

A Third-Generation Strategy for Accelerated Growth and Development in India: Need for Government Strengthening and Institutional Development

RAKESH MOHAN

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CSEP Research Foundation
6, Dr Jose P. Rizal Marg, Chanakyapuri,
New Delhi - 110021, India

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**A Third-Generation Strategy
for Accelerated Growth and
Development in India:
Need for Government Strengthening and
Institutional Development**

RAKESH MOHAN*
President and Distinguished Fellow
Centre for Social and Economic Progress**
New Delhi, India

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**Formerly Brookings India.

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Abstract

In India's development journey, two major policy departures in its approach to growth and development stand out from previous long epochs. In each case, there was a marked acceleration in sustained growth over time, which then started petering out. We are at a similar crossroads and it is time to usher in a *third generation of reforms*.

The *first generation of economic reforms* took place soon after independence. This involved the introduction of a comprehensive approach to growth and development through planning and import substitution. Indian growth witnessed a notable acceleration from the early 1950s to the mid-1960s, a significant transformation from stagnation over the previous century and beyond. This was followed by policy sclerosis resulting in a growth downturn till the late 1970s.

The much delayed *second generation of economic reforms* finally began in 1991, and was again characterised by a growth oriented comprehensive approach. India was finally catching up with the prevailing global predominant thinking on development strategy: an open economy market-oriented framework. Fuelled by higher savings and investment, the economy ascended to a higher growth path of around 7 percent annual GDP growth over the next two decades. Industrial and export growth accelerated, along with a comfortable and stable external sector, and poverty reduced significantly.

But, once again, the development engine started sputtering from the early 2010s. The slowdown is broad-based across all the sectors, agriculture, industry, and services. The Indian economy is in trouble and hence needs a major reboot. There has been an inadequate generation of quality employment for the increasing Indian labour force throughout the Indian development process. There seems to have been almost no net generation of jobs over the past 15 years or so. What is needed now is a special thrust to promote employment intensive export-oriented manufacturing, which will need continued openness and not increased protection.

The key Indian development failure right through its pre and post-independence history has been the lack of adequate attention to nutrition, health, and education of the population. This is hampering the employability of new entrants to the labour force as new economic activities require an increasing level of educational competence.

The time is now right for India to initiate the *third generation of economic reforms* to elevate its growth trajectory to the next level of around 8-9 percent which is needed to ensure a doubling of per capita income in every decade. India's economic strategy going forward once again needs comprehensive policy emphasis on economic growth over other objectives, along with specific attention to enhancing health and education. Thus, the next generation of economic reforms needs a special resolve to deliver efficient public services, particularly focused on the long-neglected social needs related to nutrition and health services, primary and secondary schooling, a major quality upgrade of tertiary education, water supply and sanitation, and urban development.

The main organising principle of the second-generation reforms was to free the private sector from the myriad government controls that had hobbled its performance for a long time. This process itself still has some distance to go, and needs to be pursued further. But similar attention has not been given to improving the performance of the government itself, thereby constraining the performance of the private sector.

Consequently, the *third generation of economic reforms* must focus on a similar empowerment of the public sector, broadly defined, to deliver growth enhancing public goods and services for the benefit of all segments of the public, private sector, and corporate entities alike. The "public sector" encompasses all levels of governments from the local, state to national, and their entities which deliver public goods and services, and includes regulatory and standard-setting authorities. They all need to be strengthened.

The last 30 years have seen a clear private sector supply response to the increased demand for health, education and other services at all levels, reflecting the failure of their public provision in both quantity and quality. The way forward is not so much to restrict this private provision but to improve significantly the quality of public services, leading to greater trust, and in quantity, to promote universal accessibility. This would free up money in the hands of the less well-off for other essential goods and services. There must be a renewed understanding that it is the government's role to deliver public goods and services that only it can provide, and that such services cannot and should not be privatised.

This kind of quality improvement cannot take place without a significant enhancement of government's own technocratic competence and implementation capacity. 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.

The first condition for sustained growth is an enhancement of investment levels, both public and private. This would imply an overall increase in fiscal expenditure along with a shift in composition towards higher public investment for the delivery of public goods and services. This, in turn, would crowd in private investment rather than crowding it out. But buoyancy in the tax GDP ratio does not reflect the sustained growth in GDP of the past three decades. 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 consistent with comparable international experience, to finance enhanced public expenditure.

The key departure made in this paper is to emphasise the role of the state in promoting economic growth. Countries that have successfully sustained high growth rates did so by setting up growth-promoting governmental institutions to coordinate public investments while also incentivising the private sector to make the kind of investments necessary for a growing, dynamic economy. However, in India, adequate attention has not been given to strengthening the government itself in performing key functions, directly or through public authorities. The *third generation of economic reforms* must address this lacuna in policy and direct attention to improving the government's own competence, both administrative and technical, at all levels.

The Indian Development Story So Far

India has come a long way from independence. It has a higher level of well-being relative to where it was at that time. But it could have done better, and has fallen behind most of its peers in East Asia in terms of most metrics. In following its development journey, one can identify two major policy departures in its approach to growth and development from previous long epochs. In each case, there was a marked acceleration in sustained growth over time, which then started petering out.

The first departure took place soon after independence with initiation of the *first generation of economic reforms*. Indian growth during the 1950s and 1960s was a significant transformation from stagnation over the previous century and beyond. This was ushered in the thrall of independence consequent to the introduction of a comprehensive approach to growth and development. It involved an understanding that it was necessary to evolve an overarching policy focus that would set the country on the path of sustainable development in order to drag it away from centuries of stagnation. Apart from the articulation of this approach from the top, there was an understanding that any success in such an endeavour would need a methodology for coordinating all parts of the government's efforts at both the central and state levels to achieve the chosen aims. The institutional form chosen for accomplishing this was to set up the Planning Commission, which would then use the methodology of five-year plans to guide the country for the medium-term. Over the following three to four decades, there was a heavy focus on import substituting industrialisation, planned central allocation of government funds, and the use of the public sector for this purpose. This approach was broadly consistent with mainstream thinking on economic development across the world in the 1950s and 1960s.

A close look at the growth dynamics indicates that relative to almost zero growth in the previous century, there was a significant acceleration from the early 1950s to the mid-1960s, followed by a downturn over an equivalent period till the late 1970s, and again some recovery over the next decade. Although this period has often been characterised as a failure by many observers, it was relatively successful, given the very poor initial conditions that the country exhibited at independence. (Table 1; Panagariya, 2008; Mohan, 2011).

Table 1: Real GDP Growth (in %): An Overview

Item	1950-65	1965-81	1981-90	1990-97	1997-03	2003-08	2008-12	2012-20
GDP (factor cost)/GVA (basic prices)	4.1	3.2	5.4	5.7	5.4	8.7	7.7	6.4
1. Agriculture	2.9	2.1	3.5	3.7	1.0	4.9	3.6	3.3
2. Industry	6.6	4.1	6.9	6.9	4.3	8.8	7.3	6.1
Manufacturing	6.6	3.9	6.4	7.5	4.2	9.7	8.0	6.5
3. Services	4.9	4.2	6.4	6.4	7.9	9.8	8.9	7.4
GDP (market prices)	4.3	3.2	5.6	5.5	5.3	8.8	7.3	6.6
1. Private Consumption	3.7	3.2	4.2	4.6	4.6	7.5	8.1	6.8
2. Government Consumption	6.6	5.3	7.2	3.8	6.5	5.8	9.2	7.0
3. Gross fixed capital formation	6.9	3.9	6.2	5.2	6.7	16.2	8.6	4.8
WPI inflation	3.8	9.0	6.8	9.6	4.6	5.5	7.6	2.5
CPI inflation (Industrial Workers)	n.a.	8.9	8.8	10.3	5.9	5.0	10.0	6.5
CPI inflation (Combined)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.8
Merchandise account balance/GDP	-1.8	-1.5	-3.0	-2.4	-2.9	-5.4	-9.1	-6.9
Current account deficit/GDP	-1.2	-0.6	-1.8	-1.3	-0.3	-0.3	-3.0	-1.8

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.

Source: National Statistics Organization (NSO), Government of India; Reserve Bank of India.

For example, in 1951, the average life expectancy at birth was 32 years, the literacy level was 18 percent, and the total installed power capacity in the whole country was only 2300 MW. The country had literally been left in darkness.

Although some incremental policy change was initiated in the early 1980s, the development model remained broadly unchanged over the whole 40-year period, even though it had outlasted its usefulness. Whereas many other developing countries, particularly in East Asia, had begun to change development strategy from the late 1960s onwards, India did not. Even in China, which had started with a strict central planning system, the overall economic strategy began changing in the late 1970s.

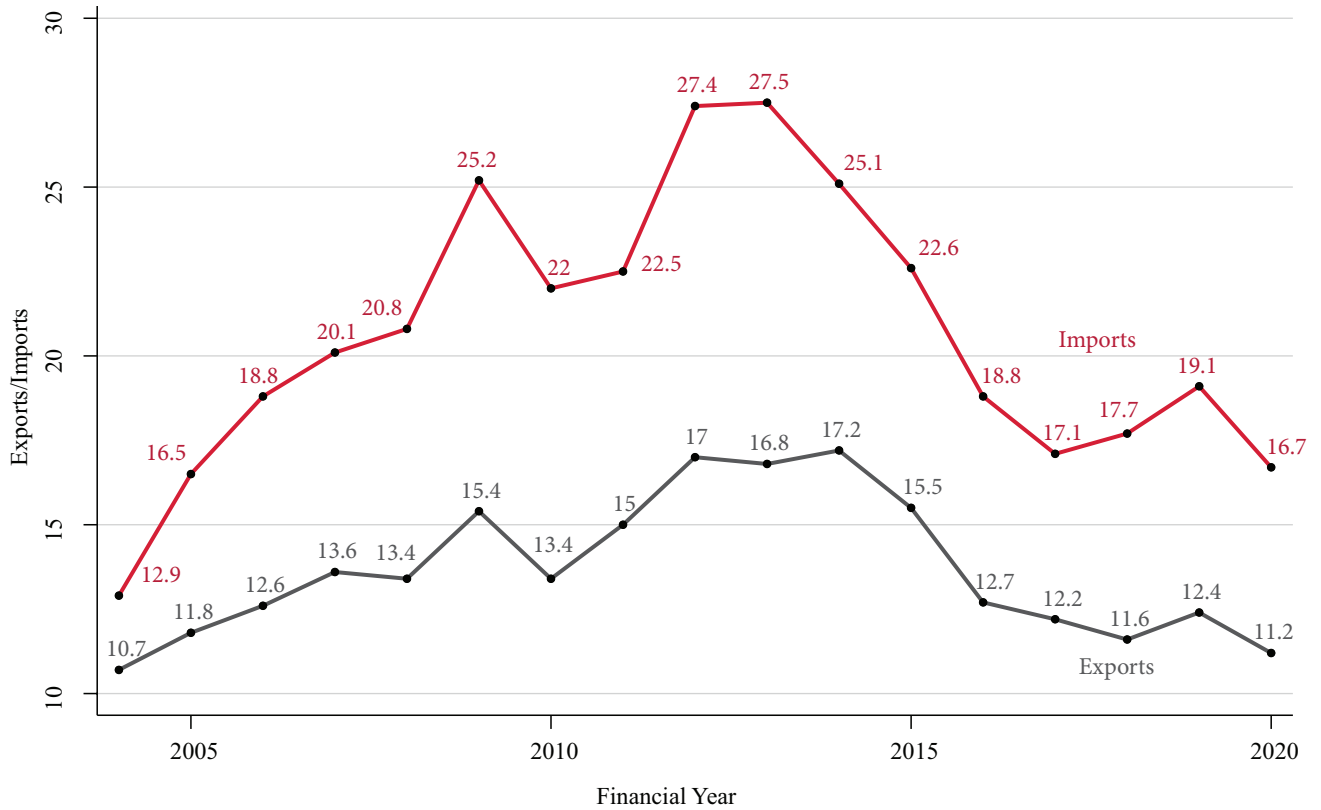
The second major departure finally took place with the *second generation of economic reform process initiated in 1991*. Once again, this departure was characterised by a comprehensive approach to the whole economy, with the reforms initiated touching almost every aspect of the economic system. India was finally catching up with the rest of the world in terms of the prevailing predominant thinking on development strategy, with the approach being characterised by an open economy market-oriented framework. The reform process involved freeing the private sector from a plethora of previous controls through capacity licensing, trade restrictions, technology restrictions, capital market controls, foreign investment restrictions, price controls and the like; and a move away from public sector domination in industry and infrastructure. Furthermore, the next 20 years witnessed an almost complete overhaul of the fiscal, monetary and financial systems. Just as the first phase of Indian development policy should be deemed a success, this second phase also ushered in a new growth dynamic that transformed the Indian economy to achieving middle-income status by the late 2000s (See Mohan, 2017). We have now had almost three decades of economic reforms spanning six governments since the early 1990s. The country has ascended to a higher growth path averaging, until recently, just under 7 percent annual GDP growth; industrial growth was also healthy along with growth in exports; the external sector has been comfortable and stable; and poverty has been reduced significantly. All this had been achieved with broad macro-economic and financial stability in the country, but strains in this regard have been emerging in recent years.¹ Nonetheless, as a consequence of all these momentous changes, there is a new respect for India in the world and, even more important, Indians from all walks of life have found a new level of self-confidence.

Just as the first epoch's growth and development engine started sputtering after the initial 15 years, it appears that the second epoch, begun in the early 1990s, is suffering a similar fate after a relatively successful couple of decades. The growth process seems to have started tapering in the early 2010s (Mohan, 2019; Rangarajan and Srivastava, 2020).² The slowdown is broad-based across all the sectors, agriculture, industry, and services. A significant feature of the acceleration experienced particularly in the 2000s was an unprecedented level of growth in savings and investment on the one hand, and manufacturing and exports on the other. Although there are some discrepancies in data, it does appear that the manufacturing sector in particular, and corresponding manufactured exports have suffered a significant decline over the past decade or so (Table 2; Figures 1, 2). Merchandise exports had peaked at around 17 percent of GDP by 2013-14: they have now fallen to just over 11 percent.

¹ See Acharya (2020).

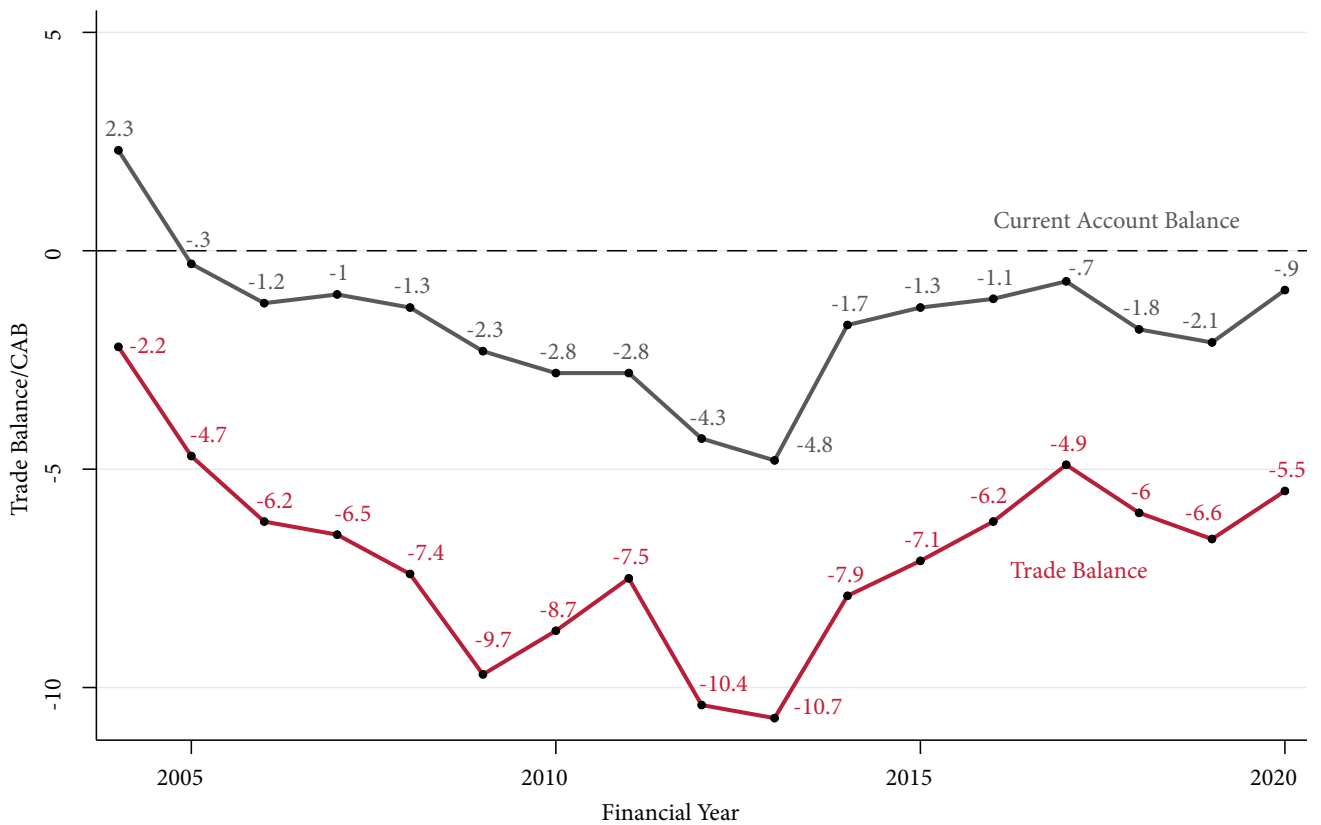
² Furthermore, as argued by Subramanian (2019), the growth estimates since 2011 may be overestimated in the new GDP national accounts series and hence the slowdown could be **more** severe than is apparent in Table 1.

Figure 1: Merchandise Exports & Imports of India (% of GDP)



Source: Reserve Bank of India

Figure 2: Trade Balance & Current A/c Balance (% of GDP)



Source: Reserve Bank of India

Table 2: Indicators of Industrial Activity (Percent Growth)

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
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	4.5	5.4	6.0	7.9	7.7
2017-18	4.6	4.4	8.1	4.4	4.4	6.6	6.3
<i>Period Averages</i>							
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
2012-18	4.0	3.8	3.7	6.0	6.1	7.7	6.3

@: 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.

Source: National Statistical Organization.

A particular feature of concern is the very marked reduction in both capital goods production in the country and imports of capital goods, which indicates a significant decrease in industrial investment and hence a portent of lower growth in the future (Table 3). The steep fall in merchandise imports (as a proportion of GDP) since 2012 also indicates the economic slowdown over this period. The consistent imbalance in merchandise trade reflects a lack of competitiveness of the Indian industry.

Table 3: Capital Goods-Domestic Production & Imports

Annual Growth Rates		
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
2018-19	2.7	14.3
2019-20	-13.8	
<i>Period Averages</i>		
2005-08	30.0	51.6
2012-20	-0.7	1.8

#: Based on index of industrial production

##: Imports of Machine tools, Machinery, Transport Equipment and project goods.

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

The country's fiscal health has been under pressure since the excessive fiscal expansion undertaken after the North Atlantic financial crisis (NAFC) in 2008-09. The tax revenue ratio is yet to reach the level attained in 2007-08. Because of the very significant expansion in non-performing assets of public sector banks since around 2012, credit growth has been constrained over this period. Furthermore, the government has had to undertake large capital injections into these banks, putting further pressure on the fisc on a relatively continuous basis. This has put constraints on the government's ability to fund both physical and social infrastructure investments needed for economic growth and social protection. Moreover, with the continuing problems plaguing the financial sector, funding constraints are becoming apparent in almost all aspects of the economy.³

The economic slowdown had become apparent even before the current COVID-19 global crisis, which has also hit India hard. At present, it would seem that the recovery process is itself going to be a challenge over the next couple of years. So, it is unlikely that a new growth process can be initiated much before 2022-23. Thus, the existing problems have become severely compounded.

In summary, the Indian economy is in trouble and hence needs a major reboot once again. Whereas there should have been a significant change in the original development strategy, starting in the late 1960s or early 1970s, it was delayed by almost 20 years until the early 1990s. We should not make the same mistake again. There is no time to lose since almost a decade has already been lost. It is, therefore, in need of correction once again. A comprehensive new policy framework needs articulation in order to set the stage for accelerated sustained growth over the next couple of decades.

It must be understood that the direction of policy reforms initiated in 1991 needs to be reinforced going into the future. Rapid economic growth cannot be achieved without the traditional levers of higher savings and investment, both of which have fallen over the last decade, and need to be restored to their levels achieved in the late 2000s. Infrastructure investment needs to be revived in particular, and this will probably need some reversal of policy towards greater public investment. For this to become feasible, the government's revenue-raising capacity will have to be enhanced. For Indian industry to be successful in global markets, the economy must remain open, and the protectionist trade policy measures implemented in the last few years must be reversed. In addition, the travails of the Indian financial sector are now well-known. Higher savings and investment will not be feasible without comprehensive financial sector reform. All these policy directions are familiar, which I have addressed in some detail in Mohan (2019), so they are not repeated in this paper.⁴

³ See Mohan (2019) for a detailed analysis of the possible causes behind the post-2012 slowdown.

⁴ For financial sector reforms, see Acharya (2020).

However, I believe that for these policy directions to be adopted and implemented successfully, the country now needs to adopt a different approach.

The time is now ripe for introduction of the third generation of economic reforms.

Key Emerging Issues to be Addressed in the Next Generation of Reforms

There has been an inadequate generation of quality employment for the increasing Indian labour force throughout the Indian development process. This has been particularly exacerbated over the past 15 years or so when there seems to have been almost no net generation of jobs.⁵

Around the time of independence, agriculture accounted for almost 55 percent of GDP and over 75 percent of employment. Whereas its share in GDP has fallen to 16-17 percent now, as expected with growth and development, almost half of the total employment is still dependent on agriculture (Papola and Sahu, 2012), leading to widespread palpable agricultural distress. Thus, growth impulses have not been transmitted adequately to agriculture. The green revolution provided a significant productivity push to the agricultural sector in the 1970s; the time has again come for another transformative push, which would be necessary for agricultural incomes to rise in the years to come. Had there been adequate generation of quality non-agricultural jobs in both industry and services, the reduced labour available for agriculture would have itself induced activities towards greater innovation leading to greater productivity and income enhancement in the agriculture sector. This will not happen without a focused, coordinated, and process-oriented approach towards agricultural development over the next couple of decades.

The pattern of manufacturing in India has simply not been adequately employment generating. Whereas the structural transformation of the economy has proceeded apace over time, 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, unlike the successful East and Southeast Asian countries. This has restrained the absorption of people needing to shift from rural to urban pursuits. Overall industrial policy must shift to the encouragement of labour-intensive, export-oriented manufacturing, and services. This requires a whole set of coordinated policy directions, including a full set of factor market reforms that will involve a great degree of process, consultation, and consensus-building, along with specific programmes to promote widespread labour-intensive manufacturing exports.⁶

Why has the Indian development process not been employment-generating in non-agricultural pursuits despite relatively high growth? In particular, Indian manufacturing has neither been employment-intensive nor export-oriented, unlike the development story of Southeast and East Asian countries, including China. There was some expectation that after the opening of the economy and lifting of restrictions in 1991, Indian manufacturing would take advantage of its comparative advantage and move towards labour-intensive industries: this has not happened.

There may, in fact, be a connection between the lack of labour using manufacturing production, inadequate generation of non-agricultural jobs and low productivity growth in agriculture itself, to the low-level of skills available in the Indian labour force coming out of agricultural pursuits. This needs urgent correction through policy aimed at both broad improvements of human resources in India over the medium and long-term and reforms aimed at reorienting the pattern of Indian industrial growth. The agricultural sector itself needs a new green revolution-like rejuvenation, which also involves improvement in the quality of human resources.

India remains far behind other middle-income countries, and even some low middle-income countries in terms of all the key human development indices.

The key Indian development failure right through its pre and post-independence history has been the lack of adequate attention to nutrition, health, and education of the population. This may be hampering the employability of new entrants to the labour force as new economic activities require an increasing level of educational competence. Thus, the next generation of economic reforms needs a special resolve to concentrate on correcting the long-neglected social needs related to nutrition and health services; primary and secondary schooling, along with a major quality upgrade of tertiary education; and universal provision of water supply and sanitation.

This is a good time to make this correction since there has been significant quantitative improvement in some health and education indices over the last 30 years. It is therefore now possible to contemplate significant enhancement in the availability of quality Indian labour in the years to come if there is much more focus on quality in both health and education at all levels. Once again, this correction cannot take place without a focused policy approach involving substantial investment along with consultation, coordination and consensus-building across all levels of government, NGOs, the private sector and people themselves.

⁵ See McKinsey Global Institute (MGI) (2020), exhibit E1, p.3

⁶ I have provided broad policy directions in this regard in Mohan (2019), while Panagariya (2020) has more detailed recommendations.

Because of the low growth in non-agricultural employment, the rate of urbanisation in India has also been relatively slow. Even then, the quality of life in our growing towns and cities leaves much to be desired, again restraining the ease of movement of people from rural to urban areas in pursuit of non-agricultural activities. There is a continuing high proportion of people living in urban slums that exhibit extreme crowding, leading to some of the highest observed population densities in the world and its associated ills. Many of these settlements are devoid of basic services such as clean water and sanitation, apart from poor access to health and education opportunities. The generation of high-productivity manufacturing and services activities in urban areas also requires efficiently functioning urban systems that attract higher-skilled people to the city to innovate and prosper. Overall, the existing institutions responsible for urban management are simply not equipped to deal with the emerging challenges of urbanisation: they need an overhaul. Here also a great degree of process is involved so that there is much greater participation in urban policy, planning, and management at the local government level. Efficient labour-intensive industry requires well-functioning cities that provide hospitable environments for their residents in terms of shelter, transportation, public services, safety, and the like so that private industry does not bear such costs.

Considerable environmental degradation has taken place in our urban and rural areas alike. With the continuing population pressure on agricultural land, mispricing of electricity and power, and misguided subsidies, rural areas have witnessed intensifying problems with declining levels of water quality and soil degradation that also affect agricultural growth negatively. On the urban side, Indian cities figure regularly among the top 20 polluted cities in the world. The issues related to climate change will further contribute to the need for much better environmental management in the country. Once again, process-oriented policies and governmental action will be needed for success in this area.

The likelihood of India ascending to another level in its growth path would be low unless these issues are tackled with some level of urgency. Most of these problems require collective action: they cannot be tackled by the private sector by itself. Hence the theme of this paper: *the need for institutional development for improved governance in the country, constituting the third generation of economic reforms.*

If this is done, India could be well placed to achieve sustained high growth over the next two or three decades if this issue is given priority along with all the other associated policy measures needed for stimulating growth and development.

The Way Ahead

India reached a per capita GDP of around US\$2,100 and overall GDP of about US\$2.9 trillion in 2019, while Chinese GDP per capita had already reached about US\$ 10,250 and GDP of US\$14.3 trillion.⁷ We now need to move to the next level of sustained growth over the next couple of decades so that per capita income growth can exceed seven per cent per annum (or over 8 per cent GDP growth per annum),⁸ and thereby see at least a doubling every decade. Even if this aspiration is achieved, India's per capita GDP will be around US\$8,500 by the late 2030s, lower than where China is today. This will not happen by itself and needs a strategic policy push and focus on the imperative for higher economic growth.

Placed in a historical and comparative perspective, what are India's chances of ascending to a higher growth path on a sustained basis over the next couple of decades and longer? It must be recognised that there are only a handful of countries that have achieved sustained growth over such long periods, and have thereby risen from poverty and succeeded in escaping the "middle-income trap" (World Bank, 2008; McKinsey Global Institute, 2018). Such sustained growth over three decades is not "normal" for any country, especially one as large and diverse as India. It is the example of East and Southeast Asia's successful growth record that provides ground for optimism, along with that of China, a country of comparable size. East Asia's GDP increased tenfold over about 30 years. 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 grounds for optimism in view of the transformation already achieved in the last three decades.

How did these countries achieve such sustainable growth?

They had an overarching focus on growth, articulated consistently at the highest policy levels supported by adequate institutional arrangements for overall coordination and implementation. Considerable attention was paid to corresponding improvements in health and education, mostly through universal public provision.⁹ Their economic strategy, particularly in industry, was employment promoting, along with productivity-enhancing programmes in agriculture. In fact, if human capital improvements

⁷ <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=IN-CN>.
<https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=CN-IN>
 Accessed September 2, 2020.

⁸ 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.

⁹ Even today, the proportion of children attending private primary schools in Japan, South Korea, Singapore and China are only 1, 2, 4 and 8 percent, respectively. Even in the United States and United Kingdom this proportion is less than 10 percent, as compared with almost half in India (Central Square Foundation, 2020). <https://data.worldbank.org/indicator/SE.PRM.PRIV.ZS?locations=US-KR-BR-JP-IN-ID-CN-HK-SG>
 Accessed September 12, 2020.

had not taken place, it is doubtful if these countries would have exhibited the kind of growth that they did over sustained periods. They adapted and developed their governance institutions consistently to cope with the increasing economic complexity that comes with rapid economic development.

Thus, India's economic strategy going forward needs predominant policy emphasis on economic growth over other objectives, along with specific attention being paid to health and education enhancement. The understanding must be that social welfare and poverty elimination cannot be accomplished without the achievement of high growth, and such high levels of sustained growth cannot be achieved without corresponding improvements in all aspects of social welfare, particularly in nutrition, health, and education.

Such success cannot be achieved with a business as usual approach. There is an imperative need for an institutional system that combines the setting of centralised strategy and focus on growth, along with greater recognition of and the need for building competent public institutions and authorities at all levels, central, state, and local, for the maintenance of law and order, social justice, and adequate delivery of essential public services.

Further acceleration in economic growth, employment, and reduction of poverty will need greater investment growth along with enhancement of productivity. For such acceleration to take place, we will need a significant enhancement of capacity in all our governance systems and public institutions. There is now a deep mismatch between the existing institutional design and developmental needs of the growing economy and polity.

Need for the Third Generation of Economic Reforms for Higher Economic Growth and Development

The main organising principle of most reforms carried out since the early 1990s has been that of freeing the private sector from the myriad government controls that had hobbled its performance for a long time. Whereas this process itself still has some distance to go, and needs to be pursued further, 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. In many ways, the country has indeed been transformed. 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. *But similar improvement has not taken place in the performance of the government itself, thereby constraining the performance of the private sector.*

The key problems highlighted above raise the question of whether we have reached the limit of private sector-led acceleration in investment and output growth within the current governmental and governance structure? Is this now being increasingly constrained by the lack of public investment, in both physical and social infrastructure? An underlying theme encompassing most constraints now is the lack of adequate governance encompassing the maintenance of law and order and functioning of the judiciary on the one hand, and delivery of basic public services in both quality and quantity, on the other. The public service system is simply not functioning as it should.

Most of the reforms that have been implemented so far have been possible through government announcements, without much need for change in the process. Many of them have indeed involved new legislation that has been enacted successfully. However, the government always seems to have difficulty in carrying out reforms that involve process and institutional development. Many desirable legislative reforms have faced difficulties in implementation.

I, therefore, believe that just as the second generation of reforms (beginning in the 1990s) empowered the private sector to perform as it can to the limits of its abilities, ***the third generation of economic reforms must focus on a similar empowerment of the public sector, broadly defined, to deliver public goods and services*** for the benefit of all segments of the public, private sector, corporate entities alike. Lest this proposition be misunderstood, I am not advocating greater empowerment of the government to increase its control over the economy as was the case in the past; nor am I advocating greater public sector involvement in business. 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. This broad definition would also include regulatory and standard-setting authorities.

The first priority must be a laser-like focus on urgent enhancement of Indian human capital.

Health and education

As already mentioned, the key failure in India's growth and development strategy in the whole period since independence has been the inadequate attention given to ensuring adequate levels of health and education for the population as a whole. Going forward, a key component of the strategy for growth and development in the future has to be a much-enhanced focus on health and education in the country. We cannot sustain high growth without a healthy and educated population. But it must be pointed out that, whereas adequate attainments in health and education are necessary conditions for sustained growth in all spheres of activity, they cannot be treated as sufficient conditions.

All countries, whether developed or developing, that succeeded in achieving high rates of growth for sustained periods in excess of a few decades, exhibited significant attention being paid to the public provision of health and education to the vast majority of the population from top to bottom.

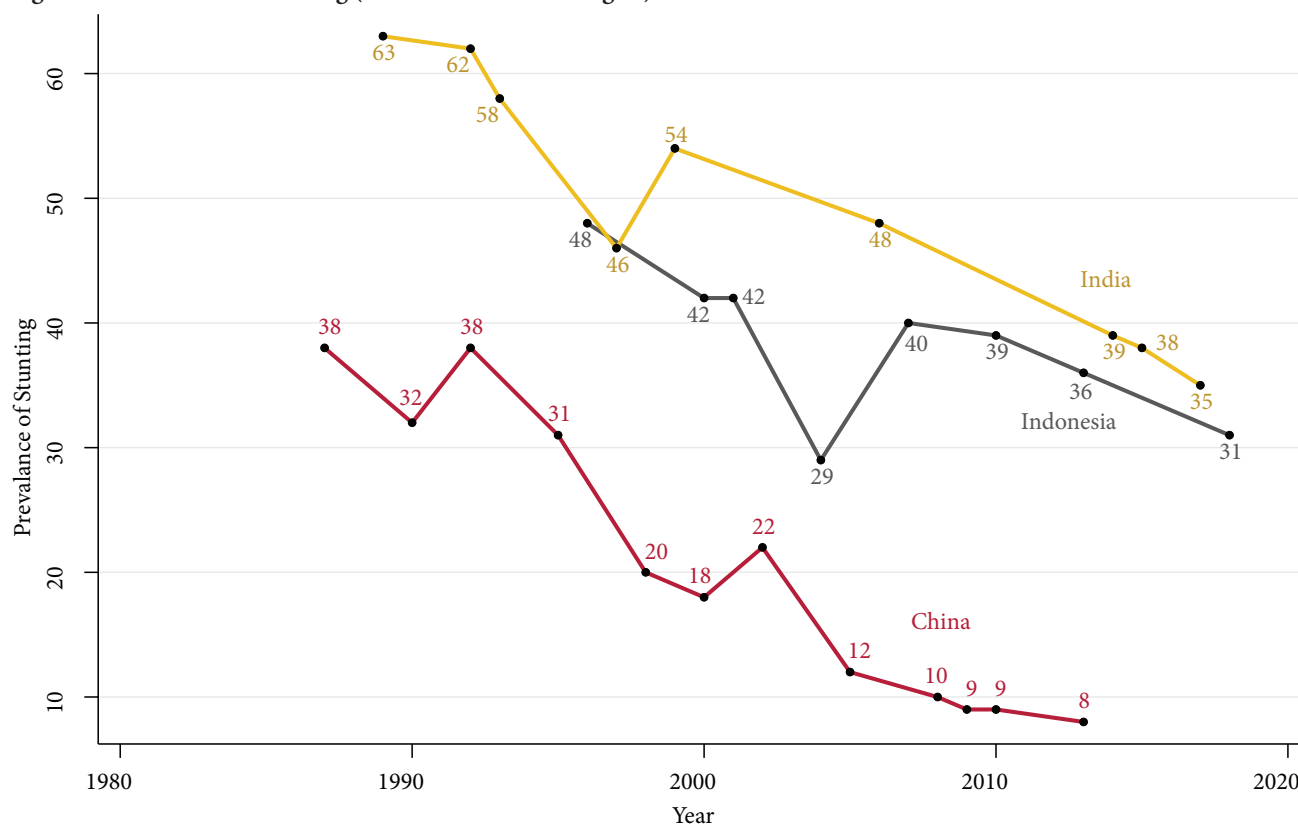
India stands out in its poor public provision of both health and education services. This is reflected in the very high and increasing share of the private sector in the delivery of the services both to the poor and to the rich.

It is useful to examine the various health-related indices that are available for countries over time. For illustrative purposes, I have chosen to compare India's performance in both health and education over time with just three countries: China, Indonesia and the Republic of Korea, with occasional references to past achievements of some developed countries, particularly the United States and Japan. Comparisons with China and Indonesia give some idea of what we should have achieved by now, since we were roughly at the same level on most indices in the 1950s and 1960s, and because all three are large populous countries.

Health

The most distressing indicator to look at is the estimate of stunted children between the ages of zero and five. This index estimates the percentage of children in this age group who exhibit heights two standard deviations below the median according to WHO child growth standards. It is the lack of adequate nutrition during the ages of zero to five that results in stunting. It is shocking to observe that almost one-third of Indian children fall in this category even now, and almost two-thirds did as late as the early 1990s. China also had about a third of its children in the stunted category in the early 1990s. That proportion has now come down less than 10 percent, perhaps nearer to 5. As it happens, Indonesia also exhibits a high proportion of stunted children at about a third.¹⁰

Figure 3: Prevalence of Stunting (% of Children under Age 5)



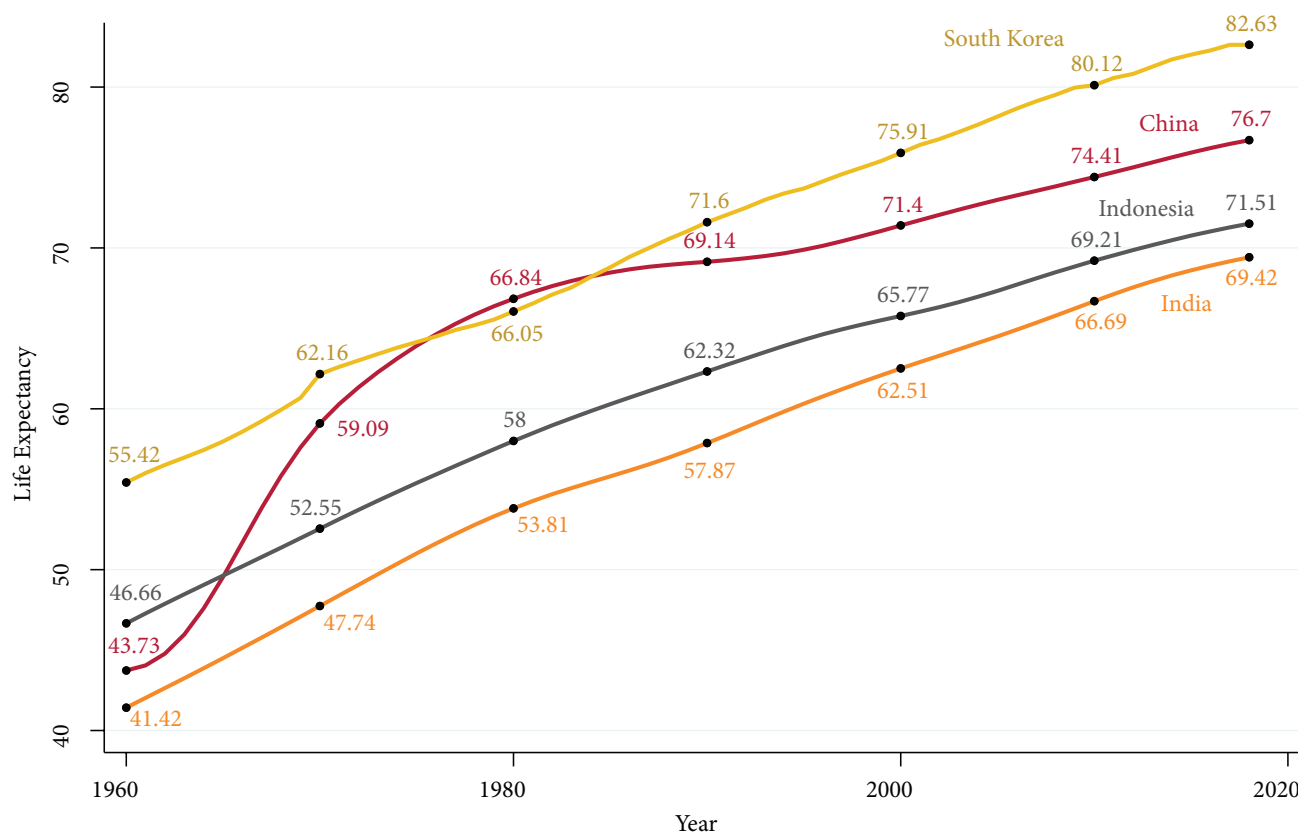
Source: World Bank

¹⁰ For data on stunting, refer to <https://data.worldbank.org/indicator/SH.STA.STNT.ZS?locations=IN-CN-KR-ID>
Accessed September 7, 2020

Although there are some criticisms regarding the standards being used for Indian children, there can be no question that even if there are some errors in this measurement, the proportion of stunted children in India is unacceptable. This issue is of great concern since the lack of nourishment in the formative stages of childhood results in diminished mental ability as a consequence of underdevelopment of the brain. This naturally leads to poor learning capacity, hence poor school performance, and later difficulty in participating in productive employment.¹¹

Other indicators of health also demonstrate India's poor performance in the health of its population over time. Life expectancy at birth was as low as 32 at the time of independence. It reached 41 by 1960, which was not too different at that time from comparable countries like China (44) and Indonesia (47).

Figure 4: Life Expectancy at Birth



Source: World Bank

The improvement recorded since then by China has been much greater, whereas that of Indonesia is comparable, though somewhat better. South Korea, of course, has surged ahead.¹² With life expectancy now at around 69, India is about 30 years behind China and 10 years behind Indonesia.

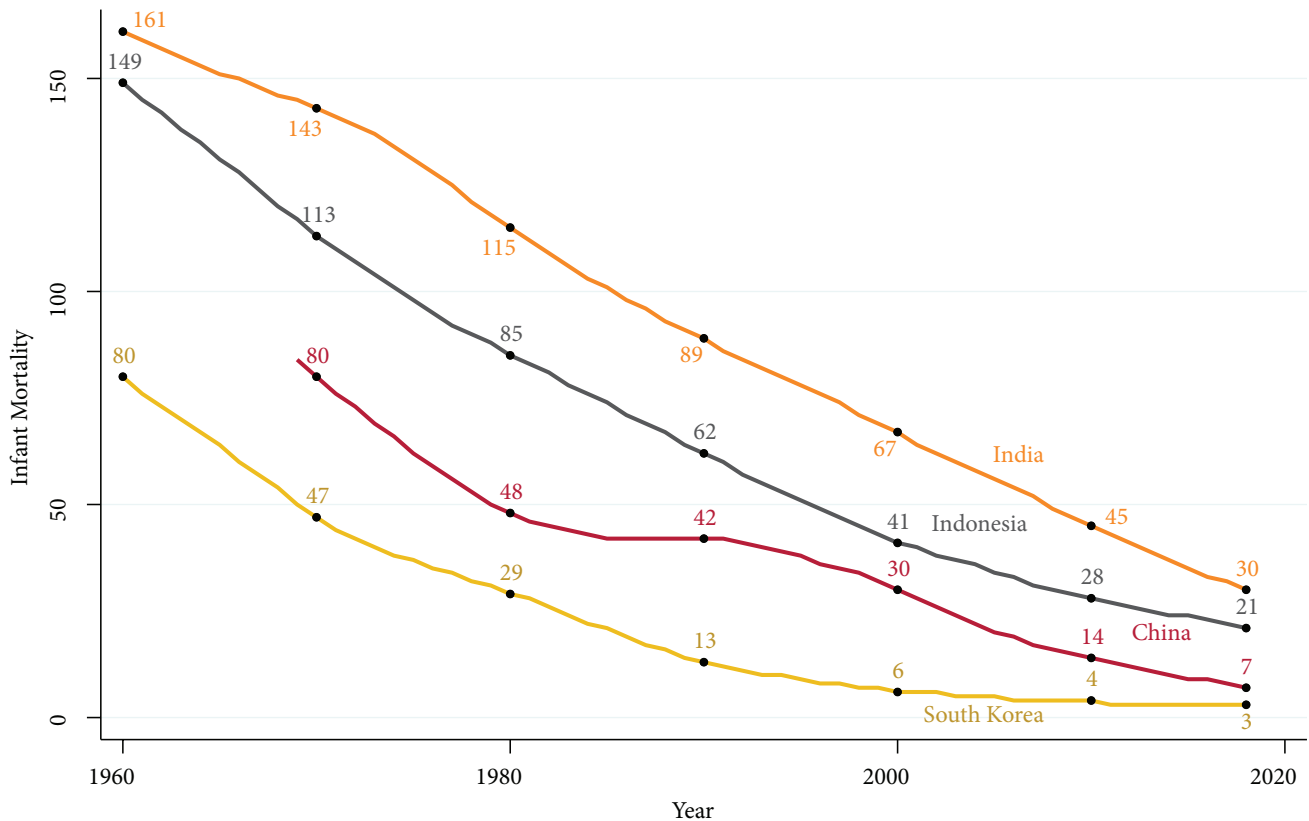
Another key indicator of health, particularly related to mothers, is that of infant mortality, measured as infant deaths per 1000 live births. Again, India and Indonesia were broadly comparable in 1960, with India recording infant mortality of 161 and Indonesia 149. The data for China is not available for 1960, but they reached 80 by 1970, a number not reached by India until the mid-1990s. The Indian infant mortality rate now is around 30, Indonesia at 21, and China at 7.4. South Korea had reached 30 by 1980, 40 years ago.¹³

¹¹ The NFHS-5 for 2019 has recorded a sharp reversal of the progress achieved earlier with observation of severe deterioration in child health in most of the 22 states surveyed in phase I of this survey. In comparison to NFHS-4, 13 out of the 22 states & UTs in phase I have recorded a rise in the indicator for child stunting. The picture is same for child wasting with 12 states & UTs recording a rise in child wasting. Maharashtra and Gujrat have more than a quarter of children wasted. Even Kerala, known for its good welfare indicator, has logged a rise in both indicators. Gujrat has performed the worst with 80 percent of its children (< 5years) being anaemic, in contrast to 63 percent in NFHS-4.

¹² For data on Life Expectancy at Birth, refer to <https://data.worldbank.org/indicator/SP.DYN.LE00.IN?locations=IN-CN-KR-ID> Accessed September 7, 2020

¹³ For data on Infant Mortality, refer to <https://data.worldbank.org/indicator/SP.DYN.IMRT.IN?locations=IN-CN-KR-ID> Accessed September 7, 2020

Figure 5: Infant Mortality (per 1000 live births)



Source: World Bank

It is interesting to see that the comparable numbers for infant mortality in the United States were around 175 in 1880 and 25 in 1960.¹⁴ In the United States, “the main drivers of the decline in the death rate, which began around 1885, were the improvements in public health, such as the urban sanitation infrastructure largely consisting of central water supplies and sanitary sewers”.¹⁵ Quoting Green (1986), Gordon reports that “the primary goal of the public health movement of the late 19th century was to create universal clean water supplies and sewage systems. In fact, clean water technologies have been labelled as “likely the most important public health intervention of the 20th century”.¹⁶ The first rank among the causes of progress during 1890 to 1940 is awarded to urban sanitation infrastructure, the network of pipes making clean running water available in the home and the different set of sanitary sewer pipes taking away the waste and effluents. Gordon reported the work of Cutler and Miller (2006) to suggest that clean water may explain as much as three-quarters of the decline in infant mortality in the United States.

It is difficult to explain, therefore, why Indian public policy through the decades did not give as much attention to the provision of clean water, sanitation and sewerage as it should have. The record of the United States and other countries, both developed and developing, provided clear evidence that public health depended particularly on the provision of these services on a wide scale. Notably, it is only the current government that has made a very major attempt to eliminate open defecation in the country, with reported significant success within a few years. The resources required to undertake this program have not been particularly large.

It was Isher Ahluwalia herself who chaired a “*High Powered Expert Committee (HPEC) for Estimating the Investment Requirements for Urban Infrastructure Services*” in 2009-11. That committee estimated the total investment required for urban infrastructure services, which included water supply and sewerage. It proposed that investment in water supply over the following 20 years should aim to connect all urban households with safe, continuous piped water. Its investment program implied total annual urban infrastructure investment of between 0.7 to 1.14 percent of GDP over the 2011-31 period, of which water supply and sewerage combined amounted to about 18 percent. Thus, if this program were to have been implemented, it would have cost only about 0.12 to 0.2 percent of GDP per year, and the country would be well on its way to achieving hundred percent piped water to all urban households, with immeasurable health and productivity benefits. This landmark was achieved by the United States about 80 years ago in 1940. In the event, this has not received much attention: instead, much more importance has been given to expensive infrastructure projects like metros in select cities.

¹⁴ Gordon, 2016, p. 209.

¹⁵ Gordon, 2016, p. 215.

¹⁶ Gordon, 2016, p. 217.

Coming to health care itself, once again, India exhibits a relatively sorry record. “Nearly 1 million children still die before their first birthday and many infectious diseases, such as malaria and tuberculosis, have still not been eliminated. Around 7 percent of households fall below the poverty line as a result of health shocks and high out-of-pocket expenditures on health. India also has one of the highest rates of open defecation in the world, which is especially damaging children’s health in densely populated areas.”¹⁷ Total government health expenditures in India have ranged between about 1 to 1.4 percent of GDP over the last 15 years, among the lowest in the world, and constitute only about 30 percent of total health expenditures. As it happens, Indonesia exhibits a similar record, while China has gone up from about 1.8 to 3.0 percent over the same period, constituting about 60 percent of total health expenditures.¹⁸ Thus India has among the most privatised healthcare systems in the world. Public policy in recent years is continuing to emphasise this model, placing greater reliance on insurance-based privately provided health care. “The experience of the 25 years since reforms demonstrates that leaving the provision of healthcare to the invisible hand of the market is not the solution to achieving better health outcomes..... In all high-performing healthcare systems, governments act purposefully finance, plan and deliver the required services”¹⁹

The poor health outcomes documented here are, therefore, not accidental. Indian public policy has simply not paid adequate attention to providing adequate public health services to its population, nor adequate medical services. The continued emphasis on private sector supplied medical services does not look likely to be reversed at the present time. I would hope that the experience with COVID-19 will serve as a big wake-up call and that there is new thinking on public health and medical care in the country in the years to come.

Education

The Annual Status of Education Reports (ASER), conducted by the NGO *Pratham*, and which are now well known, have shown that the achievement outcomes of primary education are much lower than might be expected. They have repeatedly reported that almost half of children in standard V are not able to demonstrate reading and numeracy skills at even the standard II level, though improvements are indeed taking place.²⁰ These findings are consistent with the issue of stunting raised above. Many researchers have commented on the frequent absence of teachers in Indian primary schools, particularly in rural areas, and also their inability to teach effectively, as demonstrated by the results in ASER surveys. *The question that does arise is whether, because of stunting of a significant proportion of children, particularly in some of the poorest states, is it feasible for primary school teachers to impart education at the adequate level?* Also, as enrollment levels in primary schools have now reached 100 percent, it may be the case that if there is a significant proportion of stunted children in the schools, other children also suffer as the teacher has to make a higher effort in these circumstances. The flight of children from public to private primary schools over the last 20 years is possible evidence of this problem as hundred percent primary school enrollment has been achieved.

Overall, just like the health indices documented above, education indices of India also exhibit a poor record compared to other countries in similar circumstances. Around the time of independence, the overall literacy rate in India was only about 18 percent. Although a significant improvement took place over the next 40 years, even by 1990, the overall literacy rate had reached only about 52 percent, as compared with China, which had reached about 70 percent. For the population, 15 years and above, the Indian literacy rate is still only about 74 percent now compared with almost 97 and 95 percent for China and Indonesia, respectively.²¹

¹⁷ Nachiket Mor and others (2017). p. 385.

¹⁸ For Public Health Expenditures

<https://ourworldindata.org/grapher/public-health-expenditure-share-gdp-owid?time=1995..2014&country=IND~IDN~CHN~KOR>[For Total Health expenditures

<https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS?locations=IN-CN-ID-TH>

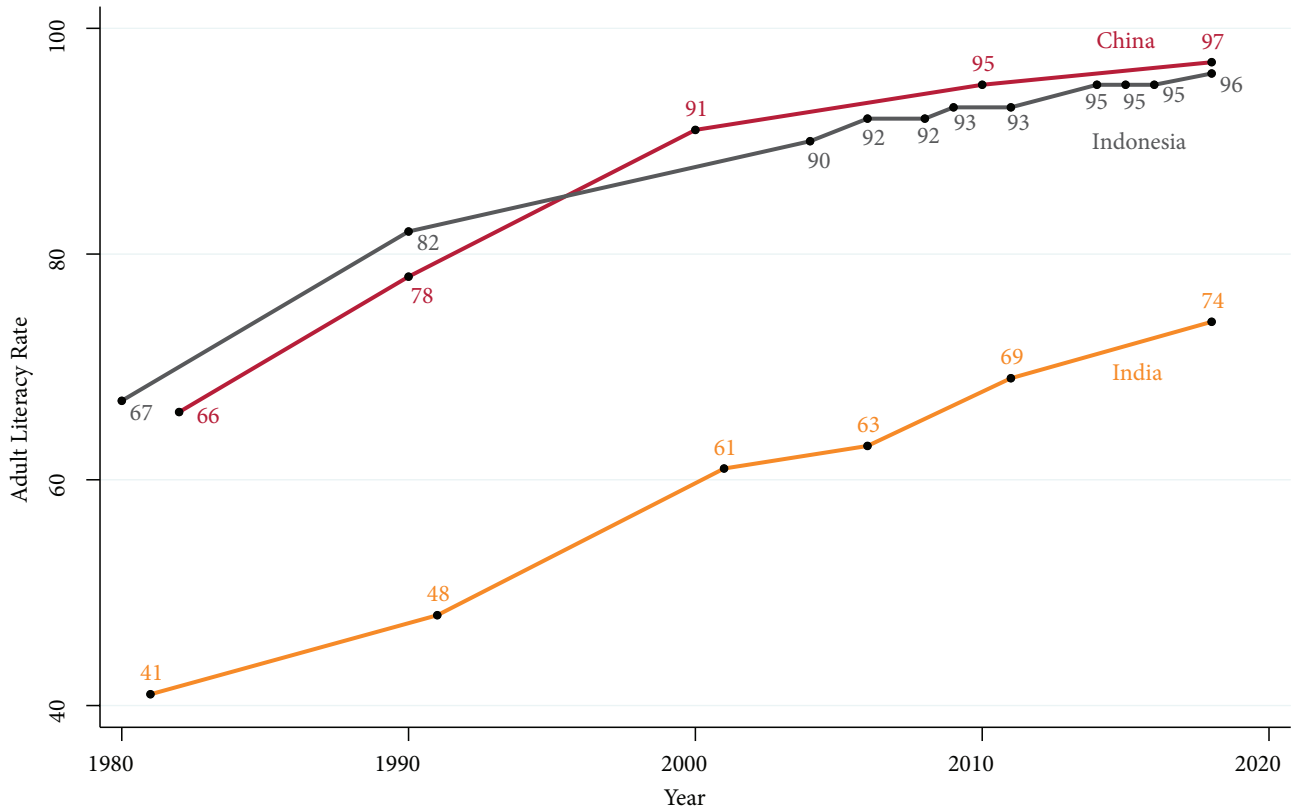
¹⁹ Nachiket Mor and others (2017). p. 399

²⁰ <http://img.asercentre.org/docs/ASER%202018/Release%20Material/aser2018pressreleaseenglish.pdf>
Accessed September 7, 2020.

²¹ For data on Adult Literacy, refer to

<https://data.worldbank.org/indicator/SE.ADT.LITR.ZS?end=2018&locations=IN-CN-KR-ID&start=1981&view=chart>.
Accessed September 7, 2020.

Figure 6: Adult Literacy (% of people above age 15)

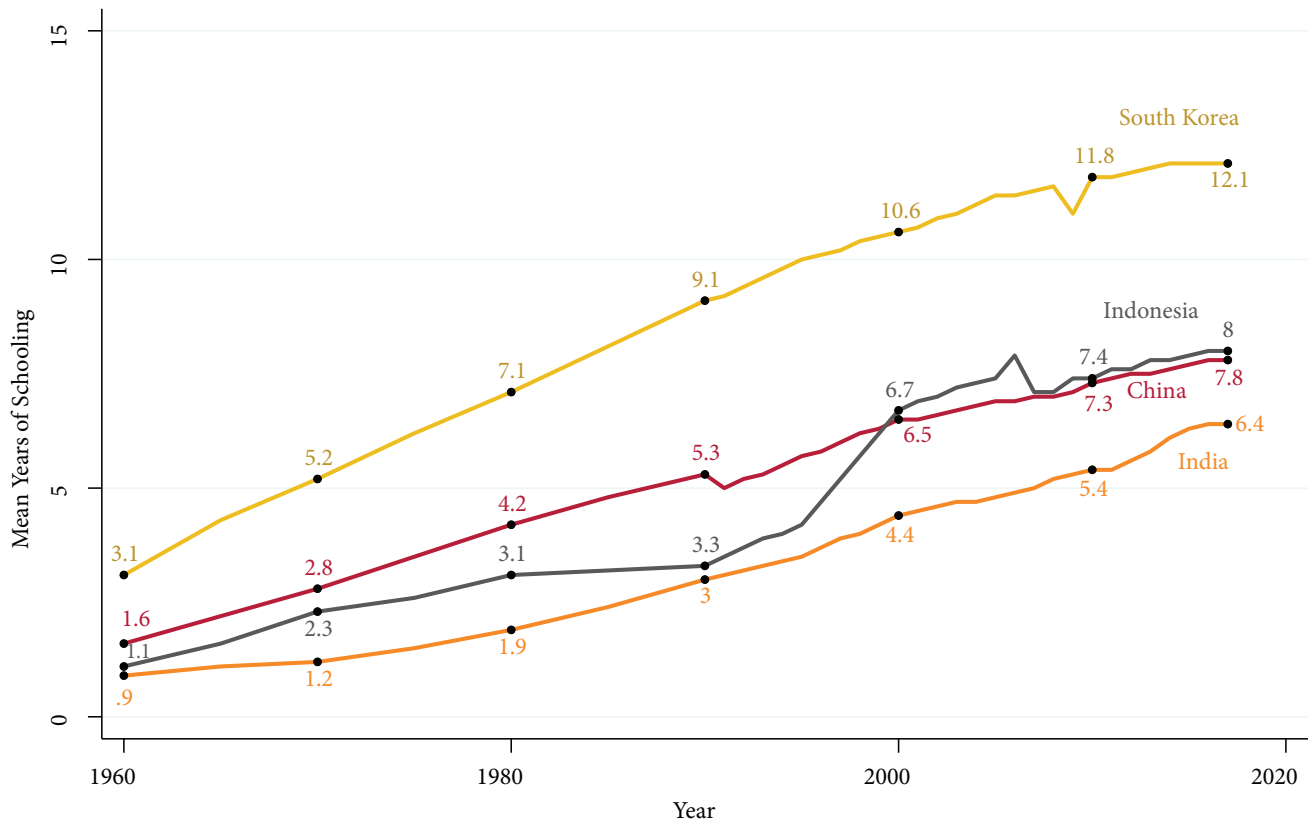


Source: World Bank

Thus, about a quarter of the Indian adult population is still illiterate, with obvious implications for their employability in higher productivity activities in all sectors: agriculture, industry, or services. With the high likelihood that this segment of the population may have suffered stunting in their childhood, the probability of finding vocational training methods for them would also be judged to be low. Given our past sorry record of education, the mean years of schooling for the adult Indian population is still at only around 6.5 years, compared with 7.9 for China and 8.0 for Indonesia. We are about 20 years behind China and Indonesia on this indicator. Once again, this points to the low average quality of the Indian labour force in terms of educational achievement and hence their employability in productive activities.²²

²² For data on Mean Years of Schooling refer to <https://ourworldindata.org/grapher/mean-years-of-schooling-1?tab=chart&country=KOR~GBR~CHN~IDN~USA~JPN~IND> Accessed September 7, 2020

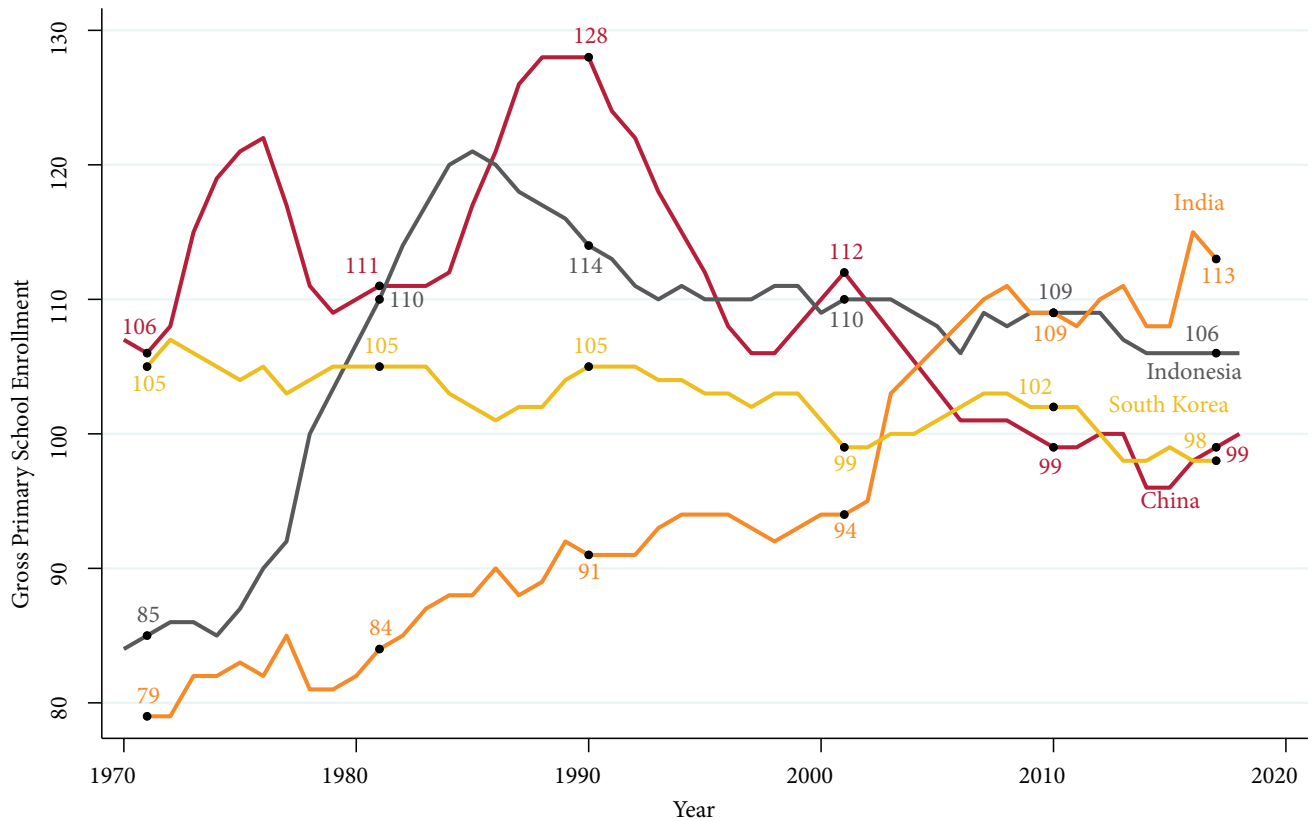
Figure 7: Mean Years of Schooling



Source: World Bank

There are, however, some silver linings in the education scenario in India as it has evolved over the last 30 years or so, relative to the record in the health sector. For example, the gross enrollment ratios (GER) have increased tremendously at each level of education. At the primary level, the GER was just over 90 percent in 1990 and has now been 100 percent over the last 15 years or so. In the cases of China and Indonesia, they reached the hundred percent level before 1990. At the secondary level, India and China were broadly similar, around 37 percent, in 1990, whereas Indonesia had already achieved 47 percent. There has been impressive progress with the doubling of the GER at the secondary level in India to around 75 percent now, while China has reached hundred percent and Indonesia around 90 percent. So, in this regard, India is behind China by about 15 years and Indonesia by about 10 years. Similar impressive quantitative progress has been made in tertiary education, with the GER increasing from 6 percent in 1992 to just under 30 percent now. China's progress in GER in tertiary education has been even more remarkable, increasing from 3 percent to about 50 percent now.

Figure 8: Percentage Gross Primary School Enrollment



Source: World Bank

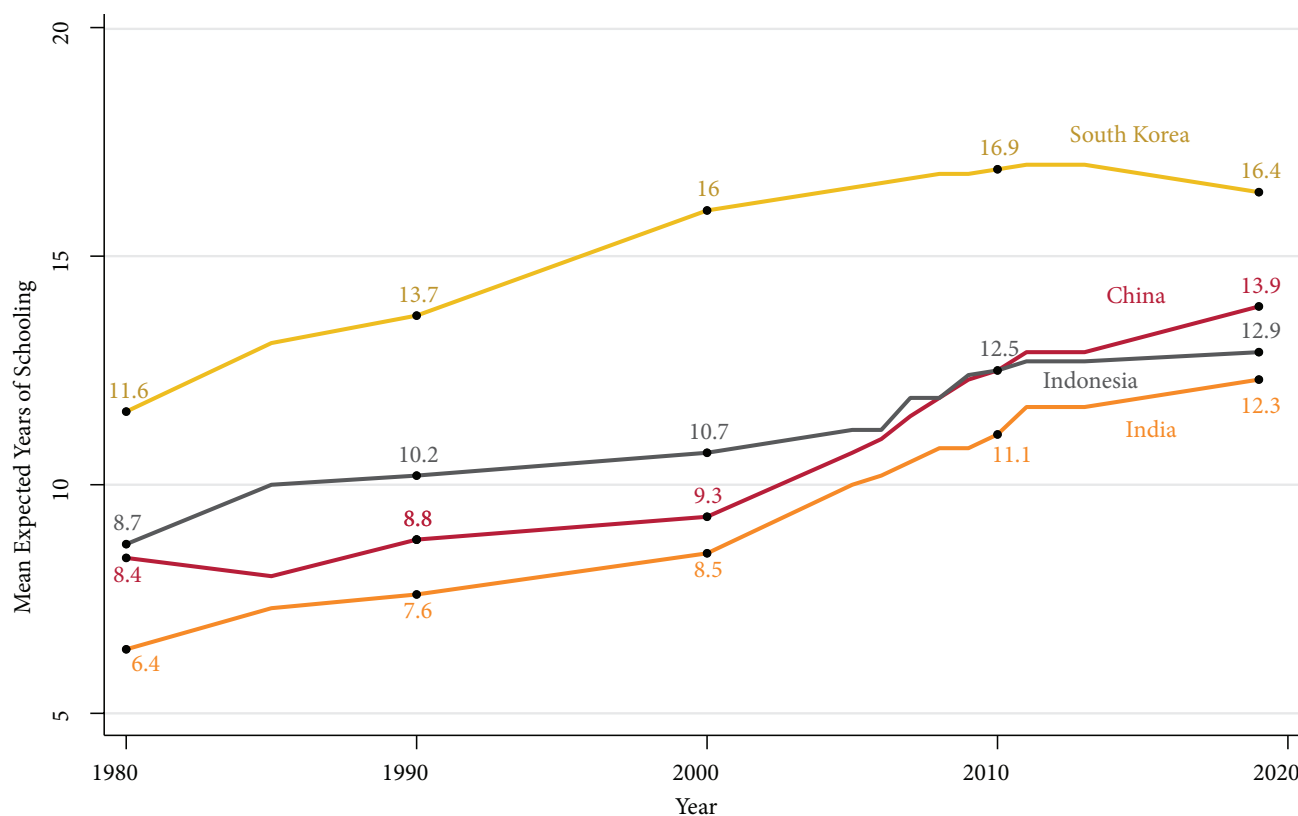
Other Asian countries like Indonesia, have made similar progress. South Korea is now exhibiting 100 percent GER in tertiary education, which is in excess of almost all other developed countries.²³

Overall, there has been an explosive increase in the number of students at every level on a quantitative basis in India, along with other Asian countries.

As a consequence of these increased enrollments at every level, the expected years of schooling for a child entering school today in India has now reached 12.3 years, as compared with 13.9 for China and 12.9 for Indonesia; on this indicator, we are behind both these countries by only 10 years. In developed countries, new entrants to the schooling system are now expected to complete 16 to 18 years of education: so, the competition for labour competence will continue to increase, and this will become increasingly important as economic tasks become complex using higher levels of knowledge and technology.²⁴

²³ For GER in primary education, refer to <https://data.worldbank.org/indicator/SE.PRM.ENRR?locations=IN-CN-KR-ID> Accessed September 7, 2020
 For GER in secondary education
<https://data.worldbank.org/indicator/SE.SEC.ENRR?locations=IN-CN-KR-ID>
 For GER in tertiary education
<https://data.worldbank.org/indicator/SE.TER.ENRR?locations=IN-CN-KR-ID>

²⁴ For data on expected years of schooling, refer to <http://hdr.undp.org/en/content/expected-years-schooling-males-years> Accessed September 7, 2020

Figure 9: Mean Expected Years of Schooling

Source: UNDP Human Development Reports

These developments augur well for the future: the issue now is related to quality, and the generation of jobs that are commensurate with the increased educational attainment of these new entrants. Thus, increasingly, the new entrants to the Indian labour force should be of somewhat comparable quality to our Asian neighbours.

The achievement of sustained high growth and development over the next 20 years will be closely dependent on improvement in human capital at all levels. This seems to have been recognised with the recent National Education Policy²⁵ by the government of India, but it remains to be seen how it will be implemented.

At the higher education level, although enrollment has increased by a factor of four over the past 20 years, there are severe issues related to quality. This has been led by a change in policy at the turn-of-the-century favouring the entry of private colleges, resulting in a proliferation of relatively small private colleges, generally of low quality. There are now almost 50,000 higher education institutions (HEIs) in India with an average enrollment of only about 700, as contrasted with only about 2,600 HEIs in China, implying an average enrollment of around 16,000. The number of institutions in India classified as universities is less than 1,000. Only about 2.5 percent of HEIs have PhD programs, with little emphasis on research in these institutions (S.Ravi and others, 2019). Hence there is an urgent need to launch a program for clustering of colleges to achieve economies of scale and the possibility of placing greater emphasis on postgraduate education and research in the university system. The NEP has policy proposals in this direction.

Overall, in health, education, and water supply, India has consistently underinvested in their public provision in the whole period since independence. A recent careful review of Indian government expenditure, including both the central and state governments, shows that *government expenditure, as a proportion of GDP, has actually fallen from the late 1980s until now in all these areas* (Mundle and Sikdar, 2020). The current total government spending in each of these areas is around 1 percent or less of GDP.²⁶ Utilising the interstate variation in such expenditures and the various state wise health and education indices, Mundle and Sikdar demonstrate a very clear positive relationship between government expenditures and health and education outcomes. Thus, increased expenditures in each of these categories would be very beneficial in obtaining better outcomes in both health and education. They go on to suggest incremental expenditure of about 1 percent of GDP per year in each of these areas (elementary education, secondary education, health, and water supply). Their overall fiscal review suggests that such an increment in these areas is feasible, but with significant reordering of expenditure priorities.

²⁵ https://www.mhrd.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf
Accessed September 7, 2019.

²⁶ In 2015-16 the total countrywide government expenditures on elementary education, secondary education, health and water supply were estimated to be 1.23, 0.79, 0.74 and 0.71 percent of GDP, respectively.

The last 30 years have seen a clear private sector supply response to the increased demand for health services and education at all levels, reflecting the failure of their public provision in both quantity and quality. The way forward is not so much to restrict private provision but much more to improve the quality of public services so that people choose to take advantage of the free or much cheaper public services. This would happen only if there is significant improvement in quality leading to greater trust in the provision of these services, and in quantity. Such a move would then free up money in the hands of the less well-off, increasing demand for growth inducing other essential goods and services. The average Indian clearly pays much more for health and education than any other major country in the world. India would then be more in line with best practices in both developed countries and emerging markets. The improvement in both health and education indices would contribute immeasurably to the possibility of obtaining higher productivity growth in the coming years.

This kind of quality improvement cannot take place without a realisation that government's own technocratic competence and implementation capacity has to be improved.

Restoring the scientific temper: Emphasis on technical competence

A unifying theme underlying the major modernisation effort after independence was the 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 higher education institutions at all levels, there has been much less attention given to the promotion of science and technology and technical competence over the last couple of decades. Sustained growth will require much greater investment in improving the quality of education at all levels, as argued above, greater investment in science and technology in all fields, and greater recognition that the functioning of government itself requires much greater competence.

The building blocks of an institutional framework for enhancing the quantity and quality of education in science and technology have been laid in principle. The number of Indian Institutes of Technology (IITs) has been increased from 5 to 23 in recent years and 7 new Indian Institutes of Science Education and Research (IISERs) have been established. It is reported, however, that these institutions are encountering significant difficulty attracting faculty of the right quality. There is a high level of vacancies in each of these institutions. Many of these institutions are increasing tuition fees significantly, which is bound to reduce access for less well-off students. There has also been a relative decline in the funding of and importance given to public research institutions. Inadequate attention has been given to upgrading the quality of other colleges and universities, where the vast majority of students get their education, particularly in science, technology and mathematics.

As already documented, the last couple of decades have seen a proliferation of private technical institutions at the tertiary level, but their quality leaves much to be desired. If overall technical competence in the country in both the public and private sectors has to be enhanced, there needs to be a renewed emphasis on fostering the development of these institutions, and tuition fees to be kept low in order not to discourage students from modest circumstances.

The lack of emphasis on research is indicated by the low level of R&D expenditures in India compared with other countries. Indian expenditure has stagnated at between 0.75 percent of GDP in the early 2000s and about 0.6 percent now. During this period, China has almost doubled its expenditure on R&D from around 1 percent to more than 2 percent; South Korea is now exhibiting an expenditure of 4.2 percent of GDP, which is the highest in the world. The outcomes of this are also evident in the number of patents being filed: in 2017, less than 15,000 patents were filed in India as compared with almost 1.25 million in China (S.Ravi and others, 2019).

This is too large and complex an area to address in this paper.²⁷ 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 reduced the attraction of the best students to technical fields. A cursory examination of the emphasis that China places 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 incentivise industry for higher technological investment along with regeneration and expansion of public sector research and development institutions. There is a similar need to develop programmes for enhancing technical capacity in all governmental and public sector organisations delivering infrastructure and other investments and services.

Sustained economic growth cannot be achieved without continued productivity enhancement in all areas, which needs a much higher level of attention to science and technology and encouragement of research and development across universities.

²⁷ See Naushad Forbes (2017) on the lack of adequate R and D in universities and in both the Indian public and private sectors.

Infrastructure

All the areas of physical infrastructure involve the management of large systems: airports, ports, roads, 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. The growth and competitiveness of the private sector is heavily dependent on the availability of all such public services at competitive prices.

Management of urbanisation requires strengthening 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 reduction of 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 as well, whereas some private delivery is possible, international experience suggests that basic infrastructure ownership has to be with the government, along with regulation. Similar is the case with ports and airports: typically, ownership is usually with the government or a public authority, while delivery is often privatised. For example, almost all ports and airports in the United States and Europe are structured as public authorities, which then act as landlords of private sector terminals and other service providers.

Some lessons can be learned from international experience. The UK, for example, embarked on the most ambitious privatisation program in its railway system in the late 1990s, which has experienced many difficulties ever since. Thus, a great deal of thought and analysis has to go into the design and management of public infrastructure, whether run exclusively by the public sector or in different forms of partnership with the private sector. What is unavoidable is the acquisition or availability of adequate technical, managerial, policy, and design expertise within the government to design the best systems for delivering essential public services.

Since public management systems are typically very large and complex, they need excellence in public management. The irony, however, is that there is little expertise for such management 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 public sector enterprises manage such large systems, the 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. 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.

How is this to be coordinated?

Transform and Strengthen NITI Aayog to 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^{28, 29} 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. Japan, South Korea, and China) also set up strong, technically competent organisations to oversee and implement their development strategies. In each case, they maintained these organisations until a much later stage of development than what India has attained now.

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, and to provide appropriate periodic guidance to the country as a whole on expectations of the composition of future growth over the medium and long-term. 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.³⁰ 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. This will only be 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.

It is reported that each ministry has now been instructed to develop five-year plans in their respective domains. 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 preparing 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 also no indication of how decisions will be made in terms of trade-offs between competing investments in different sectors. For example, as I have argued, major reorientation in public policy needs to be made towards much enhanced public expenditures on health, education, water supply, sanitation and infrastructure. If this is to be done, there has to be a central agency that mediates between competing demands.

There is as yet no indication of how countrywide strategies are to be coordinated across states. Hence a relook at the structure and functions of NITI Aayog becomes obvious. While keeping the principle of subsidiarity in mind, a key function of NITI Aayog must be both the horizontal and vertical coordination of investments in infrastructure that go across both central departments and state governments alike. Coordination across transport modes is a clear necessity. In recognition of this issue, the National Transport Development Policy Committee had suggested the formation of “Offices of Transport Strategy” (OTS), at both the central and state levels, to devise long-term strategies in this sector since it needs coordination across both time and space (NTDPC, 2014). That recommendation had been made in the context of the Planning Commission. The need to revisit that suggestion has become even more important in light of abolition of the Planning Commission.

Increasing Public Investment Will Need a Higher Tax/GDP Ratio

Overall enhancement of investment will indeed require increases in public investment at all levels: central, state and local. One of the big puzzles of the record of growth in the last 30 years, since the early 1990s, has been the relative stagnation in the overall tax GDP ratio, including both centre and the states, at between 16 to 18 percent of GDP³¹ This is despite a massive tax reform program undertaken at all levels during this period, culminating in the Goods and Services Tax (GST). Higher overall growth cannot be achieved without an increase in the country’s overall tax GDP ratio, which will enable higher public investment where necessary. This involves significant strengthening of fiscal administration at all levels, including in particular at the local level. As stated by Devesh Kapur (2020), “explanations of poor governance and limited service provisioning are intrinsically linked to a state’s limited ability to tax citizens...”.³² This stagnation in tax revenues has increasingly constrained the government’s ability to invest in and deliver public services that are needed by a growing economy.

²⁸ National Institute for Transforming India.

²⁹ 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.

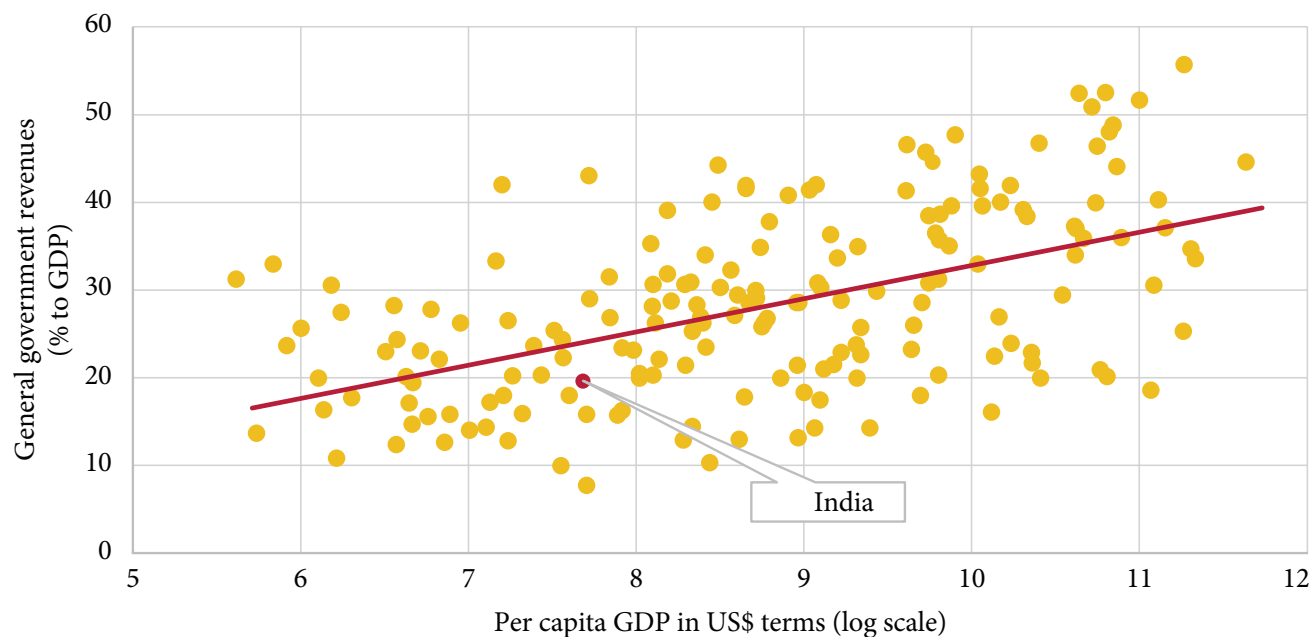
³⁰ Similar arguments have been made by Vijay Kelkar in his Sukhamoy Chakravarty Memorial Lecture (Kelkar, 2019), and Y V Reddy (Reddy and Reddy, 2019), former chairmen of the 13th and 14th Finance Commissions, respectively. Both are also advocates of greater state autonomy in resource allocation.

³¹ See Table 8, p.26 in Mohan (2019) documents stagnation in central government that’s revenues over the last decade, and p.3 in Kapur (2020) since the late 1980s

³² Kapur (2020), p.3.

One of the consequences of fiscal tightness is consistent pressure on the government to look for non-tax resources, be it through public-private partnerships, excessive borrowing, pressure on public sector banks and other financial intermediaries, etc. to fund activities that should otherwise be provided by the state. The negative impact of this fiscal conundrum on the functioning of the Indian financial sector as a whole has been addressed comprehensively by Viral Acharya in his recent book (Acharya, 2020).³³ As I have argued in another paper (Mohan, 2019), there is a clear need to increase the Indian tax GDP ratio by about 3 percent of GDP. This is supported by the fact that the Indian tax GDP ratio is significantly below other Asian countries and others at similar levels of per capita income (Figure 10). Such an enhancement would enable the increase in expenditure suggested for health, education, water supply, sanitation and infrastructure.

Figure 10: General Government Revenues and Per Capita Income



Note: Data pertain to 2018 for 184 countries (all countries with general government revenues below 60 percent of GDP are included in the chart).

Source: World Economic Outlook Database (October 2019), IMF.

The overall conclusion is that the capacity of the Indian state needs significant enhancement in order to deliver all the public services that it should, and to perform other governmental functions, such as standard-setting and regulations, that are necessary for the functioning of a modernising growing economy.

Public Administration: Need for a Comprehensive Revamp

After the private sector's induction 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 reversal brought on by an apparent collapse of confidence within the government itself on 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 only it can provide, and that such services cannot and should not be privatised.

An all-round effort must be made to empower the government with technical competence at all levels, centre, state, and local, in order to restore confidence in their ability to perform the essential functions. A useful rule to follow is the principle of subsidiarity: in areas which do not fall within the exclusive competence of the centre, it should act if and only if the objectives of the proposed action cannot be sufficiently achieved by the states at regional and local levels. The states need to follow the same principle in relation to functioning of the local governments. The Constitution itself provides some guidance in this direction, reinforced by the 73rd and 74th amendments designed to strengthen local governments.

³³ Viral Acharya was Deputy Governor of the Reserve Bank of India during 2017-19

Furthermore, the private sector should not be distracted from its own core business functions towards its involvement in delivering public services, which ought to be the government's domain.

Hence, there is the broad issue of the continuation of the extant, somewhat archaic, system of public administration in India. We inherited the colonial system of general administrators staffing both secretariat functions in state and central governments, and also district administrative functions. In this system, 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. The main function of administrators during the colonial times was to maintain law and order. There were no development tasks of note, as illustrated by the very poor development indicators at the time of independence. Thus, the administrators had very clear objectives, and in some sense, were specialists in administration. There are few countries in the world, if any, where such systems continue to exist. In most countries, local administration is done by some form of locally 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 devolution of higher-level funds.

There is no doubt, however, that given the extreme diversity that exists in India, and its federal nature, there is a political, social and administrative need for mechanisms that promote unity of the country. The all-India services have indeed performed this role with some success in the formative stages of the Indian Republic after independence. A significant revision of the current system will therefore require a great deal of thought, ingenuity and innovation: one that combines some level of presence of all-India services at the local level promoting national unity and integrity, while promoting the empowerment of local government.

In India, since most financial and 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. State departments and officials carry out most administrative and development functions. The basic administrative unit in India is the district. As population grew over time, the number of districts also increased, and there are now about 730 districts in the country. The average population per district at about 1.8 million is still huge. As it happens, more than 50 countries in the world have populations less than the average Indian district! Any examination of the governance arrangements at the district level would suggest that India's basic administrative unit is relatively under administered.

With state officials being transferred regularly and frequently, no local level expertise can develop. There is little involvement of local people in the determination of their own destiny. Consequently, public service planning, management and delivery suffer at all levels. Within districts, of course, there are local governments at both the town and city levels, and panchayats in rural areas, but they perform limited functions. India stands out in its low level of empowerment at the local levels of government. In the United States and China, around two-thirds of government employees work at the local or sub-provincial levels, whereas it is only 12 percent in India. This is also reflected in the low level of local government expenditure amounting to only 3 percent of India's total government expenditure, compared with 27 percent in the United States and 51 percent in China. Correspondingly, despite their lower expenditures, Indian local governments raise only 6 percent of their total resources, the rest being devolved from higher levels. It is then not surprising that the basic public services have not been provided adequately in India; they being the province of local governments in most countries³⁴ (Kapur, 2020).

The main administrative powers and functions rest with the IAS and IPS officers, assisted by other government officials representing the state's various technical departments. It is worth noting that, countrywide, there are only around 5,000 officers in each of these elite services at present. Therefore, the administrative and law and order system of the country is extremely stretched and has not kept up with the times. Moreover, mainly for political reasons, the average tenure of officers in a district is very low, about 15 months.³⁵ As development has proceeded apace, there are a large number of programmes that need to be administered at any given time. Most of these programmes are carried out by representatives of state-level technical departments in a top-down manner. Given the very short tenures of the key district officers, as well as those of technical departments, there is little local knowledge or expertise that is developed; moreover, there is no incentive for these officers to develop an interest in local issues and development concerns. As noted, with the top-down fiscal system, almost all resources at the local level come from state or central government programmes. Local governments are, therefore, peripheral, with few resources of their own and with limited functions. In cities, even the municipal authorities' commissioners are from the IAS, who may be competent but have little intrinsic interest in the cities whose development they are responsible for.

Therefore, there is a crying need in India for recognition of this problem and of a new system that is designed to empower and develop local governments technically at all levels. As of now, there is an almost complete absence of any kind of technocratic expertise at the local-level. Thus, local level initiative and entrepreneurship are heavily circumscribed.

³⁴ In the United States, for example, the period, "1870-1940, witnessed an extraordinary investment by state and local governments in both education and infrastructure. This was the period when clean running water and sewer pipes reached most of urban homes, an achievement that was largely financed by local governments rather than by private commerce..... State and local governments worked together to finance the expansion of education from the 1870 attainment of elementary school graduation to a transition that occurred mainly in 1910 and 1940 toward universal high school graduation." Gordon (2016), p. 314.

³⁵ <https://www.livemint.com/news/india/the-good-and-bad-news-in-bureaucrat-transfers-1555928850522.html>
Accessed September 5, 2020

Similar problems exist at the secretariat level at both the central and state levels. With increasing global complexity and interrelationships, most governmental functions require extensive domain knowledge for effectiveness in governance. Whereas technical expertise is not necessary for secretariat functions, domain knowledge is. Here again, with the existing Indian civil service system, generalist civil servants may be field district officers one day and state or central government secretariat functionaries the next day. There is no necessary continuity in the areas in which they work. 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 secretaries³⁶ in charge: for example, between 2010 and 2014, each of the transport ministries had between three to five secretaries.³⁷ It is, therefore, difficult for knowledge-based reform or policymaking to be made in such circumstances. Institutional history and domain knowledge are then the province of the longer-lasting, lower-level officials who are generally much less competent.

Therefore, policymaking is much more subject to the whim and fancy of political and administrative leaders who necessarily have to react to current pressures at any given time. The lack of technocratic capacity within government is currently leading to increased usage of management consultancy firms whose personnel have little public policy expertise themselves. *Injecting technocratic capability in government is, therefore, a necessity in order to cope with the new global and domestic challenges.*

One estimate of the strength of the central government (not including employees of public sector enterprises, the railways and public sector banks) suggests that there are only about 1.6 central government employees³⁸ in India per thousand population, as compared with more than 8 in the United States. Whereas India's population increased from 846 million to 1.2 billion, by about 40 percent between 1991 and 2011, total public sector employment actually fell by more than 5 percent. Even the absolute size of the elite services fell by 10 percent over this period. 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. The judicial system is reported to have a backlog of more than 30 million cases; it is further estimated that about 10 percent of these cases have been pending for more than 10 years. Justice delayed is justice denied.³⁹ Kapur (2020) also reports that, even with these low levels of staffing, there is a consistent malaise of high levels of vacancies at any time: 1/5 of central government positions are vacant, 1/3 of high court judges, 1/5 of the Supreme Court judges, 1/4 of district judges and police, and 1/3 of faculty positions even in the highly respected Indian Institutes of Technology.

One positive development that has taken place in terms of governance over the last 25 to 30 years is the setting up of various regulatory authorities to oversee tasks that were earlier performed by administrative ministries.⁴⁰ A certain degree of domain knowledge is developing among the staff of these new authorities, but building such institutions takes time. However, most of these authorities continue to be headed by retired IAS officials reducing the incentive for experts to join these authorities. Each of them needs to enhance the level of technical competence in their staff at all levels, along with the size of the staff in each case. For example, SEBI is now about 25 years old, but its staff at the professional level still number less than about 800; its US counterpart, the Securities and Exchange Commission has about 4,500 staff.

Even the oldest regulatory authority, the Reserve Bank of India (RBI), is relatively thinly staffed compared to other central banks and financial regulatory authorities. Despite being a full-service central bank, in charge of a whole host of functions including monetary policy, government debt management, banking supervision and regulation, currency management, foreign exchange and results management, etc., it had a total of only 6,670 professional staff in 2019. Despite the continuous expansion and increase in complexity of the financial sector that it regulates and supervises, its staff strength had actually come down from around 9,400 ten years ago in 2009. In comparison, the United States Federal Reserve system employs as many as 22,000 people, whose average technical quality is likely to be higher than the RBI.⁴¹

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. There is a need for increasing both numbers as well as technical and domain competence. 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.

³⁶ Administrative heads of ministries.

³⁷ See National Transport Development Policy Committee (NTDPC) (2014).

³⁸ Excluding railways and postal service employees.

³⁹ See Devesh Kapur and others (2017) p.5.

⁴⁰ These relatively new regulatory authorities include the Securities and Exchange Board of India (SEBI), the Telecom Regulatory Authority of India (TRAI), the Central Electricity Regulatory Commission (CERC) and State Electricity Regulatory Commissions (SERCs), the Competition Commission of India (CCI), Tariff Authority for Major Ports (TAMP), the Pension Fund Regulatory and Development Authority (PFRDA), and the Insurance Regulatory and Development Authority (IRDA), among others.

⁴¹ The data reported in this paragraph have been taken from the respective annual reports of institutions mentioned.

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? First, we need to make public service prestigious again relative to the private sector: not for the exercise of power and authority, but for tackling effective governance challenges and 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 building cadres of domain expertise in different areas in the government itself at all levels, centre, state and especially local. As documented, contrary to popular perception, the Indian government is significantly understaffed at all levels, both in numbers as well as in domain competence. If a systematic programme is indeed developed for lateral entry they would need to balance those who come for specified limited periods and others who come on a relatively permanent basis once inducted. There is also value in maintaining the current administrative services that serve at different times across districts, state secretariats and central levels through their careers. They provide stability and continuity in administration along with the unity of the country.

The administrative reform programme has to be systemic and systematic, not piecemeal, but adequately phased to minimise disruption. Such a reform must examine the modes of staffing in the government itself at both the central and state levels, their technical departments, and also the various public authorities such as urban development authorities.

Only if such widespread administrative reform is undertaken on an urgent basis can we expect improvement in public service delivery of all kinds necessary to take the country forward on an accelerated path of growth and development.

Concluding Remarks

Since independence, India's growth record suggests that it is capable of 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.

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. The COVID crisis has set us back, along with the rest of the world, by at least a couple of years. Hence, there is no time to lose.

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.

Incentivising 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. This article has argued in favor of a growth policy focus that takes account of these issues.

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. *I have demonstrated that India's largest failure has been in the provision of universal public service delivery to ensure adequate nutrition, health and education for its whole population. This then must be the highest priority for public policy going forward for growth and development.*

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. 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. *This will need enhancement of the technical capacity of government at all levels, as argued in this paper.*

The key departure made in this paper is to emphasise the role of the state in promoting economic growth. Countries that were most successful in maintaining high growth rates for three decades or more were those whose governments succeeded in setting up growth-promoting governmental institutions to coordinate public investments while also incentivising the private sector to make the kind of investments necessary for a growing, dynamic economy. Most of the economic policy reforms undertaken since 1991 have been designed, quite appropriately, to reduce government interference 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 perform, directly or through public authorities.

The third generation of economic reforms must address this lacuna in policy and direct attention to improving the government's own competence, both administrative and technical, at all levels.

References

- Acharya, Viral (2020). *Quest for Restoring Financial Stability in India*. New Delhi: Sage Publications.
- Central Square Foundation (2020). *State of the Sector Report: Private Schools in India*. New Delhi: Central Square Foundation.
<https://centralsquarefoundation.org/State-of-the-Sector-Report-on-Private-Schools-in-India.pdf>
- Cutler, David M., and Grant Miller (2006). The Role of Public Health Improvements in Health Advances: The Twentieth Century United States." *Demography*, Volume 42, No. 1 February: pp 1-22.
- Forbes, Naushad (2017). "India's National Innovation System: Transform or Half Formed?" In Rakesh Mohan (ed.), 2017. Pp 508-540.
- Gordon, Robert J. (2016). *The Rise and Fall of American Growth: The US Standard of Living Since the Civil War*. Princeton N.J. Princeton University Press.
- Green, Harvey (1986). *Fit for America: Health, Fitness, Sport, and American Society*. New York: Pantheon Books.
- Government of India (2011). *Report on Indian Urban Infrastructure and Services*. New Delhi: The High Powered Expert Committee (HPEC) for Estimating the Investment Requirements for Urban Infrastructure Services. (Chair: Isher J. Ahluwalia).
<https://icrier.org/pdf/FinalReport-hpec.pdf>
- Kapur, Devesh, Pratap Bhanu Mehta and Milan Vaishnav (ed.) (2017). *Rethinking Public Institutions in India*. New Delhi: Oxford University Press. 2017.
- Kapur, Devesh (2020). "Why Does the Indian State Both Fail and Succeed?" *Journal of Economic Perspectives*, Volume 34, No. 1, Winter. Pp. 1-24
- Kelkar, Vijay (2019). *Towards India's New Fiscal Federalism*. Dr Sukhamoy Chakravarty Memorial Lecture. Working Paper No. 252. New Delhi: National Institute and responding guys in Boston on
https://nipfp.org.in/media/medialibrary/2019/01/WP_252_2019.pdf
- McDowell, M.S. (1929). "What the Agricultural Extension Service Has Done for Agriculture," *Annals of the American Academy of Political and Social Science*, Volume 142, March 1929: 250-56.
- McKinsey Global Institute (2020). *India's Turning Point: An Economic Agenda to Spur Growth and Jobs*.
<https://www.mckinsey.com/featured-insights/india/indias-turning-point-an-economic-agenda-to-spur-growth-and-jobs?cid=other-eml-alt-mgi-mck&hlkid=ce77e7f421a74dfab80602a60dbbcd54&hctky=3171607&hdpid=aeb64e8d-770a-47cf-8fc6-e8448bf17b4e>
- McKinsey Global Institute (2020). *Outperformers: High Growth Emerging Economies and The Companies That Propel Them*.
https://www.mckinsey.com/~/_media/McKinsey/Industries/Public%20and%20Social%20Sector/Our%20Insights/Outperformers%20High%20growth%20emerging%20economies%20and%20the%20companies%20that%20propel%20them/MGI-Outperformers-Full-report-Sep-2018.pdf
- Mohan, Rakesh (2011). "The Growth Record of the Indian Economy: A Story of Sustained Savings and Investment". Chapter 1 in Rakesh Mohan, *Growth with Financial Stability: Central Banking in an Emerging Market*. New Delhi: Oxford University Press.
- Mohan, Rakesh (ed.) (2017). *India Transformed: 25 Years of Economic Reforms*. New Delhi: Penguin Random House.
- Mohan, Rakesh (2019). *Moving India to a New Growth Trajectory: Need for a Comprehensive Big Push*. Brookings India Research Paper No. 072019. New Delhi: Brookings India.
https://www.brookings.edu/wp-content/uploads/2019/06/MOVING-INDIA-_Final.pdf
- Mor, Nachiket, Diva Dhar and Sandhya Venkateswaran (2017). "Health Care in India: A Fork in The Road". In Rakesh Mohan (ed.), 2017. Pp 369-384.
- Mundle, Sudipto and Satadru Sikdar (2020). "Subsidies, Merit Goods, and the Fiscal Space for Reviving Growth". *Economic and Political Weekly*, February 1, 2020, Volume LV, No. 5. Pp is 52-60.

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

https://niti.gov.in/planningcommission.gov.in/docs/reports/genrep/present_ntdpc2802.pdf

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

Panagariya, Arvind (2020). India: Accelerating Growth, Creating Well Paid Jobs for the Masses. *India Public Policy Review*, Volume 1, No. 1 August 2020.

Papola, T.S. and Partha Pratim Sahu (2012). *Growth and Structure Of Employment in India: Long-Term and Post-Reform Performance and the Emerging Challenge*. New Delhi: Institute for Studies in Industrial Development.

http://111.93.232.162/pdf/ICSSR_TSP_PPS.pdf

Rangarajan, Chakravarthy and D.K. Srivastava (2020). "India's Growth Prospects and Policy Options: Emerging from the Pandemic Shadow". *India Public Policy Review*, Volume 1, No. 1 August 2020.

Ravi, Shamika, Neelanjana Gupta, and Puneeth Nagaraj (2019). *Reviving Higher Education in India*. Brookings India Research Paper No. 112019-01. New Delhi: Brookings India.

<https://www.brookings.edu/wp-content/uploads/2019/11/Reviving-Higher-Education-in-India-email-1.pdf>

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

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.

World Bank (2008). *The Growth Report: Strategies for Sustained Growth and Inclusive Development*".

Washington DC: Commission on Growth and Development⁸. <https://openknowledge.worldbank.org/bitstream/handle/10986/6507/449860PUB0Box3101OFFICIAL0USE0ONLY1.pdf>

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