

MOVING INDIA TO A NEW GROWTH TRAJECTORY

NEED FOR A COMPREHENSIVE BIG PUSH

RAKESH MOHAN

JUNE 2019



BROOKINGS INDIA

Copyright © 2019
Brookings Institution India Center
No. 6, Second Floor, Dr Jose P Rizal Marg,
Chanakyapuri, New Delhi - 110021

Recommended citation:

Mohan, Rakesh: "Moving India to a New Growth Trajectory: Need for a Comprehensive Big Push,"
Brookings India Research Paper No. 072019.

The Brookings Institution India Center serves as a platform for cutting-edge, independent, policy-relevant research and analysis on the opportunities and challenges facing India and the world. The Center is based in New Delhi, and registered as a company limited by shares and not for profit, under Section 25 of the Companies Act, 1956. Established in 2013, the Center is the third and newest overseas center of the Washington, D.C.-based Brookings Institution. Our work is centered on the Brookings motto of "Quality, Independence, Impact."

All content reflects the individual views of the author(s). Brookings India does not hold an institutional view on any subject.

MOVING INDIA TO A NEW GROWTH TRAJECTORY

NEED FOR A COMPREHENSIVE BIG PUSH

RAKESH MOHAN¹

Senior Fellow
Jackson Institute for Global Affairs
Yale University

and

Distinguished Fellow
Brookings India

¹ I would like to express my deepest appreciation to my longtime collaborator, Muneesh Kapoor, for invaluable help in collating all the data in this paper. I would also like to acknowledge the assistance provided by Jonathan Hawkins of Yale University and Neelanjana Gupta of Brookings India; Zehra Kazmi and Mukesh Rawat of Brookings India for the design and production of the paper. I have benefitted greatly from detailed comments received from Anne Krueger, Sarwar Lateef and Yashika Singh.

RAKESH MOHAN

Senior Fellow
Jackson Institute for Global Affairs
Yale University

and

Distinguished Fellow
Brookings India

ABSTRACT

The paper discusses the need to focus attention on the primacy of growth as a policy objective. As the achievement of annual economic growth of about 7 percent has almost become commonplace, the country is now in danger of suffering from a degree of complacency. If India is to eliminate poverty and achieve upper middle income status in the foreseeable future, by around 2035, it must elevate its growth trajectory to the next level. This paper analyses the key macroeconomic tasks ahead to take growth back to 8-9 percent: sustained increase in savings, particularly in financial savings, and investment, fiscal consolidation through enhanced tax revenues, along with a step up in infrastructure investment. It also highlights the need to revive animal spirits in the private sector to rekindle investment, particularly in an internationally competitive manufacturing sector. This would need the maintenance of a realistic competitive exchange rate, along with implementation of long overdue bold land and labour reforms, incentivising labour using manufactured exports, and a focus on industrial research and development. Efficient growth promoting private sector functioning requires the next generation of reforms to concentrate on the institutional and technical strengthening necessary to empower government at all levels, which enables it to ensure delivery of essential public goods and services, particularly in health and education.

TABLE OF CONTENTS

I. THE INDIAN ECONOMY: A STORY OF CONSISTENT GROWTH	9
The Golden Era of Growth: 2003-08	13
The Current Deceleration: 2012-18	16
II. A POSSIBLE FUTURE HIGH GROWTH SCENARIO 2020 TO 2035	22
Financing Growth	23
Household Savings	23
Private Corporate Sector Savings	24
Public Sector Savings	24
External Savings	28
Manufacturing	30
Infrastructure Investment	30
III. POLICY IMPERATIVES FOR A BIG PUSH	33
Finding the Resources for Higher Growth	33
Public Savings and Fiscal Policy: Need to Raise the Tax GDP Ratio	33
Incentivising Higher Household Savings: Ensuring Price & Financial Stability	35
Foreign Savings and Capital Account Management	38
Inducing Greater Investment for Higher Growth	39
Reviving Private Sector Animal Spirits and Renewed Investment	39
Major Push for Competitive Manufacturing for Both Domestic and Export Markets	41
Promotion of Export-Oriented Labour Using Manufacturing	41
Need for Organised Government Industry Partnership	44
Emphasis on Technology Investment and Industrial R & D	44
Agriculture: Need for a Second Green Revolution	45
Emphasis on a Renewed Focus on Agricultural R & D and Extension	46
Facilitating Development of Food Supply Chains from Farm to Market	47
Stepping up Infrastructure Investment: Focus on Efficient Transport and Logistics	48
A New Approach for Transport Investment Planning and Programming	48
Public Private Partnerships (PPP) in Infrastructure Investment	49
IV. INSTITUTIONAL DEVELOPMENT FOR HIGHER OVERALL GROWTH	51
Strategy to Empower Government to Deliver Governance that Enables the Private Sector to Function, Grow, Prosper, and Innovate	51
Development of State Capacity for Delivering Governance	52
Restoring the Scientific Temper: Emphasis on Technical Competence	55
Need to Transform NITI Aayog to Develop and Oversee the Strategy for a Comprehensive Big Push	55
V. A NEW SOCIAL CONTRACT: GROWTH, GROWTH, EMPLOYMENT, AND UNIVERSAL BASIC SERVICES	57
REFERENCES	60

LIST OF TABLES

Table 1: Real GDP Growth: An Overview.....	10
Table 2: Savings and Investment Rates: An Overview.....	11
Table 3: Minimum Support Prices (MSP) and Wholesale Price Index (WPI).....	14
Table 4: Infrastructure Spending: Recent Developments.....	15
Table 5: Balance of Payments.....	19
Table 6: Indicators of Industrial Activity.....	21
Table 7: Incremental Capital Output Ratio.....	23
Table 8: Fiscal Position of the Centre.....	26
Table 9: Income Tax Collections for Individuals in India.....	27
Table 10: Savings and Investment Rates: Projections.....	29
Table 11: Investments in Infrastructure.....	31
Table 12: Changes in Financial Assets / Liabilities of the Household Sector.....	36
Table 13: Capital Goods - Domestic Production and Imports.....	40

LIST OF CHARTS

Chart 1: Corporate Profitability: Key Ratios.....	17
Chart 2: Real Effective Exchange Rate.....	18
Chart 3: Portfolio Investment Inflows (Annual Flows, Net).....	20
Chart 4: General Government Revenues and Per Capita Income.....	27
Chart 5: Household Financial Savings: Gross and Net.....	37

I. THE INDIAN ECONOMY: A STORY OF CONSISTENT GROWTH

India reached a per capita GDP of around US \$1800 (China US \$8700) and overall GDP of about US \$2.6 trillion in 2017 when Chinese GDP had already reached about US \$12.2 trillion². What should be our aspiration for growth over the next couple of decades? Given the progress made over the past two to three decades, our minimum aspiration must be for doubling of per capita income in each of the next two decades. That implies a per capita growth rate of around 7 percent on a sustained basis, and over 8 percent per year for overall GDP.³ Even then, Indian per capita income would be around US \$6000 (2011-12 prices) by 2035, and GDP would be in the region of US \$10 trillion. Even if this relatively ambitious growth path is achieved, India's per capita income would be lower than China's levels today, and about 10 percent of the current US level. Such a level of mean per capita income would make it feasible to eliminate poverty and to achieve a decent standard of living for almost all Indians. Thus, such a growth objective should be seen as reasonable, though ambitious.

Placed in a historical and comparative perspective, broadly speaking, East Asia's GDP increased tenfold over about 30 years, between 1975 to 2005. If India achieves the kind of growth outlined above for a similar period of three decades, it would also achieve a comparable expansion. There are only a handful of countries that have achieved sustained growth over such long periods and thereby succeeded in escaping the "middle income trap". Given the continuing high levels of poverty in India, it is essential that we persist in our efforts to do so. Sustained maintenance of per capita GDP growth over 7 percent over decades is not "normal" for any country, especially one as large and diverse as India. *It needs predominant policy emphasis on economic growth over other objectives*, with the understanding that social welfare and poverty elimination will also be accomplished with the achievement of high growth. Such success cannot be achieved with a business-as-usual approach.

India's slow growth in the first decades after independence has often been characterised as the (slow) "*Hindu rate of growth*". In fact, Indian growth during the 1950s and 1960s was a major departure from stagnation over the previous century and beyond. Moreover, a closer look at the growth dynamics indicates that there was a consistent acceleration in growth from the 1950s up to the late 2000s, except for an interregnum during 1965–81 (Table 1; and Mohan, 2011a).⁴ That consistent acceleration may have been expected to continue but, instead, the past decade has again exhibited a relative slowdown. Although there appears to have been some growth recovery in recent years⁵, the question facing the country now is whether overall annual growth can be accelerated again to 8-9 percent on a sustainable basis.

² <https://data.worldbank.org/country/china>; <https://data.worldbank.org/country/india>. Accessed January 11, 2019

³ The current annual population growth rate is estimated at about 1.2-1.3 percent. We can therefore expect the average annual population growth rate in the next 15 to 20 years to be 1 percent or less.

⁴ The new back series of the national accounts, based on 2011-12 as the base year, has revised overall growth downwards, particularly services sector growth for the years 2004-05 to 2011-12. Since this revision is being subject to considerable discussion at present, this paper has used the old series data until 2011-12, and the new series from 2012-13 onwards.

⁵ There is, however, renewed questioning of the new GDP national accounts series and growth estimates since 2011 (Subramanian, 2019).

TABLE 1: REAL GDP GROWTH: AN OVERVIEW

(Percent per year)								
Item	1950-65	1965-81	1981-90	1990-97	1997-03	2003-08	2008-12	2012-18
1	2	3	4	5	6	7	8	9
GDP (Factor cost)/GVA (Basic prices)	4.1	3.2	5.4	5.7	5.4	8.7	7.7	6.9
1. Agriculture	2.9	2.1	3.5	3.7	1.0	4.9	3.6	3.1
2. Industry	6.6	4.1	6.9	6.9	4.3	8.8	7.3	7.2
Manufacturing	6.6	3.9	6.4	7.5	4.2	9.7	8.0	7.5
3. Services	4.9	4.2	6.4	6.4	7.9	9.8	8.9	7.9
GDP (Market prices)	4.3	3.2	5.6	5.5	5.3	8.8	7.3	7.1
1. Private consumption	3.7	3.2	4.2	4.6	4.6	7.5	8.1	7.1
2. Government consumption	6.6	5.3	7.2	3.8	6.5	5.8	9.2	6.2
3. Gross fixed capital formation	6.9	3.9	6.2	5.2	6.7	16.2	8.6	5.6
Memo:								
i) WPI inflation	3.8	9.0	6.8	9.6	4.6	5.5	7.6	2.4
ii) CPI inflation (Industrial workers)	n.a.	8.9	8.8	10.3	5.9	5.0	10.0	6.5
iii) CPI inflation (Combined)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	6.4
iv) Merchandise account balance/GDP	-1.8	-1.5	-3.0	-2.4	-2.9	-5.4	-9.1	-7.1
v) Current account deficit/GDP	-1.2	-0.6	-1.8	-1.3	-0.3	-0.3	-3.0	-1.9
Source: Central Statistics Organization, Government of India; Reserve Bank of India. Note: Data upto 2011-12 are GDP at factor cost, and data from 2012-13 are GVA at basic prices. GVA/ GDP growth rates upto 2011-12 are based on the 2004-05 series of national accounts, and 2012-13 onwards are based on the 2011-12 series. n.a. = not available.								

The secular uptrend in domestic growth since independence is clearly associated with consistent trends of increasing domestic savings and investment over the decades. Gross domestic savings increased from an average of 11 percent of GDP during 1950–65, to over 33 percent of GDP in 2003-08 (37 percent in 2007-08); over the same period, the domestic investment rate also increased continuously from 12 percent to 34 percent (38 percent in 2007-08) (Table 2). A significant feature that emerges from these trends in savings and investment rates is that Indian economic growth has been financed predominantly by domestic savings. The recourse to foreign savings—equivalently, current account deficit—has been rather modest in the Indian growth process. We may also note that towards the end of the two decades of the 1960s and 1980s, the current account deficit increased marginally beyond 2 percent of GDP, necessitating a greater recourse to external savings. These periods were followed by significant balance of payments and economic crises. The brief period of enhanced current account deficit during 2010-13 also led to crisis-like conditions in 2013. The long-term upward trends in savings and investment have, however, been interspersed with phases of stagnation, influenced particularly by developments in government finances.

TABLE 2 : SAVINGS AND INVESTMENT RATES: AN OVERVIEW

(Percent to GDP)								
Item	1950-65	1965-81	1981-90	1990-97	1997-03	2003-08	2008-11	2011-18
1	2	3	4	5	6	7	8	9
Savings								
1. Household Sector	7.0	10.8	13.3	16.8	21.0	23.2	24.0	19.8
(a) Household - Financial	2.1	3.9	6.6	9.6	10.0	11.2	10.7	7.2
(b) Household - Physical	4.9	6.9	6.7	7.2	11.0	12.0	13.3	12.6
2. Private Corporate Sector	1.2	1.4	1.7	3.4	3.9	7.2	7.9	11.0
3. Public Sector	2.6	3.9	3.7	2.1	-0.3	2.9	1.2	1.4
(a) Public Authorities	2.3	2.9	1.1	-0.8	-3.6	-1.1	-1.7	-1.0
(b) Non-departmental Commercial Enterprises	0.3	1.0	2.6	2.9	3.3	4.0	3.0	2.3
4. Gross Domestic Savings	10.8	16.1	18.7	22.4	24.5	33.3	33.1	32.1
Investment								
1. Gross Fixed Capital Formation	11.8	15.5	20.7	22.8	23.8	29.6	31.7	30.7
(a) Public Sector	5.3	7.3	11.0	9.3	6.9	7.4	8.3	7.1
(b) Private Corporate Sector	1.7	1.6	3.5	6.5	6.2	10.7	10.3	11.4
(c) Household Sector	4.8	6.6	6.2	7.1	10.7	11.4	13.1	12.1
2. Change in Stocks	1.1	1.7	1.9	0.6	0.7	2.7	2.7	1.7
3. Valuables	0.0	0.0	0.0	0.0	0.4	1.1	1.7	1.8
4. Errors & Omissions	-0.5	-0.3	-2.0	0.4	0.0	0.3	-0.4	0.1
5. Total Investment	12.3	16.8	20.5	23.8	24.9	33.7	35.8	34.3
Saving-Investment Gap	-1.5	-0.7	-1.8	-1.4	-0.4	-0.4	-2.6	-2.2
Source: Central Statistical Organization, Government of India; Reserve Bank of India. Note: Data upto 2010-11 are based on the 2004-05 series of national accounts, and data from 2011-12 are based on the 2011-12 series. Saving in physical assets includes gold and silver from 2011-12 onwards.								

What were the sectoral drivers of growth over the whole period since independence? Policy attention has traditionally been focused on industry starting particularly in the 1950s. Industrial growth was indeed quite robust in the immediate period after Independence, a very significant transformation from the previous stagnant era. It then slowed down in the mid-1960s (Table 1) before recovering again in the 1980s.⁶ What is less remarked upon is the continuing and consistent acceleration in growth of services over the decades, which really accounts for the corresponding acceleration in overall GDP growth (except for the 1965–81 interregnum). Hence, there is nothing particularly special about service sector growth during the 1990s and 2000s, except that the acceleration over time continued till the late 2000s.⁷ Agricultural growth has been relatively modest over the whole period, accompanied by weather-induced volatility. It is notable that overall GDP growth slowdowns during 1965-81 and 1997-2003 were accompanied by loss of pace in agriculture, as also in the recent period, 2014-19. This is suggestive of the importance of agriculture in interpreting overall growth impulses in the economy, despite its diminishing weight. Why did the interregnum occur during 1965-81?

⁶ The periodisation in this paper follows and extends Mohan (2011a) and is based on significant policy changes (early 1950s, early 1980s, and early 1990s), or significant differences in growth rates (1997–2003, 2003-08, 2008-12 (the North Atlantic Financial Crisis (NAFC) and its domestic stimulus impact) and the period since then.

⁷ See footnote 2

Apart from objective circumstances such as the 1965-67 drought, the wars with Pakistan, and the 1973 oil price shock, and the disruption and uncertainty created by the Emergency during 1975-77, this slowdown in growth during the 1965-81 period, 'the darkest in the post-independence economic history of India' (Panagariya, 2008), can be attributed to the various restrictive policy actions put in place during this period that effectively closed the Indian economy just when, in contrast, various East and South East Asian countries were opening up and accelerating their growth. This episode serves to place emphasis on the importance of following growth-friendly economic policies that are necessary on a sustained basis for a low-income country. Policy errors can have serious consequences and can have long-lasting impact over an extended period.

The 1965-81 growth slowdown was reversed during the 1980s, with the initiation of reform measures aimed at increasing domestic competitiveness. Beginning in the early 1990s, growth impulses gathered further momentum in the aftermath of comprehensive reforms encompassing the various sectors of the economy. These included: industrial deregulation, a significant opening of the economy to foreign direct investment (FDI) and foreign technology, gradual trade liberalisation, ex-ante real devaluation of the rupee in 1991, substantial reduction in tax rates and rationalisation of the taxation structure through the 1990s, deregulation of interest rates, reduction in statutory pre-emptions, and improvement in the monetary-fiscal interface. These reform measures were greeted with a great deal of enthusiasm by the private sector as demonstrated by tremendous increases in its investment intentions and robust export growth.⁸

There was, however, again some loss of the growth momentum in the latter half of the 1990s in the wake of the East Asian financial crisis, setbacks to the fiscal correction process, deterioration in the quality of fiscal adjustment, slowdown in agriculture growth affected by lower than normal monsoon years, some slackening in the pace of structural reforms, monetary tightening to contain inflation, and excessive enthusiasm and optimism with regard to investment plans in domestic industry following deregulation, some of which went awry. We seem to have experienced a similar phenomenon this time around after the North Atlantic Financial Crisis (NAFC), although there are some key differences as well.

It is therefore important that focused attention be given once again to crafting policy strategies that can move India to a new growth trajectory. There should be recognition of the interconnectivity of policy measures between different aspects of the economy. Policy and decision-making in silos will not deliver the kind of growth that we aspire to. At the same time excessive centralisation should be avoided: the principle of subsidiarity should help in deciding where coordination is needed and where it is not. There is no time for complacency.

⁸ As might be expected, there were also a number of incumbent private-sector business groups (dubbed the "Bombay Club") who were averse to opening of the economy and the reduction of greater competition overall.

The Golden Era of Growth: 2003-08⁹

After 2003-04, there was a distinct strengthening of the growth momentum. Restructuring measures by domestic industry in the previous period (1997-2003), overall reduction in domestic nominal and real interest rates, fiscal consolidation, strong global demand, and easy global liquidity and monetary conditions, led to a benign investment climate and improved corporate profitability. Consequently, overall high economic growth was recorded during 2003-08. Growth during this period was broad-based, with all the three key sectors – agriculture, industry and services – contributing to the momentum (Table 1).

The progressive reduction in fiscal deficit, and hence in overall government borrowing, freed up resources for investment by the private corporate sector. This improvement was underpinned by an increase in gross tax/GDP ratio of the central government and containment of subsidies. Thus, the significantly higher public sector and private corporate sector savings rates, in conjunction with broadly stable household savings rate, led to a substantial increase in the overall savings rate of the economy, making more resources available for domestic investment (Table 2). *Net household financial savings were adequate to meet the financial needs of both the government and the private corporate sector during this period.*

It is also noteworthy that monetary management succeeded in containing inflation during this period, despite an unprecedented volume of inward capital flows. This was facilitated by the multiple instrument approach, including innovations such as the market stabilisation scheme to sterilise the impact of large and volatile capital flows (Mohan and Kapur, 2011). Notably, inflation during this high-growth period (in terms of the wholesale price index and, contrary to common perception, even in terms of the consumer price index) was broadly similar to that in the preceding period, even as global commodity inflation was substantially higher during this period (Table 1). On the other hand, the increase in minimum support prices in respect of agricultural commodities during 2003-08 was generally lower than wholesale market prices (Table 3), and the trend lower than that in 1997-2003, which in turn was lower than in 1991-97. Thus, the government's agricultural support price policy was favourable towards the objective of inflation control during 2003-08, although this policy might have also benefited from the generalised lowering of inflation globally beginning in the latter half of the 1990s. The financial sector also performed well, with continuous improvements in asset quality and efficiency indicators (Mohan, 2011b).

Infrastructure investment was also stepped up by about 1 percent of GDP over the period, with the increase divided roughly equally between the public and private sectors, thereby increasing the share of private sector investment in infrastructure (Table 4¹⁰; NTDP, 2014). A notable increase took place in investment in roads, whereas that in the railways remained stagnant as a share of GDP (Table 11).¹¹ Improvements in infrastructure then contributed to the high growth in manufacturing and trade.

⁹ See Footnotes 2 and 3. The previous series had recorded GDP annual growth over this period at 8.8 percent, manufacturing at 9.7 percent, and services at 9.8 percent: hence the "Golden Era of Growth".

¹⁰ The data reported from the 2004-05 and 2011-12 National Accounts Series appear to be not comparable, but are reported nonetheless because of the non-availability of comparable data.

¹¹ See the detailed estimates of infrastructure and transport investments in NTDP (2014).

TABLE 3: MINIMUM SUPPORT PRICES (MSP) AND WHOLESALE PRICE INDEX (WPI)

(March 2003 = 100)

Item	Mar-03	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09	Mar-10	Mar-11	Mar-12	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17	Mar-18
Rice																
WPI	100.0	97.7	101.1	104.0	113.4	129.7	149.7	161.7	165.4	173.7	204.2	228.2	227.1	232.6	254.1	262.6
MSP	100.0	103.8	105.7	107.5	109.4	121.7	169.8	188.7	188.7	203.8	235.8	247.2	256.6	266.0	277.4	292.5
Gap	0.0	6.2	4.5	3.4	-3.5	-6.1	13.5	16.7	14.1	17.3	15.5	8.3	13.0	14.4	9.1	11.4
Wheat																
WPI	100.0	104.8	104.1	120.5	132.8	144.4	155.6	178.4	178.7	177.7	212.0	220.2	217.4	231.6	246.7	243.8
MSP	100.0	101.6	103.2	104.8	121.0	161.3	174.2	177.4	188.7	207.3	217.7	225.8	233.9	246.0	262.1	279.8
Gap	0.0	-3.1	-0.8	-13.0	-8.9	11.7	12.0	-0.5	5.6	16.7	2.7	2.6	7.6	6.2	6.2	14.8
Gram																
WPI	100.0	96.4	95.6	124.9	145.8	151.5	145.0	140.7	152.7	217.0	233.4	205.6	220.3	285.6	361.3	258.8
MSP	100.0	114.8	116.8	117.6	118.4	131.1	141.8	144.3	172.1	229.5	245.9	254.1	260.2	286.9	327.9	360.7
Gap	0.0	19.0	22.2	-5.8	-18.8	-13.5	-2.2	2.5	12.7	5.8	5.4	23.6	18.2	0.5	-9.2	39.4
Arhar																
WPI	100.0	106.9	98.9	107.8	129.0	152.2	174.8	246.0	222.8	197.2	231.0	236.3	287.6	399.6	250.2	231.6
MSP	100.0	103.0	105.3	106.1	106.8	117.4	151.5	174.2	265.2	280.3	291.7	325.8	329.5	350.4	382.6	412.9
Gap	0.0	-3.6	6.5	-1.6	-17.2	-22.8	-13.3	-29.2	19.0	42.1	26.3	37.8	14.6	-12.3	52.9	78.3
Moong																
WPI	100.0	89.3	91.2	128.2	143.7	117.6	140.3	266.5	222.8	211.0	247.0	276.9	314.7	331.4	241.0	238.3
MSP	100.0	103.0	106.0	114.3	114.3	127.8	189.5	207.5	275.9	300.8	330.8	338.3	345.9	364.7	392.9	419.2
Gap	0.0	15.4	16.2	-10.9	-20.5	8.7	35.0	-22.1	23.8	42.5	33.9	22.2	9.9	10.0	63.0	75.9
Urard																
WPI	100.0	97.1	94.5	141.1	166.5	136.1	157.8	236.5	232.9	202.9	214.1	240.2	296.6	439.7	335.2	248.7
MSP	100.0	103.0	106.0	114.3	114.3	127.8	189.5	189.5	255.6	285.7	323.3	323.3	327.1	347.7	375.9	406.0
Gap	0.0	6.1	12.2	-19.0	-31.4	-6.1	20.0	-19.9	9.8	40.8	51.0	34.6	10.3	-20.9	12.2	63.3

Source: Database on the Indian Economy, Reserve Bank of India.

Note: MSP = Minimum Support Prices; WPI = Wholesale Price Index.

The row 'Gap' gives difference (percent) of MSP over WPI.

Data for WPI upto March 2013 are based on the WPI series with base 2004-05=100, and from March 2014 onwards are based on the WPI series with base 2011-12=100.

TABLE 4: INFRASTRUCTURE SPENDING: RECENT DEVELOPMENTS

		NAS series with base 2004-5=100										NAS series with base 2011-12=100				
	2000-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
Infrastructure (USD billion)																
Total	28	47	64	78	85	99	102	118	108	106	95	119	113	134		
Public Sector	20	35	47	50	54	59	60	42	41	38	47	54	51	NA		
Private Sector	8	12	17	28	31	40	42	76	67	68	48	62	74	NA		
Infrastructure (Percent to GDP)																
Total	4.6	5.0	5.2	6.3	6.2	5.8	5.4	6.5	5.9	5.7	4.7	5.7	4.9	5.1		
Public Sector	3.2	3.7	3.8	4.1	3.9	3.4	3.2	2.3	2.2	2.0	2.3	2.6	2.3	NA		
Private Sector	1.4	1.3	1.4	2.3	2.3	2.4	2.2	4.2	3.6	3.7	2.4	2.9	3.2	NA		
Infrastructure (Percent to total)																
Total	100	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
Public Sector	70.9	73.9	73.9	64.1	63.1	59.3	59.1	35.7	38.0	35.5	49.5	46.7	40.9	NA		
Private Sector	29.1	26.1	26.1	35.9	36.9	40.7	40.9	64.3	62.0	64.5	50.5	53.3	59.1	NA		

Source: National Accounts Statistics 2018; National Transport Development Policy Committee (2014).

Note: Data for the columns NAS series with base 2004-05=100 are from NTDP (2014), and with base 2011-12=100 are from CSO.

The Current Deceleration: 2012-18

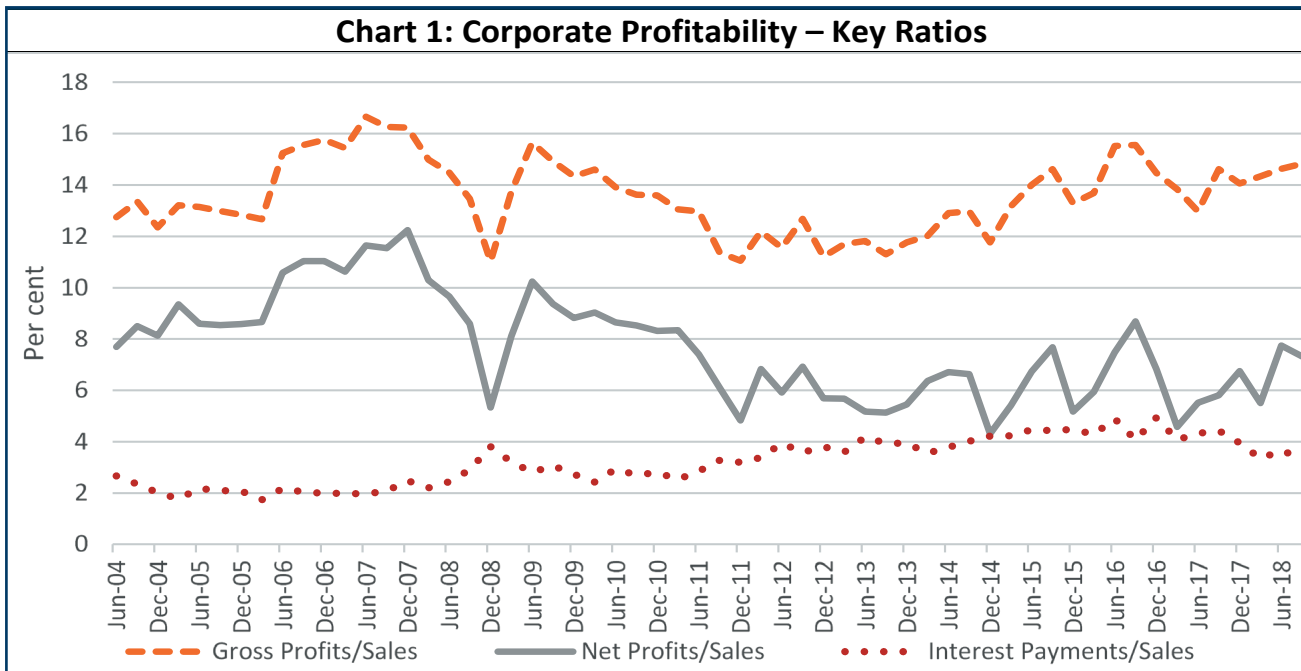
The growth slowdown during 2012-14 occurred after almost a decade of consistent high growth, including a sharp recovery from the 2008-09 crises. This reflected a number of factors (Kapur and Mohan, 2014). First, while the macroeconomic policy response to the NAFC – both monetary and fiscal policy – was admirably rapid, there was, at least with hindsight, overshooting of the stimulus, both monetary and fiscal, which sowed the seeds for inflation and current account pressures.

Subsequent monetary tightening, though somewhat tepid, then had the expected dampening impact on economic activity and growth. The efficacy of monetary policy to deal with inflation in this period was blunted by the persistent inflation in food items, which required monetary policy to be in a relatively tighter mode for a longer period. In contrast to the restraint exercised during 2003-08, Minimum Support Prices (MSP) for key actual agricultural products have been increased faster than the WPI since then, and particularly during the 2009-14 period (Table 3).

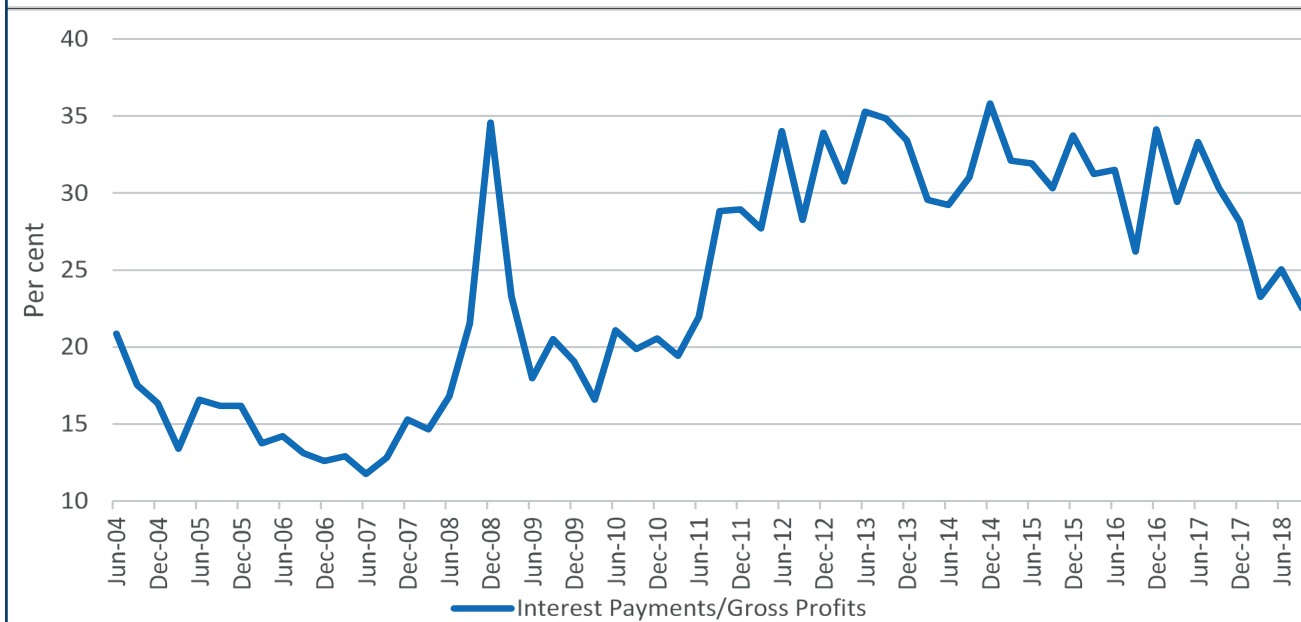
Second, the quality of the fiscal stimulus, which focused on tax cuts and increased revenue expenditure (particularly on subsidies), while keeping capital outlays stagnant, added to demand pressures, which were then mirrored in high inflation. The withdrawal of the fiscal stimulus was also hesitant and slow.¹² There was an attempt to keep up public investment in roads and power along with the fiscal stimulus in 2008-10, but then a steep decline took place after that, thereby contributing to the growth slowdown, particularly in manufacturing.

Third, the delayed and incomplete withdrawal of the fiscal stimulus led to crowding out of the private sector, which might have also hampered private corporate investment. Simultaneously, the high nominal interest rate in an environment of subdued growth also impacted corporate profitability and investment. Interest payments as a proportion of gross profits or of sales of the corporate sector have been significantly higher since 2012, although they have shown some encouraging improvement since 2016 (Chart 1). The availability of domestic resources for the private corporate sector was therefore squeezed from all sides.

¹² IMF (2012)



Source: Reserve Bank of India; CEIC Data.



Source: Reserve Bank of India; CEIC Data.

Fourth, the current account deficit (CAD) widened well beyond comfort levels by 2012-13. The global environment imparted headwinds: growth in volume of global exports of goods as well as “goods and services” during 2012-14 was almost a third of that during the 2003-07 period, which then impacted Indian exports and overall growth. High domestic inflation and negative real interest rates on deposits encouraged gold imports; incomplete pass-through of international crude oil prices to domestic fuel prices led to greater demand for imported petroleum products; and appreciation pressure on the real exchange rate from large capital flows further added to CAD pressures. Furthermore, in contrast to previous episodes of large capital flows, there was little foreign exchange intervention: foreign exchange reserves were not increased and the real effective exchange rate appreciated during 2009-11 (Chart 2) while the CAD widened (Table 5). In fact, capital inflows were encouraged through continued opening of the capital account, particularly to potentially destabilising debt flows (Chart 3).

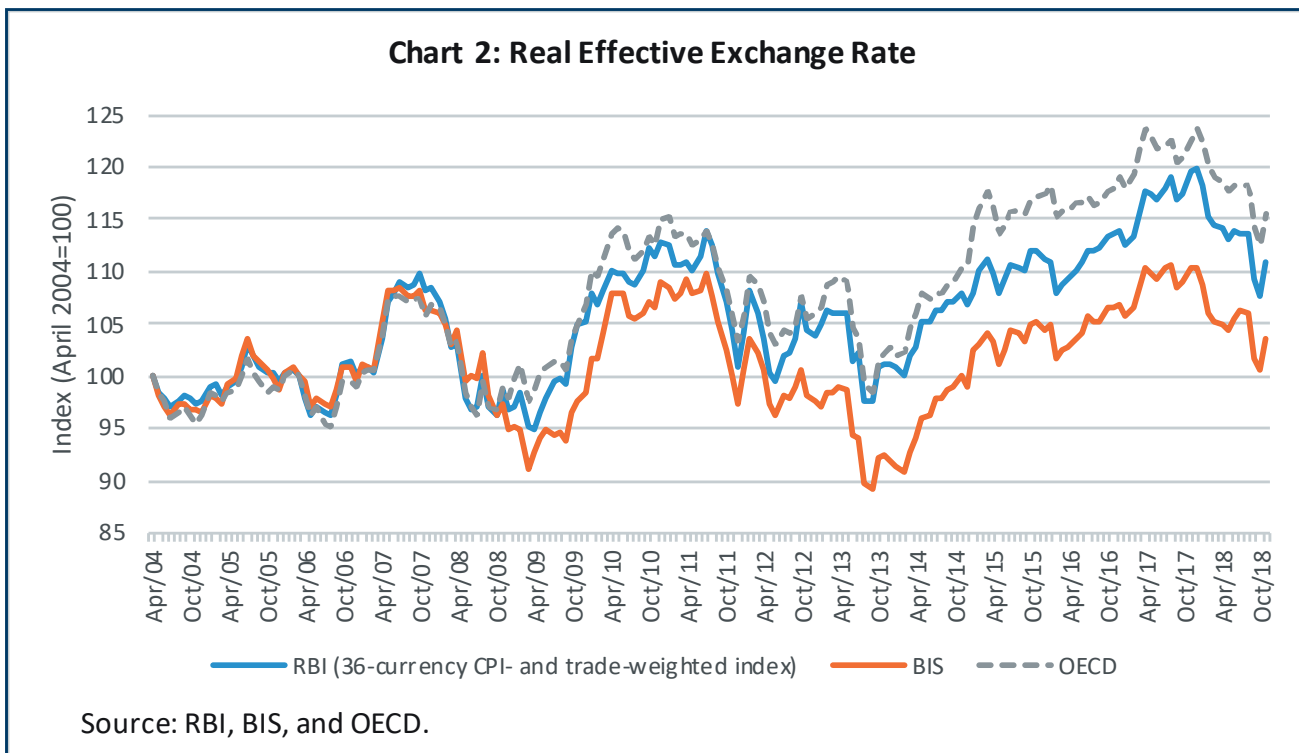
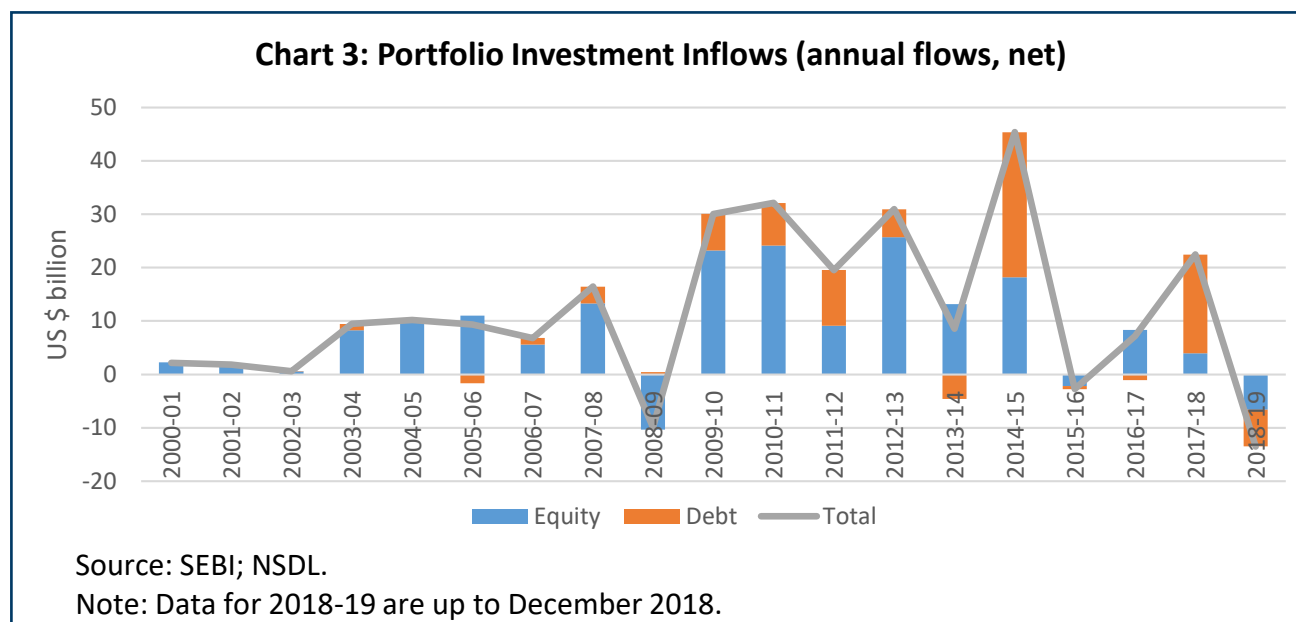


TABLE 5: BALANCE OF PAYMENTS

	(Percent to GDP)																
Item	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		
1 Merchandise exports	10.7	11.8	12.6	13.6	13.4	15.4	13.4	15.0	17.0	16.8	17.2	15.5	12.7	12.2	11.6		
a) Oil	0.6	1.0	1.4	2.0	2.3	2.2	2.1	2.4	3.1	3.3	3.4	2.8	1.5	1.4	1.5		
2 Merchandise imports	12.9	16.5	18.8	20.1	20.8	25.2	22.0	22.5	27.4	27.5	25.1	22.6	18.8	17.1	17.7		
a) Oil	3.3	4.1	5.3	6.0	6.4	7.6	6.4	6.2	8.5	9.0	8.9	6.8	3.9	3.8	4.1		
b) Gold	1.1	1.5	1.3	1.5	1.3	1.7	2.1	2.4	3.1	2.9	1.5	1.7	1.5	1.2	1.3		
c) Non-oil non-gold	8.6	10.9	12.3	12.6	13.0	15.8	13.5	13.9	15.8	15.6	14.7	14.2	13.4	12.1	12.3		
d) Net oil imports	2.7	3.2	3.9	4.0	4.1	5.4	4.3	3.8	5.4	5.6	5.5	4.0	2.5	2.4	2.6		
3 Trade balance	-2.2	-4.7	-6.2	-6.5	-7.4	-9.7	-8.7	-7.5	-10.4	-10.7	-7.9	-7.1	-6.2	-4.9	-6.0		
a) Non-oil balance	0.5	-1.5	-2.3	-2.5	-3.2	-4.4	-4.3	-3.7	-5.0	-5.1	-2.5	-3.1	-3.7	-2.5	-3.4		
b) Non-oil non-gold balance	1.6	0.0	-1.0	-1.0	-1.9	-2.7	-2.2	-1.3	-1.9	-2.1	-0.9	-1.4	-2.2	-1.3	-2.1		
4 Invisibles, net	4.5	4.3	5.0	5.5	6.1	7.5	5.9	4.6	6.1	5.9	6.2	5.8	5.1	4.2	4.2		
a) Services, net	1.6	2.1	2.8	3.1	3.1	4.4	2.6	2.6	3.5	3.6	3.9	3.8	3.3	2.9	2.9		
b) Private transfers, net	3.5	2.8	2.9	3.1	3.4	3.6	3.8	3.1	3.5	3.5	3.5	3.2	3.0	2.5	2.4		
c) Investment income, net	-0.6	-0.6	-0.6	-0.7	-0.4	-0.5	-0.5	-1.0	-0.9	-1.2	-1.3	-1.2	-1.2	-1.2	-1.2		
5 Current account balance	2.3	-0.3	-1.2	-1.0	-1.3	-2.3	-2.8	-2.8	-4.3	-4.8	-1.7	-1.3	-1.1	-0.7	-1.8		
a) non-oil balance	5.0	2.8	2.7	3.0	2.9	3.1	1.5	1.0	1.1	0.8	3.7	2.7	1.4	1.8	0.8		
b) Non-oil non-gold balance	6.1	4.3	4.0	4.6	4.2	4.8	3.6	3.3	4.2	3.8	5.3	4.4	2.9	3.0	2.1		
6 Capital flows, net	2.7	3.9	3.1	4.8	8.6	0.6	3.8	3.7	3.7	4.9	2.6	4.4	2.0	1.6	3.4		
a) Capital inflows	12.3	13.7	17.3	24.6	35.4	25.8	25.3	29.5	26.3	25.8	27.6	27.0	24.2	24.0	24.3		
b) Capital outflows	9.6	9.8	14.3	19.8	26.8	25.2	21.5	25.8	22.5	20.9	24.9	22.6	22.3	22.4	20.8		
7 Foreign investment, net	2.2	1.8	1.9	1.6	3.5	0.7	3.7	2.5	2.2	2.6	1.4	3.6	1.5	1.9	2.0		
a) FDI inward	0.7	0.8	1.1	2.4	2.8	3.4	2.4	1.7	1.8	1.5	1.7	1.7	2.1	1.8	1.5		
b) FDI outward	0.3	0.3	0.7	1.6	1.5	1.6	1.1	1.0	0.6	0.4	0.5	0.2	0.4	0.3	0.3		
c) Portfolio	1.8	1.3	1.5	0.7	2.2	-1.1	2.4	1.8	1.0	1.5	0.3	2.1	-0.2	0.3	0.8		
8 Debt flows, net	-0.1	1.4	1.3	3.1	3.3	1.0	1.2	1.9	1.7	2.5	2.5	0.8	0.5	-0.5	1.0		
a) Non-resident deposits	0.6	-0.1	0.3	0.5	0.0	0.3	0.2	0.2	0.7	0.8	2.1	0.7	0.8	-0.5	0.4		
9 Others	0.6	0.7	-0.1	0.1	1.8	-1.0	-1.1	-0.6	-0.1	-0.2	-1.3	0.0	-0.1	0.2	0.5		
10 Overall balance	5.1	3.6	1.8	3.9	7.4	-1.6	1.0	0.8	-0.7	0.2	0.8	3.0	0.9	0.9	1.6		
Memo:																	
Current account balance (US \$ billion)	14	-2	-10	-10	-16	-28	-38	-48	-78	-88	-32	-27	-22	-15	-49		
Capital flows, net (US \$ billion)	17	28	25	45	107	7	52	64	68	89	49	89	41	36	91		
End-March																	
External debt	17.2	18.1	16.8	17.5	18.0	20.3	18.2	18.2	21.1	22.4	23.9	23.8	23.4	19.9	19.7		
Import cover of forex reserves - goods and services (months)	14.0	11.6	9.5	10.2	12.0	8.4	9.3	7.9	6.1	6.0	6.7	7.5	9.0	9.1	8.7		
Foreign exchange reserves (US \$ billion)	113	142	152	199	310	252	279	305	294	292	304	342	360	370	425		

Source: Reserve Bank of India; Ministry of Finance.



Fifth, a key feature of the great slowdown is the significant deceleration in industrial growth observed since 2011. Unfortunately, the available data do not provide a consistent picture of the industrial growth pattern during this period, and are hence difficult to interpret. Growth in industrial output, as exhibited by both the Index of Industrial Production (IIP) and the Annual Survey of Industries (ASI), at 3-4 percent is much lower than value-added at 6-6.5 percent as reported by both the ASI and the National Account Statistics (Table 6). Such significant differences did not generally occur in previous periods. Given the macroeconomic factors outlined above, a slowdown would have been expected, so the higher growth levels reported in the revised national accounts are difficult to understand. The issue of data discrepancies makes policy prescription even more challenging, hence the need for clearer explanations of the data. In any case restoration of sustained high overall growth in the future will be critically dependent on reinvigoration of the manufacturing sector towards double-digit growth rates, which are significantly higher than even the reported national accounts manufacturing growth rates.

TABLE 6: INDICATORS OF INDUSTRIAL ACTIVITY

(Growth in Percent)							
Year	Index of Industrial Production		Annual Survey of Industries @			Gross Value Added (constant prices)	
	Manufacturing	General	Output	Net Value Added	Gross Value Added	Manufacturing	Industry #
1	2	3	4	5	6	7	8
2000-01	5.4	4.9	-0.1	-10.3	-8.4	7.3	6.0
2001-02	2.9	2.8	2.0	-1.3	0.9	2.3	2.6
2002-03	6.0	5.8	14.4	16.3	13.9	6.9	7.2
2003-04	7.4	7.0	7.8	11.5	9.5	6.3	7.3
2004-05	13.2	11.7	22.3	20.6	17.7	7.4	9.8
2005-06	10.3	8.6	11.4	17.2	15.0	10.1	9.7
2006-07	15.0	12.9	19.4	20.1	19.4	14.3	12.2
2007-08	18.4	15.5	10.0	16.1	14.6	10.3	9.7
2008-09	2.5	2.5	11.1	3.2	4.2	4.3	4.4
2009-10	4.8	5.3	11.6	9.7	11.5	11.3	9.2
2010-11	9.0	8.2	18.5	12.6	12.0	8.9	7.6
2011-12	3.0	2.9	13.8	1.2	2.3	7.4	7.8
2012-13	4.8	3.3	0.4	5.9	5.7	5.5	3.3
2013-14	3.6	3.3	5.6	2.0	2.6	5.0	3.8
2014-15	3.8	4.0	2.4	6.2	6.6	7.9	7.0
2015-16	2.8	3.3	1.5	12.0	11.3	13.1	9.6
2016-17	4.4	4.6	4.4	5.1	5.7	7.9	7.7
Memo: Period Averages							
1980s	7.4	7.6	8.1	7.3	7.9	6.2	5.8
1990s	6.5	6.3	7.3	6.8	6.9	5.8	5.7
2000s	8.6	7.7	11.0	10.3	9.8	8.0	7.8
2003-08	12.8	11.1	14.2	17.1	15.2	9.7	9.7
2008-12	4.8	4.7	13.7	6.7	7.5	8.0	7.2
2012-17	3.9	3.7	2.9	6.2	6.4	7.9	6.3
Source: Central Statistical Organization. @: Growth rates are based on ASI data deflated by WPI-Manufactured Products index. #: including construction. Data on Gross Value Added in columns 7 and 8 are from National Accounts Statistics.							

All these macroeconomic and policy developments contributed to the Great Slowdown during 2012-14, though there has been recovery since then. Overall, the key policy messages from the 2012-14 slowdown reinforce the messages from the 2003-08 high growth phase: need for prudent fiscal policy, a low and stable inflation environment, appropriate capital account management, and a focus on infrastructure investment. The 2012-14 episode also flags the issue of containing the CAD within prudent limits, although the CAD is ultimately a reflection of other domestic macroeconomic and financial policies.

II. A POSSIBLE FUTURE HIGH GROWTH SCENARIO 2020 TO 2035

Historically, Indian growth accelerations have been accompanied by higher gross domestic investment rates, largely financed from correspondingly increasing domestic savings, supplemented modestly by external savings including foreign direct investment (FDI). One scenario for significantly higher savings and investment levels, consistent with a return to 8-9 percent growth, was put out by the National Transport Development Policy Committee (2014) in its *India Transport Report: Moving India to 2032*.¹³ The “aspirational projections” put forward in this paper are essentially derived from the growth simulations made in that report but have been adjusted somewhat. A similar aspiration is expressed in NITI Aayog’s “*Strategy for New India @75*”.¹⁴ Ideally, it would have been better to conduct a fresh simulation, updated for more recent data, to make macroeconomic consistent projections of the kind of growth that the Indian economy is realistically capable of sustaining in the medium-term. This, however, is difficult at the present time because of the change that has been made in the base of the national accounts series, and some of the controversies that have arisen in the back series that has been estimated. I believe, however, that the broad quantitative thrust provided here is essentially robust, even if aspirational.

The projections aim to provide a consistent macroeconomic framework for returning Indian annual GDP growth from around 7-7.5 percent in recent years to a consistent 8-9 percent over the period 2020-35. The objective is to work out the quantitative implications and necessary conditions for the kind of movements that will be needed in key macroeconomic magnitudes that would make such growth actually happen. The results then provide some assessment of the feasibility of achieving such a growth objective. This scenario entails the gross fixed capital formation (GFCF) rate to increase from about 31 percent in 2012-18 to around 33-35 percent during 2020-25 and ascending to 35-38 percent during the five-year period 2030-35. Such a projected increase in investment would appear to be feasible in view of the actual investment level (GFCF) of 33 percent reached in 2007-08.¹⁵ The corresponding rates of domestic savings would be about 31-33 percent during 2020-25, rising to 33-36 percent during 2030-35. These projections envisage an increase in all the three major components of savings – household, private corporate and public savings (Table 10).¹⁶ While the projections are deemed to be feasible and achievable, given that the domestic savings rate had reached almost 37 percent in 2007-08, they are ambitious in view of the recent record. In this scenario, the absorption of external savings has been kept at around 2-2.5 percent of GDP throughout the period, which is judged to be consistent with a sustainable CAD.

What do the projections imply for overall efficiency of the economy? One crude measure of productivity is the incremental capital output ratio (ICOR). Indian ICORs have ranged between 3.5 and 4.5 for much of the past three decades, except for some outlier years (Table 7). Our projections embedded in the desired growth paths of GDP and GFCF imply an ICOR of about 4.2 over the projected period. The ICOR has increased in recent years to around 5, so there is a clear need for improvement. We are, therefore, assuming a relatively high and improved level of efficiency in resource use. This is consistent with Indian

¹³ Chapter 3 in the India Transport Report provides detailed macroeconomic consistent projections up to 2032. The NTDP was chaired by me, and the simulation projections were carried out under my supervision.

¹⁴ Government of India (2018). https://www.niti.gov.in/writereaddata/files/Strategy_for_New_India.pdf. Accessed January 20, 2019.

¹⁵ NITI Aayog envisages GFCF rising to 36 percent of GDP by 2022.

¹⁶ These numbers are similar to the simulations from NTDP (2014) reported in Table 10, but have been adjusted slightly downward.

historical achievements, and with similar high growth periods in East and South East Asian countries. It is therefore within the realm of feasibility.

TABLE 7: INCREMENTAL CAPITAL OUTPUT RATIO							
Country	1980s	1990s	2000s	2010-17		2000-07	2008-17
Emerging Market Economies							
Brazil	6.4	10.8	5.5	14.3		5.0	12.3
Chile	5.7	4.3	5.2	6.8		4.3	7.9
China	3.7	3.8	3.9	5.8		3.7	5.6
India	3.7	4.2	4.5	4.8		4.2	4.9
Indonesia	5.8	6.6	5.3	6.1		5.3	6.0
Korea	3.8	5.2	6.8	8.9		5.9	9.9
Malaysia	5.7	5.4	5.0	4.5		4.4	5.1
Mexico	10.8	6.4	15.0	7.4		9.2	11.2
Philippines	13.6	9.5	4.5	3.3		4.2	3.7
South Africa	11.2	12.8	5.2	10.0		4.2	11.5
Thailand	3.8	6.8	5.8	6.7		4.8	8.1
Turkey	5.5	5.8	6.3	4.3		4.5	5.6
Vietnam	2.8	2.9	5.0	4.6		4.7	5.0
Source: World Economic Outlook Database (April 2018), International Monetary Fund. Note: Incremental capital output ratio is computed as the ratio of average investment rate to average annual growth during the specific sample periods. n.a.: not available.							

What would be the nature of sectoral growth transformation that would be consistent with projected GDP growth? A key feature of such a growth path is that, even with relatively optimistic agriculture growth scenarios of around 4 percent per year, overall GDP growth rates in excess of 8 percent are really not possible to achieve without manufacturing growth approaching 10 percent. Whereas such a high rate of manufacturing growth was indeed achieved during 2005-08, India has never exhibited such a rate over a sustained period of a decade. The revival of competitive Indian manufacturing over a period of a couple of decades is therefore the key challenge facing the country if it is to aspire to the kind of high growth envisaged here.

Financing Growth

Household Savings

Household savings have been the bedrock of domestic savings in India, exhibiting a steady increase over the years. They reached about 21 percent of GDP during 1997-2003 and ascended further to just under 24 percent during 2008-11, but have since fallen to around 17 percent in 2016-2018. There has been a dramatic fall in net household financial savings from the high of 11-12 percent of GDP reached in 2007-08 to around 7 percent in recent years (Table 12). These need to be restored to the 10 percent level in the near future (from 7 percent at present), and then increased gradually to around 13 percent by 2030-35. Such a steep fall in recent years is difficult to understand since household financial savings had been around 10 percent of GDP for almost 20 years right through the 1990s and 2000s.

Prima facie the desired increase would appear reasonable with the expectation of continued enhancement of financial depth in the economy along with the kind of income growth projected. The various measures taken towards much greater financial inclusion, such as the *Jan Dhan Yojana*, introduction of new mobile related financial technology and payment systems, and financial deepening through greater contractual

savings should help in this regard. If Indian growth has to ascend to a higher level, this focused approach to increasing household financial savings will have to be accompanied by measures to intermediate them more efficiently towards productive uses.

All of this is predicated on the maintenance of low inflation in the country on a sustained basis, so that reasonable nominal interest rates do provide adequate real interest rates to savers. Appropriate monetary policy aimed at the maintenance of low and stable inflation would be extremely helpful if it is supplemented by supply side policies aimed at improving productivity and output in agriculture. Food-inflation containment will also depend on a more focused roll out of rural infrastructure in terms of both transport and energy, mainly a public sector function.

Private Corporate Sector Savings

A distinguishing feature of the golden era of growth (2003-08) was the dramatic doubling of private corporate savings from 3.9 percent of GDP during 1997-2003 to about 7.9 percent during 2008-11, reflecting the buoyant profitability of that period. High corporate investment levels were then enabled by the availability of both ample external and internal resources, particularly that of net household savings. Therefore, success with fiscal consolidation and inflation management, allowing sustained low nominal interest rates will have a positive impact on corporate savings and investment. Maintenance of private corporate savings and investment at the current level of about 10 -12 percent is essential on a sustained basis.¹⁷ This would enable private corporate sector investment to ascend to higher levels of 12-15 percent of GDP in 2025-35.

Public Sector Savings

This brings us to the desired trajectory of public sector savings, which consist of two broad categories: government *per se* and public sector enterprises. As a consequence of the fiscal stimulus initiated in 2008-09 in the wake of the NAFC and the ensuing 2009 general elections, government savings turned distinctly negative, after having become mildly positive at 1.1 percent of GDP in 2007-08, and have remained negative ever since. This broadly corresponds to the revenue deficit of the Centre and States combined. Interestingly, public enterprises (non-departmental commercial enterprises) had maintained consistent positive saving rates of around 3-4 percent of GDP through the 1990s and 2000s. These rates have since fallen to less than 2.5 percent, levels last seen in the 1980s. With the envisaged fiscal correction embodied in the new FRBM framework¹⁸ at the central government level, and a new push that is needed at the state level, the aim should be to restore government savings *per se* to approach mildly positive levels.

Action has already been taken on reducing central subsidies, particularly energy subsidies, from 2.6 percent of GDP in 2012-13 to around 1.6 percent now.¹⁹ However, in light of perceptions of agrarian distress, and electoral compulsions at both the central and state levels, there is a possibility of significant slippage in the coming years, particularly in light of new schemes that are being announced or contemplated. It would be desirable to contain the central subsidy levels to around 1 percent of GDP. Accordingly, if government savings can be maintained at mildly positive levels and if public enterprise savings can be

¹⁷ As exhibited by the current National Accounts series.

¹⁸ Fiscal Responsibility and Budget Management Act

¹⁹ These estimates of subsidies do not include expenditure on other welfare schemes such as the Mahatma Gandhi National Rural Employment Guarantee Scheme and the new income transfer scheme for poor farmers announced in the 2019-20 interim budget. Together they would amount to almost 0.7 percent of GDP.

restored to the 3-4 percent range, overall public sector savings can be projected to increase from the current level 1.5 percent of GDP to 3 percent in 2020-2025, rising to about 3.5 percent by 2030-35. This is a relatively optimistic assumption in view of current populist pressures. If the attainment of sustainable high growth is the objective, it is essential that great effort be expended in containing subsidies, as opposed to the current policy tendency of increasing subsidies in a number of different ways at both the central and state levels, largely due to populist pressures. It is possible, however, greater improvement can take place in overall public sector savings if the overall tax/GDP ratio can be improved over the years.

Net borrowing by the central and state governments combined has been in the range of 7-10 percent of GDP since the NAFC related fiscal stimulus in 2008-09, nearer 7 percent in recent years, almost completely absorbing net household financial saving during this period.²⁰ Some recent estimates suggest that the current total public sector borrowing requirement (PSBR) is almost 9 percent of GDP, consuming total household sector financial savings and more (Chinoy, 2019). This can crowd out the private corporate sector once the corporate demand for investment funds gets rekindled. It accordingly contributes to the prevalence of relatively high real interest rates in the economy, and impedes monetary policy transmission if attempts are made to provide a monetary stimulus. *Thus, reduction in the overall fiscal deficit and borrowing requirements of the government, both at central and state levels, is a sine qua non for the restoration of high sustainable growth.* Consequently, if overall consolidated government borrowing can indeed be reduced to around 4-5 percent of GDP (as it had in 2007-08) on a sustained basis over the next 5 years and beyond, and household financial savings restored to the levels projected, the private corporate sector would once again have better access to financial resources for the higher levels of investment that are needed to fund higher economic growth.

The second issue with respect to fiscal policy is the need to focus on the revenue side; the gross tax/GDP ratio of the central government recorded a significant fall from its peak of 2007-08 of about 12 percent, to around 10 percent during 2009-15. There has been some welcome buoyancy since then (Table 8). However, the performance of tax collection still seems to be patchy. The latest estimate for gross tax revenue for 2018-19 is around 10.9 percent of GDP, slightly lower than the previous year. This pattern illustrates the lasting damage that can be done by sudden tax cuts: it has taken a decade to restore the kind of tax performance achieved earlier. The most welcome development in recent years had been buoyancy in personal income tax collections, but the 2018-19 actuals are now showing lower collections as a portion of GDP than in the 2017-18 (Table 12). The personal income tax/GDP ratio had remained stagnant at around 2 percent for over a decade until 2015-16, despite significant income growth over that period. The interim budget target of 3 percent for 2019-20 is now unlikely to be achieved. Corporate income tax has, however, fallen over the same period from around 4 percent of GDP during 2007-11 to under 3.5 percent in recent years, reflecting some reduction in corporate tax rates and some in corporate profitability (Table 8). The welcome introduction and roll out of the Goods and Services Tax (GST) should help overtime increasing tax buoyancy of the system in the collection of indirect taxes, now at both the central and state levels. Further simplification of the system would help in this regard.

²⁰ International Monetary Fund (2013, 2015, 2018). Table 6.

TABLE 8: FISCAL POSITION OF THE CENTRE

Item	(Percent to GDP at market prices)													Projected		Actuals	
	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 RE	2018-19 Actuals	2019-20 BE			
1	2	3	4	5	6	7	8	9	10	11	12	13 (a)	13 (b)	14			
1. Gross fiscal deficit	2.5	6.0	6.5	4.8	5.9	4.9	4.5	4.1	3.9	3.5	3.5	3.4	3.4	3.4			
2. Gross primary deficit	-0.9	2.6	3.2	1.8	2.8	1.8	1.1	0.9	0.7	0.4	0.4	0.2	0.3	0.2			
3. Revenue deficit	1.1	4.5	5.2	3.2	4.5	3.7	3.2	2.9	2.5	2.1	2.6	2.2	2.3	2.2			
4. Revenue receipts	10.9	9.6	8.8	10.1	8.6	8.8	9.0	8.8	8.7	8.9	8.4	9.2	8.2	9.4			
a) Gross tax	11.9	10.8	9.6	10.2	10.2	10.4	10.1	10.0	10.6	11.2	11.2	11.9	10.9	12.1			
i) Corporation tax	3.9	3.8	3.8	3.8	3.7	3.6	3.5	3.4	3.3	3.2	3.3	3.6	3.5	3.6			
ii) Income tax	2.1	1.9	1.9	1.8	1.9	2.0	2.1	2.1	2.1	2.3	2.5	2.8	2.4	3.0			
iii) Customs duties	2.1	1.8	1.3	1.7	1.7	1.7	1.5	1.5	1.5	1.5	0.8	0.7	0.6	0.7			
iv) Union excise	2.5	1.9	1.6	1.8	1.7	1.8	1.5	1.5	2.1	2.5	1.5	1.4	1.2	1.2			
v) Service tax	1.0	1.1	0.9	0.9	1.1	1.3	1.4	1.3	1.5	1.7	0.5	0.0	0	0.0			
vi) GST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	3.4	3.1	3.6			
b) Non-tax revenue	2.1	1.7	1.8	2.8	1.4	1.4	1.8	1.6	1.8	1.8	1.1	1.3	1.3	1.3			
5. Capital receipts	3.4	6.1	7.0	5.3	6.5	5.9	5.0	3.9	4.2	4.0	4.1	3.0	n.a.	2.7			
6. Total receipts	14.3	15.7	15.8	15.4	15.1	14.7	14.1	12.7	12.9	12.9	12.5	12.2	n.a.	12.1			
7. Revenue expenditure	11.9	14.1	14.1	13.4	13.1	12.5	12.2	11.8	11.2	11.0	11.0	11.4	10.6	11.7			
a) Interest payments	3.4	3.4	3.3	3.0	3.1	3.1	3.3	3.2	3.2	3.1	3.1	3.1	3.1	3.2			
b) Subsidies	1.4	2.3	2.2	2.2	2.5	2.6	2.3	2.1	1.9	1.5	1.3	1.6	n.a.	1.6			
8. Capital expenditure	2.4	1.6	1.7	2.0	1.8	1.7	1.7	1.6	1.8	1.9	1.5	1.7	1.6	1.6			
a) Capital outlay	2.1	1.4	1.5	1.7	1.6	1.5	1.5	1.3	1.6	1.6	1.4	1.5	n.a.	1.5			
9. Total expenditure	14.3	15.7	15.8	15.4	14.9	14.2	13.9	13.3	13.0	12.9	12.5	13.0	12.2	13.3			

Source: Reserve Bank of India and Union Budget documents.

Note: Data for 2018-19 and 2019-20 are revised estimates and (interim) budget estimates, respectively.

n.a. = not available.

Cross-country analysis indicates that the ratio of general government revenues to GDP in India is lower than the Asian EMEs and, more generally, also lower than that in countries with similar levels of per capita incomes (Chart 4). With the buoyant growth that the Indian economy achieved in the 2000s, and even since the NAFC, there has been a very substantial increase in middle and upper-income households: income tax collections should therefore increase continuously as a proportion of GDP for the foreseeable future. This is indicated, for example, by the increase in the number of cars sold, from 1.5 million in 2007-08 to 3.3 million in 2018, more than doubling in a decade;²¹ and by the relatively booming housing sector. The number of taxpayers declaring annual incomes above Rs 1 million have increased from about 1.8 million in 2011-12 to 4.6 million in 2017-18. So the prospects for higher income tax collections in the coming years can be seen as optimistic (Table 9).

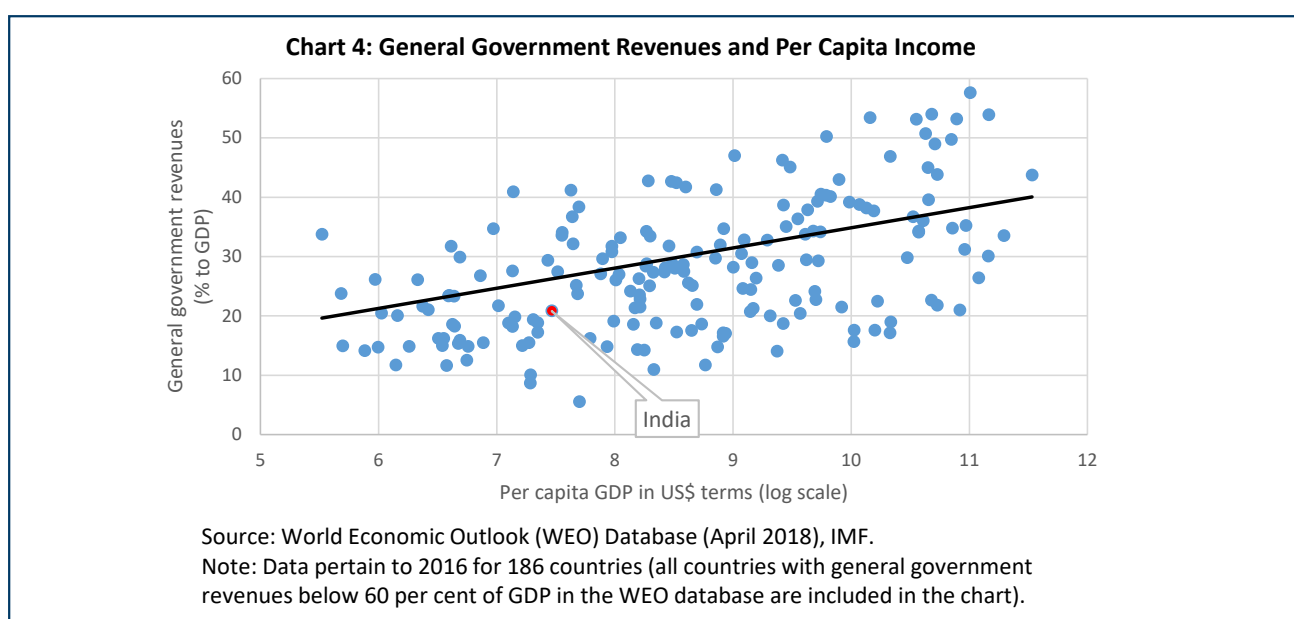


TABLE 9: INCOME TAX COLLECTIONS FOR INDIVIDUALS IN INDIA									
Item	Assessment Year 2015-16				Assessment Year 2017-18				
	Income Range (Rupees)	Number of returns (million)	Tax payable (Rs. billion)	Number of returns (% to total)	Tax payable (per cent to total)	Number of returns (million)	Tax payable (Rs. billion)	Number of returns (% to total)	Tax payable (per cent to total)
upto Rs. 0.5 million	29.7	847	72.8	45.1	30.5	1,214	65.3	44.4	
Rs. 0.5-1.0 million	8.1	254	20.0	13.5	11.6	383	24.8	14.0	
Rs. 1-2 million	2.1	207	5.2	11.0	3.3	304	7.1	11.1	
>Rs.2 million	0.8	572	2.1	30.4	1.3	833	2.8	30.5	
Total	40.7	1,880	100.0	100.0	46.7	2,734	100.0	100.0	
Memo:									
Rs. 0.5 million and above	11.1	1,033	27.2	54.9	16.1	1,520	34.5	55.6	
Domestic Sales of Automobiles (millions)									
	2014-15				2016-17				
Passenger Vehicles	2.6				3.0				
Two wheelers	16.0				17.6				

Source: Income Tax Return Statistics (Assessment Years 2015-16 and 2017-18), Income Tax Department; SIAM.

Overall, for the projected increase in public investments to be feasible, enhancement in public savings through higher tax revenues is essential.

²¹ <http://www.siamindia.com/statistics.aspx?mpgid=8&pgidtrail=14>. Accessed January 13, 2019.

External Savings

India will also need to make a prudent use of external savings to ensure external sustainability. Except for 2008-09 and 2009-10, which were crisis years for global trade, Indian exports of goods and services, in dollar terms, had been growing at 20-25 percent per year from 2002: hence their share in GDP almost doubled to about 25 percent between 1998-2002 and 2008-12 (Table 5). They have stagnated since then and this share has fallen to about 16 percent: so Indian exports have grown at a rate lower than that of GDP growth since around 2012. Correspondingly, the Indian share in global trade has stagnated while actually losing share among Emerging Market Economies (EMEs).²² Accounting for the global trade slowdown and protracted slow growth in the advanced economies, we should still aim for exports to grow at 11-12 percent between 2020 and 2035.²³ At this pace, exports of goods and services would increase from the current level of about 20 percent of GDP to about 30 percent of GDP in 2025-30 and, perhaps, 35 percent in 2030-35. Given the current disturbed global trade scenario this is a relatively ambitious scenario of export growth (the highest level of exports of goods and services achieved by China amounted to about 36 percent of its GDP in 2006).²⁴ Imports of goods and services are projected to grow correspondingly.

With this scenario, a CAD level between 2.0-2.5 percent of GDP, can be considered sustainable. Allowing for 2 percent of GDP annual accretion of foreign exchange reserves accumulation would be consistent with higher import levels, and consistently increasing foreign liabilities. Such accretions would provide comfort to external lenders and investors. Moreover, such growth in the Reserve Bank's balance sheet (base money) will also be consistent with the growth in money supply that would correspond to the overall economic growth projected. If these assumptions are seen as reasonable, net capital flows will need to be in the region of about 4.0-4.5 percent of GDP during 2020-35 (Table 10). Even with the maintenance of such modest levels of CAD, these projections suggest a continuing need for relatively large net capital inflows in terms of absolute magnitudes. Such inflows would amount to around US \$50-65 billion now for the financing of the CAD, and another US \$50 billion for augmenting foreign exchange reserves, amounting to a total of US \$100-115 billion. In recent years, net capital inflows have fluctuated between 1.6 percent and 4.5 percent of GDP, which have largely been adequate to finance the CAD but the accretion to foreign exchange reserves has perhaps not kept up with prudent requirements. With similar assumptions this requirement will increase to around US \$180-220 billion in 2035 for financing the CAD, and another US \$180 billion for augmenting foreign exchange reserves on an annual basis. From an external sustainability point of view, and given the more volatile nature of debt flows, the projections assume that equity flows will dominate, at 60-65 percent of net capital flows, with debt flows (35-40 per cent) being the residual. These proportions are also broadly consistent with the prevailing debt/equity ratios in the Indian corporate sector. The debt service projections in the current account are based on such a composition of capital flows. Overall, these projections reinforce the need for augmentation of domestic savings for the investment needs for a high growth economy.

²² https://www.business-standard.com/article/opinion/needed-a-strategy-to-revive-exports-118092400029_1.html Accessed September 24, 2018.

²³ The report of the High Level Advisory Group on Trade Policy posits a similar target for export growth (Government of India, 2019).

²⁴ <https://data.worldbank.org/indicator/NE.EXP.GNFS.ZS?locations=CN> Accessed January 13, 2019. Among Asian countries, the share of exports of goods and services to GDP has also fallen over this period in China, Indonesia and Korea; but has remained relatively robust in others such as Japan, Thailand and Vietnam.

TABLE 10 : SAVINGS AND INVESTMENT RATES: PROJECTIONS							
							(Percent to GDP)
Item	2007-08	2012-13	2017-18		2017-18 TO 2021-22	2022-23 TO 2026-27	2027-28 TO 2031-32
	Actuals				Projections		
1	2	3	4		5	6	7
Gross Domestic Savings	36.8	33.9	30.5		35.9	38.6	40.9
1. Household Sector	22.4	22.5	17.2		24.5	26.3	27.9
(a) Household - Financial	11.6	7.4	6.6		11.4	12.3	13.0
(b) Household - Physical	10.8	15.1	10.6		13.1	14.0	14.9
2. Private Corporate Sector	9.4	10.0	11.6		8.5	9.1	9.6
3. Public Sector	5.0	1.4	1.7		2.9	3.2	3.4
(a) Public Authorities	1.1	-1.2	-0.6		-1.2	-1.2	-1.3
(b) Non-departmental Commercial Enterprises	3.9	2.6	2.3		4.1	4.4	4.7
Gross Domestic Capital Formation	38.1	38.7	32.3		38.9	41.1	43.3
(a) Public Sector	8.9				10.0	10.0	10.0
(b) Private Sector	29.2				28.9	31.1	33.3
Memo:							
Foreign Savings (Current account deficit)	1.3	4.8	1.8		2.5	2.5	2.5
Capital Flows, net	8.6	4.9	3.4		4.3	4.3	4.6
(a) Foreign Investment, net	3.5	2.6	2.0		2.7	2.7	2.9
(i) Direct Investment	1.3	1.1	1.2		1.7	1.7	1.9
(ii) Portfolio Investment	2.2	1.5	0.8		1.0	1.0	1.0
(b) Debt and Other Flows, net	5.1	2.3	1.5		1.5	1.6	1.8
(i) Disbursements					4.0	4.2	4.3
(ii) Repayments					2.4	2.5	2.5
Foreign Exchange Reserves							
(a) Stock	25.0	16.0	16.0		18.8	20.3	22.0
External Debt	18.0	22.4	19.7		22.6	22.1	21.8
Debt Service					3.6	3.8	3.8
Source: Reserve Bank of India; Central Statistics Organization; National Transport Development Policy Committee (2014). Note: 1. Data for 2007-08 (column 2) are based on the 2004-05 series of national accounts, and for 2012-13 and 2017-18 (columns 3 and 4) are based on the 2011-12 series. 2. Projections for 2017-18 to 2031-32 (columns 5 to 7) are from NTDPC (2014). 3. Saving in physical assets includes gold and silver in columns 3 and 4.							

Manufacturing

Globally, rapid industrialisation and manufactured exports have been the most reliable levers for rapid and sustained growth. Virtually all countries that have sustained high growth rates for decades have done so on the back of manufacturing, with growth miracles of Japan, Korea and China being conspicuous examples (McKinsey Global Institute, 2018). Thus, policies that promote manufacturing activity in India will have a key role, although the cross-country evidence indicates that the structural change in favour of manufacturing has softened in many countries and some countries are exhibiting premature deindustrialisation (Rodrik, 2013). This makes sustained revival of manufacturing growth challenging. What is of the utmost importance is acceleration in manufacturing growth to levels approaching double digits and then sustaining it at such levels over the next twenty years and beyond.

With the Indian economy now being essentially open on the current account, future development of Indian manufacturing has to be internationally competitive. Although the Indian factor endowment is abundant in labour, Indian manufacturing has not been generally competitive in labour using sectors. There needs to be focused effort at correcting this, much as China and other East Asian countries have done over the past 30-40 years. Legacy issues connected with regulatory impediments that constrain the use of both land and labour in Indian manufacturing have to be tackled with some urgency, as is repeatedly emphasized in this paper.

Inflation has been higher than world inflation on a sustained basis and can be expected to continue in a similar mode. In the presence of much higher relative GDP growth India remains an attractive destination for foreign investment in all its forms. Such capital flows add to pressure for exchange rate overvaluation unless managed adequately. This is clearly visible from CPI-based real effective exchange rate indices (Chart 2). Success with inflation management will provide a conducive environment for stability in the real exchange rate, which will encourage exports, manufacturing activity and corporate health.

It is this combined and focused approach to urban land and labour reforms, along with the maintenance of a competitive real exchange rate that can accelerate manufacturing growth in labour using industries. In addition, it goes without saying that the efficient provision of power, transport, and logistics is also necessary.

Infrastructure Investment

Achieving a high sustained rate of economic growth requires corresponding investments in infrastructure, including all aspects of transportation. If manufacturing growth is to be ratcheted up to around 10 per cent, and if there is to be the kind of trade growth projected, the demands for the provision of power, transportation and logistics will also grow commensurately. The continued expansion of trade requires corresponding investments in ports, airports, and in all forms of domestic transport linkages and trade logistics.²⁵ In addition, with the ongoing changes in global technology in manufacturing, future usage of labour and manufacturing will require greater skills: hence the need for specific attention for generating the creation of adequate skilled manpower.

With this perspective, infrastructure investment will need to pick-up significantly in the coming years. NTDPC (2014) projected that overall infrastructure investment would need to increase substantially from around 5-5.5 percent of GDP in recent years to around 8 percent during the 2020s and beyond – levels consistent with the economic growth and transformation experiences of South East and East Asian countries (Table 11). While significant proportion of infrastructure investment could be undertaken by the private sector, the public sector will have to continue to play the predominant role in sectors such as electricity, railways, roads and bridges. The private sector can be the driving force in the “communications” sector, in ports and airports and in commercial vehicles. For the public sector to carry out such an enhanced role, fiscal consolidation, as indicated earlier, assumes importance.

²⁵ PMEAC (2018). Report of the Logistics Development Committee on Key Challenges in Logistics Development and the Associated Commerce Policy Reforms for Ease of Doing Business/Trade in India.

TABLE 11: INVESTMENTS IN INFRASTRUCTURE

Item	2000-06		2006-12		2011-12		2016-17		2017-18		2017-18 TO 2021-22		2022-23 TO 2026-27		2027-28 TO 2031-32	
	2	3	4	5	6	7	8	9	10	Projections						
	Actuals (NAS series 2004-05 base)		Actuals (NAS series 2011-12 base)													
Infrastructure - Total	4.6	5.7	5.4	6.5	4.9	5.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	
Electricity, Gas, Water Supply	1.7	2.1	2.1	3.5	2.3	2.3	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	
Railways	0.4	0.4	0.3	0.4	0.5	0.4	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	
Other Transport	1.1	1.0	1.1	0.5	0.3	0.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	
Roads and Bridges	0.8	1.2	1.2	1.4	0.9	1.1	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	
Storage	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Communications	0.7	0.9	0.7	0.6	0.9	0.9	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	
Infrastructure - Public Sector	3.2	3.3	3.2	2.3	2.6	2.6	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Electricity, Gas, Water Supply	1.5	1.5	1.6	1.8	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Railways	0.4	0.4	0.3	0.3	0.4	0.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Other Transport	0.1	0.1	0.1	0.1	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
Roads and Bridges	0.8	0.9	1.0	0.0	0.0	0.0	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	
Storage	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Communications	0.5	0.4	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
Infrastructure - Private Sector	1.4	2.4	2.2	4.2	2.9	2.9	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	
Electricity, Gas, Water Supply	0.2	0.6	0.5	1.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	
Railways	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Other Transport	0.9	0.9	1.0	0.4	0.2	0.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Roads and Bridges	0.0	0.3	0.1	1.3	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
Storage	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Communications	0.2	0.6	0.6	0.6	1.1	1.1	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	

Source: National Accounts Statistics 2018; National Transport Development Policy Committee (2014).

Note: Data in columns 2 and 3 are based on the 2004-05 series of national accounts, and data in columns 4, 5 and 6 are based on the 2011-12 series. Projections for 2017-18 to 2031-32 (columns 7 to 9) are from NTDP (2014).

A key finding of the NTDPC (2014) was the clear need for raising the share of Indian Railways in total infrastructure investment very substantially, from the earlier level of about 0.4 percent of GDP to 1 percent and above by 2017-22, and continuing at similar levels for at least the next decade and a half (Table 11). Whereas there has indeed been some enhancement in railways investments to around 0.5 percent of GDP, it is nowhere near the 1 percent target that was envisioned by the NTDPC. This was regarded as essential for improving productivity of manufacturing overall, for linking inland nodes to ports to aid in the sustained growth required in trade, and for a sustainable environment. Total investments in transport (including railways), both public and private, would need to increase by around 1 percent of GDP above current levels (Tables 4 and 11).

The projections given above provide a quantitative idea of the continuous enhancement of savings and investment that will be necessary to achieve growth rates of 8.5 to 9 percent on a sustainable basis over the next 15 years or so. Achievement of such a level of sustained growth is not easy. It requires a consistent and coordinated effort of policy change for a big push that makes a break from a business as usual approach.

III. POLICY IMPERATIVES FOR A BIG PUSH

The objective of taking growth back to around 8-9 percent will need a very significant big push on growth-focused policy reforms in a range of different activities. That reform had been carried out on a relatively continuous basis from the early 1980s, intensifying considerably in the 1990s and accentuated in the infrastructure sector after the mid-1990s, gives confidence in the potential ability of the country's policymaking system to rise to the challenges of the future. In principle, Indian institutional capacity for governance and reform has exhibited considerable resilience, although the institutional development and reform needed to get to the next steps in the ladder towards achieving upper middle income status will be of a much higher order than that achieved in the past. The current policy scenario, however, does give cause for considerable concern. It would appear that the political establishment of all hues, the bureaucracy, the public commentariat, and academics, are all focused much more on how to make distribution more efficient. There is limited discussion on how to enhance growth to the levels projected, which would also address social welfare concerns. Unless policy attention comes back to growth, there is little chance for India to achieve upper middle income status in the foreseeable future. It is to these policy imperatives that I now turn.

I first focus on some of the key macroeconomic management issues.

Finding the Resources for Higher Growth

Public Savings and Fiscal Policy: Need to Raise the Tax GDP Ratio

It is now well accepted in Indian policy circles that fiscal consolidation is necessary for sustained growth to be achieved in an environment of macroeconomic and financial stability. This is illustrated by the enactment of the Fiscal Responsibility and Budget Management Act in 2003, the more recent official review aimed at strengthening rules-based fiscal policy (Government of India, 2017; Cigdem Akun and others, 2017), and the constant repetition of the desire to achieve stated fiscal deficit targets by successive finance ministers. At the same time, populist political impulses emanating from all political parties at both the central and state government levels have made it difficult to sustain the kind of fiscal discipline needed on a consistent basis; even though it is recognised that weak public finances contribute to inflation and increased inflationary expectations, which inject an upward bias to the interest rate which impedes investment activity (Kelkar Committee, Government of India, 2012). As already noted, increased revenue deficits after the NAFC have led to a fall in the public sector savings rate, which has contributed to the fall in the overall gross domestic savings and investment rates. Moreover, negative government savings also serve to crowd out the private sector's access to financial resources, while putting upward pressure on real interest rates. Reduction or even elimination of the revenue deficit at both the central and state government levels will make it possible to limit government borrowing exclusively for public investment purposes in both social and physical infrastructure. This would be critical to enable domestic savings to finance growth of 8-9 percent and above in a sustainable manner. Whereas progress is being made in recent years in reducing overall fiscal deficit, there has not been adequate reduction in the revenue deficit, thereby constraining the government's ability to make growth oriented capital investments. The amendments proposed in the FRBM Act recommend doing away with targets for revenue deficit. This could make the high revenue deficits more persistent.

Subsidies had increased from 1.4 percent of GDP in 2007-08 to 2.6 percent in 2012-13, contributing significantly to the deterioration in the quality of fiscal expenditure. The policy objective now must be to reduce overall subsidies to be in the region of about 1 per cent. Such a move would free up around 0.6 percent of GDP for public investment in physical and social infrastructure. Significant progress has indeed been achieved to bring back subsidies to about 1.3 percent of GDP in 2017-18, mainly through a reduction in fuel subsidies by de-regulation of fuel prices. This effort must continue. However, just when some success is achieved in the reduction in some subsidies, new ones are added in response to emerging political pressures. While recognizing that, given the kind of widespread low incomes that exist in India, there will always be genuine needs for enhancement of social welfare of the poor. One disciplining principle in approaching subsidy reform could be that any addition of a new subsidy must be accompanied by the elimination of an existing one that can essentially be classified as a non-merit subsidy.

The current fashion among economists, policymakers and politicians alike is to extend various variants of universal basic income (UBI) through direct cash transfers to defined groups in need of and deserving of such transfers. To some extent this policy direction has arisen because the availability of new technology that enables efficient electronic transfers to bank accounts that have been enabled by the roll out of the *Jan Dhan Yojana*. Most economists advocating such transfers argue that they would be much more efficient to implement than wasteful in-kind subsidies that are subject to significant leakages. They then make the advocacy of such transfers conditional on the elimination of existing subsidies. In actual practice, there has so far not been any reduction in existing subsidies and these direct cash transfers are being added on to the existing plethora of subsidies. *Given the inadequacy of tax revenues emphasised in this paper for the government to deliver essential public services and to invest in essential public infrastructure, the extension of these subsidies will make it even more difficult for the government to perform these essential functions.*

The second issue with respect to fiscal policy is that fiscal consolidation efforts in recent years have been focused excessively, in proportionate terms, on reduction in public capital expenditure. Total public capital outlay is now similar in magnitude to total subsidies. After accounting for minimum necessary capital expenditure for essential defence requirements, there is little left for infrastructure and other public investments.²⁶ Future fiscal consolidation must be focused on increasing tax revenues on the one hand, and preserving or enhancing growth inducing public capital investment in infrastructure, on the other. Infrastructure investment is also critical to loosening supply side constraints in promoting manufacturing. Despite increasing private investment in infrastructure, it is necessary to enhance public investment in infrastructure on a sustained basis. The culture of economic user charges must be reinforced so that infrastructure investment is remunerative.

As noted earlier, cross-country analysis indicates that the general government revenue/GDP ratio in India is quite low, even taking into account its per capita income (Chart 4). Thus, there is considerable room for increasing the tax/GDP ratio. Despite the steady economic growth over more than three decades, and widespread tax reforms, the tax/GDP ratio has been stubbornly stagnant. The level achieved around 2007-08 of about 12 percent of GDP is yet to be reached again. The net result of a sustained thrust on tax compliance in all areas – both direct and indirect taxes, particularly with the introduction of GST – does inject some optimism with regard to continuation of greater buoyancy in the tax/GDP ratio in the future than has been experienced in the past. Public sector savings should then recover in the manner projected, and the gross domestic savings rate could increase by around 2-3 percent of GDP,

²⁶ Defence expenditure is now down to 1.6 percent of GDP, lower than a desired 2 percent perceived as necessary for national security. Here also capital expenditure has been squeezed. (C. Uday Bhaskar, 2019)

or even higher. A similar event occurred about 15 years ago when public sector savings had become negative (Mohan, 2011b). The envisaged fiscal correction would also make more resources available to the private sector and contribute to the recovery of private sector investment and profitability and hence private sector savings. However, increased tax collections give rise to populist temptations to reduce tax obligations, which must be resisted. For example, the 2019-20 interim budget increased the effective income tax threshold to around Rs 650,000 annual income (about US \$9300), which is more than 4.5 times Indian annual per capita income. The current threshold in the United States, is about US \$13,500, whose per capita income is around thirty times that of India.²⁷ In PPP terms, the Indian threshold is now around US \$33,700! Such actions do not augur well for future improvement in Indian tax collections. Moreover, once such a step is taken it cannot be reversed and its fiscal cost becomes permanent.

Strong fiscal consolidation, along with improved quality of adjustment, would provide a conducive environment for higher domestic savings, lower domestic interest rates, and more flexibility to monetary policy in its operations.

Incentivising Higher Household Savings: Ensuring Price & Financial Stability

As already noted, overall household savings are now significantly lower than the peak attained in 2007-08 in terms of both financial and physical savings. This fall affects adversely the availability of resources for the rest of the economy, especially the private corporate sector. *Hence there is an urgent need to examine the reasons for the fall so that measures can be taken to increase such savings to the kind of levels indicated.* With overall government borrowing accounting for, or even exceeding all of net household financial savings, the private corporate sector has to finance itself essentially from its own savings, i.e. retained earnings. In these circumstances, net borrowing from the rest of the economy is negligible. The effective cost of finance has therefore increased considerably for the private corporate sector, thereby also eroding its international competitiveness. Hence, there needs to be a special policy thrust on increasing net household financial savings, along with reduction in the overall fiscal deficit and hence, government borrowing.

What possible measures can be taken in this direction?

With the substantial increase in inflation between 2010 and 2013, real interest rates for both small savings and bank deposits had become significantly negative in that period. Consequently, households had resorted substantially to other savings avenues such as gold (Kapur and Mohan, 2014). It would appear that households are yet to return to the traditional financial instruments. There has been a significant fall in gross financial savings of households as a proportion of GDP since 2007-08: in bank deposits and small savings instruments alike, without any trend increases in contractual savings (Table 12, Chart 5). There has been some recent increase in household financial savings going to the equity market, presumably through mutual funds. The crisis in NBFCs and their knock-on effects on debt mutual funds may, however, have an adverse effect on household confidence in these market related instruments. *Hence ensuring positive real returns on bank as well as small savings deposits in an environment of low and stable inflation is necessary to reverse the downward trend in household financial savings.* It is also possible that the deterioration in performance of both public and private sector banks has dented the traditional confidence that the Indian household has placed in the financial system. A concerted effort therefore must be made to restore this confidence through both the strengthening of the banking sector and improvement in banking regulation and supervision.

²⁷ Per capita Income, 2017:

Current US dollars: India USD 1,942; US USD 59,531

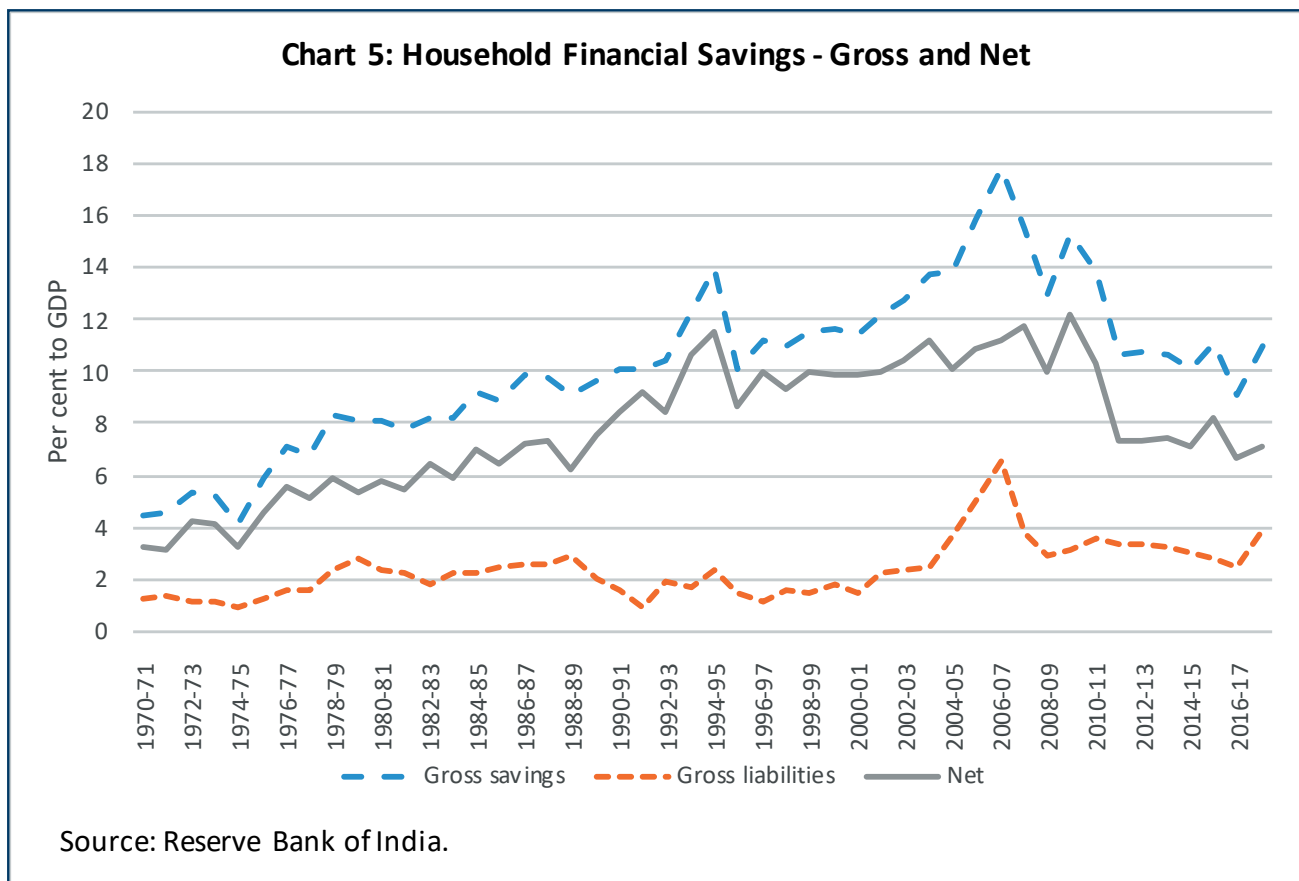
PPP Terms: India USD 7,059; US USD 59,531

<https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=US-IN>

TABLE 12: CHANGES IN FINANCIAL ASSETS / LIABILITIES OF THE HOUSEHOLD SECTOR

Year	Currency (1)	Bank deposits (2)	Non-banking deposits (3)	Life insurance fund (4)	Provident and pension fund (5)	Claims on government (small savings) (6)	Shares & debentures (7)	Gross savings (8)	Bank advances (9)	Gross liabilities (10)	Net savings (11) (= 8 - 10)
2000-01	0.72	4.35	0.14	1.56	2.34	1.79	0.51	11.37	1.17	1.46	9.91
2001-02	1.20	4.80	-0.01	1.75	1.88	2.20	0.42	12.14	1.84	2.20	9.95
2002-03	1.13	4.84	0.49	2.05	1.81	2.21	0.28	12.75	2.14	2.38	10.37
2003-04	1.50	5.49	0.07	1.84	1.72	3.07	0.32	13.71	2.04	2.46	11.24
2004-05	1.14	5.40	0.00	2.10	1.72	3.28	0.25	13.79	3.45	3.70	10.09
2005-06	1.41	7.19	0.01	2.26	1.68	2.36	0.92	15.82	4.75	4.98	10.84
2006-07	1.56	10.00	0.11	2.67	1.69	0.45	1.18	17.80	6.37	6.58	11.22
2007-08	1.63	7.80	0.03	3.41	1.43	-0.57	1.49	15.49	3.60	3.77	11.71
2008-09	1.64	7.42	0.26	2.72	1.30	-0.49	-0.04	12.91	2.75	2.91	10.01
2009-10	1.50	6.15	0.29	4.01	2.00	0.67	0.69	15.28	3.00	3.14	12.14
2010-11	1.76	7.04	0.07	2.70	1.81	0.38	0.02	13.87	3.46	3.57	10.30
2011-12	1.22	6.02	0.11	2.24	1.10	-0.25	0.19	10.68	3.12	3.32	7.36
2012-13	1.12	5.78	0.28	1.81	1.57	-0.07	0.17	10.70	3.10	3.32	7.38
2013-14	0.89	5.69	0.20	1.82	1.58	0.21	0.17	10.60	2.69	3.19	7.41
2014-15	1.07	4.65	0.23	2.40	1.53	0.01	0.16	10.08	2.27	3.02	7.06
2015-16	1.46	4.53	0.13	1.96	2.12	0.49	0.33	11.04	2.00	2.84	8.20
2016-17	-2.06	6.13	0.16	2.27	1.97	0.41	0.24	9.14	1.63	2.44	6.71
2017-18	2.75	2.78	0.12	1.91	2.05	0.48	0.88	11.00	2.52	3.94	7.06

(Percent to GDP)



Simultaneously a focused policy thrust is needed to promote contractual savings schemes. Efforts to improve access to savings channels such as insurance, provident and pension funds would be among the key measures needed to enhance financial savings. With increasing urbanisation and longevity, one might have expected a greater shift in financial savings towards savings such as provident and pension funds and life insurance products as the financial sector diversified. As urbanisation gathers pace and longevity increases, such improvements in social security would also be essential for social welfare. Given that the vast majority of Indian household savers continue to be in the middle income categories, they exhibit a marked preference for safe savings avenues such as postal savings and public sector bank deposits. Since there is really no social security worth the name in the country, and pensions are available to only the privileged few, there would be significant unmet demand for safe assets that provide a mildly positive real rate of return with some degree of assurance. Thus, there is a pressing need for the provision of savings vehicles that meet such demand in the form of simple, easy to understand, pension and life insurance products which combine some elements of defined benefits while remaining predominantly defined contribution schemes. Not only will such schemes provide much needed elements of social security, they would also be ideal for financing infrastructure projects that typically need long term finance. Despite various reforms that have been undertaken in both the insurance and pension sectors there is little change in the magnitude of savings that are going into these areas. A greater effort needs to be made to understand the reasons for this inaction so that appropriate policies can be designed to enhance contractual savings significantly in the years to come.

The sustained availability of positive real interest rates for households' financial savings is critically dependent on the maintenance of low inflation. Notable success has been achieved in this direction in recent years. However, food inflation is often a key driver of perceived inflation and its expectation in India. Attention on food inflation has traditionally been focused on the prices of cereals. There also needs

to be better recognition of the changing diet of Indian consumers towards non-cereals including fruits, vegetables, poultry, meat and dairy products. With increasing incomes and accelerating urbanisation, demand for these products will continue to grow much faster than that for cereals, and hence perception of food inflation will also be dependent on the price trends of these foods. Without the existence of appropriate rural infrastructure and an efficient supply chain, including refrigeration facilities in both warehouses and trucks, the markets for these products remain segmented to limited geographic areas within the vicinity of cities. Burgeoning non-cereal food demand therefore contributes to inflation on a consistent basis giving rise to wage pressures and more generalised inflation, and loss of competitiveness. The prices of fruits, vegetables, meat and fish, and prepared foods have increased faster than those of cereals over at least the past decade. This is despite the fact that the average annual growth in production of horticulture crops, at 4.4 percent, has been well above that of food grains at 2.5 percent during this period (2007-16). Inflation containment will therefore also depend on a more focused roll out of rural infrastructure in terms of both transport and energy, mainly a public sector function. Specific policies are also needed to promote private sector activity in investing in the overall agriculture supply chain as the basic infrastructure is enabled.

Monetary policy has its limitations in affecting headline inflation when it is caused by food inflation. Accordingly, as already noted, policies aimed at improving productivity and output in agriculture through reorientation of government spending away from current spending (fertilizer, power and irrigation subsidies) towards capital outlays will be extremely helpful (OECD/ICRIER, 2018) in containing food inflation while ensuring adequate returns to farmers. The approach outlined later in this paper on initiating a second green revolution focused on non-cereals is also therefore connected to overall macroeconomic concerns, such as inflation containment.

Foreign Savings and Capital Account Management

The projections for overall resources needed for enhancing investment include the utilisation of sustainable external savings. The macro consistent external projections suggest that it is feasible for the Indian economy to sustain a current account deficit, and hence absorb net capital flows, of around 2-2.5 percent of GDP on a continuous basis. In its financial accounts, India has been somewhat different from other countries in that foreign direct investment(FDI) has typically been lower than foreign portfolio investment (FPI), even though FDI flows have been relatively more stable than somewhat volatile FPI flows. Moreover, FDI in manufacturing has been subdued. As argued below, the key to accelerating Indian economic growth is in manufacturing, particularly in export-oriented people-using sectors. Thus, as part of the strategy for promoting manufacturing, FDI needs to be encouraged in these sectors, in order to influence the composition of external flows towards FDI as distinguished from FPI.

Available evidence indicates that rapid financial sector and capital account liberalisation, to portfolio debt flows in particular, often ends up in crisis: financial openness is not a panacea and it could instead be poison. The Indian experience, as well as that of other economies, indicates that high reliance on foreign savings increases vulnerability to financial crises. Opening the financial account appears to raise the frequency and severity of economic crises. Benefits of financial openness are most likely to be realised when implemented in a phased manner, when external balances and reserve positions are strong, and when complementing a range of domestic policies and reforms to enhance stability and growth (CGFS, 2009; Obstfeld, 2009). Debt capital flows increase vulnerability to future crises, and this was clearly seen in the NAFC. Given the structural growth, inflation and interest differentials in favour of emerging market economies (EMEs), a fully open capital account would inevitably lead to large

flows in search of arbitrage—creating booms when they come in and a bust once they leave. Indeed, one factor that reduces India’s external vulnerability, despite large twin deficits, is the fact the public debt is largely internally held. Thus, sound management of capital flows, particular that of debt flows, is essential to preserve financial stability.

It would be prudent to continue with this approach and further opening up of the government securities market to non-resident investment needs to be carefully watched and calibrated, despite consistent pressure from financial market participants to do so. Debt investments by non-residents in domestic securities are more volatile than in equity and can add to foreign exchange market pressures. More often, these flows react to monetary policy developments in advanced economies, as was the case in mid-2013, and could arise again as monetary policy is normalised in advanced economies in the coming years. There is a view that the traditional fears about foreign-currency borrowing by residents are not applicable to investments by non-residents in local-currency denominated bonds and hence the limits on the latter category of investments should be removed (Patnaik et al, 2013). Such a notion was clearly disproved during the June-August 2013 turmoil and the stress experienced recently in the second half of 2018.

The macroeconomic strategy should therefore encourage the flow of external savings in the magnitude indicated but oriented more towards the facilitation of FDI flows relative to FPI flows, exercising particular portion on debt portfolio flows.

Inducing Greater Investment for Higher Growth

Reviving Private Sector Animal Spirits and Renewed Investment

Interpreting the performance of the private corporate sector over the past few years poses somewhat of a puzzle. The golden growth period exhibited various metrics such as sales growth, profitability rates, profit growth, investment rates, growth in retained earnings and the like which were all high and consistent. They also corresponded to high rates of growth in credit, manufactured exports, and industrial production as reflected in both the IIP and ASI. Thus the high-growth in both industry and services sectors as recorded in the earlier series of national accounts situation during 2003-08, was consistent with the other available indicators. The situation since 2012 is, however, quite different. Whereas the national accounts exhibit high manufacturing and industrial growth since then, the IIP and ASI data do not exhibit corresponding high rates of growth. Furthermore, corporate sector data show much lower growth in sales, profit rates and other metrics. These data are consistent with the substantial increase observed in nonperforming assets in the corporate sector during this period (Mohan and Ray, 2019). As might be expected, the increase in NPAs is reflected in a substantial slowdown in credit growth, especially to industry. Surprisingly, however, the national accounts suggest that corporate sector investment and savings have actually increased in the last five years or so relative to the average of the 2003-08 high growth period. Private corporate sector investment had reached a peak of 14.3 percent of GDP in 2007-08,²⁸ and has since moved lower in an 11-12 percent range (2011-18).²⁹ Corporate sector savings effectively reflect retained earnings, which is not observed in the corporate data. The moderation in the rate of corporate sector investment as a proportion of GDP during 2011-18 from its peak of 2007-08 seems consistent with observed stagnation in both domestic capital goods production and in

²⁸ According to the old series.

²⁹ According to the new series.

imports of capital goods (Table 13). This is difficult to reconcile with the national accounts manufacturing sector growth rates of around 7.5 percent during 2012-18. The average annual growth in capital goods production for the whole period 2010-18 is only 0.9 percent, and that the import of capital goods is actually -0.2 percent.^{30 31} Crowding out, deleveraging of the large debt overhang and higher real interest rates could have all contributed to the relative stagnation of industrial investment. Thus, until there is a better explanation of the growth reported in the national accounts, one has to conclude that policy action needs to be taken to revitalise Indian corporate sector performance so that higher overall growth can be achieved.

TABLE 13: CAPITAL GOODS - DOMESTIC PRODUCTION AND IMPORTS		
		(Growth in percent)
Year	Production of capital goods #	Imports of capital goods ##
2005-06	18.1	64.6
2006-07	23.3	27.9
2007-08	48.5	62.5
2008-09	11.3	-5.1
2009-10	1.0	-7.1
2010-11	14.8	17.8
2011-12	-4.0	28.9
2012-13	0.3	-3.5
2013-14	-3.7	-13.3
2014-15	-1.1	-1.7
2015-16	3.0	0.2
2016-17	3.2	5.8
2017-18	4.0	11.3
Period averages		
2005-08	30.0	51.6
2012-18	0.9	-0.2

Source: Database on Indian Economy, Reserve Bank of India.
 #: Based on index of industrial production.
 ##: Imports of Machine tools, Machinery, Transport Equipment and project goods.

Sustained success with fiscal consolidation and inflation management will allow lowering of nominal and real interest rates, which will allow higher corporate profitability and higher corporate savings. Persistently high inflation during 2009-13 had led to exchange rate overvaluation during this period; after depreciation of the nominal exchange rate following the taper tantrum crisis in 2013, the real exchange rate had got corrected. In the subsequent period until 2018, partly as a consequence of restored capital flows and inadequate foreign exchange intervention, the real exchange-rate had appreciated significantly once again. These trends in the real exchange rate are clearly visible from CPI-based real effective exchange rate indices (See Chart 2).

Real exchange rate appreciation affects manufacturing competitiveness in both domestic and export

³⁰ There has been an ongoing debate on this issue ever since the new series was introduced. See, for example, Nagaraj (2015a, b); CSO (2015a, b); Dholakia and others (2018).

³¹ Arvind Subramanian (2019), former chief economic adviser to the Indian ministry of finance, has now questioned the growth rates implied in the new national accounts series more directly. Noting the inconsistencies between other indicators and the estimated growth in the new national accounts series, he uses cross country regressions to relate such indicators to GDP growth estimates. On this basis he estimates that the Indian national account estimates of annual GDP growth since 2011-17 are overstated by 2.5 percent throughout the period. His methodology and estimate is still going to through rigorous research scrutiny.

markets. This is reflected in the relatively high level of merchandise trade deficit that has averaged almost 7 percent of GDP over the last decade (2008-18) (Table 5). Thus ensuring sustained growth in Indian manufacturing and restoring the health of the Indian corporate sector requires maintenance of a competitive real exchange rate on a continuous basis, which has not been the experience in recent years (Chart 2). The consistent practice of this policy stance would be effective in providing adequate signals to Indian manufacturers to pursue investments that reflect India's comparative advantage in the labour-intensive manufacturing, which has not been seen so far. Success with inflation management will also provide a conducive environment for stability in the real exchange rate, which will encourage exports, manufacturing activity and corporate health, while also contributing to the sustainability of the current account deficit at the moderate healthy levels indicated earlier. Although there is widespread skepticism in India about the efficacy of the exchange rate channel in supporting exports, empirical evidence indicates that the exchange rate does have a significant impact on exports as well as on imports (Kapur and Mohan, 2014; Chinoy, 2018).

Major Push for Competitive Manufacturing for Both Domestic and Export Markets

The policy imperatives outlined above are essentially aimed at making available adequate domestic and foreign resources to enable the kind of sustained growth in investment that is needed to maintain steady overall GDP growth consistent with doubling per capita income in at least each of the next two decades. Even if we are able to implement the kind of macroeconomic policies outlined, will they be sufficient to achieve the sectoral growth projections?

Globally, rapid industrialisation and manufactured exports have been the most reliable levers for rapid and sustained growth. Virtually all countries that have sustained high growth rates for decades have done so on the back of manufacturing, with growth miracles of Japan, Korea and China being conspicuous illustrations of this phenomenon (Rodrik, 2013, 2014; Timmer et al, 2014; Panagariya, 2018; McKinsey Global Institute, 2018). Thus, policies that promote manufacturing activity in India will have a key role in ensuring sustained accelerated overall economic growth.

Promotion of Export-Oriented Labour Using Manufacturing

What is of the utmost importance is acceleration in manufacturing growth to levels approaching double digits and then sustaining it at such levels over the next twenty years and beyond. With the Indian economy now essentially open on the current account, future development of Indian manufacturing has to be internationally competitive. For manufacturing growth to accelerate in the manner proposed, the greatest need for India over the next decade or two has to be in inducing a major expansion in labour using export-oriented manufacturing: much as China and other East Asian countries have done over the past 30-40 years. There is a new window of opportunity that is emerging over the next 5-10 years as such manufacturing moves out of China in response to a continued increase in real wages in that country. The current trend is for these activities to move to South East Asian countries such as Vietnam, Philippines, Cambodia and Bangladesh, but not to India.

It is often argued that:

- India has missed the manufacturing employment bus.
- That automation and other new technologies will now reduce rather than expand the potential for manufacturing employment.
- The growth in demand for manufactured products will be subdued in the foreseeable future due to the stagnating growth in advanced economies.

These issues have been addressed comprehensively in recent work by the McKinsey Global Institute (2018) which refutes each of these concerns. Whereas there is no doubt that the labour intensity in labour using manufacturing will indeed be much lower than in the past, the expected magnitude of growth in demand from Asian emerging market countries for manufactured products will actually exceed that experience in the last couple of decades from advanced economies. The MGI projects an incremental GDP addition of around US \$9 trillion by China, India and ASEAN combined during 2015-30, as compared with around US \$5 trillion by the US and Western Europe combined during 2000-2015. Correspondingly, they estimate that the incremental growth in imports of manufactured goods will be about US \$3.8 trillion by China, India and ASEAN combined during 2015-30, compared with less than US \$1.4 trillion by US and Western Europe combined during 2000-2015. Thus the growth in demand for manufactured goods is continuing unabated and India just has to board the bus: it must not miss it now!

This will not happen in a business-as-usual context. There has to be a renewed focused effort for the revival of Indian industrial growth in a manner similar to what was attempted in 1991. Export growth did respond to the successive opening of the external sector (Harsha Vardhana Singh, 2017), but there has been no exuberant investment in large labour using export-oriented industry as exhibited by all the successful East Asians.

Regulatory impediments that constrain the use of both land and labour in Indian manufacturing have to be addressed. Earlier it was the system of small-scale industrial reservations that had restrained large firms in investing in such industries. Those reservations no longer exist, but there has been no significant visible change in the pattern of investment in these sectors. In fact, India has been losing shares in labour using manufacturing exports in sectors such as clothing and textiles. The main constraint that now inhibits investment in these industries are the restrictive labour regulations, and difficulties related to location in and around cities and towns. Despite the fact that employment in the organised manufacturing sector is only about 14 million, so far no government has had the courage to implement the kind of reforms that are necessary to allow for labour flexibility in the manufacturing sector. The time is now ripe to initiate this bold reform which is heavily overdue and is essential to make feasible a big push in labour-intensive export oriented manufacturing activities.³²

It is difficult to understand why successive governments have not found it possible to initiate the kind of labour reforms that are necessary to induce a big push in labour using industries in the country. It is often argued that successive governments have been constrained to undertake these reforms because of the alleged power of labour trade unions. In fact, as in the rest of the world, labour trade unions have been considerably weakened over the years and, in any case, represent the relatively small proportion of total labour that is employed in the organised sector. It goes without saying that such labour legislation reform would have to be accompanied by new credible measures for social protection of labour in the context of industrial restructuring, similar in spirit to the National Renewal Fund proposed in 1994.³³ This would enable productive dialogue with labour unions which would be essential for the implementation of bold liberal reforms advocated in this paper.

This is all the more remarkable when the government has been able to implement relatively unpopular decisions such as demonetisation and the introduction of the GST. The number of people who would be impacted negatively by labour reforms is miniscule relative to those negatively affected by these

³² Such labour reforms have also been recommended by the recent "High Level Advisory Group on Trade Policy" (Government of India, 2019). Regrettably, this Advisory Group has not argued for the need to maintain a competitive exchange rate for the promotion of Indian exports.

³³ See the description of the National Renewal Fund scheme that was proposed in 1993-94 in Rakesh Mohan (2017a).

recent measures. The benefit that would accrue from the vast potential for employment growth in manufacturing and the associated derived demand in services will far exceed any costs associated with bold labour reform. The jobs generated by a more flexible labour policy regime are likely to far outweigh the labour losses that might occur consequent to the initiation of such a regime. There is no doubt that such reforms that make the deployment of labour more flexible will need to be accompanied by corresponding social security measures that reassure labour that would be so affected. The increase in organised sector employment will, over time, result in the expansion of membership of labour unions.

Further, there has been a traditional prejudice against the location of industries in Indian cities, which is where skilled labour is likely to be available, and where infrastructure costs for connectivity would be lower, necessary for enhancing competitiveness. Urban land ceiling regulations and other zoning requirements, have traditionally limited the availability of urban land for industries development. Thus, whereas in other successful manufacturing oriented cities it is not unusual to find multi-storied structures housing labour using industries such as clothing and other light industries, such manufacturing is almost totally absent in Indian cities. Indian cities have to become more hospitable to manufacturing. Location of such manufacturing in and around cities and towns must be an explicit policy objective. *Impediments to such investments need to be identified and removed on a proactive basis.*

It is remarkable that manufacturing employment in the organised sector in India is only around 14 million, increasing by only about 6 million in almost 20 years; while it has been stagnant at about 36 million in the unorganized sector over the same period (Kapoor and Krishnapriya, 2019; Basole and others, 2018, 2019). The objective must be to double organised sector manufacturing employment over the next 5-10 years. Comparable employment in the industrial sector in China exceeds 200 million;³⁴ while urban manufacturing employment is about 80 million, of whom about 50 million are in the organised sector (Nicholas Lardy, 2015).

Once such a momentum is developed, one can expect continued expansion in these industries as has been observed in East and South East Asian countries in the past three decades or so. Measures for specific encouragement through fiscal and other means may be considered to induce large investments in areas that were hitherto reserved for small-scale industries. Once again, as shown by the McKinsey Global Institute (2018), the most successful high-growth countries have been characterised by the existence of large export-oriented manufacturing firms that become competitive in the global context. Indian policy has traditionally been the opposite: greater encouragement of small firms rather than large ones. This attitude must be reversed.

It goes without saying that such an ambitious enhancement of manufacturing employment will not take place unless there is also corresponding improvement in the health and education levels of Indian labour. This will need specific localised programmes for worker training and retraining in the areas where this new manufacturing will get located. Policies designed to improve health and education levels in India are, therefore, not only necessary for social welfare reasons but also for enabling higher overall economic competitiveness, particularly of the manufacturing sector. Such growth in organised manufacturing employment would inject new animal spirits in the Indian economy and also serve to address the key structural transformation problem referred to earlier.

³⁴ <https://www.ceicdata.com/en/china/employment/employment-secondary-industry>

Need for Organised Government Industry Partnership

During the period of high industrial growth achieved by East Asian countries there was continuous and active organised communication and cooperation between the government and the private sector. Even though it was not as well organized, such communication and cooperation did exist in India during the 1990s years of reforms (Tarun Das, 2017). It appears to have eroded over the past decade. Devising a successful strategy for accelerating industrial growth once again, and on a sustainable basis for the future, requires a similar process of continuous interaction between the government and the private sector on an organised regular basis. It should not be sporadic. It is essential to build such mutual trust for the strategy to be successful.

For manufacturing exports to succeed there is also need for trade promotion and trade facilitation from the government in a host of different ways that have been proposed in detail recently by a committee appointed by the Prime Minister's Economic Advisory Council (PMEAC, 2018) and the High-Level Advisory Group on Trade Policy (Government of India, 2019). JETRO³⁵ and KOTRA³⁶, the respective trade promotion agencies of the governments of Japan and South Korea are well-known for their successful trade promotion efforts in support of their private sectors. Aggressive manufacturing exports expansion from India will also need similar supportive promotion agencies. Other promotional measures that would need to be considered include the kind of coastal economic zones that Arvind Panagariya proposed as vice-chairman of the NITI Aayog, but did not succeed, regrettably.

Emphasis on Technology Investment and Industrial R & D

In the modern contemporary globalised world manufacturing cannot be competitive without being technologically sophisticated so that appropriate quality levels can be achieved. Naushad Forbes (2017) provides evidence on the lack of technology investment in Indian industry relative to East Asian countries, and suggests some solutions. What becomes clear is that Indian industry has simply not evinced enough interest in technology investment and that there has been excessive dependence on foreign technology, without adequate corresponding generation of capacity development in domestic technology for efficient absorption, substitution and innovation. The one area where there has indeed been greater attention to technology investment, both through technology imports as well as domestic technology generation, has been in pharmaceuticals, and this is borne out by the performance of this industry in both domestic and competitive foreign markets (Goswami, 2017). What stands out is the consistent positive support provided by the government at different levels, particularly, the department of biotechnology (Mazumdar Shaw, 2017). This is unusual in that this technical department provided both promotional and technological support, which helped this nascent industry: being a new department mostly staffed with technical personnel it does not seem to have exhibited a control mindset. This is a pointer to the kind of promotion that can be done to help Indian industry. There is need for a focused effort by the government and private industry combined to examine the causes for the lack of technology investment in industry in both the public and private sectors, including in R & D. The most successful manufacturing countries such as China and South Korea have demonstrated that it is indeed possible for emerging markets such as India to make such progress in industrial technology and capacity. In fact, lack of attention to R&D and technology investment is among the key reasons for countries falling into the middle income trap. Beyond a point, active development of technical capacity within the country, is essential to enable continued technology absorption.

³⁵ Japan External Trade Organisation

³⁶ Korea Trade-Investment Promotion Agency

The widespread perception of despair in agriculture and lack of adequate generation of employment in urban areas are clearly connected. If these problems are to be addressed there is no solution other than a concentrated policy focus on widespread new generation of jobs in labour using export-oriented competitive manufacturing activities. In the absence of such policy focus and success the pressures for social welfare palliatives will lead to the kind of competitive populism that is currently observed, and is not fiscally sustainable.

It is this combined and focused approach to urban land and labour reforms, along with the maintenance of a competitive real exchange rate, and accelerated improvements in nutrition, health and education, that can accelerate manufacturing investment in labour using industries. India has also exhibited competitiveness in heavy industries such as steel, aluminum, automotives, and others. Such industries are more affected by governance issues related to environmental and other approval processes that have suffered in recent years, and from inadequate infrastructure. Some of the approval process issues are already being addressed and perhaps need further focus.

Agriculture: Need for a Second Green Revolution

The need now is for a corresponding second agricultural revolution which is designed to accelerate agricultural growth and productivity, but one that will have to be much more heterogeneous. How can this be achieved? Surprisingly, agriculture has been notable in terms of its neglect of a systematic approach to economic reforms in the sector. The sector has been beset with many controls in both prices and movement of agricultural products. These controls have inhibited the export orientation of Indian agriculture, which has also suffered from stop go policies on quantitative restrictions on imports and exports in the sector. Its long-term annual growth has been in the region of 3 percent. It had indeed ascended to about 3.7 percent during 2004-14, but has then again declined to 2.9 percent in the following five years. It is widely believed that it is not really feasible for the agriculture sector to achieve much higher growth rates. In contrast, China, despite being an equally large country, has recorded agricultural sector annual growth rates of about 4.5 percent over the last 40 years (Gulati, 2019). For there to be acceleration in agricultural growth there is a need to step up public investment in agriculture to match the increasing private investment that is taking place. Far more resources are going into input subsidies that do not promote growth. A reduction in agriculture related subsidies can enable enhancement in public investment: an overall investment rate of around 17 percent of agricultural GDP would enable a higher than 4 percent annual agricultural growth rate (Fang and others, 2008; Gulati, 2012)

About 50 percent of the Indian population continues to depend on agriculture for its livelihood. Thus, if the Indian economy is to ascend to a higher growth path overall, it is essential that a sustained effort is made to raise farm productivity. This requires a coordinated approach to reforms in the sector encompassing pricing, trade and infrastructure, along with initiation of directed programmes for enhancing investment and efficiency.

With the sustained high growth in incomes over the last three decades, even though its level still continues to be too high, there has been a notable decline in poverty. Accordingly, there has been a continuing increase in the satisfaction of basic nutrition needs of an increasing proportion of the population. The staple of Indian diets has been cereals, essentially rice and wheat supplemented by coarse grains in some areas. Agriculture policy has traditionally been excessively concentrated on the production of cereals. Once the basic nutrition needs are satisfied there is a shift away towards other foods. This is leading to an increasing diversification of the Indian diet. Thus, Indian agriculture policy needs a significant shift to take account of this major transformation taking place in the composition of demand for food.

There is great potential for acceleration of growth in the production of all non-cereal foods, though in varying degrees. Hence there is need for a new agricultural revolution in all areas such as: dairying, horticulture (covering both fruits and vegetables), aquaculture and pisci-culture, poultry, meat, and even wineries. There is also similar potential for acceleration in growth in non-food agriculture. The potential in all these areas is massive for income and employment generation on a well-distributed basis; for generation of a host of new activities; and for widespread innovation. Aggressive development of the supply chain connecting farms with food processing, storage and logistics up to the retail will generate employment at all links through the whole chain.

Emphasis on a Renewed Focus on Agricultural R & D and Extension

A key common feature behind the success of the national programmes related to both the green revolution and the white revolution (milk production) was the relatively homogeneous nature of cereal production and of milk. It was thus possible to design national programmes that were broadly applicable country-wide with relatively easy regional variations. Productivity breakthroughs in these areas were enabled by organised R&D programmes, both national and international, and corresponding extension programmes. The difficulty in designing programmes for the new agricultural activities is that these products are very heterogeneous and, moreover, exhibit great regional differences. Nonetheless they will need focused attention.

Even for each activity, say poultry production, it will be difficult to design the kind of national programmes that helped the green and white revolutions. The need is now for decentralised packages for the many different activities that will have to be regionally disaggregated. The broad approach can be similar. Each package will need to make simultaneous provision for technology inputs, infrastructure, supply of inputs and associated credit delivery. Whereas the packages will need to be diverse and decentralised, it is unlikely that they will be developed without initiation of nationwide coordinated programmes on a mission basis, with the full participation of states and the private sector. Such a programme could form expert teams for each activity and location. It will be essential to bring together high level expertise, both domestic and international, along with local practitioners. Each team would prepare a package for their respective activities and locations. There is now much more expertise available across the country relative to the situation 35 years ago. States also need to be incentivised to compete in this area as they do now for attracting industry.

Along with such disaggregated but coordinated programmes, there is need for a major new initiative for the rejuvenation of agricultural research that is also regionally distributed. Investment in agricultural R&D and extension is estimated at around 0.7 percent of GDP. This needs to be doubled (Gulati, 2019). The returns to agricultural R&D have long been known to be high (Mohan, 1975; Mohan and Evenson, 1974; Gulati, 2019). A crash programme is required for the urgent renovation of agricultural universities, which will need to be supported internationally as well. These universities need to be made respectable again. Many of them were set up in the 1970s in the wake of and in aid of the green revolution. There was a nationally coordinated program with permission of the states to set up these universities. This program was actively supported by international foundations and aid programmes at the time, with a focus on quality as well. There is now at least one agriculture university in each major state, and more than one in many, resulting in a total of 67 such universities in the country.³⁷ In light of the widespread acknowledgment of distress, this is an opportune time to invest in these universities to enhance agricultural research and education

³⁷ https://en.wikipedia.org/wiki/List_of_agricultural_universities_in_India

focused on enhancement of agricultural productivity in the country. It would also be useful to have an organised programme of cooperation with the CGIAR, and the coupling of each research university with a corresponding international research institute.³⁸ Each university will need to specialise in the agricultural activities relevant to their locations. The transfer of technology from these rejuvenated universities and from other sources will also have to be specific to each activity and new forms of extension activity will need to be explored to achieve the maximum effectiveness. There is now increasing expertise in the private sector and in the cooperative sector so new forms of public private partnerships will have to be explored, just as the National Dairy Development Board innovated in respect of milk.

Facilitating Development of Food Supply Chains from Farm to Market

For the Second Green Revolution to take place, it also has to be incentivised by accelerated demand for new foodstuffs emanating from consumers as their food habits change with income growth. The spread of large format retail supermarkets can do much to aid the emergence of a complete supply chain from farm to market. This is essential to enhance overall rural productivity and incomes. Large format retail supermarkets aid in demand articulation for new kinds of food products, in the extension of shelf life of processed foods, and in enhancement of quality and in quality control. India boasts of a wide variation in regional foods. At present, the consumption of these foods is largely confined to their respective local and regional markets. With the emergence of large format retail supermarkets, the markets for regional foods can expand significantly and become nationwide markets, also leading to international marketability of quality controlled Indian foodstuffs. Thus a key component of reforms that will aid agricultural growth and rural productivity is policy reform that allows the introduction of large format retail supermarkets. This will not happen unless all constraints inhibiting the building of supply chains from farm to market are removed. Roll out of the Prime Minister's *Gram Sadak Yojana*³⁹ over almost 20 years ago has done much to remove the physical transportation constraints inhibiting the movement of agricultural products to markets where the demand exists. There has been continuous discussion since 2003 to implement a model Agricultural Produce and Livestock Marketing (Promotion and Facilitation) Act. The implementation of this act would remove many of the current legislative and regulatory constraints that currently inhibit the free marketing of products.

It is possible that, with income elasticity of demand for food being less than unity, higher growth in agriculture could be constrained by limitations on domestic demand growth. Despite the various constraints that inhibit even better performance, Indian agriculture has demonstrated its international competitiveness whenever permitted: it has been the largest exporter of rice and buffalo meat, among others. Given India's comparative advantage it would stand to reason that there is even greater potential for cultural export growth. This also needs a comprehensive look including price, regulatory and infrastructure reforms.

I have digressed at some length on the need for accelerating agricultural growth and how it could possibly be done because of its obvious importance and its relative neglect over the past two decades. The key point that I would like to emphasise here is that without the organising and coordinating initiative of the government and its agencies at various levels, such a programme cannot be implemented. It is in this context that I talk about the empowerment of the public sector in all its aspects, but particularly related to competence.

³⁸ Formerly the "Consultative Group for International Agricultural Research".

³⁹ Prime Minister's Rural Road Programme

Stepping up Infrastructure Investment: Focus on Efficient Transport and Logistics

I have outlined the magnitude of growth needed in infrastructure investment overall and in transport investment in particular. Even for the kind of growth needed in power generation, for example, it will not be feasible without corresponding expansion in transport capacity. The same is true for the expansion of basic industries like iron and steel and other heavy industries. Planning and programming for adequate investment in transport needs a new approach.

A New Approach for Transport Investment Planning and Programming

Much of the thinking on transport in India has been project centric and done within single-mode silos. The focus has been on stepping up investments to address specific problems usually well after serious logistic and transport dislocations have become more than apparent. Even the Five Year Plans were essentially collections of standalone projects, which were not necessarily connected. To achieve significant improvement in overall productivity and efficiency, it is imperative that future development of the transport network should be aimed at a better integration of the various modes so as to facilitate the development of multimodal transport within the country for the expansion of exports and imports. So a key requirement for thinking on transport strategy is that it must be system based: it must cut across modes of transport, administrative geographies and integrate capital investment (both public and private) with regulatory and policy development. Thus, the country must develop planning capacity in transport that, on the one hand develops coherent medium and long term transport strategies, but on the other, is able to respond on an on-going basis to changes that occur over time in both technologies and relative prices. The NTDP (2014) proposed the setting up of “Offices of Transport Strategy” at both the national and state levels, so that transport investment can be planned and programmed adequately. If this is done, investments in roads, railways, ports and airports can be coordinated so that network efficiencies can be achieved.

The NTDP had also recommended the formation of a unified transport ministry so that the planning, programming and investment in the transport sector could be coordinated. Whereas the ministries of roads, and ports and shipping, were indeed united under the previous NDA government, there has now been a reversal to individual ministries in the new formation: roads, ports and shipping, civil aviation, railways, and urban transport (within urban development) each again have a separate ministry. Furthermore, with the Planning Commission having been disbanded and five year plans abandoned, there now seems to be even less of an institutional mechanism for transport investment coordination. We can note in passing that China has continued its integrated approach to infrastructure and transport planning through the NDRC⁴⁰ even beyond its borders through the Belt and Road Initiative (BRI).

If there was a systems approach to transport investment, it would become very clear that the key transformation needed is in railways, as concluded in the India Transport Report (NTDP, 2014). Much of investment in Indian railways since independence has been incremental: route expansion has been marginal and technological upgradation has been limited. For the kind of overall economic growth envisaged to become feasible, a transformational approach needs to be taken for modernising and expanding Indian railways.

⁴⁰ National Development and Reform Commission

A key innovation which is already underway is that of setting up a network of “Dedicated Freight Corridors (DFCs)”, similar to the NHDP (National Highway Development Project) in roads. Once this is done in the major trunk freight corridors, freight transportation by rail will become much more efficient. It could then begin to regain its lost share over the decades, particularly if investments are done in the modernisation of rolling stock enabling multimodal transport. Simultaneously, as the freight traffic goes to DFCs, passenger trains can be speeded up and capacity can be expanded significantly.

As of now, work is in progress on only two of the six DFCs that have been envisaged. This programme needs to be accelerated with the objective of completing all the DFCs by 2030 or thereabouts. This would be a complete game changer for the Indian transport and logistics scene propelling both passenger and freight transport in India to a new transformative level and to contribute significantly to the competitiveness of an industry. Investment in this programme would be far more productive for the economy as a whole rather than further wasteful investment in high-speed bullet trains.

For all this to be achieved, major reform has to take place in the Indian Railways so that its capacity expansion and technical upgradation can be enabled. The Indian Railways Report (2001) and the NTDP Report (2014) have provided detailed blue prints on how this can be done, particularly through the corporatization of Indian railways necessary to make it more business and customer oriented. For my current purposes, I confine myself to saying that a business-as-usual approach to railways investment will not do and urgent action has to be taken now to implement programmes that reflect the kind of investment projections made earlier.

Public Private Partnerships (PPP) in Infrastructure Investment

A major welcome policy departure was made on infrastructure investment in the mid to late 1990s to invite large-scale private investment in infrastructure projects (NCAER, 1996). The scale of PPP infrastructure has expanded considerably over the following couple of decades. To some extent this has been done in recognition of the limited resources available with the government to make infrastructure investment in the scale required for high growth. The other rationale for PPP is the expectation that the private sector would be more efficient both in use of financial resources and in operation of infrastructure projects. Experience with the efficacy of PPP has, however, been very mixed as it has in other parts of the world as well. One of the consequences of possible excessive exuberance with regard to PPP has been the large increase in non-performing assets in the infrastructure sector with consequent impacts on both private sector corporate and bank balance sheets in recent years.

There is thus a need to revisit the use of PPP in infrastructure. In principle, the main resource additionality that comes from the PPP approach is the equity investment that the private sector brings to infrastructure projects: the sources of debt funds are common to both the private and public sectors. It must be understood much more clearly that private equity investment would be attracted only in those sectors where the returns are comparable to risk-adjusted private-sector investments in other activities. As the private sector got attracted to PPP projects it would seem in retrospect that both the government as well as the investors underestimated the kind of typical risks that are involved in infrastructure. There has been a serious mismatch between the allocation of risks among the various bearers of risk. Whereas the government and its regulatory and rulemaking authorities typically determine the risks that infrastructure projects are subject to, particularly with respect to environmental laws and access to land, it is the private sector investors which effectively bear the risks unless they are properly allocated. Since infrastructure projects typically have higher debt equity ratios, it is their lenders who then bear the risk in case of

default. In India, since it is the public sector banks that have done most of the infrastructure lending to private-sector investors they have ended up with significant non-performing assets (NPAs) in the sector. To the extent that it is the government that would end up recapitalising these banks, the additionality of resources that was expected from the PPP process will not have been realised.

In principle, public investment should be done in those sectors that essentially constitute public goods and services, where the benefits of investment are widely spread and are more difficult to capture as returns for the equity investor, and which are more subject to government generated regulatory and other risks. Roads constitute such an example, except for certain inter-city high density traffic routes where limited access highways can be implemented. Similar is the case for railways and much of urban infrastructure including metros, water supply, solid waste disposal and the like. Because of the scarcity of resources resulting from the strained fiscal circumstances of the country there has been a tendency to wish for PPP in almost all infrastructure sectors even when they are not suitable for such a framework. PPP is suitable for those sectors which can be regarded as a mix of public and private goods and services, and exclusive private investment can be done in those which are essentially classified as private goods and services. Telecom, ports and airports are good examples where private sector and PPP projects should be seen to be successful.

Such an examination would suggest a greater role for public investment from government revenues particularly in transport investment: hence the connected recommendation made in this paper for advanced tax revenues and improvement in the composition and quality of public expenditures. Such projects should of course be subject to appropriate user charges wherever it is possible to levy them. Consequently, much greater attention has to be given to making such investment more efficient and to upgrade capacity for planning, programming and implementation in the government itself and in public sector enterprises and authorities that implement infrastructure projects. In recognition of the activities that will continue to need public sector investment, each of the public enterprises and authorities that implement such investments need to be upgraded technically. Public sector enterprises, such as the National Thermal Power Corporation, and others, have demonstrated that building such competence is indeed feasible. This constitutes part of the general recommendations made in this paper for technical strengthening of the government as a whole.

In summary:

- Public investment for public goods and services.
- PPP for semi-public goods and services.
- Private sector for private goods and services.

IV. INSTITUTIONAL DEVELOPMENT FOR HIGHER OVERALL GROWTH

Strategy to Empower Government to Deliver Governance that Enables the Private Sector to Function, Grow, Prosper, and Innovate

We have now had almost three decades of economic reforms spanning six governments. What have these reforms achieved? We have ascended to a higher growth path achieving an average of just under 7 percent annual GDP growth; poverty has been reduced; the external sector is comfortable and stable; industrial growth has been healthy but needs a big push; and all this has been achieved with broad macro-economic and financial stability in the country. As a consequence of all these momentous changes there is a new respect for India in the world and, even more important, Indians in all walks of life have found a new level of self-confidence.

Consequently, a certain degree of complacency may have set in. But we now need to set our aspirations higher and move to the next level of sustained growth so that per capita income growth can exceed seven percent per annum (or over 8-9 percent GDP growth per annum on a sustained basis) and thereby see at least a doubling every decade. This will not happen by itself and needs a strategic policy push and focus on the imperative for higher economic growth.

Where have we failed? Whereas the structural transformation of the economy has proceeded apace with the share of industrial and service activities rising and that of agriculture reducing, manufacturing growth has not been labour-intensive nor adequately export-oriented. This has restrained the absorption of people needing to shift from rural to urban pursuits. Second, although there has been a continuing improvement in health and education indices, India remains far behind other middle income countries, and even some low middle income countries. *We need a special resolve to focus on correcting the long neglected social needs related to nutrition and health services, and primary and secondary schooling.* There may in fact be a connection between the lack of generation of quality nonagricultural jobs and the low level of labour skills available. Third, partly as a consequence of the inadequate transfer of surplus labour from the agricultural sector there is palpable agrarian distress in the country: the agricultural sector is in need of a new green revolution like rejuvenation. Fourth, the quality of life in our growing towns and cities leaves much to be desired, again restraining the needed movement of people from rural to urban areas.

The main organising principle of most reforms carried out so far has been that of freeing the private sector from the myriad government controls that had existed for a long time. Whereas this process itself still has some distance to go, the consequence of this widespread deregulation and introduction of competition in most segments of the economic sphere has been the very visible unleashing of entrepreneurial energies at all levels and in most parts of the country. We have been reasonably successful in what we set out to do so far, with the benefits of increased competition and efficiency manifesting themselves in the higher recorded growth.

The issue that arises now is whether we have reached the limit of private sector led acceleration in investment and output growth? Is this now being increasingly constrained by the lack of public investment, both physical and social? An underlying theme encompassing most constraints now is the lack of adequate delivery of public services in both quality and quantity. The public service system is simply not functioning.

Further acceleration in economic growth and reduction of poverty will need greater investment and employment growth along with enhancement of productivity. For such acceleration to take place we will need a significant enhancement of growth in capacity-building and in the availability of public services that the private sector cannot provide.

I, therefore, believe that just as the first generation of reforms empowered the private sector to perform as it can to the limits of its abilities, *the second generation of economic reforms must focus on a similar empowerment of the public sector to deliver public goods and services* for the benefit of all segments of the private sector, corporate entities and the public alike. Lest this proposition be misunderstood, I am not advocating greater empowerment of the public sector to increase its control over the economy as was the case in the past. The “public sector” needs to be seen in its widest definition to encompass all levels of governments from the local, state to national, and their entities, which deliver public goods and services.

Development of State Capacity for Delivering Governance

The way forward for accelerated growth in India is being held back by major governance deficits in all areas connected with the delivery of public goods and services. The economic reform process so far has concentrated on empowering the private sector to do what it can do best. But it has done little to empower the public sector, broadly defined, to do what it has to do to serve the public interest. In fact, the private sector is now being constrained because of inadequate progress in the delivery of public services in all spheres.

After the induction of the private sector in infrastructure investment in the 1990s there has been an increasing tendency for the government to ask the private sector to even deliver essential public services in an expanding number of areas including basic health and education, urban infrastructure services, and the like. In the long period before economic reforms began in the early 1990s the government confidently wanted to perform all functions including those that should have been done by the private sector. There now appears to be a collapse of confidence within the government itself in its ability to perform even essential public functions. *There must be a renewed clear understanding that it is indeed the government's role to deliver public goods and services that it only can provide, and that such services cannot and should not be privatised.* An all-round effort must be made to empower government at all levels, centre, state and local, in order to restore confidence in their ability to perform the essential functions.

All the areas of physical infrastructure involve the management of large systems: airports, ports, railways, telecommunications and the like. Similarly, cities, education systems, health systems, hospitals, are also all large public service systems that are in dire need of efficient and innovative management. Some of them also have the possibility of at least part delivery by the private sector. The key issue is that of efficient delivery of public services at affordable prices.

Management of urbanisation requires strengthening of city governments so that they can face the emerging challenges of rapidly growing cities including the provision of urban water supply systems, sanitation and sewerage systems, public lighting and public transportation, and pollution. In most of these areas, a large public sector presence is unavoidable, even if there is some element of private delivery. Being essential services, there has to be some form of public regulation. In the railways also, whereas some private delivery is possible, international experience suggests that basic infrastructure ownership has to be with the government, along with regulation and allocation. Similar is the case with ports and airports: typically, ownership is with the government or a public authority, while delivery is often privatised.

All such public management systems are typically very large and complex. Hence they need excellence in public management. Thus the biggest management challenges lie in the management of these large complex systems which should attract the brightest managers. The irony, however, is that there is little generation of expertise for such management functioning and there are few prestigious schools of management that consciously impart training for managing these systems. All these systems need complex financial management of huge budgets; all of them involve sensitive customer delivery; and all involve complex logistics. It must therefore be understood that where public authorities or where public sector enterprises manage such large systems, government must concentrate on improving the management and technical expertise in these organisations.

A theme running across the different sectors that have been discussed is the exploration and development of new forms of public private partnerships. It must be understood that these are not easy to foster. They usually involve the tension between two different organising principles: one non-profit and the other profit seeking. The challenge is to design appropriate incentive systems so that the ultimate objective gets aligned. Different sectors will need different forms of partnerships. In education, for example, the partners could well be non-profit non-governmental organisations. In ports and airports, the partners could clearly be profit-seeking private companies.

Overall, there has to be a search for innovative forms of public service delivery. This would also involve realignment of compensation levels. If individuals of high levels of competence are sought to do the most complex tasks they will need to be compensated adequately.

There is also a broader issue of public administration in India, which needs to be addressed over time. We inherited the system of general administrators staffing both secretarial functions in state and central governments, and also district administrative functions. Thus district officers are essentially agents of the state and central governments and have little intrinsic connection with the districts that they administer: this form of administration is essentially a colonial legacy. There are few countries in the world where such systems exist. In most countries, local administration is done by some form of local elected governments: they are seldom constrained by functionaries from higher levels of governments, even if much of their funding may come from some kinds of higher level funding.

Thus, in India, since most administrative powers rest with the state or central level bureaucracies, local government is not empowered and hence does not attract either competent elected representatives or municipal-level officials. With state officials being transferred regularly and frequently, no local level expertise is able to develop. Consequently, public service planning, management and delivery suffer at all levels.

Similar problems exist at the secretariat level. With increasing global complexity and interrelationships, most governmental functions require extensive domain knowledge for effectiveness in governance. Whereas technical expertise is not necessary in secretariat functions, domain knowledge is. Here again, with the existing Indian civil service system, civil servants may be field district officers one day and state or central government secretariat functionaries the next day. Domain knowledge is then acquired on the job, but no sooner is it acquired that they are transferred to the next job. It is a common experience for a department or ministry to be subject to frequent transfers of secretaries in charge: between 2010 and 2014 each of the transport ministries had between three to five secretaries.⁴¹ It is therefore difficult for knowledge-based reform or policymaking to be made in such circumstances. Institutional history and domain knowledge is then the province of the longer lasting lower level officials who are generally much less competent. Injecting technocratic capability in government is therefore a necessity in order to cope with the new global and domestic challenges.

If public management in India is to be improved and public service delivery has to be made more effective there has to be a thorough overhaul of the overall administrative system. This clearly cannot be done overnight in a disruptive fashion. The first step is recognition of the problem, which does not exist at present.

What do we need to do? We need to make public service prestigious again: not for the exercise of power and authority, but for tackling challenges for efficient public service delivery. Most public service delivery operations, including those run by the civil service, need the injection of outside expertise at different levels. Each of our public authorities discourages lateral entry and therefore tends to become inward looking and suspicious of new ideas. Lateral entry of outside experts would help in injecting new energy and even encourage public entrepreneurship. But sporadic lateral entry as is being currently envisaged will not be enough. What is needed is the building of cadres of domain expertise in different areas in the government itself at all levels, centre, state and local. Contrary to popular perception the Indian government is significantly understaffed at all levels, both in numbers as well as in domain competence. One estimate of the strength of central government (not including employees of public sector enterprises, the railways and public sector banks) suggest that there are only about 1.6 central government employees in India per thousand population, as compared with more than eight in the United States. Similar understaffing is reported for the number of judges, police and the like in essential administrative and judicial functions. It is no wonder then that all judicial proceedings, both civil and criminal, take inordinately long in India: a major contributor to the unease of doing business. Thus there is ample scope for the expansion of government in India at all levels, but with the purpose of improving efficiency and technical competence for delivering public services. This must not be done on any knee-jerk basis but with thorough evaluation of existing strength, competence, identified needs for strengthening of public administration and for the delivery of public services. *There needs to be a system change in the approach to public administration in India away from the traditional colonial approach that continues to be in practice.*

As part of the reform process a host of regulatory and other specialised institutions have been set up. Part of the rationale for setting up these institutions outside existing ministries was recognition of their need for greater professional competence than could be built within ministries. That there is little actual understanding of the need for professional competence and knowledge in public management is illustrated by the fact that, without exception, the heads of these institutions are all drawn from the generalist services, some with no prior familiarity or experience even within ministries concerned with the subject.

⁴¹ See NTDP (2014), Volume I, p. iii.

It is not easy to develop a clear path for such public administration reform, but it is clearly high time that more constructive thought is given to the subject. We thus need a nationally generated focused programme to improve public administration and management at all levels of government and public authorities so that the delivery of public services becomes efficient. This cannot be done by the private sector and if it is not done the private sector will itself suffer from the emerging inadequacies of health, education, rural and urban infrastructure, and all other physical infrastructure.

Restoring the Scientific Temper: Emphasis on Technical Competence

A unifying theme underlying the major modernisation effort undertaken after independence was emphasis on the need for development of a scientific temper in the country across all activities. It is perhaps ironic that, although there has been a proliferation of new educational institutions at all levels, there is much less attention given to the promotion of science and technology and technical competence over the last couple of decades. Sustained growth of the kind proposed in this paper will require much greater investment in improving the quality of education at all levels, greater investment in science and technology in all fields, and greater recognition that the functioning of government itself requires much greater competence.

This is too large and complex an area to address in this paper. Suffice it to say that the prestige of science, scientists, teachers, engineers and technocrats needs to be restored. To some extent the attractiveness of finance and general management related occupations has served to reduce the attraction of the best students to technical fields. A cursory examination of the kind of emphasis that China is placing on enhancing the quality of its scientific and technical higher education institutions would make clear the direction that we need to take. R&D needs to be promoted and enhanced in all sectors, both public and private; accordingly, ways need to be found to incentivize industry for higher technological investment along with regeneration and expansion of public sector research and development institutions. There is a similar need to develop programs for enhancing technical capacity in all public sector organizations delivering infrastructure and other investment and services.

How is all this to be coordinated?

Need to Transform NITI Aayog to Develop and Oversee the Strategy for a Comprehensive Big Push

Since its inception, the Planning Commission served as the governmental fulcrum for organised discussion for framing growth strategies with an eye to the future. Regrettably, in the later years of its life it had become excessively bureaucratic and unimaginative. It was also increasingly perceived by some to be overbearing in its attitude to state governments. Whereas it clearly needed a major restructuring its abolition and transformation to a new avatar in the form of the current NITI Aayog^{42,43} is unfortunate. An examination of the handful of countries that have achieved sustained high growth suggests that this is not achieved unless there is an overarching strategic focus on high growth. Each of these countries (e.g.

⁴² National Institute for Transforming India.

⁴³ It is interesting that China also re-designated its former "State Planning Commission" as the "National Development and Reform Commission", to distinguish it from the former practices of central planning; but it has retained overall policymaking and coordinating functions as an organ of the top policymaking State Council.

Japan, South Korea, and China) also set up strong technically competent organisations to oversee and implement their development strategies.

The NITI Aayog must be technically strengthened and reorganised so that it can develop a capacity to frame long-term integrated programs for investment and management of key interconnected sectors, particularly infrastructure and environment. Its function to coordinate public investment programs between ministries at the central level and across states must be restored, but within the framework of a new cooperative federalism.⁴⁴ This function can only be effective if it is given fund allocation powers analogous to that of the former Planning Commission. Its ability to perform these functions effectively will depend on the respect that it earns for its technical capacity: when both the central ministries and state governments believe that the activities of such a restructured NITI Aayog are helpful to them in achieving their own objectives.

With the advent of the new government, the Prime Minister is reported to have instructed each ministry to develop five-year plans in their respective domains. New cabinet committees have also been appointed to focus on growth and employment; and their proposals for coordinating committees of secretaries as well. These mechanisms are, however, being formed at the ministerial and bureaucratic levels. Given the current administrative structures, there would seem to be little scope for technical inputs in the preparation of these plans, nor mechanisms for financial coordination. As these five-year plans are developed for each ministry it will become obvious that a technocratic mechanism will be needed for assessment of each of these plans and for their coordination for efficient resource allocation. There is as yet no indication how countrywide strategies are to be coordinated across states. Hence a relook at the structure and functions of NITI Aayog becomes obvious.

⁴⁴ Similar arguments have been made recently by Vijay Kelkar (2019) in his recent Sukhamoy Chakravarty Memorial Lecture, and Y V Reddy (2019), former chairmen of the 13th and 14th Finance Commissions, respectively. Both are also advocates of greater state autonomy in resource allocation.

V. A NEW SOCIAL CONTRACT: GROWTH, GROWTH, EMPLOYMENT, AND UNIVERSAL BASIC SERVICES

India's growth record since independence suggests that it is capable of recording sustained growth over a long period, even if it is punctuated by some periods of lower growth because of business cycles or other reasons. Its institutional system has also demonstrated that significant policy changes are made in response to changing circumstances. Sometimes this is done relatively quickly, whereas at other times there may be significant delays before the needed policy change is done.

Within this sustained growth record there have been specific bursts when India has made a break and ascended to a higher growth trajectory. One such departure was made soon after independence with the initiation of growth-oriented planning in the 1950s, while the second departure was initiated with the 1991 economic policy reforms when India opened its economy to the world. In each case the departure resulted from an all-encompassing policy focus on attaining higher economic growth, with other policy objectives made secondary.

It is now more than 25 years since these policy reforms were initiated. As the achievement of annual economic growth of about 7 percent has almost become commonplace, the country is now in danger of suffering from a degree of complacency. The time is now right for India to aspire to further elevation of its growth trajectory to the next level. A sustained annual growth rate of around 8-9 percent is needed to ensure annual per capita growth of about 7 percent, which would then ensure doubling of per capita income in every decade. It is only then that India can expect to eliminate poverty completely. It will also enable it to be among the three largest economies in the world by about 2035.

This then must be the overarching objective of economic policy over the next couple of decades. Such growth cannot be achieved unless focus is brought back to placing economic growth as the primary objective of economic policy.

There has perhaps been some disenchantment with growth as a primary policy objective because:

- There has been inadequate generation of employment leading to the sobriquet, "Jobless Growth".
- Growth impulses have not been transmitted adequately to agriculture on which at least half the population depends leading to widespread perceptions of agricultural distress.
- There is inadequate access for the vast majority of the population to basic services such as water, sanitation, health and education.

This paper has argued in favor of a growth policy focus that takes account of these issues. Progress on each of these three problems can only be made if there is a new thrust on growth-oriented economic policy in which the government recognises its own crucial role in providing essential public goods and services. The incentivising of labour augmenting investment in both agriculture and industry also needs a new policy focus along with more efficient public sector functioning and the provision of essential infrastructure, R&D and other services, all designed to enable the private sector to revive its animal spirits for enhanced investment and growth.

Such a reorientation of policy will need *enhanced government expenditures* in both public investment for public goods and services, and for the provision of universal basic services. This needs to be distinguished from “Universal Basic Income” (UBI) that has received considerable policy support in recent times from both economists and policymakers alike. If the vast majority of people do have access to basic services there would be little demand for UBI.

It goes without saying that the first condition for sustained growth is an enhancement of investment levels, both public and private, but which are to be achieved while maintaining macroeconomic stability centered on fiscal prudence. Much of the Indian growth record has been possible due to sustained growth in domestic savings and associated investments. The use of external savings has been relatively limited as a proportion of total investment. This paper has documented that the key constraint restraining enhanced investment levels has been the fall in savings in both the public and private sectors. In the public sector, the buoyancy in the tax/GDP ratio does not reflect the sustained growth in GDP that has been experienced over the past three decades. The immediate priority for taking the country to a higher growth trajectory is to improve its fiscal quality. Focused attention now needs to be given, to increasing efficiency and compliance in tax revenue collection so that the Indian overall tax/GDP ratio rises to levels that are consistent with comparable international experience. This would enable a shift of fiscal expenditure composition towards increases in public investment for the delivery of public goods and services, which in turn would crowd in private investment rather than crowding it out.

If such macro-economic stabilisation, in terms of both fiscal deficit and inflation, can indeed be achieved over the next couple of decades, along with a change in the composition of expenditures, the macro-economic projections presented in this paper suggest that it is within the realms of feasibility that the Indian economy can return to an 8-9 percent growth path for a sustained period of a couple of decades in the future. This would then begin to replicate a kind of growth experience exhibited by East and South East Asian countries, including China, in the immediate past and Japan in earlier periods. Although the task ahead will be more difficult now in view of the protracted slow-down in global economic growth and in global trade, the silver lining in future expectations is that the weight of the global economy is shifting to emerging market and developing economies (EMDEs) in Asia, Latin America and Africa. Thus, even if the North Atlantic economies of North America and Europe do suffer secular stagnation in growth, as some are predicting, it is possible that the impact of global growth may be mitigated by counter balancing growth in EMDEs. Indian economic and foreign policies also need to reflect this ongoing structural change in the global economy.

The current fiscal policy focus is much more on efficient distribution of government subsidies, as distinguished from government expenditures, being directed to growth enhancing investments in both physical and social infrastructure that would contribute to lasting productivity gains in the economy as a whole. The point of departure in this paper on this issue is to argue for the provision of basic services rather than expansion of subsidies.

The point of departure that this paper has taken is centered on two propositions.

First, for the Indian growth story to exhibit the kind of dynamism posited, it is crucial for Indian economic policy to focus particularly on the revival of labour using manufacturing and overall industrial growth. It is not feasible to achieve a sustained overall GDP growth of 8-9 percent unless industrial growth in India is in double digits, and which is employment generating. Apart from the maintenance of appropriate interest rates, and a realistic and competitive real exchange rate, the achievement of such industrial

growth needs focused attention on the promotion of labour using manufacturing exports in much the same way as our Asian neighbours have demonstrated in the past 3 to 4 decades. It must be understood that *India has not missed the bus* in this regard and that the expanding Asian markets over the next couple of decades will indeed provide the kind of demand needed. Such competitive manufacturing would also serve an expanding domestic market. This will not happen unless bold policy reforms are undertaken with full political commitment in order to remove the remaining impediments in factor markets, particularly labour and land. *labour reforms towards making labour more flexible can no longer be delayed*. The traditional antipathy toward large firms also needs to be reversed in recognition of the fact that it is large firms that become most competitive internationally, even in labour using industries, and are also able to progressively ascend the technology ladder. In addition, competitiveness in Indian industry will depend on making Indian cities more efficient and hospitable to location of manufacturing entities within or in the vicinity of cities.

The second point of departure made in this paper is to emphasise the role of the state in promoting economic growth. The countries that have been most successful in maintaining high growth rates for three decades or more have been those whose governments have succeeded in setting up growth promoting governmental institutions that coordinate the needed public investments while also incentivising the private sector to make the kind of investments necessary for a growing dynamic economy. Much of the economic policy reforms undertaken since 1991 have been designed, quite appropriately, to reduce interference of the government in economic activities, so that the private sector is empowered to do what it does best in response to market signals. However, adequate attention has not been given to strengthening the government itself in performing the functions that it must directly or through public authorities.

The need now is to recognise this lacuna in policy and to direct attention to improving its own competence, both administrative and technical, at all levels. The abolition of the Planning Commission has been a major error in that it has robbed the country of a coordinating mechanism which is essential at this stage of the country's development. There is no doubt that the erstwhile Planning Commission had indeed become excessively bureaucratic and was in need of a total revamp. It is now time to recognize that the NITI Aayog itself should be restructured so that it recovers its coordination and public investment allocation functions, with appropriate changes in its functioning taking account of current trends in fiscal federalism.

There has also been a tendency in recent decades to under emphasise the importance of maintaining and fostering scientific temper in the country. The needs of a modern economy and a fast advancing globalised world require much more technical competence in all public agencies at the central, state and local levels, including both governments as well as public sector enterprises and authorities that deliver public goods and services.

Taking India to a higher growth trajectory is, therefore, quite feasible but it will need much more focused attention to the primacy of growth as a policy objective, and understanding of the important role of a competent government.

This then should be the new social contract: the acceptance of higher tax compliance leading to higher revenues which are then better by the government in delivering both higher economic growth along with the provision of universal basic services.

REFERENCES

- Akın, Çiğdem, Bruno Carrasco, Sudipto Mundle, and Abhijit Sen Gupta (2017). *Fiscal Responsibility and Budget Management Act in India: A Review and Recommendations for Reform* ADB South Asia Working Paper No. 52. Manila: Asian Development Bank.
<https://www.adb.org/sites/default/files/publication/337306/swp-52.pdf> Accessed January 30, 2019.
- Basole, Amit, and others (2018, 2019), *State of Working in India*, Bangalore: Azim Premji University, Centre for Sustainable Employment.
https://cse.azimpremjiuniversity.edu.in/wp-content/uploads/2019/02/State_of_Working_India_2018-1.pdf
https://cse.azimpremjiuniversity.edu.in/wp-content/uploads/2019/04/State_of_Working_India_2019.pdf
 Accessed June 15, 2019.
- Bhaskar, C. Uday (2019) <https://www.thequint.com/voices/opinion/defence-budget-2019-allocation-analysis>
 Accessed February 2, 2019.
- CSO (2015a), Changes in Methodology and Data Sources in the New Series of National Accounts: Base Year 2011–12, Ministry of Statistics and Programme Implementation, Government of India.
- (2015b), “No Room for Doubts on New GDP Numbers,” *Economic & Political Weekly*, Vol 50, No 16, pp 86–89.
- (2016): Instructional Manual: Annual Survey of Industries (Concepts, Definitions and Procedures), CSO Industrial Statistics Wing and Field Operations Division, National Sample Survey, <http://www.csoisw.gov.in/cms/cms/Files/243.pdf>
- Chinoy, Sajjid and Toshi Jain (2019), “What Drives India’s Exports and What Explains the Recent Slowdown? New Evidence and Policy Implications” in NCAER, *India Policy Forum 2018*, New Delhi: NCAER.
- Chinoy, Sajjid (2019), “India: A Near-Term Policy Agenda for the New Government”. J P Morgan Economic Research Note. May 30, 2019.
https://markets.jpmorgan.com/research/email/b4v588jd/6syFdKOeQQ5lel_M0UKG-A/GPS-3021374-0.
 Accessed June 4, 2019.
- Committee on the Global Financial System (2009). *Capital Flows and Emerging Market Economies* (Chairman: Rakesh Mohan), CGFS Publication No. 33. January. Bank for International Settlements.
- Das, Tarun (2017), “Changing Colours of Government Business Relations”, Chapter 11 in Rakesh Mohan (ed.) *India Transformed: 25 Years of Economic Reforms*. New Delhi: Penguin Random House.
- Dholakia, Ravindra H., R. Nagaraj, Manish Pandya (2018), “Manufacturing Output in New GDP Series: Some Methodological Issues”, *Economic and Political Weekly*, September 1, 2018, Volume LIII, No 35.
- Expert Group on Commercialization of Infrastructure Projects (EGCIP) (1997), *The India Infrastructure Report*, (Chairman: Rakesh Mohan), New Delhi: NCAER.
- Expert Group on Indian Railways (EGIR) (2001), *The Indian Railways Report 2001: Policy Imperatives for The Reinvention and Growth*, (Chairman: Rakesh Mohan), New Delhi: NCAER.
- Forbes, Naushad (2017), “India’s National Innovation System: Transformed or Half Formed?”, Chapter 26 in Rakesh Mohan (ed.) *India Transformed: 25 Years of Economic Reforms*. New Delhi: Penguin Random House.

Government of India (2012), *Report of the Committee on Roadmap for Fiscal Consolidation* (Chairman: Vijay Kelkar), New Delhi: Ministry of Finance.

Government of India (2017), *Responsible Growth: A Debt and Fiscal Framework for 21st Century India*. New Delhi: Ministry of Finance, FRBM Review Committee Report, (Chairman: N.K. Singh).
<https://dea.gov.in/sites/default/files/Volume%201%20FRBM%20Review%20Committee%20Report.pdf>. Accessed January 30 2019.

Government of India (2018), *Strategy for a New India*, New Delhi: Niti Aayog. https://www.niti.gov.in/writereaddata/files/Strategy_for_New_India.pdf. Accessed January 20, 2019.

Government of India (2019), *Report of the High Level Advisory Group on Trade Policy* (Chairman: Surjit Bhalla), New Delhi: Ministry of Commerce and Industry.

Goswami, Omkar (2017), "Changes and Challenges: Corporate India since 1991", chapter 24 in Rakesh Mohan (ed.) *India Transformed: 25 Years of Economic Reforms*. New Delhi: Penguin Random House.

Gulati, Ashok (2012), "Reforming Agriculture", in *Seminar*, Issue No 629. January 2012.
https://www.india-seminar.com/2012/629/629_ashok_gulati.htm
 Accessed June 14, 2019.

_____ (2019), "From Plate to Plough: The Farm Factory Connect", *Indian Express*, June 10, 2019. <https://indianexpress.com/article/opinion/columns/farm-income-farm-loan-national-statistical-office-nso-data-agriculture-crisis-5772425/>
 Accessed June 13, 2019.

Fang, Shenggen, Ashok Gulati and Sukhdeo Thorat (2008), "Investment, Subsidies and Pro Poor Growth in Rural India", *Review of Agricultural Economics*, Volume 39.

International Monetary Fund (2012), *India: Staff Report for the 2012 Article IV Consultation*. Washington D.C.

International Monetary Fund (2013), *India: Staff Report for the 2013 Article IV Consultation*. Washington D.C.

International Monetary Fund (2015), *India: Staff Report for the 2015 Article IV Consultation*. Washington D.C.

International Monetary Fund (2018), *India: Staff Report for the 2018 Article IV Consultation*. Washington D.C.

Kapoor, Radhicka and P. P. Krishnapriya (2019), "Explaining the Contractualisation of the Indian Workforce". ICRIER Working Paper 369. New Delhi: ICRIER.

Kapur, Muneesh and Rakesh Mohan (2014), *India's Recent Macroeconomic Performance: An Assessment and Way Forward*. IMF Working Paper WP/14/68. Washington DC: International Monetary Fund.

Kelkar, Vijay (2019), "Towards India's New Fiscal Federalism". Dr Sukhamoy Chakravarty Memorial Lecture. Working Paper No. 252. New Delhi: National Institute for Public Finance and Policy.
https://nipfp.org.in/media/medialibrary/2019/01/WP_252_2019.pdf
 Accessed February 9, 2019.

Lardy, Nicholas (2015), "Manufacturing Employment in China", <https://www.ceicdata.com/en/china/employment/employment-secondary-industry>. Washington DC: Peterson Institute of International Economics. China Watch. Accessed February 2, 2019.

McKinsey Global Institute (2018). *Outperformers: High Growth Emerging Economies and the Companies that Propel Them*.

<https://www.mckinsey.com/~media/McKinsey/Featured%20Insights/Innovation/Outperformers%20High%20>

growth%20emerging%20economies%20and%20the%20companies%20that%20propel%20them/MGI-Outperformers-Full-report-Sep-2018.ashx

Mazumdar Shaw, Kiran (2017), "25 Years of Reforms that Led India's Pharmaceutical and Biotech Industry towards Global Leadership", Chapter 31 in Rakesh Mohan (ed.) *India Transformed: 25 Years of Economic Reforms*. New Delhi: Penguin Random House.

Mohan, Rakesh (1975) "The Intensive Agriculture Districts Programme in India: A New Evaluation", *Journal of Development Studies*, Volume 11, No3, April 1975.

___(2011a), "The Growth Record of the Indian Economy: A Story of Sustained Savings and Investment", in Rakesh Mohan (2011), *Growth with Financial Stability*, Oxford University Press, New Delhi.

--- (2011b), "Development of Banking and Financial Markets in India: Fostering Growth while Containing Risk" in Rakesh Mohan (2011), *Growth with Financial Stability*, Oxford University Press, New Delhi.

--- (2011c), "Economic Reforms in India: Where are We and Where Do We Go?", in Rakesh Mohan (2011), *Growth with Financial Stability*, Oxford University Press, New Delhi.

---(2017a), "The Road to the 1991 Industrial Policy Reforms and Beyond: A Personalized Narrative from The Trenches", Chapter 1 in Rakesh Mohan (ed.) *India Transformed: 25 Years of Economic Reforms*. New Delhi: Penguin Random House.

---(2017b), (ed.) *India Transformed: 25 Years of Economic Reforms*. New Delhi: Penguin Random House.

Mohan, Rakesh, and Robert Evenson (1974), "The Contribution of Research and Extension to Productivity Change in Indian Agriculture", *Economic and Political Weekly*, September 28, 1974, pp A 97-A104.

Mohan, Rakesh and Muneesh Kapur (2011), "Managing the Impossible Trinity: Volatile Capital Flows and Indian Monetary Policy", in Rakesh Mohan (2011), *Growth with Financial Stability*, Oxford University Press, New Delhi.

Nagaraj, R. (2013), "India's Dream Run, 2003-08: Understanding the Boom and Its Aftermath", *Economic and Political Weekly*, Vol. XLVIII, No.20, pp.39-51, May 18.

Nagaraj, R (2015a), "Seeds of Doubt on New GDP Numbers: Private Corporate Sector Overestimated?" *Economic & Political Weekly*, Vol 50, No 13, pp 14-17.

— (2015b), "Seeds of Doubts Remain: A Reply to CSO's Rejoinder," *Economic & Political Weekly*, Vol 50, No 18, pp 64-66.

National Transport Development Policy Committee (NTDPC) (2014), *India Transport Report: Moving India to 2032* (Chairman: Rakesh Mohan), New Delhi: Routledge.

OECD/ICRIER (2018). *Agricultural Policies in India*, OECD Food and Agricultural Reviews, OECD Publishing, Paris.

Obstfeld, Maurice (2009), "International Finance and Growth in Developing Countries: What Have We Learned?" *IMF Staff Papers*, Vol. 56(1), pp.63-111.

Panagariya, Arvind (2008), *India: The Emerging Giant*. New York: Oxford University Press.

--- (2018) *Free Trade and Prosperity: How Openness Helps the Developing Countries Grow Richer and Combat Poverty*. New York: Oxford University Press.

Patnaik, Ila, Sarat Malik, Radhika Pandey and Prateek (2013), "Foreign Investment in the Indian Government Bond Market", SEBI DRG Study No. 1, Securities and Exchange Board of India.

Prime Minister's Economic Advisory Council (PMEAC) (2018). *Report of the Logistics Development Committee on Key Challenges in Logistics Development and the Associated Commerce Policy Reforms for Ease of Doing Business/Trade in India*. New Delhi: Government of India.

Reddy, Y.V. and G R Reddy (2019), *Indian Fiscal Federalism*, New Delhi: Oxford University Press.

Rodrik, Dani (2013), "The Past, Present, and Future of Economic Growth", Working Paper 1, Global Citizen Foundation, June.

Singh, Harsh Vardhana (2017), "Trade Policy Reform in India Since 1991", Chapter 6 in Rakesh Mohan (ed.) *India Transformed: 25 Years of Economic Reforms*. New Delhi: Penguin Random House.

Subramanian, Arvind (2019), "India's GDP Mis-estimation: Likelihood, Magnitudes, Mechanisms, and Implications", CID Faculty Working Paper No. 354, Cambridge (Mass.): Harvard University, Center for International Development.

Timmer, Marcel, Gaaitzen de Vries, and Klaas de Vries (2014), "Patterns of Structural Change in Developing Countries", GGDC Research Memorandum 149, University of Groningen, Groningen Growth and Development Centre, July.



QUALITY. INDEPENDENCE. IMPACT.

Brooking Institution India Center

No. 6, Second Floor, Dr. Jose P Rizal Marg,
Chanakyapuri, New Delhi - 110021

www.brookings.in



@BrookingsIndia



Brookings.India



Brookings India



www.brookings.in