

**Background Paper for IGIDR Symposium on  
“Future of India”**

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# **IGIDR CEA Symposium on “Future of India” Background Paper**

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## Session 1. Macroeconomy, Finance and Regulation<sup>2</sup>

For India to be a USD ten trillion dollar economy in 2030 from its 2016 level of 2.26 trillion its real rate of growth must be at least 7% per annum. A faster growth of 9% will give it 4 trillion more of GDP. But can Indian real growth rate accelerate above 8 per cent?

As a ten trillion dollar economy its per capita income will rise to USD 7040 from 1709 in 2016. It will shift firmly from the World Bank's lower income group to the upper-middle income group, which starts at a per capita income of USD 3856. An upper-middle income economy has multiple dispersed reinforcing growth foci. The bottlenecks that restrain low income economies are relieved.

The bottlenecks India has to grow out of include poor public services, congestion and pollution, failures of market integration in agriculture and in industry, poor health, nutrition and poor quality education, failures in land, labour and financial markets, and of fiscal federalism giving a heterogeneous quality of life in India's States. It is a long road to overcome these but India is well set on it now. These are all attributes of economic inclusion. It is a puzzle that the full political inclusion India had at independence did not lead to economic inclusion. It maybe heterogeneity and poverty allowed the creation of caste and community-based vote banks. But today a more aware electorate demands governance, development, and economic opportunity, and therefore is slowly getting it (Goyal, 2015).

India's demographic dividend is an opportunity and a challenge. By 2020 its estimated average age of 29 and dependency ratio of 0.4 will be the lowest in the world. But finding jobs for 12 million young people entering the labour force each year, and millions transferring out of low productivity agricultural jobs is a major and continuing task. The inability to deliver good jobs is partly responsible for India's labour participation rate of around 50 being one of the lowest in the world—the world average is 63. Women have dropped out of the labour force in large numbers.

World Bank estimates also give 23.6% of Indian population, or about 276 million people, living below \$1.25 per day on purchasing power parity in 2011. The Rangarajan Committee's (Planning Commission, 2014) estimate for the similar period was 363 million (29.5% of the population). Of course distribution of income also matters, but higher growth has been a major factor bringing down Indian poverty ratios, which were above 50 % in the 1960s. Therefore it is worrying that Indian growth rates have slowed by about 2% since 2011. An estimate of the output loss over 2011-2017 from each 1% slower growth over 2011-17 is Rs 10 trillion GDP or about 200 USD in per capita terms (Goyal, 2017a). A loss of 400 USD is not minor for the potential improvements it could have brought to the millions living at less than \$ 1 per capita.

In 2011, after a series of global shocks, India's macro economy was fragile, with a depreciating rupee, widening current account deficit, and high food inflation. Policy actions

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<sup>2</sup> The lead contributor to this section is Ashima Goyal.

since helped improve these fundamentals. A path of fiscal consolidation and implicit flexible inflation forecast targeting was adopted in 2014. This was also the year when a fall in international oil prices brought down inflation below targets and opened space for macroeconomic stimulus, which, however was not utilized, despite a negative output gap. Similarly in 2016, despite major negative shocks, space available for countercyclical macroeconomic policy was not utilized.

Goyal (2017b) broad-brushes macroeconomic policy into two types: Type I takes a narrow supply-side approach, where all available factors of production determine potential growth, while demand affects only inflation not output. It leads to a sole focus on structural reform. It is related to monetarist theories or the capital market perspective. Type II views potential growth as uncertain in an economy in transition. As under-utilized factors begin to be used more productively, demand need not be inflationary and can play a major role in shifting to a higher level of performance that can have persistent effects. It is closer to Keynesian theories or the labour view that values the creation of employment, but it differs in bringing in structural EM features not normally included in Keynesian theories. Its view of expectations as self-fulfilling, makes it is even more appropriate for economies where there are inherent grounds for business optimism.

Indian macroeconomic policy, especially since 2013, has been of Type I. Can India's poor and unemployed afford to wait long years for all bottlenecks to be resolved, before growth takes place?

With this background we turn to some specific questions:

### **1. Investment, credit and growth slowdown and policy response: There has been too much focus on longer term structural reforms, macroeconomic policy has neglected the collapse of aggregate demand.**

Apart from the recent slowdown from Q2 2016-17 that is showing signs of reversing, there is a longer term growth slowdown. Average annual growth was 8.5% over 2003-04 to 2010-11 but 6.7% over 2011-12 to 2016-17. New GDP series showed a rise in growth to 7.2 in 2014-15 from 6.1 the previous year. But this is controversial since the WPI used to deflate inputs was, in this period, much lower than CPI. The new IIP also shows lower industry growth than NAS. Therefore growth may actually be lower. Moreover, there is excess capacity in industry and slow employment growth, and a clear slowdown in private gross fixed capital formation and in bank credit.

Inflation targeting seems to have been interpreted too strictly giving very little weight to growth. The RBI's own studies show monetary policy impacts output with a lag of 2-3 quarters and inflation with a lag of 3-4 quarters, but effect of the interest rate on GDP 2-3 times greater than its effect on inflation. Since the aggregate demand channel is weak, the focus should have been on anchoring inflation expectations. An upward bias in inflation forecasts, however, weakened this potentially effective channel. The focus on reducing aggregate demand resulted in a large output sacrifice.

Fear of outflows and ratings agencies drove fiscal consolidation. The new Committee on FRBM in deriving such a future path assumes the real interest rate will exceed the growth

rate! This cannot be true on a high catch-up growth path. Countercyclical space created is not being used.

There is an argument that firms' debt and banks NPAs limit credit and investment, not interest rates. But that banks are holding excess SLR, ECBs and market borrowings are also low, and firms are not borrowing from non-PSBs all suggest demand is the current binding constraint.

## **2. Aligning of macro prudential regulation with macroeconomic policy: Before the global financial crisis India was one of the pioneers in this, but now both tend to be pro-cyclical together. They have both tightened in a downturn.**

In the mid-2000s the RBI successfully used countercyclical provision weights before such policies became fashionable internationally after the global financial crisis (GFC) (Reddy, 2010). Under Dr. Bimal Jalan the RBI pragmatically and flexibly reduced NPAs with a combination of accommodation, regulatory tightening and macroeconomic stimulus.

But today Indian banks that were not even implicated in the GFC, are being forced into a developed country mold with standards even tighter than Basel III, IndAS to be implemented one year before it is internationally, and strict provisioning. In India bank credit and deposits are the major avenues for finance and savings unlike the US where markets dominate. Can we afford to destroy our banks in the hope that markets will develop?

There was poor sequencing in the action on NPAs. Resolution should have first priority in Indian conditions, where infrastructure is potentially viable given India's population density. These are not zombie firms that must die; but owner's must also bear risk and have adequate equity. Recognition was implemented first without fund infusion in a high interest rate regime that added to corporate debt and NPAs. Bank recap bonds are an excellent move. But demand stimulus must complement them. Infusion must be partly conditional on resolution actions and decisions. The IBC will help hasten decisions.

A large amount of savings are going into equity markets through mutual funds. This is good and will reduce dominance of foreign inflows. But some countercyclical prudential measures are required to reduce froth.

One of the focus areas in discussing regulation is the rule of law in a broader context. Be it in the overall macro-economic context or specifically in finance, an emerging economy like India is constantly bringing in new laws and regulations at par with international best practices. The institution of Central Goods and Services Tax Act, 2017 (GST Act), the enactment of the UIDAI Act 2016, or the slew of regulations in the banking sector and securities markets, have been extensively debated in terms of its impact on the efficiency and transparency in market transactions in different spheres of activities. However, what has received relatively little attention among policy makers and framers of laws is the efficiency in enforcement of such laws and regulations. Despite having extensive governance laws in the books, most often transplanted from developed countries,, the virtual absence of the rule of law in many developing and transition economies is blamed on weak enforcement mechanisms. For instance, in the context of corporate governance regulations

in India, it has been observed that while there are stringent corporate governance guidelines in the country that are in line with international best practices, and "outstrips" that of many countries, there is a "wide gap between prescription and practice." Recent literature on rule of law and economic growth has tended to highlight the significance of this gap by showing that the long-run growth of economies correlates positively more with "laws-on-the-ground" than with "laws-on-the-book". In various rule of law indices, while India scores relatively higher than other emerging economies in the quality of law, it falls substantially behind with respect to its enforcement. Weak enforcement is pervasive in India and the discussion on this issue can take place particularly in the context of either the enforcement of the GST or UIDAI Acts.

### **3. Thinking about innovation, what are the key driving forces of innovation that one should focus on? Do we have comparative advantage in such driving forces at least in a few select areas? Can we hope to become a major innovation hub in the World by 2030 in those few select areas?**

An economy in transition should be one which is innovating. World productivity growth has slowed after the GFC but it has continued here, although India has a long way to go from its current levels of about 45 to reach the US frontier at 100. Catch-up can be one driver of innovation. Diversity is another. New technologies that leverage youthful skills and reduce prices to target low income masses can give India a special advantage. The mobile is an example.

Goyal (2017c) shows that while pure income transfers need not shift the poor to dynamic technologies that show continuous improvement, better public services would do so. This would also induce more innovation in accessible technologies as their market size increased. And innovation reduces costs.

Aadhar and GST give one of the world's largest data base that can be used for various innovations including in fintech. Internet based businesses including retail will be a major source of innovations given India's large consumer base. Shifting to renewable energy sources and environment friendly technologies will be another.

### **4. How do we go about designing a tax structure that brings in greater efficiency in both design and tax collection? How does GST fare by those criteria?**

Tax reform is slowly increasing India's tax base and shifting the social norms from one where it was alright to avoid taxes to one where the majority is willing to pay. Incentives are also working in that direction. GST makes it a firm's interest to ensure that its supplier pays taxes since only then can it claim credit. Industry becomes a giant tax collector.

The focus on information and assuring States against revenue loss has made GST unnecessarily complex. As the tax base and compliance increases rates can come down, and the excessive inputting and matching of invoices imposed to catch all transactions be removed. Simplicity aids compliance, and the latter breeds trust.



Direct taxes are also on a path of increasing the tax base through better compliance, driven by better data and lower rates, and reduction of exemptions.

## 5. To what extent the political economy of India supports the parallel economy?

Since the informal sector is heavily cash-dependent, it bore the brunt of cash withdrawal. The problem is that GST also hurts the informal sector. Whether costs of forced formalization will be larger than the benefits will become clear only over the longer-term. That society itself, however, largely supports the policies shows a willingness to undertake costs to increase the tax base and reduce corruption.

The set implemented do have the advantage of leveraging new technologies and global trends against tax evasion to create potential long-term benefits. For example, better data is allowing NBFCs and new fintech companies to assess risks and lend to the informal sector with low lags based on cash flows rather than collateral. Better records and accounts, as the large grey market shrinks, will facilitate bank lending to small firms.

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## Session 2. Structural Transformation: Sectoral Issues in Agriculture, Industry and Services<sup>3</sup>

India's development trajectory thus far stands out among other countries in that the economy has transformed from being predominantly agricultural at Independence from colonial rule in 1947 to being services dominated, largely bypassing the phase of rapid industrialization that other high income countries witnessed during their own development. While agriculture now accounts for less than a fifth of GDP, it still remains the main source of employment for nearly half the labour force. For the unskilled workers migrating out of agriculture it is the low value services and not manufacturing that is the first port of call. Share of manufacturing in total employment has remained fairly low at about 12 percent. This is in sharp contrast, not just with the developed countries, but even with Asian peers such as China and South Korea where it is higher at around 16 percent to 19 percent.

The reasons behind this pattern of growth are widely recognized. They lie (i) in the factors that have constrained more rapid industrialization, which are mostly poor infrastructure, land availability constraints, and restrictive labour laws; and (ii) factors that have not constrained services sector, especially high technology and financial services, from latching onto the positive forces of globalization, viz., absence of restrictive labour laws applicable to services, relatively less requirement for land and local infrastructure, and greater dependence and relatively easier access to global infrastructure made possible by the deregulation and subsequent growth of the telecommunications sector.

In a recent study, Ahsan and Mitra (2017) show that structural change as it has happened has nevertheless contributed positively to growth in the period after the 1990s reforms. They argue that workers have moved from sectors with low labour productivity (value added per worker) to those with relatively high labour productivity thereby resulting in growth in aggregate labour productivity in the country. Despite this positive finding, questions on the long-run sustainability of this development pattern, especially its ability to pull out unskilled labour from agriculture and rural areas and bring about a transformation in their lives have been questioned by many including in policy circles. Of particular concern has been the inability of manufacturing so far to be an engine of structural transformation. Arguably, this concern / realization perhaps underlie the present government's "Make in India" initiative.

A plausible alternative perspective on structural change is provided by Edmund Phelps (2013) in "Mass Flourishing". Phelps delves into the question of what is wrong with the West's Economies as well as its Economics. Among the many ideas that he puts forth, two stand out starkly; these are the notions of "Corporatism" and "Flourishing". He argues that starting from a benchmark which lacked inclusion of the less advantaged, viz., access to jobs offering work and pay that provide them 'self-respect', 'modern corporatism' founded on the idea that the national governments ought to provide benefits in the form of tax exemptions or grants or merely free service to groups that are better able to organize

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<sup>3</sup> The lead contributors are P. G. Babu, S. Mahendra Dev, and A. Ganesh-Kumar

themselves such as corporations, unions or select consumer groups, further aggravates the initial lack of inclusion (Phelps, 2015). 'Flourishing' too has a philosophical origin in the notion of 'good life', which according to Professor Phelps is an experience that deeply involves employing one's imagination and creativity in finding new ways to produce or new things to produce. In short, it is 'the experience of using one's mind' irrespective of the social class.

Let us look at these two ideas from the point of view of India's development experience since independence in 1947 up to 1990s when economic reform was initiated. India, since its independence, limited its economic integration with the rest of the world<sup>4</sup> and tried to follow a path of self-reliance. The self-reliance was supposed to be achieved by the State through its conscious investment in industrialization, particularly in the so-called 'formal sector', which otherwise was believed not to have happened, given the high propensity to consume of the richer part of the population. It resulted in many 'formal' public sector industries - in sectors such as Cement, Oil, Steel and Manufacturing. This basic proposition led to two distinctly different paths for agriculture (which can be viewed as predominant part of the so called 'informal sector') and for (formal sector) industry, which would form the basis for our two stories: one formal and the other informal.

Against this background, several questions and issues of policy concern arise.

## **1. Corporatism versus mass flourishing – formal versus informal**

Let us briefly summarize the two stories. In the predominantly agriculture sector, the green revolution involved both 'new things to produce' as well as 'new ways to produce', and permeated through all strata of a poor agricultural economy infusing information, dynamism as well as acceleration of agricultural productivity and self-reliance in food stocks, thereby highlighting how 'mass flourishing' works, to borrow from Phelps (2015), to create "a 'good enough' economy with high enough wages, low enough unemployment and wide enough access to engaging work". Through a major innovation phase of HYV seeds, popularly known as 'green revolution', we went from recurring famines and acute paucity of food grains to one of self sufficiency.

The Indian 'formal sector' industrialization process post independence till 1980's conforms to all the ills of 'corporatism' pointed out by Edmund Phelps: absolutely no drive to innovate or even adapt better technologies by the domestic producers, little effect on unemployment, stagnation of real wages, apart from growing indebtedness. To twist a familiar belief that India moved from 'state led capitalism' to that of 'market led capitalism' (Mohan 2002) on its head, we can argue that India moved from 'state led corporatism' to that of 'market led capitalism'. In industrial sector, India took a top heavy approach and made huge public investments in 'formal sector' heavy industries funded through foreign aid, indirect taxation and deficit financing, and protected them from international competition. This led to complete lack of innovation, inadequate job creation, stagnant real

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<sup>4</sup> However, this was not always the case. India before independence was open to the world markets, even though the industry then was limited to cotton and jute mills.

wages, centralized licensing, lobbying and corruption. All of this characterizes what Phelps calls as 'corporatism' in its worst form.

The unfolding of this story until early nineties gives rise to the following natural questions: What is our current assessment of these two sectors and these two organizing ideas? Is Indian economy headed towards 'mass flourishing' given the campaigns such as 'Make in India' or are we still in the 'Corporatism' environment, perhaps of a mutated kind?

## 2. Do we need a strategic trade and exchange rate policy?

In an important cross-country study on structural change in developing countries McMillan and Rodrik (2011) show that Asian countries, including India, have in general done well in managing globalization and structural change as compared to Latin American and African countries. They identify three aspects of policies that have helped the Asian countries especially those in East and South-East Asia: viz., (a) flexible labour markets; (b) maintaining a competitive or undervalued currency that has had positive effects on the tradable industries, and (c) a two-track nature of their trade policy under which import-competing activities continued to receive support even as barriers to exports were systematically addressed and removed. This they argue has enabled labour to move out of traditional sectors more rapidly and accelerated structural change.

On all these three counts, India pales in comparison with its Asian peers. While the need for flexible labour markets is widely recognized by policy makers, there has not been much discussion on the need, or otherwise, for a strategic trade and exchange rate policy. Is it time for us to visit / re-visit these two policies, especially if "Make in India" is to become an engine of rapid structural transformation?

## 3. Sectoral issues in manufacturing

**An omnibus industrial policy or a more nuanced approach?** Indian manufacturing spans a wide range of industries – from low-technology labour-intensive sectors producing traditional manufactured goods (e.g., textiles, garments, leather goods, wood products, etc.) to high-technology industries (e.g., automobiles, aerospace, electronics, etc.). While the traditional manufacturing sectors offer relatively high employment potential they are perhaps not in a position to reap large benefits from globalization given the current domestic situation, global economic conditions, and the high levels of competition from other labour abundant Asian countries including China. Mani (2017) has argued that high tech manufacturing sectors offer a much higher export potential suggesting that focusing on them could enable the country to reap much larger benefits from globalization and international production networks. In this context, Mani (2017) highlights the need for having industry specific policies. What are the industry specific aspects that a nuanced policy should address? Would it implicitly mean the government gets to pick "winners" and "losers" across and/or within industries? How to avoid such an approach from degenerating into the kind of pre-1990s industrial policy that we had?

**Role of public sector in manufacturing:** Public sector enterprises (PSEs) are a major force in mining and in some of the capital intense manufacturing sub-sectors as metals, oil, natural gas, refining, capital goods, aerospace, etc. The performance of the PSEs varies quiet a lot

across these sub-sectors. What is the role of the public sector, say a decade from now? If they are to remain, for social / political-economic / strategic reasons, then how to ensure that they remain efficient and do not become a drag on the economy? Do we have clarity on their “social role” going forward? What institutional innovations are needed to ensure that the PSEs can compete commercially, and at the same time deliver on their social role?

**MSMEs:** In most countries with a fairly large industrial base, including in India as well, MSMEs as a whole form a major chunk of manufacturing, and are an important source of employment. Despite this recognition, and some specific policies specifically for them (e.g., small scale credit), many aspects of government policy are at best scale neutral and do not really favour the MSMEs. This is especially so in import competing sectors. What are the policies that urgently need to be reformed to give a positive bias towards MSMEs so that they can be a driver for employment generation? Which are the low hanging fruits that can yield quick returns? What are the long-term initiatives required specifically for the MSMEs?

#### 4. Manufacturing oriented services

Globally, with manufacturing getting more sophisticated in terms of both production technologies and product characteristics and increasing competitive pressures to keep costs down and yet maintain high quality and reliability, the linkages between manufacturing with rest of the economy is continually evolving to include substantial use of services as input into manufacturing. Technological progress has now given rise to out-sourcing of manufacturing and global value chains, which is now referred to as “servicification” of manufacturing. This trend is seen in India as well. Chanda (2017) shows that services valued added constitutes about a third of gross manufacturing exports, and that two-thirds of this embedded services is of domestic origin. This is unlike in China where a big chunk of the embedded services are of foreign origin. Chanda (2017) then argues that the policy for manufacturing should recognize the growing linkage of the sector with services and that a twin-pillar approach of manufacturing-cum-services is required even for the Make-in-India initiative to succeed. What are the dimensions of such a twin-pillar approach? What institutional innovations are required within the government to bring out such integrated policies? Are the industry bodies themselves organized effectively in a manner that brings out the synergies between manufacturing and services or do they function in silos?

#### 5. Sectoral constraints in agriculture

An important feature of Indian agriculture is the presence of very large number of farmers (about 90 million farm households), and the very low average farm size – majority of farms are less than 1 hectare. These millions of farmers typically sell their produce in to wholesale markets that can be described as an oligopsony. Consequently, farmers are typically largely price takers, often not benefiting from high prices at the retail end or being at the wrong end when farm prices crash. Arguably, this market structure is an important reason for the low labour productivity in the sector. To improve labour productivity in agriculture, we need (i) innovative institutional arrangements for some form of “collective” marketing by farmers (e.g., cooperatives, farmer producer organization, etc.) to improve their bargaining strength in the market; (ii) greater on-farm value addition / agro-processing (cleaning, cutting, packaging, etc.), (iii) development of agricultural marketing chains and agriculture specific

infrastructure, and (iv) development of agro-processing industries. Progress on these aspects, however, has been extremely slow. An often cited reason is that agriculture being a “state subject” any progress or lack of it is due to state governments.

Do we need a Constitutional Amendment to bring agriculture into the concurrent list? If that is not desirable/ possible, then what alternative institutional mechanisms can incentivize state governments to bring about meaningful and effective and widespread reforms in agriculture? Can the GST-Council be a model for agriculture and management of inter-state rivers that are crucial for agriculture? We should also note here that after the Fourteenth Finance Commission states already have a higher share in total government revenue? Should the future Finance Commissions give greater weightage to parameters that are crucial for agriculture (which ones)?

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## Session 3. Labour, Employment and Technology<sup>5</sup>

In the context of Labour, Goal 8 and Goal 5 of the Sustainable Development Goals (SDGs) are directly relevant in the context of labour and employment. To recall, Goal 8 is “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”, while Goal 5 is “Achieve gender equality and empower all women and girls”. On both these aspects several issues confront the country. The broad issues can be stated as follows:

### 1. How to create jobs and manage the challenge of technological change?

How to facilitate job creation for people looking for jobs and that are entering the labor force? The annual addition to working age labor force (those falling in the age bracket 15-59) is estimated to be in the range of 5.8 million for the period 2015 to 2030. This may be regarded as the core labor force and it is part of the overall labour force that includes all those in ages 5 and above. This latter broader definition of labour force is estimated to add 7 to 8 million people per year to the labor force. This would be the minimum number of jobs per year that needs to be created over the next 15 years. More detailed calculations in Ghose (2016) indicated that India is required to absorb around 16 million persons in new jobs over the next 15 years.

How to make investment and growth more labor absorbing in the next 15 years?

Can one think of fiscal policy measures that can be taken to encourage hiring of workers? For example, government (Central/State) subsidy for enterprises which hire new workers in a fiscal year. If yes, what should be the form of the subsidy? How to design *sun set clauses* for such a policy? Should it be based on wage bill of the enterprise or cost of social security contributions per worker? In short how to make policy environment employment friendly for enterprises *in addition* to ease of doing business? This can be a short to medium term measure.

Simultaneously consider fine tuning tax/subsidy policies that encourage that encourage substitution of machinery for workers. If yes what are they? Are there design issues or industry specific or region/state specific considerations (vested interest groups? issues of regional equity?)? How to manage them? From a longer term perspective, how to change the output-composition (industry-mix) in favour of labour-intensive industries? Will there be conflict between such macro policy issues and industry-specific interventions?

Can India’s services-led growth be sufficiently high to absorb additions to labor force? This challenging question has taken a much more serious dimension with the media reports of introduction of ‘automation’ and ‘digitization’ and other new technologies based on Artificial Intelligence (AI) taking away the routine jobs outsourced to labor abundant economies like India.

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<sup>5</sup> The lead contributor to this section is K. V. Ramaswamy.

## 2. How to correct the mismatch or misalignment between demand and supply of labor?

The future skill-profile of workers demanded by Industry and services sector could undergo dramatic change. Our system of education and skill-training needs to respond to the demands of industry and services sector. The pace of skill development would also be important if we have to benefit from the demographic transition.

## 3. How to encourage formalization of enterprises and workforce?

Large proportion of India's labor force is engaged in informal work or work in informal enterprises. The challenge is two-fold. How to incentivize the entrepreneur to set up new enterprises in the formal/organised segment of the economy? How to encourage currently operating enterprises in the informal segment to move into the organised sector? How to halt the process of informalization of enterprises and workers?

## 4. How to ensure conditions of decent work in our industries, establishments and enterprises?

What kind of changes are required to make India's labor-eco system of labor-market institutions, labor law and regulatory framework such as Employment Protection Legislation (EPL), to ensure decent work conditions and enhance labor welfare? In addition to informal work, the proportion of workers engaged in informal/contractual work in formal enterprises has also increased. The question then is how to reform India's labor institutions without sacrificing decent work environment and without making labor more insecure and without increasing precarious work conditions. How to reform, upgrade and make regulatory institutions both employer and worker friendly?

## 5. How to reduce gender inequality in employment?

Gender disparity in labor market has many dimensions. The low share of women workers in organized sector and the *lower wage per day of work* for women in all types of wage employment are the striking features. Low quality of female employment in work outside the organized sector and high proportion of women in surplus labour are areas of major concern that needs to be addressed. Are there biases against female employment built-in the economic system (policy induced or otherwise)? What kind of policy initiatives can remove such gender biases?

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## Session 4. Trade: Geopolitical Challenges and Opportunities<sup>6</sup>

Let us begin with the geopolitical scenario and narrow down to specific trade related questions.

What will the world look like in 2030? Where do we see ourselves in that world? How should we choose our objectives? How should we build capacity to pursue those objectives? The answers to these questions have to be located in our interlocked domestic and international contexts. The domestic context is framed by four factors: a large and growing, but unemployed or unemployable workforce; the stagnation of the countryside and the agricultural sector aggravated by climate change; haphazard urbanisation; and growing particularism. The first three factors are inter-related and they fuel particularism under formally robust, but substantively weak institutions of the country. This in turn divides the polity and makes institutional resolution of the first three problems difficult.

To manage its domestic challenges, India has to reach out to other countries to access cost-effective technology, investment, and energy and to deal with transnational non-state actors. India's outreach will be constrained by the relative decline of the West (and Japan), the dramatic rise of China, and turmoil in the region to the west of the Subcontinent and looming uncertainties in the east as well, especially in the Korean peninsula and South-China sea. These in turn foster a fourth constraint, namely, the breakdown of the international consensus on shared values. The West Asian turmoil also feeds into certain strands of particularism within India. China tries to exploit instances of particularism in the northwestern and northeastern parts of India through ostensibly non-state actors based in third countries. China's implacable hostility is perhaps the single biggest international challenge facing India even as it tries to reorient Pakistan's outlook toward it, check the growing militarisation of the Indian Ocean, and stabilise Afghanistan; manage transnational water resources; access raw material, markets for finished goods, international finance, and technology; and reform global institutions.

There is a larger challenge that has received insufficient attention though. The world is not going through a mere intra-systemic reorganisation of the international order, for instance, Britain making room for the United States or the USSR bowing out of the race. In both these cases, there was no uncertainty about the intellectual and normative foundations of the worldview of the winner/successor. Also, the technological and institutional foundations of the world economy did not undergo a dramatic change. However, at present, we are at the threshold of a much longer term inter-systemic reorganisation of the kind seen in the late 18<sup>th</sup> and the early 19<sup>th</sup> Century, when industrialisation reconstituted both the political and economic landscapes across the world and conclusively thrust the West to the forefront. Unlike intra-systemic reorganisations, inter-systemic reorganisations are extended and

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<sup>6</sup> The lead contributors are Vikas Kumar and C. Veeramani.

rough processes and the outcomes are more uncertain. In the latter type of reorganisations, both the distribution of power within and across societies as well as the very notion and bases of power, its purposes, and the self-identity of the potential bearers of power are in flux. Under such circumstances, a decade is a very long time. At this stage, only a few things are certain, namely, the West's intellectual, technological, normative, and linguistic dominance will not wane as fast as its economic and military dominance, the weight of some of the leading developing countries in the world economy will grow faster than expected, and climate change will increasingly constrain choices in almost all spheres of life.

India needs far more nimble economic and foreign policies than it has had at any time since independence to navigate through this emerging and uncertain landscape. Bits and pieces of such a policy can be found in how India has engaged, say, Iran since early 1990s. Relations with Australia, Bangladesh, Indonesia, Iran, Israel, Japan, Myanmar, Oman, Saudi Arabia, Singapore, South Korea, Taiwan, Tajikistan, Thailand, the UAE, Vietnam, and major African countries will be key to India's success in the emerging economic and political landscapes. The traditional relations with the North Atlantic countries and Russia will remain important, especially, in the economic and technological spheres, while there might be newer convergences in international institutions. India will be expected to stand by Asian countries at the receiving end of Chinese adventurism, but it will have to face any military confrontation with China alone.

Over the next five years, India's priorities must include opening land routes to Afghanistan and Central Asia through Iran's Chabahar port (and linking it to the International North-South Transport Corridor (INSTC)), the North East through Myanmar's Sittwe port, and South East Asia through Myanmar; developing Andaman and Nicobar and Lakshadweep, reducing the dependence upon foreign ports for transshipment, reclaiming ground lost in Sri Lanka and the Maldives and strengthening existing ties with other islands countries in Western Indian Ocean; technological collaborations with smaller western countries, Israel, and Taiwan in addition to engagements with major western countries, Japan, and South Korea; indigenisation of the production of critical inputs to defence preparedness (even if through 100 per cent FDI route); building at least one global news media organisation; securing digital and telecommunication autonomy from the West and reducing the growing dependence on China in these fields; developing good quality and low-cost housing, primary healthcare, and primary education facilities (with the aim of universalising access by 2030); and promoting small and medium enterprises (including agro-storage and processing units) across the country, while bolstering larger enterprises with global reach. It would help to avoid direct military confrontations and focus on the domestic agenda.

What are the means at India's disposal? Its defence forces are underequipped and overstretched. A rapid reduction in defence imports through indigenisation and expansion of the air force and navy are called for if India aims at real strategic autonomy and hopes to protect its interests across the world. Speedy resolution of some of the lingering insurgencies and police reforms are needed to relieve the army from domestic distractions. Its understaffed foreign bureaucracy is largely manned by underqualified and poorly trained diplomats. Speedy reforms in this case require decoupling of the foreign bureaucracy from the rest of the civil bureaucracy, which is much more difficult to reform. Its large market is a major source of leverage in the international arena. However, without contentious labour,

land, and tax reforms, India cannot address chronic and mass poverty and leverage its economic potential. India is richly endowed with a wide range of soft power resources, but it lacks an appropriate institutional “ecosystem” and physical infrastructure to harness its soft power and further its interests in the international sphere. Soft power partly depends upon and complements hard power, but it has limited use in isolation and beyond a point it cannot make up for the shortfall in hard capacity.

With this geopolitical background, let us now turn to specific trade issues.

### **1) Global production networks and value chains: challenges, opportunities and implications for policy**

World-wide reduction in tariff barriers and technology-led decline in the costs of transportation and communication has made it possible to unbundle the production processes in several industries, with various stages distributed across different countries. The growth of global production networks (GPN) and fragmented trade structures have major implications for a wide range of issues ranging from the existing practice of collecting and recording trade data, to the nature of industrial and trade policies, to the influence of global supply chains on employment, income distribution and welfare and to the ways in which trade theories are traditionally formulated. A better understanding of these issues will help India, a latecomer to GPNs, find room for itself to be able to access advanced technology as well as generate employment within the country.

### **2) Internationalization of Indian Enterprises: Patterns, Determinants and Consequences**

The rapid growth of overseas direct investment by firms in developing countries has been an important feature of economic globalization over the past three decades. Firms from India have become an integral part of this process. The seemingly puzzling phenomenon of outward FDI by firms in a capital scarce low-income country like India raises an important question: are the trends and patterns of FDI outflows consistent with the stage of development of the country and its comparative advantage? Are the outflows of the technology- and/or market- seeking and risk-diversifying type or are they escaping low returns to capital within the country due to infrastructural bottlenecks, low labour productivity, regulatory uncertainty, and poor purchasing power? What are its domestic consequences in terms of productivity, domestic investment, employment, learning/knowledge spillovers etc? Answers to these questions will help India figure out how to reconcile economic openness with the need to enhance employment and value addition within its borders.

### **3) Political economy of regional integration and economic impacts**

The manner in which different actors interact with political processes is fundamental for how regional integration will take place. What are the political, economic, social and institutional factors and constraints to regional integration? What are the economic consequences of regional integration, particularly in a context in which production processes for most of the goods and services are increasingly fragmented across countries? What are

the prospects of regional integration in the aftermath of the weakening of the ASEAN under relentless Chinese pressure and of the EU due to Brexit and Chinese forays into the eastern and southern Europe; the US withdrawal from existing and prospective trade blocks such as the Trans-Pacific Partnership (TPP); and the inability of TPP's rival Regional Comprehensive Economic Partnership (RCEP) to fill in the vacuum? What will be the role of emerging transport and infrastructure corridors that could promote newer patterns of resource allocation such as Asia-Africa Growth Corridor (AAGC), Bangladesh-China-India-Myanmar-Economic Corridor (BCIM-EC), Belt and Road Initiative (BRI), India-Iran-Afghanistan International Transport and Transit Corridor, and INSTC on regional integration and the existing and emerging GPNs? (Some of these international corridors have major domestic counterparts in large countries such as the Delhi-Mumbai Industrial Corridor in India and the China Pakistan Economic Corridor in Pakistan.) The human and environmental impacts of these corridors are not well-understood, which is a knowledge gap that could affect assessment of the viability of corridors.

#### **4) Causes and consequences of international trade in the framework of heterogeneous-firm models**

Only a small proportion of firms within industries engage in export and/or use imported inputs. Further, the intensity of exports/import varies significantly across firms within each industry. What explain this heterogeneity? International activities of firms exhibit significant volatility over time. In particular, the magnitude of existing trade flows by incumbent firms fluctuates (known as 'intensive margin' responses). In addition, industries exhibit firm entry into and exit from export and import markets and fluctuations in the composition and destination of exported products. Such adjustments in the type and number of firms, products and markets are known as 'extensive margin' responses. What type of policy interventions would help achieve faster export growth? The answer depends primarily upon whether export growth is to be targeted along the extensive margin or the intensive margin.

#### **5) 'Make in India' Campaign, Inward FDI and Economic Consequences**

In the context of 'Make in India' campaign, what roles could multinational corporations play in industrial development and what kind of synergies they could establish with domestic companies? Global production networks in several industries are primarily controlled by large MNEs. The ability of local firms and micro, small and medium enterprises (MSMEs) to play a role as subcontractors and suppliers of intermediate inputs to MNEs (as in the case of Indian automobile industry) will be key to improving the Indian industry's productivity and generating employment.

The factors and developments noted above will have a bearing on choices related to Labour, Resources and Technology.

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## Session 5. Physical Infrastructure<sup>7</sup>

The liberalisation of economies in the late 1980s and early 1990s and linkages to western markets, buttressed growth in several developing countries for about a generation. Developing countries need, among other things, an infrastructure push to sustain growth over the next generation. Infrastructure can be divided into three parts: trade and transport corridors, industrial zones, and social infrastructure.

Over the past decade, the importance of the West as the dominant source of international export demand has declined. Developing countries are confronted with the need to find newer markets within their boundaries and in other countries in the global south. This requires reorientation of westward trade channels through massive investment in intra-national (Bharatmala Project and Delhi-Mumbai Industrial Corridor), inter-national (India-Afghanistan air corridor, Kaladan Multimodal Transit Transport Project connecting India and Myanmar, and India-Bangladesh rail, road, and sea transport projects), intra-regional (BBIN /Bangladesh, Bhutan, India and Nepal projects), inter-regional (India-Iran-Afghanistan International Transport and Transit Corridor and India-Myanmar-Thailand trilateral highway), and inter-continental (International North-South Transport Corridor and Asia-Africa Growth Corridor) physical connectivity. This is the context for the growing interest in domestic and transnational infrastructure over the past decade.

While the need to develop infrastructure is widely recognised, the organising principles remain contentious and the differences in this regard are likely to determine international political divisions in the decades to come. The infrastructure that will be built over the next two decades by competing groups of countries will differ primarily in terms of the manner in which plans are drawn (whether imposed from above or decided in consultation with all stakeholders), finances are arranged (whether based on the ability of host countries to repay loans or governed by the priorities of countries with excess capital), impact on environment is taken care of (whether accommodating local knowledges and priorities or deferring to the requirements of financiers), and political and legal norms of governance are identified (whether through consultation with local communities or based on the convenience of the financiers).

China has taken a lead with regard to building infrastructure both within and across countries in the developing world and even in the periphery of Europe. It often promotes dual use infrastructure that can be put to military use and deepen its strategic grip in other parts of the world. China aims to co-produce both infrastructure and a new international order. India has rightly declined to participate in China's hegemonic initiatives that do not satisfy any of the criteria outlined above. The nature of India's domestic infrastructure requirement and its capacity are such that it can develop as an international hub for building of infrastructure because of economies of scale. India can develop infrastructure in neighbouring countries as a by-product of infrastructure in its own border provinces. Also, across the Indian Ocean, India will retain a natural advantage over competitors with respect

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<sup>7</sup> The lead contributors are P. G. Babu, Ganesh-Kumar, and Vikas Kumar.

to maintenance costs as outside players face much higher (marginal) costs of maintaining infrastructure.

Development of distributed networks of non-renewable energy generation as well as agro-processing facilities with a significant share held by local stakeholders and manufacturing hubs, including those specialising in production for the digital economy and defence forces, aligned with domestic and international trade corridors is the primary concern as far as Industrial Zones are concerned.

As far as the Social Infrastructure is concerned, building primary education, health care, and waste management facilities across the country, development of new small towns and renovation of existing towns and connecting them with local labour intensive manufacturing and services industries, and decongestion of existing metropolitan cities would be of utmost importance.

To elaborate the interlink between these three parts, let the spotlight be turned on transportation and the following key empirical observation based on the projections for worldwide consumption and its components, grounded on microeconomic estimates of how spending patterns change as total consumption rises (Hellebrandt and Mauro (2015)):

### **1. Nonlinear relation between individual incomes and the share of spending on transportation.**

The relationship is S-shaped; initially it is convex signifying that the share of spending on transportation increases steeply as income increases and then it becomes concave implying that the share of spending on transportation rises less steeply as satiation sets in. One can broadly conclude that the developing countries exhibit the convexity while the richer countries exhibit concavity. Turing to India, in particular, the spending on transportation is projected to increase by a factor of four (compared to factor of three for China). In numbers, that cumulative increase in transportation as a share of total initial consumption, between 2013 and 2035, is 46.3 percent. Such a massive increase in transportation would necessitate huge investment in infrastructure, and has serious implications of its resulting greenhouse gas emissions and prevalence of corruption.

Now, taking the increase of four-fold projection in infrastructure as well as possible prevalence of petty corruption (such as poor road surfacing) and grand corruption practices (such as in giving initial licenses) in that sector as given, one can explore the possible consequences. Three most important consequences of corruption in infrastructure projects are likely to be:

- Lower quality of infrastructure and linked public services
- Distorted composition of government expenditure
- Lower overall investment in infrastructure

The best way forward would be to look for those damaging consequences of corruption that are most easily observable and monitor them closely. For example, these could be: careful project selection, frequent physical auditing of the physical infrastructure such as roads, and focus on Operations and Maintenance programs. Where feasible, as one has learnt from

Dixit (2016), one could think of community participation that is likely to reduce corruption, whenever there is relatively little free riding among the community members as well as minimal elite capture possibility.

However, often in India, one sees a particular type of distortion with regard to infrastructure. Various household survey data often rank electricity, road and water at the top of voter demands, which in day-to-day life also dominate the electoral rhetoric. However, across provinces in India, public spending on such capital works has averaged 13% of total spending. As Shankar Acharya points out, it is likely that the increased electoral competition might be associated with a shift towards recurrent spending on social programs that focus more on “politically targeted” benefits such as local jobs and social welfare, due to possible populist pressures and might move away from ‘politically diffused’ benefits such as infrastructure. This effect could be strong in provinces having weaker governance structure.

A related point to movement away from politically diffused benefits such as infrastructure is the following. As Jennifer Bussell (2012) shows, the nature of corruption reducing reforms is closely linked to that of politicians’ expectations about how such reforms would affect their future rent seeking activities. Hence, reform of the institutions that underlie political incentives, such as campaign financing, is perhaps important.

Perhaps one should also focus on the contract structures that underlie the infrastructure projects, including the legal and arbitration procedures. For example, with respect to PPP (Public-Private Participation) contracts in building the roads, we have three different contract models: Toll, Annuity, and Operations and Maintenance Contracts. For the first two (Toll and Annuity) contract models, the contractor is responsible for the engineering, procurement of materials, construction and maintenance of the project. The key difference between Toll and Annuity is that in the case of Toll, the traffic/commercial risks are borne by the concessionaire and the investment is sustained by toll revenues, while in Annuity projects, all costs are borne by the Government in the form of deferred budgetary payments. In the case of Toll, government budgetary support, if any, is restricted to an upfront grant, while in some cases the concessionaire may even pay the granting authority a one off fee as part of the concession grant. In the case of Annuity, the concessionaire relies on annuity payments determined by competitive bidding and made out of budgetary allocations spread over time. The third type (O&M) of contract involves only operation and maintenance of the project, and here the contractor bears the traffic/commercial risk; the contractor does not have the responsibility of road construction. In simulations, Annuity model appears to give better results. However, if one looks at actual numbers with regard to the share of these contracts, Toll is close to 75% of total projects, whereas Annuity accounts for around 20% and O&M projects are roughly 5-6%. Perhaps one has to undertake a corruption audit, similar to that of law and economics audit, of all these contractual forms. And in so doing, it will help to keep in mind the asymmetric nature of the briber and bribe taker problem pointed out by Professor Kaushik Basu (2015) in his famous note on corruption.

These micro-insights will have to be situated in the larger canvas of global political and economic competition among rising Asian powers that will shape the institutional solutions



to the problems identified here. The global picture is important because raw materials, finance, technology, and insurance will have to be sourced from across the world.

## 2. Disaster proofing our cities, villages and our infrastructure

India has always been hit by a variety of natural calamities – cyclones along the eastern coast, floods in the Gangetic plains, droughts in the semi-arid regions of the southern and western states, earthquakes along the Himalayan regions all the way from J&K to the Arakan Mountains in the North-East, and also in the Deccan Plateau and Kutch regions, etc. Following the experience of the Odisha Super Cyclone of 1999 and the 2004 Indian Ocean Tsunami that affected the eastern coast of the country, the country has done remarkably well in putting up early warning systems that have minimized loss of human lives. This was amply clear during the 2013 Cyclone Phailin when human fatalities were down to 45 compared to nearly 10,000 during the Odisha Super Cyclone of 1999.

Yet, the country has not been able to contain the loss to property. Nor have we been able to minimize the disruption to life and economy due to natural disasters. In the last decade even our large metros like Mumbai, Chennai and Bengaluru have been brought to a complete standstill by rainfall and flooding, causing immense economic loss. Indeed, the haphazard and often chaotic urbanization itself is at the root of the problem. Our villages routinely suffer from floods and droughts, which continue to be a major source of production uncertainty in agriculture. Current predictions relating to climate change impacts only suggest that things could get worse in the years to come with respect to occurrence of natural disasters and climate extreme events. This calls for disaster proofing our cities, villages and infrastructure. How to achieve the same kind of progress on this aspect as we have in minimizing loss of human lives due to disasters?

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## Session 6. Development: Social and Environmental Dimensions<sup>8</sup>

In 2015, leaders of 193 countries of the UN General Assembly, including India, adopted the 2030 Development Agenda titled "Transforming our world: The 2030 Agenda for Sustainable Development". As part of this Agenda, all countries resolved to "free the human race from the tyranny of poverty and want and to heal and secure our planet". Towards this, 17 Sustainable Development Goals (SDGs) were announced, whose progress is to be monitored through 169 targets. These Goals and Targets seek to build upon the progress made under the Millennium Development Goals. They set a plan of action over the next fifteen years in areas that are of critical importance to "People and Planet" to bring about "Prosperity and Peace" through "Partnerships".

The 17 SDGs (listed in the box below) encompass different dimensions of human development, sectors of the economy and the environment. Confronted as it is by many of these developmental problems, India has played an important role in shaping the SDG Agenda, which bears a close resemblance with the country's own development goals over the decades. With nearly 18% of the world's population it would not be an exaggeration to say that India's experience and progress on the multiple dimensions of SDGs is of critical importance both nationally and globally.

### **The 17 Sustainable Development Goals:**

Goal 1: End poverty in all its forms everywhere.

Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.

Goal 3: Ensure healthy lives and promote well-being for all at all ages.

Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

Goal 5: Achieve gender equality and empower all women and girls.

Goal 6: Ensure availability and sustainable management of water and sanitation for all.

Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all.

Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

Goal 10: Reduce inequality within and among countries.

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable.

Goal 12: Ensure sustainable consumption and production patterns.

Goal 13: Take urgent action to combat climate change and its impacts.

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<sup>8</sup> The lead contributors are A. Ganesh-Kumar, Jayati Sarkar, V.K. Sharma and Sudhakar Yedla.

Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development.

As part of its commitment to the SDGs, India has presented its Voluntary National Review in 2017 to the High-Level Political Forum on Sustainable Development. Several flagship programmes – both past and recent ones – their targets, progress thus far, and how and which of the SDGs goals they address have been elaborated in this review. It clearly brings out the integrated nature of the various developmental problems, the interlinkages across different SDGs, and also the cross-sectoral aspects of the government’s policy approach / programmes. There is also a clear recognition that the country still has a long way to go in several aspects of development.

Against this background the following issues and questions arise in several sectors:

## 1. Health and Education

Health and education are essential for social well-being, and for productive self-employment. Yet the country’s progress on both these aspects leaves much to be desired. Both health and education sectors are steeped in problems that have not been conducive to the development of human capital in the country. Indeed, there are worrying signals that these two sectors may be the big failures preventing the country from benefiting from the much talked about demographic dividend.

**The great quality dichotomy:** Both health and education sectors present a picture of sharp contrasts – islands of excellence that can compete internationally amidst an ocean of institutions of indifferent quality. Consequently, good quality health services are far and few leaving behind vast numbers to face poor or no health care facilities. Similarly, a few education institutions of high repute are able to train world class students, while the vast majority of them churn out masses of children with poor learning achievement and unemployable graduates. How to fix this dichotomy in both these sectors?

**Public versus private service providers:** Both the sectors are characterized by the coexistence of public sector and private sector service providers. Most of the educational institutions of excellence are in the public sector while in the case of health they are mostly in the private sector. Most of the public sector institutions in both health and education are overburdened, steeped in bureaucratic lethargy, vastly under invested in terms of physical and human capital, and for most part decaying. Amongst the private service providers, there is yet again a dichotomy. In the health sector especially, there are a few large players who provide good quality service but at a very high price and out of reach of the vast majority, while most of the private players are often small and medium, often poorly regulated and

whose service is only a shade better than public sector providers though at a much higher price. How can we spur competition between the public and private players to bring about a transformation in both these sectors that ensures good quality at reasonable price for all?

**Cost and access to healthcare:** The Indian government has been running a health insurance programme “Rashtriya Swasthya Bima Yojana” (RSBY) for about nine years. Yet penetration of health insurance remains low and it has not reduced the out-of-pocket expenditure, which remains one of the highest in the world. Indeed health expenditure is often a major cause of households falling into indebtedness and poverty. Given this abysmal situation and the problems of cost and quality plaguing the health sector where are we heading to?

**Gender disparity in education:** Gender disparity in education remains large, though it has been declining in recent times especially with regard to primary education. Yet, in terms of adult women (girls of the yesteryears) the problem remains quite acute. What needs to be done to improve education levels of adults in general and adult women in particular?

**Benchmarking across States:** Good public services are more important for the poor, who cannot afford substitutes, and therefore for social inclusion. Since these are often State subjects, emulation of best practises must be encouraged across States. How to create a robust system for experience sharing and scaling up beyond the specific state?

## 2. Environment

Long time unresolved issue of conflict between conservation and livelihood rights of locals in protected area of forest due to implementational and institutional issues despite the introduction of Forest Rights Act, 2006 which recognized locals rights to these area.

“Triple Bottom Line Approach” of “Economic, Social and Environmental” focusing on “Profit, People and Planet” is essential for a Sustainable Future: This calls for maintaining a Balance in the Economic Growth and Social and Environmental Development. While an accelerated growth is required to alleviate wide spread poverty in the country, natural resource depletion and environmental pollution resulting from it must be accounted for. Improved economic conditions also induce change in their consumption patterns and life style of people enhancing the environmental stress. Continuing with a “Business-as-Usual” approach towards environment might result in an irreversible damage to our ecosystem. The National Environmental Action Plan, proposed in pre-reforms period (as early as in 1990s) to integrate the environmental damages in all sectors of the economy must be accelerated.

Need to Translate Theory into Practice and Enforce Policies on Papers: India has a long history of environmentalism with the passage and codification of various Acts even before the pre-reforms period, started in 1974. Also, the existing environmental regulations in the country are among the most stringent laws exist elsewhere. However, their implementation and enforcement had been inadequate. Thus, tangible effects of the provisions of laws and policies have not translated into reality. This has resulted in continued deterioration of ecology and environment and needs to be corrected.

Proactive Action is the Need of Hour: Among various reasons for limited success of environmental policies are, institutional failure and general apathy. Despite several measures taken by the government, controversies often surround development activities. “Not in my backyard” attitude of masses is equally responsible for pollution problems. On one hand, the regulating authorities should, by keeping in mind that “prevention is better than cure,” play a pro-active role by, and, on the other hand, masses should avoid blame game and get involved in tackling the environmental issues.

Pseudo Environmentalism must be curbed: Due to enhanced importance and awareness of environmental issues, several pseudo-environmentalists have emerged, who often exaggerate the issues without any logical ground. At times, such environmental extremism creates misconceptions among masses, results in an excessive spending of public funds on less important environmental problems and diverts attention from the real issues, and, hence, must be curbed.

Environmental Challenges of Development strategies are enormous as such issues are no more confined to one sector or one nation. Thus, to deal with multi-dimensional and multi-national problems, appropriate measures are required at international, national and local levels. Solutions to environmental problems should be based on facts and rationale rather than emotions and debate. Policies and measures should focus on a strategy that strikes a balance between environmental care and the economic development in the country.

Modern consumerism is getting deeper and it leads us to resources intensive society. Our consumption patterns coupled with systemic limitation and poor participation from community makes solid waste management a big and aggravating issue in the country. While it is important to address solid waste management by changing the behavior of people towards waste and collecting charge for the service, it is even more important to bring change in consumption patterns which are major drivers for waste generation and resources depletion. This change in consumerism coupled with aggressive recycling would make our society much closer to a “Material Cycle Society”. This has great global benefits as well.

### **3. Water Resources**

We are too far from 24x7 water supply and we need to do some things about it. 24x7 water supply means complete geographical coverage of water supply with continuous supply of potable drinking water. Loss of welfare due to water born diseases is too large to ignore and its time we address the roots of this issue. Per capita availability of water is declining steadily. Climate change induced changes in precipitation brings uneven rainfall that includes cloud bursts and this coupled with reduced infiltration in urban areas owing to excessive concretization of natural draining paths results in poor ground water recharge. Pollution further reduces the availability of fresh water, which is already scarce. The perceived rapid economic growth further increases per capita water consumption levels making the future water availability too bleak under present circumstances. This issue needs to be addressed on priority or else we have to brace for serious social welfare losses, which could be to the degree of affecting the economic growth rate itself.

## 4. Transportation

Our transportation need to be far more efficient than what we have today. Providing transportation services to about 750 millions of urban population by 2030 would probably require a significant augmentation of the system in terms of infrastructure and alternative sources of energy. Moving away from fossil fuels, electric vehicles (EVs) need to be developed and promoted. Bus system needs a complete up gradation and non-motorized modes of transportation and inland water transportation needs overall integration in developmental plans. More importantly all cities need to have mass rapid transit systems connecting their CBDs to the respective catchment areas. Metro can continue to play the anchoring role.

Ensure to have safe road, rail and air travel (civil aviation). Every year thousands of people die in road accidents both on city roads as well as highways. Annually railways also have their share of fatalities. Congestion in civil aviation has been witnessing too many “near misses” in the last two decades. With the “fast moving” trains on cards, India must ensure to have safe “travel modes” in its quest to be a developed country.

## 5. Waste Management

Management of waste in terms of recycling , recovery and development of markets for reuse. Recycling rate (particularly plastics) of India is quite better in comparison with global average, even better than some Asian countries .In India, it's mostly in unorganized sector, could not reap full benefits in reuse. Organised waste management is the need of the hour. We still lag behind in non-segregation of waste at source ( Review of Env and Development, Introduction section of a recent EPW issue, Aug 5, 2017, Vol LII No.31, has some statistics on this issue).

We have to reduce our dependence on China for recycled (low priced) goods and grow into material cycle society: Like many other countries in the world, India also depends on China for most of the low end commodities, which are largely recycling based. India need to promote our SME sector particularly recycling based SMEs. 127,000 tons of garbage generated every day gives us large quantities of recyclables and by using these material streams, which other leads to dump sites would help us manage waste more efficiently and at the same time supply domestic markets with low cost commodities. That would also put a check on our dependence on China for such goods. Such efforts would be even more meaningful if we can integrate recyclables from all sorts of waste such as E-Waste and construction and demolition waste. This would be a beginning step of our journey towards more robust material cycle society.

## 6. Development through CSR Funds

One of the watershed policies enacted in the social sector in India has been to make it mandatory for Indian companies (subject to certain conditions) under Section 135 of the Companies Act 2013, to mandatorily spend 2 per cent of their net profits averaged over past three years on social welfare activities. No country in the world has such a law. Section 135, while being still debated for its economic rationale and possible distortionary effects on a company's incentives to maximize shareholder value, is at the same time being considered

by many to be a “historical opportunity” to be a game changer for the country to bring about sustainable development where corporates work alongside the government to bridge the welfare gaps that persist despite public welfare expenditure incurred by the government. While this may be the case, there are several implementation challenges that may come up with consequent perverse effects. Some of the challenges that can be discussed with respect to social and environmental expenditure by corporates are listed below:

- Finding adequate projects every year both in number and in value terms – especially for big companies and sustaining these over time: Strain on company’s management?
- Finding projects which meet common goals of corporates, NGOs, and local govt. ; tendency to expend on ‘low hanging fruits.’
- Coordinating with local agencies for project implementation and project harmonization – social and political considerations.
- CSR and regional inequality: Ensuring regional equality in CSR spending and social development considering that large corporates with substantial CSR expenditures are concentrated in few states.

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