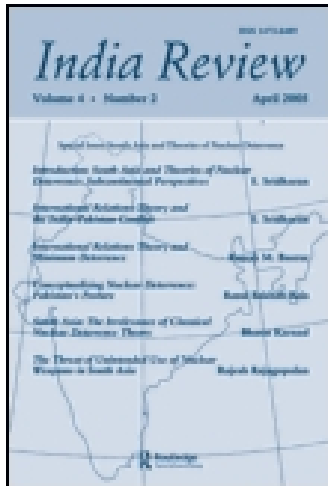


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# Getting India Back to the Growth Turnpike: What Will It Take?

*RAKESH MOHAN and MUNEEESH KAPUR*

## Introduction

India's real Gross Domestic Product (GDP) growth averaged almost 9 percent per annum during the 5-year period 2003–04 to 2007–08. But since then growth has slipped substantially, reflecting both domestic and global factors. Real GDP growth fell to 6.7 percent in 2008–09 under the impact of the North Atlantic financial crisis (NAFC), but quickly rebounded to an average of 7.7 percent during 2009–12 benefitting from the unprecedented large and coordinated fiscal and monetary stimulus. However, subsequently (2012–14), annual growth averaged under 5 percent. Softer global demand, volatility in international financial markets on the back of the NAFC, higher domestic inflation, and governance issues have been among the main factors that led to the investment and growth deceleration.

Slowdown in growth in the post-NAFC period is not peculiar to India. Since 2012, emerging and developing economies (EDEs) have, as a whole, slowed down in a synchronized and protracted manner. Growth rates since 2012 are lower than the pre-NAFC average in more than 70 percent of the EDEs, which points to a broad-based slowdown.<sup>1</sup> However, the growth slowdown in India during 2012–14 has been more severe than the group of EDEs, which would suggest that domestic factors have compounded the global slowdown impact.

Going forward, the strong growth momentum of the 2000s may not be repeated in the EDEs over the next 2–3 years even if the favorable factor accumulation and productivity growth of the 2000s were to prevail, given the adverse external environment.<sup>2</sup> Recovery in global trade is still very subdued, with growth rates less than half those recorded in the 1990s and 2000s up to the crisis. There is a risk that the world could get stuck for some time with a “mediocre” level of growth.<sup>3</sup> There is also a perception that the global economy might see an extended period of secular stagnation.<sup>4</sup> Similarly, concerns have been expressed that, going forward the Indian growth rate is likely to be lower.<sup>5</sup> More generally, there is also a view that abnormally rapid growth is rarely persistent; regression to the mean is empirically the most salient feature of economic growth.<sup>6</sup> In developing countries, episodes of rapid growth are frequently punctuated by discontinuous drop-offs in growth and, accordingly, these authors expect that growth in China and India will be much less rapid than is currently anticipated.

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Against this backdrop, the key policy concern for India is: can growth be revived back to the high growth phase of 2003–08 in an environment of macroeconomic and financial stability—low and stable inflation, moderate current account deficit, moderate fiscal deficit and a strong financial sector? These are the issues addressed in this article, which is concerned with painting a scenario whereby India can return to the golden growth turnpike in the medium to long term, exhibiting the kind of policy and animal spirit synergies that characterized the 2003–08 period. This scenario assumes that some degree of normalcy will return to the global economy, and that India also addresses its own growth impediments in the next couple of years. The objective is to demonstrate that return to a sustained high growth path is well within the realms of feasibility for India.

In order to do this, it is helpful to understand the long-term growth dynamics of the Indian economy since independence, the special features of the golden period of 2003–08, and the contributing domestic factors for the current slowdown. We then provide one possible growth scenario for the medium and long-term and outline the key features of policy imperatives that are needed to stimulate such sustained growth.

### **The Indian Economy: A Story of Consistent Growth**

India's growth since independence in 1947 is often characterized as having been slow until the late-1970s, followed by a pick-up in the subsequent period. A closer look at the growth dynamics indicates a consistent acceleration in growth since the 1950s, however, except for an interregnum during 1965–81.<sup>7</sup> Industrial growth was not slow in the entire 30 years after Independence as has often been believed. Stagnation only set in, during the mid-1960s (Table 1).<sup>8</sup> There has been a continuing and consistent acceleration in growth of services over the decades that really accounts for the corresponding acceleration in overall GDP growth (except for the 1965–81 interregnum). There is nothing particularly special about service sector growth during the 1990s and 2000s, except that the acceleration over time has continued. The slowdown in growth during the 1965–81 period, “the darkest in the post-independence economic history of India,” can be attributed to the various restrictive policy actions put in place during this period that effectively closed the Indian economy and slowed down Indian economic growth, just when various East Asian countries were opening up and accelerating their growth.<sup>9</sup>

The slowdown in growth witnessed during 1965–81 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 liberalization, ex-ante real devaluation of the rupee in 1991, substantial reduction in tax rates and rationalization of the taxation structure through the 1990s, deregulation of interest rates, reduction in statutory pre-emption, 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.

TABLE 1  
REAL GDP GROWTH: AN OVERVIEW

Item	(%)								
	1950–65	1965–81	1981–90	1990–91	1991–97	1997–2003	2003–08	2008–12	2012–14
GDP (factor cost)	4.1	3.2	5.4	5.3	5.7	5.4	8.7	7.7	4.6
Agriculture	2.9	2.1	3.5	4.0	3.7	1.0	4.9	3.6	3.1
Industry	6.6	4.1	6.9	5.9	6.9	4.3	8.8	7.3	0.4
Manufacturing	6.6	3.9	6.4	4.8	7.5	4.2	9.7	8.0	0.2
Services	4.9	4.2	6.4	6.1	6.4	7.9	9.8	8.9	6.2
GDP (market prices)	4.3	3.2	5.6	5.5	5.5	5.3	8.8	7.3	4.9
Private consumption	3.7	3.2	4.2	4.5	4.6	4.6	7.5	8.1	4.9
Government consumption	6.6	5.3	7.2	3.4	3.8	6.5	5.8	9.2	5.0
Gross fixed capital formation	6.9	3.9	6.2	13.6	5.2	6.7	16.2	8.6	0.3
Memo:									
WPI inflation	3.8	9.0	6.8	10.3	9.6	4.6	5.5	7.6	6.7
CPI inflation		8.9	8.8	11.6	10.0	5.9	5.0	10.0	10.1
Merchandise account balance/GDP	-1.8	-1.5	-3.0	-2.9	-2.4	-2.9	-5.4	-9.0	-9.2
Current account deficit/GDP	-1.2	-0.6	-1.8	-3.0	-1.0	-0.3	-0.3	-3.0	-3.2

Source: Central Statistics Organization, Government of India; Reserve Bank of India.

There was, however, some loss of the growth momentum in the latter half of the 1990s, which coincided with the onset of the East Asian financial crisis, setbacks to the fiscal correction process, 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. We seem to be seeing a similar phenomenon this time around, although there are some key differences as well.

#### *The Golden Era of Growth: 2003–2008*

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

The progressive reduction in fiscal deficit freed up resources for investment by the private corporate sector. This improvement was underpinned by an improvement 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.

It is also noteworthy that monetary management could succeed 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 stabilization scheme to sterilize the impact of large and volatile capital flows.<sup>10</sup> Notably, inflation during this high-growth period was broadly similar to that in the preceding period, even as global commodity inflation was substantially higher during this period. On the other hand, the increase in minimum support prices in respect of agricultural commodities during 2003–08 was lower than that in 1997–2003, which in turn was lower than in 1991–97. Thus, the government's agricultural support price policy was favorable towards the objective of inflation control during 2003–08, although this policy might have also benefited from the generalized lowering of inflation beginning in the latter half of the 1990s. The financial sector also performed well, with continuous improvements in asset quality and efficiency indicators.<sup>11</sup>

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. A notable increase took place in investment in roads, whereas that in the railways kept stagnant as a share of GDP. Improvements in infrastructure then contributed to the high growth in manufacturing and trade.

#### *Consistent Growth in Savings and Investment*

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; over the same period, the domestic investment rate also increased continuously from 12 percent to 34 percent (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 (CAD)—has been rather modest in the Indian growth process. We may also note that the two decades of the 1960s and 1980s, when the current account deficit increased marginally towards 2 percent of GDP, were followed by significant balance of payments and economic crises. The long-term upward trends in savings and investment have, however, been interspersed with phases of stagnation, influenced particularly by developments in government finances.

#### *The Great Slowdown: 2012–2014*

The growth slowdown during 2012–14 has occurred after almost a decade of consistent high growth, including a sharp recovery from the 2008–09 crises. This reflects a number of factors.<sup>12</sup> 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, which sowed the seeds for inflation and current account

TABLE 2  
SAVINGS AND INVESTMENT RATES: AN OVERVIEW

Item	(% to GDP)								
	1950–65	1965–81	1981–90	1990–91	1991–97	1997–2003	2003–08	2008–12	2012–13
<b>Savings</b>									
Household sector	7.0	10.8	13.3	18.5	16.5	21.0	23.2	23.7	21.9
(a) Household—Financial	2.1	3.9	6.6	8.5	9.7	10.0	11.2	9.8	7.1
(b) Household—Physical	4.9	6.9	6.7	10.1	6.8	11.0	12.0	13.9	14.8
Private corporate sector	1.2	1.4	1.7	2.6	3.6	3.9	7.2	7.8	7.1
Public sector	2.6	3.9	3.7	1.8	2.2	−0.3	2.9	1.2	1.2
(a) Public authorities	2.3	2.9	1.1	−1.1	−0.7	−3.6	−1.1	−1.7	−1.6
(b) Non-departmental commercial enterprises	0.3	1.0	2.6	2.9	2.9	3.3	4.0	3.0	2.8
Gross Domestic Savings	10.8	16.1	18.7	22.9	22.3	24.5	33.3	32.7	30.1
<b>Investment</b>									
Gross capital formation	12.9	17.1	22.5	24.9	23.2	24.9	33.4	36.2	34.7
(a) Public sector	5.6	7.9	11.3	10.6	9.1	7.2	7.8	8.7	8.1
(b) Private corporate sector	2.4	2.3	4.5	4.3	7.3	6.3	12.5	11.6	9.2
(c) Household sector	4.9	6.9	6.7	10.1	6.8	11.0	12.0	13.9	14.8
Valuables	0.0	0.0	0.0	0.0	0.0	0.4	1.1	2.0	2.6
Errors and omissions	−0.5	−0.3	−2.0	1.1	0.2	0.0	0.3	−0.5	0.1
Total investment	12.3	16.8	20.5	26.0	23.5	24.9	33.6	35.7	34.8
<b>Saving–investment gap</b>									
Overall	−1.5	−0.7	−1.8	−3.1	−1.2	−0.4	−0.4	−3.0	−4.7
Public sector	−2.9	−4.0	−7.7	−8.8	−7.0	−7.5	−4.9	−7.5	−7.0

Source: Central Statistical Organization, Government of India; Reserve Bank of India.

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.

Second, the quality of the fiscal stimulus, which focused on tax cuts and increased revenue expenditure (particularly in subsidies) while keeping capital outlays stagnant, added to demand pressures, which were then mirrored in high inflation. The withdrawal of the fiscal stimulus has also been hesitant and slow. 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 environment in an environment of subdued growth also impacted corporate profitability and investment. The availability of domestic resources for the private corporate sector was squeezed from all sides.

Fourth, the CAD widened well-beyond comfort levels by 2012–13. The global environment has 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 exchange rate appreciated while the CAD widened. In fact, capital inflows were encouraged through continued opening of the capital account, particularly to potentially destabilizing debt flows.

Fifth, a key feature of the Great Slowdown is the near collapse of manufacturing growth in 2012–14, which has been near zero during this period—an almost unprecedented event for the Indian economy since independence.<sup>13</sup> This is difficult to understand since until 2012, manufacturing growth averaged in excess of 8 percent. Given the macroeconomic factors outlined above, a slowdown would have been expected, but a collapse to zero growth needs explanation. In fact, restoration of sustained high overall growth will be critically dependent on reinvigoration of the manufacturing sector. One possibility for weak manufacturing activity in the recent period is the emergence of policy bottlenecks, such as obtaining environmental permissions, fuel linkages, or carrying out land acquisition which led to stalling of a number of large projects. This may, in turn, have discouraged new investment, particularly in infrastructure projects and manufacturing.<sup>14</sup>

All these macroeconomic and policy developments contributed to the Great Slowdown during 2012–14. 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.

### Getting Back to the Growth Turnpike: A Simulation for 2017–2032

India reached a per capita GDP of around 1500 US dollars and overall GDP of about 1.9 trillion US dollars in 2013–14. What should be our aspiration for growth over the next couple of decades? Given the progress made over the past two to three decades, it is not unreasonable to aim 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. Even then, Indian per capita income would be around 6000 US dollars (2011–12 prices) by 2035, and GDP would be in the region of 8.5 to 9 trillion US dollars. Even if this relatively ambitious growth path is achieved, India's GDP in a couple of decades would be just over a half of US GDP today, and per capita income would be about 12 percent of the current US level. Thus, the aspiration of such a growth objective should be seen as a reasonable but ambitious one. But is it feasible?

Placed in a historical and comparative perspective, it can be noted that, broadly speaking, East Asia's GDP increased ten-fold over about 30 years (1975–2005). 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”. Thus, given the continuing high levels of poverty in India, it is essential that we persist in our efforts to do so, but recognize that such a sustained high growth cannot be taken for granted: it will need sustained efforts.

Going forward, for annualized GDP growth to return to around 9 percent, it is apparent, and consistent with the messages from the overview in the previous section, that both domestic investment and saving levels will have to increase significantly from their current somewhat depressed levels. One such consistent scenario for growth and corresponding savings and investment levels has been put out by the National Transport Development Policy Committee (NTDPC) in its recent *India Transport Report: Moving India to 2032*.<sup>15</sup> The simulations reported here are essentially taken from this Report.<sup>16</sup> The simulations rely on the fundamental accounting identity of standard national income accounts, and include detailed information on key items such as investment and consumption/savings (disaggregated into public and private components) and net exports/imports. Projections of these components, in turn, are based on past relationships and trends, while also taking into account the government’s announced medium-term fiscal plans. They are also conditioned on the expected practice of sound macroeconomic and financial policies. The growth and investment relationship draws upon historical productivity estimates reflected in incremental capital output ratios, supported by estimates on total factor productivity that has been achieved in recent years. Implications of the investment and growth projections for balance of payments—both current and capital accounts—and the overall external sector sustainability are also factored in, while also imposing a cap on the recourse to sustainable foreign savings. The NTDPC projections are the preferred point estimates, picked following consultations with a broad range of stakeholders in government and in the private sector.

The projections aim to provide a consistent macroeconomic framework and their implications for returning Indian annual GDP growth to around 7 percent in the near future and then ascending to 8–9 percent in the following quinquennial periods from 2017–32. The results then provide some assessment of the feasibility of achieving such a growth objective, should the return to such a growth path be seen to be within the realms of reality. Another way of interpreting these projections is to see the results as implications of achieving such a high growth path: what they imply for the evolution of key macroeconomic variables.

This scenario entails the gross domestic capital formation (GDCF) rate to increase from about 35 percent in 2012–13 to around 39 percent during 2017–22 and further to 43 percent during the 5-year period 2027–32. The corresponding rates of domestic savings would be about 36 percent during 2017–22, rising to 41 percent during 2027–32. These projections envisage an increase in all the three major components of savings—household, private corporate and public savings (Table 3). While the projections may seem ambitious, they appear to be reasonable and achievable, given that the domestic savings rate and the investment rate had reached as high as 37 and 38 percent, respectively, in 2007–08. The fact that Indian savings and investment rates have exhibited a

TABLE 3  
SAVINGS AND INVESTMENT RATES: PROJECTIONS

	(% to GDP)				
	2007–08	2012–13	2017–18 to 2021–22	2022–23 to 2026–27	2027–28 to 2031–32
	Actuals		Projections		
Gross domestic savings	36.8	30.1	35.9	38.6	40.9
Household sector	22.4	21.9	24.5	26.3	27.9
(a) Household—Financial	11.6	7.1	11.4	12.3	13.0
(b) Household—Physical	10.8	14.8	13.1	14.0	14.9
Private corporate sector	9.4	7.1	8.5	9.1	9.6
Public sector	5.0	1.2	2.9	3.2	3.4
(a) Public authorities	1.1	–1.6	–1.2	–1.2	–1.3
(b) Non-departmental commercial enterprises	3.9	2.8	4.1	4.4	4.7
Gross domestic capital formation	38.1	34.8	38.9	41.1	43.3
Public sector	8.9	8.1	10.0	10.0	10.0
Private sector	29.2	26.7	28.9	31.1	33.3
Memo:					
Foreign savings (current account deficit)	1.3	4.7	2.5	2.5	2.5
Capital flows, net	8.6	4.8	4.3	4.3	4.6
(a) Foreign investment, net	3.5	2.5	2.7	2.7	2.9
Direct investment	1.3	1.1	1.7	1.7	1.9
Portfolio investment	2.2	1.4	1.0	1.0	1.0
(b) Debt and other flows, net	5.1	2.3	1.5	1.6	1.8
Disbursements			4.0	4.2	4.3
Repayments			2.4	2.5	2.5
Foreign exchange reserves					
(a) Increase	7.4	0.2	1.8	1.9	2.1
(b) Stock	25.0	15.7	18.8	20.3	22.0
External debt	18.0	21.0	22.6	22.1	21.8
of which: Short-term debt service	3.7	5.2	4.0	4.3	5.1
			3.6	3.8	3.8

Source: Reserve Bank of India; National Transport Development Policy Committee (2014).

secular uptrend since independence, although interspersed with some short periods of stagnation, also provides comfort in the likelihood of reaching the projected savings and investment rates. Of course, these projections are contingent on the pursuit of sound and stable macroeconomic and financial policies and continuing structural reforms, as elaborated in the rest of the paper. In this scenario, the absorption of external savings has been kept at around 2.5 percent of GDP throughout the period, which is judged to be consistent with a sustainable current account deficit (CAD). We draw out the implications of this on the trajectory of balance of payments, capital flows, and desired foreign exchange reserves.

What do the projections imply for overall efficiency of the economy? One crude measure of productivity is the incremental capital output ratio (ICOR). International experience suggests that the best ICORs achieved for any sustained period fall in the region of about 3.5 to 3.6. Indian ICORs have ranged between about 3.5 and 4.5 for

TABLE 4  
INCREMENTAL CAPITAL OUTPUT RATIO

Country	1980s	1990s	2000s	2000–07	2008–13
Emerging market economies					
Bangladesh	5.0	4.0	4.1	4.1	4.2
Brazil	6.3	10.9	5.3	4.8	6.2
Chile	5.6	4.2	5.5	4.6	6.1
China	3.7	3.9	4.0	3.8	5.3
Colombia	6.2	7.4	5.0	4.4	5.7
India	3.8	4.2	4.5	4.3	5.5
Indonesia	6.8	7.1	5.0	4.8	5.4
Korea	3.6	5.3	6.7	5.7	9.8
Malaysia	5.3	5.0	4.9	4.3	5.3
Mexico	9.4	7.4	12.6	8.5	12.7
Peru	39.1	6.4	3.9	3.8	4.1
Philippines	12.5	8.9	4.5	4.2	3.8
Russia	n.a.	-7.0	3.8	2.9	12.2
South Africa	9.5	10.8	5.0	4.1	9.0
Thailand	3.8	6.9	6.4	5.2	9.3
Turkey	5.4	5.6	5.1	3.7	6.0
Vietnam	2.8	2.9	5.0	4.7	5.6
Advanced economies					
Australia	7.8	7.6	8.6	7.8	11.2
Canada	7.4	8.4	10.5	7.7	17.6
France	8.8	9.9	15.1	9.6	148.6
Germany	13.1	10.5	20.5	11.3	23.9
Italy	11.4	14.2	36.1	13.6	-13.3
Japan	6.7	19.6	40.9	15.2	202.1
Spain	8.1	8.2	10.8	7.8	-22.7
United Kingdom	6.8	6.2	8.8	5.5	-78.1
United States	7.4	6.6	12.1	8.5	19.2

Note: Incremental capital output ratio is computed as the ratio of average investment rate to average annual growth during the specific period. Source: World Economic Outlook Database (April 2014), International Monetary Fund.

much of the past three decades, except for some outlier years (Table 4). Our projections embedded in the desired growth paths of GDP and GDCF imply an ICOR of about 4.2 over the next couple of decades. We are therefore assuming a relatively high level of efficiency in resource use, but which is consistent with Indian historical achievements and also other recent evidence on productivity.<sup>17</sup>

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 a very major restoration of manufacturing growth in India to annual growth rates approaching a sustainable 10 percent. Even with such an optimistic manufacturing growth scenario, the share of manufacturing in Indian GDP would not exceed 15 percent, while agriculture can be expected to fall below 10 percent, in 20 years. Whereas such a high rate of manufacturing growth was indeed achieved during 2005–08, it has since tapered off and collapsed to almost zero during 2012–14. The achievement of the kind of growth projected here is thus critically dependent on the revival of competitive Indian manufacturing in a sustained fashion over the next couple of decades.

*Financing Growth: Domestic Savings*

We now provide some understanding of the way different constituents of savings can be expected to behave: household savings, private corporate sector savings and public sector 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 2008–12. We have therefore projected only a slow increase to about 28 percent by 2027–32. From the point of view of financing of investment by the public and private sectors, it is the household financial savings that are important. Net household financial savings increased from about 6–7 percent of GDP during the 1980s to about 10 percent in the 1990s, stabilizing at this level thereafter. It is only in the very recent years that they have again fallen to around 7 percent, as savings appear to have been directed to gold. In the near future, we expect financial savings to be restored to the earlier 10 percent level, and then increase gradually to around 13 percent by 2027–32. This would appear reasonable with increased financial depth in the economy as income increases at the kind of pace projected. We would, in particular, expect increasing shares of savings going into contractual saving such as insurance, provident and pension funds. This tendency should get accentuated as urbanization gathers pace and people have to insure themselves for their retirement.

A distinguishing feature of the golden era of growth (2003–08) was the dramatic increase in private corporate savings from 3.9 percent of GDP during 1997–2003 to about 7.8 percent during 2008–12. It was the buoyant profitability of that period and high corporate investment levels that induced the private corporate sector to keep such high levels of retained earnings—or we could reverse the causation: It was the high levels of profitability that allowed high retained earnings that helped greatly in financing high levels of corporate investment. Restoration of private corporate investment will critically need enhancement of profitability so that private corporate savings again reach their earlier level of 7.5 percent of GDP within the next 3–4 years. We have then projected them to increase to 9.5 percent by 2027–32.

It is necessary to restore confidence in future Indian growth for corporate investment to increase again in the next couple of years. This brings us to the desired trajectory of public sector savings, which consist of two broad categories: public authorities and nondepartmental commercial enterprises. Public authorities include government administration and “departmental enterprises,” which are essentially commercial government enterprises that are not corporatized (e.g., railways), and “nondepartmental enterprises” are the corporatized public sector enterprises. As a consequence of the fiscal stimulus of 2008–09, savings turned distinctly negative after having become mildly positive at 0.5 percent of GDP in 2007–08, which was a remarkable turnaround from (-)5 percent in 2000–01. This broadly corresponds to the revenue deficit of the Centre and States combined. Interestingly, both departmental and non-departmental public enterprises have maintained consistent positive saving rates of between 3.5 and 4.5 percent of GDP over the past decade and a half. With the slow unwinding of the fiscal and revenue deficits, government savings have remained in negative territory, though some improvement has taken place in the last couple of years. If the envisaged fiscal correction does take place over the next 2–3 years, government savings could again approach

positive levels. Accordingly, we have projected overall public sector savings to increase from the current level of just over 1 percent of GDP to 3 percent in 2017–22, rising to 3.4 percent by 2027–32. It is possible that even greater improvement can take place, particularly if the overall tax/GDP ratio can be improved over the years.

The plausible projections of savings enhancement in each of the aforementioned three main segments, the household sector, the private corporate sector, and the public sector, yield a good possibility of gross domestic savings increasing from the current 31–32 percent level to about 36 percent in 2017–22 and 41 percent in 2027–32.

#### *Financing Growth: External Savings*

In recent years, there has been a great deal of stress laid on mobilizing external savings to finance Indian investment for growth, particularly in infrastructure. In estimating the maximum feasible level of external savings that can be mobilized to finance overall investment in India, it is important that such external capital flows should be sustainable from the point of view of servicing such inflows over time. This has been done by utilizing a debt sub-model that projects the implications of debt flows servicing needs over time. For a country with an increasing size of its economy as projected, even relatively small proportions of its GDP start assuming large absolute magnitudes from the point of view of international capital markets.

Net capital flows that are absorbed by the economy as a whole are identically equal to the CAD. Considerations for sustainability indicate that the CAD should not exceed 2.5 percent of GDP. As the CAD increased to levels exceeding 4 percent of GDP in 2012–13, we have already seen the kind of instability that can be caused by adverse developments in international financial markets.

Indian exports have grown at a healthy pace since 2002, significantly faster than world exports. In fact, the total exports of goods and services almost doubled as a share of GDP between 1998–2002 and 2008–12, reaching a level of about 22 percent of GDP. Except for 2008–09 and 2009–10, which were crisis years for global trade, Indian exports of goods and services have been growing at 20–25 percent per year since 2002. In view of the protracted current slowdown in global trade, and the low probability of a revival of the high growth rates achieved earlier, we are projecting a relatively slower pace of growth at 11–12 percent between 2017 and 2032. Even at this pace, exports of goods and services would increase from the current level of about 25 percent of GDP to about 30 percent of GDP in 2017–22 and 38 percent in 2027–32. By way of comparison, the current level of exports of goods and services of China amounts to about 31–32 percent of its GDP. Imports of goods and services are projected to grow correspondingly while keeping a sustainable level of CAD at about 2.5 percent of GDP. Such projections of exports and imports will not be feasible without the corresponding growth in all aspects of investment in transport, logistics, ports, and airports.

As India's external account expands in the manner projected, and as India's economy and its financial markets become more open, it will be necessary to build foreign exchange reserves in a prudent manner, such that financial stability can be maintained even in the face of the inevitable capital flow volatility. Foreign exchange reserves have been posited to be maintained at a level of about 6 months of imports of goods and

services on a consistent basis. The projections suggest that this would imply an increase in foreign exchange reserves from the current 16 percent of GDP to about 19–20 percent in 2017–22 and rising to 22 percent in 2027–32. At present, Chinese forex reserves amount to about 18 months of imports and 41 percent of GDP. Such an expansion of reserves would also be consistent with the required expansion of base money, the Reserve Bank of India's balance sheet, which is necessary to fuel the monetary expansion consistent with GDP growth. Thus, the consistent need for accretion to forex reserves implies that net capital flows will need to be in the region of about 4.5 percent of GDP during 2017–32, if the CAD is kept at a level of about 2.5 percent of GDP. This would allow annual reserve accretion amounting to about 2 percent of GDP over the period. In absolute terms, the implications of such a scenario are that net annual capital flows will need to be about 135 billion US dollars in 2017–22, rising to about 330 billion US dollars in 2027–32 (at 2012–13 prices). From an external sustainability point of view, and given the more volatile nature of debt flows, the projections assume that the equity component will dominate, at 60–65 percent of net capital flows, with debt flows (35–40 percent) being the residual. These proportions are also broadly consistent with the prevailing debt equity ratios in the Indian corporate sector.

The key lesson from this exercise is that even if the CAD is kept at a modest range of around 2.5 percent of GDP, total net capital flows that will be needed amount to large and growing magnitudes over the medium term. There will, therefore, be a need to keep external confidence in the Indian economy so that such external capital flows are forthcoming.

#### *Infrastructure Investment*

Achieving a high sustained rate of economic growth requires corresponding investments in infrastructure, including all aspects of transportation. If industrial growth is to be ratcheted up to growth rates of around 10 percent, 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.

With this perspective in view, infrastructure investment will need to pick-up significantly in the coming years for stable and sustainable growth. NTDPC projects that overall infrastructure investment will need to increase substantially from around 5.4 percent of GDP in 2011–12 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 (Tables 5 and 6).<sup>18</sup> It had indeed reached 6.2–6.3 percent in 2008–10. So, aiming for 7 percent in the medium term and ascending to 8 percent later is realistic. While an increasing proportion of infrastructure investment could be undertaken by the private sector, the public sector will have to continue to play the predominant role. The share of public sector in infrastructure investment is projected to be around 57 percent of the total infrastructure spending in 2017–22, somewhat lower than the current estimate of 60 percent. Sector-wise, the public sector is expected to continue to be the leading investor in sectors such as electricity, railways, and roads and bridges,

TABLE 5  
INFRASTRUCTURE SPENDING: RECENT DEVELOPMENTS

Year	2006–07	2007–08	2008–09	2009–10	2010–11	2011–12
Infrastructure (Rupees billion—current prices)						
Total	2149	2586	3574	4031	4516	4891
Public Sector	1588	1910	2292	2544	2680	2890
Private Sector	560	676	1282	1486	1836	2001
Infrastructure (USD billion)						
Total	47	64	78	85	99	102
Public sector	35	47	50	54	59	60
Private sector	12	17	28	31	40	42
Infrastructure (% to GDP)						
Total	5.0	5.2	6.3	6.2	5.8	5.4
Public sector	3.7	3.8	4.1	3.9	3.4	3.2
Private sector	1.3	1.4	2.3	2.3	2.4	2.2
Infrastructure (% to GDCF)						
Total	14.0	13.6	18.5	17.1	15.9	15.3
Public sector	10.4	10.0	11.9	10.8	9.4	9.0
Private sector	3.7	3.6	6.6	6.3	6.5	6.3
Infrastructure (% to total)						
Total	100.0	100.0	100.0	100.0	100.0	100.0
Public sector	73.9	73.9	64.1	63.1	59.3	59.1
Private sector	26.1	26.1	35.9	36.9	40.7	40.9
Memo:						
Infrastructure (Rupees billion—constant 2004–05 prices)						
Total	1980	2286	3005	3239	3472	3585
Public sector	1459	1682	1914	2027	2105	2098
Private sector	521	604	1091	1239	1514	1656

Source: National Transport Development Policy Committee (2014).

whereas the private sector is expected to be the driving force in the “communications” sector, and in ports and airports. For the public sector to carry out the enhanced role, fiscal consolidation, as indicated earlier, assumes importance.

As noted earlier, significant success has been achieved in ramping up investment in roads over the past two decades, and particularly since the year 2000. This joint initiation of the National Highways Development Project (NHDP) and the Prime Minister’s Gram Sadak Yojana (PMGSY) has since 2000 improved road connectivity between major cities on the one hand, and within rural areas, on the other, thereby contributing to the productivity enhancements that benefitted the economy as a whole. Overall investments in roads tripled from 0.4 percent of GDP in the late 1990s to around 1.2 percent by the late 2000s.

There is now a clear need for raising the share of Indian Railways in total infrastructure investment in a similar manner from the current 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. This is essential for improving productivity of the manufacturing sector overall and for linking inland nodes to ports to aid in the sustained growth required in trade, both exports and imports. A specific requirement for the expansion of railways capacity is to enable the transportation of bulk freight like coal and iron ore and steel in the volumes that will be necessary to fuel overall economic growth. With power demand elasticity with respect to GDP being about unity, the generation of power will need to increase four fold, along with the projected GDP over the next

TABLE 6  
INDIA: INVESTMENTS IN INFRASTRUCTURE

	% to GDP				
	2007–08	2011–12	2017–18	2022–23	2027–28
			to 2021–22	to 2026–27	to 2031–32
Actuals	Projections				
Infrastructure—Total	5.2	5.4	8.1	8.1	8.1
Electricity, gas, water supply	2.0	2.1	2.8	2.8	2.8
Railways	0.4	0.3	1.1	1.2	1.2
Other transport	1.0	1.1	1.3	1.3	1.3
Roads and bridges	1.1	1.2	1.3	1.2	1.2
Storage	0.0	0.0	0.0	0.0	0.0
Communications	0.7	0.7	1.6	1.6	1.6
Infrastructure—Public sector	3.8	3.2	4.5	4.4	4.3
Electricity, gas, water supply	1.7	1.6	2.0	2.0	2.0
Railways	0.4	0.3	1.0	1.0	1.0
Other transport	0.4	0.1	0.3	0.3	0.3
Roads and bridges	1.1	1.0	0.9	0.8	0.8
Storage	0.0	0.0	0.0	0.0	0.0
Communications	0.2	0.0	0.3	0.3	0.3
Infrastructure—Private sector	1.4	2.2	3.7	3.8	3.8
Electricity, gas, water supply	0.2	0.5	0.8	0.8	0.8
Railways	0.0	0.0	0.1	0.2	0.2
Other transport	0.6	1.0	1.0	1.0	1.0
Roads and bridges	0.0	0.1	0.4	0.4	0.4
Storage	0.0	0.0	0.0	0.0	0.0
Communications	0.5	0.6	1.3	1.3	1.3

Source: National Transport Development Policy Committee (2014).

couple of decades. Given the composition of India's energy sources, and even allowing for significant substitution away from coal, such growth in power generation will imply an increase in the corresponding demand for coal by at least a factor of three. With railways freight capacity being almost fully utilized, it is clear that major enhancements are needed in the carrying capacity of Indian railways. Thus, just like the NHDP has transformed the Indian road system, the program for Dedicated Freight Corridors (DFCs) needs a similar focused investment program. Corresponding investments will also be needed to expand port infrastructure significantly for the enhanced import of energy commodities, both oil and coal, along with containerized freight.

There is a symbiotic relationship between efficient transport provision and industrial growth. Thus, the kind of growth projected will not be possible without enhanced infrastructure spending, and the enhanced infrastructure spending will be infructuous if manufacturing growth does not accelerate significantly. Total investment in transport, both public and private, would need to increase from about 2.6 percent during the eleventh Five Year Plan to about 3.3 percent of GDP during the 2030s, with public sector component being 2.1–2.2 percent of GDP and the private sector investment component at around 1.5–1.6 percent of GDP. The much enhanced level of investment in roads over the past decade or so relative to previous periods demonstrates that it is possible to achieve such an accelerated growth in a short period of time.



## Policy Imperatives for Getting Back to the Turnpike

The objective of taking growth back to around 9 percent and the required increase in savings and investment rates will need very significant policy reform in a range of different activities. That such reform has been carried out on a relatively continuous basis since the early 1980s, intensifying in the 1990s and accentuated in the infrastructure sector since the mid-1990s, gives confidence in the potential ability of the country's policy making 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 middle income status will be of a much higher order than that achieved in the past. We first turn to some of the key macroeconomic management issues.

### *Public Savings and Fiscal Policy*

Fiscal consolidation is necessary for sustained growth in an environment of macroeconomic and financial stability. A key factor that has led to a decline in the domestic savings rate since the NAFC has been the increased revenue deficit of the central government (Table 7).

The government has reaffirmed its commitment, in the Union Budget 2014–15, to pursue fiscal consolidation, by reducing the fiscal and revenue deficits to 3.0 percent and 1.6 percent of GDP, respectively, by 2016–17. The aim must be to eliminate the revenue deficit completely and then move towards a small surplus. It would then be 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 9 percent and above in a sustainable manner.

The increase in subsidies, from 1.4 percent of GDP in 2007–08 to 2.5 percent in 2012–13 has been a key component of the increased revenue deficit. Enhanced fuel subsidies to kerosene, diesel and LPG constituted the main component of this increase (Table 7). The policy objective must be to bring back overall subsidies to be in the region of about 1 percent as has been achieved earlier. Such a move would free up around 1–1.5 percent of GDP for public investment in infrastructure.

The government has completed the process of eliminating diesel subsidies in an incremental manner and announced deregulation of diesel prices in October 2014; a similar process could be followed for reducing or eliminating LPG subsidies. This process would also allow for a more efficient use of petroleum products. The demand for petroleum products is generally adjudged to be relatively price inelastic. In the Indian context, the problem has been compounded by the relatively sticky administered prices. However, empirical evidence shows that demand for oil in India does respond to prices in a significant manner: the estimated price elasticity of demand for petrol is (–) 0.66, for diesel is (–) 0.36 and for kerosene oil is (–) 0.54.<sup>19</sup> Thus, the elimination of fuel subsidies will be beneficial for growth in a number of different ways: reduction in revenue deficit, leading to increase in government savings, and reduction in the crowding out of the private sector; sustained reduction in the CAD as a result of reduced demand for fuel; and higher overall efficiency in the use of energy, and hence in overall economic activity.

TABLE 7  
FISCAL POSITION OF THE CENTER

Item	(% to GDP)											
	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15		
Gross fiscal deficit	4.0	3.3	2.5	6.0	6.5	4.8	5.7	4.8	4.6	4.1		
Gross primary deficit	0.4	-0.2	-0.9	2.6	3.2	1.8	2.7	1.8	1.3	0.8		
Revenue deficit	2.5	1.9	1.1	4.5	5.2	3.2	4.4	3.6	3.3	2.9		
Revenue receipts	9.4	10.1	10.9	9.6	8.8	10.1	8.3	8.7	9.1	9.2		
a) Gross tax	9.9	11.0	11.9	10.8	9.6	10.2	9.9	10.2	10.2	10.6		
b) Non-tax revenue	2.1	1.9	2.1	1.7	1.8	1.7	1.4	1.4	1.7	1.7		
Capital receipts	4.9	3.5	3.4	6.1	7.0	5.3	6.3	5.8	4.8	4.6		
Total receipts	14.3	13.5	14.3	15.7	15.8	15.4	14.7	14.5	13.9	13.8		
Revenue expenditure	11.9	12.0	11.9	14.1	14.1	13.4	12.7	12.3	12.3	12.2		
a) Interest payments	3.6	3.5	3.4	3.4	3.3	3.0	3.0	3.1	3.3	3.3		
b) Subsidies	1.3	1.3	1.4	2.3	2.2	2.2	2.4	2.5	2.3	2.0		
Capital expenditure	1.8	1.6	2.4	1.6	1.7	2.0	1.8	1.6	1.7	1.8		
a) Capital outlay	1.5	1.4	2.1	1.4	1.5	1.7	1.5	1.4	1.5	1.6		
Total expenditure	13.7	13.6	14.3	15.7	15.8	15.4	14.5	13.9	14.0	13.9		
Memo:												
Combined (Center and states) finances												
Gross fiscal deficit	6.5	5.4	4.0	8.3	9.4	6.9	7.6	6.8	7.0	6.4		
Gross primary deficit	1.0	0.0	-1.2	3.3	4.5	2.4	3.2	2.3	2.2	1.7		
Revenue deficit	2.7	1.3	0.2	4.3	5.7	3.2	4.1	3.4	3.2	2.6		

Source: Reserve Bank of India and Union Budget documents.

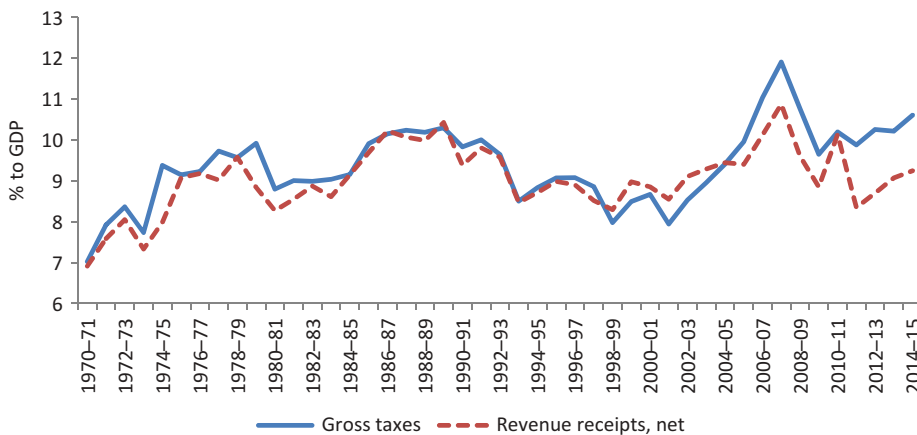
Note: Data for 2013-14 and 2014-15 are revised estimates and budget estimates, respectively.

The second issue with respect to fiscal policy is that the trend in recent fiscal consolidation efforts has been focused excessively on reduction in expenditure, and particularly in capital expenditure. Consequently, revenue expenditure has increased. This needs to be reversed. On the revenue side, the gross tax/GDP ratio of the Centre has recorded a significant fall from its peak of 2007–08 of 12 percent, to 10 percent in 2013–14 reflecting the stimulus measures and weakening of economic activity. The revenue receipts (net)/GDP ratio of the Central government is now below the levels prevailing in the late 1980s—reflecting the lower tax revenues as also perhaps more devolution to States (Figure 1).

Cross-country analysis indicates that the general government revenue/GDP ratio in India is quite low, even taking into account its per capita income (Figure 2). The revenue/GDP ratio in India has declined since the NAFC, even as this ratio has increased in other major EME regions. Thus, there is considerable room for increasing the tax/GDP ratio. The net result of a sustained thrust on tax compliance in all areas—both direct and indirect taxes—should result in greater buoyancy in the tax/GDP ratio than has been experienced in the past. This can be achieved without any increase in tax rates. Taking into account the fiscal correction that is being programmed as also the fiscal consolidation record of 2002–08, and greater efforts at compliance, public sector savings should recover in the manner projected: gross domestic savings rate could then increase by around 2–3 percent of GDP, or even higher. A similar event occurred about 10 years ago when public sector savings had become negative. The envisaged fiscal correction will make more resources available to the private sector and contribute to the recovery of private sector investment and profitability and hence private sector savings.

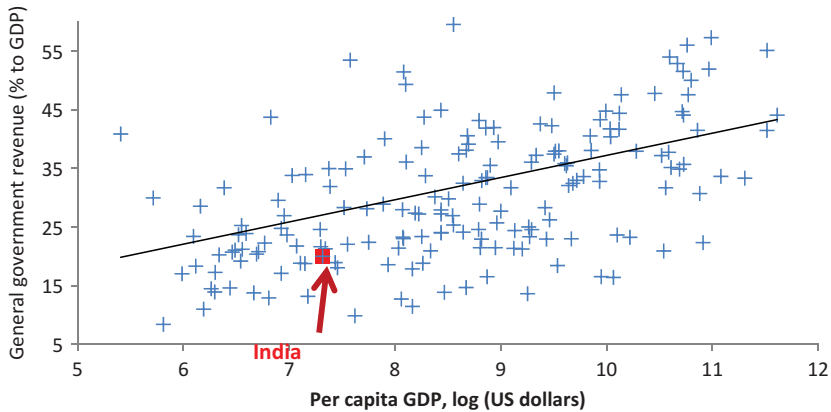
It is well recognized that by all the infrastructure investment is critical to loosening supply side constraints and promoting manufacturing. Fiscal consolidation is also important here. Despite increasing private investment in infrastructure, it is necessary

FIGURE 1  
CENTRAL GOVERNMENT'S REVENUES.



Source: Reserve Bank of India and Union Budget documents.

FIGURE 2  
GENERAL GOVERNMENT REVENUES AND INCOME.



Note: Data pertain to 2013 and includes 179 countries.

Source: World Economic Outlook Database (April 2014), IMF.

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; second, with increasing incomes, expenditures on nonmerit subsidies must be curtailed and directed toward infrastructure investments. Strong fiscal consolidation on these lines, along with quality of its adjustment, would provide a conducive environment for higher domestic savings, lower domestic interest rates and, more flexibility to monetary policy in its operations.

#### *Household Savings and Management of Inflation*

Although overall household savings in 2012–13 were only marginally lower than the peak attained in 2007–08, there has been a significant change in the composition of these savings, with a pronounced shift away from financial savings towards physical savings. This shift affects adversely the availability of resources for the rest of the economy, especially the private corporate sector. Hence, ensuring positive real returns on bank as well as postal deposits in an environment of low and stable inflation is necessary to reverse the downward trend in household financial savings, along with focused thrust on contractual savings schemes.

With increasing urbanization and longevity, one might have expected a greater shift in financial savings towards contractual savings such as provident and pension funds and life insurance products as the financial sector got diversified. 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. 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.

As persistently high food inflation has been a key driver of headline inflation, monetary policy will have its limitations. Accordingly, policies aimed at improving productivity and output in agriculture through reorientation of government spending way from current spending (fertilizer, power and irrigation subsidies) towards capital outlays will be extremely helpful. Appropriate policies with regard to minimum support prices are also critical.<sup>20</sup>

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 urbanization, demand for these products will continue to grow much more than that for cereals. 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 will therefore contribute to inflation on a consistent basis-giving rise to wage pressures and more generalized inflation, and loss of competitiveness. 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.

#### *Private Corporate Sector and Manufacturing*

The private corporate savings rate has declined by more than two percentage points between 2007–08 and 2012–13. This reflects reduction in profitability on the back of the slowdown in aggregate demand and the impact of higher interest rates necessitated by the persistence of inflation. Success with fiscal consolidation and inflation management will allow lowering of nominal interest rates, which will allow higher corporate profitability and higher corporate savings. Persistently high inflation during 2009–13 has also added to some exchange rate overvaluation during this period, and this is clearly visible from CPI-based real effective exchange rate indices. 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 as well as contribute to sustainability of the current account deficit. 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.<sup>21</sup>

Globally, rapid industrialization 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.<sup>22</sup> Thus, policies that promote manufacturing activity in India will have a key role, although the cross-country evidence indicates that the structural change in favor of manufacturing has softened in many countries and some countries are exhibiting premature deindustrialization.

Although the Indian factor endowment is abundant in labor, Indian manufacturing has not been generally competitive in labor 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. Key among these involves the tackling of legacy issues connected with regulatory impediments that constrain the use of both land and labor in Indian manufacturing. There has been a traditional prejudice against the location of industries in Indian cities, which is where skilled labor is likely to be available. 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 labor using industries such as clothing and other light industries, such manufacturing is almost totally absent in Indian cities.

There has been longstanding discussion of labor legislation hindering investment in labor using industries, along with small-scale industry reservations. The latter impediment has now largely been removed, but labor legislation problems remain. The measures needed are well known, but it has so far not been felt to be feasible politically. The way forward has to include quick labor reforms accompanied by programs that promote social security for labor such as unemployment insurance and practical training and retraining programs.

It is this combined and focused approach to urban land and labor reforms, along with the maintenance of a competitive real exchange rate that can accelerate manufacturing investment in labor using industries. India has exhibited competitiveness in heavy industries such as steel, aluminum, automotive, 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. There is a new window of opportunity that is emerging over the next 5–10 years as such manufacturing moves out of China as wages rise in that country. The current trend is for these activities to move to South East Asian countries such as Vietnam, Philippines, Cambodia and Bangladesh. A focused effort to address constraints emanating from labor and land laws will be critical for promotion of manufacturing in the country. In addition, it goes without saying that the efficient provision of power, transport, and logistics is also necessary for promoting such growth.

#### *Foreign Savings and Capital Account Management*

The Indian experience as well as of 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 realized 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.<sup>23</sup> Debt capital flows increase vulnerability to future crises, and this was clearly seen in the NAFC. EDE regions such as Central and Eastern Europe, which saw a large increase in debt flows and also had large current account deficits, did face crises in the aftermath of the NAFC, whereas other EDEs did not. Given the structural growth, inflation and interest differentials in favor of EDEs, 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. Thus, management of debt flows assumes importance. Indeed, one factor that reduces India's external vulnerability, despite large twin deficits, is the fact the public debt is largely internally held.

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. 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. This issue is especially relevant at the current juncture, given the continued near zero policy rates in the US and other major advanced economies, and the likelihood of an extended continuation of very low interest rates. There is a view that the traditional fears about foreign-currency borrowing by residents are not applicable to investments by nonresidents in local-currency denominated bonds and hence the limits on the latter category of investments should be removed.<sup>24</sup> Such a notion was clearly disproved during the June–August 2013 turmoil.

Overall, it is evident that volatility in monetary policy in the major advanced economies is a source of volatility in capital flows and exchange rates in the emerging and developing economies. Swings in capital flows, if not managed properly, are often associated with macroeconomic and financial imbalances and potential financial crises in these economies. The international monetary architecture is characterized by asymmetry.<sup>25</sup> Notwithstanding significant spillovers from the advanced economy monetary policy to the emerging and developing economies, international monetary coordination is skewed and restricted among the major advanced economy central banks only. The lack of international monetary coordination and its adverse consequences were evident during the 2013 taper episode.<sup>26</sup> These developments, the prevailing international economic arrangements and the weak empirical evidence on the benefits of open capital accounts all highlight the need for continued prudence in reliance on foreign savings.

### *Transport Infrastructure*

We have outlined the magnitude of growth needed in infrastructure investment overall and in transport investment in particular. We have also noted that 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. We therefore argue that transport planning and programming for transport, and adequate investment in transport needs a new approach.

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 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. As a result, 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 has 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.

Within such a systems approach, the key transformation needed is in railways. 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 modernizing and expanding Indian railways.

A key innovation that is already underway is the setting up of the “Dedicated Freight Corridors (DFCs)” network that is similar to the NHDP 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 as investments are done in the modernization 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.

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* and the *NTDP Report* have provided detailed blue prints on how this can be done. For our current purposes, we confine ourselves to saying that a business-as-usual approach to railways investment will not do and urgent action has to be taken now to initiate the kind of investment projections.

## Conclusions

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.



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. Whenever growth has stalled, it has been associated with stagnation in savings and investment, usually in the presence of a deteriorating fiscal situation and higher inflation.

The immediate priority for returning the country to a sustained higher growth path is to achieve the kind of fiscal quality and low inflation level that was exhibited during 2003–2008. However, 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. The focus in fiscal correction has generally been on reduction in expenditure and particularly capital expenditures. Whereas it is necessary to curb current expenditure such as that on ill-targeted subsidies, the restoration of growth involves increases in public investment for the delivery of public goods and services, which then crowd in private investment rather than crowd them out.

If such macro-economic stabilization, in terms of both fiscal deficit and inflation, can indeed be achieved over the next couple of years, the macro-economic projections presented in this article suggest that it is within the realms of feasibility that the Indian economy can return to a 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. We do need to note that the task ahead will be more difficult now, however, in view of the protracted slow-down in global economic growth and in global trade. The silver lining in future expectations of global slowdown is that the weight of the global economy is shifting to emerging market and developing economies 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.

For the Indian growth story to exhibit that kind of dynamism, it is crucial for Indian economic policy to focus particularly on the revival of manufacturing and overall industrial growth, as was envisaged in the Industrial Policy Reforms of 1991 and beyond. It is not feasible to achieve a sustained overall GDP growth of 8–9 percent unless industrial growth in India is in double digits. The achievement of such industrial growth needs the maintenance of appropriate interest rates, a realistic and competitive real exchange rate, and focused attention on removing impediments in factor markets, particularly labor and land. 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 achievement of overall high growth is also dependent on a step-up in overall infrastructure investment in both energy and transport. Given that the elasticity of power demand with respect to GDP is around unity, there will be need for sustained and continued investment in power generation, transmission and distribution. Associated investment will be required for making feasible the timely supply of energy

resources such as coal and petroleum in adequate quantity from both domestic production and imports. Coordinated investments will be essential in transport facilities, particularly in Railways and Ports. In view of the deteriorating share of railways in both freight and passenger traffic over the last 60 years, there is need for a significant step-up in railways investment, which would be difficult to achieve without a major reorganization of the railways system.

Returning India to a high growth turnpike is, therefore, quite feasible but it will need much more focused attention to the revival of manufacturing and to accelerate investment in transport and infrastructure.

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### NOTES

1. International Monetary Fund, *World Economic Outlook, April* (Washington, DC: International Monetary Fund, 2014); International Monetary Fund, *2014 Spillover Report* (Washington, DC: International Monetary Fund, 2014).
2. Cubeddu, Luis, Alex Culiuc, Ghada Fayad, Yuan Gao, Kalpana Kochhar, Annette Kyobe, Ceyda Oner, Roberto Perrelli, Sarah Sanya, Evridiki Tsounta, and Zhongxia Zhang, *Emerging Markets in Transition: Growth Prospects and Challenges, Staff Discussion Note 14/06* (Washington, DC: International Monetary Fund, 2014).
3. Christine Lagarde, "The Challenge Facing the Global Economy: New Momentum to Overcome a New Mediocre," *Speech at Georgetown University, School of Foreign Service*, <http://www.imf.org> (accessed October 2, 2014).
4. Lawrence Summers, "Why Stagnation might Prove to be the New Normal?" *Financial Times*, December 15, 2013, <http://www.ft.com/intl/cms/s/2/87cb15ea-5d1a-11e3-a558-00144feabdc0.html#axzz3PyCn7DZJ>.
5. International Monetary Fund, *India: Staff Report for the 2013 Article IV Consultation* (Washington, DC: International Monetary Fund, 2014); R. Nagaraj, "India's Dream Run, 2003–08: Understanding the Boom and Its Aftermath," *Economic & Political Weekly* 48, no. 20 (2013): 39–51.
6. Lant Pritchett and Lawrence Summers, "Asiphoria Meets Regression to the Mean," in *Prospects for Asia and the Global Economy*, Asia Policy Conference, eds. Reuven Glick and Mark Spiegel (San Francisco: Federal Reserve Bank of San Francisco, 2014), 33–91.
7. Rakesh Mohan, "The Growth Record of the Indian Economy: A Story of Sustained Savings and Investment," in *Growth with Financial Stability*, ed. Rakesh Mohan (New Delhi: Oxford University Press, 2011), 3–42.
8. The periodization in this paper follows and extends Mohan, "The Growth Record" 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 NAFC and domestic stimulus impact) and the period since then.
9. Arvind Panagariya, *India: The Emerging Giant* (New Delhi: Oxford University Press, 2008).
10. Rakesh Mohan and Muneesh Kapur, "Managing the Impossible Trinity: Volatile Capital Flows and Indian Monetary Policy," in *Growth with Financial Stability*, ed. Rakesh Mohan (New Delhi: Oxford University Press, 2011), 271–344.
11. Rakesh Mohan, "Development of Banking and Financial Markets in India: Fostering Growth While Containing Risk," in *Growth with Financial Stability*, ed. Rakesh Mohan (New Delhi: Oxford University Press, 2011), 101–52.
12. Muneesh Kapur and Rakesh Mohan, "India's Recent Macroeconomic Performance: An Assessment and Way Forward," Working Paper WP/14/68, International Monetary Fund (Washington, DC: International Monetary Fund, 2014).
13. Some caution is, however, needed in analyzing the industrial performance during 2012–14 based on the available data on index of industrial production (IIP), given that IIP data indicate much lower growth than indicated by the Annual Survey of Industries (ASI) for the comparable period. For example, during 2008–12, the IIP indicated an annual average industrial growth of 4.7 percent, while the ASI data (net valued added adjusted for inflation) indicated an annual growth of 9.1 percent. ASI data for the period 2012–13 onwards are not yet available.
14. Government of India, *Economic Survey 2012–13* (New Delhi: Author, February 2013).

15. National Transport Development Policy Committee (NTDPC), *India Transport Report: Moving India to 2032* (Chairman: Rakesh Mohan) (New Delhi: Routledge, 2014).
16. The NTDPC was chaired by one of us, Rakesh Mohan, and the simulation projections were carried out under his supervision.
17. For example, according to a recent study—“Estimates of Productivity Growth for Indian Economy,” India KLEMS Project at ICRIER in collaboration with Reserve Bank of India (2014)—the trend rate of growth in total factor productivity (TFP) of the overall economy increased from 1.1 percent per annum during the 1980s and 1990s to 2.3 percent during the 2000s (2000–01 to 2008–09), led by manufacturing and services sectors. Overall, the contribution of TFP growth to real GDP growth increased from 21 percent during the 1980s and 1990s to 30 percent during the 2000s. For the next two decades, we can expect the TFP growth to be at least of the same order as was recorded during the 2000s. If infrastructural shortages are addressed satisfactorily, then TFP growth can easily exceed the one estimated for the 2000s, which can provide an upside boost to growth prospects.
18. These infrastructure numbers are based on estimates for gross domestic capital formation (GDCF) according to National Accounts Statistics (NAS) and are typically lower than those usually made for infrastructure by the Planning Commission. For example, expenditures made for buying land in the process of making infrastructure investments are not included in GDCF as these are regarded as transfer payments in the GDP context. This and other factors could lead to an underestimation of infrastructure estimates in NAS classification and hence this paper by 1–1.5 percent of GDP (NTDPC, *India Transport Report*).
19. See Kapur and Mohan, “India’s Recent Macroeconomic Performance.”
20. Surjit S. Bhalla, “What You Sow Is Not What You Reap,” *Indian Express*, October 19, 2013, <http://archive.indianexpress.com/news/what-you-sow-is-not-what-you-reap/1184525/>.
21. See Kapur and Mohan, “India’s Recent Macroeconomic Performance.”
22. Dani Rodrik, “The Past, Present, and Future of Economic Growth,” Working Paper 1, Global Citizen Foundation, June 2013; Dani Rodrik, “An African Growth Miracle?,” Richard Sabot Lecture (2014); Marcel Timmer, Gaaitzen de Vries, and Klaas de Vries, “Patterns of Structural Change in Developing Countries,” GGDC Research Memorandum 149 (University of Groningen, Groningen Growth and Development Centre, July 2014).
23. Committee on the Global Financial System (CGFS), *Capital Flows and Emerging Market Economies* (Chairman: Rakesh Mohan), CGFS Publication No. 33 (Basel: Bank for International Settlements, 2009); Obstfeld, Maurice, “International Finance and Growth in Developing Countries: What Have We Learned?,” *IMF Staff Papers* 56, no. 1 (2009): 63–111.
24. Ila Patnaik, Sarat Malik, Radhika Pandey, and Prateek, “Foreign Investment in the Indian Government Bond Market,” DRG Study No. 1 (Mumbai: Securities and Exchange Board of India, 2013).
25. Rakesh Mohan, Michael Debabrata Patra, and Muneesh Kapur, “Currency Internationalization and Reforms in the Architecture of the International Monetary System: Managing the Impossible Trinity,” Working Paper WP/13/224 (Washington, DC: International Monetary Fund, 2013).
26. Rakesh Mohan and Muneesh Kapur, “Monetary Policy Coordination and the Role of Central Banks,” Working Paper WP/14/70 (Washington, DC: International Monetary Fund, 2014); Raghuram Rajan, “Competitive Monetary Easing: Is It Yesterday Once More?” *Reserve Bank of India Bulletin* 48, no. 5 (May 2014): 1–12.