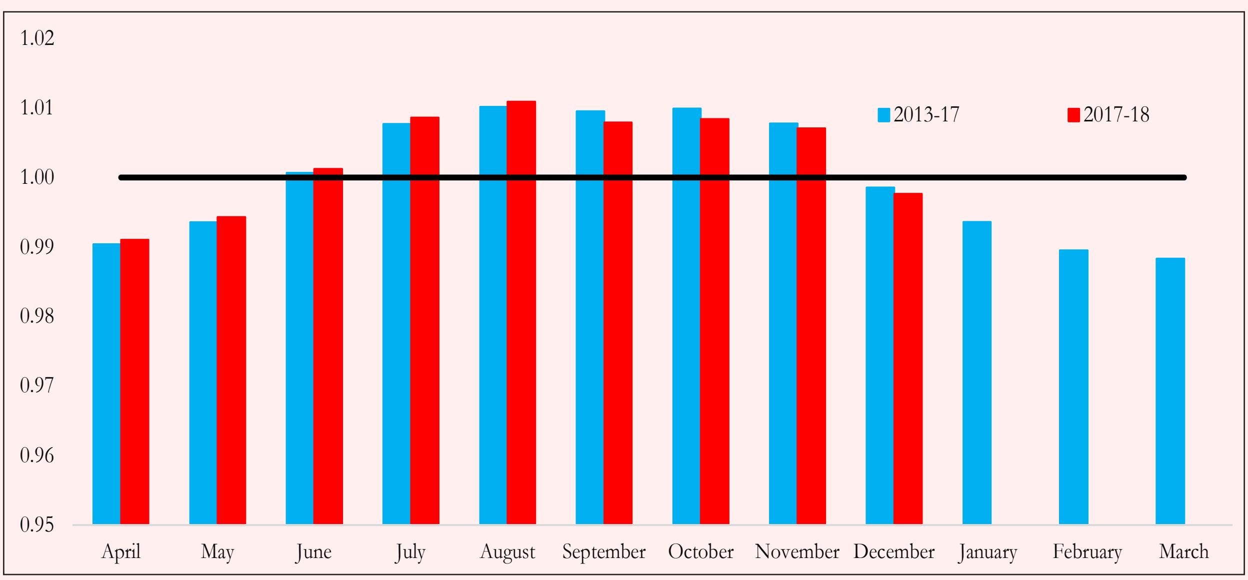


Figure 2 : Movement of Seasonal Factors of CFPI

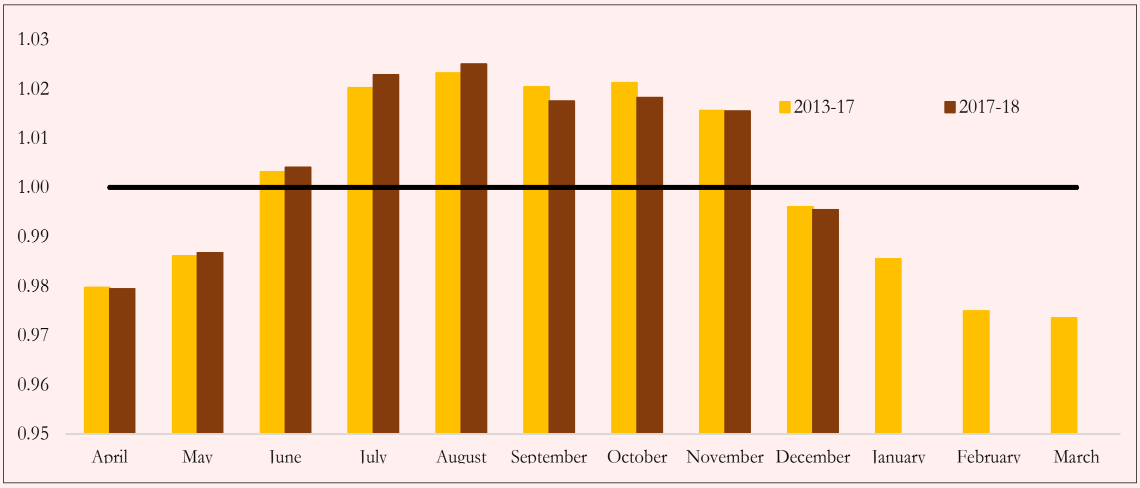
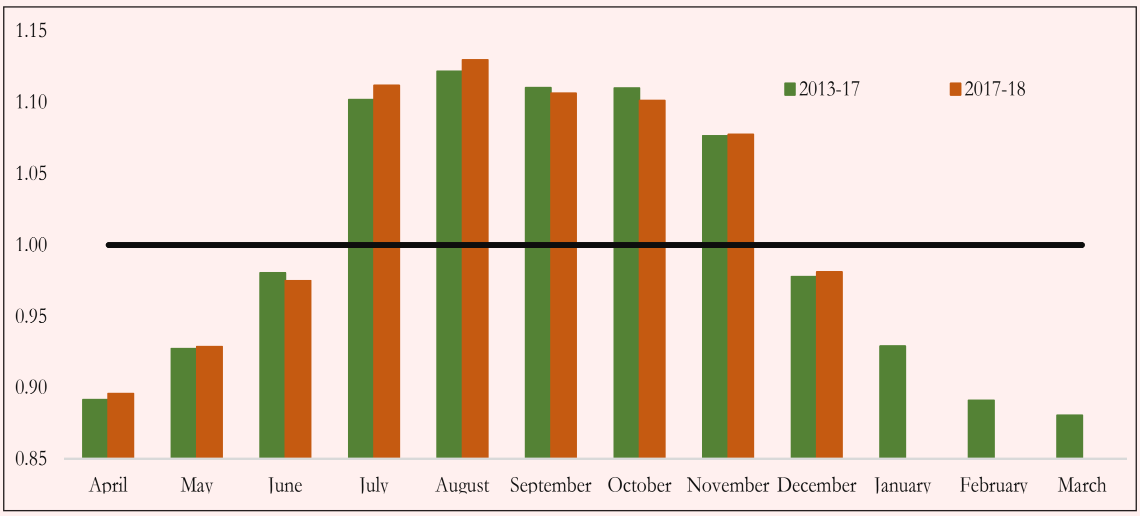


Figure 3 : Movement of Seasonal Factors of CPI-C Vegetables



To look at variability of seasonal factors in price indices during a given year and over the years, coefficient of variation (CV) is computed for seasonal factors of price indices for four years i.e. 2013-14 to 2016-17. Table 1 shows that level of variability of seasonal factors is more in the case of Food than General price indices. Within Food price indices, variability level of vegetables is several times that of pulses. CV of seasonal factors of pulses has increased during the period.

Table 1 : Coefficient of Variation (CV) of Seasonal Factors for Major Groups/Sub Groups of CPI-C

	CPI-C All Groups	CFPI	CPI-C (Pulses & Products)	CPI-C (Vegetables)	CPI-C (Non CFPI)
2013-14	0.90	1.96	1.29	9.68	0.26
2014-15	0.88	1.97	1.50	9.68	0.20
2015-16	0.86	1.96	1.71	9.81	0.14
2016-17	0.84	1.95	1.90	9.82	0.11

Source: **Survey Calculation**

* '*Report of the Internal Technical Group on Seasonal Movements in Inflation*', RBI, March 2008.

TRENDS IN GLOBAL COMMODITY PRICES

4.12 As per the commodity prices published by the World Bank, energy commodity prices are surging recently. These recorded average inflation of 15.3 per cent in FY 2017-18 (Apr-Dec) compared to (-) 8.0 per cent in FY 2016-17 (Apr-Dec) (Figure 10). Movement of 'Fuel & Power' inflation based on All India WPI tracks World Bank Energy price index and increased at an average of 9.7 per cent in FY 2017-18 (Apr-Dec) compared to (-) 6.5 per cent in FY 2016-17 (Apr-Dec) (Figure 11). World Bank Food price index declined by 3.0 per cent in 2017-18 (Apr-Dec), but rose at 5.8 per cent during the corresponding period last year. In contrast, FAO food prices have recorded higher inflation of 5.8 per cent in FY 2017-18 (Apr-Dec) compared to 3.2 per cent in FY 2016-17 (Apr-Dec). WPI 'Basic Metals' prices have also tracked World Bank's 'Base Metals' prices, though, inflation of 'Basic Metals' as per WPI is lower at 9.9 per cent than that of World Bank's 'Base Metals' inflation of 23.7 per cent during FY 2017-18 (Apr-Dec).

Figure 10 : Inflation based on World Bank Price Indices and FFPI[7] (per cent)

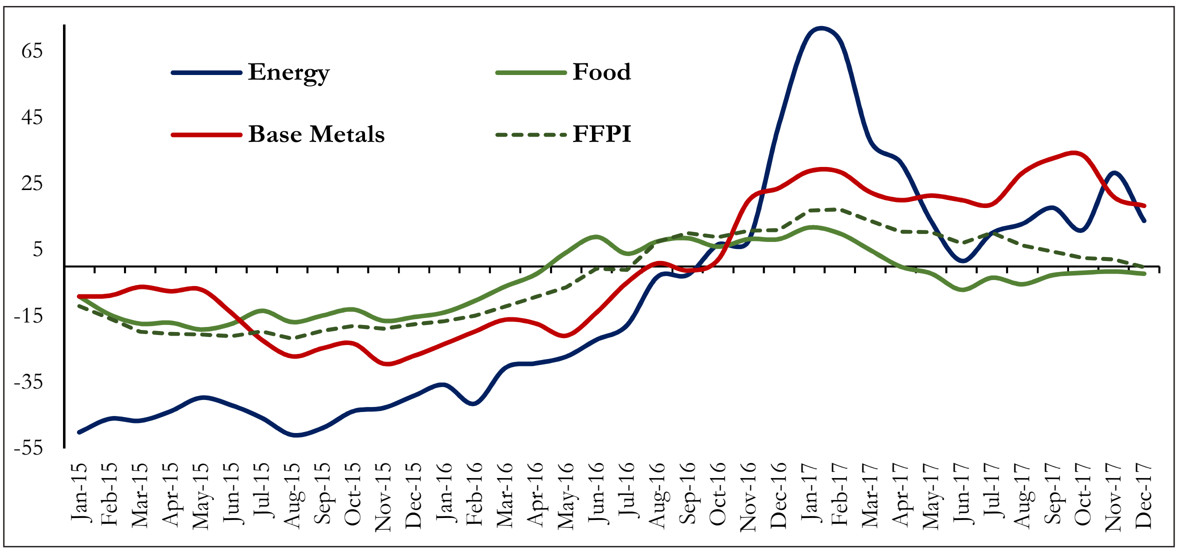
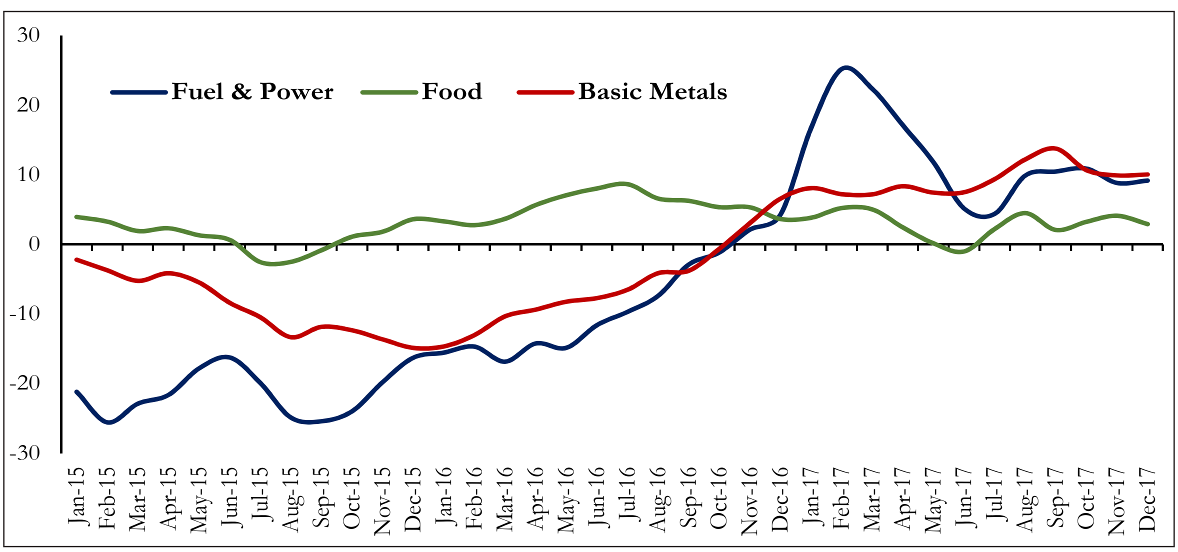


Figure 11 : Inflation based on WPI (per cent)



7 FFPI - FAO Food Price Index; The FAO (Food and Agriculture Organization) Food Price Index is a measure of the monthly change in international prices of a basket of food commodities. It consists of the average of five commodity group price indices, weighted with the average export shares of each of the groups for 2002-2004.

EFFORTS TO CONTAIN INFLATION

4.13 Central Government monitors the price situation on a regular basis as controlling inflation is a priority area. It has taken a number of measures to control inflation especially food inflation which, inter alia, include the following:

- Advisories are being issued, as and when required, to State Governments to take strict action against hoarding & black marketing and effectively enforce the Essential Commodities Act, 1955 & the Prevention of Black-marketing and Maintenance of Supplies of Essential Commodities Act, 1980 for commodities in short supply.
- Regular review meeting on price and availability situation is being held at the highest level including at the level of Committee of Secretaries, Inter Ministerial Committee, Price Stabilization Fund Management Committee and other Departmental level review meetings.
- Higher MSP has been announced so as to incentivize production and thereby enhance availability of food items which may help moderate prices.
- A scheme titled Price Stabilization Fund (PSF) is being implemented to control price volatility of agricultural commodities like pulses, onions, etc.
- Government approved enhancement in buffer stock of pulses from 1.5 lakh MT to 20 Lakh MT to enable effective market intervention for moderation of retail prices. Accordingly, a dynamic buffer stock of pulses of upto 20 lakh tonnes has been built under the Price Stabilization Fund (PSF) Scheme through both domestic procurement as well as imports. Of this, 3.26 lakh MT has been released for market intervention and buffer management.
- Pulses from the buffer are being provided to States/UTs for PDS distribution, Mid-day Meal scheme, etc. In addition, pulses from the buffer are being utilized to meet the requirement of pulses by Army and Central Para-military Forces. Recently, it has also been decided that all Ministries/Departments having schemes with a nutrition component or providing food/catering/hospitality services would utilize pulses from the Central buffer for their operations.
- Export of edible oils was allowed only in branded consumer packs of up to 5 kg. with a minimum export price of USD 900 per MT. With a view to incentivizing domestic production this restriction has been removed on oil except for palm oil, mustard oil and sunflower oil.
- Government has imposed stock holding limits on stockist/dealers of sugar till April, 2018.
- Government imposed 20% duty on export of sugar for promoting availability and moderating price rise.
- Permitted import of 5 lakh tonnes of raw sugar at zero duty; subsequently, import of additional 3 lakh tonnes was allowed at 25% duty.
- Export of all varieties of onion will be allowed only on letter of credit subject to a minimum export price (MEP) of $ 850 per MT till 31st December, 2017.
- States/UTs have been advised to impose stock limit on onions. States were requested to indicate their requirement of onions so that import of requisite quantity may be undertaken to improve availability and help moderate the prevailing high prices.

CONCLUSION

4.14 CPI inflation declined to 3.3 per cent during FY 2017-18 (Apr-Dec), with broad based decline in inflation across major commodity groups except Housing and Fuel & Light. Headline inflation has been below 4 per cent for 12 straight months, from November, 2016 to October, 2017 and CPI food inflation averaged around one per cent during April -December in the current financial year.

Sustainable Development, Energy and Climate Change

05

CHAPTER

India continues to undertake and effectively implement a large number of actions relating to energy, environment and climate, in particular, covering renewable energy, energy efficiency, sustainable agriculture, sustainable habitat, water, forestry, Himalayan ecosystem, and knowledge and capacity building. These actions reflect India's commitment to meet (and reconcile) the goals of climate change, sustainable development and energy access. India also expects the international community to be ambitious and fulfil its commitments in accordance with the principles of equity and common but differentiated responsibilities.

SUSTAINABLE DEVELOPMENT GOALS

5.1 The UN Sustainable Development Goals (SDGs) adopted by the international community in September, 2015 comprehensively covers social, economic and environmental dimensions and build on the Millennium Development Goals (MDGs). Notably, the SDGs constitute a universal agreement to end poverty in all its forms and dimensions, including extreme poverty. There are 17 SDGs which have 169 targets to be achieved by 2030. India played an important role in shaping the SDGs.

5.2 Several of the Government's programmes would directly contribute to advancement of the SDG agenda. A noteworthy example is the Pradhan Mantri Jan Dhan Yojana (PMJDY) which is the world's largest financial inclusion programme. While targeting economic growth, infrastructure development and industrialisation, the country's fight against poverty has become fundamentally focussed on social inclusion and empowerment of the poor. Reinforcing India's commitment to the national development agenda and SDGs, the country's Parliament has organized several forums to develop policy and perspectives on elimination of poverty, promoting gender equality and addressing climate change. India is one of the countries that has volunteered to take part in the Voluntary National Reviews (VNRs) at the High-Level Political Forum (HLPF) 2017. India presented its 1st VNR on implementation of SDGs on 19th July, 2017 in the HLPF at United Nations, New York. The VNR report is based on an analysis of progress under various programmes and initiatives in the country. The VNR report focused on 7 SDGs: 1 (No Poverty); 2 (Zero Hunger); 3 (Good Health and Well-Being); 5 (Gender Equality); 9 (Industry, Innovation and Infrastructure), 14 (Life below Water) and 17 (Partnerships for the Goals).

National SDG Indicators and Baseline

5.3 In the light of the global SDG indicators endorsed by the UN Statistical Commission, the draft national SDG indicators are being developed by Ministry of Statistics & Programme Implementation with inputs from Central Ministries and various other stakeholders and are now at an advanced stage of finalization. Going forward, a monitoring and reporting system will be set up to regularly take stock of the implementation process and generate credible information and evidence on progress of the

SDGs with the base year as 2016. The National Institution for Transforming India (NITI) Aayog's role will be to collect, validate and document best practices in implementation of SDGs for wider dissemination. On a regular basis, progress on SDGs will be tracked through an integrated dashboard.

URBAN INDIA AND SUSTAINABLE DEVELOPMENT

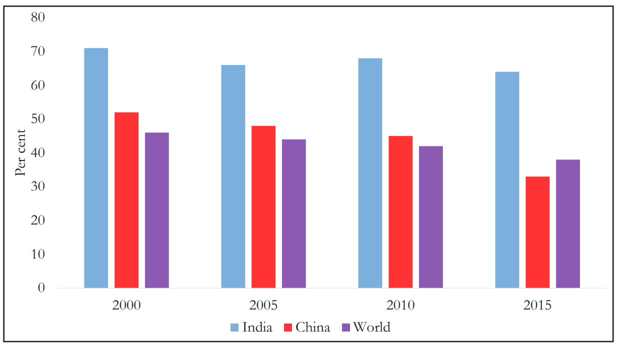
5.4 The SDG 11 states: "make cities inclusive, safe, resilient and sustainable". India is now embarking on a fast rural to urban transition. As cities are the centres of economic activity, how cities deliver on a number of basic services will determine the path and progress of sustainable development. In other words, one of the defining parameters for delivering India's sustainable development agenda will be the development path chosen by urban India.

5.5 According to World Economic and Social Survey, 2013, achieving the sustainability of cities entails integration of four pillars - social development, economic development, environmental management, and effective urban governance. According to the UN World Cities Report 2016, by 2030, India is expected to be home to seven mega-cities with population above 10 million. According to Census 2011, 377.1 million Indians comprising 31.16 per cent of the country's population live in urban areas. India's urban population is projected to grow to about 600 million by 2031. Many Indian cities are now struggling with multiple problems of poverty, inadequate provision of urban services, congestion, air pollution, sizeable slum population, lack of safety measures, and challenges in terms of garbage removal, sewage system, sanitation, affordable housing, and public transport. Government of India has undertaken several measures to improve sustainability of cities, which include the Smart Cities Mission, National Urban Housing & Habitat Policy (2007), Swachh Bharat Mission (Urban), and management of Municipal Solid Waste (MSW) etc. Yet, many challenges remain. According to the High Powered Expert Committee appointed by the Ministry of Housing and Urban Affairs, about ₹39 lakh crore (at 2009-10 prices) was required for creation of urban infrastructure over the next 20 years. Out of this, about ₹17 lakh crore (44 per cent) was needed for roads and ₹8 lakh crore (20 per cent) for services such as water supply, sewerage, solid waste management and storm water drains. In addition, the requirement for operation and maintenance was separately estimated to be ₹20 lakh crore. Raising resources of this magnitude is going to be a daunting challenge. Besides the average cost recovery is less than 50 per cent in most of the Urban Local Bodies (ULBs). The way forward is to encourage the ULBs to raise resources through various innovative financial instruments such as municipal bonds, PPPs, credit risk guarantees, etc. Example of one such instrument that has been experimented in India worth highlighting is that of municipal bonds. In July, 2015, the Securities and Exchange Board of India (SEBI) notified a new regulatory framework - Issue and Listing of Debt Securities by Municipalities Regulations - for issuing municipal bonds in India. The new regulations allowed for municipal bodies or a corporate municipal entity to issue municipal bonds through private placement or public issue. Municipal bonds can be one among the options for the massive investment requirement in the urban infrastructure. However, the ULBs and the state governments have to bring operational efficiency and financial viability in urban projects.

ACCESS TO SUSTAINABLE ENERGY

5.6 Access to affordable, reliable, sustainable and modern energy is the *sine qua non* of achieving all the SDGs due to its deep inter-linkages with all the other goals. Its importance in achieving economic prosperity is straightforward. However, it is also directly and indirectly linked to other sustainable development objectives such as good health and well-being, gender equality, industry, innovation and infrastructure, sustainable cities and communities. To understand this, consider an example of the linkage between access to energy and gender equality. This happens through various channels. In India, the burden of collecting fuel wood and water and cooking falls disproportionately on the female members of households. Although, over the years the country has made considerable progress in providing access to households to clean cooking options, the proportion of population without access to clean cooking was around 64 per cent in 2015 compared to a World average of 38 per cent and 33 per cent for China in the same year (OECD/ IEA, 2017) (Figure 1).

Figure 1: Share of population without access to clean cooking



Source: **World Energy Outlook Special Report: Energy Access Outlook 2017, OECD/IEA, 2017**

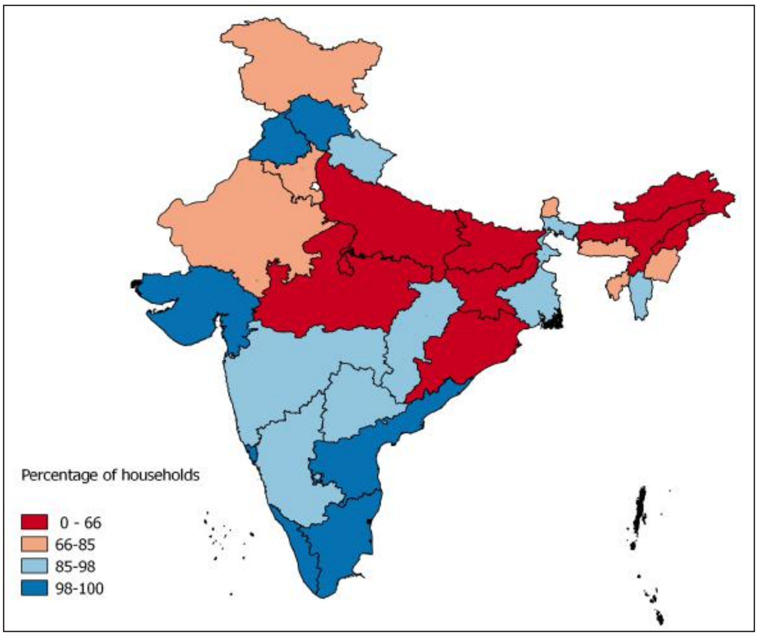
5.7 The adverse impacts of indoor air pollution also fall disproportionately on women and children who are directly involved in cooking or spend a major portion of their time indoors. According to a study (Watts et.al., 2017), around 4.3 million people die annually worldwide due to household air pollution resulting from the burning of solid fuels. Not only does using inefficient fuels like firewood and dung cakes cause health hazards, they require a considerable amount of time to be devoted for their collection. One of the estimates of the amount of time spent on collecting firewood in India suggests that on an average, women spend around 374 hours every year for collection of firewood (Global Alliance for Clean Cookstoves, 2014). Thus access to modern energy sources can reduce the amount of time spent on collection of firewood thereby leading to a positive impact on girls' education and employment. According to Lawson (2008), reduction in gender gap in India by half over the period 2008-2017 and then by half again over 2018-2027 would result in a per capita income that would be higher by around 13 per cent in the year 2030, compared to a baseline scenario.

5.8 As reported in the previous edition of the Economic Survey, Government of India had launched "Pradhan Mantri Ujjwala Yojana" (PMUY) in May, 2016 and upgraded it to provide 80 million LPG connections by 2020 to BPL households. Complementing the above scheme, Government has come out with other initiatives namely "Ujjwala Plus" which will address the cooking needs of deprived people who are not covered under the Socio-Economic Caste Census (SECC) 2011. During 2016-17, 3.25 crore new LPG connections were released that includes 2 crore connections released under PMUY. In addition, Government of India is committed to provide 24X7 reliable and quality power supply to all its consumers by 2019. The Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) scheme was launched in 2015 to achieve 100 per cent village electrification and Saubhagya scheme launched on 25th September, 2017, to provide energy access to all by last mile connectivity and electricity connections to all remaining un-electrified households in rural and urban areas to achieve universal household electrification in the country. Out of 18.1 crore rural households in the country, 14.2 crore (78%) rural households have been electrified[1]. There are also considerable variations among the different states (Figure 2). Kerala, Tamil Nadu, Andhra Pradesh, Goa, Gujarat and Punjab have achieved 100 per cent electrification of households. In contrast, Bihar, Jharkhand and Nagaland have achieved less than 50 per cent.

1 Saubhagya Portal of Rural Electrification Corporation, retrieved on 16 January, 2018.

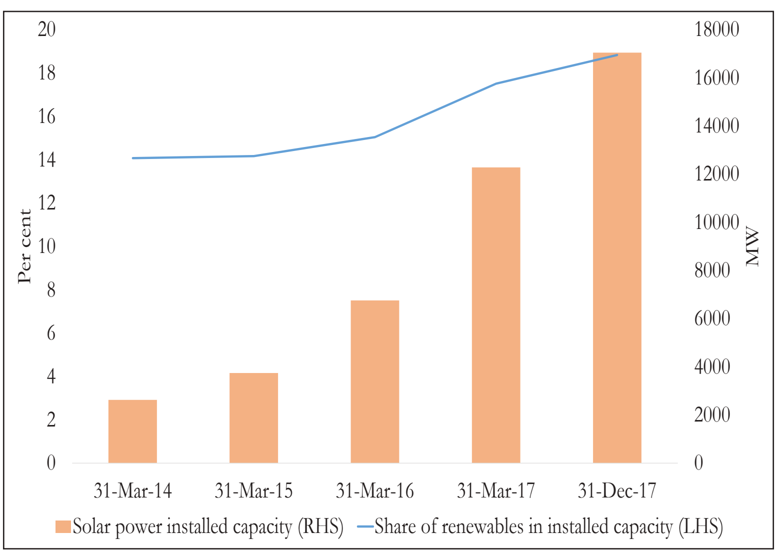
5.9 Not only has the government focussed on providing reliable electricity to the common man but also has strived to ensure that the additions are from sustainable sources. As on 30th November, 2017, the total installed capacity of electricity in India was 330860.6 MW out of which 18 per cent was from renewable energy sources. As Figure 3 shows the share of renewables in the total installed capacity has been increasing over the years and the current share is around 3 times what it was in the year 2007. Figure 3 also shows the progress made in the installation of solar power in the recent years. Between March, 2016 and December, 2017, the installed capacity of solar power increased from around 6.8 GW to 17 GW. In recent years, India has been witnessing falling solar tariffs. While this has a positive impact on the cost of procuring power, it has also initiated certain discussions about renegotiation of already signed power purchase agreements (PPAs) by certain states (Box: 5.1).

Figure 2 : Percentage of rural households electrified



Source: **Saubhagya Portal of Rural Electrification Corporation**

Figure 3 : Progress of Renewables in India



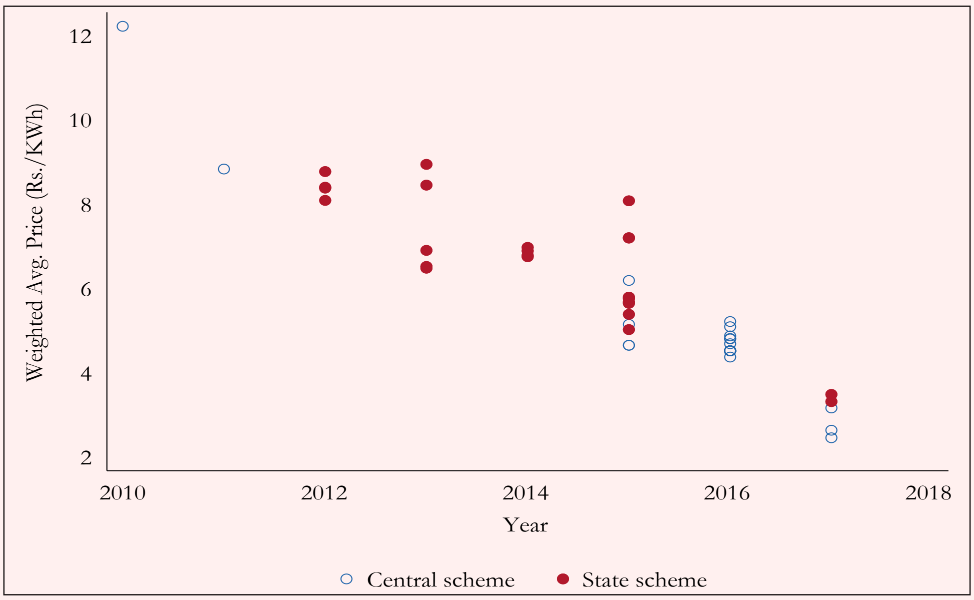
Source: **Ministry of New and Renewable Energy**

Box 5.1 : Discussions around Renegotiation of PPAs by certain states

PPA is a contract between purchaser of electricity and electricity generator setting out the terms and price for supplying electricity. Earlier, tariffs were fixed by state electricity regulatory commissions based on which PPAs were made with power generators. In the case of renewable energy, state electricity regulatory commissions set the Feed-in Tariffs for the purchase of electricity from these sources. PPAs were signed based on these pre-determined prices for a number of years. One of the key objectives of the Electricity Act, 2003 is promotion of competition in the electricity sector. Section 63 of the Act specifies that notwithstanding anything contained in section 62, the Appropriate Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government. A tariff order shall, unless amended or revoked, continue to be in force for such period as may be specified in the tariff order. The revised tariff policy was published in January, 2016.

The recent auctions for solar power procurement have led to discovery of very low tariffs (Figure). Auctions for wind based power were first held by Solar Energy Corporation of India in February, 2017 which realised a tariff of ₹ 3.46/unit. This is much lower than the lowest feed-in tariff for wind at ₹ 4.16/unit. Second wind auctions were conducted in October, 2017 where the tariffs again touched a historic low level of ₹ 2.64/KWh. The discovery of very low tariffs through the auctioning process, though a welcome news, possibly contributed to some demands for renegotiation of the already signed PPAs. Some discoms have hinted at the possibility of renegotiating the PPAs signed by them at tariffs higher than those in the recent bids. According to CRISIL (2017), renegotiating the tariffs could result in risk for investments worth ₹ 48000 crore.

Figure: Solar Tariffs



Renegotiation of PPAs are likely to face tough resistance from the developers and may result in legal battles. This introduces uncertainty for the sector and banks which are already facing the issue of NPAs, may become apprehensive of lending to the sector in the future. There are cases where the developers have already made huge investments into renewable energy projects based on the expected stream of revenue. One of the principal expectation from the Government is the enforcement of PPAs. This is especially crucial considering the government's ambitious target of achieving 175 GW of renewable energy by 2022.

Making the term of future PPAs shorter may not be desirable as it could only increase the cost of capital without much gains. Affordable financing holds the key for financing sustainable energy projects. Risk mitigating instruments such as payment guarantee fund or a foreign exchange fund available to developers could be a way forward.

The Government, so far, has played an active role in promoting the adoption of renewable energy resources by offering various incentives, such as generation-based incentives, capital and interest subsidies, VGF, and concessional finance. Renewable energy has been placed under the priority sector lending and the bank loan for solar roof-top systems is to be treated as a part of home loan/home improvement loan with subsequent tax benefits. Currently, the levelised tariff is approaching grid parity. There is a case for revisiting the subsidies and incentives being given to the renewable energy sector.

5.10 Also important is the efficient and effective use of energy resources. As a move in the direction of efficient energy use, the Ministry of Finance has issued guidelines for mandatory installation of energy efficient appliances in all Central Government buildings across India. Buildings Energy Efficiency Programme was launched in May, 2017 which is being implemented by Energy Efficiency Services Limited (EESL). Under this scheme, EESL is likely to retrofit about one crore LED lights, 15 lakh energy efficient ceiling fans, and 1.5 lakh energy efficient ACs in more than 10,000 government and private buildings by the year 2020[2].

INTERNATIONAL SOLAR ALLIANCE (ISA) ENTERED INTO FORCE

5.11 ISA, which was launched by Shri Narendra Modi, Hon'ble Prime Minister of India and Mr. François Hollande, former President of France on 30th November, 2015 in Paris, entered into force on 6th December, 2017. As per Article XIII (1), the ISA Framework Agreement (FA) has entered into force on 6th December, 2017, on the thirtieth day after the date of deposit of the fifteenth instrument of ratification, acceptance or approval. With ISA FA's entry into force, ISA has become a *de jure* treaty-based International Intergovernmental Organization. ISA is the first International intergovernmental treaty-based organization headquartered in India (Gurugram, Haryana). As on date, 46 countries have signed and out of these, 19 countries have ratified the ISA Framework Agreement (Figure 4).

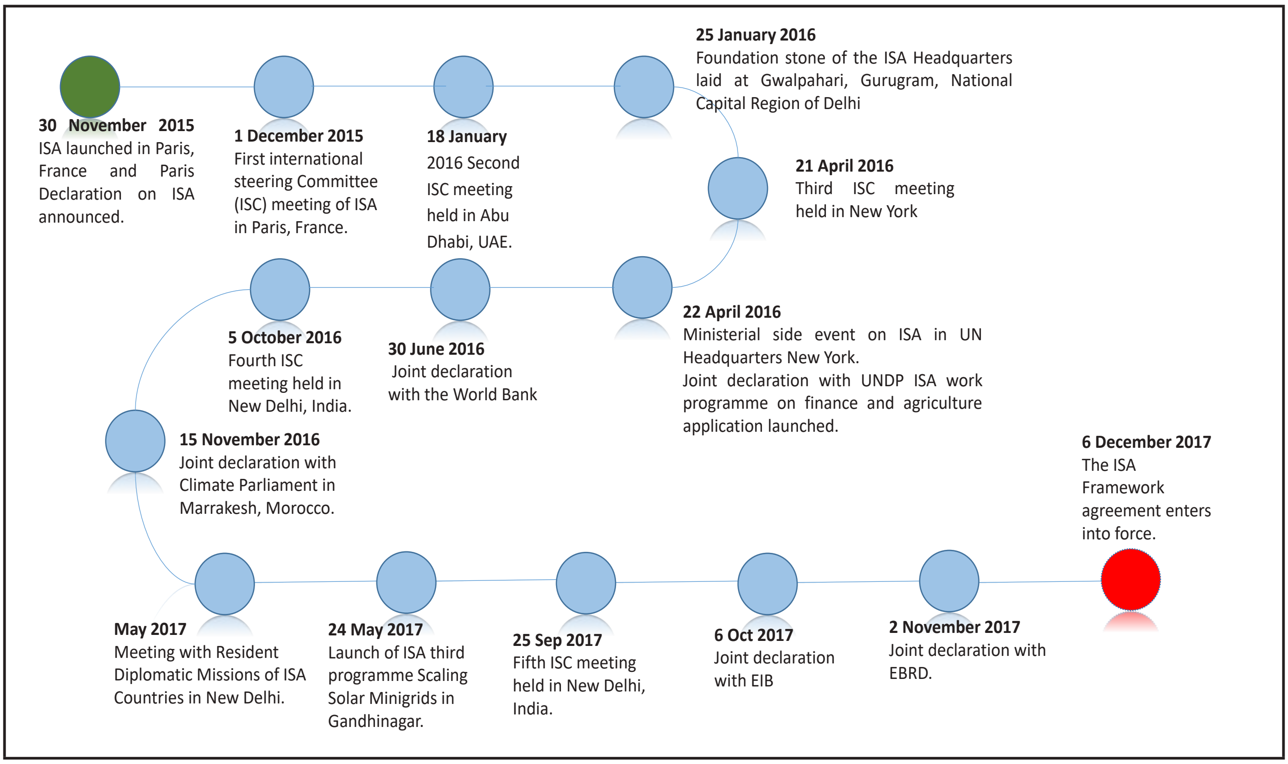
5.12 ISA is a coalition of solar resource rich countries lying fully or partially between the Tropics of Cancer and Capricorn and aims to specifically address energy needs by harnessing solar energy. The Paris Declaration establishing ISA states that the countries share the collective ambition to undertake innovative and concerted efforts for reducing the cost of finance and cost of technology for immediate deployment of solar generation assets. This will help pave the way for future solar generation, storage and good technologies for each prospective member country's individual needs by mobilizing more than US $ 1 trillion dollars in investments that will be required by 2030.

5.13 Government of India has made a provision of ₹100 crore as one-time fund for ISA Fund corpus. In addition, a recurring expenditure grant of ₹15 crore per annum for the period 2016-17 to 2020-21 has also been committed by India for meeting ISA's day to day expenditure and meeting cost of outreach events etc. On the request of the ISA, the Government of India has earmarked around US $ 2 billion Line of Credit (LoC) to the African countries for implementation of solar and related projects out of its total US $ 10 billion LoC under the Indian Development and Economic Assistance Scheme. Also as a founding member of the ISA, Government of France through the *Agence Française de Développement,* has also offered €300 million for solar projects across ISA member countries. ISA will similarly persuade other countries to contribute to the cause of solar deployment globally.

5.14 Presently ISA has three programmes Scaling Solar Applications for Agricultural Use, Affordable Finance at Scale and Scaling Solar Mini-grids. In addition, ISA plans to launch two more programmes on Scaling Solar Rooftops, and Scaling E-Mobility & Storage. Strategic and financial partnerships have been entered into with the UNDP, the World Bank, EIB, EBRD and the Climate Parliament to further the mandate of ISA. The United Nations including its organs are ISA's strategic partners. ISA is also developing "Common Risk Mitigating Mechanism" (CRMM) for de-risking and reducing the financial cost of solar projects. An international expert group has been working on the blue print of the mechanism. Another major initiative of ISA includes establishment of Digital Infopedia which serves as a platform to interact, connect, communicate and collaborate with one another. ISA also plans to administer global awards for solar R&D, applications and innovative financing. The State

2 http://pib.nic.in/newsite/mbErel.aspx?relid=169896.

Figure 4: ISA's Journey so far…



Government of Haryana has agreed to institute Kalpana Chawla Solar Award for the women Solar Scientists doing extraordinary work across the 121 ISA prospective member countries. The Haryana Government has been a trendsetter in this regard and has granted ₹10 crore to institute the award.

5.15 ISA is a trillion-dollar opportunity in solar. Economy and industry in turn can benefit from the business opportunities available across 121 ISA member countries.

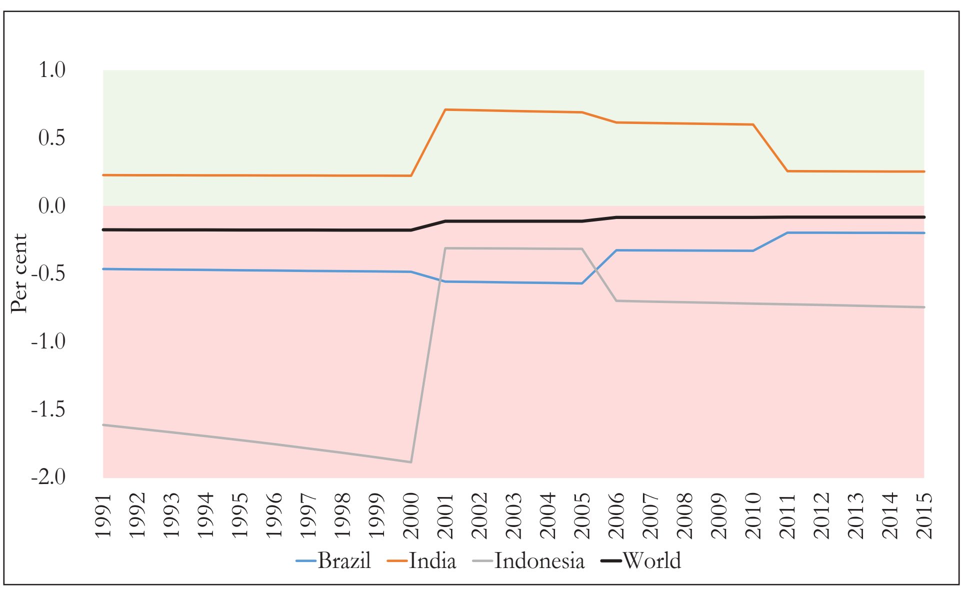
INDIA AND CLIMATE CHANGE

5.16 India's climate ranges from continental to coastal, from extremes of heat to extremes of cold, from extreme aridity and negligible rainfall to excessive humidity and torrential rainfall. The rainfall in India shows great variation, unequal seasonal and geographical distribution and frequent departures from the normal. Temperature variations are also notable in the Indian sub-continent. The annual mean, maximum and minimum temperatures during the period 1901-2010 for India, show a significant increasing trend of 0.60°C, 1.0°C and 0.18°C per hundred years, respectively. For the 1981-2010 period, the mean, maximum and minimum temperatures increased almost at an equal rate of around 0.2°C per decade, which is much higher than the trends for the period 1901-2010. Daily rainfall observations during the period 1901-2004 indicate that the frequency of extreme rainfall events (rain rate > 100 mm/day) has a significant positive trend of 6 per cent per decade. Hence, it is no surprise that India takes the challenge of climate change seriously. India has always engaged constructively at the multilateral level under the United Nations Framework Convention on Climate Change (UNFCCC) and India is now actively engaged in the efforts towards developing guidelines for effective implementation of the Paris Agreement on climate change.

5.17 Domestically, India has launched various policies and set up institutional mechanisms to advance its actions. Government of India is implementing the National Action Plan on Climate Change, which includes eight national missions covering solar, energy efficiency, agriculture, water, sustainable habitat, forestry, Himalayan ecosystem and knowledge, apart from various other initiatives. These actions reflect its commitment to address climate change. Key initiatives and progress in various areas include:

- As part of the mission on strategic knowledge on climate change, India has established 8 Global Technology Watch Groups in the areas of Renewable Energy Technology, Advance Coal Technology, Enhanced Energy Efficiency, Green Forest, Sustainable Habitat, Water, Sustainable Agriculture and Manufacturing.
- The broad policy initiatives of the central government are supplemented by actions at the sub-national levels. 32 States and Union Territories have put in place the State Action Plans on Climate Change attempting to mainstream climate change concerns in their planning process.
- Climate Change Action Programme, launched in 2014 with an objective of building and supporting capacity at central & state levels, strengthening scientific & analytical capacity for climate change assessment, establishing appropriate institutional framework and implementing climate related actions has been extended for the period 2017-18 to 2019-20 with a budget outlay of ₹132.4 crore.
- National Adaptation Fund on Climate Change established in 2015 to support concrete adaptation activities which are not covered under on-going activities through the schemes of State and Central Government, continues till 31st March 2020 with financial implication of ₹364 crore.
- India is one of the few countries where, despite ongoing development, forest and tree cover has increased transforming country's forests into a net sink owing to national policies aimed at conservation and sustainable management of forests. India's growth in the forest cover has been in the positive territory while that for Indonesia and Brazil, which are countries with substantial forest cover, the growth has been in the negative territory during the same period (Figure 5).

Figure 5: Annual change in forest cover (per cent)



Source: **World Development Indicators, World Bank**

- Pradhan Mantri Krishi Sinchayee Yojana has been formulated with the vision of extending the coverage of irrigation and improving water use efficiency.
- Second Phase of Science Express Climate Action Special train with the aim to create awareness among various sections of society, especially students, on the science of climate change, the observed and anticipated impacts, and different possible responses as to how climate change can be combated.
- Zero Effect, Zero Defect is a policy initiative to enhance energy efficiency and resources efficiency in Medium & Small Industries.
- The National Mission for Clean Ganga seeks to rejuvenate the river along its length of more than 2,500 km.
- Indian financial market also moved in the direction of greener actions. SEBI issued the circular on the disclosure requirements for Issuance and Listing of Green Debt Securities on 30th May, 2017. The utilisation of the proceeds shall be verified by the report of an external auditor, to verify the internal tracking method and the allocation of funds towards the project(s) and/or asset(s), from the proceeds of Green Debt Securities.
- In the Union Budget 2017, government indicated to increase the coverage under the Pradhan Mantri Fasal Bima Yojana(PMFBY) from 30 per cent to 40 per cent in 2017-18 and 50 per cent in 2018-19.
- In February, 2017, India launched the world's first interoperable Quick Response (QR) code acceptance solution. It is a sticker pasted on the teller counter wall of the merchant and can be generated dynamically on merchant itself, removing the need to even print. By providing the Bharat QR option, India is taking the right step in the direction of greener and sustainable future.

CURRENT MULTILATERAL NEGOTIATIONS ON CLIMATE CHANGE

5.18 Currently, the multilateral climate change negotiations are primarily focused on framing the rules and regulations for implementing the Paris Agreement. The task of finalizing the rules for implementing the Paris Agreement began in Marrakech, Morocco in 2016 (COP 22). Parties agreed that they would complete and finalize the rulebook by December, 2018 (COP 24). At COP 23, the Parties advanced the work programme under Paris Agreement.

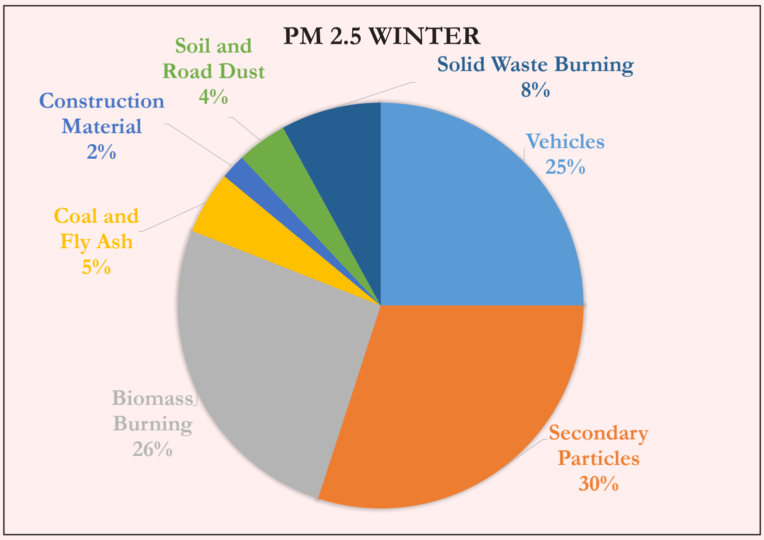
5.19 Key takeaways for India from COP 23 have been that the agenda of pre-2020 climate change commitments and implementation has found a significant place in COP 23 outcome in the form of a decision with steps for future action on pre 2020 action and ambition. This decision emphasizes that enhanced pre-2020 actions can lay a solid foundation for enhanced post-2020 ambition. India has been able to preserve differentiation in informal notes/texts on various elements of Paris Agreement work programme including nationally determined contributions, adaptation communication, transparency framework, global stocktake, compliance, technology framework, finance and capacity building prepared for further work on rules, modalities and guidelines for Paris Agreement.

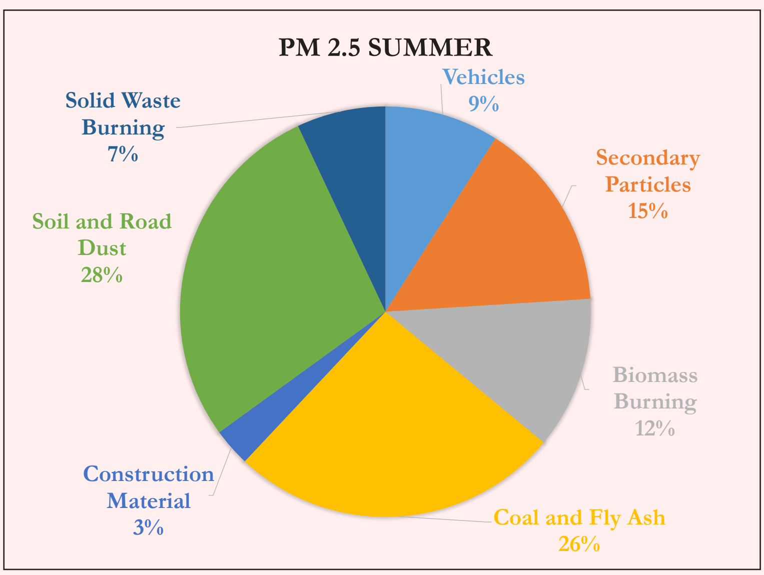
Box 5.2 : Air Pollution in Delhi -- Possible Solutions.

In recent years, the National Capital Delhi and adjoining areas have experienced alarmingly poor air quality starting winter. The farmers mainly from Northern India set their paddy fields on fire after harvesting. The resultant smoke, however, gets carried by winds all the way to Delhi and beyond, adding to the existing suspended particulate matter (SPM) and noxious substances that clogs lungs and leaves behind a near eclipsed sun.

In fact, a number of reasons cause the massive spike in suspended particulate matter (PM 2.5, being the most dangerous) during winter in this part. In 2016, it surpassed 1,000µg/m^3 making Delhi one of the unhealthiest cities in the world in terms of air pollution (*IIT Mumbai*, 2016 and others). Generally, also, the annual average PM 2.5 levels remain about 3 times higher than the prescribed standards. A combination of reasons, among which crop burning in the adjoining states plays a major role, piling on top of one another, in a dense urban concentration of a massive and growing capital city renders this region in a serious hazardous state. The solution? Addressing each source problem, systematically, one-by-one, coordinating across agencies and governments, and with sustained civic engagement (*TERI*, 2016)—as Mexico City has been doing since 1980s ('Proaire' package). London's Great Smog in 1952 spurred similar action and the Clean Air Act of 1956.

IIT Kanpur reported results earlier from a two-season study (summer and winter 2015)--whose approximate attributions to source, are noted in the diagrammatic representation below.





***Source:* IIT Kanpur, 2015**

It is imperative to address the proximate 4 top reasons for Delhi's worsening air quality, especially in winter, about 30-40 per cent of which comes from outside the NCR region (crop residues, biomass, industries and power plants) (*TERI*, 2016 and CPCB 2017):

i. **Crop residue, biomass burning (26-29 per cent).** Some 35 million tons of rice-paddy stubble in 10 million ha, in 3 adjoining states (Punjab, Haryana and Western Uttar Pradesh), burnt in late October, and whose plumes drift eastward, and seasonal load from other sources, including fire-cracker burning during Diwali (banned in 2017 by the Supreme Court, which saw a notable decrease as a contributory factor). Crop residue burning is a practice that came with combine harvesters — machines that harvest, thresh and clean the separated grain at one go. It takes barely an hour and ₹1,000-1,500 to cover an acre of paddy using combines. The same job through traditional sickle-harvesting and manual threshing-cum-cleaning requires about 10 men working a full day, and costing ₹4,500 or upwards. But combine-harvesting also leaves behind 14-15-inch long stalks in the fields that farmers have to, then, find a way to get rid of. This is to reduce the cost of disposing off the stubble.

a. According to a 2014 study by the Indian Agricultural Research Institute (IARI), in 2008-09 the country generated 620 million tonnes of crop residue, of which around 16 per cent was burnt on farms. Of which, 60 per cent was paddy straw, whereas wheat accounted for just 22 per cent. As per estimates, Punjab alone produces 19-20 million tonnes of paddy straw and about 20 million tonnes of wheat straw. About 85-90 per cent of this paddy straw is burnt in the field, and, as the satellite images show, wheat straw is also increasingly being burnt in recent years.

b. IARI report also shows that the main reasons for burning crop residues in field include unavailability of labour, high cost in removing the residues and use of combines in rice-wheat cropping system especially in the Indo-Gangetic plains (IGP). Primary crop types whose residues are typically burned include rice, wheat, cotton, maize, millet, sugarcane, jute, rapeseed-mustard and groundnut. Farmers in northwest India dispose a large part of rice straw by burning *in situ*. Wheat crop residue burning is emerging as a major issue in districts where irrigation is not a concern, cropping patterns are intense and mechanised farming options are abundant. Increased irrigation network has resulted in acreage and thus proportionate increase in residue burnings as well.

c. The usage of combine harvesting machines appear to be an important reason because it only reaps the grains, leaving stalks or stubble of around 40 cm. Removing the stubble manually or by using specialised machines to do the job is costly. For every 0.4 ha of wheat crop, the cost of renting a combine harvester is just ₹800. Once the machine has harvested, the cost of getting the stubble removed is ₹3,500/ha. So the value of fodder is discounted because it is more economic for the farmers to just burn by using one Rupee match box and clear the fields.

On December 10, 2015, the National Green Tribunal (NGT) banned crop residue burning in states of Rajasthan, Uttar Pradesh, Haryana and Punjab. Parts of these states constitute the National Capital Territory. Earlier in 2014, the Union government had released the National Policy for Management of Crop Residue, which NGT directed the states to implement. Under this policy each state needs to have an action plan to stop residue burning by involving people at different levels—from communities to panchayats to state governments. It also calls for a mechanism to alert to cases of crop burning. Moreover, crop residue burning is punishable under the Air (Prevention and Control of Pollution) Act, 1981.

ii. **Vehicular emissions (23-28 per cent) and redistributed road dust (20-27 per cent).** From trucks, buses, cars, three-wheelers and two-wheelers. Diesel particulates have higher share in the vehicular category and are especially dangerous.

iii. **Massive construction, power plants, industry, other (19-35 per cent).** Dust particles from construction activity, concentrated in and neighbouring NCR areas. This is further compounded by power plants and industrial pollution.

iv. **Winter temperature inversion, humidity and (absence of) wind.** Falling air temperature and inversion that locks particulates near the ground, compounded by relative absence of wind. The Central Pollution Control Board (CPCB) reported that 2017 saw worse meteorological conditions compared to 2016 during peak pollution episode in early November, although the banning of fire-crackers caused a significant drop in air pollution compared to last year.

A menu of effective actions has been suggested (National Green Tribunal and Supreme Court decisions; TERI, 2016; Indicus Foundation, 2017, and others), some of which have begun:

Short-Term Emergency Plan (when 24-hourly PM2.5 exceeds 300-400 $\mu g/m^3$): Strict enforcement through heavy penalties on agricultural waste burning using satellite based tools detecting fires, and mobile based applications in NCR; and incentive payments to farmers, coordinated across states and NCR.

Medium and Long-Range Actions: Implement congestion pricing for vehicles, expand and improve public buses dramatically to reduce private vehicle use, and for connectivity to and beyond metro. Phase-out old vehicles, accelerate BS-VI (already notified and to be commenced from 2020), and expand modernized bus fleets.

Use technologies to convert agricultural waste into usable concentrated fodder or bio-fuels, develop and implement business models with private sector and communities and incentivize shift to non-paddy crops. In other words, explore the business cases for finding uses for the crop residues such as manure to reduce fertilizer cost, generate power so that economic values could be assigned. One such example is the straw management system for rice and wheat farming. A technology called Happy Seeder machine could be a possible technological solution. It is a machine that sows seeds without the need to remove paddy straw and works well when the straw is spread evenly on the field through the straw management system. The technological solution has to be combined with the economics of it by further incentivizing by the Centre and States and implemented through agricultural cooperatives, local bodies etc.

WAY FORWARD

5.20 The Global Climate Risk Index 2018 has put India amongst the six most vulnerable countries in the world. Given that a sizeable population under poverty live in areas prone to climatic shifts and in occupations that are highly climate-sensitive, future climate change could have significant implications for living standards. At the same time, the effect of climate change will vary significantly depending on the level of exposure and the inherent adaptive capacities of individuals, households, and communities. India's efforts on sustainable development and climate change have ensured several positive outcomes. There are immense financial requirements to fulfil the commitments. Yet, climate change has been given high importance in policy decisions. The Fifteenth Finance Commission Terms of Reference outlined climate change as an important aspect for consideration.

5.21 The obligations of the provision of the long-term climate finance under the multilateral climate regime have not been fulfilled in any meaningful way. To allay such uncertainties on funding in the coming years, it is necessary for developed countries to be compliant on their commitments based on historical responsibilities and the principle of equity and common but differentiated responsibilities. Acting upon their fair share of responsibilities by each nation would provide the pathway of low carbon climate resilient development for our Planet.

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06

CHAPTER

External Sector

India's external sector continued to be resilient and strong in 2017-18 so far, with the Balance of Payments situation continuing to be comfortable with the Current Account Deficit at 1.8 percent of GDP in the first half (H1) of 2017-18, merchandise exports picking up with a growth of 12.1 percent in April-December 2017, net services receipts increasing by 14.6 percent, and net foreign investment growing by 17.4 percent in H1 of 2017-18 and the external debt indicators improving. Supportive measures in the budget, mid term review of the Foreign Trade Policy and suitable policy changes related to GST helped in overcoming the teething challenges while implementing these major reforms.

GLOBAL ECONOMIC ENVIRONMENT

International Developments

6.1 The global economy is gathering pace and is expected to accelerate from 3.2 per cent in 2016 to 3.6 percent in 2017 and 3.7 percent in 2018 which reflects an upward revision of the earlier projections by the IMF (Table 1). The upward revision in world growth is supported by better than expected results in the first half of 2017 in Euro Area, Japan, emerging Asia and Russia even though there are downward revisions in USA and UK. World trade volume is projected to increase from 2.4 percent in 2016 to 4.2 percent in 2017 and 4.0 percent in 2018. Commodity prices (Oil and Nonfuel) are also expected to grow, in contrast to previous years of decline. According to the IMF (October 2017), global recovery is not

Table 1 : Overview of the World output and Trade (Goods & Services) Projections

	Actuals	Projections		Difference from July 2017 WEO update	
	2016	2017	2018	2017	2018
World Output	**3.2**	**3.6**	**3.7**	**0.1**	**0.1**
World Trade Volume (goods and services)	**2.4**	**4.2**	**4.0**	**0.2**	**0.1**
Imports					
Advanced Economies	2.7	4.0	3.8	0.0	0.2
EMDEs	2.0	4.4	4.9	0.1	0.2
Exports					
Advanced Economies	2.2	3.8	3.6	-0.1	0.2
EMDEs	2.5	4.8	4.5	1.0	0.0

Source: **IMF, World Economic Outlook, October 2017.**

Note: **EMDEs- Emerging Market and Developing Economies.**

yet complete, as inflation is still below the target in most advanced economies and commodity exporters, particularly fuel exporters have been hit due to fall in oil prices. While short term risks are broadly balanced, medium-term risks are still tilted towards the downside.

INDIA'S BALANCE OF PAYMENTS DEVELOPMENTS

Overview of Balance of Payments

6.2 India's balance of payments situation, which has been benign and comfortable since 2013-14, continued to be so in the first half of 2017-18, despite some rise in current account deficit (CAD) in the first quarter, with a relatively lower CAD in the second quarter. India's CAD stood at US$ 7.2 billion (1.2 per cent of GDP) in Q2 of 2017-18, narrowing sharply from US$ 15.0 billion (2.5 per cent of GDP) in the preceding quarter. On a cumulative basis, India's CAD increased from US$ 3.8 billion (0.4 per cent of GDP) in H1 of 2016 -17 to US$ 22.2 billion (1.8 per cent of GDP) in H1 of 2017-18. The widening of the CAD was primarily on account of a higher trade deficit (US$ 74.8 billion) brought about by a larger increase in merchandise imports relative to exports. The surge in imports owed to the sharp rise in imports of gold, with its volume more than doubling as uncertainty over GST implementation resulted in front loading of purchases by jewellers in Q1. This, coupled with the rise in crude oil prices (Indian basket) resulting in increase in oil import bill, led to the increase in imports.

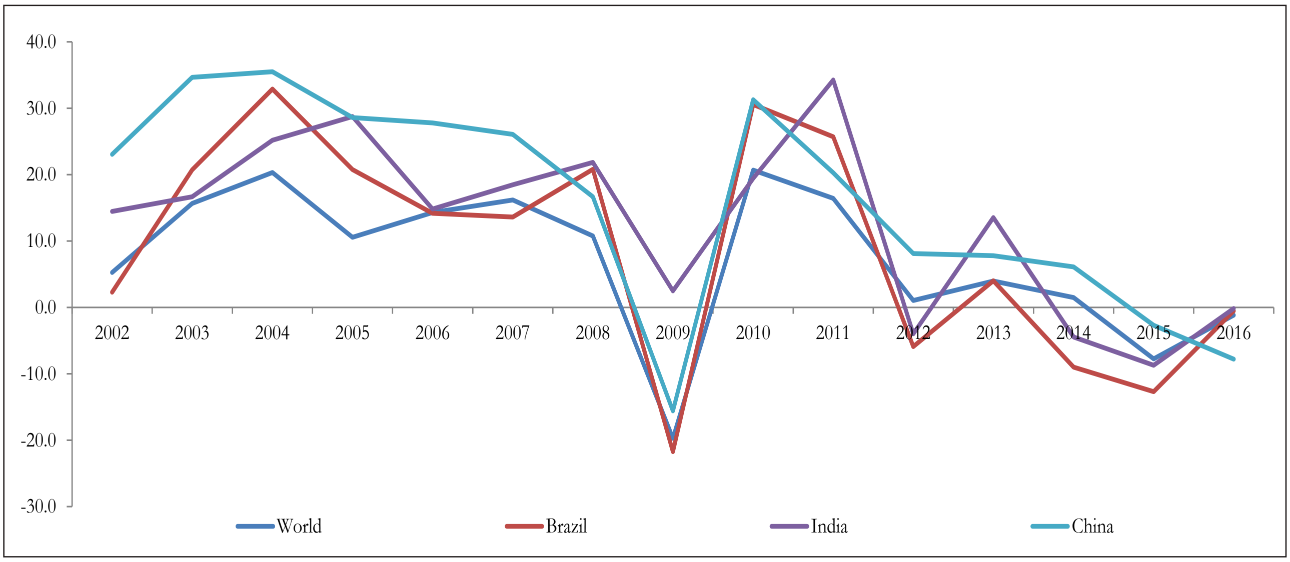
6.3 Among the other current account components of BoP, net invisibles receipts were higher in H1 of 2017-18, mainly due to the increase in net services earnings and private transfer receipts. While trade deficit widened in H1 of 2017-18 compared to H1 of 2016-17, the improvement in invisibles balance and the net capital flows dominated by foreign investment and banking capital was more than sufficient to finance the CAD leading to accretion in foreign exchange reserves in H1 of 2017-18.

Table 2: Trade Performance

	(Value in US$ billion)			(Growth rate (y-o-y) in per cent)				
	2016-17	2016-17 (Apr-Dec)	2017-18 (Apr-Dec)	2016-17	2017-18 (Apr-Dec)	2016-17 H1	2016-17 H2	2017-18 H1
Exports	**275.9**	**199.5**	**223.5**	**5.2**	**12.1**	**-1.3**	**11.9**	**10.8**
POL Exports	31.5	22.5	26.7	3.1	18.5	-15.0	25.7	16.3
Non POL Exports	244.3	177.0	196.8	5.4	11.2	0.7	10.3	10.1
Non-POL & Non Gems & Jwlry Exports	200.9	144.7	165.6	4.4	14.5	-1.9	10.8	13.4
Imports	**384.4**	**277.9**	**338.4**	**0.9**	**21.8**	**-13.3**	**16.9**	**25.9**
POL Imports	87.0	61.3	76.1	4.8	24.2	-18.1	36.8	17.8
Non POL Imports	297.4	216.6	262.2	-0.2	21.1	-11.8	12.2	28.2
Gold & Silver Imports	29.4	19.1	29.1	-17.3	52.0	-55.2	29.0	113.8
Non-POL & Non Gold & Silver Imports	268.0	197.5	233.2	2.1	18.1	-5.5	10.1	22.3
Trade Balance	**-108.5**	**-78.4**	**-114.9**	**-8.6**	**46.4**	**-36.7**	**29.9**	**71.8**

Source : **Based on data from D/o Commerce, Ministry of Commerce & Industry.**

Figure 1 : Non-Fuel Export Value growth of World and selected BRICS countries (per cent)



Source: **Based on data from ITC trade map.**

Current Account Developments in H1 of 2017-18

Merchandise

6.4 In H1 of 2017-18, merchandise imports (on Balance of Payments' basis) grew by 22.1 per cent vis-á-vis 11.3 per cent for exports. On Customs basis this growth was 25.9 per cent and 10.8 per cent respectively. Higher import growth owed to POL import growth at 17.8 per cent and gold and silver import growth at 113.8 per cent as per customs basis (Table 2).

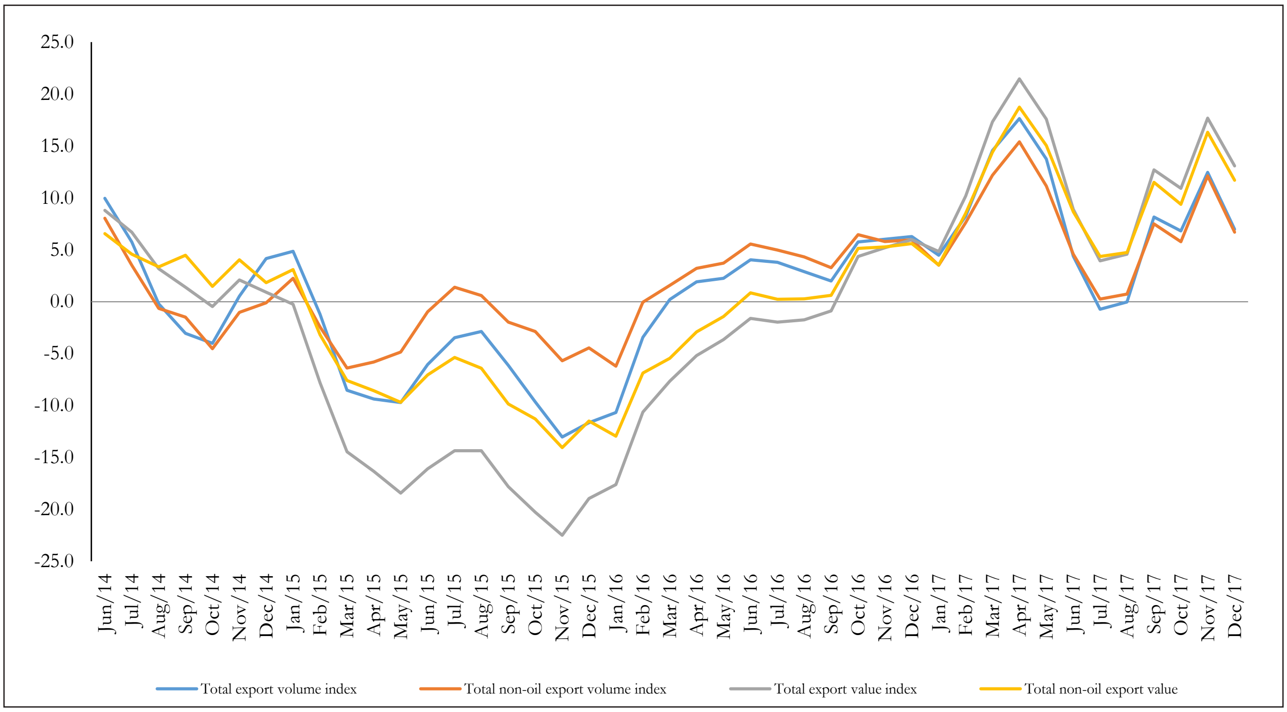
6.5 India's merchandise exports (on customs basis) had reached the level of US$ 314.4 billion in 2013-14. Following the global trend of decline in export growth, India's exports also declined during 2014-15 and 2015-16, by 1.3 per cent and 15.5 per cent respectively.

6.6 India's export growth continued to be negative in the first half of 2016-17 at -1.3 per cent. However, in the second half of 2016-17, it started recovering, resulting in exports reaching US$ 275.9 billion with growth of 5.2 per cent for the year 2016-17. In 2017-18 (April – December) export growth picked up further to 12.1 per cent. India's export growth (non-fuel) which has generally been higher than world export growth (non-fuel) moved to negative territory in 2014 and was lower or in tandem with world export growth (non-fuel) since then. Other BRICS countries also show similar trends (Figure 1).

6.7 India's positive export growth in 2016-17 owed to the positive growth of both POL and non POL exports at 3.2 per cent and 5.4 per cent respectively. In 2017-18 (April-December) export growth was 12.1 per cent, with POL and non POL growth at 18.5 per cent and 11.2 per cent respectively. India's export volume growth (3MMA), which moved to positive territory since March 2016, showed an upward trend till April 2017, but started decelerating though it was still broadly in positive territory. Since August 2017, it has again picked up and increased sharply in November 2017 in tandem with the sharp increase in export value growth. However, in December the growth rate of export volume and value index decelerated. Non-oil export volume index followed a similar trend (Figure 2).

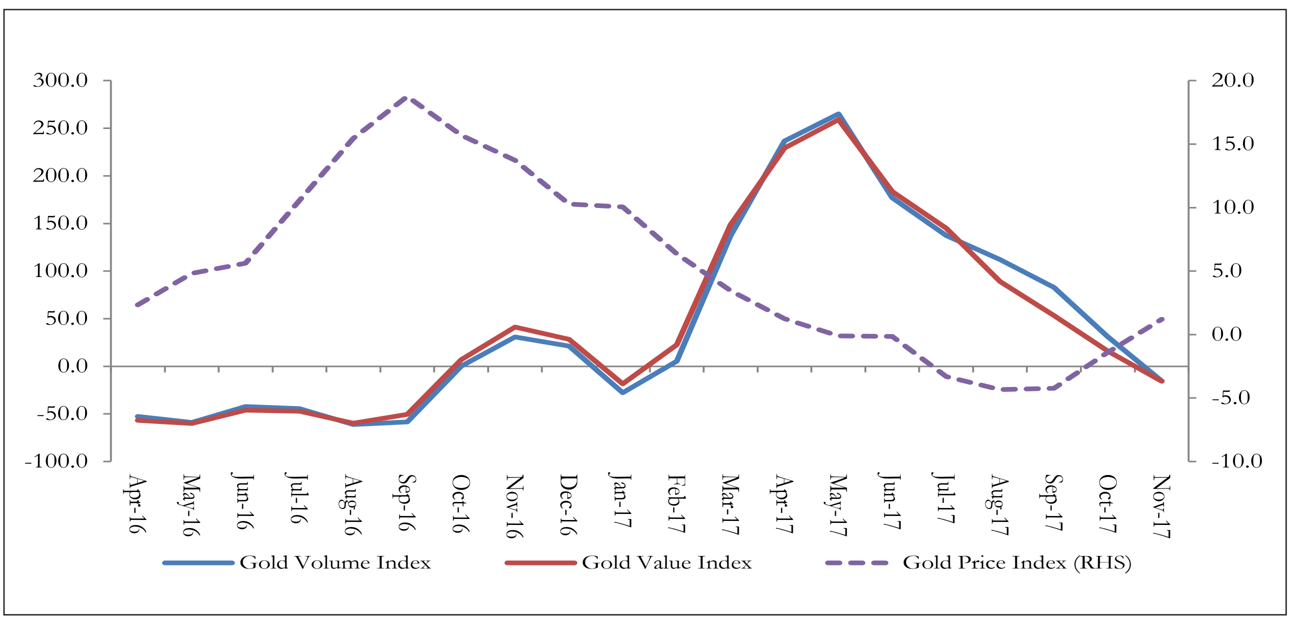
6.8 Merchandise imports also fell from a high of US$ 490.7 billion in 2012-13 to US$ 381.0 billion in 2015-16 and registered a mild increase of 0.9 per cent to US$ 384.4 billion in 2016-17. The increase in the value of imports in 2016-17, despite the decline in gold and silver imports by 17.3 per cent, was due to rise in POL imports and

Figure 2 : Growth in Value / Volume Index of Exports: 3MMA(%) 2013-14=100



Source: **In-house calculations. Monthly trade data of DGCI&S, World Bank monthly pink sheet for computing international price index in dollar and Ministry of Commerce & Industry for wholesale price index (WPI), RBI exchange rate to convert the rupee index to dollar index.**
Note: **3 MMA- 3 Months moving average reported at the end month.**

Figure 3: Growth in Import of Gold Volume/ Value & Gold Price, 3MMA (per cent) (2013-14=100)



Source: **Calculated from the DGCI&S Monthly data.**

a small increase in non POL and non-gold and silver imports which had fallen in 2015-16. In 2017-18 (April-December), imports grew by 21.8 per cent. Growth of POL import was 24.2 per

Figure 4: Growth in Value / Volume Index of Imports: 3MMA(%) (2013-14=100)

Source: **Same as for figure 2**

cent mainly due to the rise in crude oil prices. Non-POL imports registered a growth of 21.1 per cent due to the growth of 52.0 per cent in gold & silver imports, while non-POL and non-gold & silver imports grew by 18.1 per cent. Growth in value of gold imports has fallen since September 2017 due to decline in the growth of volume of gold imports. Gold import value index has been moving in tandem with gold volume index (Figure 3).

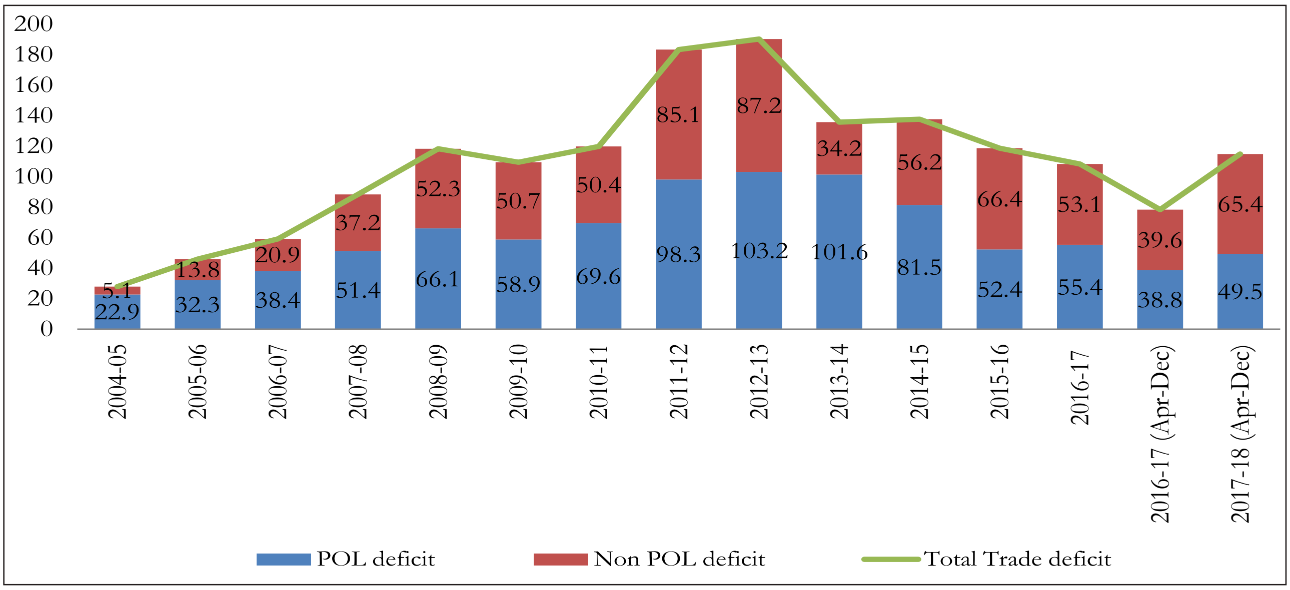
6.9 Growth of both total import volume index and non-oil non-gold import volume index (3MMA) which had picked up since January/ February 2017 started to decelerate from May 2017 though it continued to be in positive territory till December 2017 (Figure 4).

Trade Deficit

6.10 India's trade deficit (on custom basis) which had registered continuous decline since 2014-15, widened to US$ 74.5 billion in H1 of 2017-18 from US$ 43.4 billion in H1 of 2016-17. India's trade deficit was US$ 108.5 billion in 2016-17, with the reduction in both POL deficit and non POL deficit. In 2017-18 (April-December) trade deficit (on customs basis) shot up by 46.4 per cent to US$ 114.9 billion with POL deficit growing by 27.4 per cent and non-POL deficit by 65.0 per cent. (Figure 5)

6.11 Among India's trading partners, the top five countries with which India has negative bilateral trade balance are China, Switzerland, Saudi Arabia, Iraq and South Korea while the top five countries with which it has surplus trade balance are USA, UAE, Bangladesh, Nepal and UK. India has the highest trade deficit with China. Its share in India's total trade deficit increased from 20.3 per cent in 2012-13 to 47.1 per cent in 2016-17 and 43.2 per cent in 2017-18 (April-September) (Table 3). India's major items of imports from China are telephone sets including mobiles, automatic data processing machines, diodes & other semi-conductor devices, electronic devices, chemical fertilisers, etc. India's major items of exports to China are cotton yarn, copper, refined and copper alloys unwrought, PoL items, granite,

Figure 5 : POL and Non-POL Total Deficit (US$ billion)



Source: **Based on data from Department of Commerce.**

Table 3 : Bilateral Trade Surplus/Deficit (US$ billion)

		2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 H1
Countries in which India has Trade Surplus	U S A	11.0	16.6	20.6	18.6	19.9	11.9
	U A E	-2.8	1.5	6.9	10.8	9.7	4.0
	Bangladesh	4.5	5.7	5.8	5.3	6.1	3.3
	Nepal	2.5	3.1	3.9	3.5	5.0	2.6
	UK	2.3	3.7	4.3	3.6	4.9	2.2
Countries in which India has Trade Deficit	China	-38.7	-36.2	-48.5	-52.7	-51.1	-32.1
	Switzerland	-31.0	-17.5	-21.1	-18.3	-16.3	-9.2
	Saudi Arabia	-24.2	-24.2	-16.9	-13.9	-14.9	-7.3
	Iraq	-18.0	-17.6	-13.4	-9.8	-10.6	-5.0
	South Korea	-8.9	-8.3	-8.9	-9.5	-8.3	-6.7
	Total Trade Deficit	**-190.3**	**-135.8**	**-137.6**	**-118.7**	**-108.5**	**-74.3**

Source: **Computed from Department of Commerce Data**

aluminium ores, other fixed vegetable fats & oils, cyclic hydrocarbons, cotton, polymers and iron ore. In the case of Switzerland, the trade deficit is mainly due to import of gold. This deficit has fallen in the last two years. Moreover, a part of it is used in exports. In the case of Saudi Arabia and Iraq, the deficit is due to crude oil imports, while for South Korea it is due to import of electrical machinery and equipments and iron and steel.

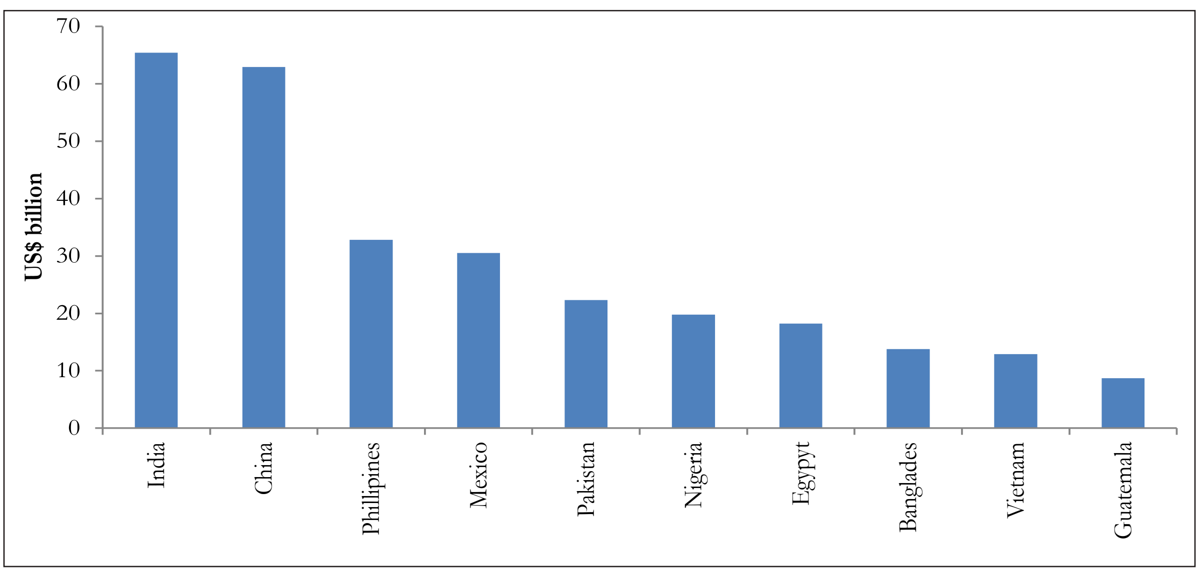
Invisibles

6.12 Net invisibles surplus fell from US$ 118.1 billion in 2014-15 to US$ 107.9 billion in 2015-16 and US$ 97.1 billion in 2016-17. However, in H1 of 2017-18 there has been an increase in net invisibles surplus to US$ 52.5 billion from US$ 45.6 billion in H1 of 2016-17, with increase observed both in net services and net private transfers.

6.13 Net services receipts increased by 14.6 per cent on a y-o-y basis during H1 of 2017-18, primarily on account of the rise in net earnings from travel and telecommunications, computer & information services. Net travel receipts more than doubled, as foreign tourist arrivals increased significantly during H1 of 2017-18. Notwithstanding uncertainties in the Indian IT industry from tougher visa policies in some countries, software exports recorded a growth of 2.3 per cent in H1 of 2017-18. Private transfer receipts, mainly representing remittances by Indians employed overseas, increased by 10.0 per cent to US$ 33.5 billion in H1 of 2017-18 over the corresponding period of the previous year.

6.14 India has remained one of the major recipients of cross border remittances and according to the World Bank (October 2017), India will remain a top remittance recipient country in 2017, followed by China, the Philippines, and Mexico. However, the private transfers (gross) inflows to India declined by 6.1 per cent in 2015-16 and 6.5 per cent in 2016-17. This was due to constrained labour market conditions in the source countries, particularly GCC (Gulf Cooperation Council) countries, largely caused by the fall in international crude oil prices. Gross private transfer inflows fell to US$ 65.6 billion and US$ 61.3 billion in 2015-16 and 2016-17 respectively from US$ 69.8 billion in 2014-15. According to the World Bank, (October 2017), the number of Indian workers emigrating to Saudi Arabia (India's third largest remittance sender) dropped from 3.0 lakhs in 2015 to 1.6 lakh in 2016; and to the United Arab Emirates (India's largest inward remittance contributor) from 2.2 lakh in 2015 to 1.6 lakh in 2016. Total Indian workers outflow fell from 7.8 lakh in 2015 to 5.1 lakh in 2016. Among the structural factors, tightening norms of hiring foreign workers in USA, labour market adjustment in GCC countries and rising anti-immigration sentiments in many source countries pose considerable downside risk.

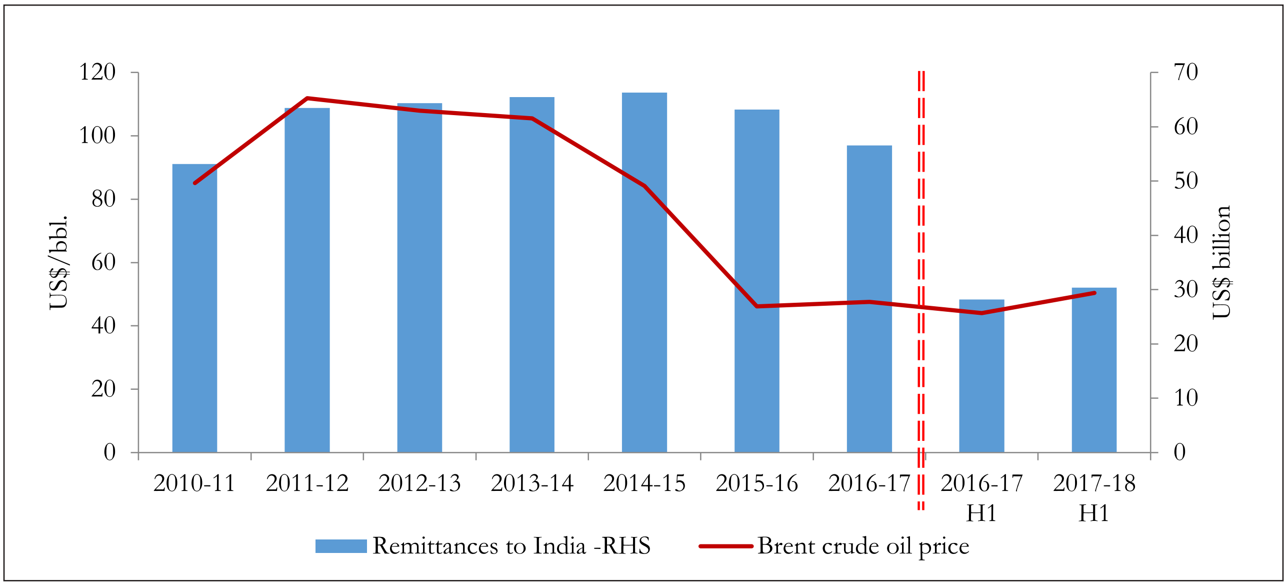
Figure 6 : Top Remittance Receivers in 2017



Source: **World Bank Report on Migration and Remittances, October 2017.**

Note: These are Provisional Estimates for 2017.

Figure 7 : Net-Remittances to India vis-a-vis-Brent Crude Oil Price



Source : **World Bank Pink Sheet data for Brent Crude oil price and RBI for Net Remittances**

6.15 As per the Balance of Payment data, gross private transfer inflows increased to US $ 33.5 billion in H1 of 2017-18 from US $ 30.4 billion in H1 of 2016-17. Going forward, with recovery in the global economy, remittance flows to India are expected to increase by 4.2 per cent in 2017 amounting to US$ 65.0 billion from US $ 62.7 billion in 2016 (World Bank, October 2017). The rise in crude oil prices could also help in the increase in remittances as the movement of the latter has close correspondence with the movement of the former (Figure 7).

6.16 Net outflow on account of investment income which have been increasing in the last two years continued to rise in H1 of 2017-18 amounting to US$ 15.3 billion from US$ 14.9 billion H1 of 2016-17.

Capital/financial account of BoP in H1 of 2017-18

6.17 Notwithstanding a decline in FDI inflows in H1 of 2017-18, net foreign investment recorded a growth of 17.4 per cent owing to a sharp rise in portfolio investment to India. Moderation in FDI flows in Q2 2017-18 led to a cumulative decline in FDI flows by 6.3 per cent in H1 of 2017-18 over its level during the corresponding period of the previous year. However, foreign portfolio investment (FPI) increased by a whopping 78.0 percent, from US$ 8.2 billion in H1 of 2016-17 to US$ 14.5 billion in H1 2017-18, reflecting the positive outlook about growth potential of domestic economy. Among other forms of capital flows, banking capital recorded a net inflow of US$ 6.3 billion with increase in overseas borrowings and liquidation of foreign assets by banks, while net repayment of external commercial borrowings resulted in an outflow of US$ 1.5 billion in 2017-18 H1. With net capital flows remaining higher than the CAD, there was net accretion to India's foreign exchange reserves (on BoP Basis) to the tune of US$ 20.9 billion in H1 of 2017-18 as compared to the US$ 15.5 billion in H1 of 2016-17 (Table 4).

COMPOSITION OF TRADE

6.18 Export growth in 2016-17 was fairly broad based with positive growth in major categories except textiles & allied products, and leather & leather manufactures. In 2017-18 (April - November) among the major sectors, there was good export growth in engineering goods and Petroleum crude and products; moderate growth in chemicals & related products, and textiles & allied products; but negative growth in gems and jewellery (Table 5).

Table 4: Balance of Payments

							(US$ million)
Sl No	Item	2012-13	2014-15	2015-16	2016-17	2016-17 H1	2017-18 H1(P)
1	2	3	4	5	6	7	8
I	**Current Account**						
1	Exports	3,06,581	3,16,545	2,66,365	2,80,138	1,34,029	1,49,211
2	Imports	5,02,237	4,61,484	3,96,444	3,92,580	1,83,476	2,24,003
3	Trade Balance (1-2)	-1,95,656	-1,44,940	-1,30,079	-1,12,442	-49,448	-74,792
4	Invisibles (net)	1,07,493	1,18,081	1,07,928	97,147	45,580	52,548
	A. Services	64,915	76,529	69,676	67,455	32,040	36,706
	B. Income	-21,455	-24,140	-24,375	-26,291	-14,363	-14,257
	C. Transfers	64,034	65,692	62,627	55,983	27,903	30,098
5	Goods and Services Balance	-1,30,741	-68,411	-60,402	-44,987	-17,408	-38,086
6	Current Account Balance (3+4)	-88,163	-26,859	-22,151	-15,296	-3,868	-22,244
II	**Capital Account**						
	Capital Account Balance	89,300	89,286	41,128	36,482	20,016	42,141
	i. External Assistance (net)	982	1,725	1,505	2,013	605	691
	ii. External Commercial Borrowings (net)	8,485	1,570	-4,529	-6,102	-3,402	-1,514
	iii. Short-term credit	21,657	-111	-1,610	6,467	-493	4,575
	iv. Banking Capital(net) of which:	16,570	11,618	10,630	-16,616	-6,754	6,340
	Non-Resident Deposits (net)	14,842	14,057	16,052	-12,367	3,465	1,948
	v. Foreign Investment(net) of which	46,711	73,456	31,891	43,224	29,035	34,088
	A. FDI (net)	19,819	31,251	36,021	35,612	20,881	19,570
	B. Portfolio (net)	26,891	42,205	-4,130	7,612	8,154	14,518
	vi. Other Flows (net)	-5,105	1,028	3,242	7,495	1,026	-2,038
III	**Errors and Omission**	2,689	-1,021	-1,073	364	-668	1007
IV	**Overall Balance**	3,826	61,406	17,905	21,550	15,481	20,903
V	**Reserves change [increase (-) / decrease (+)]**	-3,826	-61,406	-17,905	-21,550	-15,481	-20,903

Source: **Reserve Bank of India**

P: Preliminary

6.19 Sector-wise, import of Petroleum, Oil and Lubricants (POL) increased by 4.8 per cent in 2016-17 and 24.2 per cent in 2017-18 (Apr-December), mainly due to an increase in international crude oil price (Indian Basket) from US$ 46.2 /bbl in 2015-16 to US$ 47.6 /bbl in 2016-17 and to US$ 53.6 / bbl in 2017-18 (April-December). Among the other important import items, low or negative growth was registered in most of them in 2016-17, except electronic goods; ores & minerals and agriculture and allied products. Capital goods imports grew marginally, though the transport equipments sub-category registered high growth (Table 6). In 2017-18 (April- November) all major sectors registered positive growth with the capital goods imports, which are needed for industrial activity, registering a 11.3 per cent growth.

Table 5 : Sector wise share and growth rate of exports

Rank		Share (per cent)			Growth rate (per cent)		
		2015-16	2016-17	2017-18 (Apr-Nov) (P)	2015-16	2016-17	2017-18 (Apr-Nov) (P)
1	Engineering goods	23.1	24.4	25.9	-17.0	11.1	22.4
2	Gems and Jewellery	15.0	15.7	14.4	-4.8	10.5	-3.8
3	Chemicals and related products **	14.7	14.2	14.5	0.6	1.6	11.9
	of which						
	Drug & pharmaceutical	6.2	5.8	5.4	9.9	-1.2	-0.7
4	Textiles & allied products	13.7	13.0	11.8	-3.2	-0.5	3.8
	of which						
	Textiles	5.6	5.2	4.9	-8.5	-2.3	5.9
	Clothing	8.1	7.8	6.9	0.8	0.7	2.4
5	Petroleum crude & products	11.7	11.4	11.8	-46.2	3.1	17.6
6	Agriculture and allied products *	9.9	9.5	9.7	-17.6	0.3	15.0
7	Electronic goods	2.2	2.1	2.0	-5.3	0.0	4.5
8	Marine products	1.8	2.1	2.7	-13.5	23.8	29.5
9	Ores and minerals	0.8	1.2	1.0	-16.4	61.6	12.9
10	Leather & leather products	2.1	1.9	1.9	-10.3	-4.4	0.9
	Total exports including others	100.0	100.0	100.0	-15.5	5.2	11.2

Source: **Computed from D/o Commerce database. P : Provisional**
Notes: ***: including plantation. **: including plastic and rubber products**

TRADE POLICY

6.20 Two important developments on the trade policy front during the year relate to the mid-term review of Foreign Trade Policy(FTP) and the recent multilateral negotiations of WTO in December 2017. Besides these, there were some developments on the trade logistics front and anti-dumping measures.

FTP- Mid Term Review and subsequent trade related policies

6.21 In the mid-term review of FTP released on 5th December 2017, some additional measures have been taken to help India's trade sector. Besides, on 15th December 2017, a special package for employment generation in leather and footwear sector was approved by the Government which is also likely to help exports from this sector (Box 1).

Table 6 : Sector wise share and growth rate of imports

Rank	Sector	Share (per cent)			Growth rate (per cent)		
		2015-16	2016-17	2017-18 (Apr-Nov) (P)	2015-16	2016-17	2017-18 (Apr-Nov) (P)
1	Petroleum Oil and Lubricants	21.8	22.6	22.0	-40.0	4.8	21.9
2	Capital goods	21.1	20.9	19.2	-2.5	0.1	11.3
	of which						
	Machinery	8.7	8.5	8.3	3.7	-1.4	16.8
	Base metals	6.5	5.6	6.0	-8.7	-12.8	26.5
	Transport equipment	4.0	5.1	3.3	0.7	27.1	-18.3
3	Gems and Jewellery	14.8	14.0	16.8	-9.4	-4.9	53.6
	of which						
	Gold	8.3	7.2	7.8	-7.7	-13.4	46.4
	Pearls and semi precious stones	5.3	6.2	7.6	-11.2	18.6	47.7
	Silver	1.0	0.5	0.8	-17.3	-50.9	90.0
4	Chemicals and related products **	13.3	12.4	12.7	-4.2	-5.8	16.3
	of which						
	Organic chemicals	2.5	2.6	2.6	-15.2	2.7	23.8
	Fertilizers	2.1	1.3	1.3	9.1	-37.8	-5.0
5	Electronic goods	10.5	10.9	11.4	8.6	4.8	29.7
6	Agriculture & allied Products*	5.7	6.3	5.6	7.7	11.4	11.4
7	Ores and minerals	5.4	5.6	6.6	-23.2	4.6	55.6
	of which						
	Coal, Coke & Briquettes, etc.	3.6	4.1	4.8	-23.2	15.3	58.1
	Total imports including others	100.0	100.0	100.0	-15.0	0.9	22.4

Source: **Computed from D/o Commerce database P : Provisional;**

Note *** : including marine products and plantation; **: including plastic and rubber products**

Box 1 : Highlights of the Mid Term Review of Foreign Trade Policy and subsequent trade related policies

- MEIS (Merchandise Exports from India Scheme) incentives for two sub-sectors of Textiles i.e. Ready Made Garments and Made Ups increased from 2% to 4% involving additional annual incentives of Rs. 2743 crore.
- Across the board increase of 2% in existing MEIS incentive for exports by MSMEs / labour intensive industries amounting to Rs. 4576 crore.
- To provide an impetus to the services trade, the SEIS (Service Export from India Scheme) incentives have been increased by 2% for notified services such as Business, Legal, Accounting, Architectural, Engineering, Educational, Hospital, Hotels and Restaurants amounting to Rs. 1140 crore.
- The validity period of the Duty Credit Scrips has been increased from 18 months to 24 months to enhance their utility in the GST framework. GST rate for transfer/sale of scrips has been reduced to zero from the earlier rate of 12%.
- New trust based Self Ratification Scheme introduced to allow duty free inputs for export production under duty exemption scheme with a self-declaration. Under this scheme, instead of getting a ratification of the Norms Committee for inputs to be used in the manufacture of export products, exporters will self-certify the requirement of duty free raw materials/ inputs and take an authorization from DGFT. The scheme would initially be available to the Authorized Economic Operators (AEOs).
- Contact@DGFT service for Complaint Resolution has been activated on the DGFT website (www.dgft.gov.in) as a single window contact point for exporters and importers for resolving all foreign trade related issues.
- To focus on improving Ease of Trading across Borders for exporters and importers, a professional team envisaged to handhold, assist and support exporters with their export related problems, accessing export markets and meeting regulatory requirements.
- New Logistics Division created in the Commerce Department to develop and coordinate implementation of an Action Plan for the integrated development of the logistics sector, by way of policy changes, improvement in existing procedures, identification of bottlenecks and gaps and introduction of technology in this sector.
- For clarity, a negative list of capital goods which are not permitted under the EPCG (Export Promotion on Capital Goods) scheme has been notified.
- The concept of Domestic Tariff Area (DTA) sale from Export Oriented Units (EoUs) on concessional and full duty has been removed and hence, the limit on entitlement of DTA sale has also been removed. Consequently, restriction on DTA sale of motor cars, alcoholic liquors, books and tea has been removed.
- Second Hand Goods imported for the purpose of repair/ refurbishing/re-conditioning or re-engineering have been made free, thereby facilitating generation of employment in the repair services sector.
- Issue of working capital blockage of the exporters due to upfront payment of GST on inputs has been addressed. Under advance authorization Export Promotion for Capital Goods (EPCG) Scheme, 100% EoU's, exporters have been extended the benefit of sourcing inputs/capital goods from abroad as well as domestic suppliers for exports without upfront payment of GST. Further an e wallet will be launched from 1st April 2018 to make these schemes operational from 1st April, 2018.
- The Union Cabinet Committee on 15th December 2017, approved the special package for employment generation in leather and footwear sector. The package involves implementation of Central Sector Scheme "Indian Footwear, Leather & Accessories Development Programme" with an approved expenditure of Rs. 2600 crore over the three years from 2017-18 to 2019-20. The scheme would lead to development of infrastructure for the leather sector, address environment concerns specific to the leather sector, facilitate additional investments, employment generation and increase in production. The Special Package has the potential to generate 3.24 lakhs new jobs in 3 years and assist in formalization of 2 lakh jobs as cumulative impact in Footwear, Leather & Accessories Sector.

Source : **Based on inputs from Department of Commerce**

MULTILATERAL NEGOTIATIONS

6.22 The Eleventh Ministerial Conference (MC11) of World Trade Organisation (WTO) ended without a Ministerial Declaration or any substantive outcome, though the unanimous view was that it was extremely well-conducted with complete openness and transparency and the process afforded everyone ample opportunity to express their views.

6.23 In the run-up to MC11, decisions were expected on a permanent solution on food security and other agriculture issues. Unfortunately, the strong position of one of the member against agricultural reforms based on current WTO mandates and rules, led to a deadlock without any outcome on agriculture or even a work programme for the next two years. However, the existing mandates and decisions ensure that work will go forward and members will continue to work on issues such as the permanent solution on public stockholding for food security purposes, agricultural Special Safeguard Mechanism and agricultural domestic support. Some of the other decisions that were taken included a Work Programme on disciplines on Fisheries Subsidies with a view to arriving at a decision by MC12. It was also decided to continue with the non-negotiating mandate of the existing Work Programme on E-commerce. Ministerial Decisions on new issues like Investment Facilitation, MSMEs, gender and trade, which lacked a mandate or consensus, were not taken forward.

6.24 During the Ministerial Conference (MC11), India stood firm on its stand on the fundamental principles of the WTO, including multilateralism, rule-based consensual decision-making, an independent and credible dispute resolution and appellate process, the centrality of development, which underlies the Doha Development Agenda (DDA), and special and differential treatment for all developing countries.

TRADE RELATED LOGISTICS

6.25 The Indian logistics industry is estimated to be worth around US$ 160 billion in 2016-17 and has grown at a compound annual growth rate (CAGR) of 7.8 per cent over the past five years. Considering the impact of implementation of the Goods and Services Tax (GST), the Indian logistics market is expected to reach about US$ 215 billion in 2019-20, growing at a CAGR of 10.5%. Improved logistics have huge implications on increasing exports, as a 10% decrease in indirect logistics cost can contribute to around 5-8% of extra exports. India has improved its ranking in the "Logistics Performance Index" (LPI) from 54 in 2014 to 35 in 2016 (Table 7). However, compared to countries like Singapore (rank 5), South Africa (20), Taiwan (25) and China (27), India has some way to go.

Table 7 : Logistics Performance Index: India's ranking

	2007	201 0	2012	2014	2016
Overall LPI Ranking	**39**	**47**	**46**	**54**	**35**
Efficiency of Customs and Border Management	47	52	52	6 5	38
Quality of Trade and Transport Infrastructure	42	47	56	58	36
Ease of Arranging Competitively Priced Shipments	40	46	54	44	39
Competences and quality of Logistics Services	31	40	38	52	32
Ability to Track and Trace Consignments	42	52	54	57	33
Timeliness of Deliveries	4 7	56	44	51	42

Source : **World Bank LPI Statistics (2016).**

Box 2 : Logistics: Challenges and suggested Action Plan

Some key challenges

- High cost of logistics – impacting competitiveness in domestic & global market
- Unfavorable modal mix (Roadways 60%, Railways 30%) and inefficient fleet mix
- Under-developed material handling infrastructure and fragmented warehousing
- Multiple regulatory/policy making bodies with procedural complexities including cumbersome and duplicate processes.
- High dwell time and lack of seamless movement of goods across modes.

Suggested Action Plan

- Formulation of National Integrated Logistics Policy to bring in greater transparency and enhance efficiency in logistics operations
- Develop integrated IT Platform as a single window for all logistics related matters. This portal will have linkages with the IT systems of Railways, Road transport & Highways, Shipping, Civil Aviation, CBEC, State Transport departments, etc. and act as a Logistics marketplace
- Usher in ease of documentation, faster clearance, digitization.
- Bring down logistics cost to less than 10% of GDP by 2022
- Faster clearances for setting up of logistics infrastructure like Multi-modal logistic parks (MMLPs), Container Freight Station (CFS), Air Freight Station (AFS) & Inland Container Depot (ICD).
- Introduce professional standards and certification for service providers
- Promote introduction of high-end technologies like high-tech scanning equipment, RFID, GPS, EDI, online Track & Trace systems in the entire logistics network.
- Improve Logistics skilling in the country and increase jobs in Logistics sector to 40 million by 2022.

Source: **Based on inputs from Logistics Division, Department of Commerce**

ANTI-DUMPING MEASURES

6.26 Complaints of dumping have been rising in the aftermath of the global slowdown. India conducts anti-dumping investigations on the basis of applications filed by the domestic industry with prima facie evidence of dumping of goods in the country, injury to the domestic industry and causal link between dumping and injury to the domestic industry. In 2016, 300 anti-dumping investigations were initiated by all countries with India leading at 69 investigations followed by USA (37) and Argentina (25) (Table 8).

6.27 During 2017-18 (upto December-end), DGAD initiated anti-dumping investigations into the import of 24 products, issued preliminary findings in 3 anti-dumping investigations, final findings in 35 anti-dumping investigations, and final findings in one anti-circumvention of anti dumping duty investigation. Products wherein anti-dumping duty has been imposed fall in the products group of Chemicals & Petrochemicals, Products of Steel & other metals and Rubber or Plastic Products. The countries involved in these investigations are China, Iran, Saudi Arabia, USA, EU, Japan, Canada, Russia, Indonesia, Georgia, Thailand, Norway, Turkey, Bangladesh, South Korea, Ukraine and Taiwan, with major products found to have been dumped from China.

FOREIGN EXCHANGE RESERVES

6.28 India's foreign exchange reserves reached US$ 409.4 billion on end-December 2017. Foreign exchange reserves grew by 14.1 percent on a y-o-y basis from end-December 2016 (US$ 358.9 billion) to end-December 2017 (US$ 409.4 billion) and it grew by 10.7 percent from end-March 2017 (US$

370.0 billion) to end-December 2017. The foreign exchange reserves increased further to US$ 413.8 billion on January 12, 2018. The level of foreign exchange reserves can change due to change in reserves on BoP basis as well as valuation changes in the assets held by the Reserve Bank of India. On the balance of payments basis (i.e., excluding valuation effects), the foreign exchange reserves increased by US$ 20.9 billion during H1 of 2017-18 as compared with an increase of US$ 15.5 billion during H1 of 2016-17. The foreign exchange reserves in nominal terms (including the valuation effects) increased by US$ 30.3 billion during H1 of 2017 as compared to an increase of US$ 11.8 billion during the same period of preceding year. Valuation gain, that mainly reflect the depreciation of the US dollar against major currencies, amounted to US$ 9.3 billion during H1 of 2017 as against a loss of US$ 3.7 billion during the same period of the preceding year (Table 9). The import cover of India's foreign exchange reserves was 11.1 months at end-September 2017 as compared with 11.3 months at end-March 2017. Within the major economies running current account deficit, India is among the largest foreign exchange reserve holder and sixth largest among all countries of the world.

EXCHANGE RATE

6.29 During 2017-18 (up to December 2017), the rupee generally traded with an appreciating bias against the US dollar, barring intermittent depreciation in September and October 2017. The rupee strengthened by 2.5 per cent to a level of Rs.64.24 per US dollar during December, 2017 from the level of Rs.65.88 per US dollar during March 2017 on the back of significant capital flows, both foreign portfolio flows and FDI. Improved macroeconomic conditions coupled with reforms initiated by the Government were mainly responsible for the buoyant capital flows. The rupee was one of the least volatile EM currencies during April-December 2017 and traded in the range of 63.63 to 65.76 per US dollar.

6.30 On an average, the rupee has appreciated so far against most other major currencies besides the US dollar (April – December, 2017). The

Table 8 : Investigations Initiated by some major users of Anti-Dumping Measures

Country	India	USA	EU	Brazil	Argentina	Australia	China	All Countries including others
2009	31	20	15	9	28	9	17	217
2010	41	3	15	37	14	7	8	173
2011	19	15	17	16	7	18	5	165
2012	21	11	13	47	12	12	9	208
2013	29	39	4	54	19	20	11	287
2014	38	19	14	35	6	22	7	236
2015	30	42	12	23	6	10	11	229
2016	69	37	14	11	25	17	5	300
1995-2016	839	606	493	403	348	316	234	5286

Source: **WTO**

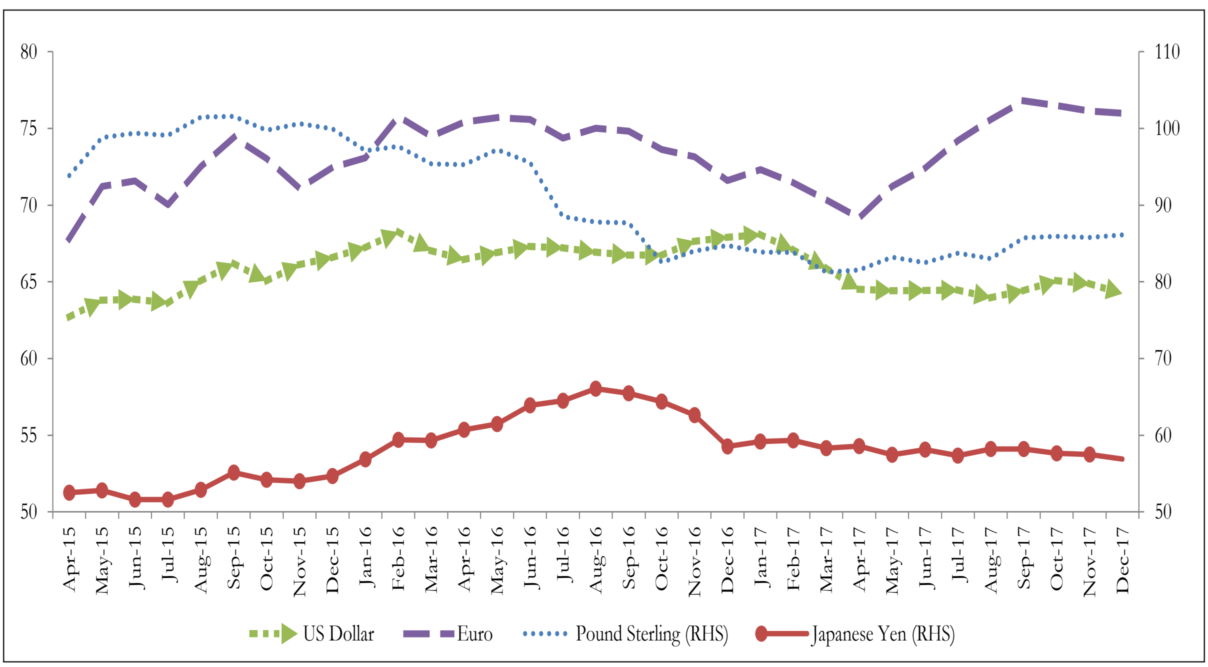
Table 9: Summary of Changes in Foreign Exchange Reserves (US$ billion)

Year	Foreign Exchange reserves at the end of financial year (end March)	Total Increase (+)/ decrease (-) in reserves	Increase(+) / decrease (-) in reserves on a BoP basis	Increase/decrease in reserves due to valuation effect
2007-08	309.7	110.5	92.2	18.3
2008-09	252.0	-57.7	-20.1	-37.6
2009-10	279.1	27.1	13.4	13.7
2010-11	304.8	25.8	13.1	12.7
2011-12	294.4	-10.4	-12.8	2.4
2012-13	292.0	-2.4	3.8	-6.2
2013-14	304.2	12.2	15.5	-3.3
2014-15	341.6	37.4	61.4	-24.0
2015-16	360.2	18.5	17.9	0.6
2016-17	370.0	9.8	21.6	-11.8
2016-17 (H1)	372.0*	11.8	15.5	-3.7
2017-18 (H1)	400.2*	30.3	20.9	9.3

Source: **Reserve Bank of India (RBI)**

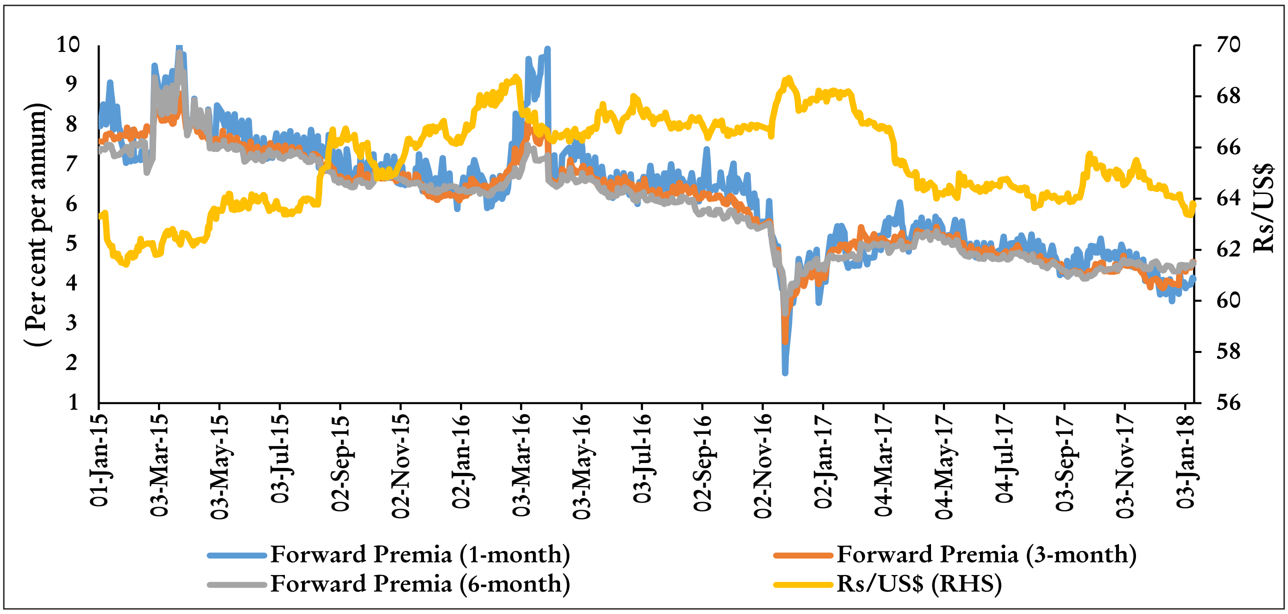
Note *** : end - September**

Figure 8: Movement of Rupee against US Dollar, Euro, Pound Sterling and Japanese Yen



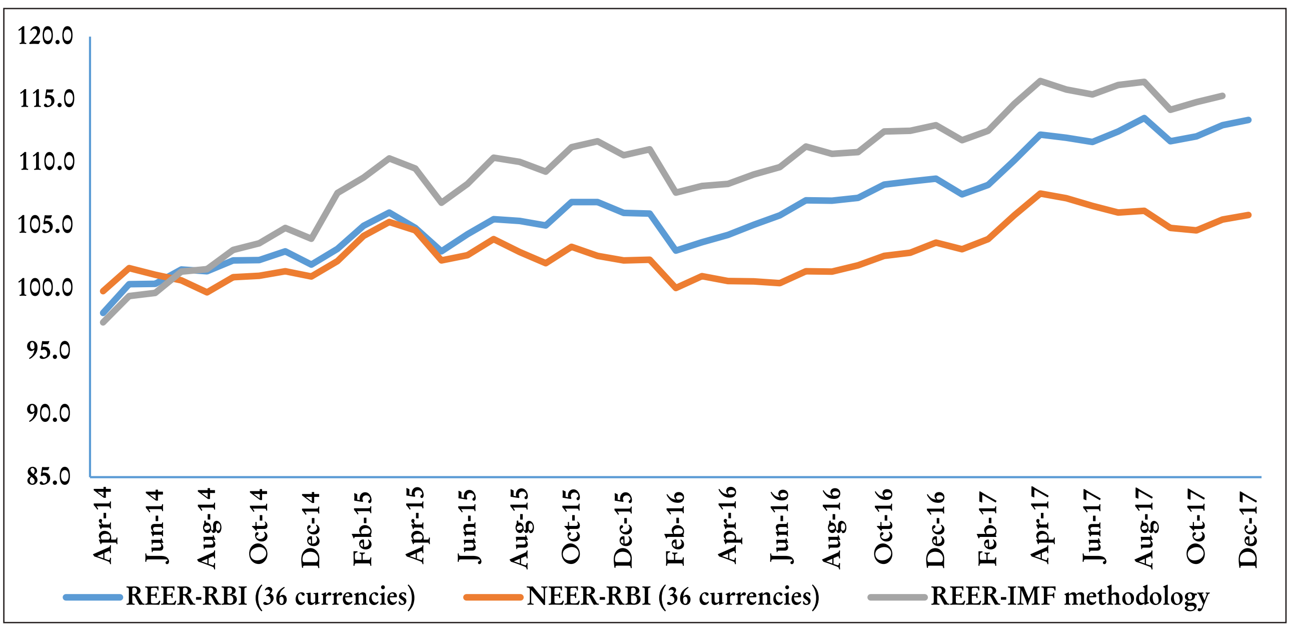
Source: **Based on RBI data.**

Figure 9 : Movement of Forward Premia and Reference Rate (Spot)



Source: RBI.

Figure 10 : Movement of Indices in REER, NEER: (2014=100)



Source: RBI, Note: REER-IMF is calculated by using the methodology adopted by IMF.

rupee appreciated by about 6.0 per cent against the pound sterling, 0.2 percent against the Euro and 9.2 per cent against the Japanese Yen during the period April-December, 2017 over the same period of the last fiscal year (Figure 8).

6.31 The forward premia generally exhibited a softening trend during 2017-18 so far (up to January 11, 2018), barring intermittent hardening in September 2017 and January 2018, mainly due to narrowing of interest rate differential between India and the US on the back of policy rate cut by the RBI and increase in the US Fed fund rate. The 6-month forward premia, which stood at 4.9

Table 10: India's Key External Debt Indicators (per cent)

Year	External Debt (US$ billion)	Growth in External Debt (%)	Total External Debt to GDP	Debt Service Ratio	Concessional Debt to Total External Debt	Foreign Exchange Reserves to Total External Debt	Short term External Debt# to Foreign Exchange Reserves	Short term External Debt# to Total Debt	Short term debt (Residual Maturity) to total debt	Short term debt (Residual Maturity) to foreign exchange reserves
2012-13	409.4	13.5	22.4	5.9	11.1	71.3	33.1	23.6	42.1	59.0
2013-14	446.2	9.0	23.9	5.9	10.4	68.2	30.1	20.5	39.7	58.2
2014-15	474.7	6.4	23.9	7.6	8.8	72.0	25.0	18.0	38.5	53.5
2015-16	485.1	2.2	23.5	8.8	9.0	74.3	23.1	17.2	42.7	57.4
2016- 17 R	471.8	-(2.7)	20.2	8.3	9.3	78.4	23.8	18.6	41.5	52.9
End-September2017 P	495.7	5.1	*	*	9.1	80.7	23.2	18.7	41.7	51.7

Source: **RBI** ***Notes:*** **R: Revised; P: Provisional** ***# Short term debt is based on original maturity.***

Debt Service Ratio is the proportion of gross debt service payments to current account receipts (net of official transfers)

per cent at end-March 2017 declined to 4.5 per cent on January 11, 2018 and moved in the range of 4.2 per cent to 5.3 per cent during this period (Figure 9).

6.32 In terms of the NEER (trade weighted) rupee appreciated by 3.6 percent and 4.3 per cent against a basket of 6 and 36 currencies respectively in April-December 2017-18. However, the former depreciated by 2 per cent while the latter marginally appriciated by 0.03 per cent in December, 2017 from their level in March, 2017.

6.33 In terms of the real effective exchange rate (trade weighted) against a basket of 36 currencies, the rupee appreciated by 5.2 per cent in April-December 2017 over the corresponding period of 2016-17. Following the IMF methodology of the REER, there was appreciation of 4.5 per cent during the April-November 2017. Though the rupee continued to be broadly stable, the appreciation of REER indicates that India's exports might have become slightly less competitive (Figure 10).

EXTERNAL DEBT

6.34 India's External Debt stock increased by 5.1 per cent to US$ 495.7 billion at end-September 2017 from end-March, 2017, while it increased by 2.1 per cent from end-June, 2017. The long-term debt increased by 5.0 per cent at end-September 2017 over March 2017, though its share was more or less the same at 81.3 per cent compared to 81.4 per cent. The increase in long term debt was primarily due to the increase in foreign portfolio investment in the debt segment of domestic capital market included under commercial borrowings. Short term debt grew by 5.4 per cent primarily due to increase in trade related credits. Share of Government (sovereign) debt in total debt increased to 21.6 percent end-September 2017 from 19.4 per cent at end-March 2017, mainly due to other Government external debt component reflecting the increased level of foreign portfolio investments in Government securities.

6.35 Foreign exchange cover to total external debt improved to 80.7 per cent at end-September 2017 as compared to 78.4 per cent at end-March 2017, with the ratio of short term debt by original maturity to foreign exchange reserves falling to 23.2 per cent at end-September 2017 from 23.8 per cent at end-March 2017. The ratio of short term debt by residual maturity to foreign exchange reserves fell to 51.7 per cent from 52.9 per cent during the same period. The share of short term debt by residual maturity in total external debt, which is useful in assessing liquidity requirements to service contractual obligations within a year was more or less the same at 41.7 per cent at end-September 2017 compared to 41.5 per cent at end-March 2017. (Table 10). Valuation loss due to depreciation of US Dollar against other currencies in September 2017 over March 2017 was at US$ 1.4 billion implying that excluding valuation effect, external debt would have been lower at US$ 494.3 billion instead of US$ 495.7 billion.

6.36 International comparison of external debt situation based on World Bank data shows that among the top 20 developing debtor countries in 2016, India's external debt stock to Gross National Income (GNI) ratio at 20.4 percent was the second lowest after China's 12.8 per cent. In terms of the foreign exchange reserves cover to external debt, India's position is the fifth highest and India's debt service rate is the eight lowest. As per the World Bank data, though India is the third largest debtor country among developing countries (after China and Brazil), India's share of short term debt to total debt is only 18.6 percent and 18.3 per cent in 2017Q1 (end-March) and 2017 Q2(end-June) compared to China's 59.0 per cent and 60.1 per cent respectively. India is not among the top debtor countries in the world (including developed and developing) with 26th position at end-June 2017.

Conclusion

6.37 The prospects for India's External Sector in this and coming year look bright with world trade projected to grow at 4.2 percent and 4 percent in 2017 and 2018 respectively from 2.4 percent in 2016; trade of major partner countries improving and above all India's export growth also picking up. The downside risks lie in the rise in oil prices. However, this could also lead to higher inflow of remittances which have started picking up. The supportive policies like GST, logistics and trade facilitation policies of the government could help further.

07

CHAPTER

Agriculture and Food Management

Agriculture is not crop production as popular belief holds - it's the production of food and fibre from the world's land and waters. Without agriculture it is not possible to have a city, stock market, banks, university, church or army. Agriculture is the foundation of civilization and any stable economy.

Allan Savory

Agriculture and allied sector has a critical role in ensuring food security, reducing poverty and sustaining growth in India. To improve productivity in agriculture the focus has been on the critical inputs like irrigation, seeds, fertilisers and mechanization. The dynamics of agricultural growth reflect a reduction in the share of crop sector and an increase in the share of agricultural sub-sectors. As agriculture entails risks related to production, weather, prices and policy, capitalizing the structural changes in the agriculture sector by diversifying income generating activities can mitigate the risks and sustain growth of the economy.

7.1 In a developing country like India, agriculture sector and rural economy have a significant role in providing livelihoods, ensuring food security and providing impetus to the growth of industries and service sectors. The process of development inter alia results in declining share of agriculture in Gross Value Added (GVA), which is being witnessed in India too. However, the declining share does not undermine the significance of the sector for employment, livelihood and food security. With structural changes in agriculture, there is greater scope to broaden the range of activities related to agriculture to improve productivity and make way for sustainable growth.

OVERVIEW OF AGRICULTURE AND ALLIED SECTORS

7.2 The growth rates of agriculture & allied sectors have been fluctuating at 1.5 per cent in 2012-13, 5.6 per cent in 2013-14, (-) 0.2 per cent in 2014-15, 0.7 per cent in 2015-16 and 4.9 per cent in 2016-17 (Table 1). The uncertainties in growth in agriculture are explained by the fact that more than 50 percent of agriculture in India is rainfall dependent which aggravate the production risks.

Table 1 : Agriculture Sector – Key indicators

Item	2012-13	2013-14	2014-15	2015-16	2016-17 PE
Growth in GVA in Agriculture & Allied Sectors at 2011-12 prices (in per cent)	1.5	5.6	-0.2	0.7	4.9
Share of Agriculture & Allied Sectors in total GVA (in per cent) at current prices	18.2	18.6	18.0	17.5	17.4
Share of Agriculture & Allied Sectors GCF in total Gross Capital Formation at current prices* (in per cent)	7.7	9.0	8.3	7.8	NA
Share of Crops*	6.5	7.7	6.9	6.5	NA
Share of Livestock*	0.8	0.9	0.8	0.8	NA
Share of Forestry and logging*	0.1	0.1	0.1	0.1	NA
Share of Fishing *	0.4	0.5	0.5	0.5	NA

Source: **Central Statistics Office.**

*** Calculations have been based on National Accounts Statistics, 2017. NA=Not Available**

GROSS CAPITAL FORMATION IN AGRICULTURE AND ALLIED SECTOR

7.3 The Gross Capital Formation (GCF) in Agriculture and Allied Sectors relative to GVA in this sector has been showing a fluctuating trend from 18.2 per cent in 2011-12 to 16.4 per cent in 2015-16 (Table 2). The Gross Capital Formation in agriculture and allied sectors as a proportion to the total GCF showed a decline from 8.3 per cent in 2014-2015 to 7.8 per cent in 2015-16. This decline can be attributed to reduction in private investment.

Table 2 : Agriculture sector – Key indicators

Period	GCF in Agriculture & Allied Sector(in Rs. Crore) at 2011-12 prices			GVA in Agriculture & Allied Sector(in Rs. Crore)	GCF in Agriculture & Allied Sectors as percentage of GVA of Agriculture & Allied Sector		
	Public	Private	Total		Public	Private	Total
2011-12	35696	238175	273870	1501947	2.4	15.9	18.2
2012-13	36019	215075	251094	1524288	2.4	14.1	16.5
2013-14	33925	250499	284424	1609198	2.1	15.6	17.7
2014-15	36714	240701	277415	1606140	2.3	15	17.3
2015-16*	44957	220081	265038	1617208	2.8	13.6	16.4

Source: **Central Statistics Office(CSO), M/o Statistics & Programme Implementation.**

***As per provisional estimates of Annual National Income, 2016-17 and quarterly estimates of GDP for the 4th Quarter (Q4) of 2016-17 (latest available) released on 31st May 2017.**

PRODUCTION OF CROPS 2016-17

7.4 As per the Fourth Advance Estimates for 2016-17 released by Department of Agriculture, Cooperation and Farmer's Welfare, the country achieved a record production of food grains estimated at 275.7 million tonnes, which is higher by 10.6 million tonnes than the previous record production of food grains in 2013-14. The production of rice is estimated at 110.2 million tonnes during 2016-17 which is also a new record. Similarly, the production of wheat, estimated at 98.4 million tonnes is higher by 2.6 per cent than the previous record production achieved during 2013-14. Another significant achievement is in the production of pulses which is estimated at 23.0 million tonnes during 2016-17 and higher by 3.7 million tonnes than the previous record production achieved during 2013-14. The production of oilseeds and cotton registered a growth of 27 per cent and 10.3 per cent respectively in 2016-17. This increase in production of food grains and other crops is mainly on account of very good rainfall during monsoon 2016-17 and various policy initiatives taken up by the Government. The details of area, production and productivity are summarized in table 3.

KHARIF PRODUCTION 2017-18

7.5 As per the First Advance Estimates released on 22nd September, 2017, kharif food grains production during 2017-18 is estimated at 134.7 million tonnes which is expected to be lower by 3.9 million tonnes from the production of 138.5 million tonnes during 2016-17. The total production of rice during 2017-18 is estimated at 94.5 million tonnes vis-à-vis 96.4 million tonnes in 2016-17. The production of pulses during 2017-18 is estimated at 8.7 million tonnes, sugarcane at 337.7 million tonnes, oilseeds at 20.7 million tonnes and cotton at 32.3 million bales of 170 kgs each.

Table 3 : Area, Production and Yield (2016-17*)

Group/Commodity	Area (Million ha)	Percentage change in area over 2015-16	Production (Million tonnes)	Percentage change in production over 2015-16	Yield (kg/ha)	Percentage change in yield over 2015-16
Foodgrains[a]	128.0	3.9	275.68	9.6	2153	5.5
Rice	43.2	-0.7	110.15	5.5	2550	6.3
Wheat	30.6	0.6	98.38	6.6	3216	6.0
Jowar	5.1	-15.4	4.57	7.9	889	27.5
Maize	9.9	12.0	26.26	16.4	2664	3.9
Bajra	7.5	4.8	9.80	21.5	1311	15.9
Pulses	29.5	18.3	22.95	40.4	779	18.7
Gram	9.6	14.1	9.33	32.1	973	15.8
Tur	5.4	36.3	4.78	86.6	885	36.9
Oilseeds	26.2	0.5	32.10	27.1	1225	26.5
Groundnut	5.3	15.6	7.56	12.4	1424	-2.8
Rapeseed and Mustard	6.0	4.8	7.98	17.4	1324	12.0
Cotton[b]	10.8	-11.8	33.09	10.3	519	25.0
Sugarcane	4.4	-10.9	306.72	-12.0	70#	-1.2

Source: **Directorate of Economics & Statistics, Department of Agriculture, Cooperation and Farmers Welfare.**

Note: *** : Fourth Advance Estimates; # : tonnes/ha, a :Includes cereals and pulses; b : Million Bales of 170 kg each.**

SOWING OF RABI CROPS 2017-18

7.6 The sowing of rabi crops is under progress. As per latest information available on sowing of crops from States, 617.8 lakh hectares of area has been covered under Rabi crops for 2017-18 as on 19th January 2018. The area coverage under rabi crops is above 98 per cent of the normal area. The details of area coverage under Rabi crops are given at table 4.

DYNAMICS OF AGRICULTURAL GROWTH

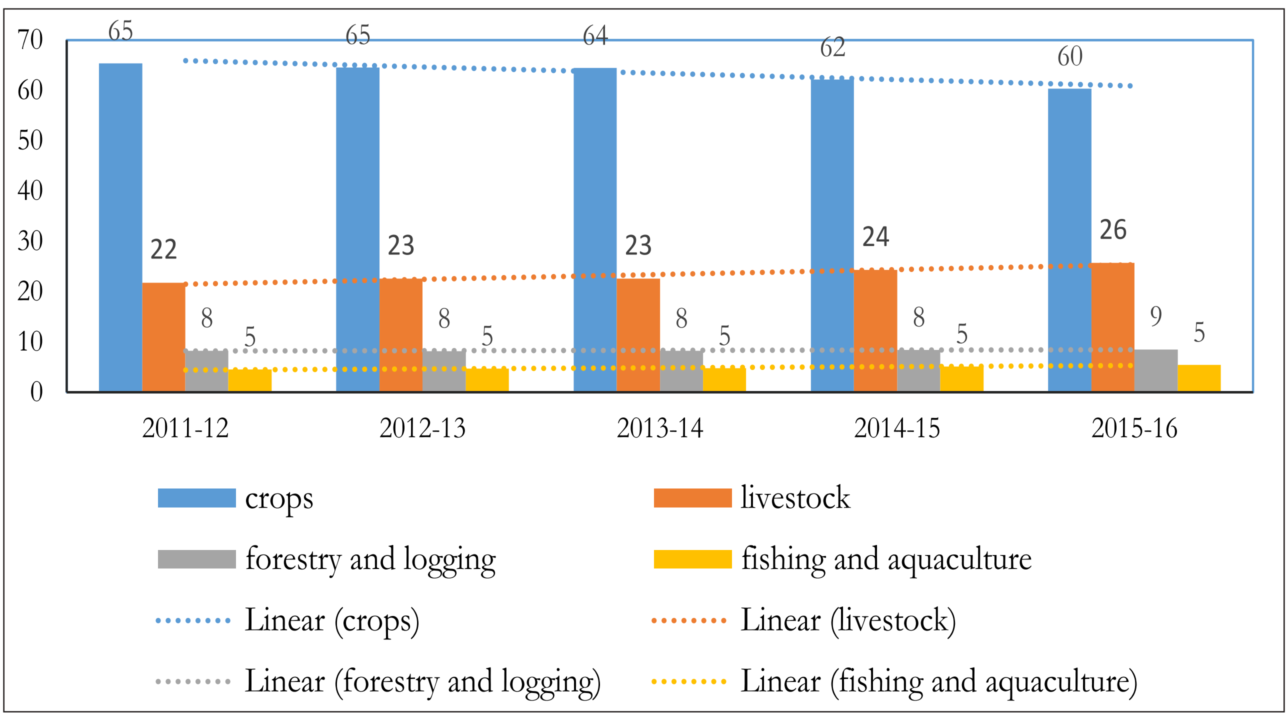
7.7 The agricultural growth in India has been fluctuating since more than 50 per cent of agriculture in India is rainfall dependent as noted in the overview. However, the sector has been witnessing a gradual structural change in recent years. The share of livestock in GVA in agriculture has been rising gradually, the share of the crop

Table 4 : Area under Rabi crops as on 19-01-2018

Crop	Area sown 2017-18(lakh hectares)	Area sown 2016-17 (lakh hectares)	% change over 2016-17
Wheat	298.7	311.2	-4.0
Rice	22.3	16.0	39.6
Pulses	163.1	155.8	4.7
Coarse Cereals	54.6	56.0	-2.5
Oilseeds	79.1	82.1	-3.6
Total	**617.8**	**621.0**	**-0.5**

Source: **Crops Division, Department of Agriculture, Cooperation and Farmers Welfare.**
Note: **All figures are tentative and eye estimated by the States.**

Figure 1 : Share of Agriculture and allied sectors in Gross Value Added (in %)



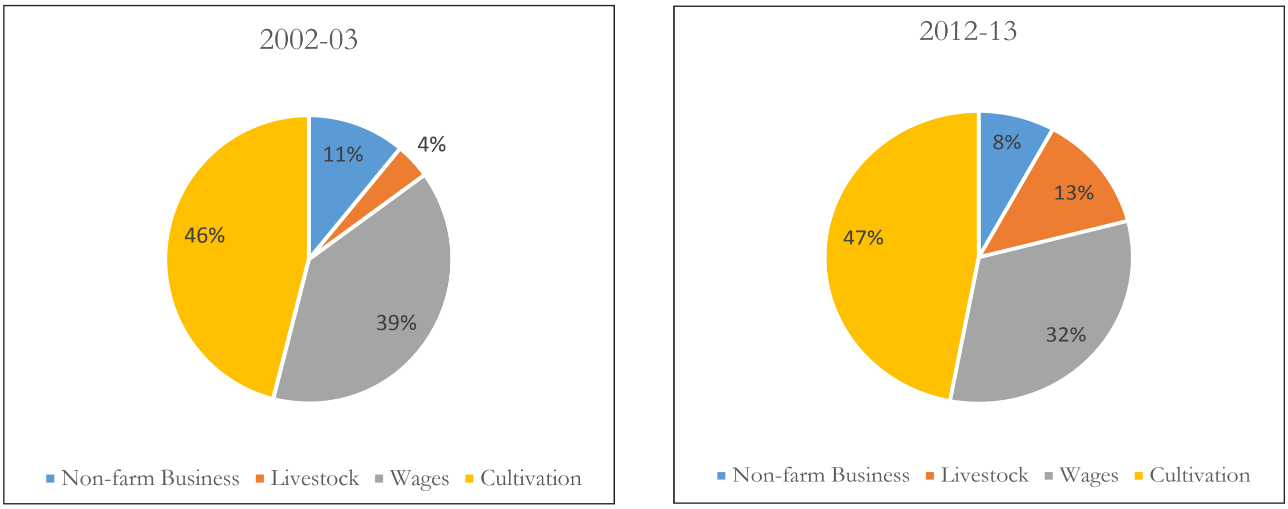
Source: **National Accounts Statistics 2017**

sector in GVA has been on the decline from 65 per cent in 2011-12 to 60 per cent in 2015-16.

7.8 The structural changes that are being witnessed by the agriculture sector in India necessitates re-orientation in policies towards this sector in terms of strengthening the agricultural value chain by focusing on allied activities like dairying and livestock development along with gender-specific interventions (Box7.1). The structural transformation is also manifested in the farm incomes of the households.

7.9 The decrease in share of crop sector in the total gross value added of the agriculture and allied sector has impacted the sources of incomes of the farm households. As can be seen from Figure 2 in 2002-03 the share of livestock in total farm incomes was just 4 per cent which increased to 13 per cent by 2012-13.

Figure 2 : Sources of Farm Incomes, 2002-03 and 2012-13



Source: **National Sample Survey Organisation, 2002-03 and 2012-13.**

Box 7.1 : Policy for Women Farmers

Women play a significant and crucial role in agricultural development and allied fields including in the main crop production, livestock production, horticulture, post-harvest operations, agro/social forestry, fisheries, etc. is a fact long taken for granted (NCW, 2001). For sustainable development of the agriculture and rural economy, the contribution of women to agriculture and food production cannot be ignored. As per Census 2011, out of total female main workers, 55 per cent were agricultural labourers and 24 per cent were cultivators. However, only 12.8 per cent of the operational holdings were owned by women, which reflect the gender disparity in ownership of landholdings in agriculture (Table 1) Moreover, there is concentration of operational holdings (25.7 per cent) by women in the marginal and small holdings categories.

Table 1 : Percentage of operational holdings owned by women

Size Group	2000-01	2005-06	2010-11
Marginal (Below 1.00 ha.)	11.8	12.6	**13.6**
Small (1.00-2.00 ha.)	10.3	11.1	**12.2**
Semi-Medium (2.00-4.00 ha.)	8.7	9.6	10.5
Medium (4.00-10.00 ha.)	6.9	7.8	8.5
Large (Above10.00 ha.)	5.2	6.0	6.8
All Size Groups	10.8	11.7	**12.8**

Source: **Agriculture Census, 2010-11.**

With growing rural to urban migration by men, there is 'feminisation' of agriculture sector, with increasing number of women in multiple roles as cultivators, entrepreneurs, and labourers. Globally, there is empirical evidence that women have a decisive role in ensuring food security and preserving local agro-biodiversity. Rural women are responsible for the integrated management and use of diverse natural resources to meet the daily household needs (FAO, 2011). This requires that women farmers should have enhanced access to resources like land, water, credit, technology and training which warrants critical analysis in the context of India. In addition, the entitlements of women farmers will be the key to improve agriculture productivity. The differential access of women to resources like land, credit, water, seeds and markets needs to be addressed. Towards this, Government has been implementing various schemes which help improve the entitlements of women farmers, which will prove to be advantageous in bridging the policy gaps which exist in the sector. The following measures have been taken to ensure mainstreaming of women in agriculture sector:

- Earmarking at least 30 per cent of the budget allocation for women beneficiaries in all ongoing schemes/programmes and development activities.
- Initiating women centric activities to ensure benefits of various beneficiary-oriented programs/schemes reach them.
- Focusing on women self-help group (SHG) to connect them to micro-credit through capacity building activities and to provide information and ensuring their representation in different decision-making bodies.
- Recognising the critical role of women in agriculture, the Ministry of Agriculture and Farmers Welfare has declared 15th October of every year as Women Farmer's Day.

With women predominant at all levels- production, pre-harvest, post-harvest processing, packaging, marketing- of the agricultural value chain, to increase productivity in agriculture, it is imperative to adopt gender specific interventions. An 'inclusive transformative agricultural policy' should aim at gender-specific interventions to raise productivity of small farm holdings, integrate women as active agents in rural transformation, and engage men and women in extension services with gender expertise.

7.10 The significance and contribution of allied sectors like animal husbandry, dairying and fisheries have been highlighted in Chapter 7 of the Economic Survey 2016-17, Vol.II released in August 2017.

CROPPING PATTERN IN INDIAN AGRICULTURE

7.11 India ranks first, with 179.8 Mha (9.6 percent of the global net cropland area) of net cropland area according to United States Geological Survey 2017. The pattern of cropping is determined by various factors like agro-climatic conditions, farm size, prices, profitability and government policies. A diversified cropping pattern will help in mitigating the risks faced by farmers in terms of price shocks and production/harvest losses. With 9.6 per cent of the global net cropland area, India has tremendous potential for crop diversification and to make farming a sustainable and profitable economic activity. In the following paragraph, it is examined whether there has been adequate crop diversification in India over time.

7.12 The Index of Crop Diversification[1] has been computed for major States and All India to examine whether there has been major changes in the cropping patterns across States. The index value ranges between 0 and 1 and higher the value, greater the diversification. It is evident from the Table 5 that there is a declining inter-temporal

[1] Gibbs and Martin's Method for Demarcating Crop Diversification has been used to compute Index of Crop Diversification. Index of Crop Diversification = 1 - $[\sum x^2 / (\sum x)^2]$

where X is the percentage of total cropped area under an individual crop.

behaviour in crop diversification for the States like Chhattisgarh, Haryana, Madhya Pradesh, Odisha, Punjab and Uttar Pradesh. Among these States, the decline in the index has been sharp for Odisha. The index for the State declined from 0.740 in 1994-95 to 0.703 in 2005-06. The year 2010-11 saw a steeper decline in the index for the State as it fell to 0.380 and subsequently to 0.340 in 2014-15. Two of the States Himachal Pradesh and Jharkhand have shown increasing values in crop diversification. The crop diversification scenario for India as a whole appears to be almost stable throughout the periods.

Table 5 : Index of Crop Diversification

Index of Crop Diversification				
States	**1994-95**	**2005-06**	**2010-11**	**2014-15**
Andhra Pradesh	0.870	0.870	0.852	0.864
Bihar	0.700	0.719	0.743	0.726
Chhattisgarh	na	0.531	0.503	0.491
Goa	0.770	0.771	0.762	0.769
Gujarat	0.910	0.908	0.899	0.900
Haryana	0.830	0.808	0.788	0.774
Himachal Pradesh	0.740	0.743	0.741	0.754
Jammu & Kashmir	0.800	0.797	0.801	0.798
Jharkhand	na	0.473	0.537	0.578
Karnataka	0.920	0.932	0.937	0.938
Kerala	0.850	0.856	0.852	0.845
Madhya Pradesh	0.880	0.871	0.859	0.835
Maharashtra	0.890	0.905	0.904	0.903
Odisha	0.740	0.703	0.380	0.340
Punjab	0.710	0.682	0.664	0.658
Rajasthan	0.870	0.874	0.891	0.884
Tamil Nadu	0.860	0.853	0.859	0.870
Uttar Pradesh	0.810	0.794	0.786	0.782
Uttarakhand	na	0.820	0.814	0.819
West Bengal	0.550	0.613	0.663	0.654
All India	**0.905**	**0.907**	**0.907**	**0.899**

Source: **In-house computation based on data from Land Use Statistics.**

7.13 In Odisha, by 2014-15, 80 per cent of the cropped area has been under rice, around 10 per cent under other pulses and around 4 percent under other food crops. In Punjab too, wheat and paddy cover 83 per cent of the cultivable area of the State. The issues related to mono-culture as witnessed in Odisha and Punjab are declining productivity, lower fertilizer response ratio, degradation of soil health and declining profitability of cultivation.

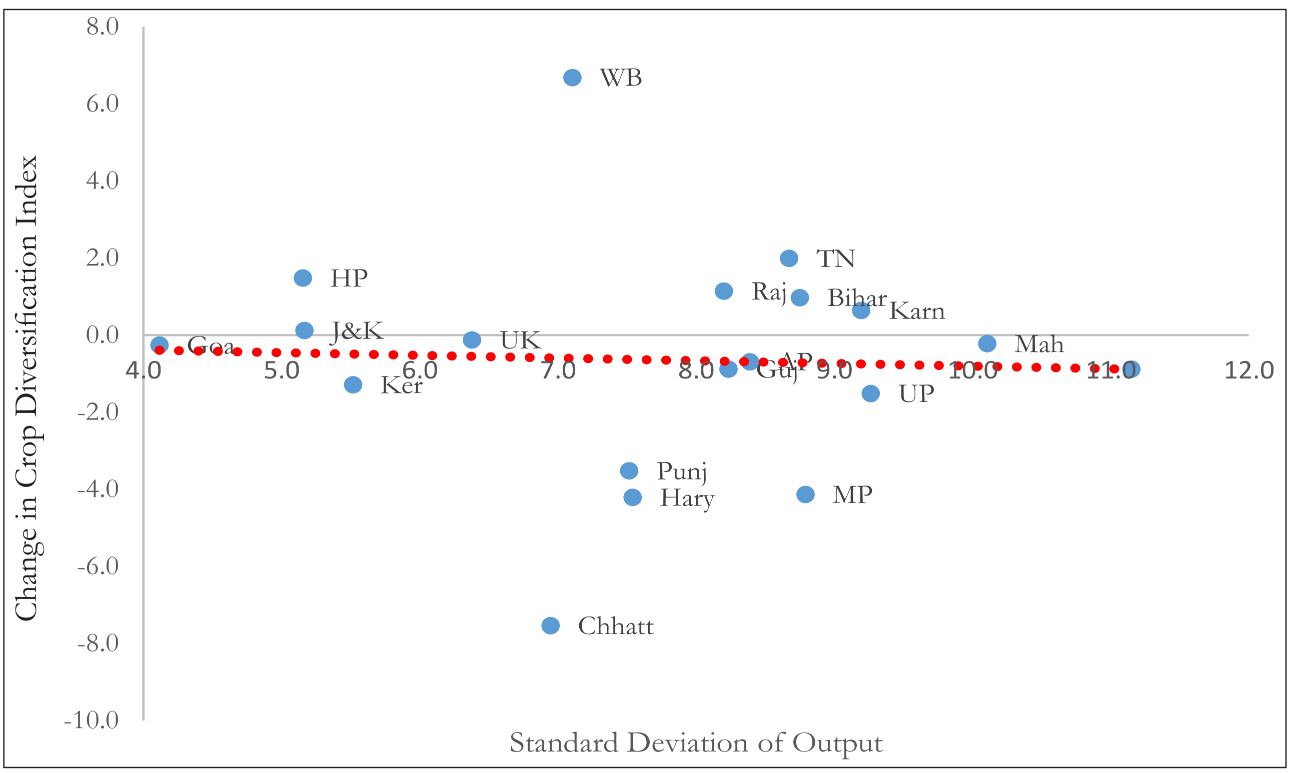
7.14 Crop diversification needs to be encouraged to improve soil health, productivity and thereby profitability of cultivation. The inverse relationship between change in crop diversification index and variability of output can be seen in the plot of States (excluding outliers Odisha and Jharkhand) in Figure 3.

7.15 There is a need to diversify into high value crops and horticulture crops for which Government has taken several measures. Crops Diversification Programme is being implemented by the Government in original green revolution states viz. Punjab, Haryana and in Western UP to diversify paddy area towards less water requiring crops like oilseeds, pulses, coarse cereal, agro-forestry and shifting of tobacco farmers to alternative crops/cropping system in tobacco growing States viz. Andhra Pradesh, Bihar, Gujarat, Karnataka, Maharashtra, Odisha, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal.

INPUT MANAGEMENT IN AGRICULTURE

7.16 Agricultural productivity is determined by the appropriate use of critical inputs like

Figure 3 : Change in Crop Diversification and Variability of Output (%)
(Excluding Odisha and Jharkhand)



Source: **In-house computation based on data from Land Use Statistics**

irrigation, seeds, fertilisers, credit, machines, technology and extension services. For instance, the Green Revolution in India which brought about self-sufficiency in food production was driven by the use of high yielding varieties (HYVs) of seeds, intensive use of fertilisers and irrigation. Managing the inputs in appropriate combinations for specific crops can improve the productivity in agriculture without losing soil fertility and causing environmental damages. In this context, the significance of extension services and capacity of farmers to adopt new innovations, technologies and inputs for improving productivity become pertinent.

Operational Holdings by Educational status

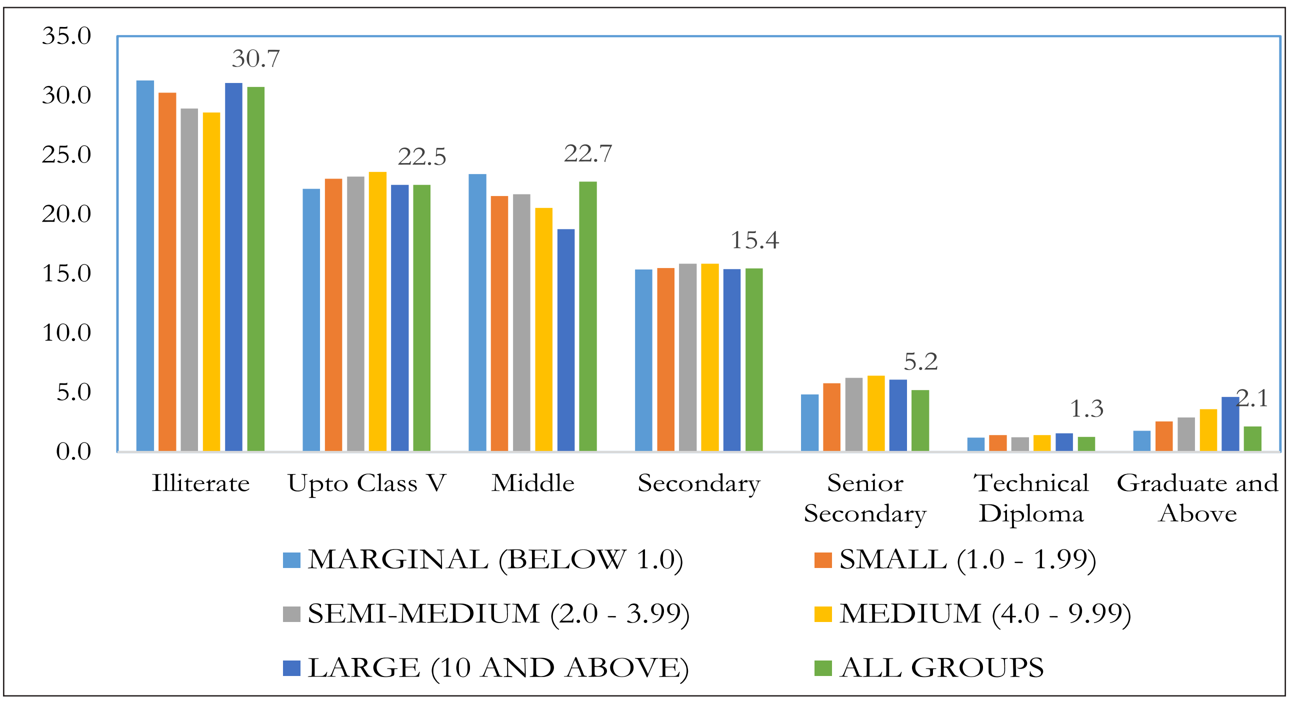
7.17 As indicated above, the educational level of farmers has a significant impact on the capacity of farmers to adopt and inculcate new methods of cultivation and input management. The percentage distribution of operational holdings in each size group by educational status are given in Figure. 4

7.18 As per Input Survey 2011-12 (with an estimated 138.11 million operational holders), about 69.3 percent were literate with 22.5 percent studied up to class V, 22.7 percent up to middle class, 15.4 percent up to secondary, 5.2 percent up to senior secondary, 1.3 percent technical diploma holders below degree level and rest 2.1 percent has graduation and above. However, 30 per cent among marginal and small farmers were illiterate. With predominance of small and marginal farm holdings, it is necessary to improve the educational status of farmers to increase their capacity to absorb technologies, and adopt risk mitigating measures.

Use of Inputs by Agricultural Holdings

7.19 The use of inputs like fertilisers, hybrid seeds and organic manure are critical in increasing productivity in agriculture. As reported in Input Survey, out of total operational holding only 9.4 percent used certified seeds while 27 percent used seeds of notified variety and only 9.8

Figure 4 : Percentage of Operational Holdings by Educational Status

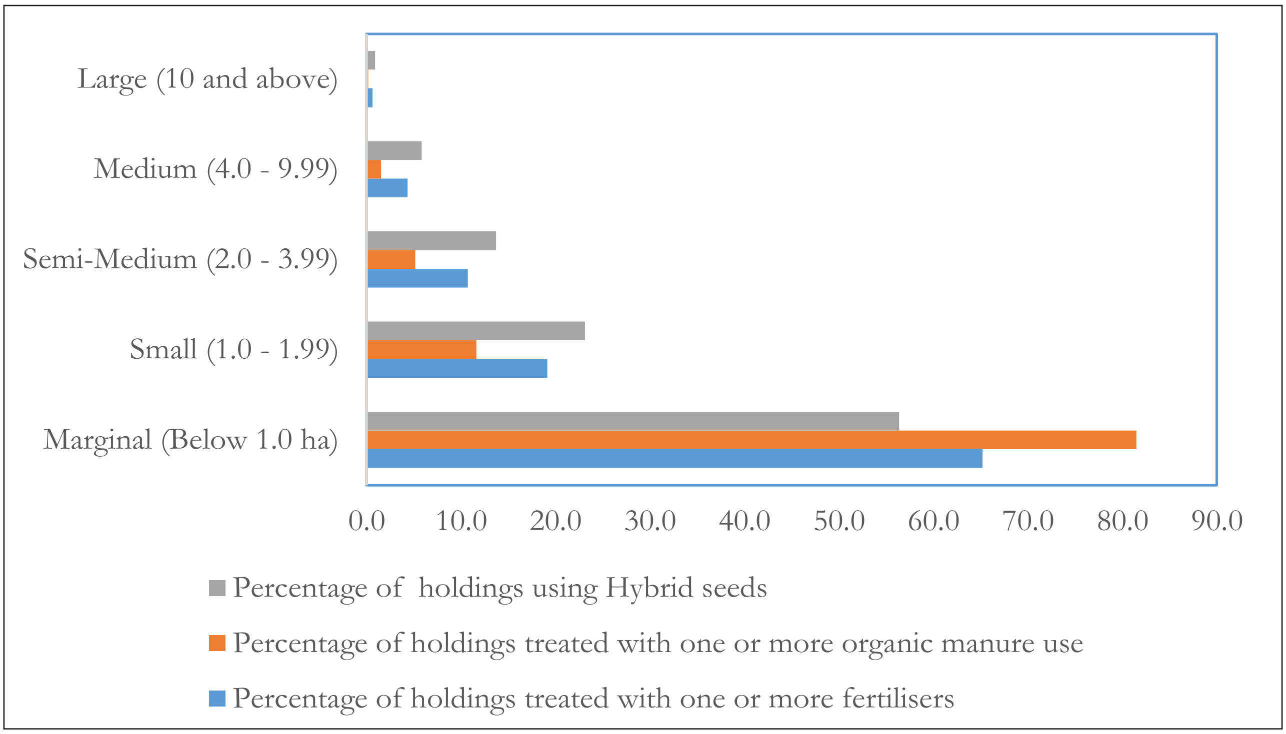


Source: **Input Survey, 2011-12, Department of Agriculture and Cooperation**

percent used hybrid seeds. It can be evidenced from Figure 5 that the small and marginal farmers use these inputs, with more than 80 per cent of agricultural holdings in the marginal size category using organic manure which increases soil fertility.

7.20 The percentage of small holdings which use hybrid seeds and fertilisers are also lower in comparison to marginal holdings. Recognising the significance of quality of seeds in improving the crop yields, the Government has taken several measures.

Figure 5 : All India use of inputs by agricultural holdings by size group



***Source*: Input Survey, 2011-12, Department of Agriculture and Cooperation**

Box 7.2 : Direct Benefit Transfer in Fertiliser sector

The Government of India has introduced Direct Benefit Transfer (DBT) system for fertilizer subsidy on Pilot Basis with effect from October, 2016. Under the proposed fertilizer DBT system, 100 per cent subsidy on various fertilizer grades shall be released to the fertilizer companies on the basis of actual sales made by the retailers to the beneficiaries. The Sale of all subsidized fertilizers to farmers/buyers will be made through Point of Sale (PoS) devices installed at each retailer shop and the beneficiaries will be identified through Aadhar Card, KCC, Voter Identity Card etc.

The implementation of the DBT Scheme requires development of PoS devices at every retailer shop, training of retailers for using PoS device, Stock initialization in the PoS device after verifying the physical stock at retail point, before making sales transactions. Presently, the DBT scheme is under implementation in 17 pilot districts. Based on the deployment of PoS device in different States, preparedness of State Government, Lead fertilizer Suppliers/Fertilizer companies, the Department has drawn up a detailed action plan to extend the DBT Scheme to other States in a phased manner. As on 22nd December, 2017, 14 States/UTs have been brought under DBT Framework.

The benefits of the DBT Scheme are: (a) The proposed DBT framework is a beneficiary driven subsidy payment mechanism being initiated at national level. (b) It creates Aadhaar seeded data base of beneficiaries and provides transaction visibility at the level of buyers. (c) By linking the actual sales to subsidy payments, it facilitates a more transparent and faster tracking of funds along the value chain i.e. from manufacturers to beneficiaries. (d) Diversion of fertilizers is expected to be minimized.

7.21 During 2016-17, total breeder seed production in field crops has been 121989 quintals, comprising cereal crops 70093, Pulses 20578 and Oilseeds 30288, fibre crops 131 and forage crops 898 quintals. In order to promote Seed Replacement Rate (SRR) and Varietal Replacement Rate (VRR), Seed Project entitled, "Seed Production in Agricultural Crops" is being implemented. During the year 2016-17, total production of quality seed including all classes was 620743 quintals against the target of 462404 quintals. In addition, 239 lakh planting material and 1.9 lakh tissue culture plantlets were also produced.

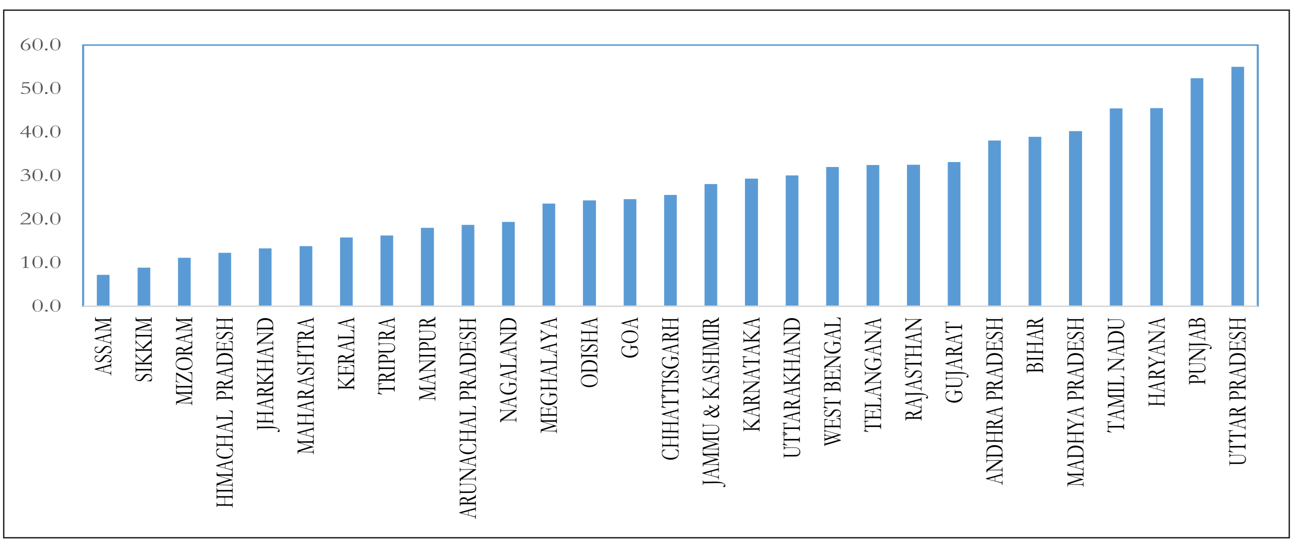
7.22 However, the use of fertilizers and hybrid seeds can bring about better yields if there is adequate coverage of irrigation since agriculture in India is largely rainfed.

Irrigation

7.23 The all India percentage of net irrigated area to total cropped area was 34.5 per cent, which makes a large segment of cultivation dependent on rainfall. The State-wise percentage distribution of net irrigated area to total cropped area shows that only two States, Punjab and Uttar Pradesh have more than 50 per cent net irrigated area to total cropped area and only seven states have above 34 percent in 2014-15 (Figure 6).

7.24 There is tremendous potential to increase the coverage of irrigated area for which the Government launched the Prime Minister's Krishi Sinchayee Yojana (PMKSY) in 2015. PMKSY has been approved for implementation across the country with an outlay of Rs.50,000 crore in five years. During the year 2016-17, Rs.1991.2 crores was allocated for Per Drop More Crop under PMKSY which is 28 per cent, more than Rs. 1,556.7 crore allocated in the year 2015-16. In 2015-16, 5.7 lakh hectare area was brought under micro-irrigation, while 8.4 lakh hectare area was brought under micro irrigation during 2016-17, which is the highest so far. An amount of Rs. 3400 crore has been allocated for Per Drop More Crop scheme for the year 2017-18, and till September, Rs.1601.4 crore has been released. The target is to bring 12 lakh hectare area under micro-irrigation during 2017-18. PMKSY Scheme is being implemented in the mission mode with the help of Command Area Development to complete 99 major and medium irrigation projects

Figure 6 : Percentage of Net Irrigated Area to Total Cropped Area, 2014-15



Source: **Directorate of Economics and Statistics.**

Note: Net Irrigated Area is Gross Irrigated Area minus Area irrigated more than once.

covering 76.0 lakh hectares in a phased manner by December 2019.

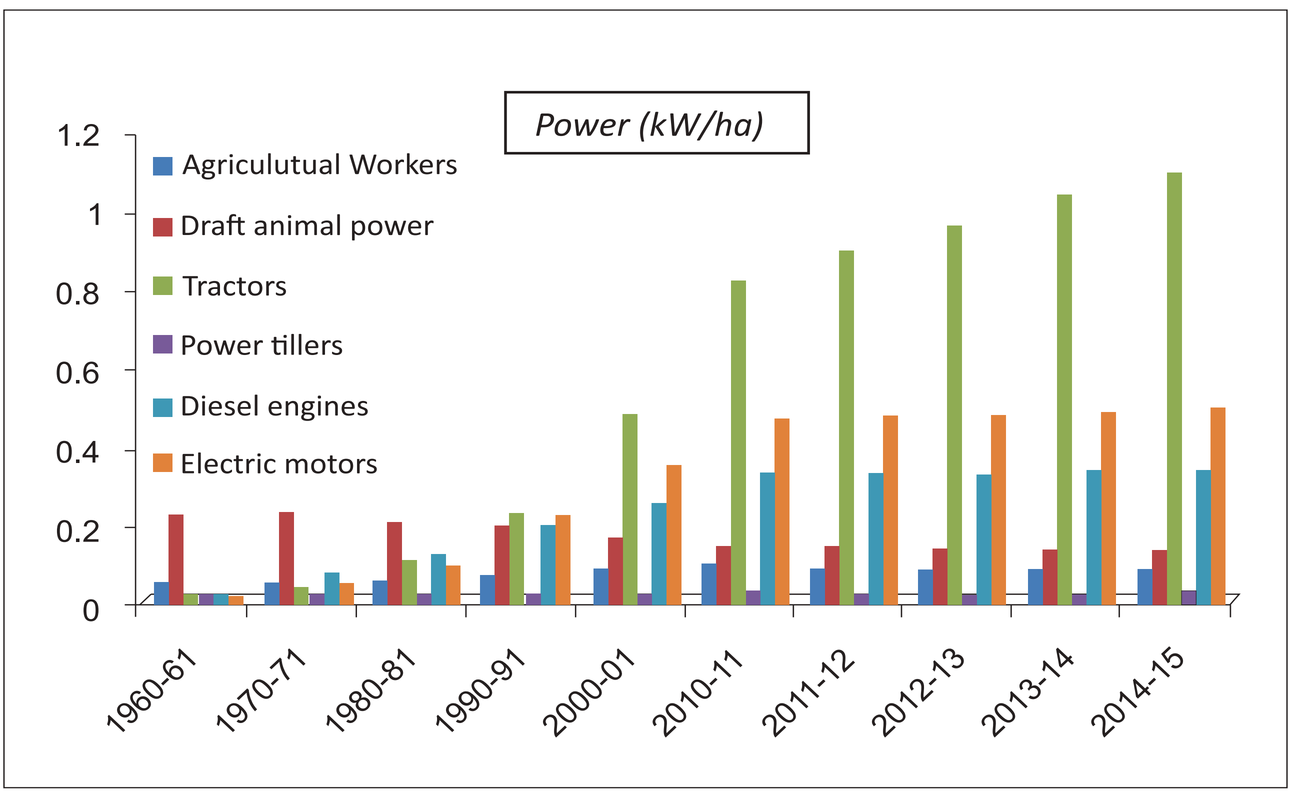
Agricultural Mechanization

7.25 Farm mechanization and crop productivity has a direct correlation as farm mechanization saves time and labour, reduces drudgery, cut down production cost in the long run, reduces post-harvest losses and boosts crop output and farm income. Use of improved implements has potential to increase productivity up to 30 per cent and reduce the cost of cultivation up to 20 per cent. At present, Indian farmers are adapting farm mechanization at a faster rate in comparison to recent past. Although, the sale of tractors in India cannot be taken as the only measure of farm mechanization but to a great extent it reflects the level of mechanization. Indian tractor industries have emerged as the largest in the world and account for about one-third of total global tractor production.

7.26 According to the World Bank estimates, half of the Indian population would be urban by the year 2050. It is estimated that percentage of agricultural workers of total work force would drop to 25.7 per cent by 2050 from 58.2 per cent in 2001. Thus, there is a need to enhance the level of farm mechanization in the country. Due to intensive involvement of labour in different farm operations, the cost of production of many crops is quite high. Human power availability in agriculture also increased from about 0.043 KW/ha in 1960-61 to about 0.077 KW/ha in 2014-15 (Figure 7). However, as compared to tractor growth, increase in human power in agriculture is quite slow.

7.27 Over the years, the shift has been towards the use of mechanical and electrical sources of power. In 1960-61, about 93 per cent farm power

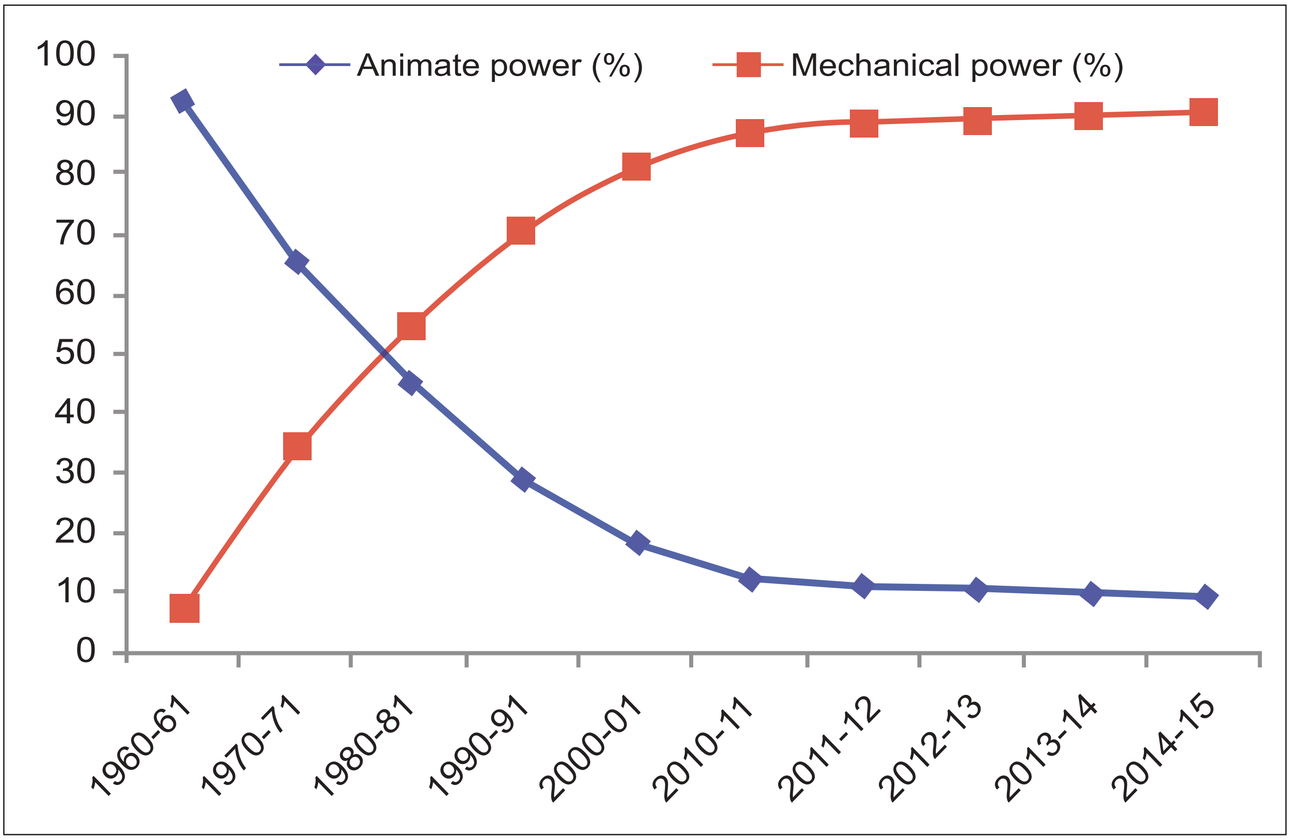
Figure 7 : Power available from different power sources on Indian farms



Source: **Indian Council of Agricultural Research**

was coming from animate sources, which has reduced to about 10 per cent in 2014-15 (Figure 8). On the other hand, mechanical and electrical sources of power have increased from 7 per cent to about 90 per cent during the same period.

Figure 8 : Animate and mechanical power scenario in Indian agriculture



Source: **Indian Council of Agricultural Research**

7.28 There is predominance of small operational holdings in Indian agriculture. It is, therefore, needed to consolidate the land holdings to reap the benefits of agricultural mechanization. There is a need to innovate custom service or a rental model by institutionalization for high cost farm machinery such as combine harvester, sugarcane harvester, potato combine, paddy transplanter, laser guided land leveller, rotavator etc. to reduce the cost of operation and it can be adopted by private players or State or Central Organizations in major production hubs.

MITIGATING RISKS IN AGRICULTURE: CROP INSURANCE AND CROP LOSS

7.29 The NSSO Report (July 2012 – June 2013) had indicated that a very small share of agricultural households engaged in crop production activities was insuring their crops. In respect of wheat and paddy, the two most harvested cereals in the country, less than 5 percent of the cultivating agricultural households insured their crops. The share of households opted for crop insurance in the case of cotton, groundnut and soybean was slightly higher compared to the other selected crops harvested during the two halves of the agricultural year July 2012-June, 2013.

Table 6 : Share of agricultural households not insuring crops by reasons for not insuring

		Agricultural households not insuring by reason for (July 2012 to Dec 2012) (in %)		
	Reasons for not insuring	**Paddy**	**Arhar**	**Groundnut**
1.	Not aware about crop insurance	43	41	49
2.	Not aware about availability of facility	19	16	18
3.	Not interested/not felt the need to insure	20	18	19
4.	Insurance facility not available	6	9	5
5.	Lack of resources for premium payment	4	6	3
6.	Complex procedures	3	2	1
7.	Delay in claim payment	0.9	0.7	0.2

Source: **NSS Report No.573, Some aspects of farming in India, 2012-13.**

7.30 The reasons for not insuring for selected crops as highlighted in Table 6 reflect that '*Not aware about the crop insurance*' was the most prominent reason reported by the cultivating agricultural households for not insuring their crops during the two halves of the agricultural year July 2012-June 2013. The lack of awareness about the availability of the facility for the harvested cop was the second highest reported reason for not insuring the crops. Barring this 20 percent of households which were either not interested in insuring their crops or not felt the need for insuring their crops, majority of the agricultural households did not insure their crop due to reasons that can be attributed to lack of awareness, improper coverage and reach and complicated procedures and lack of resources etc. To enhance the coverage and rate of crop insurance among agricultural households, proper awareness needs to be generated along with enhanced geographical coverage and simplification of procedures.

7.31 In this context, it is noteworthy that the Pradhan Mantri Fasal Bima Yojana (PMFBY), which is a yield index based crop insurance scheme launched in 2016, has made substantial progress with more ground coverage compared to erstwhile schemes. During Kharif 2016 season 23 States implemented PMFBY and during Rabi 2016-17, 25 States/Union Territories implemented PMFBY.

7.32 During 2016-17, the target of 30 percent of the Gross Cropped Area (GCA) in the country for PMFBY has been achieved. In 2016-17, for a gross premium of Rs. 22,004 crore, overall coverage was 571 lakh farmer applications and 554 lakh ha. area insured for a sum of Rs. 20,2145 crore. As on December 2017, under PMFBY, total claims of Rs. 13,292 crores have been approved for 116 lakh farmers (applications) and Rs. 12,020 crores have been paid. Loanee and non-loanee coverage stood at 435 lakh and 136 lakh respectively. As compared to 2015-16, there is about 18.3 per cent increase in farmer applications, 10.8 per cent increase in area insured and about 76 per cent increase in sum insured under the scheme. The coverage of non-loanee farmers has also been increased by 123.5 per cent during 2016-17 over previous year i.e. 2015-16. The target for 2017-18 has been kept at 40 per cent of GCA. During Kharif 2017, the scheme is being implemented by 25 States/UTs.

7.33 PMFBY provides comprehensive coverage of risks from pre-sowing to post harvest against natural non-preventable risks. The insurance premium is to be paid to companies on actuarial basis, with however very low share to be paid by farmers on a uniform basis across the country (2 per cent & 1.5 per cent for food & oilseed crops for Kharif & Rabi seasons respectively and 5 per cent for annual commercial/horticultural crops) and balance premium to be paid upfront and shared equally by Central and State Governments. It provides better protection for the farmers in terms of sum insured which has been made equal to the scale of finance.

Reasons for Crop Loss

7.34 Among the agricultural households which experienced crop loss during the two halves of the agricultural year July, 2012-June, 2013, reason for the crop loss and the average total loss were ascertained with respect to each major crop reported by the households. Inadequate rainfall/drought was most reported reason for crop loss for all the selected crops except coconut and urad during the first half of the agricultural year. In respect of coconut and urad, the highest reported single reason for crop loss during this period was "disease/insect/animal". The highest average total loss was reported for cotton (Rs. 43046) followed by sugarcane (Rs. 42887) and groundnut (Rs. 28721) during July 2012-December, 2012.

7.35 Within an agricultural year, the reasons for crop loss will vary substantially in rainfed agriculture, which is highly dependent on weather conditions for cultivation of crops. Compared to the period July 2012-December 2012, "disease /insect/animal" was the most reported reason for crop loss for more number of crops during the period January, 2013-June 2013. Other natural calamities also happened to be one of the major reasons reported by households which experienced loss of crops like gram, potato, rapeseed/mustard during this period. During the period January-June 2013, the agricultural households that cultivated sugarcane reported to have incurred highest average total loss (Rs. 36290) followed by cotton (Rs. 22,785) and onion (Rs. 18,860).

7.36 The significance of adopting climate resilient agriculture is increasing with rapid environmental changes occurring due to climate change factors (Box 7.3).

AGRICULTURAL CREDIT AND MARKETING INITIATIVES

7.37 Credit is a critical input in achieving high productivity and overall production in the agricultural sector. A sum of Rs.20,339 crore has been approved by the Government of India in 2017-18 to meet various obligations arising from interest subvention being provided to the farmers on short term crop loans, as also loans on post-harvest storages meets an important input requirement of the farmers in the country

Box 7.3 : Policy to Promote Climate Smart Agriculture (CSA)

Climate change incidence on agriculture can be in the form of increased variability in temperature and rainfall and intensity of extreme weather events like drought and flood ultimately creating disturbance to agro-ecosystems, thereby impacting farmers and farming community. This necessitates the need to address adaptation and rural development in an integrated manner, so as to achieve climate resilient development. It is in this context that there is emergence of the concept and significance of 'Climate Smart Agriculture (CSA).

Climate Smart Agriculture (CSA)

Climate-smart agriculture (CSA) is an approach that helps to guide actions needed to transform and reorient agricultural systems to effectively support development and ensure food security in a changing climate. CSA aims to tackle three main objectives: sustainably increasing agricultural productivity and incomes; adapting and building resilience to climate change; and reducing and/or removing greenhouse gas emissions wherever possible.

CSA is an approach for developing agricultural strategies to secure sustainable food security under climate change. CSA provides the means to help stakeholders identify agricultural strategies suitable to their local conditions.

Mainstreaming CSA

Mainstreaming CSA and Climate Change Adaptation (CCA) policies in India are still at its nascent stage. In order to address the risk associated with Climate variability and climate change, climate resilient technologies are being demonstrated in 153 model villages under KVK covering 23 states under "National Innovations on Climate Resilient Agriculture" (NICRA). In addition, 623 contingency plans have been prepared so far and hosted on ICAR /DAC websites (http://farmer.gov.in/ http:// agricoop.nic.in /acp.html, http://crida.in/) and circulated to all state agriculture departments to manage various weather aberrations such as droughts, floods, cyclones, hailstorms, heat and cold waves. The contingency plans are useful for preparedness and real time implementation towards sustainability of agriculture production system in the events of weather aberrations and extreme climatic events.

(Box 7.4 on Interest Subvention Scheme), especially small and marginal farmers who are the major borrowers. (Table 7) This institutional credit will help in delinking the farmers from non-institutional sources of credit, where they are compelled to borrow at usurious rates of interest. Since the crop insurance under Pradhan Mantri Fasal Bima Yojana (PMFBY) is linked to availing of crop loans, the farmers would stand to benefit from both farmer oriented initiatives of the Government, by accessing the crop loans.

Table 7 : Coverage of Small and Marginal Farmers (SMF) in Agriculture Ground level credit (GLC) flow in the last 3 years

Number of Accounts for GLC	2013-14	2014-15	2015-16
Total No. of accounts (all farmers) (in crores)	8.05	8.53	8.99
No. of Accounts of SMF (in crore)	5.05	4.86	5.40
% Coverage of SMFs	**62.7**	**57.0**	**60.1**

Source: **Standing Committee on Agriculture, March 2017.**

7.38 The Government has been undertaking market reforms with a view to ensuring that the farmers benefit from remunerative prices for their produce in the market. The electronic National Agriculture Market (e-NAM) that was launched by Government on April, 2016 aims at integrating the dispersed APMCs through an electronic platform and enable price discovery in a competitive manner, to the advantage of the farmers. While the farmers are advised to undertake on-line trade, it is also important that they avail themselves of post-harvest loans by storing their produce in the accredited warehouses. The loans are available to Kisan Credit Card (KCC) holding small and marginal farmers at interest subvention of 2 per cent on such storages for a period of upto six months. This will help the farmers to sell when they find the market is buoyant, and avoid distress sale. It is, therefore, needful for the small and marginal farmers to keep their KCCs alive.

7.39 The Government is keen to double the income of the farmers by 2022, for which it has launched several new initiatives that encompass activities from seed to marketing. The credit from institutional sources will complement all such government initiatives like Soil Health Card, Input Management, Per Drop More Crop in Pradhan Mantri Krishi Sinchai Yojana (PMKSY), PMFBY, e-NAM, etc.

Box 7.4 : Interest Subvention Scheme (ISS)

The Interest Subvention Scheme (ISS) has been operational since 2006-07. Under this scheme, the farmers can avail concessional crop loans of upto Rs.3 lakh at 7 per cent rate of interest. It also provides for an additional subvention of 3 per cent for prompt repayment within a period of one year from the date of advance. The scheme for 2017-18 will help farmers to avail of short term crop loans up to Rs. 3 lakh payable within one year at only 4 per cent per annum.

As a measure to check distress sale, post-harvest loans for storage in accredited warehouses against Negotiable Warehouse Receipts (NWRs) are available for upto 6 months for KCC holding small & marginal farmers. The Interest Subvention Scheme will continue for one year and it will be implemented by NABARD and RBI.

The interest subvention will be given to Public Sector Banks (PSBs), Private Sector Banks, Cooperative Banks and Regional Rural Banks (RRBs) on use of own funds and to NABARD for refinance to RRBs and Cooperative Banks. The salient features of the scheme are as follows:

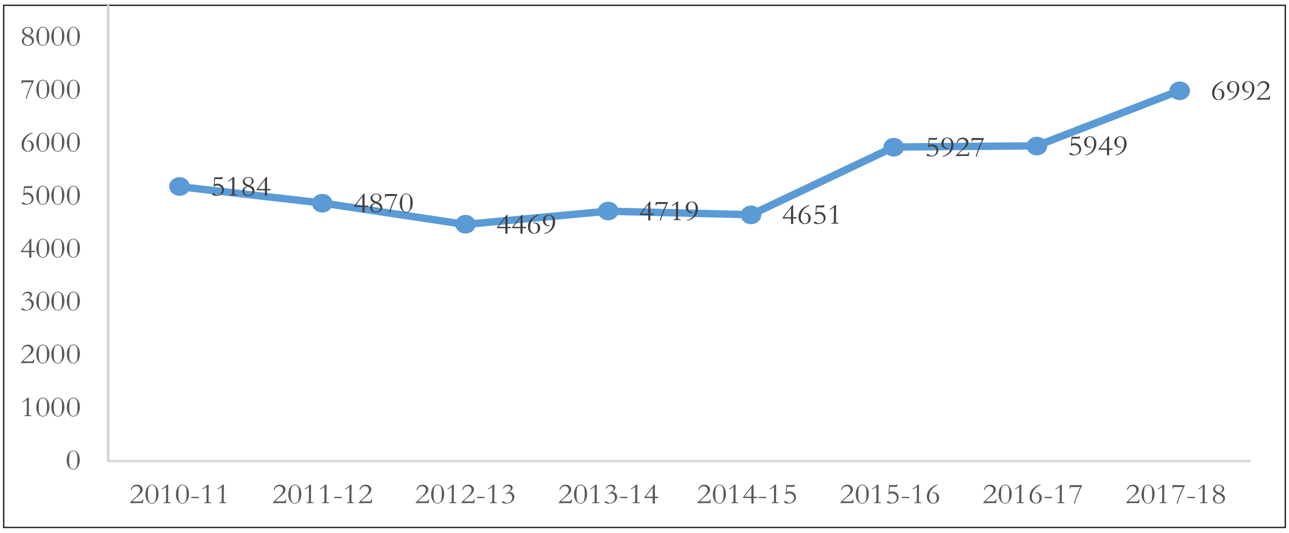
- The Central Government will provide interest subvention of 5 per cent per annum to all prompt payee farmers for short term crop loan upto one year for loan upto Rs. 3 lakhs borrowed by them during the year 2017-18. Farmers will thus have to effectively pay only 4 per cent as interest. In case farmers do not repay the short term crop loan in time they would be eligible for interest subvention of 2 per cent as against 5 per cent available above.
- The Central Government will provide approximately Rs. 20,339 crore as interest subvention for 2017-18.
- In order to give relief to small and marginal farmers who would have to borrow at 9 per cent for the post-harvest storage of their produce, the Central Government has approved an interest subvention of 2 per cent i.e. an effective interest rate of 7 per cent for loans upto 6 months.
- To provide relief to the farmers affected by natural calamities, the interest subvention of 2 per cent will be provided to Banks for the first year on the restructured amount.
- In case farmers do not repay the short term crop loan in time they would be eligible for interest subvention of 2 per cent as against available above.

The ISS is to make available at ground level, agricultural credit for Short Term crop loans at an affordable rate to give a boost to agricultural productivity and production in the country.

AGRICULTURE RESEARCH AND DEVELOPMENT

7.40 Agricultural R&D is the main source of innovation, which is needed to sustain agricultural productivity growth in the long-term (FAO, 2012). The actual expenditure of DARE/ICAR has increased from Rs. 5393 crore in 2010-11 to Rs. 6800(BE) crore during 2017-18. The compound annual growth rate of expenditure has been 4.2 percent over the years and in recent years' expenditure has been on higher side (Figure 9). During the current year (2017-18), investment in Agriculture Research and Education protected new agricultural innovations by filling 45 patent applications at Indian Patent Office (IPO) and the cumulative patent applications has now risen to 1,025. 10 copyright and 12 trademark applications were filed by ICAR for products and processes. After the Protection of Plant Varieties and Farmers' Rights Authority notified new genera, applications for 135 varieties were filed at the Registry and 155 high-yielding varieties/ hybrids of cereals were released for cultivation in different agro-ecologies of the country during 2016.

Figure 9 : Actual expenditure of DARE/ICAR (Rs. Crore)



Source: **Indian Council of Agricultural Research**
Note: **Year 2017-18 figure is Budget Estimate, Year 2016-17 Revised Estimate.**

7.41 A total 209 new varieties/hybrids tolerant to various biotic and abiotic stresses with enhanced quality have been developed for Cereals, Pulses, Oilseeds, Commercial and Forage crops.

7.42 **Cereals :** 117 high yielding varieties/ hybrids of cereals comprising 65 of rice, 14 of wheat, 24 of maize, 5 of finger millet, 3 of pearl millet, 1 each of sorghum, barley, foxtail millet, kodo millet, little millet and proso millet were released for cultivation in different agro-ecologies of the country during 2017

7.43 **Oilseeds:** 28 high yielding oilseeds varieties comprising 8 of rapeseed-mustard, 5 of soybean, 4 each of groundnut and linseed, 3 of sunflower, 2 each of castor and niger were released for different agro-ecological regions.

7.44 **Pulses:** 32 high-yielding varieties of pulses comprising 10 of chickpea, 6 of lentil, 4 of cowpea, 3 of mungbean, 2 each of pigeonpea, horse gram and field pea, 1 each of urdbean, rajmash and faba bean were released for different agro-ecological region

7.45 **Commercial crops:** 24 high-yielding varieties of commercial crops including 13 of cotton, 8 of sugarcane and 3 of jute were released for different agro-ecological regions.

7.46 **Forage crops**: 8 high yielding varieties/ hybrids of forage crops comprising 3 of oats, 1 each of bajra, napier hybrid, forage sorghum, grain amaranthus, forage cowpea and marvel grass were released for cultivation in different agro-ecologies.

FOOD MANAGEMENT

7.47 The food security system in India is managed by intertwined organizational framework between Centre and States that involves centralized and decentralised procurement of foodgrains through price support operations, allocation and distribution of foodgrains at reasonable prices to consumers/beneficiaries through TPDS (Targeted Public Distribution System) and the maintenance of buffer stocks for price stabilization. There are multiple objectives to be achieved through the system of procurement operations as implemented in India in terms of providing fair price to farmers, making foodgrains affordable to low income consumers, provisioning for contingencies/shortages by maintaining buffer stocks and to reduce food price volatility.

7.48 The procurement at MSP is open-ended, while distribution is governed by the scale of allocation and its offtake by the beneficiaries. The offtake of foodgrains is primarily under the National Food Security Act, 2013 (NFSA) and other welfare schemes of the Government of India. During the financial Year 2017-18 (upto 27.11.2017), Rs.2785 crore has been released to State Governments as Central assistance to meet the expenditure incurred on intra-State movement of foodgrains and fair price shop dealers' margins. The quantum of food subsidy released by the government is given in Table 8.

Table 8 : Quantum of food subsidies released by Government

Year	Food subsidy (Rs. in crore)	Annual growth (%age)
2010-11	62929.56	8.1
2011-12	72370.90	15.0
2012-13	84554.00	16.8
2013-14	89740.02	6.1
2014-15	113171.16	26.1
2015-16	134919.00	19.2
2016-17	105672.96	-21.7
2017-18*	134988.83	

Source: **Department of Food & Public Distribution**
Note: ***As on 28.11.2017**

7.49 With a view to make receipt of foodgrains under TPDS a legal right, Government of India has enacted NFSA which came into force w.e.f. 5th July, 2013. The Act provides for coverage of upto 75 per cent of the rural population and upto 50 per cent of the urban population for receiving subsidized foodgrains under Targeted Public Distribution System(TPDS), thus covering about two-third of the population. The eligible persons identified by the States/UTs are entitled to receive 5 kg of foodgrains per person per month at subsidized prices of Rs.3/2/1 per kg for rice/wheat/nutri-grains (coarse grains). The existing Antyodaya Anna Yojana (AAY) households, which constitute the poorest of the poor, continue to receive 35 kg of foodgrains per household per month. As on 1st November, 2016 NFSA has been implemented in all the 36 States/UTs and they are receiving monthly allocation of foodgrains under NFSA. During the year 2017-18, Government of India has so far allocated 606.43 lakh tons of foodgrains to States/UTs/Other Welfare Scheme (OWS) etc. as per break up given in Table 9.

Table 9 : Foodgrains allocation under NFSA/Non NFSA (2017-18)

Sl.No.	Category	Quantity (in lakh tons)
1	NFSA	552.86
2	Festival calamity etc.	4.48
3	Other Welfare schemes	49.09
	Total	**606.43**

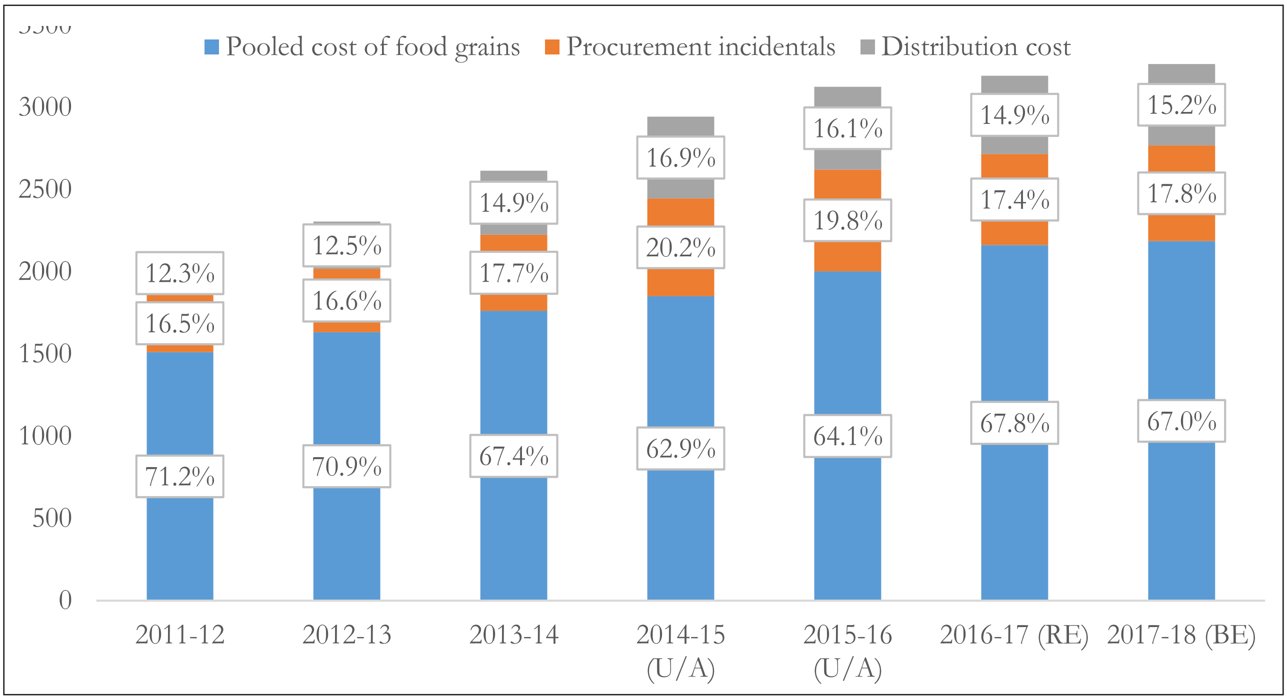
Source: **Department of Food & Public Distribution**

Economic Costs of Foodgrains to FCI

7.50 The Economic Cost of foodgrains consists of three components, namely, pooled cost of grains, procurement incidentals and the cost of distribution. 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.

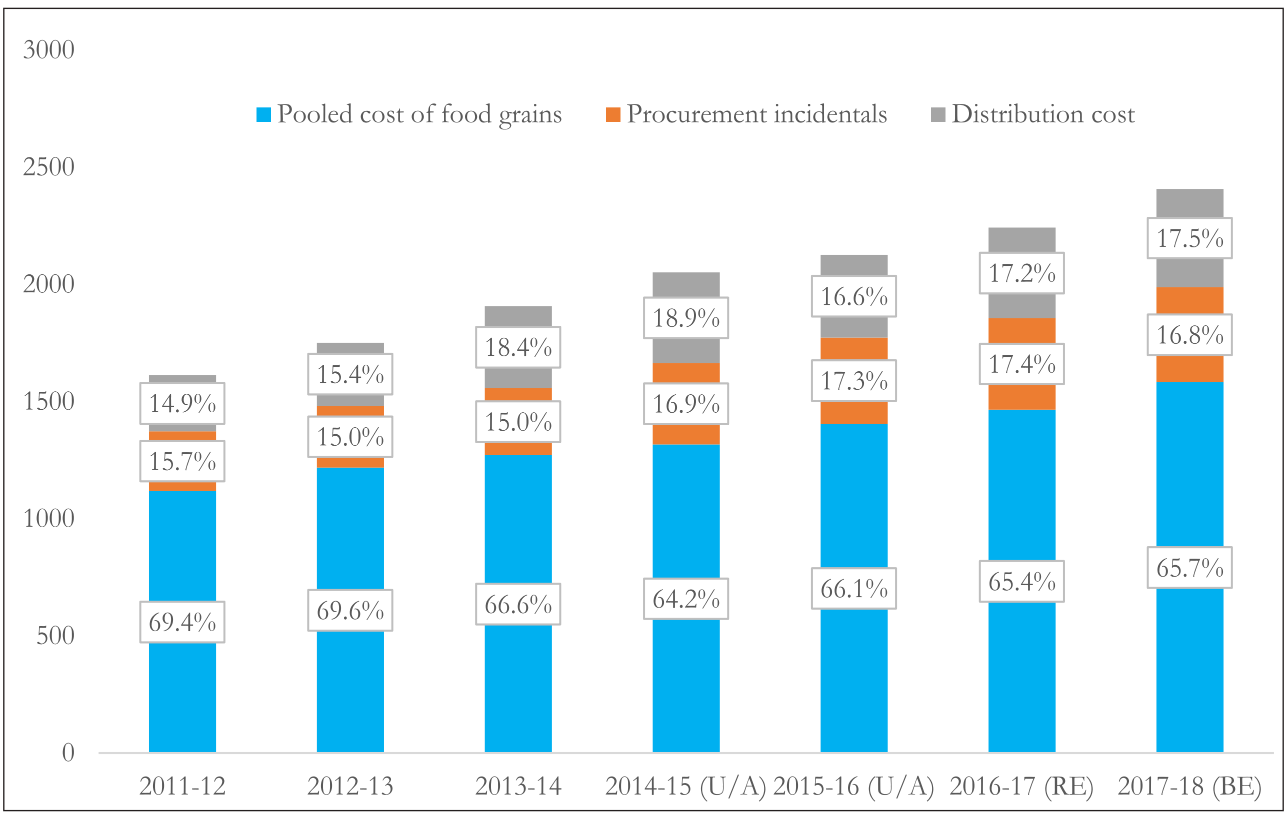
7.51 The economic cost for both wheat and rice witnessed significant increase during the last few years due to increase in MSPs and proportionate increase in the incidentals (Figure 10 and Figure11).

Figure 10 Component-wise economic cost of rice (Rs./Quintal)



Source: **Department of Food & Public Distribution**

Figure 11. Component-wise economic cost of wheat (Rs./Quintal)



Source: **Department of Food & Public Distribution**

Open Market Sale Scheme (Domestic)

7.52 In addition to maintaining buffer stocks and for making a provision for meeting the requirement of the Targeted Public Distribution System (TPDS) and Other Welfare Schemes (OWS), FCI on the instructions from the Government sells excess stocks out of Central Pool through Open Market Sale Scheme (Domestic) [OMSS (D)] in the open market from time to time at predetermined prices to achieve the following objectives:-

- To enhance the supply of food grains during the lean season and deficit regions
- To moderate the open market prices
- To offload the excess stocks
- To reduce the carrying cost of food grains

Sale of Wheat and Rice under OMSS (Domestic) during 2017-18

7.53 A target of 53 Lakh MT of wheat and 20 Lakh MT of 'A' Grade rice has been set for sale by FCI out of Central Pool in the open market under OMSS (D) during 2017-18. Reserve price for the bulk sale of wheat under OMSS (D) in 2017-18 to private bulk buyers / traders has been kept at Rs. 1,790/- per quintal, which includes loading and handling charges for all types of sales including dedicated movement. For sale of wheat under OMSS (D) in the states of Punjab, Haryana and Madhya Pradesh, the reserve price of wheat is Rs. 1,790 per quintal. The overall reserve price for sale of Grade 'A' rice under OMSS (D) has been kept at Rs. 2,500/- per quintal for 2017-18. The quantities of wheat and rice sold under the OMSS (D) during the last 5 years and current year are at table 10.

Table 10 : Quantities of wheat and rice sold under OMSS (D)

Qty. in lakh MT

Year	Wheat	Rice
2012-13	68.7	1.0
2013-14	61.2	1.7
2014-15	42.4	Nil*
2015-16	70.8	1.1
2016-17	45.7	1.8
2017-18**	5.7	2.6

Source: **Department of Food & Public Distribution**
Note: ***Sale of rice was not conducted in 2014-15.**
****Upto 4th week of November 2017**

THE WAY FORWARD

7.54 The agriculture sector in India is experiencing structural changes which are opening up new challenges and opportunities. The Government has initiated reforms in the field of agricultural marketing, given a big push to the use of technology in agriculture, and also adopted Direct Benefit Transfer (DBT) mode for timely delivery of extension services, credit and other inputs to small and marginal farmers. The central priority of the government will be to provide opportunities for farmers to diversify their income generating opportunities to reduce the various risks by facilitating the development of agricultural sub-sectors like livestock and fisheries.

7.55 The transformation of agriculture and allied sector is imminent by way of appropriate policy interventions related to prices, trade, adoption of Climate Smart Agriculture, increased focus on small, marginal and women farmers. Though the share of agriculture and allied sector in GVA is on the decline, in the quest for inclusive economic development in India, agriculture sector will remain an engine of broad based growth which will reduce inequalities and provide food security.

Industry and Infrastructure

08

CHAPTER

"Supporting iconic, growth-oriented industries, combined with tax policies that encourage small business growth and investment, represents a potent combination and is the basis of our entire administration".

-Larry Hogan

"We need to stop thinking about infrastructure as an economic stimulant and start thinking about it as a strategy. Economic stimulants produce Bridges to Nowhere. Strategic investment in infrastructure produces a foundation for long-term growth".

-Roger McNamee

Promoting inclusive employment-intensive industry, and building resilient infrastructure are vital factors for economic growth and development. The Government is taking several sector- specific measures in this direction. Apart from structural reforms like Goods and Services Tax, Insolvency and Bankruptcy Code and measures to facilitate Ease of Doing Business, the Government has initiated sector specific reforms in Steel, Apparel, Leather and Power sectors to address specific challenges associated with each of these sectors. Various reforms undertaken by the Government over the last 3 years, have been recognised by international rating agencies such as Moody's Investor Service and up-gradation in the ranking of Ease of Doing Business of the World Bank Report 2018. Several key measures and achievements in the industry and infrastructure sector have been discussed in this Chapter. There has been considerable progress in Roads, Railways, Metro Rail, Shipping, Civil Aviation, Power and Logistics Infrastructure Sectors that is expected to step up the growth momentum in the short term. A separate section on Policy Intervention in the Road Sector discusses issues such as stalled projects & NPAs in road sector; initiatives for enhanced construction of National Highways (NHs) and conversion of State Highways (SHs) into NHs; and the need for a comprehensive policy on developing more District Roads.

INDUSTRY

8.1 Several industry specific reform initiatives taken by the Government since 2014 have significantly improved the overall business environment in the country. The reform process has been comprehensive in scope covering Centre and the State Governments. As a result, India has leapt 30 ranks over its previous rank of 130 in the World Bank's latest Doing Business Report 2018. Credit rating company Moody's Investors Service has also raised India's rating from the lowest investment grade of Baa3 to Baa2 (Details in Box 1).

8.2 This has been made possible due to a host of measures undertaken by the Government including implementation of the Goods and Services Tax, Insolvency and Bankruptcy Code, introduction of inflation targeting regime and announcement of bank recapitalization. Other measures to facilitate ease of doing business

Table 1 : Growth of Sectoral Gross Value Added (per cent)

	Share in GVA*	2015-16	2016-17	2017-18	
				Q1	Q2
Mining & quarrying	3.0	10.5	1.8	-0.7	5.5
Manufacturing	18.1	10.8	7.9	1.2	7.0
Electricity, gas, water supply & other utility services	2.2	5.0	7.2	7.0	7.6
Construction	8.0	5.0	1.7	2.0	2.6
Industry	**31.2**	**8.8**	**5.6**	**1.6**	**5.8**

Source: **Central Statistics Office**

Note: * Share in GVA as in 2016-17 (at constant prices)

include initiation and simplification of online application for Industrial License and Industrial Entrepreneur Memorandum, integration of twenty services with the eBiz portal which functions as a single window portal for obtaining clearances from various Government agencies, limiting the number of documents required for export and import to three by DGFT.

8.3 As per the latest Quarterly Estimates of Gross Domestic Product, overall industrial sector growth was significantly higher at 5.8 per cent in Q2 as compared to 1.6 per cent in Q1 of 2017-18. This was mainly due to the robust growth of 7.0 per cent in manufacturing sector in Q2 of 2017-18, as seen in Table 1. As per the first advance estimate of national income 2017-18, overall industrial sector growth is at 4.4 per cent with manufacturing growth at 4.6 per cent.

Index of Industrial Production (IIP)

8.4 The Index of Industrial Production (IIP) is another measure of industrial performance, released by Central Statistics Office (CSO). CSO revised the base year of IIP in May, 2017 from 2004-05 to 2011-12. The latest series with base year 2011-12 is more representative of the current structure of the industrial sector. Table 2 indicates the Sectoral and Use-based growth rates for the last two years and the current fiscal year.

8.5 IIP registered a 25 month high growth of 8.4 per cent with manufacturing growing at 10.2 per cent in November 2017. Higher growth in capital

Table 2 : Index of Industrial Production (IIP) Growth Rates (per cent)

	Weight	2015-16	2016-17	2017-18 (April-November)
General Index	**100**	**3.3**	**4.6**	**3.2**
Sectoral Classification				
Mining	14.4	4.3	5.3	3.0
Manufacturing	77.6	2.8	4.4	3.1
Electricity	8.0	5.7	5.8	5.2
Use Based Classification				
Primary goods	34.0	5	4.9	3.4
Capital goods	8.2	3	3.2	2.1
Intermediate goods	17.2	1.5	3.3	0.9
Infrastructure/ construction goods	12.3	2.8	3.9	3.8
Consumer durables	12.8	3.4	2.9	-1.4
Consumer non-durables	15.3	2.6	7.9	9.4

Source: **Central Statistics Office**

Table 3: Growth in the production of Eight Core Industries (per cent)

Sector	Weight	2015-16	2016-17	April-November 2017-18
Coal	10.3	4.8	3.2	1.5
Crude Oil	9.0	-1.4	-2.5	-0.2
Natural Gas	6.9	-4.7	-1.0	4.4
Refinery Products	28.0	4.9	4.9	3.6
Fertilizers	2.6	7	0.2	-1.1
Steel	17.9	-1.3	10.7	7.2
Cement	5.4	4.6	-1.2	0.6
Electricity	19.9	5.7	5.8	4.9
Overall Index	**100**	**3.0**	**4.8**	**3.9**

Source: **Department of Industrial Policy and Promotion**

goods, infrastructure/construction and consumer non-durable have had a significant impact. During April-November 2017, the growth was 3.2 per cent. The major industry groups that have contributed positively to growth during this period are coke and refined petroleum products; pharmaceuticals, medicinal chemicals and botanical products; basic metals; computer, electronic and optical products; and motor vehicles, traillers & semi-trailers. The industry groups that have contributed negatively are tobacco products; wearing apparel; rubber and plastic products; other non-metalic mineral products and electrical equipment.

8.6 As per the Use-based classification of IIP, in 2017-18 (April-November), Consumer non-durables have shown consistency and have registered a growth of 9.4 per cent. Growth of the Index of Primary Goods has witnessed a comparatively lower rate at 3.4 per cent during this period mainly due to suboptimal performance of Mining Sector and Petrol/Motor spirit industry. Infrastructure/Construction goods in 2017-18 (April-November) recorded a growth of 3.8 per cent as compared to 5.0 per cent in same period last year on account of sub-par performance of the cement sector. The performance of Capital goods has not been upto expectations mainly due to the impact of destocking after announcement of GST in the first quarter of 2017-18.

Eight Core Industries

8.7 The Index of Eight Core Industries measures the performance of eight core industries i.e. Coal, Crude Oil, Natural Gas, Petroleum Refinery Products, Fertilizers, Steel, Cement and Electricity. In line with the base year change in IIP, Department of Industrial Policy and Promotion, revised the base year of Index of Eight Core Industries from 2004-05 to 2011-12. The industries included in the eight core industries comprise about 40 per cent weight in the IIP.

8.8 The details of growth in the production of eight core industries are given below in Table 3. In 2016-17, the eight core industries grew by 4.8 per cent as compared to 3 per cent in 2015-16. The production of Coal, Refinery Products, Fertilizers, Steel and Electricity registered positive growth, with Steel registering a robust growth of 10.7 per cent (this can be attributed to the positive measures taken by the Government such as imposition of Minimum Import Price (MIP), anti-dumping duty etc. on Steel imports in February 2016). On the other hand, Crude Oil, Natural Gas and Cement production registered negative growth. During the current financial year, for the period, April-November, 2017-18, the index has

Table 4 : Growth of Sales, Profits & Capacity Utilisation for the Corporate Sector (per cent)

	2016-17				2017-18	
	Q1	Q2	Q3	Q4	Q1	Q2
Sales	-1.0	3.7	4.9	10.2	8.9	9.5
Profits	28.8	27.5	57.5	22.2	-33.6	-4.0
Capacity Utilisation	71.7	72.0	71.0	74.6	71.2	---

Source: **Reserve Bank of India**

Note :Sales and profits of over 1700 manufacturing companies & Capacity Utilisation based on a sample of 805 manufacturing companies

registered growth of 3.9 per cent. The production of Coal, Natural Gas, Refinery Products, Steel, Cement and Electricity have registered positive growth during this period.

Corporate Sector Performance

8.9 Growth in Sales (Y-o-Y) of over 1700 non-government non-financial (NGNF) listed manufacturing companies in first two quarters of 2017-18 was 8.9 per cent in Q1 and 9.5 per cent in Q2 of 2017-18 (Table 4). This has been on account of improved performance of industries like Iron & Steel and Motor Vehicles & other Transport Equipment within the manufacturing sector. Performance in terms of profits was high and sustained in 2016-17. During Q1 & Q2 of 2017-18 there was negative growth in profits mainly on account of postponement of production related to implementation of GST. Capacity utilisation in Q1 for 2017-18 has declined to 71.2 per cent as compared to 74.6 per cent in Q4 of 2016-17.

8.10 Nominal credit growth (y-o-y) to industry turned positive to 1per cent in November 2017 for the first time after witnessing negative growth since October 2016. Lower credit supply can be attributed to impaired balance sheets of public sector banks due to higher Non Performing Assets but it could also reflect weak demand for credit. The Government has recently announced bank recapitalisation to the tune of ₹2.11 lakh crore. The move is aimed at easing the balance sheets of the public sector banks, conditional on cleaning up their balance sheets, thereby helping banks to accelerate the pace of credit disbursement.

8.11 Demand for funds by Indian firms, in the wake of the credit slowdown, has been somewhat met by alternative sources such as corporate bonds and commercial paper as can be seen in Table 5.

Table 5 : Flow of Credit and Alternative Sources of Finance to Industry

(Rs. Billion)

	2014-15	2015-16	2016-17	2017-18 (Apr - Dec.)
Non Food Credit	5464	7024	3882	2427
Growth (per cent)	---	*28.6*	*-44.7*	*257.2*
Alternative Sources				
Corporate Bonds	1364	1513	2159	981
Commercial Paper	558	517	1002	900
External Commercial Borrowing/FCCBs	14	-388	-509	-79.0
Total Alternative Sources	1936	1642	2652	1801.7
Growth (per cent)	---	*-15.2*	*61.5*	*-1.5*

Source: **Reserve Bank of India Annual Report 2016-17, Table II.6**

Foreign Direct Investment

8.12 Foreign Direct Investment (FDI) has been an important source of financing for the economy. FDI policy reforms announced in 2016 brought most of the sectors under automatic approval route, except a small negative list. Total FDI inflow grew by 8 per cent i.e. US$ 60.08 billion in 2016-17 in comparison to US$ 55.56 billion of the previous year. It is the highest ever for a particular financial year. In 2017-18, till September, the inflow of total FDI was to the quantum of US$ 33.75 billion.

8.13 In terms of share in FDI Equity inflows, Mauritius, Singapore and Japan have been top three countries in India contributing 36.17 per cent, 20.03 per cent and 10.83 per cent of the total FDI Equity Inflows during 2016-17. In terms of the Sectors receiving FDI Equity inflows, Services (Finance, Banking, Insurance etc.), Telecommunications and Computer Software & Hardware have been the top three sectors with a share of 19.97 per cent, 12.80 per cent and 8.40 per cent respectively.

Key initiatives taken by the Government to boost industrial performance

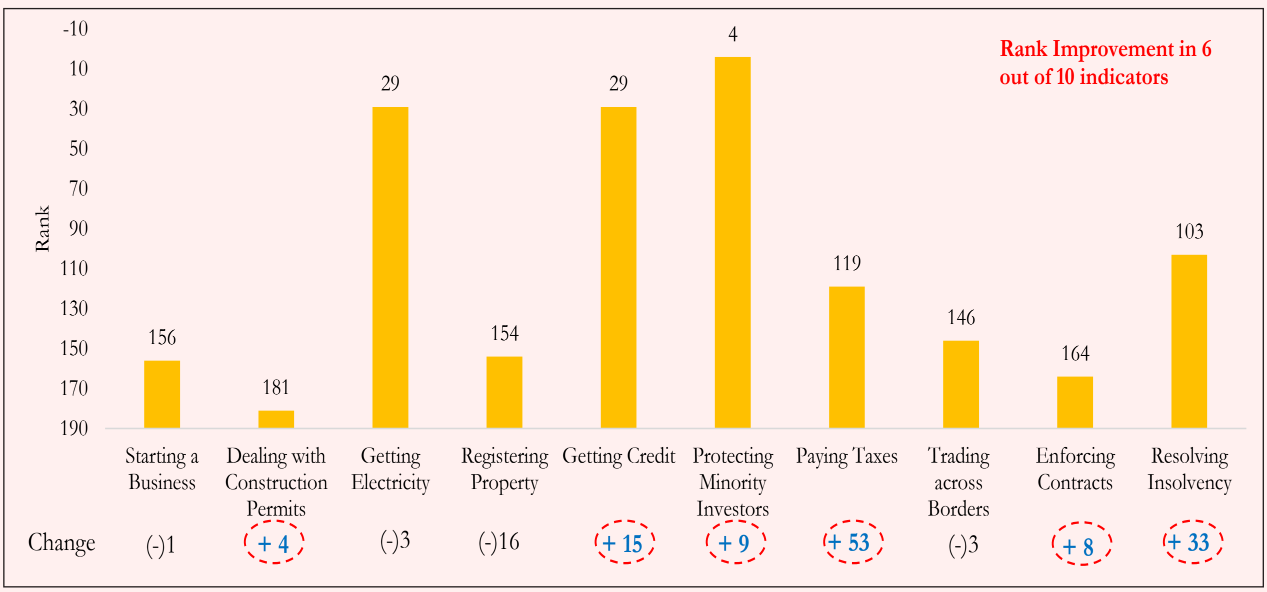
8.14 The Government has undertaken a number of economic and institutional reforms, which have led to significant up-gradation in the ranking of Ease of Doing Business of the World Bank Report 2018. (Box 8.1)

Box 8.1 Ease of Doing Business

The year 2017-18 has been remarkable for India's global image as a promising investment destination. In recognition of the reforms carried out by the Government, Moody's Investor Service upgraded India's sovereign credit rating to Baa2 from the lowest investment grade of Baa3 after a period of 13 years.

India ranked 100 among 190 countries assessed by the Doing Business Team in the Ease of Doing Business Report, 2018 with an improvement of 30 ranks over its rank of 130 in the Ease of Doing Business Report 2017. India saw an improvement in six out of ten indicators namely – Dealing with construction permits, getting credit, protecting minority investors, paying taxes, enforcing contracts and resolving insolvency (Figure 1).

Figure 1. Ranking on Doing Business Topics



Source: **World Bank**

These improvements in rankings have been a result of various reform measures undertaken by the Government including Structural and deep-seated reforms such as Goods and Services Tax (GST) and Insolvency and Bankruptcy Code (IBC); reforms aimed at strengthening India's institutions – Demonetization, mechanism for inflation targeting via the Monetary Policy; progress in Aadhaar enrollment and use in targeted delivery of benefits; and announcement of the Government's decision for recapitalization of public sector banks.

Improved ratings had an immediate positive impact on economic indicators. The immediate impact was seen in terms of the Daily Sensex rising roughly 700 points in a span of few days (Figure 2). The immediate impact was also visible in terms of the rupee appreciation reflecting better investment sentiment and expectations (Figure 3). The rating upgrade is also expected to reduce the cost of borrowing for the Indian Government.

Figure 2. Sensex (Daily)

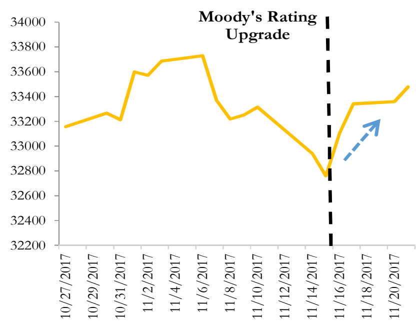
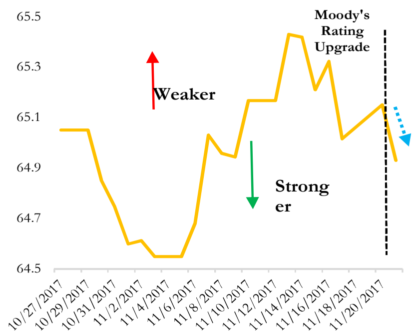


Figure 3. Currency (Daily)



Source **: Bombay Stock Exchange & Reserve Bank of India**

However, there are several reforms and simplifications already complete but still to be acknowledged by the Ease of Doing Business Team (EoDB). Some of them include:

Construction Permits - Municipal Corporation in Mumbai and Delhi have reduced the number of procedures to 8. Likewise, the time frame for approvals during the construction cycle of a building has brought down to 60 days. *Resolving Insolvency* - Reorganization of procedure for corporate debtors through insolvency eco-system, namely, National Company Law Tribunal (NCLT), National Company Law Appellate Tribunal (NCLAT), Insolvency Professionals (IP), Insolvency Professional Agency (IPA), Insolvency Professional Entity (IPE), and Insolvency and Bankruptcy Board of India has been carried out. *Trading Across Border* – Various steps have been undertaken to simplify trade. Noteworthy among these include online message exchange system for import clearances of agricultural commodities; limiting the number of documents for import and export to 3; establishment of Import Data Processing and Management System (IDPMS) for data processing for payment of imports and effective monitoring; and reduction in the "Gate in" time period for export containers from 5 days to 4 days. *Enforcing Contracts*- Various reforms have been undertaken to improve the enforcement of contracts. Maharashtra and Delhi High Court have established Commercial Division benches and Commercial Appellate Division benches. *Getting Credit* - The amended SARFAESI Act 2002 provides priority to secured creditors to be paid first over all other debts and all revenues, taxes, cesses and other rates payable to the Central Government or State Government or local authority. *Paying Taxes* – The Government has introduced project 'RAPID- revenue, accountability, probity, information and digitalization' for administrating the tax reforms to make tax compliances more taxpayer-friendly, transparent with the aim of widening the tax base.

Make In India

8.15 The 'Make in India' programme was launched on 25th September 2014 which aims at making India a global hub for manufacturing, research & innovation and integral part of the global supply chain. The Government has identified ten 'Champions sectors' that have potential to become global champion, drive double digit growth in manufacturing and generate significant employment opportunities. The sectors have been identified for renewed focus under the Make in India version 2.0 including Capital goods, Auto and Auto Components, Defence & Aerospace, Biotechnology, Pharmaceuticals and Medical Devices, Chemicals, Electronic System Design & Manufacturing (ESDM), Leather & Footwear, Textiles & Apparels, Food Processing, Gems & Jewellery, New & Renewable Energy, Construction, Shipping and Railways.

Intellectual Property Rights (IPR) Policy

8.16 In May, 2016, Government for the first time adopted a comprehensive National Intellectual

Property Rights (IPR) policy to lay future roadmap for intellectual property. This aims to improve Indian intellectual property ecosystem, hopes to create an innovation movement in the country and aspires towards "Creative India; Innovative India". Subsequent to the approval of this policy and creation of Cell for Intellectual Property Rights Promotion and Management (CIPAM), there has been a substantial improvement in the IPR and Patent handling matters. In April - October 2017, 45449 patents and 15627 copyrights were filed while 9847 patents and 3541 copyrights were granted.

Start-up India

8.17 In order to promote innovation and entrepreneurship among enterprising youth of our country, the Hon'ble Prime Minister of India had announced the "Startup India, Standup India" initiative on Independence Day (15th August 2015). The initiative aims to create an ecosystem that is conducive to growth of Startups. An Action Plan for Startup India comprising 19 action points was unveiled on 16th January, 2016. Government has acknowledged the need to reduce the regulatory burden on Startups and have allowed them to self-certify compliance under 3 labour laws and 6 environment laws.

8.18 The initiative allows Startups to focus on their core business and keep compliance cost low. Startup India hub has been developed as a single point of contact for the entire Startup ecosystem and enables knowledge exchange along with access to funding. In order to provide support, a Fund of Funds for Startups (FFS) with a corpus of ₹10,000 crores has been created and is being managed by SIDBI. Several steps have also been taken to promote Industry-Academia Partnership and Incubation. With an aim to foster and facilitate Bio-entrepreneurship, Bio-clusters, Bio-Incubators, Technology Transfer Offices (TTOs) and Bio-Connect, offices are being established in research institutes and universities across India. Seed Fund and Equity Funding support is also provided to bio-tech Startups under the initiative.

SECTOR WISE ISSUES AND INITIATIVES

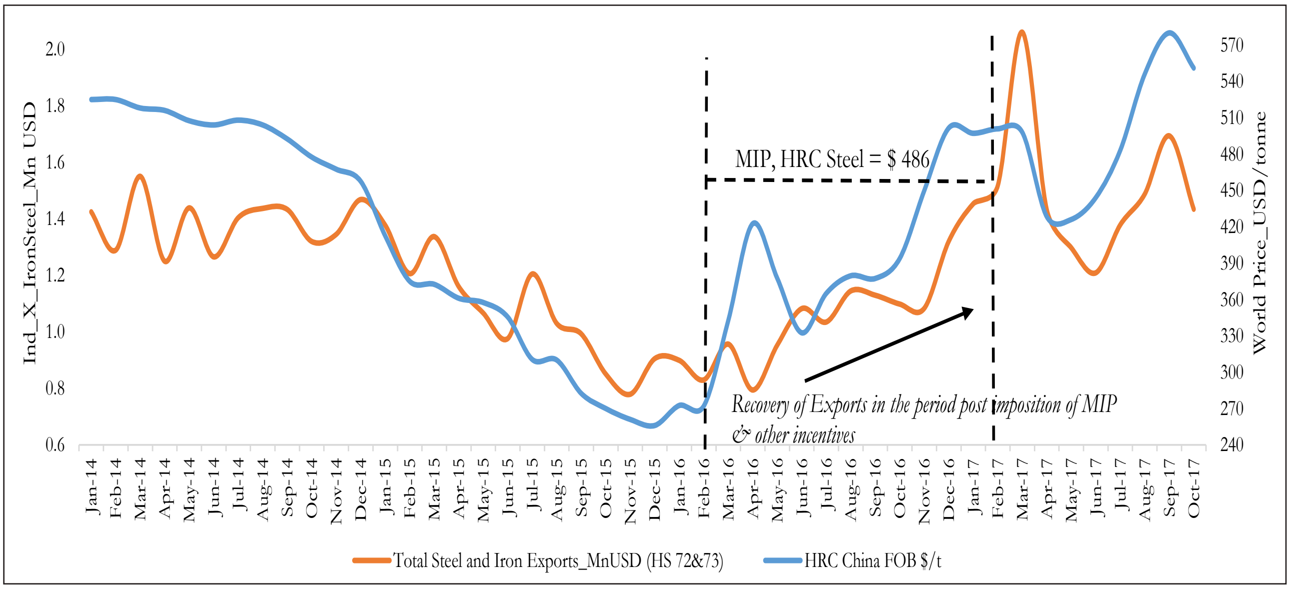
Steel sector

8.19 In the backdrop of a slowing world economy and over capacity in production of steel, India witnessed rising imports of cheap steel from countries like China, South Korea and Ukraine into Indian markets at low prices since early 2014-15. This dumping of cheaper steel imports adversely affected domestic producers. In order to address this, apart from raising customs duty and imposition of anti-dumping duty, Minimum Import Price (MIP) on a number of items was introduced in February 2016 with a sunset clause of one year. These measures helped the domestic producers and exports recovered since February 2016 until March 2017. Subsequently exports started declining again (as may be seen in Figure 1). The Government notified anti-dumping duties and Countervailing Duties on various steel products in February 2017 as follows:

1. Anti-dumping duties were imposed on import of seamless tubes, pipes and hollow profiles of iron, alloy or non-alloy steel originating and exported from China. The Government also imposed Anti-Dumping duty on HR Coils, HR Plates, CR Products, Wire Rod and Color Coated steel.

2. The Government levied Countervailing duty on imports of cold rolled flat products of stainless steel of all grades/series from China, Korea, European Union, South Africa, Taiwan, Thailand and USA.

Figure 1 : World Prices, Minimum Import Price and Exports of Steel



Sources: **Joint Plant Committee, Ministry of Steel & Ministry of Commerce and Industry**

8.20 At the same time, significant cutback in China's production capacity of Steel has led to rising international prices of steel, especially post June 2017. The government has rolled out a New Steel Policy in May 2017. Further, a policy on preference to domestically manufactured select iron & steel products has been enforced also since May 2017. Global trends of steel prices (post June 2017) along with measures undertaken by the Government led to rise in exports of steel for the period April – December 2017 by 52.9 per cent while imports have risen by only 10.9 per cent (Table 6).

Table 6 : Steel Production,Imports, Exports and Consumption (April – Dec 2017)

Finished Steel	Quantity (Million Tonnes)*	YoY per cent
Sale	79.3	5.6
Import	6.1	10.9
Export	7.6	52.9
Consumption	64.9	5.2

Sources : **Joint Plant Committee, Ministry of Steel & Ministry of Commerce and Industry**

****Provisional***

MSME Sector

8.21 The share of MSME Sector in the country's Gross Value Added (GVA) is approximately 32 per cent. MSMEs in India play a crucial role in providing large scale employment opportunities at comparatively lower capital cost than large industries and also in industrialization of rural & backward areas. As per the National Sample Survey (NSS) 73rd round, for the period 2015-16, there are 633.8 lakh unincorporated non-agriculture MSMEs in the country engaged in different economic activities providing employment to 11.10 crore workers.

8.22 The MSME sector faces a major problem in terms of getting adequate credit for expansion of business activities. Latest data on credit disbursed by banks shows that out of a total outstanding credit of ₹26041 billion as in November 2017, 82.6 per cent of the amount was lent to large enterprises. The MSME received only 17.4 per cent of the total credit outstanding. Growth of credit to Micro and Small enterprises increased by 4.6 per cent, while credit to Medium enterprises decreased by 8.3 per cent (Table 7).

Table 7 : Credit Outstanding to Industry (₹ Billion)

	End Nov'16	End Nov'17	Rate of Growth (per cent)
Industry	**25,793**	**26,041**	**1.0**
Of which			
Micro and Small	3,435	3,592	4.6
Medium	1,033	947	-8.3
Large	2,1325	21,502	0.8

Source: **Reserve Bank of India**

The major schemes implemented for the development of MSME sector are as follows:

i. Prime Minister's Employment Generation Programme (PMEGP) is aimed at generating self-employment opportunities through establishment of micro-enterprises in the non-farm sector by helping traditional artisans and unemployed youth.

ii. Credit Guarantee Scheme for Micro and Small Enterprises covers collateral free credit facility (term loan and/or working capital) extended by eligible lending institutions including Non-Banking Financial Company (NBFC) to new and existing micro and small enterprises up to ₹ 200 lakh per borrowing unit.

iii. Credit Linked Capital Subsidy Scheme (CLCSS) aims at facilitating technology upgradation of the MSME sector.

iv. The Government has also initiated the Pradhan Mantri Mudra Yojana for development and refinancing activities relating to micro industrial units. The purpose of Micro Units Development and Refinance Agency (MUDRA) is to provide funding to the non-corporate small business sector. The Government has also set up the MUDRA Bank. Loans extended under the Pradhan Mantri Mudra Yojana (PMMY) during 2016-17 have crossed the target of ₹1.8 lakh crore. Of this amount, ₹1.23 lakh crore was lent by banks while non-banking institutions lent about ₹57,000 crore. In December 2017 total number of borrowers were 10.1 crore, out of which 7.6 crore were women.

Textiles and Apparels

8.23 The Textiles and Apparels sector has tremendous potential for growth in exports and employment, particularly, women's employment. The sector witnesses a historic opportunity with China losing market share in clothing exports due to rising labour costs. However, India has not been able to leverage this opportunity due to India's competitors i.e. Bangladesh, Vietnam, Ethiopia having duty free access to markets of EU and USA; high domestic taxes on manmade fabrics vis a vis cotton fabrics; stringent labour laws; and high logistics cost. (as also discussed in Economic Survey 2016-17 Vol1, Chapter 7)

8.24 To address some of these constraints, the Cabinet announced a ₹6000 crore package for the apparel sector on 22nd June 2016. Major components of the package included enhanced subsidy under Amended Technology Upgradation Fund Scheme for concessional import of machinery from 15 per cent to 25per cent (conditional on firms generating requisite employment); implementation of Rebate of State Levies on Export(RoSL) for state levies which were not refunded through duty drawback earlier; Government to bear 12 per cent of the employers' contribution of the full EPFS for new workers; increasing overtime caps in line with ILO norms; and introduction of fixed term employment.

8.25 The scheme was implemented since November 2016. In March 2017, the first installment of ₹400 crores was released, while in May 2017 the second installment of ₹1554 crore was released from Ministry of Textiles to Central Board of Excise and Customs (CBEC) for duty drawbacks.

8.26 The Government has in December 2017 approved the scheme for Capacity Building in Textile Sector (SCBTS). The scheme will be applicable from 2017-2018 to 2019-2020 with an outlay of ₹1,300 crore. It shall have the National Skill Qualification Framework (NSQF) compliant training courses, with funding as per the common norms notified by Ministry of Skill Development and Entrepreneurship (MSDE).

8.27 Using difference - in - difference technique the impact of the package on promotion of exports has been examined, as discussed in Economic Survey 2017-18, Vol1, Chapter 1. It was noted that since its implementation in June 2016, the package did have a positive impact on the exports of Ready Made Garments (RMG) of Manmade fibres while it did not have a statistically significant impact on the RMG of other natural fibres, except wool. The impact of the package increased over time and did not show any signs of attenuation.

Leather sector

8.28 Like the clothing sector, leather sector is also highly labour intensive sector (as discussed in Economic Survey 2016-17, Vol 1, Chapter 7). Going by global market trend, it is a favourable time to promote the footwear industry. However, challenges persist. The global demand for footwear is moving towards non leather footwear, while Indian tax policies favour leather footwear production. India also faces high customs tariffs in a number of developed country markets of leather goods and non-leather footwear. The issues in labour and employment have been recently addressed.

8.29 A scheme for promotion of employment in the leather & footwear sector has been approved similar to that of the textile sector, with an outlay of ₹2600 crore over three financial years 2017-18 to 2019-2020. The scheme would lead to development of infrastructure for the leather sector, address environment concerns specific to the sector, facilitate additional investments, employment generation and increase in production. Enhanced tax incentive would attract large scale investments in the sector. Reforms in labour laws, in view of seasonal nature of the sector, will support economies of scale. The special package has the potential to generate 3.24 lakhs new jobs in 3 years and assist in formalization of 2 lakh jobs, as cumulative impact in Footwear, Leather & Accessories Sector. The scheme proposes to provide assistance for Placement Linked Skill Development Training to unemployed persons; incentives for investment for new plant and machinery; modernization of existing plant and machinery; support for up-gradation/installation of Common Effluent Treatment Plants (CETPs); brand promotion; and providing employer's contribution to Employees Provident Fund etc.

Gems and Jewellery

8.30 India is one of the largest exporters of gems and jewellery. The industry is found to play a vital role in the contribution to total foreign reserves of the country. It is one of the fastest growing sectors and is export oriented and labour intensive. As per the 68th round of NSSO, the sector employed 20.8 lakh persons in 2011-12. Exports of the sector have risen from 0.7 per cent in 2014-15 to 12.8 per cent in 2016-17.

8.31 The import duty on goldsmith tools is 30.15 per cent. Duty drawback rate on gold jewellery is 246.5 per gram of gold content in the jewellery.

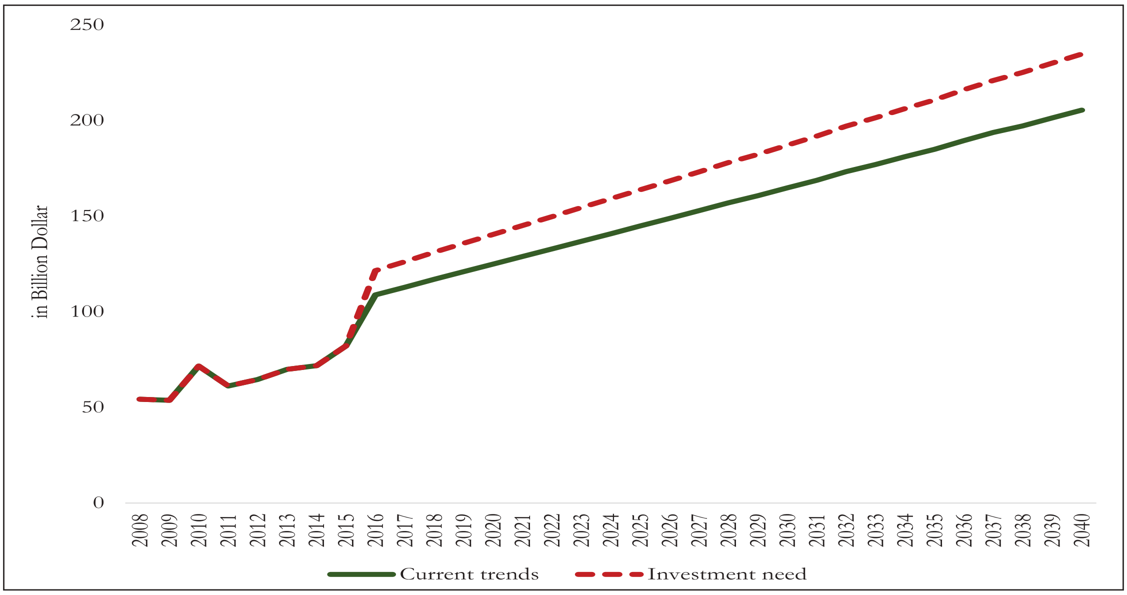
8.32 In view of the tremendous scope in gems and jewellery sector, following programs may be taken up for promoting employment in this sector:

- Public Private Partnership models could be explored for training in jewellery designing. The jewellery training institutes may be affiliated with the Gems and Jewellery Sector Skill Council.
- Setting up infrastructure such as refineries, hallmarking centres etc., to promote jewellery manufacturing in rural areas.
- Creation of multiple jewellery parks (accommodating manufacturers, shared services, testing, banking, logistic support etc.) so as to promote production in a more organized environment.

INFRASTRUCTURE SECTOR

8.33 In order to ensure high and sustainable growth, there has been a substantial step up of investment in infrastructure mostly on transportation, energy, communication, housing & sanitation and urban infrastructure sector. Enhanced investment on infrastructure sector will certainly help in creating jobs both directly and indirectly. As pointed out in Economic Survey, 2016-17 (Volume II, Chapter 8), India is far ahead of many emerging economies in terms of providing qualitative transportation

Figure 2 : Infrastructure Investment Forecast



Source : **Global Infrastructure Outlook, G20**

related infrastructure. However, the Global Infrastructure Outlook reflects that rising income levels and economic prosperity is likely to further drive demand for infrastructure investment in India over the next 25 years. Around US$ 4.5 trillion worth of investments is required by India till 2040 to develop infrastructure to improve economic growth and community wellbeing. The current trend shows that India can meet around US$ 3.9 trillion infrastructure investment out of US$ 4.5 trillion. The cumulative figure for India's infrastructure investment gap would be around US$ 526 Billion by 2040.

8.34 Figure 2 shows year on year requirement of infrastructure investment forecasted by Global Infrastructure outlook and current investment trend in India. The Global infrastructure outlook shows that the gap between required infrastructure investment and current trend of investment is expected to be widened over the year.

8.35 There was massive under-investment in infrastructure sector until the recent past when the focus shifted to invest more on infrastructure. The reasons behind the shortfall in investment were: collapse of Public Private Partnership (PPP) especially in power and telecom projects; stressed balance sheet of private companies; issues related to land & forest clearances. The need of the hour is to fill the infrastructure investment gap by financing from private investment, institutions dedicated for infrastructure financing like National Infrastructure Investment Bank (NIIB) and also global institutions like Asian Infrastructure Investment Bank (AIIB), New Development Bank (erstwhile BRICS Bank) which is focusing more on sustainable development projects and infrastructure projects.

Policy Intervention in the Road Sector

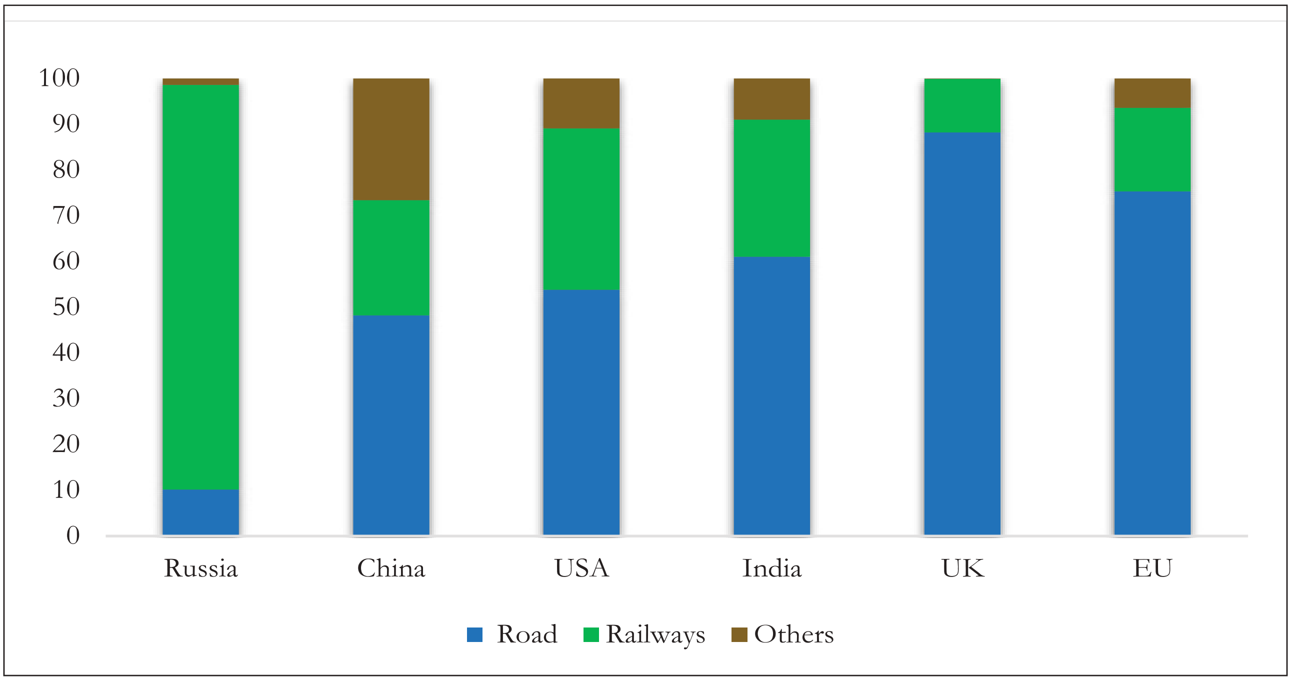
8.36 Road transport is the dominant mode of transport in India, both in terms of traffic share and in terms of contribution to the national economy. Apart from facilitating the movement of goods and passengers, road transport plays a key role in promoting equitable socio-economic development across regions of the country. Easy accessibility, flexibility of operation, door-to-door service and reliability have earned road transport a greater significance in both passenger and freight traffic vis-à-vis other modes of transport. India has one of the largest road networks of over 56.17 lakh km comprising National Highways, Expressways, State Highways, Major District Roads, Other District Roads and Village Roads. Table 8 shows the length distribution as on September, 2017:

Table 8 : Length of National & State Highways and Other Roads

Road Network	Length (km)
National Highways/Express Way	1,15,530
State Highways*	1,76,166
Other Roads*	53,26,166
Total	56,17,812

Source: **Ministry of Road Transport and Highways**
Note : *As on 2015-16

Figure 3 : Modal Share of Road in Inland Freight Transport (per cent)



Source: **World Road Statistics, International Road Federation**

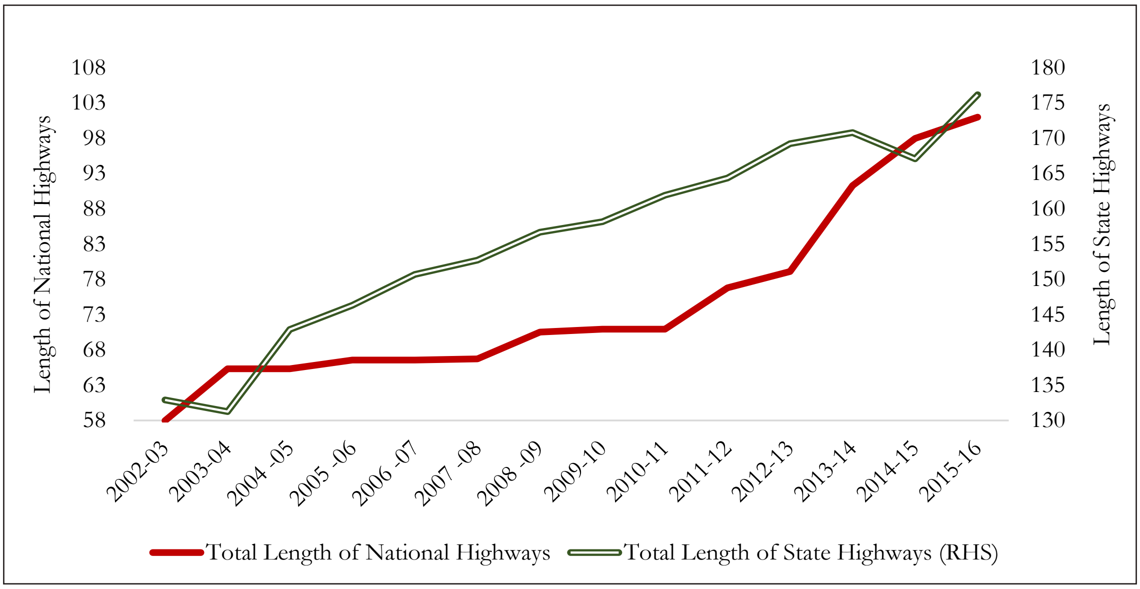
8.37 In case of inland freight transport, road share is more than railways and other modes of transportation in India, as compared to Russia, China and USA (Figure 3).

8.38 In 2001 total road length was 33,73,520 km with total number of 55 million vehicles on the roads. In 2016, total road length increased to 56,17,812 km while the total number of motor vehicles grew by four times to 229 million. The composition of vehicle shows that the share of two wheelers and passenger cars, jeep & taxis has increased on Indian roads while the share of public transport like buses and also goods vehicles contracted over the period.

Conversion of State Highways to National Highways

8.39 National Highways (NHs) /Express Ways in India accounted for 2.06 per cent of the total road length. For the last few years the construction of NHs has been accelerated rapidly. (Figure 4)

Figure 4 : Length of National Highways and State Highways (in thousand km)



Source: **Ministry of Road Transport & Highways**

Table 9 : Details of State Roads Converted to National Highways

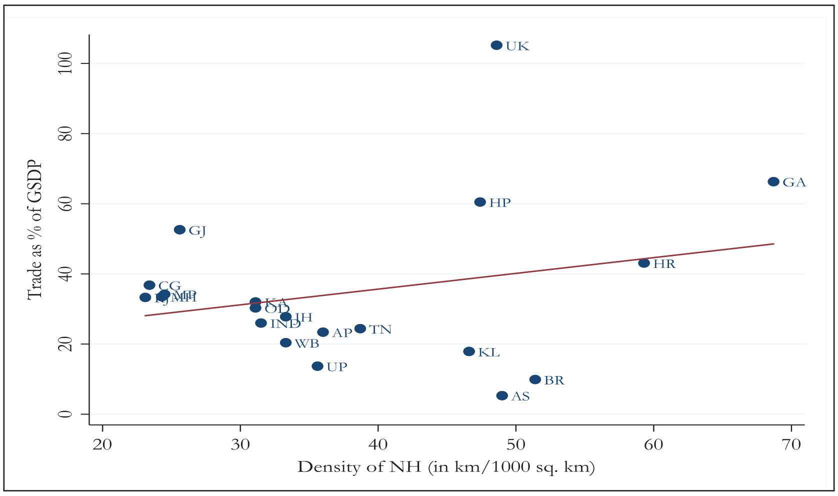
S1. No.	State/Union Territory	Length (in km)
1.	Andhra Pradesh	676
2.	Assam	9
3.	Bihar	160
4.	Haryana	395
5.	Himachal Pradesh	176
6.	Jammu &Kashmir	8
7.	Karnataka	70
8.	Madhya Pradesh	9
9.	Maharashtra	387
10.	Odisha	193
11.	Punjab	530
12.	Rajasthan	20
13.	Sikkim	154
14.	Tripura	228
15.	Telangana	119
16.	West Bengal	46

Source: **Ministry of Road Transport & Highways**

8.40 The Government received proposals for declaration of more than 64000 km of State roads as National Highways (NHs) from various State Governments, against which the Ministry has declared about 10000 km of Roads/routes as new National Highways. So far 3180 km of State Highways have been converted to NHs. The State wise conversion of State roads into National Highways is given in Table 9.

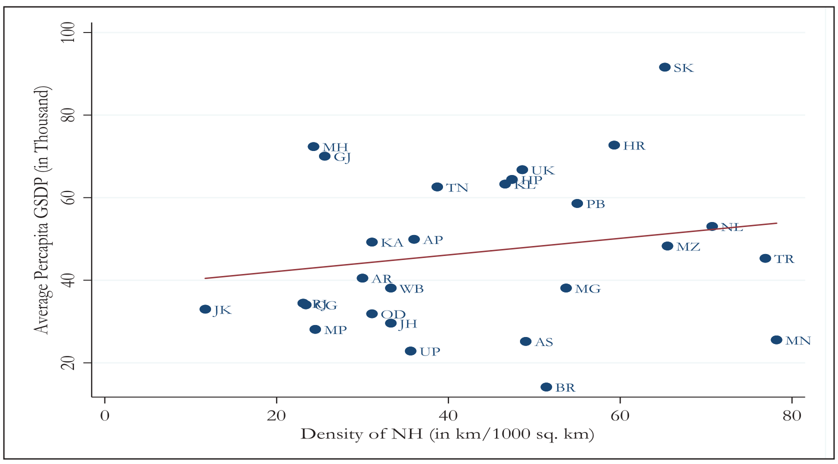
8.41 India's road density at 1.66 km/sq.km of area was higher than that of Japan (0.91 km/ sq km),

Figure 5 : Relationship of Density of NHs and Trade as per cent of GSDP



Source: **Ministry of Road Transport & Highways**

Figure 6 : Relationship between density of NHs and per capita GSDP



Source: **Ministry of Road Transport & Highways**

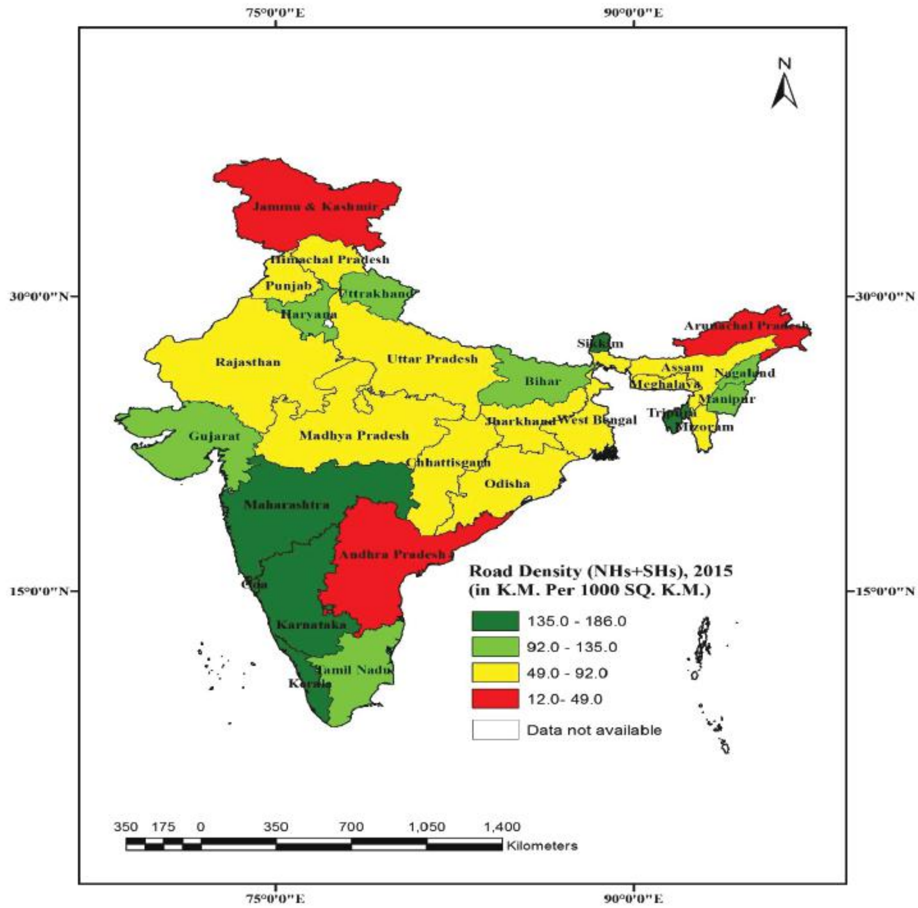
USA (0.67 km/ sq km), China (0.46 km/ sq. km), Brazil (0.18 km/sq.km) and Russian Federation (0.08 km/ sq km). The surfaced road length in India was 61 per cent of the total road length which was much lower as compared to United Kingdom (100 per cent), Korea (83 per cent) Russia (71 per cent) and China (68 per cent). The Government's focus on constructing National Highways in Indian States has a significant impact on trade and per capita income. Two interesting relationship can be established as follows:

- Higher the Density of National Highways, higher the Interstate Trade (Export + Import) as per cent of Gross State Domestic Product (GSDP) in Indian States (figure 5)[1]
- A positive relationship exists between density of NHs and the per capita income in Indian States. Higher the density of National Highways (NHs), higher the Per capita GSDP. (figure 6)[2]

[1] State wise Density of National Highways are taken from Ministry of National Highways and Transportation and the Trade as per cent of GSDP are taken from Economic Survey 2016-17, Vol. I. In the figure the Survey has shown the relationship between density of NHs and trade among states.

[2] Figure 6 shows the relationship between State wise Density of NHs and Per Capita GSDP.

Map 1 : Density of National Highways (NHs) and State Highways (SHs) in India (In K.M. Per 1000 SQ K.M. of Area)



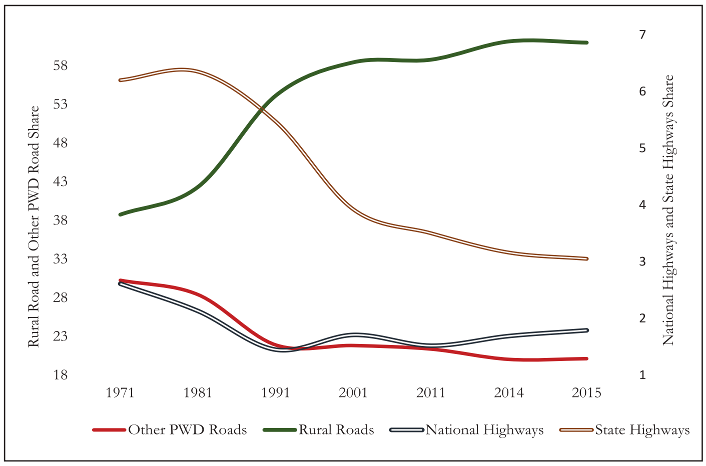
Source: **Ministry of Statistics & Programme Implementation**

8.42 The National Highways facilitate medium and long distance intercity passenger and freight traffic across the country; while the State Highways are intended to carry the traffic along major centres within the state. The relatively developed States like Maharashtra, Karnataka, Kerala and Goa have higher density of National Highways and State Highways followed by Gujarat, Tamil Nadu, Bihar, Haryana and a number of hilly States (MAP 1).

Policy for Construction of other PWD Road, especially District Roads

8.43 Other Public Works Department (OPWD) roads consist of district roads and rural roads developed and maintained by Public Work Department of the State/UTs. These roads play an important role in providing villages the accessibility for transportation of agricultural and other produce to nearby markets, along with access to schools and medical centres. The share of OPWD roads which serve as the main roads for intra district movement has decreased over the period of time (Figure 7). The largest share in the road network in India is of rural roads (61 per cent). Other PWD Roads accounted for the second highest share (20 per cent), Urban Roads (9 per cent), Project Roads (5 per cent), SHs (3 per cent) and NHs (2 per cent) in the year 2015.

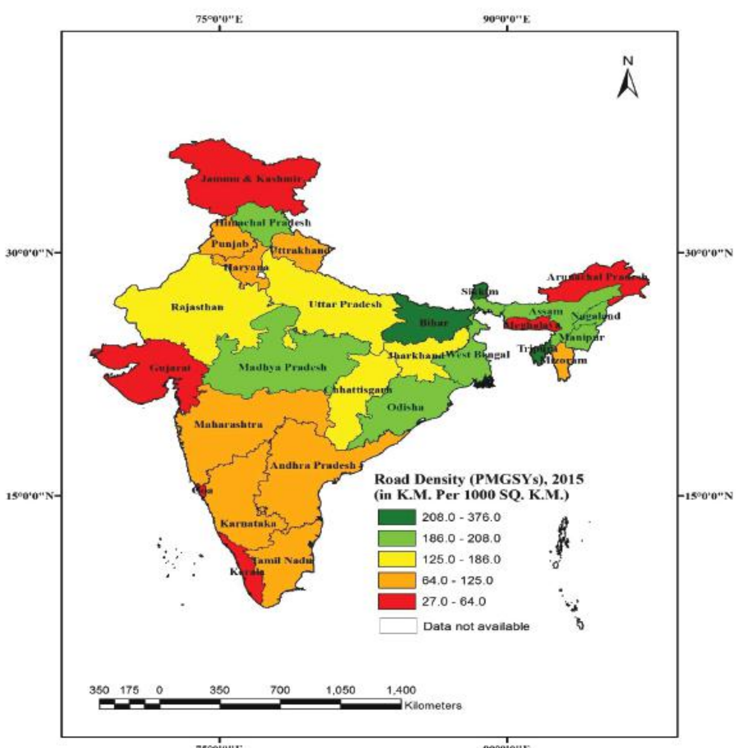
Figure 7 : Road Network by Categories (per cent)



Source: **Statistical Year Book, 2017, Ministry of Statistics & Programme Implementation**

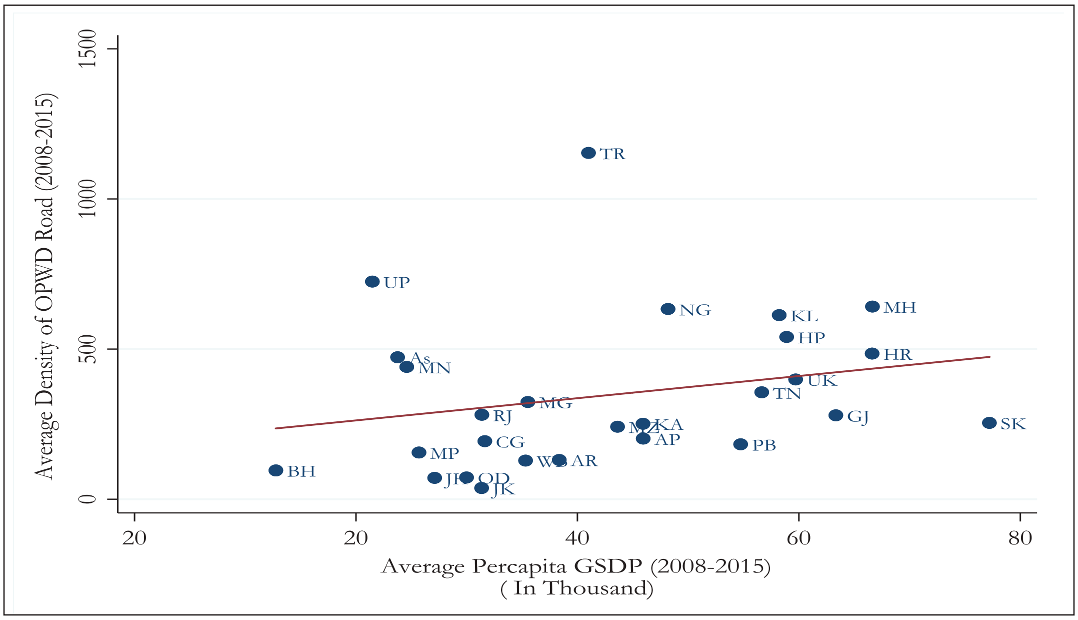
8.44 The Government is connecting habitations with rural roads through the Pradhan Mantri Gram Sadak Yojana (PMGSY), which is a centrally sponsored scheme. The District roads provide the critical function of linkage between main roads and rural roads. Map 2 shows density of PMGSY road in Indian States. Density of PMGSY road is more in States like Bihar, Odisha, Madhya Pradesh, West Bengal, Sikkim and Tripura; while the density is less in J&K, Gujarat, Kerala and Arunachal Pradesh. The relatively developed States like Gujarat, Kerala with higher density of NHs and SHs have lower density of rural roads constructed under PMGSY.

Map 2 : Density of PMGSY Road in India (In K.M. Per 1000 SQ K.M. of Area)



Source: **Ministry of Statistics & Programme Implementation**

Figure 8 : Relationship between GSDP Per capita and Density of OPWD Road



Source: **Ministry of Road Transport & Highways**

8.45 Among Indian States there is a positive relationship between GSDP Per capita and Density of OPWD road (Figure 8). In many under developed States with lower Per capita GSDP like Bihar, Odisha, Chhatisgarh, Jharkhand and Jammu & Kashmir, West Bengal, Madhya Pradesh, the density of OPWD/District Road is very low. In fact, the density is higher in many North Eastern States like Nagaland, Tripura, Assam and Manipur. There is a need for developing OPWD roads including District Roads through special projects, so as to provide access to district headquarter, market hubs etc. and to facilitate connectivity to State highways, thereby enhancing economic activities.

Status of Stalled Projects and NPAs in Road Sector

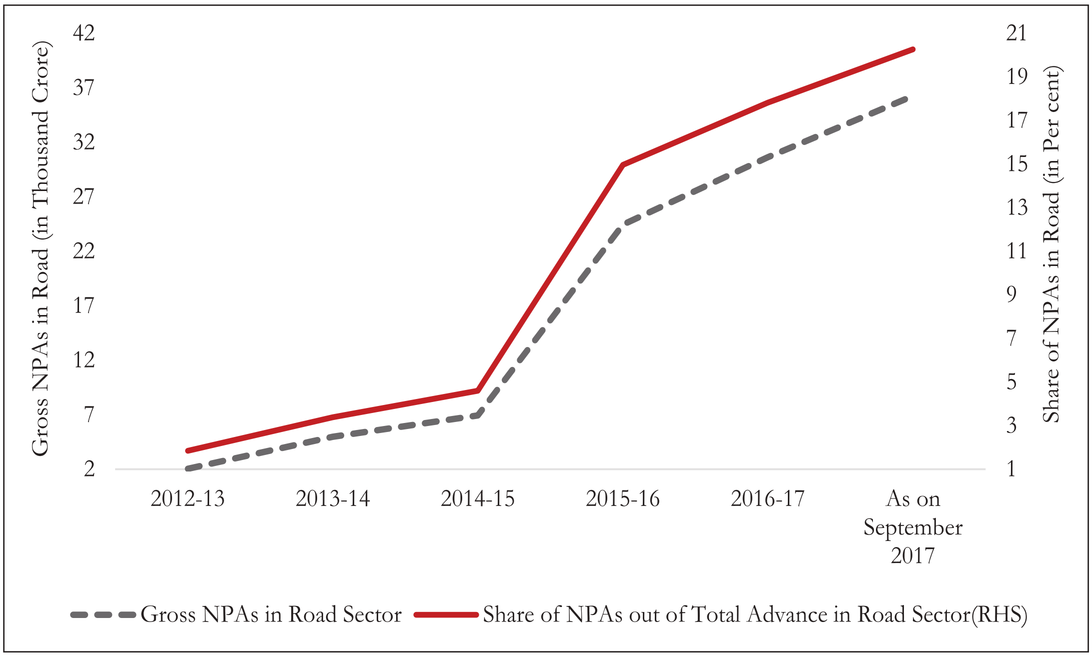
8.46 As on September 2017, out of the 1263 total ongoing monitored projects across sectors, there are 482 projects in Road Transport and Highways with (original) cost of ₹3,17,373.9 crore. Of these, 43 projects face cost overruns and 74 projects time overruns. Some of the projects under different phases of National Highway Development Program are delayed mainly due to problems in land acquisition, utility shifting, poor performance of contractors, environment/ forest/wildlife clearances, Road Over Bridge (ROB) & Road Under Bridge (RUB) issue with Railways, public agitations for additional facilities, and arbitration/ contractual disputes with contractors etc.

8.47 During 2012-13, total credit advances to road sector was ₹1,27,430 crore, which increased to ₹1,80,277 crore as in September 2017-18. The share of Non-Performing Assets (NPAs) out of total advances in road sector increased from 1.9 per cent in 2012-13 to 20.3 per cent in September 2017-18 (Figure 9).

Measures taken for revival of stalled projects on NHs

8.48 The Ministry of Road Transport & Highways and National Highway Authority of India (NHAI) have been monitoring the stalled projects. Wherever physical completion is established, one-time fund infusion by NHAI is being done to revive stalled projects. The funds are being arranged through the common fund available with NHAI for development of roads.

Figure 9 : Share of NPAs out of Total Advances in Road Sector



Source: **Reserve Bank of India**

8.49 Further, in order to expedite completion of delayed projects, regular meetings are held with project developers, State Governments and contractors, concessionaires/contractors. Various steps have been taken for streamlining of land acquisition & environment clearances, exit for equity investors, premium re-schedulement, revamping of dispute resolution mechanism, frequent reviews at various levels etc.

8.50 In order to facilitate implementation of the projects, Hybrid Annuity Model (HAM) instead to Engineering, Procurement and Construction (EPC) has been adopted. Capital expenditure is deferred under HAM (Box 8.2) and requires lesser amount of funds during construction years in comparison to projects on EPC mode. Further, initiatives such as monetization of projects through the Toll-Operate in Transfer model, securitization of toll revenue, adopting the 'Infrastructure Investment Trusts route, other innovative financing options including LIC, Long Term Pension Funds etc., have been taken to attract fresh capital from the market on the strength of already operational projects. With proactive policy interventions, around 88 per cent of these projects have now been put back on track, or appropriately re-engineered and restructured and the total number of stalled projects have been reduced to three.

Bharatmala Pariyojana

8.51 Bharatmala Pariyojana is a new umbrella program for the highways sector that focuses on optimizing efficiency of freight and passenger movement across the country by bridging critical infrastructure gaps through effective interventions like development of Economic Corridors, Inter Corridors and Feeder Routes, National Corridor Efficiency Improvement, Border and International connectivity roads, Coastal and Port connectivity roads and Green-field expressways. A total of around 24,800 km are proposed to be constructed in Phase I. In addition, Phase I also includes 10,000 km of balance road works under NHDP. Estimated outlay for Phase I is ₹5,35,000 crore. The objective of the program is to achieve optimal resource allocation for a holistic highway development/improvement initiative.

Box 8.2 Hybrid Annuity Model (HAM)

Hybrid Annuity Model (HAM) is a combination of two models i.e., the EPC (Engineering, Procurement and Construction) model and BOT - Annuity (Build, Operate, Transfer) model. Under the EPC model, the private players construct the road and have no role in the road's ownership, toll collection or maintenance. National Highways Authority of India (NHAI) pays private players for the construction of the road. The Government with full ownership of the road, takes care of toll collection and maintenance of the road.

Under the BOT model private players have an active role in road construction, operation and maintenance of the road for a specified number of years as per agreement. After the completion of the years of operation, the private players transfer the asset back to the Government. Under BOT, the private players arrange all the finances for the project, while collecting toll revenue (BOT toll model) or annuity fee (BOT annuity model) from the Government, as agreed. In the BOT annuity model, the toll revenue risk is taken by the Government. The Government pays private player a pre-fixed annuity for construction and maintenance of roads.

HAM combines EPC (40 per cent) and BOT-Annuity (60 per cent) Models. On behalf of the Government, NHAI releases 40 per cent of the total project cost, in five tranches linked to milestones. The balance 60 per cent is arranged by the developer. The developer usually invests not more than 20-25 per cent of the project cost, while the remaining is raised as debt.

In BOT toll model, the private players did not show their willingness to invest, since they had to fully arrange for the entire finances, either through equity contribution or debt. NPA-riddled banks were reluctant to lend to these projects. Since there was no compensation structure such as annuity, the developers had to take entire risk in low traffic projects. The essence of HAM model arose due to requirement of better financial mechanism where the risk would be spread between developers and the Government.

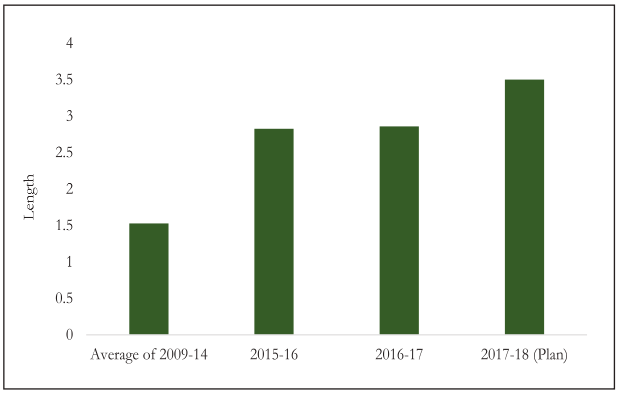
Railways

8.52 Facing stiff competition from other modes of transportation the Government is initiating various transformative measures to keep railways on track. These measures are focusing on prioritizing investments in important areas, viz. dedicated freight corridors, high speed rail, high capacity rolling stock, last mile rail linkages, port connectivity, and attracting private and foreign direct investment. During 2017-18 (upto September 2017) Indian Railways carried 558.10 million tonnes of revenue earning freight traffic as against 531.23 million tonnes during 2016-17 (upto September 2016), showing an increase of 5.06 per cent during this period.

8.53 The share of Indian Railways in freight movement has been declining over a period of time primarily due to non-competitive tariff structure. While the passenger fare had remained more or less flat, the freight fare has increased sharply over the year. To make rail transportation attractive and arrest the declining trend of rail share, various initiatives were taken in 2016-17 which includes tariff rationalization, classification of new commodities, new policy guideline for station to station rates, expansion of freight basket through containerization, withdrawal of dual freight policy for export of iron ore, rationalization of coal tariff, policy guidelines of Merry Go Round System, discount for loading of bagged consignment in open and flat wagons, new delivery models like Roll-on Roll-off services, re-introduction of short lead concession and reduction in minimum distance for charge, digital payment for freight business, Long Term Tariff Contract Policy (which provides tariff stability and attractive rebate in freight to customers), and Liberalised Automatic Freight Rebate scheme for traffic loaded in empty flow directions etc.

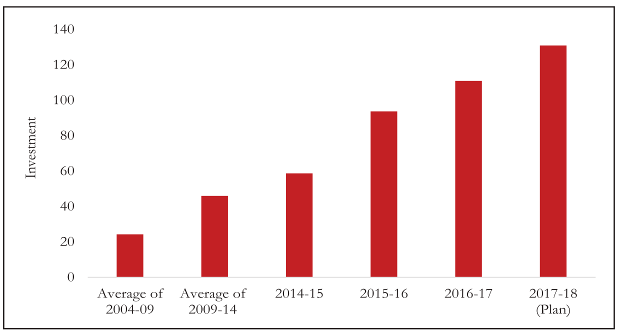
8.54 Apart from above initiatives, the Government has emphasized on railways infrastructure development. The pace of commissioning Broad Gauge lines and completion of electrification have been accelerated during the last three years (Figure 10). The capital investment during the last three years has also increased (Figure 11).

Figure : 10 Broad Gauge Lines Commissioned (thousand km)



Source : **Ministry of Railways**

Figure : 11 Capital Investment (₹ thousand crore)



Source : **Ministry of Railways**

Infrastructure Status to Station Redevelopment

8.55 'Station Redevelopment' is the biggest non-fare revenue generating project for redeveloping railways stations in the country and has been included in the Harmonized List of Infrastructure Subsectors. Station redevelopment programme is envisaged to be done by leveraging commercial development of railways' spareable space in and around the station. The stations to be redeveloped will provide world class amenities and services to passengers. The station redevelopment has been undertaken through various modes such as Zonal Railways, Indian Railway Stations Development Corporation Ltd. (IRSDC), JV with Smart City SPVs, Railway PSU and Co-operation with State Government.

8.56 Moreover, the commercial development undertaken near the stations will become the nerve centres of the city and provide quality retail, commercial and hospitality development. Besides, the redeveloped stations will improve passenger experience by providing amenities like digital signage, escalators/elevators, self-ticketing counters, executive lounges, luggage screening machines, walkways, holding areas for passengers, grand and distinctive roofing and flooring, free and paid Wi-Fi etc. An MOU has been signed by Ministry of Railways with Ministry of Housing and Urban Affairs for integrated planning for station redevelopment projects in cities identified as SMART cities. 10 stations have been taken up for redevelopment under this scheme jointly by Rail Land Development Authority (RLDA) and NBCC (India) Limited.

Metro Rail System

8.57 Rapid urbanisation has created increased demand of civic facilities and transport infrastructure. Higher capacity rail based mass transit system popularly called Metro, are rapidly being accepted across the country as a solution to the problem of urban transportation. Following the success of the Delhi Metro, many cities have implemented or are planning for metro rail systems. Government of India has been providing financial assistance to cities for improving public transport including metro rail projects. There are 425 km of metro rail systems operational in the cities of Delhi, NOIDA, Gurugram, Kolkata, Mumbai, Chennai, Bengaluru, Hyderabad, Jaipur, Lucknow and Kochi and another about 684 km are under construction in various cities by December 2017.

8.58 As metro rail projects are highly capital intensive, it is difficult to fund metro rail projects from Government exchequer only. In this context, in order to create an ecosystem for proliferation of metro rail in country, the Government of India has notified Metro Rail Policy, 2017. The policy imbibes on the learnings from international examples and bridges the much needed gap for enhancing the feasibility of metro rail projects from economic, social and environmental perspective.

Civil Aviation

8.59 India is the 3rd largest and the fastest growing domestic aviation market in the world in terms of number of domestic tickets sold. In 2016-17, annual growth in domestic passenger departures was 23.5 per cent as compared to 3.3 per cent in the US and 10.7 per cent in China.

8.60 Domestic passenger traffic registered a compound annual growth rate (CAGR) of 9.89 per cent during 2007-08 to 2016-17. In 2017-18 (April - September), domestic airlines carried 57.5 million passengers, with a growth rate of 16 per cent over the corresponding previous year period. Scheduled Indian and foreign carriers carried 29.2 million passengers to and from India, and showed a growth rate of 9 per cent in 2017-18 (April - September) over the corresponding previous year period. During this period, the domestic air cargo handled was 0.61 million MT showing a growth of 10.27 per cent over the corresponding previous year time period, and international air cargo handled was 1.07 million MT showing a growth of 19.02 per cent.

Recent Initiatives taken for the growth of the Civil Aviation sector are as follows:

Regional Connectivity Scheme – 'Ude Desh ka Aam Naagrik' (RCS-UDAN)

8.61 To make flying accessible and affordable for the masses in the regionally important cities, the RCS-UDAN scheme was launched in October 2016. This is a first-of-its-kind scheme globally to stimulate regional connectivity through a market-based mechanism. 27 States/UTs have already signed MOUs with the Central Government under RCS-UDAN. Many private sector airlines are actively participating under this scheme.

Airport Development

8.62 Provision of ₹4,500 crore for revival of 50 unserved and underserved airports/air strips has been taken up with budgetary support of Government to be completed by December 2018. Revival of airstrips/airports will be 'demand driven', depending upon firm commitment from airline operators as well as from the State Governments.

8.63 Government has granted in-principle approval for setting up 18 Greenfield airports in the country, which include Mopa in Goa, Navi Mumbai, Shirdi and Sindhudurg in Maharashtra, Bijapur, Gulbarga, Hasan and Shimoga in Karnataka, Kannur in Kerala, Durgapur in West Bengal, Dabra in Madhya Pradesh, Pakyong in Sikkim, Karaikal in Puducherry, Kushinagar in Uttar Pradesh, Dholera in Gujarat, and Dagadarthi Mendal, Bhogapuram, and Oravakallu in Andhra Pradesh. Government has granted "site clearance" for 5 Greenfield airports: Machiwara in Punjab, Itanagar in Arunachal Pradesh, Jamshedpur in Jharkhand, Alwar in Rajasthan and Kothagudem in Telangana.

Liberalization of Air Services

8.64 India-Afghanistan Air freight Corridor: The decision to establish an Air Freight Corridor between Afghanistan and India was taken in September 2016. The Corridor will provide Afghanistan, a landlocked country, greater access to Indian market especially for perishables, and will allow Afghan businessmen to leverage India's economic growth and trade networks for its benefit.

8.65 Air Services Agreement between India and Serbia: The agreement signed on 31.01.2003 has been liberalised and updated in May 2017 with a view to spur greater trade, investment, tourism and cultural exchanges between the two countries. It will provide enabling environment for enhanced connectivity and commercial opportunities to the carriers of both sides while ensuring greater safety and security.

Shipping

8.66 Shipping is an important indicator of commodity trade of any country. Around 95 per cent of India's trade by volume and 68 per cent in terms of value is transported by sea. As on 31st December, 2017, India had a fleet strength of 1,374 ships with dead weight tonnage (DWT) of 18.80 million (12.36 million GT) including Indian controlled tonnage, with Shipping Corporation of India (SCI) having the largest share of around 34 per cent. Of this, around 443 ships of 17.19 million DWT (10.88 million GT) cater to India's overseas trade and the rest to coastal trade.

8.67 To encourage the growth of Indian tonnage and for higher participation of Indian ships in

Indian trade, the Government has implemented several measures which include reduction of GST from 18 per cent to 5 per cent on bunker fuel used in Indian flag vessels; brought parity in the tax regime of Indian seafarers employed on Indian flag ships vis-à-vis those on foreign flag ships; removing obstacles in the smooth implementation of the India Controlled Tonnage (ICT) scheme which allows Indian companies to directly own ships in foreign flags; and easing many procedural compliance issues like ship registration, procuring chartering permission and payment of chartering fees online.

Scope for Shipbuilding and ship-repair industry

8.68 Ship-building is a manufacturing industry endowed with the unique feature of having nearly 65 per cent value addition coming from other technology/ancillary industries. In India, there are 27 Shipyards comprising 6 under Central Public Sector, 2 under State Governments and 19 under Private Sector Undertakings. Shipbuilding industry employs over 30,000 people directly. However, over the years, the industry has developed a large number of ancillary units and subcontractors around them employing lakhs of people.

8.69 Globally, the shipbuilding industry is dominated by three countries namely, South Korea, China & Japan, which together have more than 90 per cent share of the shipbuilding market. Major shipbuilding nations support their industry through direct financing, and fiscal incentives. It is important to note that India is located strategically on the international trade route, whereby it can attract ships plying from west to east in the trade route for its ship-repair activity. Geostrategic location of India, abundance of labour and quality of work are the strengths for the ship-repair business. There is a scope for ship building industry that can be unlocked, which will not only create a strong manufacturing base but also generate millions of jobs.

Port Development

8.70 In 2016-17, cargo traffic at Indian Ports has increased by 5.9 per cent (Y-o-Y) with 6.9 per cent growth in Major Ports and 4.2 per cent growth in Non-Major Ports. In 2017-18 (till 31.12.2017), cargo traffic handled at Major Ports has been 499.41 million tonnes compared to 481.87 million tonnes handled during the corresponding period of 2016-17. In 2017-18, projects with an investment of around ₹10,000 crore and capacity addition of about 80 MMTPA are targeted for award. Of these, 15 projects involving an investment of around ₹3159 crore and capacity addition of 18 MMTPA have already been awarded (as on 31.12.2017).

8.71 In addition, the Government has taken following initiatives to improve the performance of Major Ports:

a. Major Ports have been benchmarked to international standards and 116 initiatives were identified of which 86 initiatives have been implemented and remaining will be implemented by 2019.

b. Major Ports Authorities Bill, 2016 to replace Major Ports Trust Act, 1963 to modernise the institutional structure of Major Ports has been introduced in the Parliament on 16.12.2016. Subsequently, referred to the departmental standing committee that submitted its report in July 2017.

c. Radio Frequency Identification System (RFID) to reduce dwell time, transaction time and ease congestion has been operationalized in 9 Major Ports. The remaining Major Ports are in the process of operationalising RFID which would be completed by March, 2018.

d. Direct port delivery and direct port entry initiated at Major Ports for EXIM containers.

Sagarmala programme

8.72 The Sagarmala programme is the flagship programme of the Ministry of Shipping to promote port-led development in the country through harnessing India's 7,500 km long coastline, 14,500 km of potentially navigable waterways and strategic location on key international maritime trade routes. The main vision of the Sagarmala Programme is to reduce logistics cost for international and domestic trade, with minimal infrastructure investment. Under the Sagarmala Programme, 508 projects at an estimated investment of more than ₹8 Lakh Crore have been identified for implementation over the next 20 years. Of these, 289 Projects worth ₹2.17 Lakh Crore are under various stages of implementation and development. These projects are being implemented primarily through the private players or PPP mode. Under the budget head of Sagarmala, a total of ₹945.74 Crore has been sanctioned for the year 2017-18 and ₹644.96 Crore has already been released for the development and implementation of 49 projects.

8.73 A roadmap has been created for increasing the Indian port capacity to 3000+ MMTPA to cater the projected traffic of 2500 MMTPA by 2025. For all the 12 major ports, master plans have been finalized. From the port master plans, 131 port capacity expansion projects with project cost of ₹85,346 Cr. have been identified for implementation over next 20 years.

Inland Waterways Transport (IWT)

8.74 The 'Jal Marg Vikas Project' on National Waterways-I (NW-I) in river Ganga, a large integrated IWT project, has been launched between Varanasi and Haldia covering a distance of 1380 kms at an estimated cost of ₹5369 crore. On NW-2 (River Brahmaputra), Ro-Ro services have commenced between Dhubri and Hatsingimari in July 2017 on an Inland Waterways Authority of India (IWAI) vessel. Further, under the National Waterways Act, 2016, 106 additional inland waterways have been declared as National Waterways (NWs). Based on techno economic studies, eight new NWs have been taken up for development in 2017-18. These include, NW-16 (Barak river); three in Goa viz. NW- 27:Cumberjua, NW 68 – Mandovi , NW 111 – Zuari; NW-86 (River Rupnarayan) ; NW 97 (Sunderbans); NW-9 (Alappuzha–Kottayam– Athirampuzha Canal) and NW-37 (River Gandak). In order to reduce the logistics cost of cargo and facilitate passenger movement between North East and mainland, MOUs have been signed with Bangladesh.

8.75 To provide institutional funding, the Government has proposed to allocate 2.5 per cent of the proceeds of Central Road Fund for development and maintenance of National Waterways. In 2017-18, IWAI raised ₹660 crore from the market by issuing 'GOI fully serviced Bonds' to meet capital expenditure on development of National Waterways.

Telecom

8.76 Over the last few years the Indian telecom sector has shown remarkable growth as a result of key reforms viz., spectrum management, Bharat Net programme and umbrella scheme like 'Digital India' in order to convert India into a digital economy and a knowledge based society. As on end of September 2017, the total subscribers stood at 1207.04 million, out of which 501.99 million connections were in the rural areas and 705.05 million in the urban areas. Wireless telephony constitutes 98.04 per cent of all subscriptions whereas share of landline telephones stands at 1.96 per cent at the end of September 2017. The overall tele-density in India was 93.42 per cent including 56.78 per cent in rural areas and 172.86 per cent in urban areas (as on September, 2017). The mobile industry in India is currently employing over 4 million people both directly and indirectly.

8.77 However it is important to note that the telecom sector is going through a stress period with growing losses, debt pile, price war, reduced revenue and irrational spectrum costs as also highlighted in Chapter 8 of Economic Survey 2016-17 (Volume II). A new entrant has disrupted the market with low-cost data services and the revenue of incumbent players has fallen. The crisis has also severely impacted investors, lenders, partners and vendors of these telecom companies.

8.78 Despite various bottlenecks, the Government is committed to extending the reach of telecom network to the remote and rural villages, and bridging the digital divide with support from all stake holders. The Government is implementing the flagship 'Bharat Net' project (in two phases), to link each of the 2.5 lakh Gram Panchayats of India through optical fibre network. This is the largest rural connectivity project of its kind in the world, and is the first pillar of Digital India Programme.

It will facilitate the delivery of various e-Services and applications including e-health, e-education, e-governance and e-commerce in the future. Work on phase I of the project is progressing at a brisk pace. As on November, 2017, the fibre has reached 1,03,275 Gram Panchayats with the laying of 2,38,677 km. of optical fibre cable. The Government has launched Phase II of Bharat Net project with an outlay of ₹30,920 crore on 13th November, 2017. The phase II, which will connect 1.5 lakh Gram Panchayats through high speed broadband, is likely to be completed by March 2019.

8.79 Government is in the process of formulating the New Telecom Policy, targeted to be released in 2018, after holding wide range of consultations with various stakeholders. The major themes that new Telecom Policy shall try to address include Regulatory & Licensing frameworks impacting the sector, Connectivity for All, Quality of Services, Ease of Doing Business and Absorption of New Technologies including 5G and Internet of Things. Telecom Regulatory Authority of India (TRAI) has also recommended new policy on 'Net Neutrality' which prohibits discriminatory tariffs for data services. As per the policy, the service providers should be restricted from entering into any arrangement, agreement, or contract, with any person, natural or legal, that has the effect of discriminatory treatment based on content, sender or receiver, protocols or user equipment.

Power

8.80 The All-India installed power generation capacity has increased substantially over the years and reached 330860.6 MW as on 30th November, 2017. The peak deficit i.e. the per centage shortfall in peak power supply vis-à-vis peak hour demand, has declined from around 9 per cent in 2012-13 to 1.6 per cent during 2016-17, although slightly higher at 2 per cent during April-September 2017-18.

8.81 Despite these achievements in power generation capacity enhancement, the bottleneck continues in distribution of power supply, as discussed in the Economic Survey 2016-17 Vol II, Chapter 8. Programmes have been taken up to address improvement in performance of distribution companies so that the ambitious plan to provide electricity for all by 2019 can be achieved.

8.82 There were 18542 un-electrified census villages reported by the states as on 1st April 2015. As on 30th November 2017, electrification in 15183 villages has been completed and 1052 found to be uninhabited. The remaining 2217 villages are expected to be electrified by May 2018.

8.83 In order to enhance power supply in rural areas, Deen Dayal Upadhyaya Gram Jyoti Yojana was launched in December 2014 to extend financial assistance for capital expenditure by distribution companies (discoms) for strengthening and augmenting distribution infrastructure, including metering, in rural areas. The estimated outlay for the scheme is ₹43033 crore. In addition, the approved outlay of ₹39275 crore of erstwhile Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) has been carried forward to this scheme. The scheme is being implemented by the States and their discoms with support from Central Government to the tune of 60 per cent in 'General Category' States and 85 per cent in 'Special Category' States.

8.84 A new scheme, Saubhagya (Pradhan Mantri Sahaj Bijli Har Ghar Yojana), was launched in September 2017 to ensure electrification of all remaining willing households in the country in rural and urban areas with an outlay of ₹16320 crore. The scheme envisages electrification of around 4 crore households that do not have electricity connection by March 2019. For unelectrified households located in remote and inaccessible areas, solar photo voltaic based standalone systems with power packs of 200-300 Watt with battery backup are to be provided to allow maximum of 5 LED Lights, one DC fan, one DC power plug along with repairment and maintenance for five years. The prospective beneficiary households would be identified using Socio Economic Caste Census (SECC) 2011.

8.85 Integrated Power Development Scheme was approved in November 2014 with a total outlay of ₹32612 crore including budgetary support of ₹25354 crore form Government of India. Upto end November 2017, projects worth ₹26930 crore covering 3616 towns has already been sanctioned and state utilities are awarding the works.

Table 10 : Progress of National LED Programme

	UJALA	SLNP
No. of LED bulbs distributed/streetlights installed	28.07 crore	41.79 lakh
Average energy saved per year	36.45 billion kWh	2.80 billion kWh
Avoided peak demand/avoided capacity	7299 MW	467 MW
GHG emission CO2 reductions per year	29.53 million t CO2	1.93 million t CO2

Source: **Ministry of Power**

8.86 Government has also approved establishment of a National Smart Grid Mission in power sector to plan and monitor implementation of programmes related to smart grid activities in India with a budget allocation of ₹30 crores for 2017-18.

8.87 As discussed in detail in Economic Survey 2016-17, Vol II, the Government launched the Ujjawal DISCOM Assurance Yojana (UDAY) in November 2015 envisaging reduction in interest burden, cost of power and aggregated technical and commercial losses. 31 states/UTs have already come under UDAY. The primary focus has been on billing and collection efficiency of DISCOMS that has increased to 82 per cent by the first quarter of 2017-18. The states need to focus on reducing their technical and commercial losses (AT&C) through tariff revisions. However, the higher tariffs face potential threat from lower solar and wind prices. Latest estimates indicate solar energy price of ₹2.5 per kwh and wind energy price of ₹3.4 per kwh.

Energy Conservation

8.88 Apart from the above developments aimed at enhancing availability of power, energy efficiency also assumes significance for the country. Lighting itself accounts for about 20 per cent of the total electricity consumption in India. A number of initiatives have been taken up by the Government to ensure commercial energy efficiency in the country including the following:

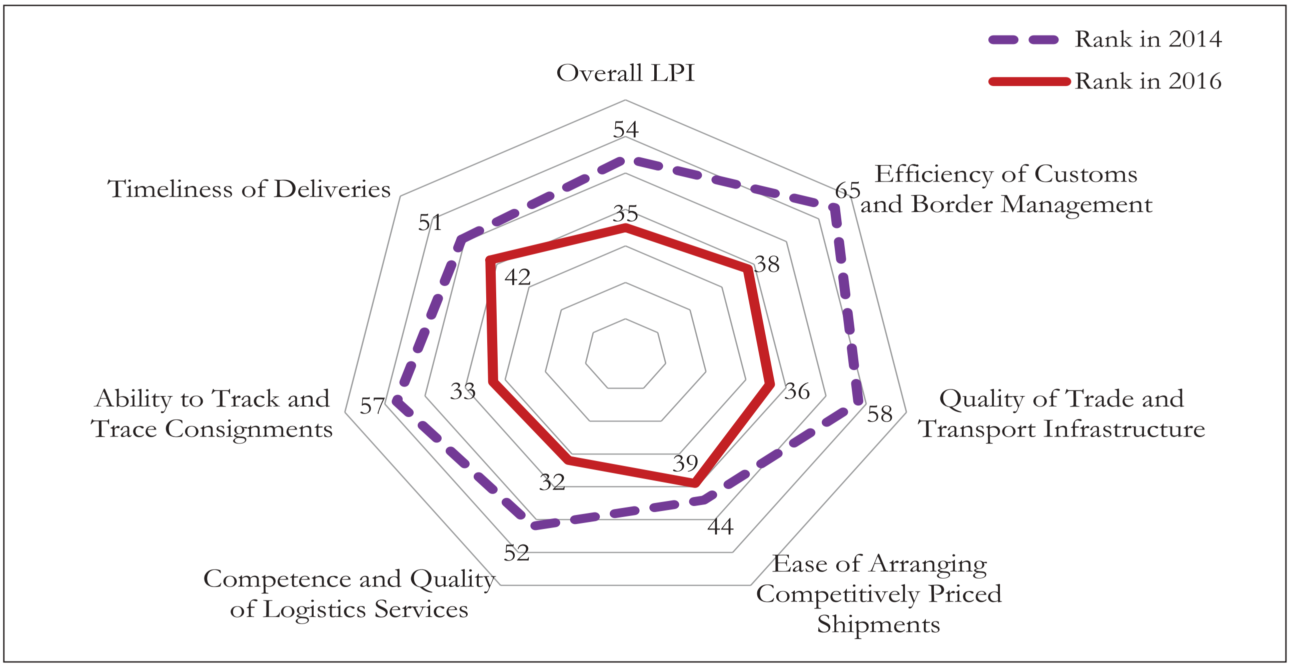
- National LED programme: A programme for promoting use of the most efficient lighting technology at affordable rates was launched in January 2015. The programme includes two components (a) Unnat Jyoti by Affordable LED for All (UJALA) providing LED bulbs to domestic consumers with a target to replace 77 crore incandescent bulbs with LED bulbs and (b) Street Lighting National Programme (SLNP) to replace 1.34 crore conventional street lights with smart and energy efficient LED street lights by March 2019. The current progress of implementation of the National LED programme up to 18th December 2017 since its launch on 5th January 2015 is as follows (Table 10):
- In addition, the Bureau of Energy Conservation is simultaneously taking up number of programmes for energy conservation including standardisation and labelling of appliances, buildings, passenger cars and heavy duty vehicles etc.

Logistics Sector: Exploring the Unexplored

8.89 Logistics including transportation, inventory management, warehousing, materials handling & packaging, and integration of information, is related to management of flow of goods between the point of origin and the point of consumption. Logistics sector in India remains unorganized to a large extent. The sector is facing challenges such as high cost of logistics impacting competitiveness in domestic and global market, under-developed material handling infrastructure, fragmented warehousing, multiple regulatory/policy making bodies, lack of seamless movement of goods across modes, lack of integrated IT infrastructure/modern technology. In order to develop this sector in an integrated way, it is important to focus on new technology, improved investment, skilling, removing bottlenecks, improving intermodal transportation, automation, single window system for giving clearances, and simplifying processes.

8.90 The Indian logistics industry worth around US$ 160 Billion has grown at a compound annual

Figure 12 : Logistics Performance Index (LPI): India's Ranking



Source : **World Bank**

growth rate (CAGR) of 7.8 per cent during last five years. Logistics sector provides employment to more than 22 million people. Improving logistics sector has huge implication on exports and it is estimated that a 10 per cent decrease in indirect logistics cost can increase 5-8 per cent of exports. With the implementation of Goods and Services Tax (GST), the Indian logistics market is expected to reach about US$ 215 Billion in 2020, growing at a CAGR of 10.5 per cent. By recognising the importance of the logistics sector, a new Logistics Division has been created in the Department of Commerce to develop and co-ordinate integrated development of the logistics sector, improvement in existing procedures, identification of bottlenecks and gaps, and introduction of technology based interventions in this sector.

8.91 The Global Ranking of the World Bank's 2016 Logistics Performance Index shows that India jumped to 35th rank in 2016 from 54th rank in 2014 in terms of overall logistics performance. Apart from increasing trade, better performance in logistics will augment the programme like Make in India, and also enable India to become an important part of the global supply chain. India has improved its rank in all the six components of logistics performance index (Figure 12).

8.92 Realizing the importance of the sector and to address the inefficiencies, the Government has included the Logistics sector in the Harmonized Master List of Infrastructure Subsector.

8.93 Inclusion of Logistics Sector in the Harmonized Master List of Infrastructure Subsector will benefit the sector in many ways as follows:

i. It will be helpful in facilitating the credit flow into the sector with longer tenures and reasonable interest rates.

ii. The infrastructure status will simplify the process of approval for construction of multimodal logistics (parks) facilities that includes both storage and transport infrastructure.

iii. It will encourage market accountability through regulatory authority and will attract investments from debt and pension funds into recognized projects.

Petroleum & Natural Gas

8.94 Crude oil production target during 2017-18 (April-Oct) was 21.85 MMT against which actual production was 21.06 MMT which meets only 96.38 per cent of the target. Shortfall in production was mainly due to declining production from old and marginal fields, delay in completion of some projects in western offshore, unplanned shutdown of wells, processing platform/plants and pipelines. Natural gas production target during 2017-18 (April-October) was 20.26 BCM against which actual production was 19.22 BCM which is 94.87 per cent of the target. Shortfall in production of natural gas has been attributed to decline of production from old and marginal fields, under-performance of wells, delay in getting multiple clearances, land acquisition, Right of Use (RoU) permission issues and resistance from local groups for development projects and unplanned shutdown of wells, processing platforms/plants and pipelines.

8.95 Some of the important new initiatives taken to transform hydrocarbon sector in India are as under:

Complete mapping of sedimentary basins

8.96 India has 26 sedimentary basins covering an area of 3.14 Million Sq Km spread over onshore, shallow water and deep water. An area of about 1.502 Million Sq. Km i.e. 48 per cent of total sedimentary basin area does not have adequate geo-scientific data. As a base to launch future Exploration and Production (E&P) activities, appraisal of all un-appraised areas has been approved and would be instrumental in increasing investments in domestic production of oil and gas. The project is being implemented by Oil India Limited (OIL) and Oil and Natural Gas Corporation (ONGC) at an estimated cost of ₹2932.99 crore.

Refining Capacity

8.97 India, which is second largest refiner in Asia after China, is emerging as a refinery hub with refining capacity exceeding demand. The country's refinery capacity has increased from 230.06 MMTPA in 2016-17 to 237.06 MMTPA at present with addition of 1 MMTPA capacity in HPCL, Mumbai refinery and capacity expansion of BPCL, Kochi from 9.5 MMTPA to 15.5 MMTPA.

National Gas Grid:

8.98 Government has envisaged developing an additional 15,000 km long pipeline network to have an ecosystem of National Gas Grid in the country. The Government has approved partial capital grant of ₹5,176 Crore (40 per cent of the estimated capital cost of ₹12,940 Crore) in September 2016 to GAIL for constructing 2650 km Jagdishpur-Haldia & Bokaro-Dhamra Pipeline (JHBDPL) natural gas pipeline project, popularly known as Pradhan Mantri Urja Ganga of Eastern India. This project will connect Eastern part of the country with National Gas Grid and will ensure the availability of clean and eco-friendly fuel, Natural Gas, to the industrial, commercial, domestic and transport sectors in the States of Uttar Pradesh, Bihar, Jharkhand, Odisha and West Bengal. These pipeline Projects would support the revival of 3 Fertilizer Plants namely Gorakhpur (U.P.), Barauni (Bihar) and Sindri (Jharkhand) along the route of these pipeline projects.

Households covered under DBTL

8.99 Government has introduced well targeted system of subsidy delivery to LPG consumers through Pratyaksh Hanstantrit Labh (PAHAL). The initiative of the Government was aimed at rationalizing subsidies based on approach to cut subsidy leakages, but not subsidies themselves. So far, about 19.05 crore LPG consumers have joined Pahal Scheme as on 31.10.2017. PAHAL has entered into Guinness Book of World Records being largest Direct Benefit Transfer (DBT) Scheme. So far, more than ₹57,196 crore have been transferred directly into the bank accounts of the consumers.

LPG Connections to BPL Houses- Pradhan Mantri Ujjwala Yojana

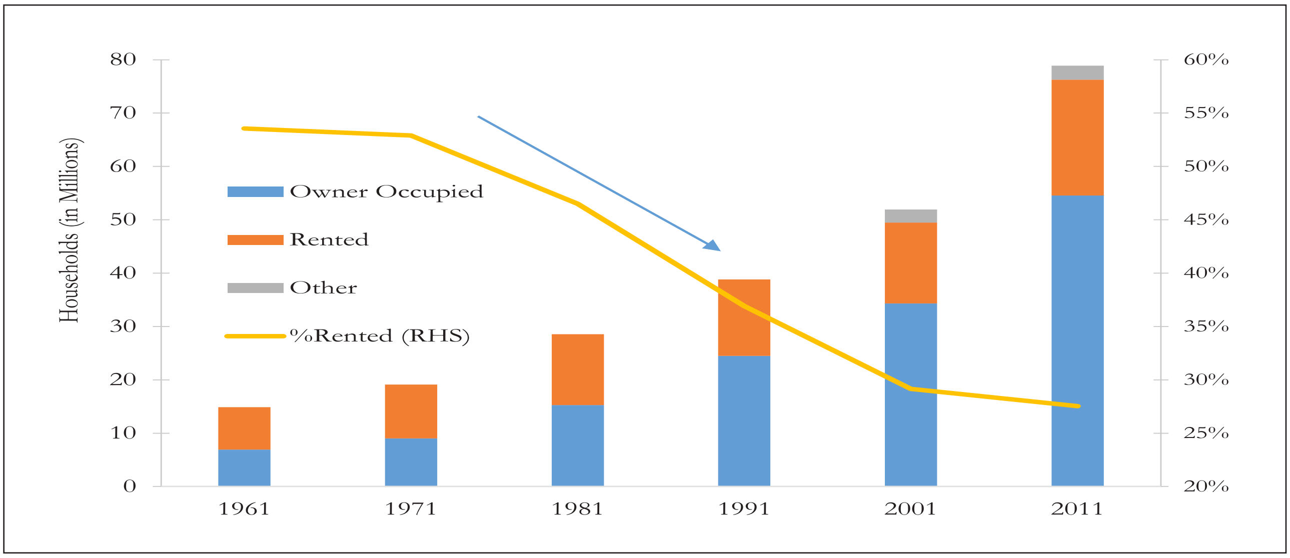
8.100 Under Pradhan Mantri Ujjwala Yojana (PMUY), 5 crore LPG connections are targeted to be provided to BPL families with a support of ₹1600 per connection by 2018-19. The scheme is aimed at replacing the unclean cooking fuels mostly used in rural India with the clean and more efficient LPG (Liquefied Petroleum Gas). During April-October, 2017, a total of around 1.86 crore new LPG connections have been released, including 1.05 crore connections under

PMUY achieving 70 per cent of the yearly target of 1.5 crore. Cumulative 3.05 crore new LPG connections under PMUY have been released till 31.10.2017, since launch of this scheme.

Housing for All – Some Issues

8.101 A key policy priority of the government is to deliver Housing for All. Policies related to housing need to recognize that India has an increasingly fluid population. A successful housing policy should enable horizontal or spatial mobility, namely the ability to move to, between and within cities as job opportunities arise. It should also

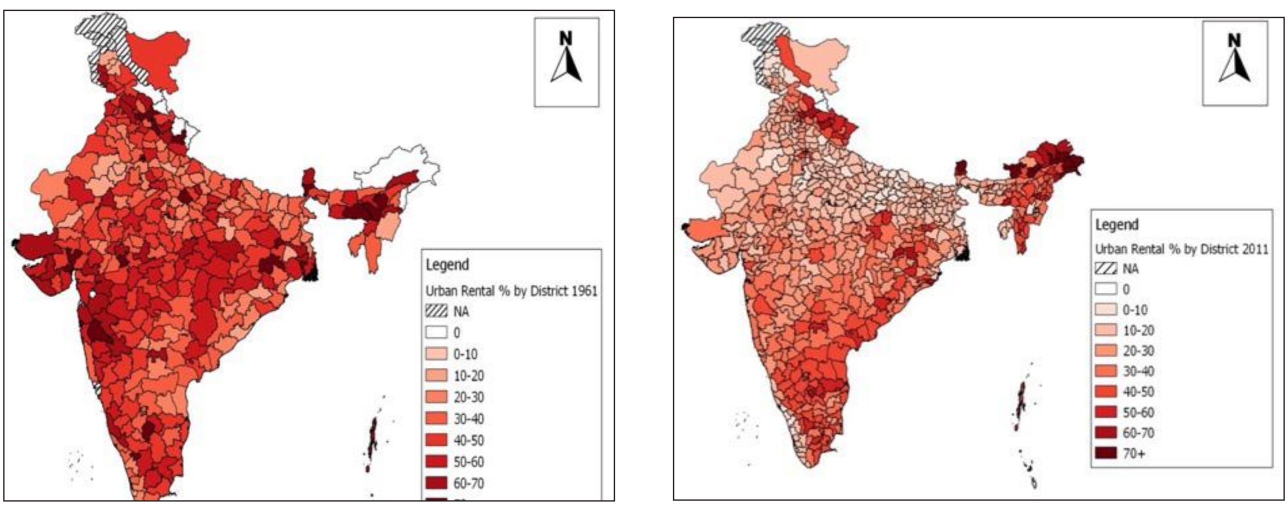
Figure 13 : Rental and ownership break up for households in Urban India[3]



Source: **For years 1981 to 2011- Harish (2015); for 1971 and 1961 - Census of India.**

Figure 14 : Rental housing in Urban India

a. 1961 **b. 2011**



Source: **Tandel, V., Patel, S., Gandhi, S., Pethe, A., & Agarwal, K. (2016). Decline of rental housing in India: the case of Mumbai. Environment and Urbanization.**

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3 Note: Other was a category introduced in 2001 and includes rent-free accommodation provided by employers or, in cases of unauthorised slums/ construction, where the household neither owns the structure nor pays rent. Further, the 1961 census is based on 20 per cent sample and numbers reported here are population estimates of the sample.

deliver vertical mobility, so that an aspirational population can climb the socio-economic ladder. These concerns should be embedded in policies ranging from urban design to those related to transaction costs in the secondary market. In this context, two areas namely the rental market and the prevalence of vacancies are discussed in this section.

The Importance of Rental Housing

8.102 Rental housing is important for both horizontal and vertical mobility as it allows people to access suitable housing without actually having to buy it. Across the income spectrum, rental housing is an important foothold into a city for new arrivals, until they are able to, or choose to, purchase their own homes. For rural migrants, in particular, whose financial portfolios may already be tied up in land and livestock, it is access to shelter that is more important than investing in another lumpy asset that is subject to local market risk.

8.103 Nonetheless, the share of rental housing has actually been declining in Indian cities since independence from 54 per cent in 1961 to 28 per cent in 2011 (see Figure 13). Although most parts of the country have witnessed a decline in the share of rentals, it is not uniform. Figure 14 provides a comparison of share of urban rental houses at district level between 1961 and 2011. The maps show that decline has been especially sharp in the northern states (excluding the mountain states).

8.104 As a proportion of all housing, renting accommodation is more prevalent in urban areas than in rural. According to the 2011 Census, the share of households living in rented houses was only 5 per cent in rural areas, but 31 per cent in urban areas. A state-wise picture also shows that the more urbanised states, such as Gujarat, Maharashtra and Andhra Pradesh have a higher per centage of rental housing (Harish, 2016). Similarly, larger cities had greater shares of rented housing – from 28 per cent for small towns, 36 per cent for medium-sized towns, to 40 per cent of total housing being rented in large cities (Kumar, 2016).

8.105 In many countries, including India, home ownership is encouraged as part of socio-economic policy. While there are good reasons for encouraging home ownership, it must be recognized that the rental market is also an important part of the urban eco-system. Rent control, unclear property rights and difficulties with contract enforcement have constrained the market in India in recent decades. These problems need to be resolved in order to allow horizontal and vertical mobility as well as to address a related issue – high vacancy rates.

The Problem of Vacant Housing

8.106 Despite the shortage of housing in urban India (more than 18 million households in 2012) (MHUPA, 2016), there is also a trend increase in vacant houses: from 6.5 million in 2001 to 11.1 million in 2011. According to the national census, vacant houses constitute around 12 per cent of the share of the total urban housing stock (Kumar, 2016) (Table 11).[4]

8.107 The district-wise distribution of vacant housing stock shows a greater prevalence of this phenomenon in the western half of the country. Figure 15 shows the number and share of vacant census houses in urban parts of major states. Maharashtra has the highest number of vacant houses (slightly greater than 2 million) followed by Gujarat (around 1.2 million). Gujarat has the highest share of vacant houses to the total residential stock (18.5 per cent), followed by Rajasthan (17.3 per cent) and Maharashtra (16.39 per cent).

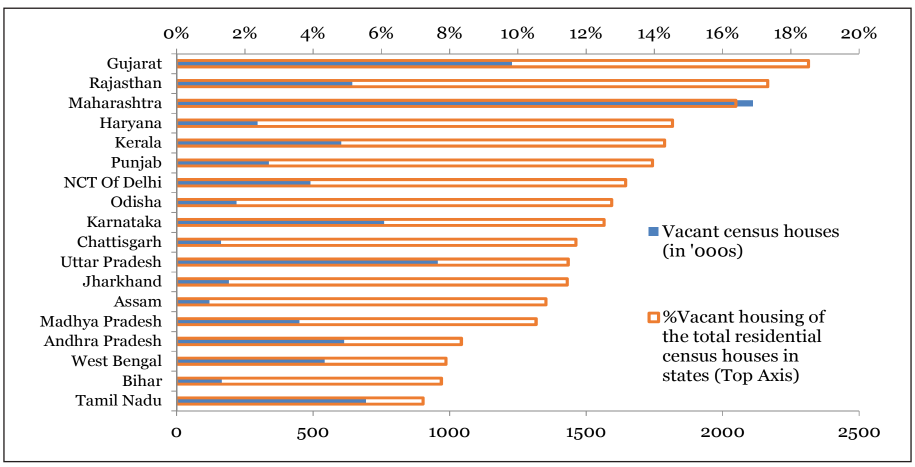
[4] In the instruction manual for the Census Housing listing, the instructions for categorising vacant housing are, *"If a Census House is found vacant at the time of House listing i.e. no person is living in at and it is not being used for any other non-residential purpose(s) write 'Vacant' "*. (http://www.censusindia.gov.in/2011-Documents/Houselistingper cent20English.pdf accessed on 8 January 2011). Also note that the comparable figure for vacant housing in the US is less than 3 per cent (US Census Bureau 2016).

Table 11 : Break-up of census houses and vacant houses in urban India[5]

Type	in Millions
Total number of vacant census houses [1]	11.09
Total number of census houses for 'Residence' [2]	76.13
Total number of census houses for 'Residence-cum-other use' [3]	2.35
Total Residential Stock [1+2+3=4]	89.58
per centVacant census houses of the total residential stock [1÷4]	12.38 per cent

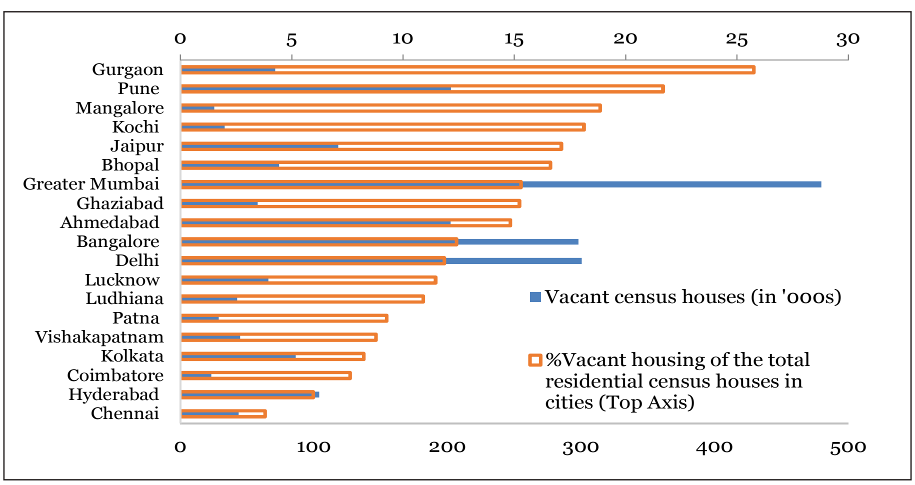
Source: **Census of India (2011) & IDFC Institute (2017).**

Figure 15 : Vacant Census Houses in major States (Urban)



Source: **Census of India (2011) & IDFC Institute (2017).**

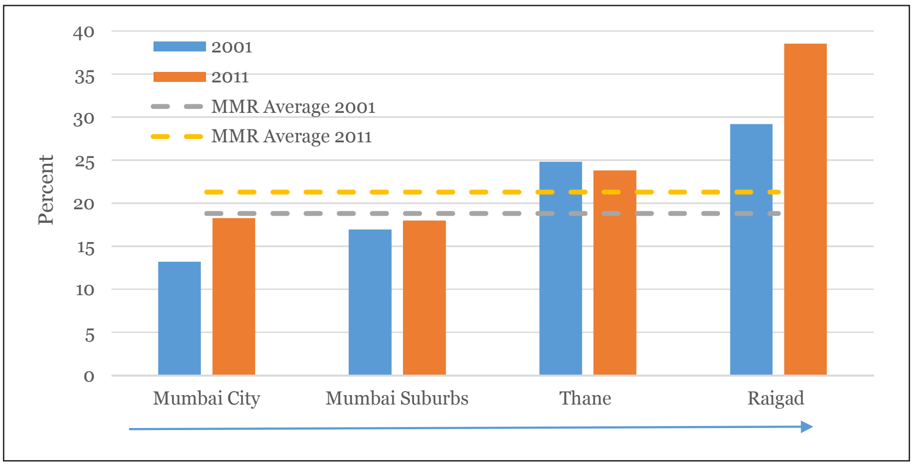
Figure 16 : Vacant Census Houses in some cities in India



Source: **Census of India (2011) & IDFC Institute (2017).**

5 Census houses have different uses such as for residential, schools, hospitals etc. All vacant census houses are for residential use.

Figure 17 : Vacant Urban Housing as a Per cent of Total Census Urban Housing Stock in the Mumbai Metropolitan Region – 2001 and 2011.



Source: Census 2001 and 2011 & IDFC Institute (2017).

8.108 Figure 16 shows the number and share of vacant census houses for 19 major cities in India. Of these cities, Mumbai has the highest number of total vacant houses (0.48 million), followed by Delhi (0.3 million) and Bengaluru (around 0.3 million). In terms of share of vacant houses to total residential stock, Gurgaon ranks highest (26 per cent). The phenomenon of high vacancy rates is not fully understood but unclear property rights, weak contract enforcement and low rental yields may be important factors. The spatial distribution of the new real estate may also be an issue as the vacancy rates generally increase with distance away from the denser urban cores. Figure 17 shows this trend for the Mumbai Metropolitan Area (MMR), where vacancy rates are higher in the districts of Thane and Raigad than in the denser "Island City" and Suburbs.

8.109 India's housing requirements are complex but till now policies have been mostly focused on building more homes and on home ownership. The above data suggests that we need to take a more holistic approach that takes into account rentals and vacancy rates. In turn, this needs policy-makers to pay more attention to contract enforcement, property rights and spatial distribution of housing supply vs. demand.

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09
CHAPTER

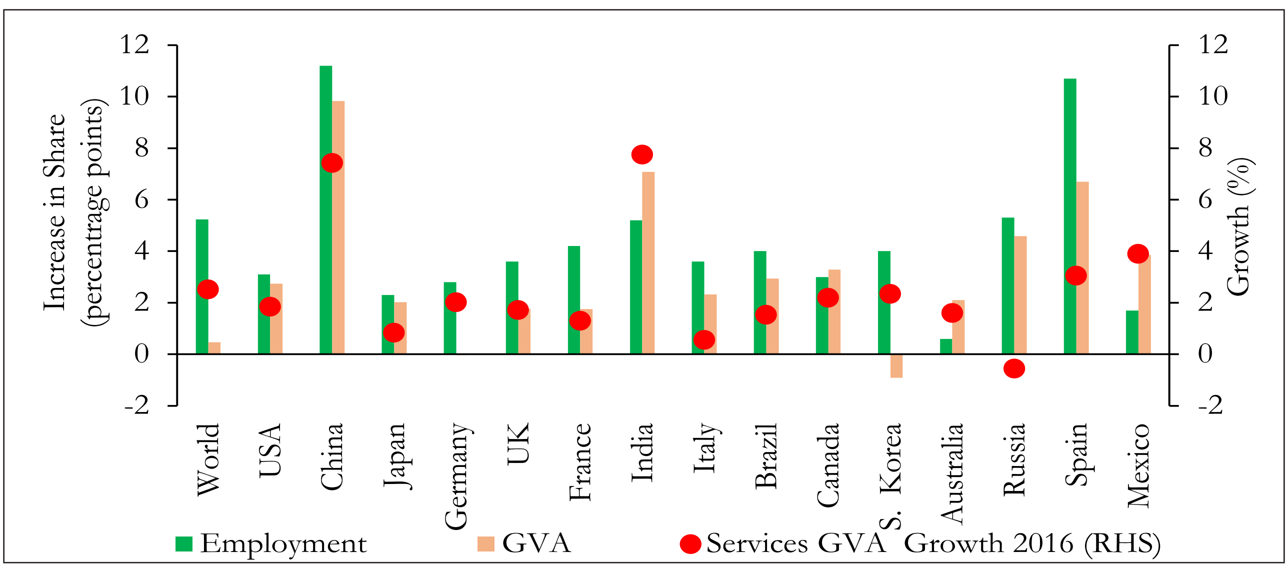
Services Sector

The services sector with a share of 55.2 per cent in India's gross value added continued to be the key driver of India's economic growth contributing almost 72.5 per cent of gross value added growth in 2017-18. While the growth of this sector in 2017-18 is expected to be at 8.3 per cent, the growth in services exports and net services were robust at 16.2 per cent and 14.6 per cent respectively in H1 of 2017-18. The Government has taken many initiatives in the different services which include digitization, e-visas, infrastructure status to Logistics, Start-up India, schemes for the housing sector, etc. which could give a further fillip to this sector.

INTERNATIONAL COMPARISON

9.1 As per the UN National Accounts Statistics data, India's ranking improved from 14th position in 2006 to 7th position in 2016, among the world's 15 largest economies in terms of overall GDP. Among these top 15 economies, China (9.8 pp) recorded the highest increase in services share to Gross Value Added (GVA) during 2006-16, followed by India (7.1 pp) and Spain (7.0 pp). In 2016, services GVA growth rate (at constant prices), was highest in India at 7.8 per cent followed by China at 7.4 per cent. As per the ILO's estimates, among the top 15 economies, the services sector accounted for more than two-thirds of total employment in 2016 in most of them except India and China, with India's share of 30.6 per cent being the lowest. While China had the highest increase in the share of services employment (10.2 pp) during the period 2006 to 2016, increase in India was 5.2 pp (Figure 1).

Figure 1: Increase in Share of Services in Employment and GVA during 2006-16



Source: Computed from UN National Accounts Statistics database for GVA and World Bank database for Employment.

9.2 Services export growth, both for World and India, which had dipped to negative territory in 2015 after an interregnum of 6 years from 2009, returned to positive territory in 2016. As per the latest World Trade Organization (WTO) data for first half of 2017, services export growth for the World was 4.3 per cent (average of Q1 and Q2) and robust at 9.9 per cent for India, though the highest growth was registered by Russia at 18.4 per cent. China's growth was at 0.2 per cent. (Figure 2)

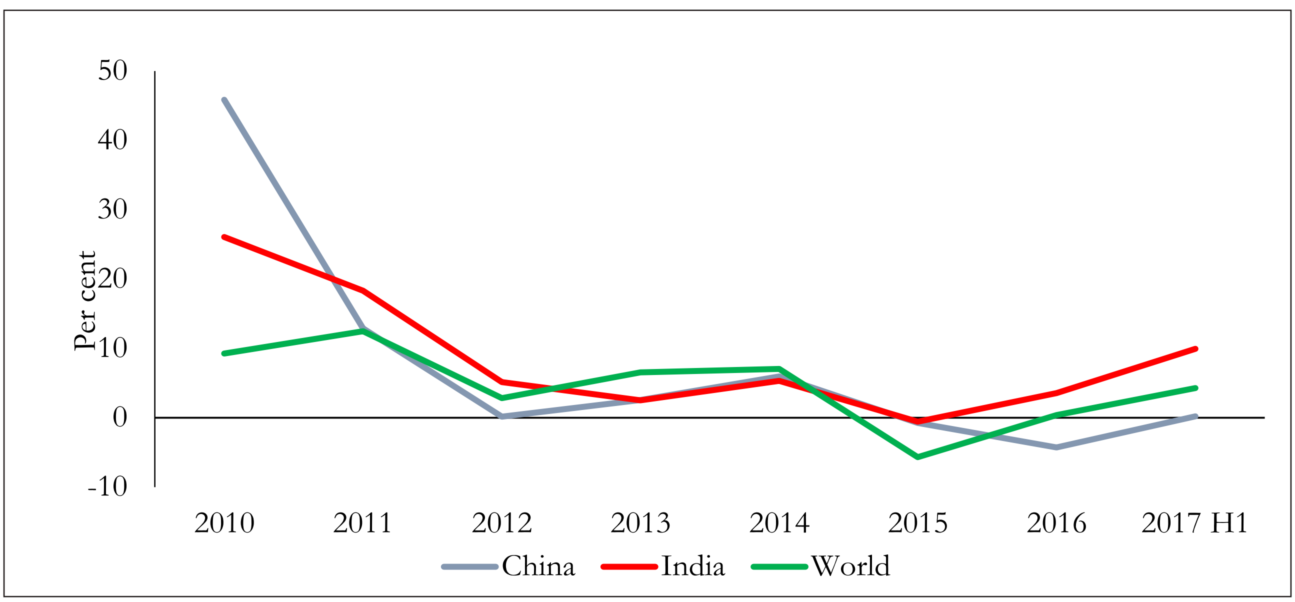
9.3 As per the World Investment Report 2017 published by United Nations Conference on Trade and Development (UNCTAD), following a surge in foreign investment in 2015, global FDI flows fell by 2 per cent in 2016, to US $1.75 trillion, amid weak economic growth. Global FDI flows are projected to increase by about 5 per cent in 2017. The services sector accounted for two thirds of global FDI stock in 2015, though a large part of this relates to affiliates of primary sector and manufacturing multinational enterprises (MNEs) that perform services-like activities, and fall under services as a default category. The share of services in total value of announced Greenfield projects increased to 58.2 per cent in 2016 from 54.1 per cent in the previous year.

INDIA'S SERVICES SECTOR

Services GVA

9.4 As per the First Advance estimates of national income 2017-18 released by Central Statistics Office (CSO), services sector growth (GVA at constant (2011-12) basic prices) is expected to be 8.3 per cent during 2017-18, higher than the growth of 7.7 per cent in 2016-17. The growth in trade, hotels, transport, communication and services related to broadcasting category is expected to be 8.7 per cent during 2017-18 as compared to 7.8 percent during 2016-17 and growth in the 'financial, real estate & professional services' category is likely to accelerate to 7.3 percent during 2017-18 from 5.7 percent in 2016-17. The 'public administration, defence & other services' category registered a growth of 11.3 per cent in 2016-17 as against 6.9 per cent in 2015-16, owing to higher payments of wages and salaries to government staff due to the implementation of recommendations of Seventh Pay Commission. This growth is expected to decelerate to 9.3 per cent in 2017-18, on a high base of 2016-17 (Table 1).

Figure 2: Commercial Services Export Growth Y-o-Y (Per cent)



Source: **World Bank and WTO data**

Note: **H1 = average of Q1 and Q2 for world.**

Table 1: Share and Growth of India's Services Sector (GVA at basic prices)

	Share (Per cent)	Growth (Per cent)		
	2015-16	2015-16	2016-17@	2017-18#
Total Services	**52.9**	**9.7**	**7.7**	**8.3**
Trade, repair, hotels and restaurants	11.4	11.2	7.8*	8.7*
Trade & repair services	10.4	10.9	--	--
Hotels & restaurants	1.0	14.4	--	--
Transport, storage, communication & services related to broadcasting	7.0	9.3	--	--
Railways	0.8	7.0	--	--
Road transport	3.2	6.7	--	--
Air transport	0.2	16.8	--	--
Financial services	5.8	6.8	5.7^	7.3^
Real estate, ownership of dwelling & professional services	15.3	12.5	--	--
Public Administration and defence & Others	13.4	6.9	11.3	9.4
Construction	8.1	5.0	1.7	3.6
Total Services (including Construction)	**61.0**	**9.1**	**6.9**	**7.7**
TOTAL GVA at basic prices	**100.0**	**7.9**	**6.6**	**6.1**
GDP Market Prices (Constant Prices) Y-o-Y		**8.0**	**7.1**	**6.5**

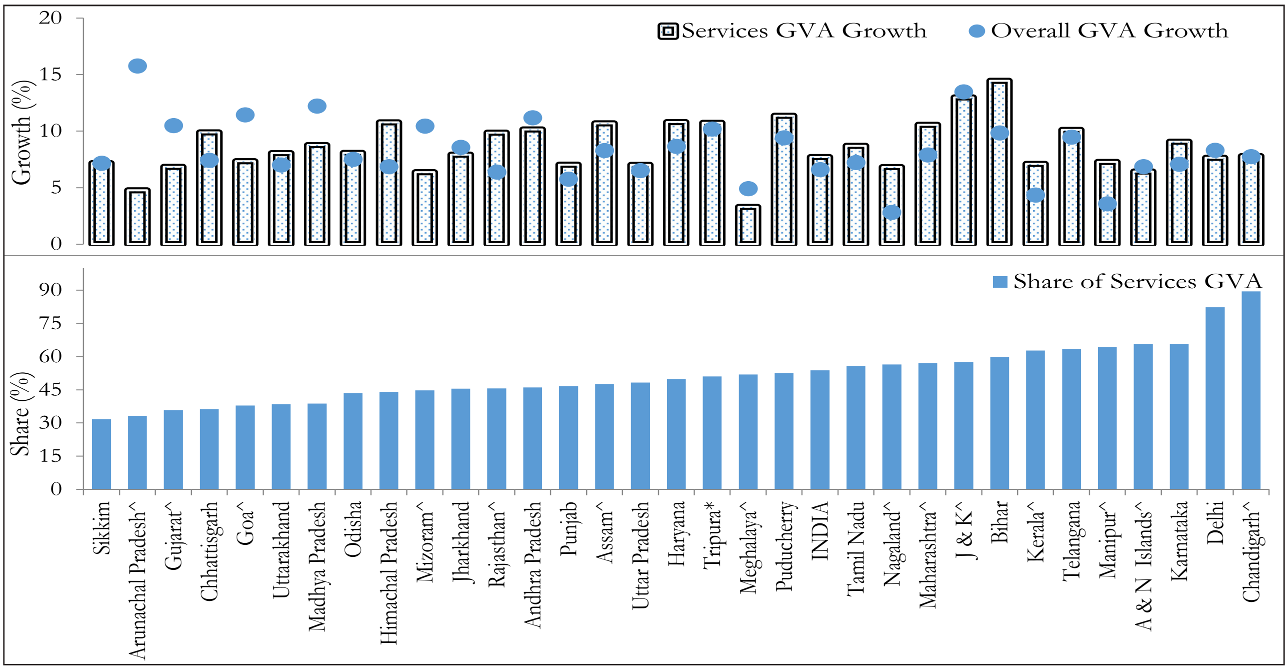
Source: **Computed from CSO data.**

Note: **Shares are in current prices and growth in constant 2011-12 prices; @ Provisional Estimates for 2016-17; # First Advance estimates, * Also includes transport, storage, communication & services related to broadcasting; ^ Also includes Real estate, ownership of dwelling & professional services.**

State-wise Comparison of Services

9.5 Out of the 32 States and Union Territories(UTs) for which data are released for new base 2011-12 series by CSO, the services sector is the dominant sector, contributing to more than half of the gross state value added (GSVA) in 15 states and UTs. The major services in most of the states are trade, hotels and restaurants, followed by real estate, ownership of dwellings and business services. However, there is wide variation in terms of share and growth of services GSVA. Out of the 32 states and UTs for which data are available for 2016-17 (or latest year for which data are available), in terms of services GSVA share, Delhi and Chandigarh are at the top with over 80 per cent share, while Sikkim is at the bottom with 31.7 per cent share. In terms of services GSVA growth, Bihar is at the top and Uttar Pradesh at the bottom with 14.5 per cent and 7.0 per cent growth respectively in 2016-17 (Figure 3).

Figure 3 : Share and Growth of Services in States (2016-17)



Source: **Computed from CSO data.**

Note: *** 2014-15, ^-2015-16, Share in current prices and growth at constant prices (2011-12).**

FDI in India's Services Sector

9.6 Though there is ambiguity in the classification of FDI in services, it is the combined FDI share of the top 10 service sectors such as financial and non-financial services falling under the Department of Industrial Policy & Promotion (DIPP)'s services sector definition; as well as telecommunications; trading; computer hardware & software; construction; hotels & tourism; hospital & diagnostic centres; consultancy services; sea transport; and information & broadcasting that can be taken as the best estimate of services FDI. However, these could include some non-service elements. The share of these services is 56.6 per cent of the cumulative FDI equity inflows during the period April 2000-October 2017 and 65.8 per cent of FDI equity inflows during 2017-18 (April-October). If the shares of another 5 services or service-related sectors like retail trading, agriculture services, education, book printing and air transport are included, then the total share of FDI equity inflows to the services sector would increase to 58.5 per cent and 69.6 per cent respectively for the above two periods. In 2016-17, FDI equity inflows to the services sector (top 10 sectors including construction) declined by 0.9 per cent to US$ 26.4 billion, though the overall FDI equity inflows grew by 8.7 per cent. However, during 2017-18 (April-October), the FDI equity inflows to these services sector grew by 15.0 per cent, as compared to 0.8 per cent growth in total FDI equity inflows, mainly due to higher FDI in two sectors i.e. Telecommunications and Computer Software and Hardware (Table 2).

9.7 In the last three years, the Government has undertaken a number of reforms to ensure that India remains an increasingly attractive investment destination, which include announcement of National Intellectual Property Rights (IPR) policy, implementation of GST, reforms for ease of doing business that resulted in improving India's ranking by 30 position. The scale of reforms can be gauged from the fact that during this period, 25 sectors also including services activities and covering 100 areas of FDI policy have undergone reforms. FDI policy provisions were radically overhauled across sectors such as construction development, broadcasting, retail trading, air transport, insurance and pension. At present, more than 90 per cent of FDI

Table 2: FDI Equity Inflows to the Services Sector

Sr	Sector	Value (in US$ Billion)		Share in Total (%)	Growth Rate (%)	
		2016-17	2017-18 (Apr-Oct)	Apr 2000 to Oct 2017	2016-17	2017-18 (Apr-Oct)
1	Services Sector *	8.7	3.4	17.6	26.0	-45.8
2	Construction #	2.0	1.4	9.9	-57.5	22.0
3	Telecommunications	5.6	6.1	8.4	320.1	115.9
4	Computer Software & Hardware	3.7	3.3	7.8	-38.2	116.0
5	Trading	2.3	1.6	4.4	-39.2	-1.2
6	Hotel & Tourism	0.9	0.6	3.0	-31.3	-4.1
7	Information & Broadcasting	1.5	0.5	2.0	50.3	-48.9
8	Hospital & Diagnostic Centres	0.7	0.6	1.4	0.7	6.9
9	Consultancy Services	0.3	0.4	1.1	-49.5	137.6
10	Sea Transport	0.7	0.6	0.9	71.2	71.1
	Top 10 services (1-10)	**26.4**	**18.4**	**56.6**	**-0.9**	**15.0**
	Top 15 services	**27.2**	**19.5**	**58.5**	**-1.7**	**17.5**
	Total FDI	**43.5**	**28.0**	**100.0**	**8.7**	**0.8**

Source: **Based on Department of Industrial Policy and Promotion (DIPP) data.**

Note: *** Financial, banking, insurance, non-financial business, outsourcing, R&D, courier, technology testing and analysis; #Combined with infrastructure activities and townships, housing, built-up infrastructure and construction-development projects.**

inflows are through automatic route. After the successful implementation of the e-filing and online processing of FDI applications by the Foreign Investment Promotion Board (FIPB), the Government announced to phase out the FIPB in the Union Budget 2017-18. Recently, on 10th January 2018, Union Cabinet approved amendments in FDI policy allowing 100 per cent FDI under automatic route for Single Brand Retail Trading. Foreign airlines also have been allowed to invest up to 49 per cent in Air India.

India's Services Trade

9.8 India remained the eighth largest exporter of commercial services in the world in 2016 (WTO, 2017) with a share of 3.4 per cent, which is double the share of India's merchandise exports in the world at 1.7 percent. Moreover, the ratio of services exports to merchandise exports increased from 35.8 per cent in 2000-01 to 58.2 per cent in 2016-17 indicating the growing importance of the services sector in India's exports. While, India's services exports registered a CAGR of 8.3 per cent during 2006-07 to 2016-17, in 2015-16 it registered negative growth of (-) 2.4 per cent. Services sector export growth returned to positive territory with 5.7 per cent growth rate in 2016-17. Services exports recorded a robust growth of 16.2 per cent during April-September 2017-18, with a turnaround in some major sectors like travel and software services (Table 3). With significant rise in foreign tourist arrivals, travel receipts, witnessed a robust growth of 27.7 per cent in the first half 2017-18 as compared to a growth of 7.6 per cent in the corresponding period of the previous year. Notwithstanding the pricing pressure on traditional services and a challenging global business environment facing domestic software companies, software services exports increased by 2.3 per cent, a mild improvement over the previous period.

9.9 India's services imports exhibited growth of 17.4 per cent in April-September 2017-18 as payments on transport sector increased by 15.0 per cent. Among the other major services imports, travel grew by 12.0 per cent and business services by 11.3 per cent (Table 3). The rise in business services payments was primarily led by higher payments for import of research and development services, professional & management consulting services and technical, trade related and other business services. Though the software services imports had a share of only 4.3 per cent, its growth was 47.6 per cent.

9.10 Lower growth in services exports than in imports led to a decline in net services receipts in 2015-16 and 2016-17. Net services receipts rose by 14.6 per cent during April-September of 2017-18. Net surplus in services financed about 49 per cent of India's merchandise deficit in 2017-18 H1 and cushioned the current account deficit.

9.11 To boost services exports, the Government in its mid-term Review of Foreign Trade Policy 2015-2020, has increased incentives under Services Exports from India Scheme (SEIS) by 2 per cent, leading to an additional annual incentive of Rs. 1,140 crore which could help services exports including Hotel & Restaurant, Hospital, Educational services, etc. Although world trade volume of goods and services is projected to accelerate in 2018, enhanced global uncertainty, protectionism and stricter migration rules would be key factors in shaping India's services exports.

MAJOR SERVICES: OVERALL PERFORMANCE

9.12 Some available indicators of the different services in India for 2016-17 (Table 4) along with the CMIE data (Table 5) show reasonably good performance of Tourism, Aviation, and Telecom sectors. The limited data available for 2017-18 also indicate good performance of these three sectors.

Table 3: Trade Performance of India's Major Services

	Value (US $ Billion)	Share (%)	Growth (%)			
	2016-17	2016-17	2015-16	2016-17	2016-17 H1	2017-18 H1
Services Exports	**163.1**	**100.0**	**-2.4**	**5.7**	**4.2**	**16.2**
Travel	23.2	14.2	4.6	9.3	7.6	27.7
Transportation	15.9	9.7	-19.9	13.2	9.6	6.9
Miscellaneous	121.2	74.3	-0.9	4.1	3.1	15.6
Software Services	73.7	45.2	1.4	-0.7	0.0	2.3
Business Services	32.9	20.2	2.0	13.6	8.4	7.6
Financial Services	5.1	3.1	-12.7	3.1	-4.1	-13.4
Services Imports	**95.7**	**100.0**	**3.7**	**13.0**	**16.5**	**17.4**
Travel	16.4	17.2	-3.4	11.1	15.7	12.0
Transportation	14.1	14.8	-6.8	-6.3	-10.0	15.0
Miscellaneous	63.0	65.9	9.8	19.5	26.5	19.3
Software Services	3.6	3.7	-0.3	32.9	25.9	47.6
Business Services	32.3	33.7	12.5	3.7	8.3	11.3
Financial Services	5.9	6.1	-12.4	86.7	69.3	-0.2
Net Services Exports	**67.5**	**100.0**	**-9.0**	**-3.2**	**-10.0**	**14.6**

Source : **Based on RBI's Balance of Payments (BoP) data (BPM-5).**

9.13 The Baltic Dry Index, a freight index and a good proxy for the robustness of trade and shipping services which fell from a peak of 11,793 on 20 May 2008 to a low of 663 on 8 December 2008 and was in the red at 290 on 11 February 2016, improved since then and was at 1,164 on 17 January 2018 (Figure 4).

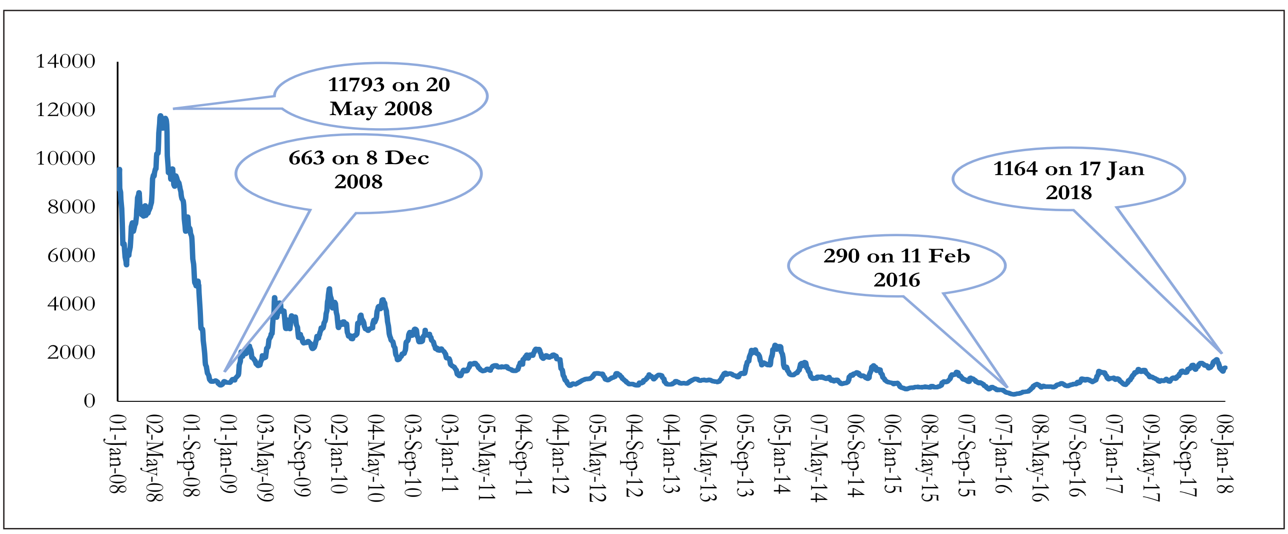
Table 4: Performance of India's Services Sector: Some Indicators

Sector	Indicators	Unit	Period			
			2009-10	2015-16	2016-17	2017-18
IT –BPM**	IT-BPM service revenues	US $ billion	64.0	129.4	139.9	150-152[P]
	Exports	US $ billion	49.7	107.8	116.1	124-125[P]
	Domestic	US $ billion	14.3	21.6	23.8	26-26.5[P]
Aviation*	Airline passengers (Total)	Million	77.4	135.0	158.4	(76.1)86.7[#]
	Domestic	Million	45.3	85.2	103.7	(49.5)57.5[#]
	International	Million	32.1	49.8	54.7	(26.6)29.2[#]
Telecom	Telecom connections (wireline and wireless)[b]	Billion	0.6	1.0	1.2	(1.1)1.2[~]
Tourism	Foreign tourist arrivals[a]	Million	5.2	8.0	8.8	10.2
	Foreign exchange earnings from tourism[a]	US $ billion	11.1	21.1	22.9	27.7
Shipping	Gross tonnage of Indian shipping[b]	Million GT	9.6	10.9	11.6	12.7[@]
	No. of ships[b]	Numbers	998	1273	1316	1374[@]
Ports	Port traffic	Million tonnes	850.0	1071.9	1133.1	574.7[#]

Sources: **Compiled from Telecom Regulatory Authority of India (TRAI), Ministry of Tourism, Ministry of Shipping, Directorate General of Civil Aviation, NASSCOM.**

Note: **[a] calendar years, for example 2009-10 for 2009; [b] As on 31 March of the financial year; [@] data is as on 31 December 2017, # data is for April to September 2017, GT=gross tonnage; MT=metric tonnes; ** excluding hardware. [P] Range Projected for 2017-18. *Domestic Passengers carried by scheduled Indian carriers on scheduled domestic services only and International Passengers carried by scheduled Indian as well as foreign carriers to and from the Indian territory; data in parentheses is for same period of previous year.**

Figure 4: Baltic Dry Index



Source: **https://in.investing.com/indices/baltic-dry-historical-data**

Table 5: Growth in Net Sales of Select Services: Company Based Data

Services	Net Sales							
	2015-16	2016-17	2016-17				2017-18	
			Q1	Q2	Q3	Q4	Q1	Q2
Transport Logistics	1.0	7.3	4.9	6.7	9.8	7.7	6.6	4.3
Shipping	-1.6	-18.7	-25.2	-29.2	-12.8	-4.7	5.1	4.4
Aviation	6.7	9.1	6.0	14.1	9.5	34.6	18.7	12.6
Retail trading	23.0	19.5	29.7	29.5	0.8	23.7	24.4	9.6
Health services	15.4	12.8	12.1	14.4	13.6	11.2	10.8	10.5
Hotel & Restaurant	8.1	2.7	2.0	4.3	3.9	0.8	4.8	-2.6
ITES	17.8	9.5	18.8	8.2	7.1	5.2	5.2	0.7
Software	11.2	7.2	10.7	6.8	7.3	4.5	3.0	4.7
Construction & Real Estate	7.6	-1.9	4.9	-6.5	-3.5	-1.9	7.4	-3.6

Source: **Exim Bank of India Research (Data derived from CMIE).**
Note: **Annual Data refers to Gross Sales.**

9.14 An analysis of the sales results of services sector firms in the last few quarters, shows that the only sector which has been showing signs of stress is the Construction and Real Estate sector. In the first two quarters of 2017-18, all sectors are performing well except Hotel & Restaurant and Construction & Real Estate sectors, in Q2.

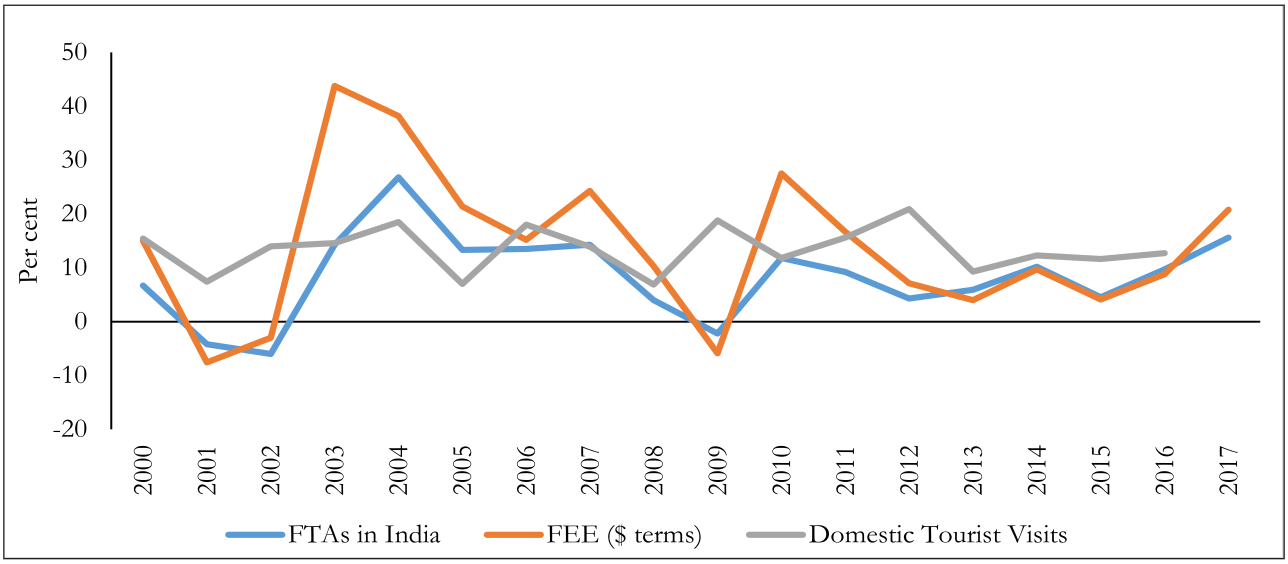
MAJOR SERVICES: SECTOR-WISE PERFORMANCE AND SOME RECENT POLICIES

9.15 This section covers some of the important services for India based on their significance in terms of GDP/GVA, employment, exports and future prospects. Some important services covered in other chapters have been excluded to avoid duplication.

Tourism

9.16 As per the latest World Tourism Barometer of the United Nation's World Tourism Organization (December, 2017 edition) international tourist arrivals reached a total of 1.2 billion in 2016, 46 million more than in the previous year, though the growth rate of 3.9 per cent was lower than in 2015 (4.6 per cent). In India, the Tourism sector has been performing well with Foreign Tourist Arrivals (FTAs) growing at 9.7 per cent to 8.8 million and Foreign Exchange Earnings (FEEs) at 8.8 per cent to US$ 22.9 billion in 2016. As per the provisional data of Ministry of Tourism, FTAs during 2017 were 10.2 million, with a growth of 15.6 per cent, while, the FEEs from tourism were US$ 27.7 billion, with a growth of 20.8 per cent over 2016 (Figure 5).

Figure 5: Growth of FTAs, FEEs and Domestic Tourist Visits



Source: **Based on data from Ministry of Tourism data.**

9.17 Outbound tourism has also picked up in recent years, with the number of departures of Indian nationals from India growing at 7.3 per cent during 2016 to 21.9 million from 20.4 million, in 2015. This is more than double the foreign tourist arrivals in India. Domestic tourist visits grew by 12.7 per cent to 1,614 million in 2016 from 1,432 million in 2015. In terms of number of domestic tourist visits, Tamil Nadu, Uttar Pradesh, Andhra Pradesh, Madhya Pradesh, and Karnataka were the top 5 destination States, accounting for 61.3 per cent of total number of tourist visits in 2016. Amongst centrally protected ticketed monuments, for domestic visitors, Taj Mahal was the most visited monument in 2016 followed by Qutub Minar and Red Fort, while for foreign visitors Taj Mahal was the most visited monument, followed by Agra Fort and Qutub Minar.

9.18 Various initiatives have been taken by the Government to promote tourism. Recent measures include the introduction of the e-Visa facility under three categories of Tourist, Medical and Business for the citizens of 163 countries; launch of Global Media Campaign for 2017-18 on various Channels; launch of 'The Heritage Trail' to promote the World Heritage Sites in India, launch of International Media Campaign on various international TV channels; Celebration of 'Paryatan Parv' having 3 components namely 'Dekho Apna Desh' to encourage Indians to visit their own country, 'Tourism for All' with tourism events at sites across all states in the country, and 'Tourism & Governance' with interactive sessions & workshops with stakeholders on varied themes. FTAs on e-Tourist Visa grew by 143 per cent to 10.8 lakh in 2016, and further grew by 57.2 per cent to 17.0 lakh during 2017.

IT –BPM Services

9.19 India's Information Technology - Business Process Management (IT-BPM) industry grew by 8.1 per cent in 2016-17 to US$ 139.9 billion (excluding e-commerce and hardware) from US$ 129.4 billion in 2015-16, as per NASSCOM data. IT-BPM exports grew by 7.6 per cent to US$ 116.1 billion from US$ 107.8 billion during the same period. E-commerce market is estimated at US$ 33 billion, with a 19.1 per cent growth in 2016-17. However as per the RBI data, software exports registered a growth of (-) 0.7 per cent in 2016-17. In 2017-18 H1, it grew by 2.3 per cent. USA, UK and EU account for around 90 per cent of the total IT-ITES exports. While, there are new challenges surfacing in these traditional geographies, demand from APAC, Latin America and Middle East Asia is growing and new opportunities are emerging for expanding in continental Europe, Japan, China and Africa.

9.20 Overall, the IT-BPM industry is estimated to employ nearly 3.9 million people in 2016-17, an addition of around 173,000 persons over 2015-16. The industry comprises 16,000 plus firms that offer the complete range of services with over 4,750 start-ups. The share of ICT in total services exports for India declined marginally during the decade (2006-2016), while the ICT share in total services exports has increased in economies like China, Brazil, Russia, Philippines, Israel and Ukraine indicating increasing competition for India from these countries (Figure 6).

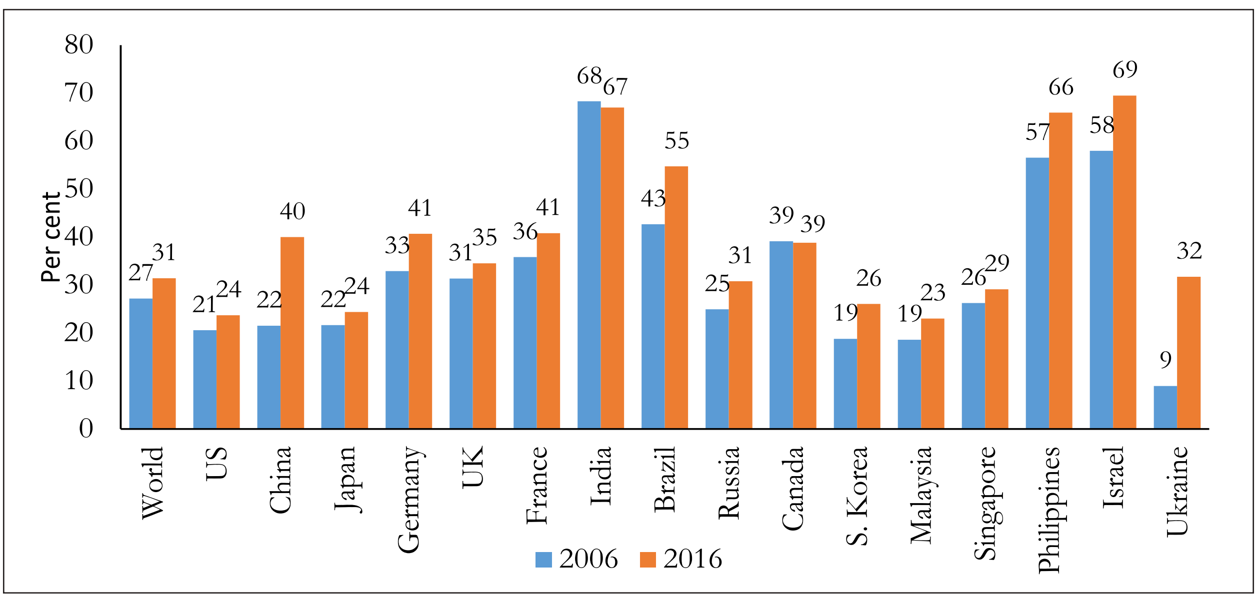
9.21 To further promote this sector, many initiatives have been taken. These include the establishment of BPO Promotion and Common Services Centres to help create digital inclusion and equitable growth and provide employment to 1.45 lakh persons, mostly in the small towns; setting up a separate Northeast BPO promotion scheme with 5000 seats and having employment potential of 15000 persons; preparing the draft open data protection policy law; besides long-term initiatives like Digital India, Make in India, Smart Cities, e-Governance, push for digital talent through Skill India, drive towards a cashless economy and efforts to kindle innovation through Start-up India.

Real Estate and Housing

9.22 The share of real estate sector which includes ownership of dwellings accounted for 7.7 per cent in India's overall GVA in 2015-16. The growth of this sector decelerated in the last three years from 7.5 per cent in 2013-14 to 6.6 per cent in 2014-15 and further to 4.4 per cent in 2015-16. This was mainly due to the growth of ownership of dwelling segment having a share of 6.8 per cent in overall GVA decelerating from 7.1 per cent in 2013-14 to 3.2 per cent in 2015-16. The growth of the construction sector which includes buildings, dams, roads, bridges, etc. has decelerated to 1.7 per cent in 2016-17 from 5.0 per cent in 2015-16.

9.23 Residential launches across top 14 cities in India during H1 2017 fell to the lowest in past five years to about 58,000 units as per the National Real Estate Development Council (NAREDCO).

Figure 6: ICT service exports (% of service exports)



Source: **Based on World Bank Database accessed on 19 January, 2018**

Note: **ICT- Information and communication technology service exports include computer and communications services (telecommunications and postal and courier services) and information services (computer data and news-related service transactions).**

Similarly, new residential sales, fell to five years low of about 101,850 units during this period. While sales during H1 2017 were down by over 38 per cent compared with H1 2016, unit launches were down by over 56 per cent during the same period. Though some recent reforms might have affected the residential market in the short term, these reforms helped in bringing down the unsold inventory levels from 888,373 units witnessed in April 2016, to about 807,903 units in October 2017. Private equity investments in the real estate sector have increased from US$ 0.9 billion in 2013 to over US$ 5.9 billion in 2016, recording more than six fold jump during this period. The year 2017 is on its course to witness the highest annual investment in Indian realty in the past decade, with about US$5 billion worth of funds already been invested between January and June 2017. The strength of the Indian economy and favorable demographics, coupled with the introduction of several growth oriented reforms are aiding the real estate sector to attract higher investments. Indian real estate has attracted institutional investments (excluding bank credit to commercial real estate) of over US$ 10.7 billion, since the beginning of 2016, which is more than half of the total investments witnessed since 2013. FDI into construction development sector declined to US$ 107 million in 2016. The reason for the substantial and continuous decline in FDI investments in this sector over the past five years was that the offshore investors have been deploying majority of their funds through debt or structured debt route. This protects their investments by providing certain fixed returns on the debt provided to developers and at the same time reduces the risk of investments. However, it has began to show signs of improvement with the total FDI of US$257 million in H1 2017, which is more than double the total FDI in 2016 full year. This positive sentiment was attributed to a host of factors including regulatory environment, enhanced infrastructure, and amendments to Real Estate Investment Trusts (REITs). These policy initiatives are expected to lead to higher transparency, accountability and make the sector better organised and structured, thereby increasing the investment. On demand side, the individual housing loan disbursements of Public Sector Banks (PSBs) and Housing Finance Companies (HFCs) have shown an increase of nearly 11 per cent in 2016-17 over 2015-16. However, increasing non-performing assets (NPAs) of individual housing loan portfolios of PSBs and HFCs is a cause for concern.

9.24 As per NHB RESIDEX, housing price index has shown increasing annual trend in 36 cities during April-June 2017 out of 50 major cities, with Vizag recording the highest increase of 15.7 per cent, Delhi recording 8.1 per cent, and NOIDA recording the lowest increase of 0.9 per cent. Among the 13 cities witnessing a fall in index, the highest decline was recorded in Bhiwadi (-10.6 per cent), followed by Coimbatore (-6.6 per cent), and Chandigarh (-5.9 per cent).

9.25 Rising NPAs, higher risk provisioning assigned to real estate sector and dwindling profits in the real estate sector, have made banks reluctant to lend to the sector. As a result, share of bank lending for organized funding to real estate sector has dropped significantly from over 68 per cent in 2013, to 17 per cent in 2016. Interestingly, Private Equity (PE) funds and financial institutions such as pension funds and sovereign wealth funds have replaced banks as the largest source of this sector. The share of PE funds and these institutions in real estate funding has gone up significantly from 14 per cent in 2013 to over 82 per cent in 2016. On a cumulative basis for the 2013-16 period, PE funds have been the highest source of funding accounting for 57 per cent share, followed by bank lending with 34 per cent share, while the remaining 9 per cent is funded through FDI inflows.

9.26 Real estate and construction together, is the second largest employment provider in the country, next only to agriculture. It employed over 40 million workforce in 2013, and as per projections is slated to employ over 52 million workforce by 2017, and 67 million workforce by 2022. This implies that it will generate over 15 million jobs over the next five years, which will translate to about three million jobs annually.

Nearly 90 per cent of the workforce employed in the real estate and construction sector are engaged in construction of buildings. The remaining 10 per cent workforce is involved in building completion, finishing, electrical, plumbing, other installation services, demolition and site preparation. Over 80 per cent of the employment in real estate and construction constitutes minimally skilled workforce, while skilled workforce account for over 9 per cent share, and the remaining are spread across work classes such as clerical, technicians, and engineers. As per the National Skill Development Council (NSDC), Real estate and construction is expected to require over 66 million people by 2022.

9.27 Some of the recent reforms and policies related to Real Estate sector include the Pradhan Mantri Awas Yojana (PMAY) with the government sanctioning over 3.1 million houses for the affordable housing segment in urban regions till November 2017. Of this, about 1.6 million houses have been grounded and are at various stages of construction, and about 0.4 million houses have been built under the mission. PPP policy for affordable housing was also announced on 21 September 2017 for affordable housing segment to provide further impetus to the ambitious 'Housing for all by 2022' mission. Credit Linked Subsidy Scheme (CLSS) under PMAY was extended to the Middle Income Group (MIG) segment, which got included in the scheme from 01 January 2017. With the enactment of Real Estate (Regulation & Development) Act, 2016, it is anticipated that accountability would lead to higher growth across the real estate value chain, while compulsory disclosures and registrations would ensure transparency.

Research and Development

9.28 As per the CSO's new method, there is no separate head for Research and Development (R&D), which is now a part of the professional scientific & technical activities. These services grew by 17.5 per cent and 41.1 per cent in 2014-15 and 2015-16 respectively. India-based R&D services companies, which account for almost 22 per cent of the global market, grew at 12.7 per cent. However, India's gross expenditure on R&D has been low at around 1 per cent of GDP. India currently ranks 60th out of 127 on the Global Innovation Index (GII) 2017, though this ranking has improved from 66th rank in 2016. Among the BRICS countries only South Africa is behind India in R & D expenditure ranking.

Table 6: Global Innovation Index of some select economies

	Global Innovation Index 2017		Human capital and research		Research and development (R&D)		Researchers		Gross expenditure on R&D (GERD)	
	(Rank)	(Score)	(Rank)	(Score)	(Rank)	(Score)	(Rank)	(Score)	(Rank)	(Score)
Brazil	69	33.1	50	35.9	29	37.2	55	8.3	32	26.9
China	22	52.5	25	49.2	17	58.5	45	14.1	17	48.5
India	**60**	**35.5**	**64**	**32.3**	**32**	**35.9**	**81**	**1.8**	**43**	**19.1**
South Korea	11	57.7	2	66.2	1	88.2	3	85.8	2	98.4
Russia	45	38.8	23	50	25	41.5	29	37.8	34	26.1
South Africa	57	35.8	60	32.8	39	27.1	65	5.2	48	16.6
UK	5	60.9	6	63.3	10	69.5	18	54.1	21	39.5
USA	4	61.4	13	57.2	4	78.8	20	51.2	10	65

Source: **Global Innovation Index 2017**

9.29 According to the global rankings of service providers in the Engineering R&D segment for 2016, the R&D spend by global top 500 R&D spenders is growing consistently at 1.5 per cent over the last two years with focus on building digital first R&D organizations. The total R&D Globalization & Services opportunity in 2016 was estimated at US$ 232 billion, and is projected to reach US$ 289 billion by 2021. Embedded and Software engineering constitute 76 per cent of the R&D outsourcing market. On the geographical spread, India, Western Europe and North America capture 75 per cent of the global Engineering R&D Services market. India's Engineering R&D (ER&D) globalization and services market, which currently stands at about US$ 22 billion, is expected to reach US$ 38 billion by 2020.

9.30 However, according to the Global Competitiveness Report 2017-18, India's capacity for innovation has been lower than that of many countries like the USA, the UK, South Korea, but better than China's. In terms of university–Industry collaboration on R&D, India ranks better than all other BRICS countries and in terms of availability of scientists and engineers, it ranks better than other BRICS countries except China. However, in terms of patents applications per million population, India significantly lags behind other BRICS countries and in terms of company spending on R&D, India ranks marginally below China (Table 7).

9.31 The government has taken many initiatives to promote the R&D sector in India, which include among others establishing the Atal Innovation Mission (AIM) in the National Institution for Transforming India (NITI) Aayog. Some other initiatives related to R&D include the following. The agreement between India and Israel in 2016 to enhance bilateral cooperation in science and technology provides US$ 1 million from each side in the next two years to support new R&D projects in the areas of big data analytics in healthcare and cyber security. The Ministry of Environment, Forest and Climate Change (MoEFCC) has announced an R&D initiative to develop next generation sustainable refrigerant technologies as alternatives to the currently used refrigerant gases like hydrofluorocarbons (HFCs), in order to mitigate its impact on the ozone layer and climate. The Department of Industrial Policy and Promotion (DIPP) aims at lowering the time

Table 7: Global Competitiveness Index: R&D Innovation

Country	Capacity for innovation		Quality of scientific research institutions		Company spending on R&D		University – Industry collaboration on R&D		Availability of scientists and engineers		PCT patents granted/million population		Overall Innovation	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
USA	6.0	2	6.0	5	5.9	2	5.7	2	5.7	2	176.5	10	5.8	2
UK	5.5	11	6.3	2	5.1	14	5.4	6	4.9	17	99.1	18	5.1	12
South Korea	4.7	35	4.8	32	4.4	28	4.4	27	4.5	38	249.5	5	4.8	18
India	**4.5**	**42**	**4.7**	**35**	**4.5**	**23**	**4.4**	**26**	**4.6**	**32**	**1.7**	**63**	**4.1**	**29**
China	4.5	44	4.6	36	4.6	21	4.4	28	4.7	29	17.7	30	4.1	28
South Africa	4.9	30	4.4	42	4.3	32	4.4	29	3.5	100	5.8	49	3.8	39
Russia	4.2	65	4.4	41	3.5	54	3.9	42	4.3	50	7.8	46	3.5	49
Brazil	4.1	73	3.7	77	3.4	62	3.4	70	3.6	90	3.4	53	3.2	85

Source: **Global Competitiveness Report 2017-18, World Economic Forum.**

Note: **PCT- Patent Cooperation Treaty.**

taken to clear pending Intellectual Property Rights (IPR) applications. The Department of Scientific & Industrial Research (DSIR) is operating a scheme for granting recognition & registration to in-house R&D units established by corporate sector, such as, development of new technologies, design & engineering, process/product/design improvements, developing new methods of analysis & testing, research for increased efficiency in use of capital equipment, materials & energy, pollution control, effluent treatment, recycling of waste products etc. As on 31st December 2016, in-house R&D units of 1900 firms were recognized by DSIR. Out of these, about 60 companies are offering R&D services, in the areas of Information Technology, Telecom, Healthcare, Power, Engineering, Biotechnology, Defence, etc. The Council of Scientific and Industrial Research, an autonomous body of DSIR is known for its cutting edge R&D knowledge base in diverse S&T areas and has a pan India presence through its network of 38 national laboratories, which undertake focused basic as well as applied research. CSIR has also established 39 outreach centres and 3 Innovation Complexes. CSIR's R&D expertise and experience is embodied in around 3700 active scientists supported by around 6000 scientific and technical personnel. National Research Development Corporation (NRDC), a Public Sector Enterprise (PSE) of DSIR offers comprehensive technology transfer services for licensing of technologies and know-how to industries, which are assigned to NRDC by R&D institutions, universities, etc.

9.32 Buoyed by the government's support, the R&D sector in India is all set to witness robust growth in the coming years. According to a study by management consulting firm Zinnov, engineering R&D market in India is estimated to grow at a CAGR of 14 per cent to reach US$ 42 billion by 2020. India is also expected to witness strong growth in its agriculture and pharmaceutical sectors as the government is investing large sums to set up dedicated research centres for R&D in these sectors. The Indian IT industry is also expected to add to the development of the R&D sector.

Space Services

9.33 Indian Space Programme contributes to national development, through the application of space technology, comprising communication, navigation and earth observation to address issues related to societal development and strategic requirements. Satellite based mapping and launching services are the two areas in which India is making a mark and has huge potential for the future. In Satellite Mapping, there has been a decline in the foreign exchange earnings in recent years, primarily due to free and open data policy adopted by many space agencies. India is negotiating with the customers for renewal of contracts. Further, Indian Space Research Organisation (ISRO) is pursuing a project to support ASEAN Member states including Myanmar to receive and process data from Indian remote sensing satellites (Resourcesat-2 and Oceansat-2) and also to provide training in space science, technology and applications for the benefit of the ASEAN member countries. Antrix currently enables direct reception and processing of data from Indian Remote Sensing (IRS) Satellites namely Resourcesat-2, Oceansat-2 and Cartosat-1 at International Ground Stations/ processing facilities outside India. There is further potential for exports and Antrix is working to increase the International Ground Station (IGS) and negotiations in this regard are in advanced stages. During 2017-18, Antrix has been working with various resellers across the globe for distribution of IRS data, including Europe, USA, Latin America, Africa and South Eastern Countries. During 2018-19, these efforts would be strengthened. New products and services released by ISRO would be marketed by Antrix.

9.34 In the case of Satellite Launching, as on March 2017, PSLV had successfully launched 254 satellites. This includes 37 National Satellites, 8 student satellites built by universities/ academic institutions, one re-entry mission and 209 foreign satellites from 29 Countries. Foreign exchange earnings of India from export of satellite launch services increased noticeably in 2015-16 and 2016-

17 to Rs 394 crore and Rs 275 crore from Rs 149 crore in 2014-15. Consequently, India's share in global satellite launch services revenue has also increased to 1.1 per cent in 2015-16 from 0.3 per cent in 2014-15. Foreign Exchange earnings in 2015-16 were higher due to two dedicated PSLV missions for launching international customer satellites, while in 2016-17 there was launching of international customer satellites only as co-passengers to the Indian national satellite missions. Antrix foresees greater utilization of PSLV, GSLV and GSLV-Mk-III launch services by the international community for launching their Low Earth orbit (LEO) satellites.

Conclusion

9.35 The growth of India's services sector is expected to improve in 2017-18 *vis-a-vis* 2016-17. This improvement is also reflected in the Nikkei/ IHS Markit Services Purchasing Manager's Index (PMI) which was 48.5 in November 2017 but improved to 50.9 in December 2017. The prospects look bright with good performance of sub sectors like Tourism, Aviation, and Telecom, robust services trade performance with even growth of major services like software returning to positive territory. The downward risk, however, lies in the external environment for software and business services.

10 CHAPTER

Social Infrastructure, Employment and Human Development

Economists have long known that people are an important part of the wealth of nations.

T.W.Schultz

To engineer an inclusive and sustainable growth for India, the social infrastructure like education, health and social protection are being given utmost priority by the Government. The Government has been enhancing the expenditure on human capital along with adopting measures to improve the efficiency of expenditure by convergence of schemes. Several labour reform measures including legislative ones, are being implemented for creation of employment opportunities and for providing sustainable livelihoods for the population who are largely engaged in the informal economy. Bridging the gender gaps in education, skill development, employment, earnings and reducing social inequalities prevalent in the society have been the underlying goals of the development strategy to enhance human capabilities.

10.1 Investment in human capital is a pre-requisite for a healthy and productive population for nation building. Being a developing economy, there is not enough fiscal space to increase the expenditure on critical social infrastructure like education and health in India. However, given the limited resources, the Government has consistently prioritized strengthening the educational and health profile of the population. As India is poised to grow as one of the leading knowledge economies, education, skill development and health will remain priorities for the Government.

TRENDS IN SOCIAL SECTOR EXPENDITURE

10.2 Public investment in social infrastructure like education and health is critical in the development of an economy. However, the expenditure on social services by the Centre and States as a proportion of GDP has remained in the range of 6 per cent during 2012-13 to 2014-15. There has been a marginal decline to 5.8 per cent in 2015-16 which has further moved up to 6.6 per cent in 2017-18 (BE) (Table.1).The data of 29 States, sourced from *State Finances: A Study of Budgets of 2016-17(RBI)* have shown upward movement in expenditure on social services (as a percentage of GSDP) from 6.0 per cent to 6.9 per cent during 2014-15 to 2016-17 (BE).

EDUCATION FOR ALL

10.3 The Government of India is committed to achieving the Sustainable Development Goal (SDG- 4) for education – "Ensure inclusive and quality education for all and promote lifelong learning" by 2030. With a view to achieve the goal of universalization of elementary education, the Right to Free & Compulsory Education (RTE) Act, 2009 had been enacted in 2010 that provides a justiciable legal framework entitling all children between the ages of 6-14 years free

Table 1: Trends in Social Services Expenditure by General Government (Centre and States)

Items	2012-13	2013-14	2014-15	2015-16	2016-17 RE	2017-18 BE
						(₹ in lakh crore)
Total Expenditure	26.95	30.00	32.85	33.78	40.60	43.96
Expenditure on Social Services	6.58	7.46	7.68	7.90	9.84	10.94
i) Education	3.13	3.48	3.54	3.31	3.95	4.41
ii) Health	1.26	1.39	1.49	1.52	2.26	2.25
iii) Others	2.20	2.59	2.65	3.07	3.63	4.27
As percentage to GDP						
Total Expenditure	27.1	26.7	26.4	24.7	26.7	26.4
Expenditure on Social Services	6.6	6.6	6.2	5.8	6.5	6.6
i) Education	3.1	3.1	2.8	2.4	2.6	2.7
ii) Health	1.3	1.2	1.2	1.1	1.5	1.4
iii) Others	2.2	2.3	2.1	2.2	2.4	2.6
As percentage to total expenditure						
Expenditure on Social Services	24.4	24.9	23.4	23.4	24.2	24.9
i) Education	11.6	11.6	10.8	9.8	9.7	10.0
ii) Health	4.7	4.6	4.5	4.5	5.6	5.1
iii) Others	8.2	8.6	8.1	9.1	8.9	9.7
As percentage to social services						
i) Education	47.5	46.7	46.1	41.9	40.2	40.3
ii) Health	19.1	18.7	19.4	19.2	22.9	20.6
iii) Others	33.4	34.7	34.6	38.9	36.9	39.1

Source: Budget Documents of Union and State Governments, Reserve Bank of India.

Notes: 1. Social services include, education, sports, art and culture; medical and public health, family welfare water supply and sanitation; housing; urban development; welfare of SCs, STs and OBCs, labour and labour welfare; social security and welfare, nutrition, relief on account of natural Calamities etc.

2. Expenditure on 'Education' pertains to expenditure on 'Education, Sports, Arts and Culture'.

3. Expenditure on 'Health' includes expenditure on 'Medical and Public Health', 'Family Welfare' and 'Water Supply and Sanitation'.

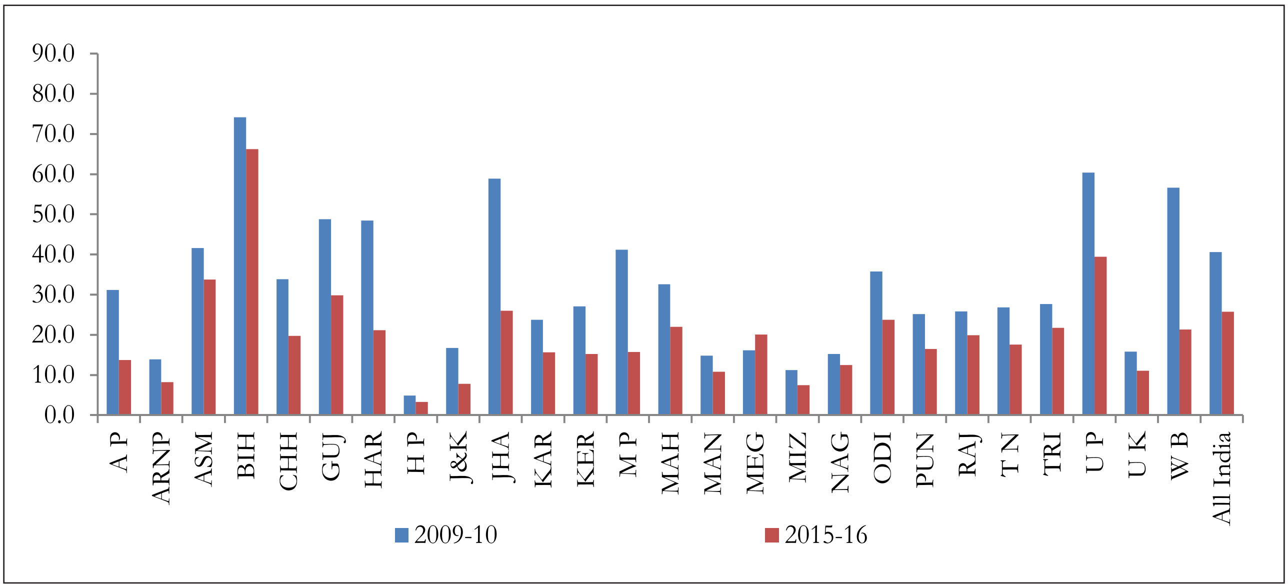
4. GDP data from 2011-12 are as per the new base year 2011-12. GDP for 2016-17 and 2017-18 are provisional estimates and advance estimates respectively.

5. Data pertains to Union Government and 26 states.

and compulsory admission, attendance and completion of elementary education. It provides for children's right to an education of equitable quality, based on principles of equity and non-discrimination.

10.4 India has made significant progress in quantitative indicators such as enrolment levels, completion rates and other physical infrastructure like construction of school buildings/class rooms, drinking water facilities, toilet facilities and appointment of teachers etc. at elementary school level.

Figure 1: State-wise Primary Schools with Student Classroom Ratio >30 (per cent)



Source: **Elementary Education in India and Flash Statistics (UDISE)**

10.5 In addition to quantitative indicators, the quality of education also needs to be monitored and assessed. The learning outcomes are assessment standards indicating the expected levels of learning that a student should achieve for that particular class. Towards improving the learning outcomes at elementary school level, Central Rules under the RTE Act have been amended in February, 2017 to include the defined class-wise, subject-wise learning outcomes.

10.6 The RTE Act, 2009 lays down the guidelines for maintaining the norms and standards relating inter alia to Pupil Teacher Ratios (PTRs), buildings and infrastructure, school-working days, teacher-working hours in both primary and upper primary schools. The impact of PTR on learning achievement is widely discussed with some studies claiming that school participation and grade attainment are positively influenced by Student Classroom Ratio (SCR) and PTR. The following section looks at some of the selected indicators such as SCR, PTR and Gender Parity Index (GPI) to assess the effectiveness and inclusiveness of the schooling system.

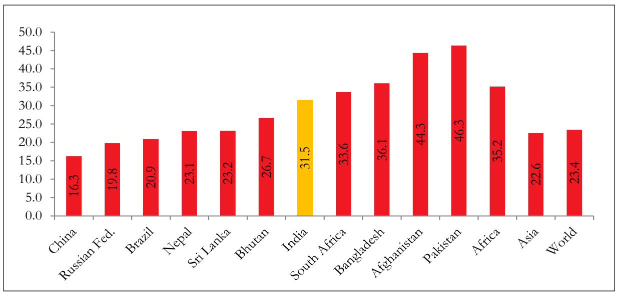
Student Classroom Ratio

10.7 SCR is defined as average number of pupils (students) per classroom in a school in a given school-year. The ideal size should be at 30 students per classroom. At all India level, percentage of schools with SCR greater than 30 students declined from 43 per cent in 2009-10 to 25.7 per cent in 2015-16. Though, SCR improved in almost all of the States, there are variations in the improvement across States (Figure 1).

Pupil Teacher Ratio

10.8 At primary level and upper primary level, the PTR should be 30:1 and 35:1 respectively. As per Unified District Information System for Education (UDISE), the PTR at national level for primary schools is 23:1 in 2015-16. Globally, there are variations in the optimum number of students taught in a particular class and as such the data is not uniformly comparable. Data from the UNESCO Institute of Statistics on PTR in primary schools shows that India has a national PTR comparable to countries with similar socio-

Figure 2 : PTR in Primary Education 2015



Source : **Data extracted from http://data.uis.unesco.org/ on 18 January, 2018**

Note : **2014 data used in respect of Bhutan, Brazil, Russian Federation and South Africa**

economic indicators (Figure 2).

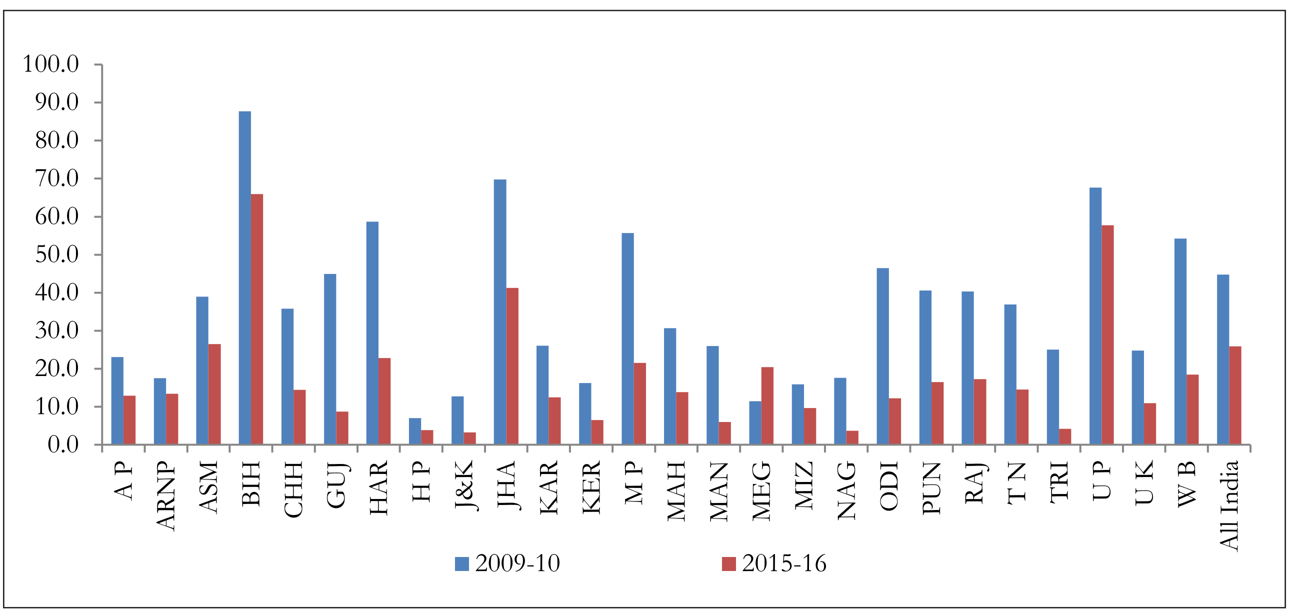
10.9 Figure 3 highlights that most of the States reported an improvement in schools complying with PTR norms of RTE Act during 2009-10 to 2015-16. However, despite improvement in number of schools complying with PTR norms, States like Bihar, Jharkhand, Madhya Pradesh, and Uttar Pradesh have higher percentage of schools with PTR >30 compared to other States. There is a need to assess whether higher number of schools having PTR>30 in above 4 States is owing to the shortage of teachers or deployment issue of teachers.

10.10 The recruitment, service conditions and redeployment of teachers are primarily in the domain of respective State Governments and UT Administrations. However, the Central Government through the flagship programmes of Sarva Shiksha Abhiyan (SSA) at elementary level and Rashtriya Madhyamik Shiksha Abhiyan (RMSA-Integrated) at secondary level provides assistance to the State Governments and UTs for additional teachers to maintain appropriate PTR as per the prescribed norms for various levels of schooling. The Central Government has been consistently pursuing the matter for expeditious recruitment and redeployment of teachers with States and UTs at various fora.

Gender Parity Index (GPI)

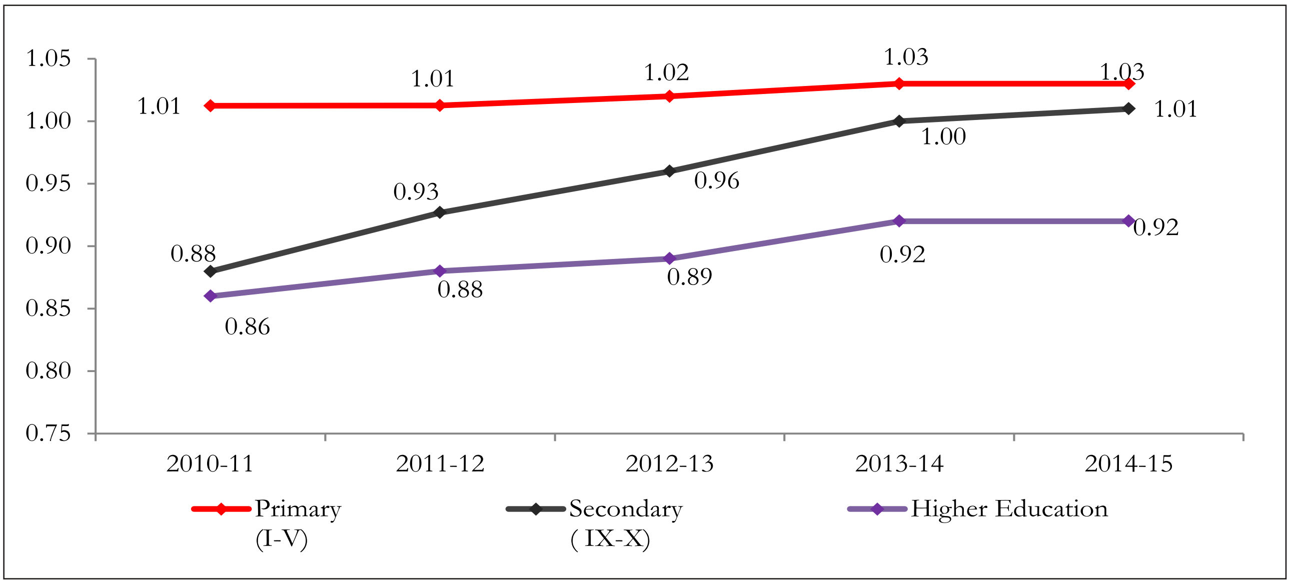
10.11 Gender Parity Index (GPI) in education is a valuable indicator which reflects the discrimination against girls in access to educational opportunities. In higher education, gender disparities still prevail in enrolment for which continuous efforts are being made by the Government to improve net

Figure 3. State-wise Primary Schools with PTR > 30 (per cent)



Source: **Elementary Education in India and Flash Statistics (UDISE)**

Figure 4: Gender Parity Index in Enrolment



Source: **Educational Statistics at a Glance, 2016, Ministry of Human Resource Development, Government of India (website: http://mhrd.gov.in/statist)**

Note: ***Figures related to School Education are provisional.**

intake rate for women in higher education. With consistent efforts by the Government through programmes like *Beti Padhao, Beti Bachao*, the GPI has improved substantially at the primary and secondary levels of enrolment (Figure 4).

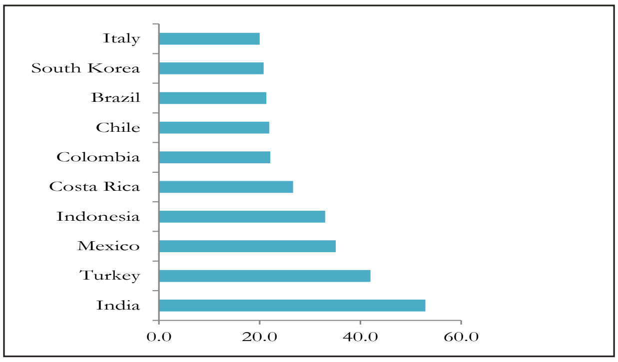
10.12 *Beti Bachao Beti Padhao (BBBP)* scheme has been introduced for promoting survival, protection and education of girl child. It aims to address the issue of declining Child Sex Ratio (CSR) through a mass campaign targeted at changing social mind set and creating awareness about the criticality of the issue. The scheme launched in 2015 is a tri-ministerial, convergent effort of Ministries of Women and Child Development, Health & Family Welfare and Human Resource Development with focus on awareness and advocacy campaign, multi-sectoral action in select 161 districts (100 districts in Phase-1 & 61 districts in Phase-II), enabling girls' education and effective enforcement of Pre-Conception & Pre Natal Diagnostic Techniques (PC&PNDT) Act. The Scheme has been approved for expansion to cover all 640 districts in the country.

PROGRESS IN LABOUR REFORMS

10.13 The Government is in the process of rationalizing 38 Central Labour Acts by framing relevant provisions of existing laws into 4 labour codes viz Code on Wages, Code on Safety and Working Conditions, Code on Industrial Relations, and Code on Social Security and Welfare. The draft Code on Wages Bill 2017 has been introduced in Lok Sabha in August 2017 and referred to the Standing Committee on Labour for examination. The other three Codes are at pre-legislative consultation stage. The codification of the labour laws is expected to remove the multiplicity of definitions and authorities leading to ease of compliance without compromising wage security and social security to the workers.

10.14 The Government has undertaken numerous technology enabled transformative initiatives such as Shram Suvidha Portal, Ease

Figure 5: Gender Gap (percentage points) in the Labour Force Participation Rate 2015 (15-64 year olds)



Source: **The Pursuit of Gender Equity: An Uphill Battle, OECD 2017.**

of Compliance to maintain registers under various Labour Laws/Rules. The Universal Account Number have been effected in order to reduce the complexity in compliance and to bring transparency and accountability for better enforcement of the labour laws. Further, the Government initiated the National Career Service portal (www.ncs.gov.in) by linking all employment exchanges of the country to facilitate online registration and posting of jobs for job-seekers and to provide employment related services like career counselling, vocational guidance, information on skill development courses and internships.

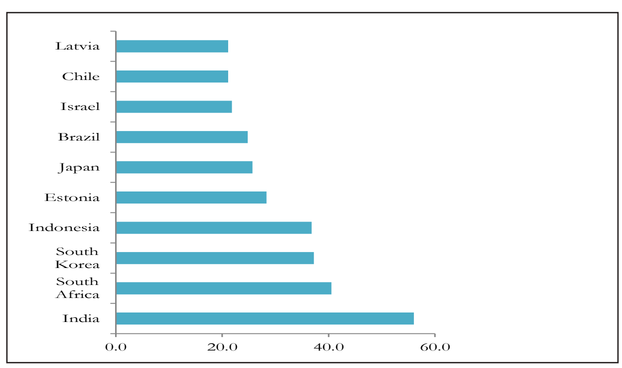
10.15 Further, the Employee's State Insurance (ESI), Act has been extended to all 325 complete districts as well as 93 district headquarters area. The scheme is also partially available in centers in 85 districts. Arrangements are being made for further extension of the scheme across the country by 2022. Under the scheme, insured persons are entitled to various cash benefits in the event of abstention from work due to sickness, temporary disablement, permanent disablement, dependent benefit, unemployment allowance, maternity benefit etc. The family members of the insured persons are also entitled to medical benefit. As on 31.03.2017, the number of insured persons covered under ESI scheme is 3.19 crore and total beneficiaries including their family members are 12.40 Crore. ESI has a network of 152 hospitals, 1467 dispensaries, 628 branch offices and 62 regional /sub regional offices across the country.

Gender gap in Labour Force Participation Rate and Earnings: Global Comparison

10.16 Among developing countries, there exists gender gaps in labour force participation rates which can be seen in the Figure 5 given below. In the case of India, the gender gap in labour force participation rate is more than 50 percentage points. The lower participation of women in economic activities adversely affects the growth potential of the economy. The Government has been taking measures to increase the participation of women in productive economic activities by schemes to provide support services to working women and also through legislative measures to enhance maternity benefits.

10.17 Women workers are the most disadvantaged in the labour market as they constitute a very high proportion among the low skilled informal worker category, and are engaged in low-productivity and low paying work. Owing to this, women earn very low wages, mostly piece rates in highly insecure jobs. India had the largest gender gap in median

Figure 6: Gender Gap in Median Earnings for full time Employees 2015 (per cent)



Source: **The Pursuit of Gender Equity: An Uphill Battle, OECD 2017.**

earnings of full time employees in 2015, as can be seen in Figure 6, in comparison to countries like South Africa, Brazil, and Chile.

10.18 *Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)* is one of the important schemes which ensures participation by women in the economic activity by stipulating minimum 33 per cent participation by women. There has been highest ever budget allocation of Rs 48000 crore under MGNREGA during 2017-18. About 4.6 crore households were provided employment totaling 177.8 crore person days during 2017-18 as on 14th January, 2018. Out of this, 54 per cent were generated by women, 22 per cent by Schedule Castes and 17 per cent by Schedule Tribes. Trends from 2013-14 to 2017-18 show that participation by women in the total person days generated has been more than 50 per cent. Further, the scheme has been converged with ICDS scheme for construction of AWCs.

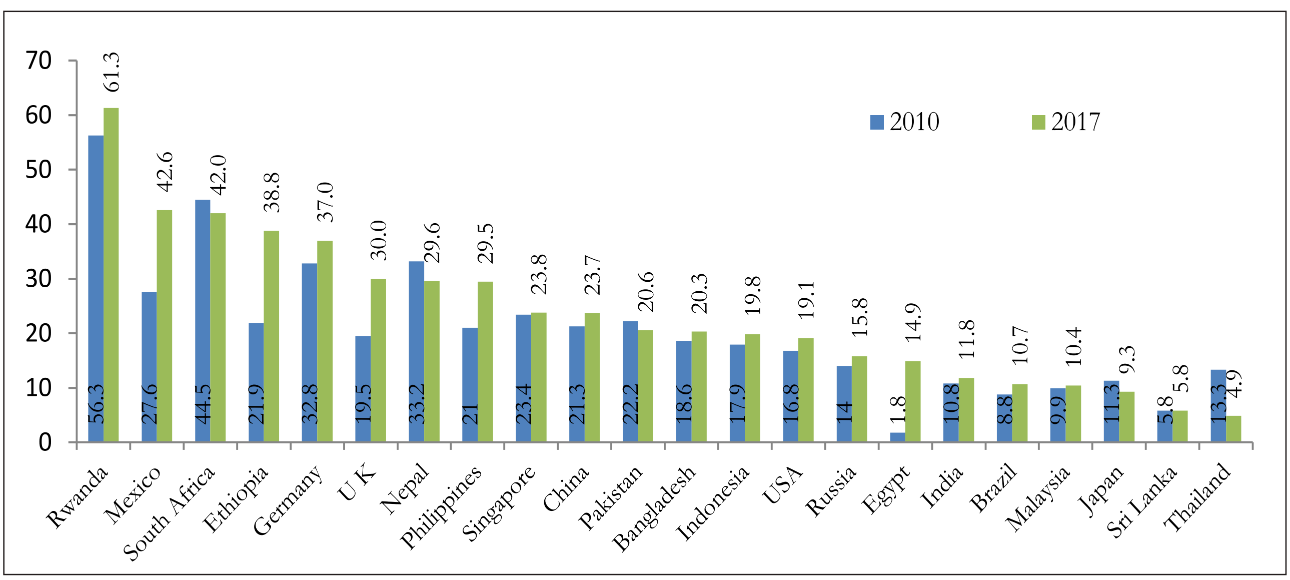
10.19 For economic empowerment of women through promoting the spirit of creating self-employment ventures, *Mahila E-Haat*, an initiative for meeting aspirations and needs of women entrepreneurs has been launched with the objective to provide an e-marketing platform by leveraging technology for showcasing product made/manufactured/sold by women entrepreneurs/SHGs/NGOs. This is impacting directly and indirectly over 26000 SHGs and 3.75 lakh beneficiaries.

10.20 As per the *Maternity Benefit (Amendment) Act, 2017,* the women are entitled to enhanced maternity leave for a period of 26 weeks (6 months) working in registered establishment under any Central or State law. It has been made mandatory for the establishments employing 50 or more employees to provide crèche facility, either separately or along with common facilities within a prescribed distance.

POLITICAL EMPOWERMENT OF WOMEN

10.21 The representation of women in Parliament and in decision making roles in public sphere is one of the key indicators of empowerment. As per the report '*Women in Politics 2017 (IPU & UN)*' Lok Sabha had 64 (11.8 percent of 542 MPs) and Rajya Sabha had 27 (11 per cent of 245 MPs) women MPs. As on October 2016, out of the

Figure 7: Representation of Women in Parliament in Select Countries



Source: **Women in Politics 2010 and 2017 published by the Inter-Parliamentary Union (IPU) and UN Women.**

Table 2: Top 5 Factors that deter Men and Women from entering Politics

	Deterrents for women	Deterrents for men
1.	Domestic responsibilities	Lack of support from the electorate
2.	Prevailing cultural attitudes regarding the roles of women in society	Lack of Finance
3.	Lack of support from family	Lack of support of political parties
4.	Lack of confidence	Lack of experience in 'representative functions' public speaking, constituency relations
5.	Lack of Finance	Lack of confidence

Source : **IPU, Equality in Politics: A survey of Women and Men in Politics, 2008.**

total 4118 MLAs across the country, only 9 per cent were women. Among the State assemblies, the highest percentage of women MLAs were from Bihar, Haryana and Rajasthan with 14 per cent followed by Madhya Pradesh and West Bengal with 13 per cent and Punjab with 12 per cent (Women & Men in India – 2016, MoSPI).

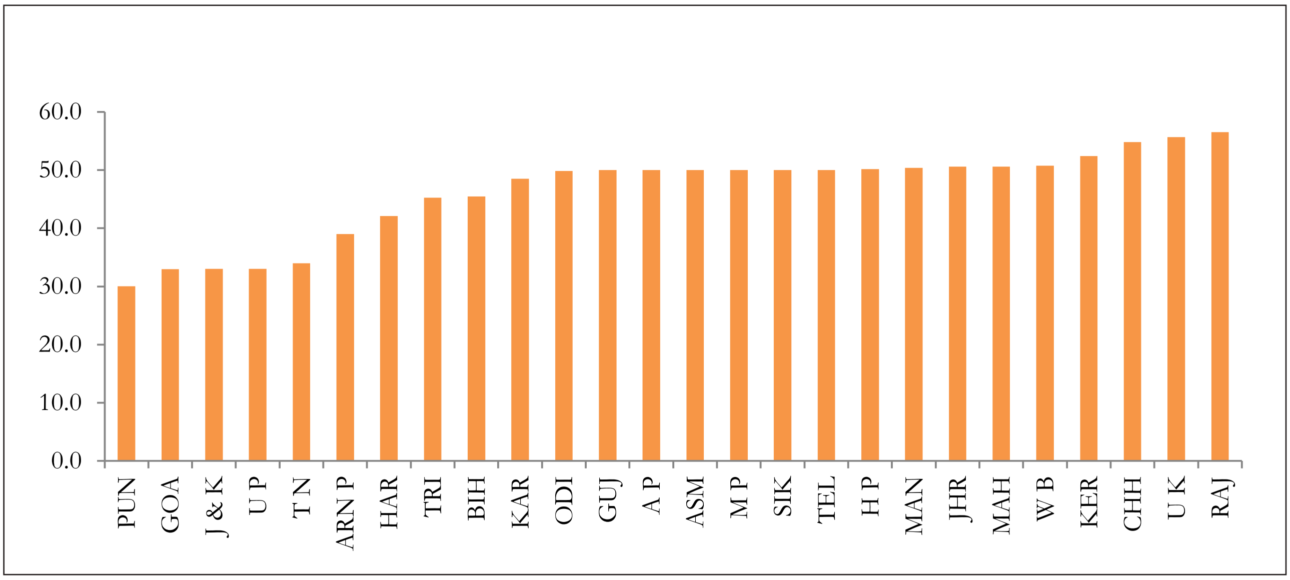
10.22 In India, between 2010 and 2017 women's share rose 1 percentage point in its Lower house (Figure 7). There are developing countries like Rwanda which has more than 60 per cent women representatives in Parliament in 2017 while countries like Egypt, India, Brazil, Malaysia, Japan, Sri Lanka and Thailand have less than 15 per cent representation of women in Parliament.

10.23 In a country like India with around 49 per cent of women in the population, the political participation of women has been low. There are various factors that determine women's participation in public services, especially in societies that follow patriarchal norms and prejudices. The differences in the factors that prevent women and men from entering politics were highlighted in a survey of women and men by the IPU (Table 2). Recognizing the significance of roles of women in decision making process in the society is critical to strengthen women's agencies for building a progressive society with equality of opportunities among all citizens.

10.24 As promoting women's political participation and leadership roles has vast implications for gender equality policies, Article 243D (3) of the Constitution of India provides that not less than one third of the total number of seats be reserved for women. Further, Article 243 D (4) of the Constitution of India provides that not less than one third of the total offices of Chairpersons in Panchayats at each level shall be reserved for women. There has been substantial representation of women at the local government levels but varies from State to State (Figure 8). There are 13.72 lakh elected women representatives (EWRs) in PRIs which constitute 44.2 percent of total elected representatives (ERs) as on December, 2017. Women sarpanchs (chairperson) accounted for 43 percent of total gram panchayats (GPs) across the country, exhibiting active leadership of women in local governments (Figure 9).

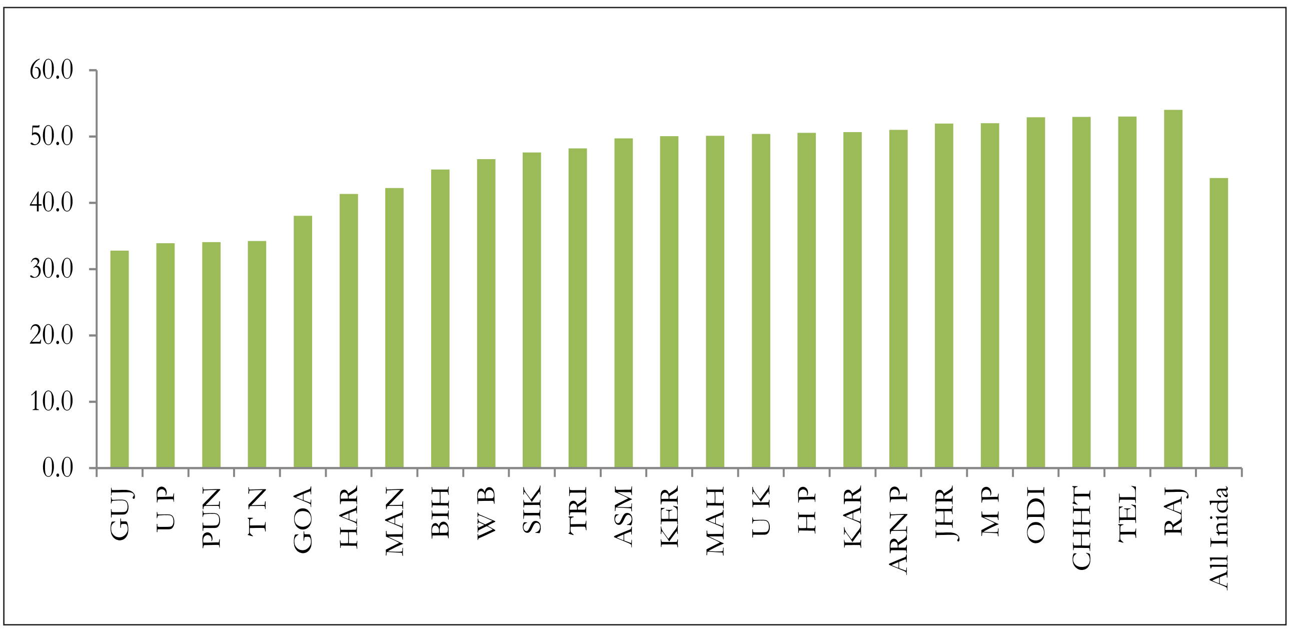
10.25 Further, for leadership development and to address women's issues at village levels, *Mahila Shakti Kendra* scheme has been launched at the village level. Over 300 thousand student volunteers are being sent out in 115 most backward districts under this new scheme. District Level Centres for Women are also being set up in 640 districts under

Figure 8: Elected Women Representatives in PRIs (per cent)



Source: **Ministry of Panchayati Raj (As on 31.12.2017).**

Figure 9: State-wise Women Sarpanchs in Gram Pranchayats (Per cent)



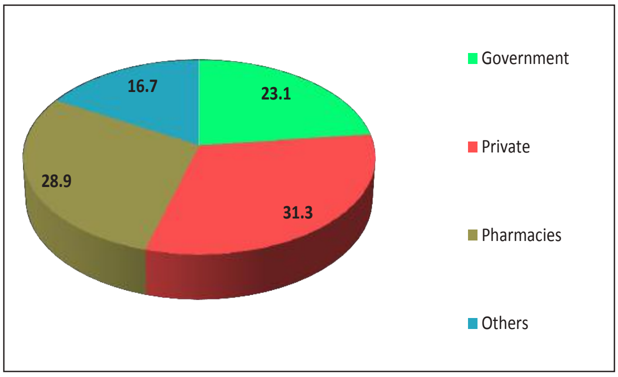
Source: **MoPR (Number of women surpanchs as on 31.12.2017) and http://lgdirectory.gov.in (Nos. of active GPs of 26 States extracted as on 16/01/2018)**

this scheme, which will provide convergence at the district level for all initiatives related to women. Besides, *Nai Roshni*, a leadership development programme, is also operational for benefiting the women belonging to minority communities.

HEALTH FOR ALL

10.26 Ensuring healthy lives and promoting the well-being for all at all ages is essential to sustainable development (SDG-3). India's commitment to achieve the targets under SDG-3 with some of them also aligned with the National

Figure 10: Current Health Expenditure by Healthcare Providers 2014-15 (per cent)



Source: **National Health Accounts, Estimates for India, M/o H& FW.**

Note: **Government expenditure includes General & specialized hospitals, family welfare and primary health centers etc. Private expenditure includes general & specialized hospitals and clinics.**

Health Policy 2017, will help in strengthening health delivery systems and in achieving universal health coverage.

Expenditure on Health

10.27 Figure 10 shows that expenditure by the Government healthcare providers accounted for about 23 percent of the Current Health Expenditure (CHE) as per National Health Accounts 2014-15 that reflects the prominence of private hospitals and clinics among health care providers. The expenditure on pharmacies accounted for 29 percent of CHE by both health care providers (government and private).

10.28 In a developing country like India, incurring higher levels of Out of Pocket Expenditure (OoPE) on health adversely impacts the poorer sections and widens inequalities. Although, OoPE has declined approximately 7 percentage points during the period 2004-05 to 2014-15, its share is still at 62 per cent as per NHA 2014-15.

10.29 Diagnostics are an important part of the health care system that provide information needed by service providers to make informed decisions about healthcare provision related to treatment and management. Limited affordability and access to quality medical services are among the major challenges contributing to delayed or inappropriate responses to disease control and patient management. The findings of Household Health Expenditure survey in India indicate that about 10 per cent of OoPE on health was spent by households on diagnostics (including medicines and diagnostic test as part of package) during 2013-14.

Table 3: Range in prices/average costs of diagnostic tests across cities in India, 2017

Name of Diagnostic Tests	Costs of Diagnostics (In ₹)		Average Costs of Diagnostics (In ₹)	
	Minimum (of all cities)	Maximum (of all cities)	Minimum (of average price of cities)	Maximum (of average price of cities)
Lipid Profile Test (125)	90	7110	217	759
ANC test (74)	110	6500	389	2396
Albumin test (120)	20	1810	100	203
2d echo test (51)	500	5200	856	2412
Electrolyte test (121)	30	3000	245	627
Liver Function test (117)	100	2500	210	1186
Thyroid test (123)	100	3100	300	721
ESR test (103)	10	1100	35	116
Dengue IgG test (114)	100	3600	314	1312

Source: **www.medifee.com accessed on 12th December, 2017.**

Note: **Figures in parenthesis are number of cities. ESR (Erythrocyte Sedimentation Rate)**

Box 1: Steps taken by the Government to regulate prices of Drugs and Diagnostics

- Under National Health Mission (NHM), Government is supporting States through *National Free Diagnostic Service Initiative* to provide essential diagnostic services in public health facilities. Government of India has brought out guidelines in July 2015 to provide states with a broad framework for implementing free drug initiatives. The number of tests varies from State to State. An amount of Rs 759 crore has been approved for free diagnostic service initiative under NHM for 29 States/UTs in 2017-18.
- *National Free Drug Initiative* under NHM aims at expanding the availability of free drug provision in all public health facilities. The initiative would not only provide support to States for purchase of drugs but enabling States to place transparent system of procurement and quality assurance, robust supply management and logistics that would ensure highest level of safety and quallty of drugs. All States have notified free drug policy. Over 25 States are implementing IT based supply chain management of drugs.
- Under Clinical Establishments (Registration and Regulation) Act, 2010 and Clinical Establishments (Central Government) Rules, 2012, the clinical establishments (in the States / Union Territories where the Act is applicable) shall charge the rates for each type of procedure and services within the range of rates determined by the Central Government from time to time in consultation with the State Governments. The clinical establishments are also required to display the rates charged for each type of services provided and facilities available, at a conspicuous place both in the local language and English. The National Council for Clinical Establishments has approved a standard list of medical procedures and a standard template for costing of medical procedures and shared the same with the States and UTs.
- Medical Council of India (MCI) has amended the Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulations, 2002 vide notification dated 21.09.2016, which stipulates that 'every physician should prescribe drugs with generic names legibly and preferably in capital letters and he/she shall ensure that there is a rational prescription and use of drugs'. All the Registered Medical Practitioners under the Indian Medical Council (IMC) Act have been directed to comply with the aforesaid provisions.

10.30 An analysis of prices of diagnostic tests across various cities in India reveals that there are not only wide differences in average prices of diagnostic tests but also range in the prices is substantial (Table 3). The data on quality and accreditation of diagnostic establishments in the country is scanty.

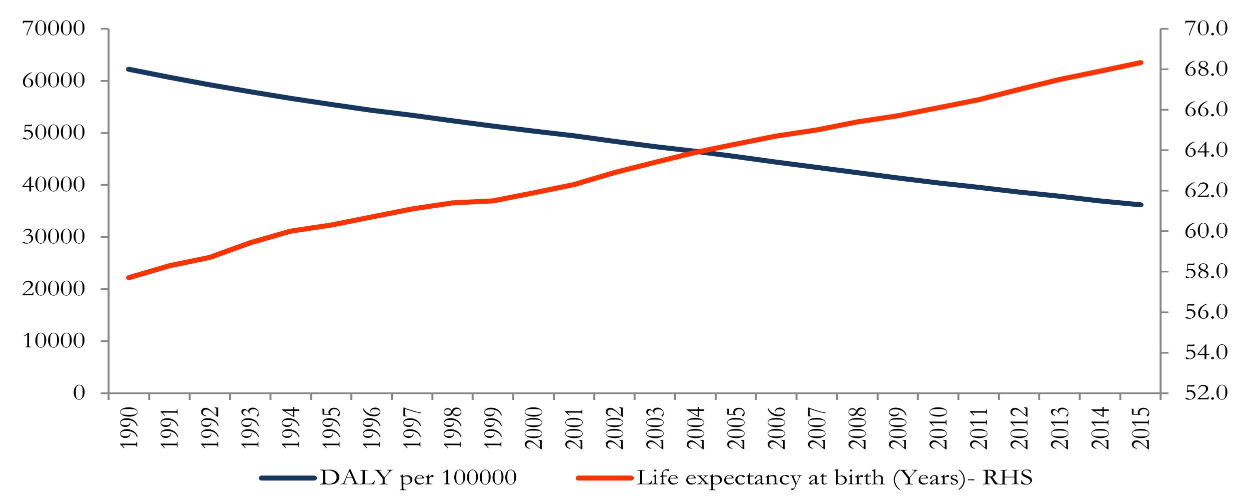
10.31 There is a need to prioritize standardization of rates by devising appropriate quality assurance framework and regulatory mechanism. Though, the Government has already enacted Clinical Establishments (Registration and Regulation) Act, 2010 and notified the Clinical Establishments (Central Government) Rules, 2012 to regulate the clinical establishments across the country, presently, the Act is applicable in 10 States/UTs, which needs to be taken up by remaining States while ensuring strict compliance as well. The details of the Act and various other steps taken to reduce out of pocket expenditure are given in the Box 1.

Burden of Diseases: India and States

10.32 The report 'India: Health of the Nation's States', 2017 provides the first comprehensive set of findings for the distribution of diseases and risk factors across all States from 1990 to 2016. The concept of Disability Adjusted Life Years (DALYs)[1] provides a framework for analyzing

1 DALYs express the premature death and disability attributable to a particular cause, and are made up of two components: years of life lost (YLLs) and years of life lived with disability (YLDs). YLLs measure all the time people lose when they die prematurely, before attaining their ideal life expectancy. Ideal life expectancy is based on the highest life expectancy observed in the world for that person's age group. YLDs measure years of life lived with any short- or long-term condition that prevents a person from living in full health. They are calculated by multiplying an amount of time (expressed in years) by a disability weight (a number that quantifies the severity of a disability). Adding together YLLs and YLDs yields DALYs, a measure that portrays in one metric the total health loss a person experiences during their life. The report mentioned in para 10.32 above is a collective effort of Indian Council of Medical Research (ICMR), PHFI and IHME, University of Washington.

Figure 11: All India trends in LEB and DALYs



Source: **http://thelancet.com, and Registrar General & Census Commissioner, India.**

the disease burden and risk factors. DALYs is the sum of years of potential life lost due to premature mortality and the years of productive life lost due to disability. One DALY represents the loss of the equivalent of one year of full health. Using DALYs, the burden of diseases that cause premature death but little disability can be compared to that of diseases that do not cause death but do cause disability. The information and data base about changing disease patterns and the use of DALYs to quickly compare the impact caused by very different conditions, such as cancer and depression, in a single, comparable metric are crucial inputs for decision-making, effective resource allocation and policy planning.

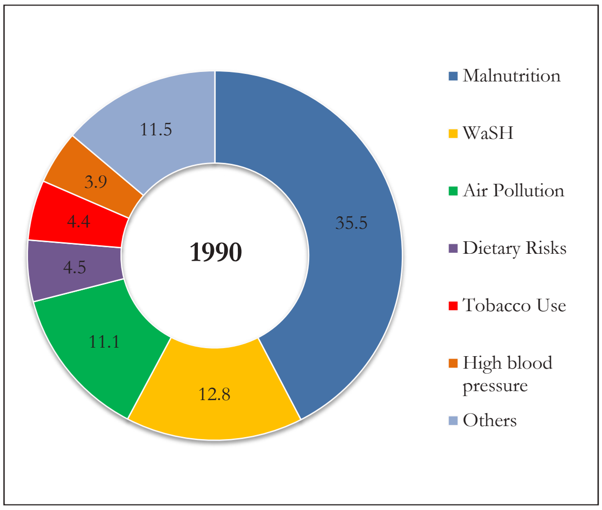
10.33 There has been significant improvement in the health status of the individual as life expectancy at birth (LEB) has increased by approximately 10 years during the period 1990 to 2015. The significance of DALYs as a critical health policy indicator is reflected by the inverse relationship between life expectancy and DALYs rates. The all India trends in LEB and DALYs echo the inverse relation between the two over time from 1990 to 2015 (Figure 11).

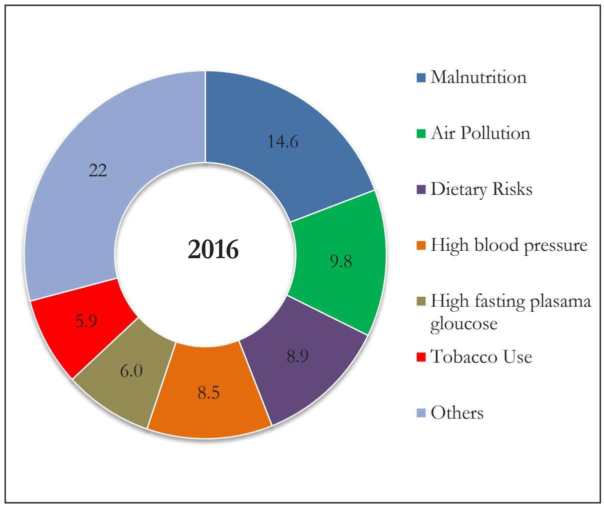
10.34 The per person disease burden measured as DALYs rate dropped by 36 per cent from 1990 to 2016 in India, after adjusting for the changes in the population age structure during this period. Of the total disease burden in India measured as DALYs, 61 per cent was due to communicable, maternal, neonatal, and nutritional diseases (CMNNDs) in 1990, which dropped to 33 per cent in 2016. There was a corresponding increase in the contribution of non-communicable diseases (NCDs) from 30 per cent of the total disease burden in 1990 to 55 per cent in 2016, and of injuries from 9 per cent to 12 per cent.

10.35 The risk factors are drivers of diseases and injuries causing premature death and disability. The leading risk factors for health loss (as percent of DALYs) in India for the year 1990 and 2016 can be seen in Figure 12. The use of DALYs to track disease burden has also been recommended by India's National Health Policy of 2017. The disease burden in India can be reduced substantially, if the risk factors related to health loss are addressed effectively.

10.36 In 2016, malnutrition still remains the most important risk factor (14.6 percent) that results in disease burden in the country though the disease burden due to it has dropped in India

Figure 12: Change in DALYs number and rate attributable to risk factors in India (per cent)





Source: **India: Health of the Nation's States Report, 2017.**

Note: 1. **The figures mentioned against each risk factor are DALYs attributable to that risk factor out of the total DALYs.**

2. **WaSH is unsafe water, sanitation, and handwashing. Others include ooccupational risks, high total cholesterol, alcohol & drug use, impaired kidney function, high body mass index, other environmental, low physical activity, unsafe sex, low bone mineral density, sexual abuse & violence.**

Box 2: Government Programmes for Women and Children

In the current financial year (2017-18) the scope of several existing programmes and schemes have been expanded and several new initiatives have been taken up to foster all round development of Women and Children in the country. Some of the schemes are mentioned below:

Integrated Child Development Services (ICDS): ICDS scheme aims at the holistic development of children upto 6 years of age and to meet nutritional needs of pregnant women and lactating mothers. Recently, rationalization, restructuring and continuation of four child centric schemes such as (a) Anganwadi Services (in place of ICDS); (b) Scheme for Adolescent Girls (SAG) (in place of SABLA); (c) Child Protection Services (in place of Integrated Child Protection Scheme) and (d) National Crèche Scheme (in place of Rajiv Gandhi National Crèche Scheme) of the Ministry under 'Umbrella Integrated Child Development Services' Scheme has been approved by the Government. Keeping in line with the Swachh Bharat Abhiyan, special emphasis has been given on providing toilet and safe drinking water facility at every Anganwadi Centre under the restructured Anganwadi Services Scheme. The scheme has been universalized with cumulative approval of 7076 projects and 14 lakh Anganwadi Centres (AWCs) including 20,000 anganwadis on demand. Digitization of Anganwadi Centres (AWCs) has already begun in 8 States with ICTs enabled monitoring of the Schemes through smart phones/ Tablets to anganwadi worker and supervisor. A new web-portal has been created for enabling the MIS data entry by the States/UTs. The Ministry has taken an initiative to address the micro-nutrient deficiencies among women and children in the country. In this regard, fortification of food items with essential micro-nutrients has been made mandatory in the Government funded nutrition related schemes.

Pradhan Mantri Matru Vandana Yojana (PMMVY): The earlier Maternity Benefit Programme, for the eligible pregnant women and lactating mothers (PW&LM) has now been named as Pradhan Mantri Matru Vandana Yojana (PMMVY) a Centrally Sponsored Scheme, in January, 2017 for providing partial compensation for the wage loss in terms of cash incentive so that the woman can take adequate rest before and after delivery of the first child. The cash incentive provided would lead to improved health seeking behaviour amongst the PW&LM. The Scheme envisages providing cash incentive amounting to ₹5,000/- in DBT Mode during pregnancy and lactation. The remaining cash incentive of ₹1000/- is provided towards maternity benefit under Janani Suraksha Yojana (JSY) after institutional delivery so that on an average, an eligible women will get ₹6,000/-.

National Nutrition Mission (NNM): The Government of India has approved setting up of National Nutrition Mission (NNM) commencing from 2017-18 The NNM, as an apex body, will monitor, supervise, fix targets and guide the nutrition related interventions across the Ministries. The programme through the targets will strive to reduce the level of stunting, under-nutrition, anaemia and low birth weight babies. It will create synergy, ensure better monitoring, issue alerts for timely action to achieve the targeted goals.

Pradhan Mantri Ujjwala Yojana (PMUY): PMUY was launched in May 2016, for providing LPG connections to 5 crore women belonging to the BPL families over a period of 3 years from 2016-17. The scheme aims to safeguard the health of women & children by providing them with a clean cooking fuel – LPG, so that they do not have to compromise their health in smoky kitchens or wander in unsafe areas collecting firewood. Since inception, around 3.3 crore LPG connections have already been provided as on 18.01.2018.

substantially since 1990. Neonatal disorders and nutritional deficiencies as well as diarrhoea, lower respiratory infections, and other common infections are manifestation of maternal and child malnutrition. The Government is implementing several programmes and has also initiated new policy interventions to improve the health and nutritional status of women and children. Some of the initiatives are highlighted in Box 2.

10.37 The contribution of air pollution to disease burden remained high in India between 1990 (11.1 per cent) and 2016 (9.8 per cent), with the levels of exposure remaining among the highest in the world. It causes burden through a mix of non-communicable and infectious diseases, mainly cardiovascular diseases, chronic respiratory diseases, and lower respiratory infections. The burden of household air pollution related to use of solid fuels for cooking is being addressed with government interventions through schemes like *Pradhan Mantri Ujjwala Yojana* (Box 2).

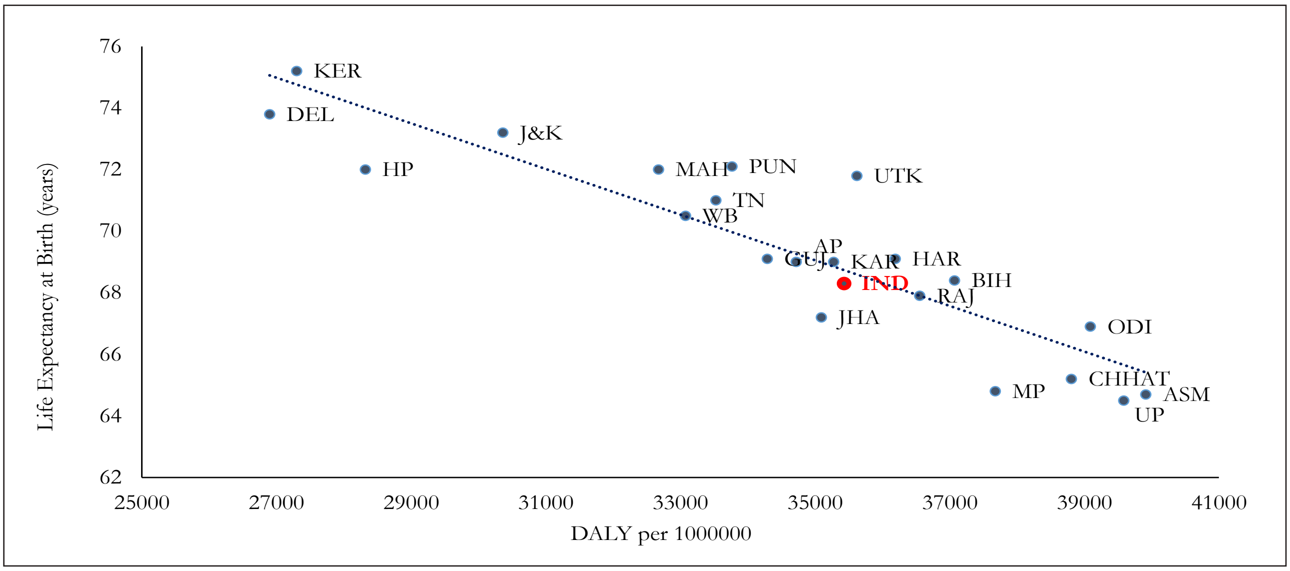
10.38 The behavioural and metabolic risk factors associated with the rising burden of Non Communicable Diseases (NCDs) have become quite prominent in India. In 2016, the dietary risks, which include diets low in fruit, vegetables, and whole grains, but high in salt and fat, were India's third leading risk factor, followed closely by high blood pressure and high blood sugar (high fasting plasma glucose).

10.39 Unsafe water, sanitation, and handwashing (WaSH) was the second leading risk factor in 1990, but its ranking has dropped to seventh position in 2016. Around 5 per cent of health loss is still attributable to this factor which is being addressed successfully by the government through the Swachh Bharat Mission (SBM), the details are explained in section under SBM.

DALYs: A State level analysis

10.40 In Figure 13, the similar relationship between LEB and DALYs can be seen across States. States with higher life expectancy are reflecting lower DALYs rates means lower incidence of diseases and vice-versa. Though, there have been dramatic fall in CMNNDs, however, States with high DALYs rates are indicating relatively greater increase in NCDs. Among the leading NCDs, the largest disease burden or DALYs rate increase was observed for diabetes, at 80 per cent, and ischemic heart disease, at 34 per cent during the period 1990 to 2016. Majority of the States have the largest dominance of non-communicable

Figure 13: State-wise DALYs Rate (2016) and Life expectancy at Birth (2015)



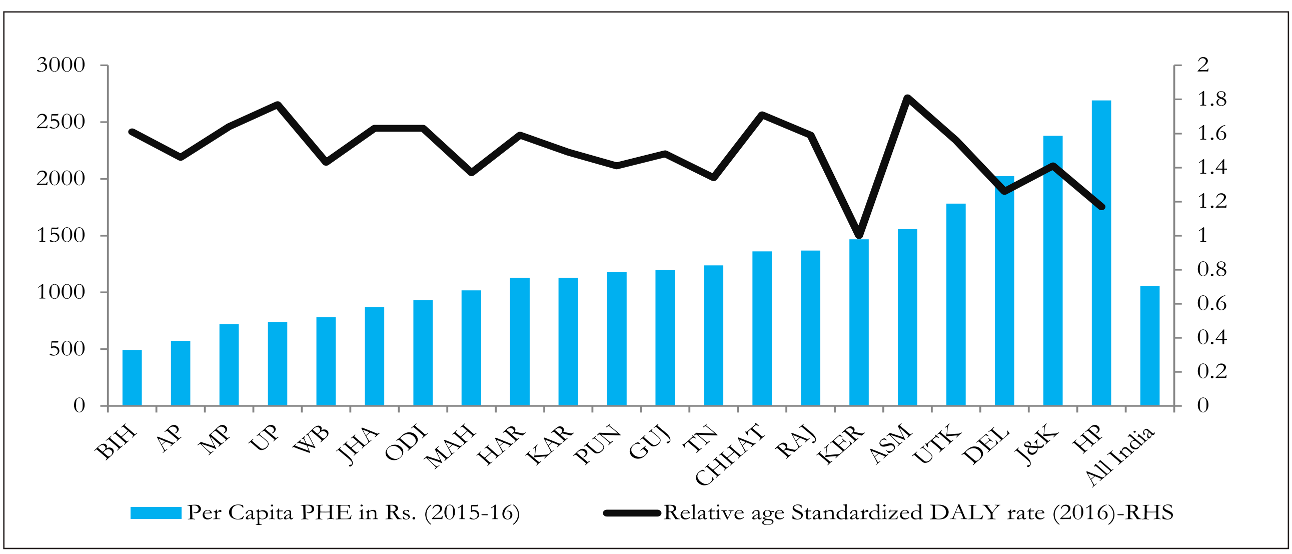
Source: **http://thelancet.com, and Registrar General & Census Commissioner, India.**

diseases and injuries over infectious and associated diseases except Delhi, Andhra Pradesh, Uttar Pradesh and Assam where this is relatively less. Despite improvements in overall life expectancy in India over the years, inequalities still persist among states with a range of 64.5 years in Uttar Pradesh to 75.2 years in Kerala in 2015 (Figure 13).

Public Health Expenditure by States and DALYs

10.41 The National Health Policy, 2017 has recommended increasing State sector health spending to more than 8 per cent of the State government budget by 2020. There is a need to understand the efficiency of the public spending

Figure 14: PHE 2015-16 and relative age standardized DALYs Rate 2016 among major States



Source: **Health Sector Financing by the Centre and States/UTs, Ministry of Health & FW**

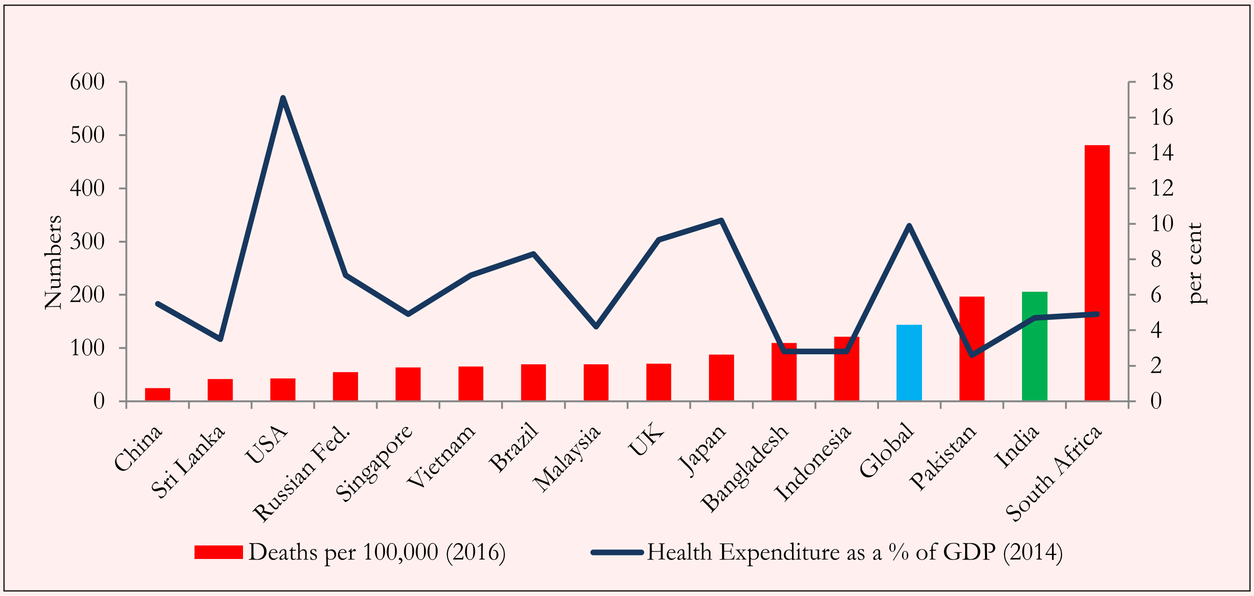
Note: **Per capita public health expenditure (PHE) for 2015-16 is calculated from data using state-wise public health expenditure 2015-16 and projected population of census for 2015.**

Box. 3. Combating Antimicrobial Resistance (AMR) in India

Antimicrobial resistance (AMR) occurs when microorganisms such as bacteria, viruses, fungi and parasites change in ways that render the medications used to cure the infections they cause ineffective. It occurs naturally but is facilitated by the inappropriate use of medicines, for example using antibiotics for viral infections such as cold or flu, or sharing antibiotics. Low-quality medicines, wrong prescriptions and poor infection prevention and control also encourage development and spread of drug resistance.

World Health Organization's first global report on AMR in 2014 reported that it is not a country specific issue but a global concern that is jeopardizing global health security. AMR is of particular concern in developing nations, including India, where the burden of infectious diseases is high and healthcare spending is low (Figure 1). The country has among the highest bacterial disease burden in the world. Antibiotics, therefore, have a critical role in limiting morbidity and mortality in the country.

Figure 1: Incidence of causes of Death due to Communicable, Maternal, Neonatal and Nutritional Diseases (2016) and Health Spending (2014) in select Countries



Source: **The Global Burden of Disease 2016 study group report published in the Lancet medical journal extracted from http://thelancet.com and World Bank databank.**

The challenges associated with controlling antibiotic resistance, particularly in India, are many and multifaceted. On the one hand, antibiotics are necessary in many life-threatening cases. But on the other hand, overuse of antibiotics can be disastrous in the long run. Hence, judicious use of antibiotics is required, but acceptable strategies to achieve this goal and to address the challenges must be devised and awareness needs to be generated among the public.

Acknowledging AMR as a serious threat to global public health, India has finalized a comprehensive and multi-sectoral National Action Plan aligning to the Global Action Plan and adopted a holistic and collaborative approach involving all stakeholders such as UN, WHO, FAO and other UN agencies towards prevention and containment of AMR. The National Action Plan has been prepared through extensive national consultations with various stakeholders in alignment with global action plan which has objectives of enhancing awareness, strengthening surveillance, improving rational use of antibiotics, reducing infections and promoting research in India. In addition, India aims to support neighboring countries in collective fight against infectious diseases. The Government of India has initiated series of actions including setting up a National Surveillance System for AMR, enacted regulations (Schedule-H-1) to regulate sale of antibiotics, brought out National Guidelines for use of antibiotics etc.

However, more efforts are required considering the large size of our country, magnitude of the problem and the fact that AMR needs to be addressed comprehensively under "One Health Approach". The challenge now is in its efficient implementation through a coordinated approach at all levels of use of antibiotics for which all State Governments need to develop state-specific action plans.

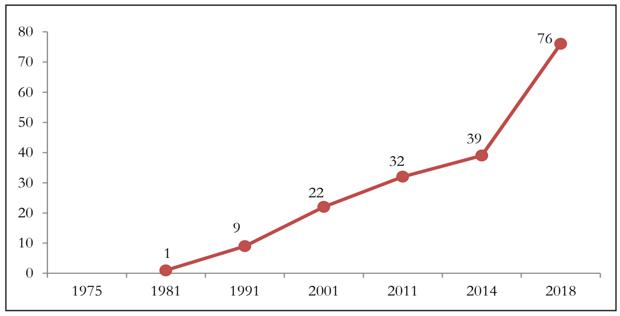
with respect to DALYs behavior across the major States and to assess whether high spending by States on health results in better health outcomes. States with lowest per capita public health expenditure have higher DALYs rate as compared to the States with greater public health spending (Figure 14). However, the States of Assam, Uttarakhand, Delhi, and Jammu & Kashmir have higher DALY rate despite having higher per capita public spending.

10.42 The efficiency in the use of resources along with measures for preventive and curative health care is necessary to translate enhanced expenditure into improved health outcomes. In this context, the increase in use of antibiotics in developing countries like India where health care spending is low, is a cause for concern (Box 3). Moreover, the health of the population is closely related to the quality of life indicators like access to sanitation, safe drinking water and the like which can decrease the disease burden of the population. Therefore, focus of the Government on improving access to sanitation through Swachh Bharat Mission (SBM) gains special significance. The health and economic impacts of SBM are detailed in the following section.

SWACHH BHARAT MISSION (GRAMIN)

10.43 As noted earlier, the health of the nation is closely related to clean drinking water, sanitation and living environment. Taking cognizance of the role of cleanliness in healthy living, and to accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation, the Prime Minister of India launched the Swachh Bharat Mission on 2nd October, 2014.

Figure 15: Rural Sanitation Coverage in India over the years (per cent)



Source: **Ministry of Drinking Water & Sanitation (As on 10.01.2018)**

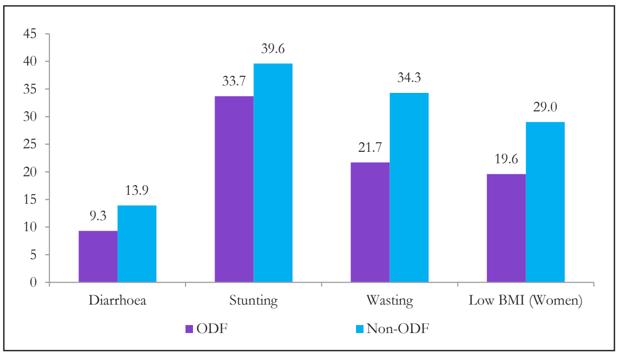
10.44 As per baseline survey conducted by Ministry of Drinking Water & Sanitation (M/o DWS), the number of persons defecating in open in rural areas, which were 55 crore in October, 2014 declined to 25 crore in January, 2018, at a much faster pace compared to the trend observed before 2014. The rural sanitation coverage in India over time is given in Figure 15. So far, 296 districts and 307,349 villages all over the India have been declared as Open Defecation Free (ODF). Eight States and two Union Territories i.e. Sikkim, Himachal Pradesh, Kerala, Haryana, Uttarakhand, Chhattisgarh, Arunachal Pradesh, Gujarat, Daman & Diu and Chandigarh have been declared as ODF completely. The surveys conducted by National Sample Survey Office (NSSO,2016) and Quality Council of India (QCI, 2017) on usage of toilets by the individuals who have access to toilets reported more than 90 per cent of individuals using toilets in 2016 and 2017.

Health and Economic Impact of Sanitation

10.45 The quality of hygiene and sanitation has significant impact on improving the health outcomes which is a well-established fact.

According to UNICEF, the lack of sanitation is responsible for the deaths of over 100,000 children in India annually and for stunting of 48 per cent children. In order to assess the impact of sanitation programme on health status, a pilot study was undertaken by the Bill & Melinda Gates Foundation (BMGF) in selected ODF and non-ODF districts. BMGF estimated that households in ODF villages in India have significantly better health indicators (Figure 16).

Figure 16: Performance of ODF and non-ODF Districts in select Health indicators (per cent)



Source: **Ministry of Drinking Water & Sanitation.**

10.46 The study was based on CAPI (Computer assisted personal interviewing) technique in a survey of 10 districts viz. Karnataka (Udupi & Chitradurga), West Bengal (Nadia & Birbhum), Rajasthan (Churu & Alwar), Madhya Pradesh (Harda & Dewas) and Uttar Pradesh (Shamli & Saharanpur) covering 4000 households (2000 ODF and 2000 non-ODF households) during May 2017 to June 2017. The findings are summarized in Table.5.

10.47 The non-ODF districts have lower percentage of population with secondary education, reflect higher levels of diarrhea, stunting, wasting and BMI owing to behavioural inertia. However, in ODF areas, with higher percentage of population with secondary education, there has been a clear cut evidence of behavioral shift of the individuals due to larger presence and proactive work undertaken by

Table 5 : Comparison of ODF and Non-ODF areas during 15th May 2017to 22nd June 2017 (in per cent)

Indicators	ODF Areas	Non ODF Areas
Prevalence of diarrhea in the last one month preceding the survey	15.1	22.1
Children who are underweight (Weight for age below -2SD WHO standard)	28.3	41.2
Proportion of Mothers whose Body Mass Index (BMI) is in the normal BMI category	62.9	57.5
Completed Secondary Education	27.1	22.8

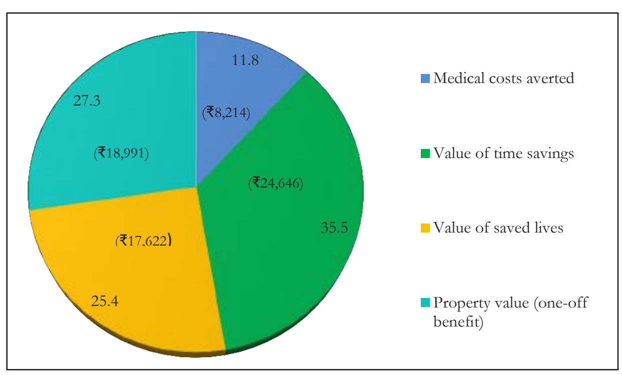
Source: Review of Health Data in Selected ODF and Non ODF Districts under SBM by BMGF, 2017.

Note : ***A*** **village which was declared as open defecation-free (ODF) at least one year prior to the cut-off date (28th April 2017) was included in the sampling frame for ODF village selection**

village health and sanitation committees (VHSC). Moreover, a higher proportion of mothers of ODF areas in the 'normal' BMI category (62.9 per cent) as compared to that of non-ODF areas (57.50 per cent) shows that not only children but mothers were also healthier in the ODF areas.

10.48 Studies have documented that in addition to the health benefits, there are also economic gains on becoming ODF areas. According to

Figure 17 : Annual Benefits of 100 per cent Toilet Use (per cent and ₹)



Source: **UNICEF.**

the World Bank estimates, the lack of sanitation facilities costs India over 6 per cent of GDP. In a report '*The Financial and Economic Impact of SBM in India* (2017)' UNICEF estimated that a household in an ODF village in rural India saves ₹50,000/- ($800) every year (Figure 17).

THE WAY FORWARD

10.49 Towards inclusive development, India has been implementing programmes for social sectors like education and health to include women and the marginalized sections of the people to bridge the gaps in educational attainments, health outcomes and employment opportunities. Though macroeconomic growth and efficient markets are essential, it is necessary to equally ensure that the benefits of growth are equitably accessible to all citizens to make growth broad based.

10.50 To conclude, '*strengthening the policy and institutional ecosystem supporting inclusive growth deserves to be a top policy priority for countries, whether they are experiencing slow growth, elevated inequality, or both. This is an imperative for countries seeking to thrive in the Fourth Industrial Revolution (WEF, 2017).*' The policies and institutional systems for inclusive growth are progressively being built by the Government of India in the form of digitalization to transform governance and achieve social inclusion through financial inclusion initiatives, gender mainstreaming and measures to reduce all forms of social inequalities inherent in Indian society.