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3 Year Action Agenda NITI Aayog

Parts of the Agenda 2017-18 to 2019-20

Chapter-1: THREE-YEAR REVENUE AND EXPENDITURE

Context and Strategy

- Budget expenditure is an important tool for the government to advance policy objectives.
- One fundamental issue with expenditure planning in India has been a strong tendency towards revenue expenditure at the expense of capital expenditure.
- Within revenue expenditures, subsidies have tended to crowd out the socially more productive expenditures such as those on education and health. Even within education and health, salaries end up accounting for the bulk of the expenditure.
- With the end of the 12th Five-year plan, it has been decided to do away with the plan and non-plan distinction, which will give a push to finances in favour of capital account items.
- The Fiscal Responsibility and Budget Management Act, 2003 requires the Central Government to prepare a medium-term expenditure framework, which sets three-year rolling targets for expenditure. There is, however, no obligation for the government to adhere to these targets during the actual budget. As such, till date, this exercise has not been taken seriously.
- In addition to making government expenditure more predictable and credible, it would also provide certainty to individual departments and ministries on available resources to them in the medium-term. This will allow them to focus on the optimum utilisation of available resources.

Growth Outlook and Resource Envelope Forecasts

Growth Outlook

The Indian economy has emerged as the fastest growing major economy in the world with the provisional estimates placing growth in real GDP on track at 7.1% for 2016-17

Tax Revenue Forecasts

Growth in gross tax revenues (in the baseline scenario) in the next three years is much lower than the growth during 2003-04 to 2007-08.

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- The **gross tax revenues to GDP** ratio is forecasted to increase to 12.3% by 2019-20, compared to 11.2% in 2016-17. .
- The forecasted **DIRECT TAX** to GDP ratio is 5.8%, 6.0% and 6.3% in 2017-18, 2018-19, and 2019-20 respectively,

compared to 5.6% in 2016-17. The reasons for this acceleration are explained below.

- **Steps taken to increase direct tax to GDP ratio:**

- The demonetization would result in disclosure there would be a significant one-time increase in the direct tax revenues for 2017-18.
- Curbing black money generation, through disclosure of foreign assets, Benami Property Amendment Act, 2016 and amendments in Double Taxation Avoidance Agreements signed with Mauritius, Singapore and Cyprus.
- A major drive to replace cash transactions by digital transactions is also under way.
- Tax simplification.
- The cumulative result of these measures would be increased the tax compliance and an expansion in the tax base. Going forward, this will lead to an increase in the direct tax-to-GDP ratio.
- The 14th Finance Commission recommended, and the Union government accepted, that the share of divisible pool of tax revenues of the centre to the states would be set at 42% till 2019-20.

Non-Tax Revenues and Capital Receipts

The non-tax revenues are forecasted a decline in absolute terms in 2017-18, compared to 2016-17 budget estimates. This is primarily because of lower projected value of revenues from the telecom sector, which includes revenues from auction of spectrum.

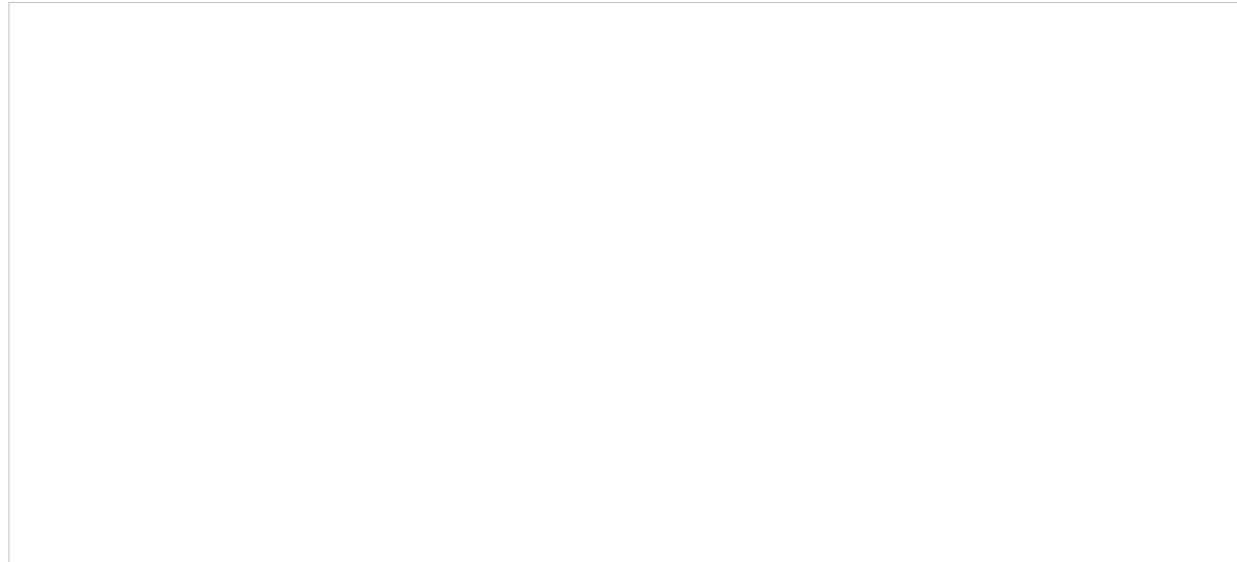
The forecast for non-debt capital receipt in 2017-18 is Rs 84,400 Crore, which is 49% higher than the 2016-17 (RE). This is because of higher proceeds for disinvestment and strategic sale which is expected to gather momentum.

Fiscal Deficit

The fiscal deficit targets are set on the basis of the fiscal consolidation roadmap announced in Budget 2017-18, which commits the Union Government to reduce its fiscal deficit to 3.2% of GDP in 2017-18 and 3% of GDP thereafter.

Expenditure

- Under the proposed plan, the revenue deficit is expected to fall from 2.1% in 2016-17 (RE) to 1.9% in 2017-18, 1.4% in 2018-19 and 0.9% in 2019-20.
- The revenue non-development expenditure is primarily the committed expenditure incurred on heads such as interest, pensions, defence salaries, and other establishment costs. Its share of total expenditure is above 40%, which limits the scope for expenditure on development activities.
- It is estimated that the share of non-development revenue expenditure will fall, both as a proportion of total budget expenditure and GDP.
- While the non-development revenue expenditure as a proportion of budget expenditure will fall, the share of development revenue expenditure will be maintained.



Sector-wise Expenditure Allocation

- **Health** – increasing its share of total expenditure from 1.7% to 3.6% of GDP
- **Education** – increasing its share of total expenditure from 3.7% to 4.0% of GDP
- **Railways and Road Capital Expenditure** – increasing its share of total expenditure from 2.3% to 4.3% of GDP
- **Defence Capital Expenditure** – The allocation towards capital expenditure in defence will increase from around Rs. 95,000 Crore in 2015-16 to about Rs. 1,72,000 Crore by 2019-20, thereby increasing its share of total expenditure from 5.3% to 6.2%. of GDP
- **Agriculture and Rural Development** – the share of expenditure on rural development would grow from 5.9% of total expenditure in 2015-16 to 7.7% in 2019-20
- **Food Subsidy** – The allocation towards food subsidy is increased from Rs. 1,24,000 Crore in 2015-16 to about Rs. 1,57,000 Crore by 2019.
- **Fertiliser Subsidy** – The government has been able to contain the expenditures on fertiliser subsidies to Rs. 70,000 Crore in the last few years.

Chapter-2: ECONOMIC TRANSFORMATION IN MAJOR SECTORS

Agriculture: Doubling Farmers' Incomes

It may be noted at the outset that agriculture is a state subject. Therefore, it is critical that state governments actively participate in bringing about the requisite changes.

The central government can help bring about change through a variety of central sector schemes and centrally sponsored schemes but these can only succeed if states are willing and active partners.

Immediate actions necessary to sustain and accelerate agricultural growth may be divided into four areas.

1. First, we need to reform of agricultural produce marketing policies and market interventions to ensure that farmers receive **remunerative prices**.
2. Second, **productivity** of both land and water remains low for many crops when compared to other countries. There also exist large regional variations in productivity.
3. Third, enacted in the 1950s or 1960s, **tenancy laws** in most states of India no longer adequately serve the interests of either landowners or tenants. Related, **land ownership records** are in need of modernization. This is essential if the landowner is to be able to lease or sell her land or take a loan against it from banks.
4. Finally, **relief measures** in the event of natural disasters need to improve.

1. Remunerative Prices for Farmers

Issues related to price fall under two categories.

1. Prevailing marketing arrangements under Agricultural Produce Market Committees (**APMC**).
2. Second, the government procures some commodities in some regions at preannounced **MSP**.

APMC

- Issues
 - Under the APMC acts, farmers are required to sell a large number of commodities in a local mandi where intermediaries often manipulate the price.
 - These same intermediaries then sell the produce to the next layer of intermediaries.
 - Because mandis lack good storage and warehousing facilities especially when it comes to fruits and vegetables, substantial wastage occurs undermining the price received by the farmer.
 - Mandis also charge multiple entry-exit and other fees.
- Way Forward
 - Reformed APMC acts should fully empower farmers to sell their produce to whomsoever they wish.
 - In parallel, actors other than APMC mandis should be conferred the right to buy produce directly from the farmer and to set up alternative marketplaces. This will create competition and pave the way for the farmer to receive lucrative prices.
 - This is necessary to serve small farmers for whom it is neither feasible nor profitable to take their produce to such markets.
 - There is also urgent need for restructuring the Essential Commodities Act to provide exemptions to certain categories of players such as exporters, food processors, multiple outlet retailers and large departmental retailers from applicability of **stock limits**.
 - We must encourage **contract and group farming** through separate contract farming acts under which the buyer can provide the farmer or Farmer Producer Organisation (FPO) access to modern technology, quality inputs, other support and a guaranteed price.

MSP

- Issues
 - MSP has distorted cropping patterns, with excessive focus on the cultivation of wheat, rice and sugarcane in the procurement states at the expense of other crops such as pulses, oilseed and coarse grains.
 - It has also resulted in depletion of water resources, soil degradation and deterioration in water quality in some states, especially in the north-western region.
 - At the same time it has discriminated against eastern states where procurement at the MSP is minimal or non-existent.
- Way Forward
 - One measure that can help remove distortion in the MSP system to some degree is the system of **“Price Deficiency Payment”**.
 - More importantly, it would spread price incentives to producers in all the regions and all the crops considered important for providing price support.
 - This approach would not require procurement and thereby preventing the accumulation of unwanted stocks
 - This system would keep the quantum of the subsidy in some check and also meet the restrictions on the subsidy imposed by the World Trade Organization (WTO).

2. Raising Productivity

Boosting productivity in agriculture in a sustainable manner requires us to work on four fronts – Irrigation

1. Irrigation,
2. Seeds and Fertiliser,
3. Technology and
4. A shift to high-value farm products such as fruits and vegetables, milk, eggs, chicken and fisheries.

Irrigation

- Crop intensity and productivity, which are very important sources of growth in output and farmers' incomes, are critically dependent on irrigation. In India, a second crop is grown on less than 40 % of cultivated area. In some states, this figure is below 25%. The main reason for low crop intensity is access to water and moisture for crop production in Rabi season.
- Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) provides a sound framework for the expansion as well as effective use of water in irrigation.

Seeds and Fertilisers

- Seeds and fertilizers are key inputs determining crop yields.
- Ideally, seeds must be replaced every year for hybrid and every three years for non-hybrid varieties. In the former case, the optimum seed replacement rate (SRR) is 1 and in the latter case 33%. In India, seeds are replaced at rates below the optimum, especially in self-pollinated crops such as rice, wheat, pulses and oilseeds. To bring the rate to the optimum, we need to enhance seed-research capacity as well as multiply stations.
- Fertilisers supply three critical elements: Nitrogen (N), Phosphorous (P) and Potassium (K). A common belief is that ideal mix of N, P and K is in ratio 4:2:1. While this may be an average, the actual optimum ratio and level of fertiliser use depends on soil and crop type and the amount of water used.
- This is why soil health cards are important for customizing fertiliser use. Because urea is heavily subsidized in India, on average, there has been a tendency to overuse it.
- There is need to create awareness of the optimal nutrient mix and optimal level of fertiliser use among farmers.

New Technology

- Genetically modified (GM) seeds have emerged as a powerful new technology promising high productivity, improved quality and lower use of fertilizers, weedicides and pesticides in the last one to two decades.
- There is some concern that GM seeds can be monopolized by multinationals, which may then exploit our farmers. But this concern is readily addressed by limiting GM seeds to those varieties discovered by our own institutions and companies.
- Precision farming and related new technologies allow highly efficient farming and resource conservation. However, these are highly skill and capital intensive methods of farming. The emphasis should be on informing farmers of the opportunities new technologies offer, improving access to credit and creating an enabling policy environment for their adoption.
- Instead of creating more institutions, quality must be attained through greater focus on fewer high quality institutions. By way of initiating the World Class University program in just 1 or 2 universities.
- Efficient and effective agricultural extension by using information technology and mobile technology. Skill India mission should be used for extension to impart agricultural skills. Local participation of progressive farmers, self-help groups and Primary Agricultural Cooperative societies (PACS) should be leveraged to help transfer technology through one-to-one exchange of information.

Shift into High Value Commodities

Shifts in the consumption pattern (more intake of fruits and vegetables, milk, eggs, chicken and fisheries along with forestry also constitute important alternative high-value products) with rising incomes and vast export markets for many of these products offer an important avenue to enhancing productivity, wages and incomes.

Horticulture

Greater encouragement for Farmer Producer Organisations and improved storage, transport, power and communications infrastructure in rural areas for better price realization by farmers.

Animal Husbandry

- An important challenge in the development of animal husbandry concerns fodder due to problems in pasture management and shrinking of common properties.
- Increase in livestock productivity through breed improvement, better feed and nutrition, animal health, and better herd composition are important. Selective genetic breed improvement of indigenous cows and buffalos will need to be an important part of this process.
- The Rashtriya Gokul Mission for increasing productivity of indigenous cows was launched in 2015-16. Based on the results of the program, a similar exercise for buffalos may be considered.

Blue Economy

- India has vast scope in both marine and inland fisheries.
- Inland fisheries, particularly of brackish water linked export oriented prawn cultivation, offer substantial opportunities for faster expansion.
- We need to encourage the use of quality fish seed and feed while also investing in disease control, marketing infrastructure, modern fish processing plants and re-engineering of the value chain. Coastal states may also find it attractive to exploit deep-sea water for fishing, especially Tuna.

Forestry

- Wood-based products such as paper and pulp and furniture offer vast potential for enhanced income for farmers. It is ironic that in a country with wide scope for growing wood as a renewable resource, we import wood for our furniture industry.
- It is essential and urgent that we liberalize our laws so that wood may be harvested from trees grown on private lands and transported to locations where it can be used most productively.

3. Agricultural Land Policy: Leasing and Records

- Restrictions on formal and transparent land leasing in agriculture results in myriad issues, ranging from fragmentation of farms and low productivity of land to poor targeting of benefits and relief measures.
- Land being a purely state subject, thus, land leasing requires amending existing state-level tenancy laws or based on model Land Leasing Law of NITI aayog, as done by Madhya Pradesh and Uttar Pradesh.
- National Land Records Modernization Programme was initiated in 2008. Unfortunately, this scheme has not worked well so far partly because it remains underfunded but perhaps also because of design problems.
- States have complained that conditions attached to the scheme make accessing funds under it difficult. It is urgent that the scheme is reformed and proper funding provided to speedily build updated digitized records in at least two-thirds of the states by end March 2020.

4. Relief Measures

Natural disasters such as droughts, floods, cyclones, storms, landslides and earthquakes can lead to extreme distress and hardship among many small farmers who lead a subsistence existence. In these situations, they need at least a minimal amount of relief at a rapid pace.

The Pradhan Mantri Fasal Bima Yojana is an important positive step towards risk mitigation for farmers but it needs to be subjected to four important reforms.

1. **First**, at present, the insurance scheme limits the farmers' contribution towards premium to 1.5%-2% of the sum insured for non-commercial crops and 5% of the sum insured for commercial crops irrespective of the

sum insured. The government pays the remainder of the premium as subsidy. This model results in larger absolute subsidy amounts for larger farmers who are less vulnerable. The scheme should be targeted towards small and marginal farmers.

2. **Second**, insurance scheme should provide coverage for three to five years so that coverage extends to both good and bad years. Otherwise, insurance companies will have an incentive to go slow in selling policies during years that droughts are predicted.
3. **Third**, the subsidy on the premium should take the form of direct benefit transfer to ensure that farmers can shop for the best value for their money.
4. **Finally**, there should be minimally two companies offering insurance in any given location. This will create competition and lead to greater efficiency and lower premiums for farmers.

Trade, Industry and Services: Creating Well-Paid Jobs

- Under-employment and low-wage employment rather than unemployment is the key challenge facing India today.
- Most workers are employed but in low-productivity, low-wage jobs in small, micro and own-account enterprises.
- According to the International Monetary Fund, nominal per-capita income in 2015 was USD 1,604 in India and USD 8,141 in China. For example, productivity as measured by value added per worker in manufacturing in China is estimated to be nearly three times that in India. Correspondingly, average manufacturing wages in China are three times those in India.
- The organized sector, which exhibits high productivity and pays higher wages, employs only a tiny proportion of the workforce
- To combat under-employment, India needs to create more and more well-paid, formal-sector jobs. This requires both an expansion of the organized sector and a shift within it towards more labour-intensive goods and services.

1. The Critical Role of Exports

- At the outset, it is important to point out that till date there are only four developing countries that have successfully transformed themselves within three decades: South Korea, Taiwan, Singapore and China. In every one of these cases, exports have played a key role.
- China accounted for 13.72% of world merchandise exports and India only 1.67%.
- On the demand side, Indian firms often complain that there is inadequate demand for their products. Yet, the world market in merchandise exports at USD 16.6 trillion in 2015 is extremely large.
- Many super-competitive firms operating in China today employ not just tens of thousands of workers but hundreds of thousands of them. These large firms create an ecosystem that enforces discipline and high productivity on smaller firms as well.
- More than 90% of apparel workers in India were employed in firms with less than 50 workers in 2005. The corresponding figure in China was less than 15% the same year

Why are Indian firms not able to take advantage of this massive demand?

- The likely explanation is that their products are not competitive in the global economy, but, however,
- Exporters must compete against the best in the world and must therefore constantly upgrade technology, management and product quality to remain competitive.

Recognizing this critical role of exports in the creation of well-paying jobs, India needs a focused strategy for creating an environment in which export competitive firms can emerge, especially in labour intensive sectors.

2. Coastal Employment Zones (CEZs) In 2017-18

- A critical element in China's development strategy was the creation of very large Special Economic Zones.

- It is in this context that India must replicate the Chinese strategy by creating two Coastal Employment Zones (CEZs), one on the east coast and the other on the west coast.
- CEZ in India needs the following:
 - Large Area with Flexible Land Conversion Rules
 - Liberal Economic Environment and Tax Incentives
 - Proximity to Deep Draft Ports
 - Public Investment and Autonomy
 - Trade Facilitation and Trade Liberalization

3. Labour Law Reforms

- Overly high levels of protection simultaneously discourage employers to hire workers on a regular basis. Consequently, formal sector jobs in India have remained a rarity.
- Two simple reforms considering fixed-term employment and the definition of start-ups should be considered.
- The change will encourage employers to rely on regular fixed-term employment instead of contract workers.

4. Actions in Specific Manufacturing Sectors

- Apparel
- Electronics
- Food Processing
- Gems and Jewelry

Apparel

- As a key labour intensive product, apparel offers India a chance to create a large number of formal sector jobs. Historically, women have had a disproportionately high share in employment in larger apparel factories. Therefore, export-oriented large-scale production of apparel offers an important avenue to well-paid jobs for women.
- With wages high and rising in China, global apparel buyers are looking to shift production away from it to lower wage destinations. India is situated well to capture this displaced production if it adopts the right mix of policies.

Following Steps could be taken to improve Indian Exports in Apparel:

1. Ease barriers to imported inputs such as man-made (synthetic) fibres and fabrics since the global market for synthetic clothing is much larger than for cotton clothing. High custom duties on synthetic fabrics have held back the progress of Indian apparel industry in this crucial sector.
2. Improve export logistics through Coastal Employment Zones.
3. Enhance market access through the completion of trade agreements and a general lowering of tariffs.
4. Work with states to reform labour regulations.

Electronics

In addition to its employment generation potential, the electronics sector can drive innovation, increase productivity and catalyze investment.

India has the potential to become a large electronics manufacturer and exporter due to its large labour force, a growing domestic market and proximity to other economies on the electronics value chain.

Steps to be considered to improve electronics industry performance:

1. Lower duties on key inputs of final electronics products.
2. The Union Budget 2017-18 increased the customs duty for Populated Printed Circuit Boards (PCBs) for use in the manufacture of mobile phones from zero to 2%. While this would provide modest protection to domestic

manufacturers of PCBs, it will hurt the mobile phone manufacturers. At this stage, it is best for us to let mobile phone manufacturing flourish and not be handicapped by tariffs on its components.

3. Reduce the administrative burden required to obtain duty drawbacks on inputs used in exports.

Food Processing

- The food processing sector contributed 1.6 % of India's GDP in 2014-15.
- The sector contributes directly to economic growth through reducing food wastage, creating jobs and export earnings. However, growth and productivity are plagued by several challenges:
 - The lack of quality infrastructure, including cold storage, storage for non-perishables, distribution networks and transportation, raise costs and inhibit competitiveness.
 - Food processing firms, particularly Small and Medium Enterprises (SMEs), have difficulties in accessing finance.
 - Additionally, small farm sizes, restricted access to markets, uncertainty related to price, availability and quality of raw materials, and limited skilled manpower pose further challenges to the sector's growth.

Way Forward

- Restructure the Essential Commodities Act such that processing firms receive exemptions.
- Attract private investment in agribusiness through institutional reforms.
- Improve logistics and storage facilities
- Raise standards to converge with international standards
- Set up 40 Food Testing Laboratories to Ensure Safety of Products.
- Scale up initiatives that are integrated processing hubs such as Mega Food Parks.

Gems and Jewelry

- The Gems and Jewellery sector accounted for 15.1% of India's total exports in 2015-16
- The sector employed around 4.5 million skilled and semi-skilled workers across India in 2015. Further, India produces 95% of world's processed diamonds.

Two key challenges

1. First, the industry is heavily skewed in favour of diamond processing and remains vulnerable to demand shocks as well as shocks in the supply of raw diamonds.
2. Second, with higher technology adoption in the sector and capital-labour substitution, the Indian gems and jewellery industry faces increasing competition from China.

Way Forward

- Reduce the Customs Duty on Gold. Lowering the customs duty on gold would help reduce the volume of gold that is smuggled and thereby reduce the potential for illegal transactions.
- Facilitate the import of rough diamonds and Enhance access to finance for diamond processing firms.
- Increase investment in skills training for the sector.
- Facilitate exchanges with industry experts and associations in other top exporters
- Increasingly adopt Recognition of Prior Learning (RPL) within the sector. Using RPL to recognize the prior learning of artisans will help provide them with suitable opportunities.

5. Actions in Specific Services Sectors

In 2015-16, services contributed 66.1% of India's gross value added (GVA) and 28.7% of employment.

Key commercial services include tourism, financial services, real estate, retail (including e-commerce), IT and IT-enabled services and pharmaceuticals. The action Agenda focuses on tourism, financial services and real estate.

Financial Services

The withdrawal of 500- and 1000-rupee notes as legal tender on November 9, 2016 has also presented challenges for the financial services sector. One of the key challenges of demonetization has been the low share of non-cash transactions in the economy. Large parts of the country remain under-banked or unbanked and a large pool of money remains outside the formal banking system. Although the government has been ramping up its efforts to increase financial inclusion and digital payments, there is further room for increasing financial involvement and enhance the take-up of digital financial services.

Non-Performing Assets

The Reserve Bank of India has predicted that the overall non-performing asset ratio is expected to worsen in the immediate future. Although the decline in loan quality has taken place mainly on account of public banks, private banks have also contributed to it. Sectors such as infrastructure, steel and textiles have been particular contributors to the challenge of distressed assets 43. This issue of rising NPAs thus requires immediate attention.

The government has already committed a sum of Rs.70,000 Crore under the 'Indradhanush' scheme to recapitalize and help Public Sector Banks (PSBs) meet the capital requirements under Basel III.

Financial Inclusion and Literacy

- Increasing competition and promoting the entry of new players will improve the efficiency of the banking system in the longer term. The policy of 'on-tap' licensing of banks is a promising step in the direction of increasing competition and coverage of the system. However, some of its requirements, such as the initial capital requirement of Rs. 500 Crore, may deter sufficient entry. It is worth considering relaxing this requirement and allowing banks to open branches and ATMs under more liberal conditions. This will not only increase access to financial services but also increase the efficiency of existing players.
- Measures to improve financial inclusion should be complemented with steps to improve financial literacy, especially to make people more aware of the benefits of using the formal banking system to send and receive payments, save and borrow money.

Tourism, Culture and Soft Power

The Hospitality, Travel and Tourism sector is a major driver of growth and employment worldwide and especially in India where it made up 6.7 % of the GDP in 2014. Foreign tourist arrivals in India have increased from 5.1 million in 2009 to 8.1 million in 2015. As a host to 35 world heritage sites, 10 bio-geographical zones and 26 biotic provinces, India has significant potential to increase number of arrivals going forward and increase its global presence by leveraging its cultural industries and soft power.

Visas

The 2015 extension of the e-Tourist visa to 150 countries contributed to the growth of the tourism sector. After the extension of the e-visa, the number of tourists that arrived between January and July 2016 increased by 266 %

Steps To Be Taken

- Increase Awareness
- We should solicit feedback on foreign travellers' experiences during the application process.
- Simplify Conference Visas
- Simplify Entry for Cruise Tourists

Infrastructure

- Develop Five Beach Destinations as Tourism Zones
- revision of Coastal Regulation Zones (CRZs) rules to facilitate the development of beaches and tourism while also providing for better protection and conservation of coastal and marine areas.

- Develop identified islands by 2020
- Plan and Develop Five National Circuits
- Swachh Bharat

Promotion and Marketing

- Enhance Digital Marketing Efforts
- Promote India Abroad- A key element in tourism promotion must be targeted advertising abroad.
- Incentivize the Private Sector to Contribute Resources and earmark funds for marketing.
- The campaign should use market statistics and data on consumer usage and dynamics to target its marketing efforts.

Skill Development

- Create a dedicated university for leadership in the tourism sector.
- Support private sector institutes in tourism regulated by the government
- Update the skills of existing workers

Cultural Tourism

Create a National Museum Authority to oversee all museums

Tax Reforms

We should consider placing tourism in the lower tax bracket of the GST to ensure competitiveness with foreign destinations.

Soft Power

Soft power, the ability of a country to attract others through its culture, spiritual and political values and foreign policies rather than coercion or economic rewards, occupies an increasingly greater role across the globe.

Given our democratic values, rich history, the diversity of languages, cultural practices and crafts we have many sources of soft power. While several aspects of India's soft power such as democratic ideals, yoga, sufi music, literature, traditional textiles and Bollywood are commonly found across the world.

Way Forward

- Establish cultural centres across the globe.
- Create a dedicated humanitarian and relief agency.
- Create a database of artisans and craft preservation. We should collect and disseminate information on different craft forms, their preservation and areas where they exist. This will not only help us preserve practices but also share knowledge with others.
- Increase emphasis on global marketing and promotion.
- Provide skills training related to cultural practices and vocations.
- Enable access to markets for traditional handicrafts producers.

Real Estate

- The Real Estate and Housing Sector made up 8% of India's GVA in 2014-15 and grew by 9.1% during the same period. Increasing urbanization and rising disposable incomes and investments are driving up the demand for different forms of real estate in the country.
- The sector is one of the largest generators of jobs after agriculture in India. Its high employment potential stems from its large number of forward and backward linkages through demand in input sectors and real estate services.

Access to Finance

Way Forward

- Grant infrastructure status to the real estate sector
- Provide incentives to Housing Finance Companies (HFCs)

Trade and Investment

- Provide export incentives to attract more foreign investment into construction.
- Lower customs duties and import tariffs, especially for inputs.

Stamp Duties

Work with states to lower stamp duties on real estate. The lower stamp duty would also encourage buyers who are otherwise deterred from entering the market.

Real Estate in Urban Areas

- The 'Housing for All' mandate can also receive a significant boost by putting rental housing to use, particularly in urban areas with high land prices. Due to low rental yields, developers and investors are often reluctant to develop housing units for rental use. We should consider working with states to amend their Rent Control Acts, easing the dispute resolution process and clearly defining tenant and landowners' rights.
- The archaic Land Ceilings and Regulation Act, 1976, unused land under the purview of central or state governments and sick Public Sector Enterprises (PSEs), complex land conversion rules and high compensation for land under the Land Acquisition Act, 2013 restrict the supply of land in urban areas.
- Resolving pending litigation to free up tracts of land will go a long way in increasing supply and bringing down land prices.

Chapter-3: Regional Development

Urban Development

- Urbanization is an integral part of economic development
- Industry and services often concentrate in urban agglomerations while agriculture is primarily a rural phenomenon. In a rapidly growing economy, productivity and wages grow faster in the former and pull workers out of the latter. The resulting migration leads to an increased urban population.
- With growth in industry and services, cities expand geographically and absorb the adjacent villages. This phenomenon of urban sprawl has been observed in nearly all of the major cities in India.
- Creation of new cities may also foster urban growth. New cities may come up through Greenfield projects as in the case of Chandigarh, Naya Raipur in Chhattisgarh and Amaravati in Andhra Pradesh but they may also grow granularly when industrialization in an initially rural region turns it urban. Shenzhen in China offers the most dramatic example of this form of urbanization.
- To ensure smooth flow of rural-urban migration and to maximize the wellbeing of the urban population, it is critical that cities are efficiently managed. Poor management leads to scarcity of commercial and residential space and creation of slums; absence of greenery and common spaces for outdoor activity; inadequate availability of electricity, water and sewage; excessive air pollution, accumulation of solid waste around neighborhoods and persistence of swamps; and traffic jams and long commutes. These conditions in turn slowdown urbanization and hence growth and development.
- As per the Census 2011, 377 million Indians comprising 31.1% of the total population live in urban areas, however, the extent of urbanization in India remains significantly below those in other major developing countries.
- According to the World Bank, urban population as a proportion of the total population in 2015 stood at 86% in

Brazil, 56% in China, 54% in Indonesia, 79% in Mexico and 82% in South Korea.

- During 1981-2001, urbanization in India was mainly driven by natural increase in the population of cities (around 60%), followed by rural-urban migration, expansion of boundaries of cities and re-classification of rural areas into urban areas. However, between 2001 and 2011, the share of natural increase in the cities' population declined to 44% while the share of reclassification of rural areas into urban areas strengthened and the share of rural-urban migration increased to 24%.

1. The On-going Schemes and Programs

Affordable Housing

1. Pradhan Mantri Awas Yojana - Housing for All (HFA) (Urban Mission) was launched in June 2015 to provide housing to all in urban areas by 2022.
2. Atal Mission for Rejuvenation and Urban Transformation (AMRUT) - has been launched with the objective to provide hard infrastructure for universal coverage of piped drinking water, sewerage and green spaces and parks.

Developing Smart Cities

Smart Cities Mission aims at driving economic growth and improving the quality of life through area based development and city-level smart solutions. The mission would convert 100 existing cities into smart cities.

Swachh Bharat Mission (Urban)

Swachh Bharat Mission (SBM) (Urban) is the key mission driving the campaign to make our cities clean. The mission aims to eliminate open defecation in all statutory towns by 2nd October 2019. It also proposes to eradicate manual scavenging, introduce modern and scientific solid waste management, induce behavioural change with respect to healthy sanitation practices and generate awareness for sanitation and its link to public health, augment the capacity of ULBs and create an enabling environment for the private sector in waste management.

Public Transport

About 517 km of metro lines is being constructed under 8 on-going metro rail projects funded partly by the Central government.

200 km of Bus Rapid Transit System (BRTS) would be operationalized.

Livelihood for the Urban Poor

Deen Dayal Antodaya Yojana – National Urban Livelihood Mission (DAY – NULM). DAY-NULM aims at creating opportunities for skill development leading to market based employment and helping the poor to set up self-employment ventures.

Preserving & Restoring the heritage and culture of our cities

National Heritage City Development & Augmentation Yojana (HRIDAY) Mission was launched in January 2015 with an aim to rejuvenate the heritage cities, with special attention to others issues such as sanitation, tourism, and livelihood. The Mission is targeted for completion by November 2018. The HRIDAY mission will be concluded in 12 heritage cities as per the Detailed Project Reports submitted upon commencement.

2. Additional Necessary Steps in the Existing Areas of Action

In this section, we describe a set of complementary actions that can make some of the on-going programmes more effective. The actions relate to three areas: urban housing, Swachh Bharat and urban transportation.

Urban Housing

- A key constraint on rapid expansion of low-income housing is high cost of land.
- High land prices translate into high property cost and therefore low rental yields. With borrowing rates at substantially higher levels, these yields are too low to recoup the value of the investment, thus acting as the key barrier to the emergence of institutional investors in low-rent housing.
- **Key factors contributing to inflated land prices in India has been**
 - The flow of illicit money into real estate.
 - Many sick public sector enterprises (PSEs) own large pieces of unused land in prime urban areas.
 - Central and state governments own substantial urban land that remain unused or subject to encroachment.
 - The Land Acquisition Act, 2013 fixes compensation for acquired land at rather high levels. In turn, this makes land acquired for affordable housing expensive and contributes to high costs.
 - A further constraint on the supply of urban land is the stringency of land conversion rules.

Way Forward

- Expanding space vertically through the construction of taller buildings. The availability of this avenue depends on the permitted floor space index (FSI). Increasing FSI is required.
- In cities, rent is held at low levels and eviction is difficult. There is clearly need for a modern tenancy law, which would give full freedom to tenant and owner to negotiate the rent and the length of the lease.
- **REDUCE Taxes:** Migrant workers who come to cities without their families, often for short periods live in dormitory houses. Most states treat these dormitories as commercial hotels and subject them to commercial water and electricity tariffs, higher property taxes, trade-license fee and luxury tax. These charges greatly increase the rent on dormitory housing forcing the migrants to look for alternatives, which inevitably encourages the growth of slums.

Swachh Bharat

Municipal Solid Waste (MSW) Disposal

- Rapidly rising prosperity has resulted in the generation of vast volumes of solid waste in our cities. The cities have been slow to develop effective ways to dispose of this waste.
- ULBs spend about Rs. 500 to Rs. 1,500 per tonne on solid waste management. Out of this expenditure, about 60% - 70% is spent on the collection of waste and 20% - 30% on transportation but almost nothing on treatment and disposal.
- On methods of final disposal, options such as biogas and composting are not sustainable solutions in larger cities since they generate by-products or residues in large volumes that these cities will find difficult to dispose of efficiently. Only incineration (also called Waste to Energy), thermal pyrolysis and plasma gasification technologies offer the sustainable disposal solutions.
- Promote an authority at the Centre to spread the use of Waste to Energy plants. Such an authority can be called Waste to Energy Corporation of India (WECI) and placed under the Ministry of Urban Development. Just as the National Highway Authority of India (NHAI) has been instrumental in developing high quality National Highways through Public Private Partnership (PPP) across the country, the WECI may set up world class Waste to Energy plants through PPP across the country.

Urban Transport

- The quality of housing and transport are two key determinants of a comfortable city life.
- The design and maintenance of city roads is a major challenge in Indian cities. The roads are notorious for being pedestrian-unfriendly, poorly surfaced, congested, and constantly dug up.
- Unlike western cities, motorized vehicles in India change lanes with high frequency and in unpredictable ways. This creates unnecessary traffic jams and delays. It may be worth running pilots to see if strict enforcement of traffic rules through fines in case of violations can induce behavioural change and persuade drivers to the benefits of obeying all rules.
- incentives may be created to encourage vehicle-sharing systems such as Ola and Uber. This will reduce the

number of vehicles on the road reducing both congestion and pollution.

- Metro rails can be an efficient source of public transportation in many cities; this highlights the need for a national metro rail policy that will ensure that metro projects are not considered in isolation, but as part of a comprehensive plan of overall public transportation.

Conclusion

Well-run ULBs should have the power to raise financial resources including through municipal bonds. Introduction of Standardized, time-bound, audited balance sheets across 4,041 ULBs would help improve financial management as well as spur further reforms in this area. Indian cities also need to overhaul their municipal staffing and introduce appropriate skills to achieve administrative efficiency

Rural Transformation

The rural landscape has been transforming, with a clear distinction between rural and urban areas disappearing. This has resulted in a more integrated economy. Job creation, however, has not kept pace with the shift from agriculture towards non-farm sectors. Other challenges facing rural areas include low literacy levels, inadequate access to health, drinking water and sanitation as well as insufficient linkages with and use of formal financial services.

1. Convergence between Schemes and Transparency in Implementation

- The SECC 2011 is becoming the basis for determining beneficiary level entitlements for several programs.
- There is a need to correct for any significant discrepancies between Census 2011 and SECC 2011.
- The use of Geographical Information System (GIS) for tracking assets and houses created under MGNREGA and Pradhan Mantri AwaasYojana - Gramin [PMAY (G)], respectively, should be ensured.

2. Skill Development and Employment Generation

- Beyond expanding the number of Self-Help Groups (SHGs) promoted under the Deen Dayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM), several measures are needed for strengthening the scheme. Efforts should be made to ensure a longer term (say 3 years) for the CEOs of the State Rural Livelihood Missions (SRLMs)
- More organised support is necessary for forming and strengthening Producers Groups and Producers Companies in areas like sustainable agriculture and non-timber forest products.
- A mechanism for measuring key indicators for SHGs including household savings, income, asset creation, debt reduction and productivity needs to be developed. For strengthening bank linkages, up to two Bank Correspondents should be appointed for a Panchayat and one Bank Mitra for a branch.
- Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY), the focus should be on monitoring and improving the quality of placements. An integrated IT platform should be developed which can be linked with the IT platforms of the project implementing agencies at the state level.
- With respect to MGNREGA, the use of geo-tagged photographs of assets created under the scheme, social audits facilitated by an independent unit should be made compulsory. Training programs for social audit functionaries should also be developed. Further, there should be an emphasis on establishing linkages between MGNREGA and skill training programs, as envisaged in the Livelihoods in Full Employment project launched in 2015.
- In the absence of a dedicated fund for the maintenance of assets under MGNREGA, a number of assets fall into disrepair and become unusable over time. It might therefore be helpful to create a separate maintenance fund for community assets created under MGNREGA.
- Another step that needs to be taken on a priority basis is ensuring that all the technical staff vacancies in MGNREGA are filled and personnel have adequate capacity to supervise the quality of assets constructed under the scheme.
- Data indicates that the benefits of MGNREGA have been reaped disproportionately by some of the more

prosperous states. Therefore, there is a need for developing a set of inclusion, exclusion and deprivation criteria for targeting the program in favour of the poorest households.

3. Housing

- As per the PMAY-G scheme, houses will be provided to all by the year 2022. In order to meet this goal, 10 million houses will need to be constructed by March, 2019.
- To ensure that the goal is met, it is crucial that state specific plans are developed along with a work schedule and explicitly defined targets.
- Another priority is to ensure that funds are released in a timely manner based on evidence of completion of each stage of construction. Due to delays in the release of payments, there is a back-log of half-finished structures in several areas.
- The monitoring mechanism should be strengthened by the introduction of geo-tagged photographs of house construction as well as compulsory social audits.

4. Drinking Water and Sanitation

- Under the National Rural Drinking Water Programme (NRDWP), continuous uninterrupted water supply should be provided to a minimum of 179,000 partially covered habitations during the next three years. Additionally, at least 26,500 arsenic and fluoride affected habitations should be treated.
- In order to achieve the target of becoming Open Defecation Free (ODF) by 2019, 55 million household toilets and 115,000 community toilets will need to be constructed under the Swachh Bharat Mission (Gramin).
- Special attention should be paid to addressing inequalities with respect to sanitation access for women, children, senior citizens and the differently-abled.

5. Energy

- Over the next three years, the goal as part of the Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) is to bring electricity to every household in all villages across the country. In order to ensure this, there will need to be a focus on the quality, reliability, affordability and legality of supply, in the absence of which electrification of villages might not necessarily translate into rural households actually getting power.
- Further, 50 million BPL households, a large number of which are in rural areas, should have access to Liquefied Petroleum Gas (LPG) by 2019 under the Pradhan Mantri Ujjwala Yojana (PMUY).

6. Roads

Over the three-year timeframe, the goal should be to connect all villages in rural areas with all-weather roads under the Pradhan Mantri Gram Sadak Yojana (PMGSY). In 2016, following an audit conducted by the Comptroller and Auditor General (CAG) on the performance of PMGSY across 29 states, several recommendations were made for strengthening the implementation of the scheme.

7. Digital Connectivity and Literacy

Tele-density in rural areas is one-third that of urban areas. An estimated 55,619 villages do not have mobile coverage. Developing enabling infrastructure in rural areas is therefore a priority.

8. Rurban Growth Clusters

- The 300 clusters selected for development under the National Rurban Mission should be established by 2020.
- Dedicated teams are important for ensuring time-bound implementation and facilitating convergence between various government schemes. Effective convergence is at the core of the cluster development approach outlined in the Mission guidelines.
- Another area that should be strengthened is capacity building of officials and elected representatives of the

Panchayats so that they are fully aware of the steps that need to be taken for fulfilling the Mission objectives.

9. Panchayats as Institutions of Strong Local Governance

- Panchayat buildings should be equipped with the requisite facilities including electricity and computers with a functional internet connection. States should confer on the Panchayats full administrative and financial control over staff working with them.
- They should also have the authority to recruit staff, with at least one staff member dedicated to administrative work.
- An annual study on the Panchayat Devolution Index (PDI) has been conducted by the Ministry of Panchayati Raj since the year 2006.

Regional Strategies

- Among recent measures aimed at achieving regional balance at the national level, the Fourteenth Finance Commission recommended a significant 10 percentage point increase, from 32% to 42%, for the states' share in the divisible pool of tax revenues.
- The large weight given to "Income Distance" is an important step towards plugging the gaps in per-capita income between states.
- As in other large countries such as the United States and China, geography is a key differentiator in India. Several regions in the country exhibit geographical characteristics that are different from the rest of the country. These characteristics require region-specific policies and programmes.
- As in other large countries such as the United States and China, geography is a key differentiator in India. Several regions in the country exhibit geographical characteristics that are different from the rest of the country. These characteristics require region-specific policies and programmes.
- With these factors in view, in the following, we focus on targeted actions in four regions of India:
 - North Eastern Region (NER)
 - Coastal Areas and Islands
 - North Himalayan States
 - Desert & Drought prone areas

1. North Eastern Region

- NER of India includes Sikkim and the Seven Sister states of Assam, Arunachal Pradesh, Manipur, Mizoram, Meghalaya, Tripura and Nagaland.
- These states together share 5,300 km of international borders with key regional and international players such as China, Bangladesh, Myanmar, Nepal and Bhutan.
- The region is rich in natural resources like water, petroleum and natural gas. 52% of the NER is covered with forests and is endowed with exotic flora, fauna and a rich mineral resource base⁴. However, physical isolation of the region post-1947 and a pause in infrastructure development after the India-Pakistan war of 1965 has hampered the region's economic growth.
- In terms of infrastructure, the road and rail network is characterized by low density and poor quality of roads.
- 95% of India's exports to neighbouring states of Bangladesh, Bhutan and Myanmar are from regions other than North East India. This is so despite the fact that the region is the natural gateway (with 98% international borderlines) for India to the East Asian, South East Asian and South Asian economies.
- The region has a huge potential for generation of hydropower, solar power and wind energy. The region also boasts of significant shale oil reserves. Despite this, the region lacks in energy self-sufficiency. The main factors contributing to this are low capacity utilisation of power generation units, weak connectivity with the eastern grid and a limited carrying and distribution capacity.

Action Agenda

- A top priority for the next three years is ironing out the transit treaties and the development of physical

infrastructure between the NER and neighbouring countries. We must forge digital connectivity, distribution of power and transport links with the latter.

- On-going transport connectivity projects including the East West Corridor, Special Accelerated Road Development Project (SARDP-NE) and Trans Arunachal Highway should be closely monitored.
- There should be continued effort to achieve the vision of connecting all NE state capitals by 2020.
- Indo-Bhutan connectivity could be enhanced by entering agreements to construct the 12km stretch on the Bhutan side which would connect Bhutan to Tawang in Arunachal Pradesh.
- National/State highways and rural roads in the NER come under intense pressure given the region's exposure to heavy rains and landslides. The share allocated for road maintenance from the Central Road Fund (CRF) remains small and should be increased.
- A key project for international connectivity is the rail link from Imphal to Moreh and further from Moreh to Kalay (in Myanmar). This will link the NER to the Trans Asian Railway network. The Ministry of Railway (MoR) and Ministry of External Affairs (MEA) should discuss and concretize further action on this project with the intention to commence construction by 2018.
- Brahmaputra and Barak rivers were pivotal river connectivity routes prior to 1947, New river port and ancillary facilities would enhance the connectivity across the region and bring down the freight movement costs.
- The government should move ahead with securing motor vehicles agreements with key nations of Myanmar and Thailand. The aim should be to further expand these agreements to other Southeast nations of Cambodia, Laos, Vietnam and Malaysia.
- Emphasis on development of special industries including sericulture, floriculture, tea plantations and the silk industry. Artisans and handicraft industry of the region should also be promoted.
- Currently, various laws restrict the felling and transit of tree species which are grown on Non-Forest or Private land changing this would help in meeting the growing domestic demand for wood and paper based products, increase employment and help achieve the government's goal of 33% forest and tree cover.
- A well-developed dairy industry would enable balanced growth within the region
- Public-Private Partnerships (PPPs) and Private Projects should be used as a near term tools to boost power generation capacities.

2. Coastal Regions and Islands

The major coastal issues observed in Andaman Islands are:

- Loss of Coral Reefs
- Mangrove Deforestation
- Loss of Sandy Beaches
- Loss of Forest

In Andaman & Nicobar Islands, approximately 87% of the land is notified as reserve/deemed forest with only 6% of the land available for development.

The Lakshadweep group has 10 inhabited islands, which boast of an egalitarian and homogenous society. Limitations and constraints in Lakshadweep include limited landmass, lack of freshwater resources, typology of soil, exposure to natural disasters, and flat, sandy terrain leading to sanitation and drainage problems among others.

Action Agenda

- Recently 26 islands were selected for holistic development by the Department of Border Management under the Ministry of Home Affairs.
- The Ministry of Shipping along with the Directorate General of Lighthouses and Lightships identified 78 lighthouses in coastal states and the islands of Andaman and Nicobar and Lakshadweep in order to develop them as centres of tourism under the PPP route.
- The National Sagarmala Apex Committee (NSAC) 2015 meeting proposed to create Special Purpose Vehicles for the 14 Coastal Employment Zones (CEZs)

- India wants to remove the regional disparity between the western and the eastern coast by creating India's first industrial corridor, a 2,500-kilometre-long East Coast Economic Corridor. The Asian Development Bank has already approved USD 631 million for this corridor, which will run along the Vishakhapatnam-Chennai coastline.
- The coastal municipalities and islands' local municipalities should either through third party or through PPP mode devise and implement waste disposal plans by 2020.
- Widespread use of Integrated Coastal Zone Management (ICZM) as an effective tool for sustainable management of the coast should be encouraged.

3. Northern Himalayan States

- At the national-level, the wastelands occupy 19.4% of the total geographical area whereas in the Himalayan states (including the North-East states) wastelands occupy one-third of the area. In addition, one-fifth of the land in these states is either under snow or barren. These states are also close to the Himalayan glaciers that are an important source of fresh water for India.
- Jammu and Kashmir has experienced unrest in the form of terrorism and insurgency for a long time. However, opportunities for development exist as the state has an unparalleled environment for making horticulture and floriculture as key economic drivers. The predominantly agrarian economy benefits from its agro-climatic diversity which varies from sub-tropical in Jammu to cold arid in Ladakh.

Action Agenda

- Jammu and Kashmir's handicraft industry is fast gaining prominence in the global markets and should be looked as being developed as an industrial cluster.
- By 2019, the state universities of this region should establish research centres on developing and spreading the use of technology/instruments/materials agreeable to the hill economy and ecology.
- Alternative industries like animal husbandry, fruit and timber plantation and floriculture among others where the region has a comparative advantage should be identified.
- The Himalayan states should accord approval for infrastructure projects involving diversion of forestland up to an area of 10 ha from the present limit of 5 ha
- A feasibility study on establishing a railway line for the Western Himalayan region connecting Jammu & Kashmir, Himachal Pradesh, and Uttarakhand should be planned and conducted. This should also be connected with the North Eastern states.

4. Desert and Drought Prone Areas

- The desert region in India comprises 7 hot and cold deserts. The cold desert is mainly present in Jammu and Kashmir whereas the hot deserts are spread across six states, Rajasthan, Gujarat, Punjab, Andhra Pradesh, Karnataka and Haryana.
- The key features of these deserts are harsh weather conditions, wind erosion, shifting of sand dunes (in hot desert), and unsuitability for agriculture and water scarcity, among others. These conditions together do not provide suitable conditions for healthy economic growth.

Action Agenda

- New tourist circuits should be created in the desert regions and closer ties with neighbouring circuits should be established to increase footfall. For e.g. tourists visiting Delhi, Agra and Jaipur have easy access to the Desert Circuit in Rajasthan (through Jaipur) which includes places like Bikaner, Ajmer and Jodhpur
- Eco-tourism, handicrafts and culture based products could provide for alternative means of livelihood in cold desert. Additionally, wool processing industries can be set up under the small-scale sector in the Ladakh region. The available sheep and goat wool can support units for manufacturing shawls, blankets and carpets.
- Provision of education.
- Both power and water supply are inadequate in Ladakh, particularly in the far-flung areas.

Chapter-4: Growth Enablers

Transport and Connectivity

The transport sector facilitates trade and migration, thereby raising productivity in other parts of the economy. As a large sector in itself, it also contributes to growth directly. It accounts for a large part of construction activity. The movement of people, which this sector facilitates, is also a key source of social integration and transformation. For these reasons, transport and connectivity are central to India's economy and society.

Transport and connectivity in India face several challenges that lead to inefficiencies and below-potential attainment of productivity.

1. The transport network is not planned holistically. The lack of interconnectedness and synergies in the transport network prevent the efficient movement of people and goods.
2. Maintenance of different modes of transport infrastructure is poor
3. The capacity of physical transport infrastructure is limited. Congestion on roads and railways is common due to capacity constraints.
4. The transport network has severe modal imbalances. For example, over time, roadways have become the dominant mode of transport of goods at the cost of railways, despite the latter's economic and environmental advantages over the former. Similarly, inland waterways remain underutilized as a mode of transport.
5. Transport safety, particularly road safety, remains poor
6. The transport sector remains highly dependent on conventional sources of energy.

1. Roadways

- India had the second largest road network in the world with over 4.24 million km of roads in 2013-14, consisting of National Highways, Expressways, State Highways, major district roads, other district roads and village roads.
- In 2014-15, national highways alone made up 97,958 km, a 50% increase in length since 2004-05.

Road Connectivity and Mobility

- Govt should Increase connectivity, especially in Rural India and with Ports by expanding the road network.
- By 2020, we should achieve universal connectivity in rural areas under the PMGSY, which should complete the remaining 35% of road core network.
- Increase the coverage of Electronic Toll Collection (ETC) in National and State Highways. Equipping lanes with ETC will improve the flow and efficiency of traffic.
- The National Highways Authority of India (NHAI) has already rolled out a program for ETC on Toll Plazas on National Highways known as "FASTag." The system uses Radio Frequency Identification Device (RFID) technology for paying tolls directly from a linked prepaid account.

Road Maintenance

- Improve maintenance of highways and expressways. The quality and maintenance of transport varies across different modes and regions.
- While Highways and Expressways make up only about 1.7% of the length of all roads in India, they carry about 40% of the road traffic in 2014-15. We should also encourage research and innovation in road construction technology and the use of durable materials. Further, we should impose heavy penalties on contractors for poor quality of Operations and Maintenance.
- Allocate additional funds for maintenance of all roads. Across the country, roads are found in varying states of disrepair due to natural causes as well as heavy use.
- Define criteria for converting state to national highways. While converting state highways into national highways is a cost-effective way of expanding the national highway network, it also expands the central

government's maintenance responsibilities.

Road Safety

- Strengthen rules governing road safety by passing the Motor Vehicles (Amendment) Bill, 2016.
- Create Road Safety Boards to reduce accidents. Although the Motor Vehicles (Amendment) Bill, 2016, addresses important issues related to road safety, it does not provide for any road safety agencies at the central or state level. At the state level, we should establish road safety boards to set and enforce rules.
- Use data to monitor accidents. We can do this by use of data to monitor accidents in real time and use this input to direct efforts towards correction on specific points.
- Standardize reporting of accidents and enhance preparedness through better logistics.
- Provisions to ensure that whenever an emergency situation occurs, the victims are rushed to a nearby medical centre within 10 minutes of the accident.
- Create supporting infrastructure and economic models to support better safety and efficiency.

2. Railways

Freight Segment

- Rationalize railway fares to increase capacity utilization along non-major routes in the freight segment. Currently, freight fares in railways are kept high to cross-subsidize the passenger segment. By 2020, we should substantially rebalance fares such that freight fares are more affordable to increase the usage of railways for freight transport especially in non-major routes.
- Implement and plan DFC (dedicated freight corridors).

Connectivity

- Build additional infrastructure for railways to augment capacity and connectivity.
- Fast track the development of the Mumbai-Ahmedabad High Speed Rail (MAHSR).
- Develop semi high-speed trains to enhance connectivity. We should also enhance semi high-speed rail regional connectivity such as Regional Rapid Transit System (RRTS). This can be done through the introduction of semi high speed lines in sections where the DFCs are planned.

Service Delivery and Efficiency

- **Enhance service quality in passenger railways.**
- **Improve efficiency of freight railways.**
- **Improve the quality of railway stations and trains** – Upgrading technology and ensuring cleanliness at railway stations will make the rail experience more comfortable and convenient for passengers.
- **Redevelop and modernize railway stations.** The availability and quality of passenger amenities, station buildings, platform surfaces and circulating areas need to be enhanced to better serve the needs of rail passengers
- **Improve the punctuality of trains.**

Railway Safety

- **Achieve zero fatalities in railways by 2019** - by upgrading infrastructure- By 2019, the Railways should eliminate 6,113 Unmanned Level Crossings (UMLCs) on Broad Gauge Lines. The elimination of these unmanned crossings will reduce accidents and fatalities while also increasing average speed of trains.
- **Improve safety by adopting new technologies** - Three key technological interventions can help reduce accidents:
 - First, implementing the already-developed Train Collision Avoidance System (TCAS) technology across the high-density network over the next three years will help bring down the number of accidents manifold.

- Second, adopting a flood warning system at major bridges and flood-affected locations will help prevent weather-related incidents.
- Third, the adoption of a technology to enhance mobility during fog or low visibility conditions will also increase safety of passengers.
- Strengthen the institutional framework to ensure safety.

3. Shipping and Ports

- India currently has 12 major and 205 non-major ports located across about 7,500 km of coast. Coastal shipping remains largely underutilized, accounting for only 6.5% of the total freight traffic in India in 2014-15, relative to 30% by rail and 57% by road.
- **Increase competition through easing cabotage.** Currently, India does not practice absolute cabotage, or the reservation of coastal cargo transportation for Indian flag vessels. Foreign vessels can carry cargo from one Indian port to another with prior approval from the Director-General of Shipping in case Indian ships are unwilling or unavailable to carry the cargo, exercising their Right of First Refusal (ROFR).
- **Increase the capacity of and eliminate discriminatory provisions for Indian vessels** – In 2013-14, Indian flag vessels carried 8.5% of cargo. The remaining 91.5% was carried by foreign flag vessels. We need to increase the number and capacity of Indian flag vessels by levelling the playing field between them and foreign flag vessels.

4. Inland Waterways

India has about 14,500 km of navigable inland waterways, including rivers, canals, backwaters, and creeks.

Despite its potential to transport large volumes of goods and connectivity to rural areas, inland water transport accounts for a small amount of freight movement relative to other modes. Currently, the bulk of freight traffic is carried on three national waterways, NWs I, II, and III, and the Mumbai and Goa waterways.

- **Streamline the governance of inland waterways** – Currently; inland waterways are governed by multiple authorities including the Central Inland Water Corporation Limited (CIWTC Ltd), port authorities and state governments.
- **Develop measures for year-round navigation.**
- **Ease restrictions on river-sea movement** – different survey and certification requirements prevent seamless movement across inland and coastal waterways.
- **Develop inland waterways transport** to facilitate movement of goods to neighbouring countries and the Northeast.

5. Civil Aviation

- Civil Aviation directly and indirectly contributed USD 7,192 billion to India's GDP and created 9.64 Lakh jobs in 2016. Beyond the direct and indirect effects, the sector also contributes to income and employment through increasing tourism and its supply chain.
- Align excise duties on ATF (Aviation Turbine Fuel) to international levels to bring down its cost.
- Adopt a consistent model for tariff determination. Currently, Public Private Partnership (PPP) airports in India – Delhi, Mumbai, Bangalore and Hyderabad – operate under a hybrid till mode, where aeronautical revenue and a share of the non-aeronautical revenue are used to determine tariffs.
- Although the hybrid till model is beneficial in that it incentivizes infrastructure investment into airports, it raises costs for airlines and passengers.
- Keeping passenger charges low will be critical in maximizing traffic flow in the civil aviation sector.
- Remove bottlenecks for the second control period to be implemented in Delhi and Mumbai.
- Allow credit for aviation infrastructure under the GST.
- **Include provisions for domestic hub development while auctioning traffic rights.** The current proposal to offer open skies to countries beyond 5000 km and auction traffic rights to countries within a 5,000 km radius

will increase connectivity. However, it may also lead to foreign carriers using their own hubs rather than the Indian hubs.

- Improve service delivery in airports.

6. Cross-cutting Issues

Seamless Transport across Modes

- Increasing Intermodal Connectivity. For each mode of transport, we need to design plans for achieving complete and seamless access from start to end point. This would also ensure intermodal connectivity.
- Explore the feasibility of logistics parks and expedite the completion of these parks.

Logistics and Technology Adoption

- By 2020, we should improve our logistics performance and witness an improvement in our ranking in the Logistics Performance Index (LPI).
- We should also encourage automation and the use of technology to enhance logistics. For the shipping sector, a Comprehensive Cargo Database should be created.

International Connectivity

To enhance transport connectivity with neighbouring countries through various modes, we should work on streamlining standards, technologies and improving the transportation infrastructure.

Access to Finance

Since the transport sector has direct and indirect effects on economic growth, we should work to ensure increasing investment in the sector. Because public investment is constrained by limited revenues available, we need to explore avenues to mobilizing private investment in a major way.

Digital Connectivity

The Context and Challenges

Digital connectivity facilitates the communication and commerce that drives economic growth. Individuals cannot transfer payments digitally, use e-governance portals to connect with the government, access information or make online purchases without continuous and reliable Internet or telephone access. The Digital India Programme, an inter-ministry campaign launched in 2015, has made significant progress in its nine growth areas. The areas of focus include building broadband highways, providing universal access to mobile connectivity, a public internet access program, e-governance, electronic service delivery, access to information, increasing electronics manufacturing, providing information technology skills for jobs and early harvest programs.

- Tele-density, or the number of telephone connections for every 100 individuals, is 83.
- In rural areas, the tele-density is one-third that of urban areas.
- Approximately 55,619 villages do not have mobile coverage.

The Action Agenda for enhancing digital connectivity is based on the following strategic objectives

1. Enhancing digital infrastructure.
2. Developing software for services that can be provided digitally.
3. Empowering citizens digitally

Access to Broadband Internet to Rural Households

The government has already commenced a large-scale initiative, BharatNet, implemented by the Bharat Broadband Network Limited (BBNL), to create a high-speed digital highway for providing 100 Mbps connectivity to all 2.5 Lakh Gram Panchayats using optical fibre.

To speed up bringing the fibre to the Gram Panchayats, the option to carry the cable on electric poles should be more aggressively pursued. In Andhra Pradesh, the state government has exercised this option on its own and has already connected all Gram Panchayats.

Wireless Connectivity

Wi-Fi networks often offer a more affordable and flexible option than mobile Internet or broadband services for scaling up Internet access.

Enabling Infrastructure for Connectivity in Rural and Remote Areas

- While rural residents accounted for 68 % of India's population in 2011, they made up 73 % of the offline population. The high cost of Internet services deters many low-income households from accessing the Internet.
- Absolute costs of locally manufactured devices and data plans are low relative to other countries; they remain unaffordable for the poorest segments of the population.
- Keeping regulatory barriers to the minimum necessary would lead to healthy competition in the mobile sector driving down the costs of devices and data plans.

Differential Pricing

- While there are no laws enforcing net neutrality – or equal pricing for all data services – the Telecom Regulatory Authority of India (TRAI) promotes it.
- We should prioritize resolving this debate and issue a clear policy on net neutrality.

Digital Literacy and Awareness

- A 2013 survey highlights that 69 % of Indian respondents cited a lack of awareness of the Internet as a key reason for not being online.
- To ensure take-up of the proposed services, we need to make sure that citizens are able to navigate them easily. In parallel to other activities, schools, gram panchayats and vocational training institutes should provide basic training in using digital services and the Internet and cyber security awareness.

Electronics Manufacturing

The Digital India campaign aims to increase electronics production for domestic and foreign markets. Currently, 65% of the demand for electronics products is fulfilled by imports. By 2020, we should lower duties on key inputs of final electronics, reduce the administrative burden required to obtain tariff exemptions and work with states to offer electronics-specific tax incentives and facilities for firms.

Cyber Security and Data Protection Laws

Currently, India has no comprehensive privacy or data protection laws that cover digital payments specifically. An existing law for data protection, section 43(A) of the Information Technology Act (ITA), offers basic protection. Data related to digital transactions could be sold and the consequences would be unpredictable.

Digital Financial Services

We should create a digital friendly environment for financial services including payments, credit and remittances. The benefits of adopting a digital payments instrumentality include lower expenses for banks, merchants and individuals and increased transparency.

We can improve the environment for digital transactions in two ways:

- Maintaining the regulatory structure and
- Emphasizing financial literacy.

E-Governance

- Since the approval of the National e-Governance Plan (NeGP) in 2006, e-Governance has evolved from the digitization of government records to the efficient, transparent and reliable delivery of government services using Information Technology.
- Despite India's progress in e-Governance, the pace of its adoption lags in technologies such as mobile phones and messaging applications.

Globally, India ranked 107 out of 193 countries in the E-Government Development Index (EGDI) in 2016. In contrast, Brazil and China ranked 51 and 63, respectively, in the same year.

E-Governance in India faces following Challenges:

1. E-services often do not provide end-to-end solutions.
2. Interfaces may not be available in vernacular languages.
3. Technologies are limited in scale in terms of infrastructure and adoption by public authorities.
4. Connectivity and enabling infrastructure to access e-services remains limited.
5. Digital literacy remains poor.

To improve e-governance over the next three years, we should create reliable Information Technology (IT) infrastructure up to the Gram Panchayat level such that it facilitates round-the-clock access to government services.

In 2004, the Government of Rajasthan partnered with several private entities to develop **e-Mitra**, an online service-delivery platform operating in 33 districts. It delivers about 250 e-government services (e.g., forms, birth certificates, information) to individuals via dedicated centres and kiosks. Through the kiosks, the platform overcomes the challenge that many individuals do not have access to mobile phones, computers or the internet.

The **e-Mitra** system has reduced the footfall in government offices, made service delivery more timely and convenient for individuals and eased the system of document management for the government.

- Scale up grievance redressal portals at the state level and utilize data to improve the resolution of grievances.
- Ensure the adoption of e-office by different ministries and departments.
- Central Government Ministries/Departments should provide services electronically, where possible, by December 2018.
- Develop end-to-end service delivery through common back-end applications.
- Use Digital Lockers to store and share information.

Public Private Partnerships

According to the PPP Knowledge Lab, a “public-private partnership (PPP) is a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance”.

India has significant experience with private sector participation in infrastructure which traces its roots back to the liberalisation era in the early 1990s

1. The first phase marked the inception of PPPs and saw key projects primarily in the transport and power sectors.
2. The second phase, from 2004 to 2011, saw private partnerships scale up significantly. Strong political will to scale up PPP in infrastructure led to the formation of the Committee on Infrastructure chaired by the Prime

Minister. Launch of new initiatives like the Viability Gap Funding (VGF) Scheme, setting up of India Infrastructure Finance Company Limited (IIFCL) helped increase financial flexibility and capacity in the ecosystem

3. The third or the current phase has seen a decline in the momentum gained during the second phase.

Various issues have led to stalled projects in different stages of award, construction and operation. Significant dilution in important terms of the standard bidding documents, over engineering of project design, aggressive bidding by project developers, financing issues, especially bank funding as well as lack of equity funding led to a series of stalled projects, lack of investor interest and overall slowdown in roll out of PPP projects.

Ensuring Adherence to Procedures and Documentation

A. Constitute an Infrastructure Committee

For sustained implementation of PPP policies, strong political will is required. This would be facilitated by the constitution of an Infrastructure Committee with the Finance Minister or Prime Minister as the chairman

B. Increase Enforcement and Monitoring Efforts

Cabinet guidelines provide for a two-tier structure comprising of PPP Project Monitoring Unit (PPP PMU) at the project authority level and PPP Performance Review Unit (PPP PRU) at the Ministry level coupled with guidelines on periodic compliance reporting to ensure successful implementation of PPP projects. The above monitoring framework should be adopted by all the Ministries/Departments by the end of 2017 to make it fully effective.

C. Strengthen Dispute Resolution Mechanisms

D. Curb Aggressive Bidding

Instances of aggressive bidding (leads to a race to the bottom where private players often tend to make commercially unviable bids) by developers have been common and they eventually lead to delays in the delivery of projects due to renegotiation

E. Recommendation on Financing of Infrastructure by the HLCFI

Private financing for infrastructure projects is largely provided by commercial banks in India. This presents a constraint due to the inherent limits in the financial capacity of domestic lenders.

- Incentivize commercial banks to refinance their medium term debt from the construction and initial operation period by insurance and pension funds, which can take on longer-term maturities through Infrastructure Debt Fund (IDFs) structures.
- Reorient the role of IIFCL. The IIFCL was set up by the government in 2006 with a view to provide long term financing support for infrastructure projects that the commercial banks could not provide. However, IIFCL has been functioning almost like a commercial bank and has therefore deviated from its primary mandate
- IIFCL's role in providing subordinate debt has not been leveraged yet. Instead of just relying on sovereign guarantees, IIFCL should also leverage its balance sheet to extend guarantees.

F. Build the Capacity of Lending Institutions

G. Resolve the Bank Non-performing Asset (NPAs) Issue

H. Operationalize the National Investment Infrastructure Fund (NIIF)

Sector Specific Measures

Highway Sector

- Streamline clearances
- Expand the current use of Hybrid Annuity Model and the Operation & Maintenance Models in the Highway sector wherever feasible, to provide an impetus to private participation in highway construction in low traffic area

Power Sector

The inter-ministerial Task Force on PPP in the Distribution of Electricity has recommended a framework for PPP projects. This framework needs to be adopted by states with Central Government providing VGF.

Ports

- Reorient the Model Concession Agreement (MCA) on the basis of models followed in some minor ports in Gujarat
- Expedited clearance processes

Airports

Set up an appropriate PPP mechanism for encouraging private participation in the development of Brownfield and Greenfield airports.

Telecommunications

Expedite the implementation of BharatNet by engaging private partnership through the PPP model as per the recommendations of Telecom Regulatory Authority of India (TRAI) released in February 2016.

Other sectors

Relevant Ministries related to other key sectors such as Healthcare, Education, Waste Disposal and Storage should also draft appropriate PPP policies, including standard documentation, by 2020. Ministries should focus on:

- Streamlining the PPP processes for faster execution of projects
- Designing viable business models where private investments are constrained due to lack of clarity in revenue streams
- Consider implementation of initiatives like VGF in their respective sectors

Energy

The energy sector is fundamental to growth and development. Availability of electricity, petrol, diesel and gas at competitive prices is essential for the efficient functioning of energy user sectors, which include households, transportation, industry, agriculture and the government and comprise nearly the entire economy. But being a large sector, energy also contributes directly to the growth of the economy in a major way

Presently, 304 million Indians do not have access to electricity and around 500 million Indians are dependent on solid biomass for cooking.

Initiatives Related to Energy Consumption by Businesses, Households, Transportation and Agriculture

- India has already committed to bring electricity to every village by May 2018 and to every household by 2022. An even more ambitious goal would be to provide electricity to all households on 24x7 basis.
- For streamlining the demand in the industrial sector, the cross-subsidy in the power sector must be substantially reduced so that industry may receive electricity at competitive prices.
- To bring additional relief against black carbon in cooking, the PMUY programme should be complemented by:
 - 1) Setting up of biomass pelletising units; and
 - 2) launch of a scheme to distribute 'forced draft efficient biomass

chullahs’.

- On the agricultural front, solar irrigation pump distribution target must be stepped up and financed through credit support from NABARD and government subsidy.

Energy Efficiency

Energy efficiency refers to reduction in energy use for the same product or service

- The National Mission for Enhanced Energy Efficiency (NMEEE) must conduct a thorough cost-benefit analysis of the available energy-efficient technologies and products across all sectors, especially agriculture, housing and transportation. Based on this analysis, we must extend the reach of the energy efficiency programmes to sectors not presently covered.
- Since majority of energy generation in India is through thermal plants, even a small improvement in efficiency at such plants will help India yield large gains. Majority of the Indian coal-fired power plants operate on 30% - 32% energy efficiency and average CO₂ emissions of 1.08g kg/kWh – both indicators put India on the lower band of the world comparison table.
- At the institutional level, the national and state designated agencies working in the area of energy efficiency should be strengthened.
- Finally, to enhance vehicle fuel efficiency gains, the auto fuel quality should be upgraded to BS VI norms for nation-wide launch in 2020.

Increasing Coal Production and Improving the Efficiency of its Distribution

The reality of India’s energy sector is that around three-quarters of our power comes from coal powered plants and this scenario will not change significantly over the coming decades. Thus, it is important that India increases its domestic coal production to provide energy security and reduce its dependence on imports.

- At the institutional level, an independent organisation will be created to develop and maintain the repository of all coal related geological information in the country.
- Use market mechanisms to open the coal-mining sector for commercial mining. Allowing specialized mining firms to mine coal can go a long way towards improving the efficiency of mining.
- Efforts must be made to improve labour productivity, increase coal production and enhance efficiency of distribution.
- Leverage the critical role of railways in coal distribution.
- The government must employ more Coal-Handling and Preparation Plants (CHPP) that wash coal before shipping. This process removes ash and debris, thereby increasing the energy content per tonne by 10-20%.
- On the lines of China, the Indian government must take steps to reduce the use of low quality coal. The quality used in India has high ash content and low energy content. Based on this quality, India uses 650 grams coal per kWh. Whereas, in 2015 China reported use of 308 grams coal per kWh.

Increasing electricity generation and streamlining transmission and distribution

As of 31st March 2016, India had 21 operating nuclear reactors with an aggregate capacity of 5.8 Giga Watt (GW). This capacity accounted for 1.9% of India’s total installed electricity generation capacity in 2015-16. By 2032, India wants to increase the nuclear power capacity from 5.8 GW to 63 GW. Towards this goal, fresh capacity of 2.8 GW must be added by 2019. In turn, this would require commissioning the 600 MW Prototype Fast Breeder Reactor (PFBR). Work on new nuclear projects under construction at existing locations and Kudankulam-3&4 would have to be actively pursued.

For the hydro projects, the government will need to make efforts to expedite progress on capacity under construction through satisfactory Rehabilitation & Resettlement implementation. Our goal of adding generation capacity of 15.8 GW in wind power and 53 GW in solar power over the next three years will require concerted effort.

Apart from electricity generation, India also has to overhaul its transmission and distribution across the nation.

India reported one of the world's worst T&D losses (23%) contributing to very high Aggregate Technical and Commercial (AT&C) losses (25%). India must take a number of measures to limit these losses.

A. First, for a robust National Grid, the transmission capacity to South India must be increased to 18.4 GW in the next 3 years.

B. Second, 100% metering, indexing and real time monitoring of all 11 KV feeders must be achieved for all electricity consumers and feeders.

C. Third, efforts must be made to achieve the targets of Ujwal DISCOM Assurance Yojna (UDAY) by cooperative efforts between the Centre and states.

Augmenting Supply of Oil and Gas, Through Domestic Exploration and Production (E&P) as well as Overseas Acreages

India's proved crude oil reserves as of April 2016 stand at around 5.7 billion barrels. The majority of the domestic oil production is located at the western offshore fields, out which 40% is accounted by the Mumbai High Basin

In 2013, oil production in India at 1 million barrels per day (mmbd) was considerably below the demand of 3.7 mmbd

- First, to expand E&P, in the next 3 years, another 25% of the remaining unexplored area out of 3.14 million square km of sedimentary area should be awarded for initiation of exploration. Exploration should be initiated in all the remaining 11 sedimentary basins.
- Implement Open Acreage Licensing Policy (OALP), which would facilitate award of acreages throughout the year, instead of periodic bidding rounds.
- All discoveries under the Production Sharing Contract (PSC) rounds should be rationalised, either towards monetisation or surrender to the government for recycling under OALP.
- The issue of simultaneous exploitation of all hydrocarbons should also be resolved for the existing contractors/licenses.
- On the lines of the nominated acreages, the existing blocks/fields under PSC regime that have moved into appraisal/development stages of their contracts, should be granted rights to explore further (including shale oil/gas) through appropriate contract amendments.
- Global companies should be offered business support/incentives to set up R&D centres in India to undertake India-specific research, and also to manufacture tools/equipment under 'Make in India' campaign.

Augmented refining and distribution of oil and gas

- By 2019, India should sustain its export capacity of refined products by setting up new refineries.
- Within next three years the government should liberalise trade of all petroleum products in fair and transparent manner to expand the coverage of un-served regions by facilitating the entry of private enterprises.
- The tax structure should be rationalized in import and sale of energy on thermal value basis with a view to enhance the competitiveness of the economy.
- OMCs should aim at 10% ethanol blending in petrol by 2020. In addition, the OMCs should be encouraged to procure crude efficiently to reduce the price of crude imports by leveraging the large crude buying power of India.
- The Liquefied Natural Gas (LNG) receiving capacity should be doubled by 2022, by facilitating evacuation and marketing of LNG.
- To remove distortion in the gas market, the government should eliminate multiple prices in natural gas, by moving to market determined pricing.

Expanding the Installation, Generation and Distribution of Renewable energy

- A renewable energy capacity of 100 GW should be achieved by 2019-20 so as to contribute to achievement of 175 GW target by 2022.
- The off-grid target of 40 GW of solar energy by 2022 may be apportioned between residential, commercial, industrial and agricultural sectors with a target of achieving 20 GW capacity by 2019-20
- Solar Energy Corporation of India Limited (SECI) should develop storage solutions within next three years to help bring down prices through demand aggregation of both household and grid scale batteries.
- A large programme should be launched to tap at least 50% of the bio-gas potential in the country by supporting technology and credit support through NABARD by 2020.
- Small Hydro Power (SHP) target of 5000 MW by 2022 should be advanced to 2019-20 through VGF and tariff support, which will also aid balancing of variable solar energy in de-centralised locations.

Science and Technology

Proximate factors that have held back India's progress in S&T include:

- Public funding on Research and Development (R&D) is low.
- Private investment on R&D also remains low.
- Management of S&T initiatives is inefficient and non-uniform.
- Government schemes for innovation have been producing inadequate results.
- Technological development in key sectors has been slow.
- The lack of a well-functioning national ecosystem. We have a limited number of idea incubators and dedicated technology parks.
- The higher education system has lagged in terms of R&D as well as producing an adequately trained scientific workforce.

Goals for 2017-2020

Over the next three years, we should direct our S&T efforts to creating a supporting environment for innovation and development and focus on priority sectors. Indian innovations should address the needs of the burgeoning middle class and rural residents. We must facilitate the development of affordable and durable products that are suitable for the local demand and context.

To achieve this broad vision, first, we must put in place mechanisms to attract funding for and manage S&T initiatives. Second, we should ensure that S&T is harnessed in a strategic manner to address challenges in key enabling sectors. Third, we should direct our efforts to building a powerful national innovation ecosystem, through incubation facilities, quality higher education and supportive policies

Funding and Management of Science and Technology (S&T)

- Evaluate existing government schemes in science, technology and innovation- We need to create a comprehensive database of all existing schemes related to S&T across different ministries and departments. The database would contain information on the coordinating ministry, the scheme's objectives and available funds.
- Develop clear guidelines for Public-Private Partnerships (PPPs) in S&T.
- Create a body to coordinate all public S&T efforts and actors.
- Rethink the Teaching-Research-Industry Link.
- Improve the Administration of the Patent Regime- In May 2016, the Cabinet also approved a National Intellectual Property Rights (IPR) Policy³. It is important that this policy be communicated and disseminated to scientists, engineers and other researchers in the public and private sectors to spur innovation.

Priority Sectors for S&T Interventions

A focused approach to S&T to address India's socio-economic challenges in key sectors and fields are given below:

- **Water Management:** As India's growing population puts pressure on its finite water resources, innovations in the management and cleanliness of water will prove critical to providing access to water to its citizens. The government should prioritize the development of cost-effective, implementable, scalable, water sector technologies such as desalination, recycling, removing heavy toxic metals from water, and water conservation technologies for realizing the target of Water for All.
- **Agriculture:** The government should prioritize the development of productivity-enhancing technologies in agriculture over the next three years.
- **Energy:** The government should encourage the development of clean coal technologies and renewable sources. To drive growth in a sustainable manner, the manufacturing sector needs reliable access to a variety of energy sources, including sustainable energy. For example, we should explore the conversion of coal into Methanol and other non-polluting forms of energy to fuel transportation. It should also incentivize stakeholders to develop technologies for capturing carbon dioxide from the atmosphere and combining with hydrogen for producing Methanol (fuel) and olefins.
- **Connectivity and Security:** With respect to connectivity, the government should help develop affordable technologies for providing nationwide digital connectivity, which will form the backbone for e-governance, e-health, communications, rural innovations and entrepreneurship in realizing the Digital India Vision.
- **Health:** The government should help develop creative and cost-effective solutions to recurring vector borne diseases such as chikungunya, dengue and drug resistance malaria. Solutions may take the form of new vaccines, devices that help detect and kill mosquitoes carrying the viruses and creating sanitary conditions that prevent the multiplication of mosquitoes in the first place.
- **Waste Management:** As India industrializes, waste management will play a crucial role in ensuring that the development takes place in a sustainable manner. Technologies related to the management, storage and disposal of solid waste should be a priority in the next three years.

Creating an Innovation Ecosystem

As defined in the World Bank report titled "Innovation Policy - A Guide for Developing Countries," innovation involves the process of creating a new idea in a given context and its successful dissemination into the society.

Innovation is useful only when an entrepreneur can find ways to commercialize the idea and deliver it to all sections of the society.

An ideal ecosystem would enable and enrich new enterprises that significantly impact economic growth and add enough jobs to fulfill the demand of the large workforce building up in the country.

This Action Agenda focuses only on the measures where improvements can be made in the short term. These are described as below:

- Human capital
- Quality education and R&D
- Collaborative ecosystem
- Viability of funding
- Transparent regulations and a robust legal system
- Culture for innovation and entrepreneurship

Human Capital

- A centralized system for granting entrepreneur visas based on set criteria including novelty in technology, sector, job creation potential and ease of dissemination of the product/service among others should be set up.
- Talent and experiences of the large Indian Diaspora should be tapped by engaging them in short term

assignments, courses and other activities which would enable them to contribute to India's development. The government should engage with Indian High Commissions globally to formulate a strategy for engaging the Indian Diaspora.

Quality Education and R&D

Recommendations

- The government should design a detailed plan to overhaul the scholarship system in government institutions. The goal would be to implement the plan across all eligible institutions over the next three years.
- In order to encourage innovative thinking at the school level, a provision to evaluate a student's proven track record of innovation (e.g. awards and patents among others) should be introduced at the admission stage for higher education institutions.

Collaborative Ecosystem

- One of the key requirements for effective innovation is the ability to disseminate it into the society. A new technology that cannot be diffused into the economy does not benefit the society.
- Collaboration between the public and private sector can be enhanced by creating a platform which facilitates sharing of facilities, talent and research goals where possible.
- A nodal agency should be appointed which would be responsible for facilitating these partnerships. A portal should be created and a database of all the facilities made available by the participants should be maintained.
- India's eminent institutions like Bhabha Atomic Research Centre (BARC) and Indian Space Research Organisation (ISRO) among others.
- Produce cutting edge technologies, some of which can be made commercially viable. By 2020, these institutions should pilot 5 partnership agreements with private institutions to ensure dissemination of some of these technologies into the society.

Availability of Funding

Alternative Investment Fund (AIF) sector, which include venture capital and private equity funds, is an essential pillar for the start-up ecosystem.

Transparent Regulations and a Robust Legal System

The Indian Government has demonstrated its commitment in intellectual property regime by launching the National Intellectual Property Rights (IPR) Policy in 2016.

Implementation is already under way with the launch of "IPR Enforcement Toolkit for Police and IPR Awareness Campaign for Children" in January 2017

Department of Industrial Policy and Promotion (DIPP) should work collaboratively to fully implement the key objectives of the policy which include:

- IPR Awareness: Outreach and Promotion
- Generation of IPRs (stimulating IPR generation)
- Legal and Legislative Framework
- Administration and Management
- Commercialisation of IPRs
- Human Capital Development

Chapter-5: Government

Governance

1. Role of the Government

- India's choice to build a socialist pattern of production during several post-independence decades has resulted in the government entering many activities that do not serve any public purpose and are best performed by the private sector. At the same time, there has been a neglect of some activities that only the government can undertake and are of great public value. Manufacture of products such as parachutes and three wheelers falls in the first category while the provision of public health in the second.
- The present government has begun to correct this imbalance through closure of sick Central Public Sector Enterprises (CPSE), strategic disinvestment programme, and the launch of Swachh Bharat mission. This process must be accelerated in the next three years.

2. Civil Service Reform

- Civil service is the backbone of the government. It needs to be empowered to make quick decisions and implement them. Sustained high levels of performance can only be achieved if performance is objectively measured with high performance rewarded and poor performance reprimanded.
- Today, rising complexity of the economy has meant that policy making is a specialized activity. Therefore, it is essential that specialists be inducted into the system through lateral entry. Such entry will also have the beneficial side effect of bringing competition to the established career bureaucracy.
- **Institutionalize goal setting and tracking for each department.** Each Ministry and government agency should set outcome-based goals with a clear timeline.
- **Implement an HR system for government employees** which would incorporate all HR related requirements such as performance appraisal, training, leave and disciplinary proceedings.
- E-governance and paperless governance ranking for ministries at central and state levels.
- **Outsource service delivery where possible.** We should reduce dependence on government administrative machinery wherever possible.
- **Longer tenure of Secretaries.** Currently, by the time an officer is promoted from Additional Secretary to Secretary, usually she has two years or less left before retirement. This causes inordinate amount of delay in decision-making.
 - One possible solution to this problem is early promotion to the Secretary position.
 - Introduction of lateral entry, discussed immediately below, will facilitate this change.
- The platform, Pro-Active Governance and Timely Implementation (PRAGATI) launched by the Prime Minister, has led to significant improvement in monitoring and implementation of major infrastructure projects.

3. Monitoring of Government Programmes

- The platform, Pro-Active Governance and Timely Implementation (PRAGATI) launched by the Prime Minister, has led to significant improvement in monitoring and implementation of major infrastructure projects.
- NITI Aayog has also initiated the practice of preparing an outcome budget for all central government ministries and departments, which will help in setting transparent targets for all programmes as well as impact evaluation and monitoring of government funded programmes.
- A mechanism for centralized monitoring of the push towards DBT across different schemes should be created, which will utilize innovative techniques such as telephonic and interactive voice response (IVR) surveys to assess the progress of DBT and its impact on the beneficiaries.
- The Andhra Pradesh government is already doing this, having set up a 750-person two-way call centre to actively seek feedback on its schemes from beneficiaries.

4. Electoral Reform

- All elections in India should happen in a free, fair and synchronized manner so as to cause minimum

'campaign mode' disruption to governance.

- We may begin work towards switching to a synchronized two-phase election from the 2024 election to the Lok Sabha. This would require a maximum one-time curtailment or extension of some state assemblies.

5. Corruption Related Reforms

Speeding up decision-making on corruption cases

On average, it takes more than 8 years to finalize a major vigilance case from the date of occurrence of irregularity.

The major delays come from the delay in detection, preliminary inquiries for First Stage Advice, in appointment of the inquiry officer and submission of their report. Procedural reforms for reducing these delays are important.

For the All-India Services, the provision of completing the disciplinary proceedings in a time-bound manner has been introduced through subordinate legislation in January 2017.

Curbing Black Money

Structural changes to reduce flows of black money will involve keeping tax levels moderate and tax administration simple and transparent, and reforms in real estate transactions, including seeding of Aadhar and moderate stamp duties.

Cases of corruption among tax officials must be prosecuted and disposed swiftly since without instilling honesty among officials in this area we cannot curb the generation of black money.

Minimizing discretionary powers of officers

- The need for clear tax laws to minimize the tax officers' discretionary powers. Similar actions are required in every aspect of government enforcement.
- Technology led solutions which encourage government interaction with citizens and businesses in a presence-less and paper-less manner should be introduced wherever possible. Such systems both reduce the avenues of corruption available to officers, and also make it possible to focus vigilance on those transactions which do not take place through them.

Political Financing Reform

The Union Budget 2017-18 has taken several excellent steps in terms of campaign finance reform by lowering the limit for campaign donations in cash and introducing electoral bonds. An effort must be made to implement these reforms in the coming years.

6. Federalism

A signature initiative of the present government has been "Co-operative and Competitive federalism" to achieve all round growth and move away from 'One Size Fits All' approach to policy.

Ranking of States

- For fostering genuine competition between states, NITI Aayog will continue the process of ranking states in terms of doing business, and improvement in health, education and water outcomes.
- NITI Aayog will provide technical and expert assistance to states to improve their performance. This includes compilation and dissemination of best-case practices worldwide keeping in view the local Indian conditions

Fiscal independence

- The award of greater share of tax revenues as devolution has greatly advanced this objective.
- On the one hand, new CSS schemes have proliferated while on the other existing schemes have been running

for decades without due scrutiny

- It is important to evaluate each scheme to determine if it is meeting its stated objectives and if not why. In rare cases when it is determined that the scheme is performing poorly and that corrective action is not likely to result in significantly improved outcomes, its closure must be considered.

7. Non-Government Organisations (NGO)

- An effective partnership between the government and the NGOs can help in governance of the social sector schemes, as the voluntary sector can help significantly in filling the gap in the capability of the government to deliver its social welfare programmes to the targeted beneficiaries.
- For improving the transparency and accountability in the sector, NITI Aayog has been made the nodal agency for registration and accreditation of voluntary organisations. The registration will generate a unique ID for these organisations and provide a snapshot of their functions. This will help in various government agencies to identify suitable partners for their activities.

Taxation Policy and Administration

Three broad principles should guide tax policy. First, it should be such that it raises the requisite revenue while minimizing evasion and distortion in the economy. Second, it should exhibit horizontal equity in the sense that individuals with equal income are taxed equally. Finally, it should exhibit progressivity in the sense that those with higher incomes are taxed at higher rates.

The tax reform agenda outlined below is based on the following strategic objectives:

- Eliminating the generation of black money.
- Expanding the tax base
- Supporting investments through a predictable and stable tax policy.

1. Direct Taxes

Corporate Tax

The existing system faces a number of problems

- The high marginal tax rate in India, relative to other Asian countries, hurts equity investment.
- The tax system is not equitable horizontally since the differential in effective tax rate across sectors is very high. For example, in 2014-15, a sample of cement manufacturers, consultancy service firms, and banking service firms paid an effective tax rate of 9%, 16%, and 35%, respectively.
- The exemptions to corporate tax are not equitable vertically. For example, in 2014-15, small companies having a profit of up to Rs. 1 Crore paid an average tax rate of 29.37% while companies having a profit of greater than Rs. 500 Crore paid an average tax rate of only 22.88 %

During the next three years, we should eliminate various corporate tax exemptions.

Un-incorporated bodies

The income from operations of partnership firms is subjected to a tax twice: first, profits of the business entity are taxed (subject to certain deductions such as partner salary), and the individual owners' incomes are taxed.

Therefore, we propose giving the non-corporate business entities a "pass-through" of tax liabilities so that their income is taxed only once, in the hands of the individual owners.

Personal income taxes

A key limitation of personal income tax regime is the small tax base

The following reforms address the current situation:

- The current income tax exemption threshold is Rs. 2,50,000 for an individual. A total of 1.12 Crore individuals filed returns declaring an annual income between Rs. 1,50,000 to 2,50,000 and thus were exempted. In addition, many individuals would not have filed returns since their incomes were below the minimum threshold. Going forward, the nominal income exemption threshold should remain unchanged such that the real value of the threshold is reduced, leading to the inclusion of a greater proportion of individuals in the tax net over time.
- However, the tax slabs corresponding to the lowest tax rate should be expanded to ensure that the tax liability of lower income individuals does not increase suddenly with the growth in their nominal incomes.
- We should aggressively move the economy towards greater formalization, which will lead to greater number of individuals filing the tax returns. This includes moving towards digital payments and away from cash.

Arresting tax evasion when non-agricultural income is declared as agricultural income

In order to mitigate the generation of black money, the loopholes need to be plugged.

2. Indirect Taxes

Goods and Services Tax

We need to develop an efficient GST operational system and minimise the disruption caused by the transition from the current indirect tax regime to the GST.

The steps towards this include:

- A well-functioning GST council;
- Advocacy and outreach programme to help the stakeholders (especially new taxpayers) adjust to the new system;
- A robust tax administration system by the Union and the state governments; and
- A well-functioning GSTN system.

Moving forward, under the real spirit of the GST, we should move gradually towards fewer number and lower level of rates. Since the GST system will expand the tax base, we should be able to lower the tax rates without loss of revenue.

Custom Duty

To the extent feasible without violating our WTO obligations, we should unify all custom duties at 7%.

Stamp duty on property registrations

- State governments levy stamp duties and fees on property registrations at the time of purchase, in 2015-16, contributing 7% of total tax revenues of the states.
- The rate of stamp duty varies across states, with some states charging as high as 8% of the property value. A high rate creates the incentives for the buyer of property to declare a lower value and pay a part of the payment in black. Black money thus flows massively into real estate.
- Therefore, the states may consider reducing the stamp duty inclusive of property registration fee, preferably to 3% to 3.5%.

3. Improving the Tax Administration System and Minimizing Tax Litigation

Pending tax litigations cost the taxpayer and the government in terms of resources including delays in the collection of revenue.

In order to reduce the tax litigations in the country and push a stable tax environment, the following steps should be taken:

- **Reduce the scope for interpretation of tax laws** – The scope for discretion in tax laws is an important reason for tax disputes, as they allow potential interpretative differences. This needs to be corrected through precise formulation of rules and regulations that spell out in detail tax liability under specific situations. In this regard, the Easwar Committee has offered detailed recommendations, which should be implemented
- **Dispute resolution strategy** – The dispute resolution mechanisms need to be modernised through alternative dispute resolution mechanisms including arbitration and conciliation.
- **Performance assessment of tax officials** – A key factor behind the increased number of tax disputes is the tendency of tax officials to initiate an action without the necessary justification or assessment. This is reflected in the low success rate of 30% they have in tax appeals filed by taxpayers across different courts. Therefore, we should put in place a system of performance assessment of tax officials based on the success rate of their cases.

Pro-Competition Policies and Regulation

As a market-based economy, it is essential that the government puts in place a regulatory framework that maximises the efficiency of markets. Often laws, rules and regulations enacted by the government inadvertently build into them provisions that restrict competition and harm efficiency of markets.

1. Comprehensive Reform of Anti-competitive Regulations

Challenge of pervasiveness of anti-competitive regulations

- Some sectors (railway, coal and electricity) remain exclusively in the public sector while in others (steel, civil aviation) government regulations give significant advantage to state enterprises over their private-sector counterparts. This has harmed competition in many markets. It is important that reforms are introduced to unlock productivity gains in these sectors and key bottlenecks removed.
- Many elements restricting the ease of doing business are the result of heavy-handed regulation. It is important that these regulations are relaxed to further promote competition.
- The OECD indicator for product market regulations finds that with the exception of Argentina, India has the least competition friendly regulations amongst all OECD and non-OECD countries covered.
- Restrictive regulations for a particular sector can affect competition in many ways. These include creating barriers to entry, price regulation, restricting competitive conduct such as agreements, vertical integration and advertisement.

Long-term roadmap

The long-term strategy for implementing pro-market competition reforms must include the following elements:

- Reversing burden of proof in favour of competition: Instead of the current presumption of regulation, the default position should be favouring competition unless a clear policy objective justifies regulatory intervention.
- Least restrictive regulations: Adopting the principle that any regulatory or policy intervention should be the least restrictive to competition that meets the policy objectives.
- Reforming traditional public monopoly sectors: Opening-up the traditional public monopoly sectors to competition to the extent possible.
- Separating policy-making, regulation and operations: The separation of policy, regulation and business operations is needed to reduce the potential for conflict of government interests and creation of credible environment for private investment.
- Competition neutrality between government-owned and privately owned enterprises: Creating level playing conditions for competition between government-owned and privately owned enterprises.

- Dismantling restrictions on inter-state competition: Any regulation that creates isolated regional markets must be withdrawn to create unified national markets in all sectors to the extent possible.

Institutional mechanism for comprehensive review of regulations

- For ensuring a comprehensive and systematic approach to reforms over the long-term, a new competition policy that commits the government to promote competition through reform of its policies and regulations should be adopted.
- The policy will also have specific guidelines to be followed by all ministries/departments in a time-bound manner.

Foreign direct investment reforms

In the recent years, India has made significant progress in dismantling regulatory barriers to foreign direct investment (FDI), which existed in the form of sectoral equity caps.

Dismantling inter-state barriers to competition in agriculture sector

The government has undertaken an ambitious mission of unifying the country's fragmented agricultural markets. Various regulatory barriers, such as the APMC Act, Essential Commodities Act and procurement levies lead to inter-state barriers to competition. During the next three years, government should undertake efforts to unify as many local agricultural markets as possible through regulatory reforms by states and growth of the e-NAM platform.

2. Public Procurement Reforms

The following steps should be undertaken:

- **Increase in transparency in the procurement process.** The movement towards e-procurement in recent years has led to greater transparency in the process. This process would be continued to ensure more processes are conducted online.
- **Adoption of Government E-Marketplace (GeM) model.** The GeM is a portal developed by the Government of India that allows a completely paperless and cashless system of procurement thereby minimizing human interface. Procurement through it should be expanded to cover many more products and services. Procurement of common products through GeM promises to considerably reduce corruption, increase transparency, dismantle entry barriers for potential vendors and eliminate discrepancies in payments.
- **Easing of conditions for participation of bidders.**
 - The procurement regulations and policies should facilitate participation of new bidders, making collusion more difficult.
 - The qualification rules need to be rationalised so that the rules do not favour some bidders over others.
 - The technical conditions should be broadly defined based on the functional requirements, and a reference to third-party certification should be made, to the extent possible.
 - Finally, the creation a procurement complaints redressal mechanism should be explored.
- **Database for government tenders:** A centralised database should be created for automatically recording data of government tenders, including the number of bidders, price awarded and the financial bids made. This should be monitored by a government expert agency, which can highlight potential collusion cases and refer them to the Competition Commission of India for investigation.

3. Capacity Enhancement of Sectoral Regulators

The following actions are suggested:

- **Addressing gaps in regulatory powers and independence.**

The regulators should be provided with the necessary powers to enforce their decisions, such as the power to investigate and penalise, where appropriate.

- **Human-resource capacity building.**

- The capacity of regulators is directly linked with its human resources. This includes hiring experts from the non-government sector at market rates, and relaxation in rules and regulations on employment in the government.
- Further, the process for appointments of heads of regulators should be opened up such that more eminent domain experts from the industry or academia could be brought in for the decision-making roles at these bodies.

- **Reducing instances of overlap between jurisdictions of regulators.**

The overlap in jurisdiction of certain regulators can create conflicts between them and create legal uncertainties while weakening the governance.

- **Consolidation and reform of tribunals.**

- This will allow pooling of resources and expertise.
- Further, the tribunals should be mandated to make their decision within a prescribed time. These can reduce instances of regulatory decisions being delayed.

The Rule of Law

All social, human and economic development depends on the rule of law.

India ranked 172nd out of 190 countries in the area of Enforcing Contracts in the World Bank's Ease of Doing Business report 2017 with an average time of nearly 4 years required for enforcement.

The strength of the police force in the country is well below international norms. As on 1st March 2016, the total sanctioned police force was 22,80,6915 - approximately 181 policemen or policewomen per lakh population. The UN recommended number of police personnel per lakh population is 222.

Justice System Reform

There are three broad areas in which the Justice system needs reform: statutory and administrative laws, the judicial system and police.

Statutory and administrative law reform

Create a repository of all existing Central and state Laws, rules and regulations - The preliminary step should be to ensure that all legislation, amendments and subordinate legislation are available together in one place and searchable by subject matter. Once completed, all existing individual laws can be re-arranged to make a meaningful subject-wise compilation, and permit us to assess and address problems of over regulation in a structured and coherent fashion.

Repeal redundant laws - already suggested by the Malimath Committee and Law Commission Reports.

Changes in Criminal Justice and Procedural Laws - reform that should be done is of the Code of Criminal Procedure, 1973 to bring it in line with latest practices in criminal procedure, to expand the scope of forensic science evidence and recognize its strength for criminal justice delivery.

Reform land ownership and related laws - Nearly 67% of litigants in civil cases are using the judicial system for land/property related cases. The difficulty in establishing ownership also holds back the economy in other areas like Agriculture and Industry, and introduces inefficiency in renting and productive land use in urban areas.

Judicial system reform

Introduce a judicial performance index: The first step would be to establish a judicial performance index. Such an index could be established to help High Courts and High Court Chief Justices keep track of performance and process improvement at the District Courts and subordinate levels for reducing delay.

Introduce an administrative cadre in the judicial system: There is a need to create a separate administrative cadre in the judiciary to manage the system. To maintain judicial independence, the cadre should report in to the Chief Justice in each High Court.

Increase use of Information and Communication Technology (ICT): High priority should be given to court process automation and ICT enablement for electronic court and case management, including electronic management of court schedules and migration of all courts to the unified national court application software.

Streamline Judicial Appointments: Step may be taken for ensuring availability of online real time judicial statistics for determining the adequacy of Judiciary manpower and infrastructure to deal with work load of cases.

Shift certain large sections of workload out of the regular court system: Commercial Courts, Commercial Division and Commercial Appellate Division of High Courts Act, 2015 should be implemented in the largest cities to decongest existing courts. Separate traffic courts/amendment to remove requirement to pay traffic fine in court.

Police Reform

State level legislative reform:

States should be encouraged, with fiscal incentives, to introduce critical legislative reform to their police acts, most of which are still based on the police act of 1861. The Model Police Act of 2015 can serve as a basis for such legislative reform.

Administrative and operational reform:

- A Task Force must be created under the MHA to identify non-core functions that can be outsourced to save on manpower. These measures will help in reducing the workload of the police. Functions such as serving court summons and antecedents and addresses verification for passport applications or job verifications can be outsourced to private agents or government departments.
- The police-to-population ratio should be increased to reach the United Nations (UN) norm of 222 personnel per lakh population in the next seven years.
- Incidence of crime against women and other vulnerable groups is not only a reflection of societal health and social fabric; it has an adverse implication on many counts: tourism, hospitality industries, women's Labour Force Participation Ratio – all get affected. The states should be encouraged to ensure that the representation of women in the police force is increased.
- India should launch a common nation-wide contact for attending to urgent security needs of the citizens. The service may include emergency response on the pattern of 911 in the United States. The back end of the service may be designed in accordance with responsibilities under Schedule VII of the Constitution.

Chapter-6: Social Sectors

Education and Skill Development

While India is expected to become the second largest economy by 2050, it will also boast of the world's largest working-age population which is expected to touch 962 million by 2030. Furthermore, India will be the world's youngest country by 2020 with an average age of 29 years. This "demographic dividend" comes at a time when the rest of the world is ageing where, by 2020, the average age in the United States of America (USA) is expected to be 40 years, for Europe 46 years and for Japan 47 years. Thus, India will not only have a young workforce to fulfill its domestic needs, it also has the opportunity to become the global hub for skilled workforce.

This window of opportunity is also a challenge. The youth of India need education and skills to be able to fulfill their promise and the current systems are ill-equipped to deliver these on a large scale.

1. School Education Vision and Strategy in Brief

The most important goal in front of the Indian school education system today is to improve learning outcomes

- Through initiatives like the Sarva Shiksha Abhiyan (SSA) and The Right of Children to Free and Compulsory Education (RTE) Act, the Indian school system has **focused on measuring and delivering inputs**, and in this, it has largely succeeded. The Gross Enrolment Ratio (GER) in 2015-16 for grades I-V was 99.2% and for grades VI-VIII was 92.85%. Pupil-Teacher ratio at national level for elementary schools was 24:1 and for secondary schools it was 27:1
- Unfortunately, this success in getting more children into schools with more teachers has **not translated into more education**. The proportion of children in grade III who can read at least a grade I level text dropped from 50.6 in 2008 to 40.3 in 2014, before increasing marginally to 42.5 in 2016 according to Pratham's Annual Status of Education Report (ASER) data.
- These are not the only results, which suggest that a focus on inputs does not help improve education. The most rigorous and credible evidence available to-date shows that the traditional levers – more or better infrastructure, lower pupil-teacher ratios, higher teacher salaries and more teacher training – by themselves have not been effective in improving student learning outcomes. The most critical missing pieces that evidence has shown to be effective are - pedagogy that focuses on teaching at the right level, outcome linked incentives, and governance that enables the system to operate smoothly.

2. School Education Action Agenda - What Does it Seek to Accomplish and How?

There are three major goals to achieve in the first three years of the action agenda

1. Orient the system towards outcomes
2. Provide tools to teachers and students for effective learning
3. Improve existing governance mechanisms and pilot new ones

Orient the system towards outcomes

- Introduce an independent, state of the art sample based outcome measurement system.
- Track and support state level improvement through a School Education Quality Index (SEQI).
- Modify RTE requirements on inputs.
 - The Right To Education (RTE) Act stresses on inputs, causing resources to be focused on things like building schools, hiring teachers, having playgrounds and libraries while learning outcomes have steadily dropped since the introduction of the Act. The RTE needs to be modified to actually become a Right To Learning, instead of being, as it currently is, a Right to go to School.
 - In this context, the recent amendment of Rule 23(2) under the Right to Education Act constitutes an extremely important positive step. The amendment makes it compulsory for all state governments to codify expected levels of learning for students in classes I to VIII. It requires states to prepare “class-wise, subject-wise learning outcomes for all elementary classes” and devise “guidelines for putting into practice continuous and comprehensive evaluation, to achieve the defined learning outcomes.”
- **Provide tools to teachers and students for effective learning**
 - Focus on foundational learning
 - Introduce evidence based Information and Communication Technology tools only
 - Pilot a system of technology aided adaptive examinations. We should pilot a system of technologically enabled “exams on demand” which test students on absolute competencies instead of relative ‘marks’ and allow students to take and re-take exams when they are ready.

Improve existing governance mechanisms and experiment with new ones

Public schools with fewer than 50 students (and an average of 29 students per school) stood at 3.7 Lakh schools in 2014-15. They represented 36% of all public schools. High rate of teacher absenteeism, limited time spent on teaching when the teacher is in class and generally poor quality of education are among important reasons for this

emptying out. Quality improvement through improved governance is one way of slowing or reversing this process.

A set of basic governance processes and structural reforms that have the maximum impact have been identified and included in the SEQI. These include, among others, a focus on school leadership, administrative tenure, basic monitoring by administrators to resolve school level issues such as teacher absenteeism, and transparency in teacher appointments and postings/transfers.

- **Pilot new governance mechanisms:** One of the critical changes that needs to be brought about in the governance of the school education system in India is a separation of the functions of policy making, regulation and provision. Currently, all these functions are carried out under the State Ministry of Education.
- **Explore the role for private players:** Public-Private Partnership (PPP) models could also be explored where the private sector adopts government schools while being publicly funded on a per child basis. This latter instrumentality may provide a solution to the problems of schools that have hollowed and are incurring massive expenditures per pupil currently.

Higher Education Vision and Strategy in Brief

We have made significant progress in increasing enrolment – the GER in tertiary education has risen from 20.8% in 2011-12 to 24.5% in 2015-16 and is more than double what it was only 10 years ago. However, we need to drive higher quality in the system. To give an indication of the magnitude of the challenge, an assessment of 150,000 engineering graduates in 2016 found only 18% of engineers were employable in the software services sector in a functional role, only 41% in non-functional Business Process Outsourcing and only 4% in software engineering start-ups.

Higher Education Action Agenda – What Do We Seek to Accomplish?

The major actions to be completed over the next three years are:

1. **Designation of World Class Universities** – Identify 20 universities (10 public and 10 private) that can be immediately moved out from the regulatory system. Creating world-class universities requires autonomous governance, focused funding, and oversight based on independent outcomes like world rankings.
2. **Autonomy for top colleges and universities** – More established colleges should be brought under the autonomous colleges scheme to take them out of the centralized control of their university and provide greater flexibility in academic matters.
3. **Reform of the regulatory system** – A tiered system of universities –
 - The UGC's position as an overarching regulator of every aspect of higher education from student fees to curriculum to teaching and course hours keeps India's higher education system from responding to the changes and challenges that it faces in a fast evolving world. This requires an overhaul of the UGC as a regulatory system and a rationalization of the role of professional councils.
 - We should introduce a tiered system whereby the top research-focused universities, which promise to compete globally, are given full autonomy and promised additional resources based on significant improvements over time. These universities may be subject to high standards of transparency with full freedom granted in operational matters such as courses, curriculum, teaching hours and pedagogy.
 - A second tier of universities with employment-focused education can be subject to light regulation. These universities would be expected to use the flexibility given to them to adjust admission policies, curriculum and courses to respond to shifts in job composition in the marketplace. They will also be evaluated according to their success in job placements of their students.
 - The last tier of the universities, whose primary function would be to ensure that higher education is available to all who want it would be the most regulated one.
4. **Establish system of project/researcher specific research grants.**
5. **Increased focus on vocational and profession led education.**

3. Skill Development

- Estimates suggest that only 2.3% of India's workforce has undergone formal skill training compared to United Kingdom's (UK) 68%, Germany's 75%, USA's 52%, Japan's 80% and South Korea's 96%²². This has led to large sections of the workforce having insufficient job skills.
- Furthermore, according to estimates for the period 2013-2014, India's annual skilling capacity at approximately 7 million is significantly lower than the workforce entering the market annually.
- Despite numerous initiatives that have been undertaken till date, we are still faced with a daunting challenge of training a large workforce. It is estimated that the demographic dividend is expected to last for 25 years.
- Apprenticeships are an effective mechanism for skill development as they offer efficient industry relevant training. The Government of India has set a target for training 50 Lakh apprentices by 2020.
- The quality of outcomes from apprenticeship courses could be enhanced with increased transparency and robustness of the training along with better assessment and certification procedures.
- Currently we do not have an independent regulator overseeing the various skill development initiatives in India. The Ministry of Skill Development and Entrepreneurship (MSDE) is acting as both policy setting and regulation body. Over the next three years, a skill assessment board should be set up at arm's length distance from the government.
- According to the Skill Development Sector Achievements report, December 2016, NSDC partners skilled 24.9 Lakh people of which 12.0 Lakh were placed in 2014-15. This translates to a placement rate of below 50%. It is recommended that a target of a placement rate for 80% or more should be set for 2020.
- In parallel with the Recognition of Prior Learning (RPL) initiative launched with PMKVY, the identification of transferable skills should also be established as an area of focus.
- The role of NSDC needs to be delineated better. The envisioned role for the NSDC, according to its website³¹, is that of an enabler for building skill development institutions. Currently, NSDC's bandwidth is consumed by managing the PMKVY, which primarily does not address the higher levels of skilling or market led, non-sponsored skilling programs.

Sector Specific Action Points

Creative and Cultural Sectors

- Skill development in the cultural sector should be promoted by setting up a dedicated Sector Skill Councils (SSCs) for the same. This SSC would include skill development in Archaeology, Archival Studies, Conservation, Museology and performing arts, among other fields.
- We should consult with stakeholders to identify skills from different parts of India (a national cultural skill mapping has already been proposed by the NSDC) select the appropriate experts in these sub-sectors. Skill development programmes should also be developed with a view to make associated skills commercially viable.
- Traditional knowledge systems should also be strengthened by developing curricula for creative industries at tertiary institutions and certification programs
- In addition to providing skills through the Handicrafts and Carpet Sector Skills Council, selected youth with background in handicraft and weaving should be given government support to further develop their skills in eminent institutions like the National Institute of Design or the National Institute of Fashion Technology. This would give these young artists the requisite skills to fuse traditional handicraft practices with contemporary design sensibilities.

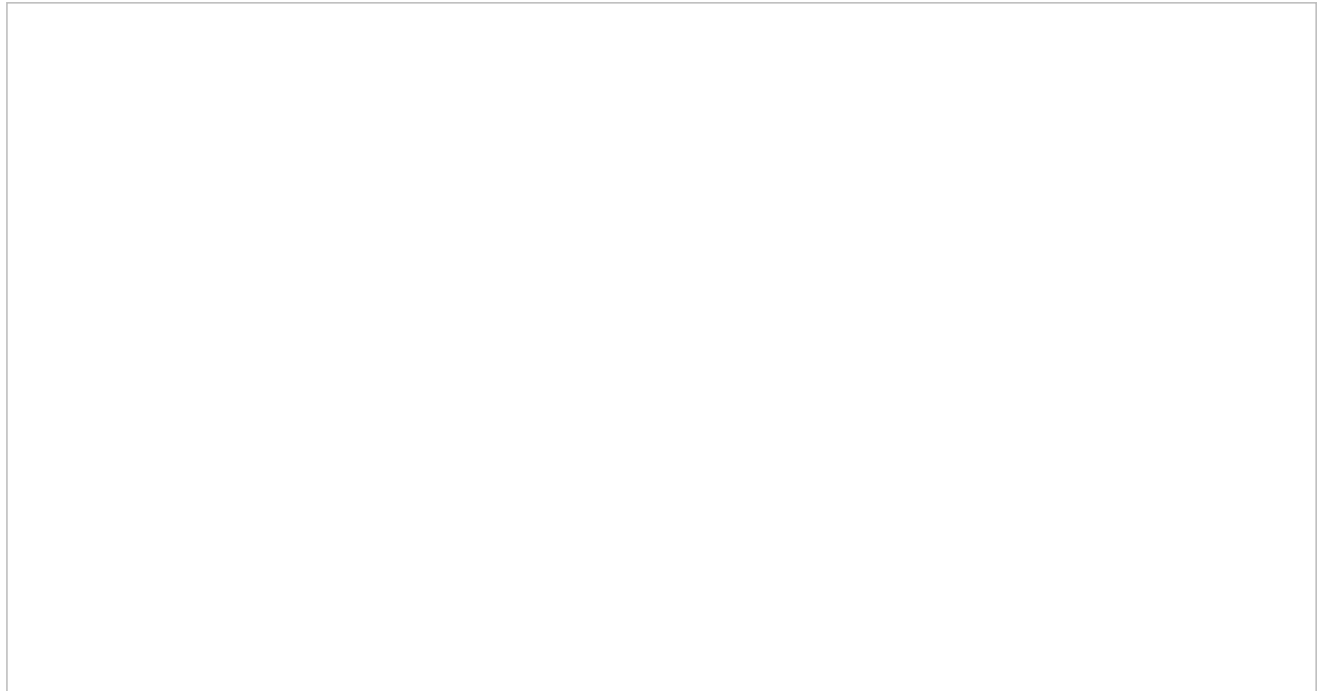
Gems and Jewellery Sector: Various measures including increased investment in skill training via co-financing with larger firms, establishing trainer courses and adoption of RPL among others are proposed.

Automotive Sector: An increased focus on the skill development agenda in the automotive sector will help tackle the low productivity of Indian workers in automotive firms.

Health

Achievement of the expected health outcomes will require

1. Adequate investment of public financial resources in health.
2. Efficient prioritization of spending with greater emphasis given to preventive health rather than curative care.
3. Adequate attention by the government to the stewardship of organizing the health sector in its entirety without focusing almost exclusively on the provisioning of health care
4. Efficient management of publicly provided health care
5. Addressing challenges in human resources for health in terms of numbers, distribution, quality and skill mix
6. Sufficient focus on and convergence with programs addressing the key social determinants of health (nutrition, drinking water and sanitation)



1. Public and Preventive Health

- Government expenditure on public health should be increased significantly to cover screenings for the entire population, active case detection and disease surveillance including from the private sector. Additionally, evidence-based preventive health interventions like breastfeeding as well as infant and young child feeding during the first two years of life should be mainstreamed through adequate budgetary allocations and plans of action at the national-level.
- Creation of a designated focal agency within the Union Health Ministry. The functions carried out by this entity should include disease surveillance, monitoring of health status, educating the public, providing evidence for public health action and enforcing public health regulation.
- An important role for preventive health is in targeting disease risk factors including smoking, high blood pressure and sanitation. Early screening must be promoted so that diseases can be prevented or treated at an early stage. This can help to avert costly hospital-based treatment.
- To focus on public and preventive health, the concept of grassroots male health workers could be reintroduced to supplement Accredited Social Health Activists (ASHAs) at the village-level. China had three million bare-foot doctors during the seventies to carry out these functions.

2. Assurance of Health Care

- There is a large capacity within the private sector for delivery of health services.
- The government must therefore adopt the function of strategic purchasing. They should leverage this purchasing power to obtain the desired services from service providers, both private and public, through autonomous structures created for this purpose.

- Autonomous structures could be set up at the Central and state/district levels for providing financial protection. These structures could act as the single payer, deciding what services to purchase, from whom and at what rates.
- The Medical Technology Assessment Board being set up under the Department of Health Research must be fully functional to carry out Health Technology Assessments. These assessments should be mandatory for the introduction of new treatment methods under the essential health package.
- For providing an essential health package including critical primary, secondary and selected tertiary services, mandatory contributions from the non-poor should be introduced

For health care institutions in the public sector, several steps need to be taken to improve quality over the next three years:

1. Quality certification of public hospitals (up to the level of district hospitals) should be carried out. Public hospitals should be ranked and nudged towards improvement.
2. Existing district hospitals should be strengthened to conform to the Indian Public Health Standards. The “Kayakalp” award should be used as a planning tool for improving water, sanitation and hygiene infrastructure in public health facilities as opposed to only for assessment. The award should also be linked to improvements in health outcomes e.g. reduction in neonatal deaths due to sepsis and tetanus.
3. For enabling communities to avail of facilities at the district-level, up to 20% of district hospitals must be linked with medical colleges during the three-year timeframe. This will help to reduce the load on tertiary care institutions.
4. Nine sanctioned All India Institute of Medical Sciences (AIIMS) should be made fully functional.
5. Co-location of Ayurveda Yoga Unani Siddha Homeopathy (AYUSH) services should be ensured in 50% of Primary Health Centres (PHCs), 60% of Community Health Centres (CHCs) and 100% of district hospitals. Thus far, AYUSH facilities have been co-located in 37% of PHCs, 50% of CHCs and 63% of district hospitals.

3. Fiscal Transfers for Better Health Outcomes

The current National Health Mission (NHM) budget has over 2000 budget lines. Though states are free to make their own priorities, they have to disaggregate the budget proposed, item-by-item, across multiple budget lines. The transaction costs and inefficiencies of seeking approval from the Centre for any changes are so high that most changes never get done and many budget lines remain unspent or under-spent.

It is therefore proposed, that Central transfers to states should follow principles focusing on outputs of service delivery and incentivizing better outcomes

In the immediate term, state transfers can be made more flexible and output-based in the following manner:

1. The Centre may approve allocation primarily in 5 pools (NRHM RCH Flexipool, NUHM Flexipool, Flexipool for Communicable Diseases, Flexipool for Non-Communicable Diseases, Infrastructure Maintenance) with flexibility to states for making inter-se modifications.
2. A baseline allocation for facility-level care to be decided (if not already done) in the first year in terms of total outpatient and inpatient cases processed and the allocations frozen.

4. Human Resources for Health

- In order to address the workforce shortages, a bridge course for training nurses/AYUSH practitioners in public and primary care should be implemented nationwide. Upon completion of the bridge course, nurses/AYUSH practitioners should be able to prescribe essential medicines.
- Additionally, we must create a cadre of primary health care practitioners by introducing a three-year competency-based dynamic course for primary, community and family medicine.
- The National Medical Commission Bill, 2016 is an important step for strengthening the quality of human resources education and training. Reforms along similar lines should be undertaken for the medical (Indian

Systems of Medicine), nursing, pharmacy and dental councils over the course of the next three years. Systems of continued medical education and skill improvement, linked to promotions and renewal of license to practice, should be introduced.

- To ensure that motivated workers fulfill community health needs, certification and career progression measures should be introduced. Specifically, ASHAs and Anganwadi Workers (AWWs) should be offered performance-based admissions to Auxiliary Nurse Midwife (ANM) schools for career progression.

5. Access to Medicines

- A balanced approach towards regulation is needed for achieving the twin objectives of access to effective medicines and a strong pharmaceutical industry. There is a trade-off between lower prices on the one hand and quality medicine and discovery of breakthrough drugs on the other. It is therefore recommended that the Drug Price Control Order may be delinked from the National List of Essential Medicines.
- For ensuring access to essential medicines, we must review the business model of the Jan Aushadhi Stores, as their rollout has been slow. In order to facilitate online access to quality medicines in a cost-effective and timely manner, the E-pharmacy Policy should be formulated and implemented before the end of 2017.

6. Health Research

Evidence plays a crucial role in designing and implementing health interventions. One of the priority actions that should be taken in this area is setting up research consortia for diseases of high priority including Neglected Tropical Diseases and emerging infections. These consortia could be set up along the lines of the India TB Research and Development Corporation, a flagship initiative by the Indian Council of Medical Research (ICMR) that aims to bring together all major national and international stakeholders for developing new tools (drug, diagnostics and vaccines) for tuberculosis.

7. Focusing on Key Social Determinants of Health

Nutrition

- Direct nutrition interventions can account for reduction in stunting by only 20% with the balance attributable to indirect interventions such as access to water, sanitation and hygiene (WASH).
- The governance structure to administer an effective nutrition program must reflect a multi-sectoral approach.
- There is an urgent need for a full-fledged and web-enabled Nutrition Information System. It should be synergized with the Health Management Information System and the Mother and Child Tracking System.
- For optimal nutritional outcomes, coordination among different frontline workers (ASHA, ANM and AWW) is essential. One of the mechanisms to motivate them could be through the provision of joint performance-based initiatives.
- Convergence of nutrition initiatives is important from two perspectives – geographic and programmatic. Currently, out of the 194 districts with high levels of child under-nutrition, there are only 11 districts where three major nutrition programs are running concurrently.

Convergence can occur in different ways:

- The Take Home Ration (THR) component of Integrated Child Development Services (ICDS) needs to converge with the Maternity Benefit Programme (MBP)>
- The Village Health and Nutrition Day should constitute the core of convergent action at the state, district and panchayat levels.
- Another necessary measure is greater flexibility to states under ICDS. For example, some states can provide direct cash transfers, based on soft conditions to address malnutrition.
- To address malnutrition challenges, we need to forge mechanisms to engage the private sector for fortification of wheat, flour, rice, edible oils and milk. In addition, we could consider making double fortification of salt (with

Iodine and Iron) and fortification of edible oils mandatory by legislating industry standards.

Drinking water and sanitation

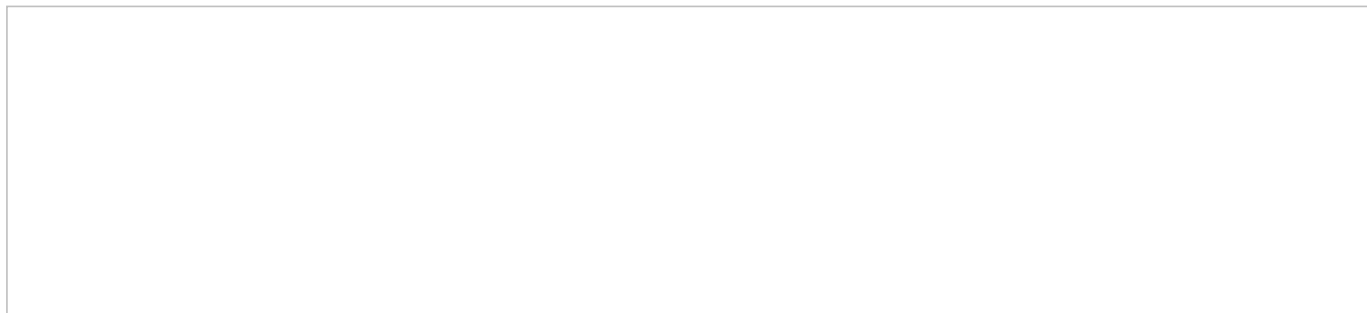
- Continuous uninterrupted water supply should be provided to at least 179,000 partially covered habitations in rural areas.
- Additionally, piped drinking water should be provided to every household across 500 Class-I cities as per the approved State Annual Action Plans under the Atal Mission for Urban Rejuvenation and Transformation.
- Additionally, uniformity must be ensured across drinking water quality parameters defined by different agencies e.g. Central Pollution Control Board and Indian Council for Medical Research.
- India is aiming to elimination open defecation by the year 2019. In order to achieve this, an additional 55 million household toilets and 115,000 community toilets should be constructed in rural areas.
- The amount of Central assistance provided for building toilets should take into account the differences in the cost of construction between rural and urban areas. Additionally, an incentive mechanism could be considered for encouraging the construction of accessible toilets for the differently abled.

More importantly, toilet functionality and usage must be ensured in the following ways:

- Strengthen real-time monitoring.
- Engage third-party assessors.
- Introduce a strong public education component in the toilet monitoring program by involving community volunteers ("Swachhata Doots") to generate peer pressure and motivate people to improve their sanitation facilities.

Towards Building A More Inclusive Society

Women



- Women's economic empowerment plays a crucial role in tackling gender inequality. Currently, the contribution of Indian women to the GDP (17%), is not only far below the global average (37%), but is also less than that of China (41%) and sub-Saharan Africa (39%).
- Despite significant acceleration in economic growth, labour market outcomes for men far outweigh those for women. This becomes evident in the extremely unequal participation of women across sectors and increasing gender wage gaps in decision-making positions.
- Evidence-based research shows that women in India tend to be paid less, work in less productive jobs, and are overrepresented in unpaid care-giving work. Globally, if women spend three times more time on unpaid work than men, in India it is 9.8 times more.
- India has the potential to increase its GDP substantially simply by enabling women's participation in the labour force on par with men.
- Over the next three years, the focus should be on promoting equal participation of women in the economy. Additionally, measures to protect women from all forms of violence must be prioritized.

Gender-Responsive Budgeting

There is a need to evaluate the impact of Gender-Responsive Budgeting (GRB) that was adopted by India in 2005 following which at least 57 government ministries/departments set up Gender Budgeting Cells.

- An analysis conducted by the National Institute of Public Finance and Policy reveals that GRB has not translated effectively in policies that impact women.
- Its objective should be to make the entire budgetary process more responsive to gender challenges. Some of the ways in which this can be achieved is by generating gender-disaggregated data and integrating gender budgets with outcome budgets.

Economic Participation

- According to the 68th round of NSSO, only 44% of Indian male workers are employed in farming, while 63% of the female workforce is employed in agriculture. In 2014, 43% of women above 15 years of age had an account in a formal financial institution compared to 62% of men.
- Enabling equal access to employment opportunities and financial services for women is crucial for bridging socio-economic gender inequalities in India.
- **For linking more women with the formal financial system, following steps should be taken:**
 - Financial literacy programs customized for women should be implemented.
 - Incentives could be provided for opening of accounts by women in which money is set aside for specific purposes e.g. school fees.
 - Successful pilot projects e.g. Bank Sakhis could be scaled up to improve the integration of female bank agents into the community.
- As per the 68th round of NSSO, only 3.4% women underwent vocational training in mechanical, electrical and electronic engineering trades as compared to 29% men. Due to caregiving responsibilities and societal biases about which jobs are suitable for them, it often becomes difficult for women to access vocational training programmes.
- Sharing childcare responsibilities can be difficult in a culture where parental leave is given only to the mother. This reinforces the belief that unpaid, household work is the sole responsibility of the woman. The government has an important role to play in promoting gender equality by ensuring equality of opportunity in public service.

Women's Safety

- While the launch of the Nirbhaya Fund was an important step, its implementation has remained sub-optimal.
- Every state should have an active (24x7) and accessible (toll free) women's helpline.
- Additional efforts should also be made to provide women with information about their rights. For instance, in Brazil, electronic kiosks have been set up at stations on railways lines for providing information to women who are survivors of violent crimes about the support services that can be accessed by them.
- Another focus should be on enhancing the safety of public transport. One of the ways in which this can be achieved is by leveraging technology such as Global Positioning System, Closed-Circuit Television and mandating that the staff, including drivers and conductors, wear photo identification cards which cannot be tampered.

Women's Well-being Index

Over the next three years, a composite gender-based index to reflect the status of women in the country should be developed.

Children

- Children constitute a little over a third of India's population, making it one of the youngest countries in the world
- A major obstacle to designing effective policy interventions for children is the unavailability of credible data.
 - For instance, the number of working children in the 5-14 years age group is estimated to be 4.3 million

(excluding marginal workers) as per the Ministry of Labour and Employment.

- The Census 2011 (which takes into account main and marginal workers), on the other hand, reports the number as 10.12 million.
- Moreover, even where data is available, there is considerable ambiguity. For instance, the chapter on human trafficking brought out by the National Crime Records Bureau, does not take into account cases of child kidnapping and abduction

Data Systems

- All out-of-school children need to be mapped as a prerequisite to planning remedial programmes for bringing them back to school.
- The data should be fed into a centralized database. Further, an updated database must be developed for trafficked/missing children.
- Digitization and real-time monitoring of Anganwadis is already underway. Over the next three years, every Anganwadi Centre needs to be digitized. Digitization is expected to reduce the time spent by Anganwadi Workers on filling beneficiary records.

Early Childhood and School Education

- It is recommended that services at Anganwadis should include crèche facilities as well. Crèche facilities are essential to free women of domestic care work so that they can become a part of the productive labour force.
- Additionally, since preschool education is a part of Integrated Child Development Services (ICDS), standardized pre-school curriculum which incorporates regional diversity, stories and games should be developed.
- E-courses should also be launched for Anganwadi Workers to improve pre-school learning.
- Facilities in Anganwadi Centres need to be upgraded . An estimated 4 Lakh Anganwadi Centres are without buildings, 1.5 Lakh without water and 2 Lakh without toilets. Resources could be converged from Swachh Bharat Mission, Mahatma Gandhi National Rural Employment Guarantee Act and Corporate Social Responsibility to ensure water & toilets in all Anganwadi Centres.
- With respect to school education, skill training, sports and extra-curricular activities should be introduced as a mandatory part of the curriculum for at least three days a week. This will provide a more holistic education to students and improve employability.
- Additionally, as outlined in the Draft National Policy for Women, 2016, a gender sensitization module should be included in the curriculum.
- Conditional cash transfer schemes that encourage education of the girl child need to be implemented more widely. Design modifications are required so that parents invest the money for the intended purpose instead of spending it on dowry.
- Functional toilets and facilities for menstrual hygiene management need to be ensured to reduce the drop-out rate for girls at the secondary school level.

Child Protection

- There has been an increase in the number of crimes against children
- Over the next three years, all State Commissions for Protection of Child Rights should be active, well-staffed and fully functional. They should be in a position to address grievances in an efficient and timely manner.
- The Child Welfare Officer in every police station needs to be sensitized to the rights of children.
- A clear definition of 'trafficking' needs to be in place. The definition of child labour also needs to be reconciled with the manner in which the Census collects and computes data. This will facilitate accurate planning and implementation.
- Emphasis also needs to be placed on ensuring registration of births and deaths for all children. Having knowledge will enable better planning of services as will keeping track of the causes of child deaths.

Youth

- Nearly a third of all Indians¹⁴ are between 15 and 29 years of age.

- In order to capitalise on this demographic dividend, however, India needs to address the multiple challenges faced by youth including access to quality education, employment, health as well as social and cultural opportunities.
- A National Youth Policy was introduced by the Central Government in 2014 to replace the National Youth Policy, 2003. Several State Governments have also formulated their own youth policies.
- **Data Systems** - Over the next three years, systems should be put in place for collecting data pertaining to youth in rural and urban areas, in a systematic and consistent manner.
- **Evaluation of Existing Schemes and Policies** - As a prerequisite to designing more effective and comprehensive policies for addressing challenges faced by the youth in the country, it is crucial that the impact of existing policies is evaluated.
- **Strengthening the Implementation of Existing Schemes:**
 - The Nehru Yuva Kendra Sangathan (NYKS) is focused on the development of personality and leadership qualities among youth from rural areas who are not a part of the formal education system.
 - Similarly, the National Service Scheme (NSS) pertains to the character development of youth enrolled in high schools, colleges and universities.
 - Universalizing the coverage of these programmes and improving their quality should be the priority over the next three years.
- Another area for action is strengthening the National Institute for Youth Development which plays an important role in the capacity building of youth.
- School-based programs can play a vital role in providing key health and nutrition services to youth. They can also sensitize them to gender-related issues. In collaboration with schools and colleges, awareness generation programmes should be carried out in at least 10 districts in each of the high burden states over the next three years.
- Further, at least 100,000 youth who have been victims of substance abuse should be involved with skill development programmes to enable them to make a meaningful contribution to society.

Minorities

- According to the Census 2011, out of the total population of 121 Crore, Hindus constitute 79.8 %, Muslims constitute 14.2%, Christians 2.3%, Sikh 1.7%, Buddhists 0.7% and Jains 0.4%.
- Muslims constitute the largest religious minority and lag behind others in terms of economic, health and education parameters. The participation of Muslims in salaried jobs is also low. Muslim workers are largely concentrated in the informal sector which is characterised by low wages, poor working conditions and little or no social security.
- **Strengthening the Implementation and Monitoring of Existing Schemes-**
 - The PM's New 15 Point Programme (15 PP) has replicated certain features of the Scheduled Caste Sub-Plan (SCSP) and the Tribal Sub-Plan (TSP) in allocating a share of fund flows to minorities. Instead of earmarking a fixed share of funds (15%), allocations should be made based on the needs of the minority population.
 - Targets and outlays of the 15 PP should be disaggregated to the level of the natural settlement/hamlet/ward to ensure that schemes are reaching the targeted beneficiaries and producing the intended outcomes.
 - For effectively monitoring schemes under the 15 PP, guidelines provide for setting up Central (Committee of Secretaries), State and District Committees to report progress on a quarterly basis.
 - State and District level implementing agencies should have clarity about their roles as well as the share of allocations available for schemes targeted at minorities.

Ensuring Appropriateness of Design of Existing Schemes

- Fund allocation under the 15 PP is currently reduced to an accounting exercise with departments 'booking' 15% of their expenditure under the minorities head.
- An additional challenge is inadequate targeting of schemes which are intended to focus on minorities. For

instance, NITI Aayog's evaluation of 'Nai Roshni', a leadership development programme for minority women, revealed that the scheme was covering a large number of women who would have accessed the services anyway.

- Policy guidelines of Centrally Sponsored Schemes covered under the 15 PP should allow for customized interventions by identifying and filling developmental gaps in minority dominated localities.

Promoting Education and Skill Development

- To enhance access to education for minority girls, 555 Balika Vidyalayas sanctioned since 2006-07 are operational in minority concentrated areas. However, the enrolment of Muslim girls in these schools was only 16.39% till 2013-14.
- Evidence from Bihar has shown that providing bicycles helped to increase the enrolment of girls, including those from minority communities, into secondary school. Thus, emphasis should be given to the provision of collective transportation facilities (not limited to cycles). Other measures include well-designed school stipend or cash transfer programmes.
- All secondary/senior secondary schools that have been sanctioned till date for areas with a large minority population should be made functional.
- Continued efforts should be made to modernise madrasas through curricular reforms and provision of facilities(e.g. computers, labs, libraries)
- To strengthen higher education for minorities, the establishment of model degree colleges in all identified districts should be completed by end of the three-year period.
- Vocational training and skill development are critical given the widespread unemployment and trend towards self-employment, especially among Muslim youth. There should be a special focus on traditional skills that are possessed by minority communities e.g. Zardozi work in Bareilly and Chikankari in Lucknow.

Empowering Women from Minority Communities

- 'Nai Roshni', the newly launched leadership training programme for women should be expanded to all districts with a large minority population.
- Representation of women from minority communities must be ensured in all institutions intended to promote their welfare. This includes the National and State Women's Commissions, National and State Minority Commissions and Minority Financial Corporations.

Scheduled Castes (SC), Scheduled Tribes (ST), Other Backward Classes (OBC)

- According to the Census 2011, SCs constitute 16.9% of the total population with approximately 80% living in rural areas. Nearly half the SC population is concentrated in five states – Uttar Pradesh, West Bengal, Tamil Nadu, Andhra Pradesh and Bihar. The Constitution recognizes that SCs have suffered social, educational and economic deprivation historically. Special provisions have therefore been made for the advancement of their interests.
- STs constitute 8.6% of India's population according to the Census 2011 with 47% living below the poverty line in rural areas and 30% in urban areas. Tribal populations often live in remote locations making it a challenge to deliver basic services to them and ensuring that they benefit from economic growth.
- OBCs include castes or communities that are considered to be educationally and economically backward. According to the National Sample Survey conducted during 2004–05 (61st Round), OBCs constitute around 41% of the total population. Approximately a quarter of the OBC population lives in rural areas as small and marginal farmers, agricultural labour and other subsidiary occupational groups.

Scheduled Castes

Empowering through Education

- Efforts need to be stepped up for establishing functional residential schools for boys and girls in blocks with a

substantial SC population.

- **Evaluations of the scholarships schemes:** A clear monitoring mechanism needs to be put in place at every level of the implementation chain. Periodic audits should also be conducted to prevent malpractices and delays in the release of scholarship funds to students.
- States that continue to provide scholarships through cash payments should move to Direct Benefit Transfer (DBT).
- A system should be put in place for revising the rates of scholarships including the maintenance charges based on the Cost of Living Index/Consumer Price Index.
- It is crucial that the impact of these scholarship schemes e.g. on improving school retention and completion rates is evaluated.

Enabling Economic Development

- Targeted coverage of SCs should be ensured through the provision of soft loans and financial assistance by the National Scheduled Caste Finance Development Corporation and the National Safai Karamchari Finance Development Corporation.
- While several initiatives have been taken by the government to market the products developed by SC artisans and entrepreneurs, the ambit of such initiatives has been limited. There is therefore a need to strengthen market linkages. This can be accomplished through the recently launched National SC/ST Hub.

Promoting integrated development of villages with a large SC population

During the three-year timeframe, efforts should be made to ensure that the 1,000 villages selected during the pilot phase of the Pradhan Mantri Adarsh Gram Yojana attain the 'model village' status.

Scheduled Tribes

Strengthening Implementation of Schemes for STs

- Administrative strengthening of agencies responsible for implementing schemes in tribal areas should be undertaken on a priority basis.
- This requires developing a comprehensive personnel policy which covers duration of postings, incentives for rendering services in tribal areas and modules for sensitizing officials.
- Currently, there is a lack of transparency with respect to posting and transfer policies. As a result, those who are posted in tribal areas remain there for long without getting a chance of being posted in or around urban areas.
- The SCSP and TSP planning process needs to be strengthened. In addition to earmarking funds for SCSP and TSP, emphasis must be placed on needs-based planning as well as a robust mechanism for monitoring and evaluation of outcomes.
- A mechanism for monitoring outreach of various schemes and assessing the critical gaps does not exist. The on-line MIS application being developed with support from the Ministry of Tribal Affairs-UNDP project will enable monitoring of fund allocation and utilization.

Empowering through Education

- For promoting pre-primary education, Anganwadi facilities should be extended to tribal areas.
- Following adequate training and capacity building, the management of Anganwadi Centres should be handed over to local women.
- Steps need to be taken for strengthening the implementation of scholarship schemes. For instance, scholarship rates and income ceiling of parents should be revised at regular intervals in alignment with the price index.
- Scholarships to students who are day scholars or hostellers are paid on a monthly basis directly into their bank accounts
- The impact of the scholarship schemes on improving educational outcomes for students should be evaluated

on a priority basis.

- In order to reduce drop-out rates especially among girls belonging to ST communities, hostel facilities must be ensured in all areas in which they are currently absent.
- For higher education, the number of scholarships awarded for ST students under The National Fellowship could be increased to 3,500 from the current figure of 3,370 per annum.
- Vocational training should be an important complementary part of education at the elementary and secondary school levels. Within the three-year period, the presence of an ITI/Polytechnic should be ensured in each development block of the Tribal Sub-Plan areas.

Enabling Economic Development

- Targeted coverage of STs should be ensured through the provision of soft loans and financial assistance by the National Scheduled Tribe Finance Development Corporation.
- Allocating funds for tribal communities to setup enterprises in rural and urban areas. Export of tribal handicrafts should also be encouraged by the government.
- The National SC/ST Hub should be leveraged for strengthening market linkages for ST entrepreneurs, accessing financial support schemes and disseminating industry best practices.

Strengthening Implementation of the Forest Rights Act (FRA), 2006 and the Panchayats Extension to Scheduled Areas Act (PESA), 1996

- A major challenge exists in making people aware of their forest user rights. Efforts should be made for reaching out to people with simple and key messages about the FRA.
- Clarity also needs to be provided with respect to the provisions of the Act and the procedure for filing applications to claim community rights.
- Additionally, capacity building should be undertaken for people who are responsible for implementing the FRA.
- Greater synergy should be developed between the Tribal Welfare Department and the Forest Department at the state level.
- Further, in selected forest villages, pilot initiatives should be launched for identifying alternative livelihood options for tribal communities which will reduce their dependence on forest resources.

Other Backward Classes

Empowering through Education

- The construction of hostel facilities for boys and girls belonging to OBCs needs to be prioritised. Further, the presence of a residential school should be ensured in every district that has a large population of OBCs on an urgent basis.
- The recently revised Free Coaching scheme for OBC students should be implemented in a timely manner.
- The number of awards under the National Fellowship for OBCs could be increased to 780 per year (currently 660).
- Any increase in the number of awards should be preceded by a strengthening of the scholarship system and evaluation of impact similar to the measures to be taken for SCs and STs.

Enabling Economic Development

- The National SC/ST Hub could be expanded to also meet the marketing needs of artisans belonging to OBCs or a similar institutional mechanism could be put in place.
- Provision of concessional loans for entrepreneurship development among OBCs as well as financial assistance to trained/educated youth for self-employment should be continued on a priority basis.

Persons with Disabilities

- According to the Census 2011, there are 2.68 Crore PwDs in India constituting 2.21% of the total population.

This, however, could be an underestimate because according to the World Health Organisation, 15% of the world's population faces some form of disability.

- India enacted the first legislation for PwDs in 1995. India also formulated its first National Policy for PwDs in 2006. In 2015, the Accessible India Campaign was launched.

Undertaking Legislative, Policy and Institutional Reforms

- Replacement of the PwDs Act, 1995, will be a major step forward, especially in recognising various types of disabilities. The National Policy for PwDs, 2006, also needs to be revised to make it more relevant and comprehensive.
- It is important to strengthen the institutional framework at all levels to have a stronger and more direct role for PwDs.
- The responsibility for specific initiatives for PwDs should be brought under the purview of the relevant line Ministries.
- Third, the number of schemes administered by the DEPwD should be rationalised. It would be prudent to have a limited number of schemes with adequate budgetary allocation that are implemented and monitored well.
- Fourth, the financial and human resource capacity of the Central and State Commissioners' offices need to be strengthened so that they are able to perform their functions more effectively.

Estimating the number of PwDs in India

The first step towards empowering PwDs is obtaining a realistic estimate of the numbers of people who are coping with various types of disabilities. This has been difficult to obtain, however, because of reluctance to disclose this information due to social stigma. A large-scale awareness campaign should be launched to sensitize people about disability and alleviate the stigma.

Improving Accessibility

Over the next three years, 10,000 government buildings and 75% of buildings in the private sector should become fully accessible. Additionally, accessibility should be ensured for 75% of government owned public transport and 50% of privately owned transport. Accessibility for all international and domestic airports as well as railway stations should be ensured within the three-year timeframe.

Strengthening Education

- Over the three-year period, around 4,80,000 Scholarships/Fellowships (fresh & renewals) should be awarded to students with disability.
- It must be ensured that schools have at least one section of each class accessible under the Universal Design Guidelines. Additionally, a module on sensitization should be made mandatory in teacher training courses.

Enhancing employability

- Skill training should be provided to at least 12.5 Lakh PwDs over the next three years. One of the ways in which this can be accomplished is by setting up dedicated ITI Centers for PwDs according to the requirements of the private sector.
- Five Centers should be established by the National Handicapped Finance and Development Corporation (NHFDC) including 1 in the North East for training PwDs for self-employment.
- The Authorized Share Capital of NHFDC should be enhanced from the present Rs.400 Crore to Rs. 1,000 Crore.
- Potential posts for PwDs in the government should be reviewed and the 3% vacancy reservation implemented

Establishing important institutions for PwDs

- Four regional centres of the Rehabilitation Council of India (RCI) should be established. Independent functioning of the National Board of Examination in Rehabilitation under the RCI should be ensured.
- Three Centres for Disability Sports (in Zirakpur, Vishakhapatnam and Gwalior) should be opened during the

three-year timeframe.

- The Indian Sign Language, Research & Training Centre should be set up and 500 additional sign language interpreters should be trained.
- For comprehensive management of spinal injuries, 20 state Spinal Injury Centres should be established in government hospitals. Additionally, an impact evaluation of the scheme for supporting the Indian Spinal Injury Centre, New Delhi, should be conducted to ascertain the feasibility of enhancing the coverage of poor people with spinal injuries and modifying the scheme if necessary.

Improving Access to Aids/Assistive technologies for PwDs

- Aids should be provided to approximately 3.5 lakh beneficiaries every year.
- Distribution of aids to senior citizens who live below the poverty line should be prioritised as a sizeable percentage suffers from age-rel