



PUNE INTERNATIONAL CENTRE



Innovating India

2019-2024:
PUBLIC POLICY AGENDA



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FOREWORD

It gives us great pleasure to put before you the document providing policy agenda for our country. We hope that this document will contribute towards building a solutions bank, ideas for the action agendas of our national parties and also enable building a consensus during the forthcoming national election policy debates. The PIC had published before the 2014 election a policy document of issues and options and this effort was widely appreciated by political leaders and policymakers. A number of political parties in fact incorporated several of our policy proposals in their election manifestos. We also received encouragement from Shri Narendra Modi, the then Chief Minister of Gujarat and Smt. Sonia Gandhi, the then president of Indian National Congress.

Since 2014, the world economic order is changing radically, where Asia is increasingly seen as the growth engine of the world economy with India in a unique position of a “swing economic power”. Keeping in mind the blowing winds of the new world economic order and the pressing national challenges, we present the ‘2019-2024: Public Policy Agenda’. This document outlines policy proposals to launch our economy from “leap-frogging” to “pole vaulting” and leverage the consequent growth momentum towards creating a more prosperous, just, and inclusive society for our people.

We believe that at this historic conjunction, our country too is at crossroads. Despite our achievements so far, our economy is underperforming as compared to our vast growth potential and our legitimate aspirations. Our country has now a window but only a few decades to achieve necessary momentum to overcome the “middle income country” trap. To grasp this “once-in-a-lifetime” opportunity, we propose bold and big policy initiatives. The 35 research-backed and balanced policy papers presented in this volume are structured around some such big ideas towards accelerating growth, improving equity, building robust data mechanisms, strengthening national security, augmenting state capacity, and providing energy and environmental sustainability.

Pune International Centre (PIC) is an independent policy research think tank, and we at the PIC hope that this volume, just like our earlier effort, would provide inputs to the manifestos of various

political parties and help create consensus towards needed policy reforms. The volume is divided in seven sections:

Section I looks at ways to better the very foundations of the nation through state capacity transformation and strengthening of democratic decentralization.

Section II looks at issues of macroeconomics and banking reforms.

Section III addresses issues of national security and India's foreign policy outlook.

Section IV looks at the essential innovations in the area of human capital.

Section V talks about the growth accelerators for the country.

Section VI focuses on climate change and how to achieve more environmentally sustainable growth.

The last **Section VII** provides focus on infrastructure reforms and its challenges.

We are very grateful to the distinguished experts from various domains who have contributed to this volume through their scholarship and deep knowledge. Mr. Shankkar Aiyar and Dr. Sumita Kale (both PIC members), led the PIC team consisting of Ms. Gauri Noolkar-Oak and Ms. Vaibhavi Pingale (both PIC Research Analysts) to put together this report. Ms. Falguni Gokhale, PIC Founder member, did the design for this report. We are very thankful to this team for their efforts. We owe special thanks to Prof. Ajay Shah, a distinguished academic and a PIC member, who assisted in formulating the framework of the report.

Finally, we hope that '2019-2024: Public Policy Agenda' will be discussed and extensively debated in public. Our hope is that a strong consensus will be formed so that the next government will be able to implement these innovative policy proposals and take the country towards the destiny that, the father of our nation, Mahatma Gandhi, had envisioned for all of us.

Raghunath Mashelkar
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PUBLIC POLICY AT THE CROSSROADS

1.1 The Challenge

The new India Story owes its genesis to the 1991 crisis and subsequent reforms. The Indian reforms process engaged in a combination of stroke-of-the-pen reforms (which removed restrictions and thereby increased freedom) and deeper state capacity building of the institutional apparatus of a mature market economy. The measures and initiatives migrated from crisis driven to consensual process.

One of the aspects in consensual policy making is public participation. The Pune International Centre invited experts from across sectors to identify solutions for the multi-faceted challenges which will be faced by India in the coming years. The first edition of the ideas bank was released in 2014. It received wide appreciation and commendation as a path-breaking initiative.

The effort is to expand the discourse to draw in stakeholders, policy makers and most importantly the political leaders to assess what needs to be done, what can be done and to lay a path for engagement and reconciliation of many competing compulsions and crying needs.

This is the second edition and is essentially a pathway of ideas to take the economy to the next level - both in material and human development. The effort is to expand the discourse to draw in stakeholders, policy makers and most importantly the political leaders to assess what needs to be done, what can be done and to lay a path for engagement and reconciliation of many competing compulsions and crying needs.

The 2019 election is a milestone as it arrives at the crossroads of global uncertainty and domestic opportunity. Over the past two decades and more, India's engagement with the world economy has grown and improved significantly, with a reduction of barriers on the movement of goods, services, capital, labour and ideas. There was a great credit boom over the period 2005-2008 and then the global financial crisis hit the world economy. India briefly recovered well, after the crisis, through the application of substantial fiscal and monetary stimulus.

The enduring challenge for India has been to bridge the gap between available resources and rising aspirations.

The enduring challenge for India has been to bridge the gap between available resources and rising aspirations. The opening up of the economy helped fund and build infrastructure and propel growth. That said, it is also true, that investments have tapered off, and not kept pace with the requirements of a growing economy. This signals the need for deeper institutional structural reforms across the factors of production, that is land, labour, capital and enterprise.

There is a great deal of angst and attention on the problems of the labour market in India. However, to create jobs, we need investment. The government is not, and should not be, a large employer. Infrastructure projects, where there is a lot of public and private investment, are not significant employers. Employment is almost entirely created by private investment projects, in areas other than infrastructure.



Figure 1: Stock of private announced projects in non-infrastructure fields

The CMIE Capex data, which measures every investment project in the country, yields a measure of the stock of private announced projects at each point in time. In the graph above, we focus only on private announced projects in areas other than infrastructure. This data shows that we shifted course in 2011. The stock of private announced projects has halved compared with 2011, in nominal terms. If expressed in real terms, the decline would have been steeper.

The challenge of 2019 lies in diagnosing the sources of difficulty in initiating new work across diverse fields, which would bring vitality into the policy process. The proximate sources of concern and often pessimism in the private sector are well understood. These can be broadly placed under policy constraints. There is what is now called the 'Ease of Doing Business', that is reducing the



layering of permissions and compliance that shackle business. But a fuller reading of the situation goes beyond the conventional Ease of Doing Business concepts.

The reasons for the tapering of investment since 2011 are many and include a) Stress in about 40% of the corporate balance sheet; (b) Difficulties in obtaining credit from the impaired banking system; (c) Fear of investigations, raids and arrests; (d) The retreat from globalisation that has taken place worldwide and in India; (e) Weak demand conditions in the economy; and (f) A lack of confidence in the outlook for high Indian GDP growth.

The task ahead is to mitigate hardship by addressing these problems to secure a turnaround of private investment announcements and thus employment growth. In many areas, this requires deeper thinking about the institutional apparatus of the country -- that is, state capacity. For some years, it was possible to make progress by easing restrictions, while remaining with weak institutional capabilities. But low institutional capacity has increasingly become the binding constraint. The intellectual puzzle of 2019 consists of identifying the key binding constraints and initiating deeper institutional change.

In all areas, there is a valuable distinction between the right statements of aspiration and the right instruments through which these aspirations can be pursued. Many times, in Indian public policy, we are led astray and pursue the wrong objectives. And many times, we choose the wrong implementation plan for pursuing a right objective. Our attempt in this book is to establish the right aspirations, and also to tangibly show the work program through which these aspirations can be achieved. The PIC community is deeply engaged with all aspects of this work and will be part of the broader policy community as the policy process unfolds.

1.2 Foundations of the Republic

Transforming state capacity

We need to look deeper into institutional capacity in India. The paper 'Transforming state capacity' systematically organises the questions around the three branches of government: the legislature, the executive and the judiciary.

The working of the legislature has deteriorated substantially. Formal voting systems will increase the accountability of legislators to their voters. The formal mechanisms through which floor time is allocated need considerable improvement.

India has veered excessively into an arena where the room for bipartisan engagement over agreed national goals is often held hostage by partisan political expediency. The history of the delays in opening up vital sector of defence or expanding the reach of insurance reflects political opposition has morphed into policy opportunism. The neglect of consensus over policy priorities, the tendency of a ruling party to not yield ground to the opposition even on reasonable arguments is a recipe for policy logjam. Absence of aisle to aisle cooperation harms the concept of the Parliament (or the Assembly) as a deliberative body. Opposition parties are reduced to disrupting Parliament, or taking to the streets, as there are no other mechanisms through which disagreement can be expressed. The rules of the game need to evolve in favour of greater collaboration co-option and cooperation with the opposition.

One of the weakest links of the Indian State is the justice delivery system. There is the time and costs delay. One of the ways it can be improved is by enhancing mechanisms that address the gap in the knowledge base so that the aggravated conditions caused by certain orders and the ensuing political commentary about judicial activism can be reduced. This will go a long way towards addressing failures in the economic policy in areas ranging from public-private partnership or the bankruptcy reform that can be traced to courts and judicial mechanisms.

Another area that needs attention is the enhancement of the management capacity in judiciary. Even the best judges need managerial support in building large complex organisation that Indian judiciary is today. The strengthening of knowledge about the process of policy formulation and execution through which an organisational transformation can be obtained can make the law fraternity that controls the judiciary even more effective.

The first critical milestone would be a separation between judicial and operational functions, as is done in all advanced countries. For an analogy, the TCS 'Passport Seva' has TCS employees processing all steps in a passport application, while a civil servant makes the decision about issuing a passport. In similar fashion, a business process engineering organisation, the 'Indian Courts and Tribunals Service', should run the operations of courts using IT and para-legal staff, while the actual hearings and orders are controlled by judges.

The first critical milestone would be a separation between judicial and operational functions, as is done in all advanced countries.

In the executive branch, there is a sharp contrast between the sprawling mandate of the Indian State and its low capabilities. The headcount of civil servants, per unit population, is the lowest among G-20 countries. Fundamental reform is required of the human resource process of



government, covering the six issues of recruitment, on-boarding and training, evaluation, promotions, remuneration, and layoff.

Fundamental reform is required of the human resource process of government, covering the six issues of recruitment, on-boarding and training, evaluation, promotions, remuneration, and layoff.

This will not be an easy stroke-of-the-pen reform. Simple slogans like ‘Five hundred lateral recruits’ are of limited value; lateral entrants on an unreconstructed foundation will work out poorly. What is required is a deeper rethink of the HR process.

On a similar note, fundamental change is required of the finance process and the procurement process. State capacity building requires establishing projects to rebuild these three processes: the HR process, the finance process and the procurement process. A natural place to embark on these reforms is at agencies of the government, such as RBI or SEBI, where new concepts can be brought in. Many different policies can be experimented with, at different organisations, and these experiences can guide reform in the core departments of government.

Privacy

The section ‘Civil Liberty in the age of Digitalisation- Privacy’ deals with the privacy debate. In 2018, the issue of privacy came into centre stage worldwide, through a combination of the European adoption of General Data Protection Rules (GDPR), revelations about data use by Facebook and Twitter, and the Indian Supreme Court’s ruling which found that privacy is a fundamental right under the Constitution of India.

It is useful to separate the problems associated with privacy into two groups: threats to the citizen from the State, and threats to the citizen from private companies.

In mature democracies, the threats to citizens that emanate from the State have been substantially addressed. This thinking has been shaped by the experiences of the 20th century ranging from war to fascism to unbridled authoritarianism. This has given a system of checks and balances that govern access to information by law enforcement agencies. As an example, for a US government agency to initiate a wiretap, it must produce an evidentiary packet, and argue the case in front of a ‘FISA’ court. Only a handful of wiretap requests are approved per month. If evidence is obtained without following due process, this evidence is rejected by courts. In contrast, in India, these checks and balances are lacking. We have inherited a colonial system where law enforcement agencies have unchecked access to information about individuals. Further, if evidence is obtained through unlawful means, the courts do not reject it.

To enable confidence in the people on deployment of technology for delivering governance, the first priority should be to restore the trust of the people.

In previous decades, this unchecked power in the hands of the State caused relatively less damage, as low state capacity prevented the State from manually listening in upon too many phone calls. The development of modern technology, and the development of capability in the Indian State, has tipped the balance. To enable confidence in the people on deployment of technology for delivering governance, the first priority should be to restore the trust of the people, re-emphasise the supremacy of civil liberties, and checks and balances wherever the state has access to private personable information or where the state retains the power to access this information. This requires establishing legal frameworks that control access of State agencies to information about individuals, and tie down investigating agencies to the rule of law. The process of justice delivery needs to factor the establishment of legitimacy of information as and when presented in court and not just barring but also penalising of pursuits that go against the rights embedded in the Constitution.

Few questions touch the foundations of the republic as much as protecting citizens from the State.

Few questions touch the foundations of the republic as much as protecting citizens from the State. The rules of the game through which private firms are pushed to behave in ways that are conducive to the interests of customers are also an important issue in the Indian privacy debate, but this problem can take a back seat until the prime question is solved.

Democratic decentralisation

The paper on 'Decentralization' turns to the foundational questions of decentralisation to enrich democracy. The 'Subsidiarity principle' teaches us that every function of government should be placed at the lowest possible level of government where it can possibly be performed.

The city government is far more important than is understood in the present Indian political discourse.

The city government is far more important than is understood in the present Indian political discourse. As an example, Jawaharlal Nehru was chairman of the Allahabad municipal board in 1923, but almost one century later we do not see this level of talent pool in city government. One of the most critical reforms in coming years is establishing self-contained political systems in cities. The working of the executive and the legislature should emerge in Mumbai and Pune as is the case with London or New York.



This implies a large-scale shift of funds, functions and functionaries to city governments. The 73rd and 74th amendments to the Constitution were not complete in their drafting; we must carry this idea through to execution.

The movement towards smaller states is consistent with the subsidiarity principle. It is logical to go all the way to states that are one city, such as Delhi. These states can directly plug into the existing federal fiscal system. This is possibly an easier pathway for establishing sound city governments. As Jairam Ramesh has emphasised, achieving smaller states only requires action by the Parliament.

NITI Aayog 2

The old-style command and control economy, where government engaged in industrial policy, is now behind us. The 'Planning Commission' has been renamed as 'NITI Aayog'. The role and function of NITI Aayog, however, has yet to be formulated.

The old-style command and control economy, where government engaged in industrial policy, is now behind us.

It is possible to envision a design of the Indian government where the Union government only has a Ministry of Finance, where inter-governmental fiscal arrangements are determined only by the Finance Commission, and where democratically elected State governments operate autonomously once the Finance Commission has completed its work. Such a structure would, however, have infirmities in strategic coordination across the Union.

It is possible to envision a design of the Indian government where the Union government only has a Ministry of Finance, where inter-governmental fiscal arrangements are determined only by the Finance Commission, and where democratically elected State governments operate autonomously once the Finance Commission has completed its work.

We have a substantial dispersion in the levels of income across states. The first decades after economic liberalisation have shown some states harness the gains from liberalisation, while others have not. Ordinarily, the 'equalising differences' forces of a market economy should move capital to low wage states and labour to high wage states, thus generating convergence. The evidence for the decades of liberalisation, however, may even betray a certain extent of divergence.

It is in this setting that we must re-imagine the role of NITI Aayog. The typical ministry of the Union government would look at its own subject matter, and the democratically elected

government of a low-performing state would have its own objective of getting re-elected. NITI Aayog must play a unique coordinating role in understanding poverty traps, and coordinating the work of many ministries at the Union government so as to contribute to growth acceleration in weak states.

This will require that NITI Aayog become more than just a think tank on the lines of NIPFP or NCAER. There will need to be operational capabilities including an Independent Evaluation Office, an enshrined place in the formal structures of the policy process, fiscal resources, and the establishment of mechanisms where states that undertake reforms are rewarded with resources.

It is imperative that the distribution of tax collection allows for the devolution of funds and functions to the third tier of government. Ergo a portion of GST can now specifically be assigned to local government to create a strong fiscal base, so that the promise waved in 1990s through the Constitutional amendments is finally brought to fruition.

Civil Society

The paper 'Enabling Civil Society for Improved Policies and Governance' turns to civil society organisations. Ever since Alexis de Tocqueville, we have been conscious of the importance of civil society as an 'autonomous area of liberty' that is a counterweight to, and essentially separated from, state power and market forces. Harnessing these gains, however, requires creating conditions for the build-up of organisational capital at civil society organisations, and creating the interfaces through which civil society organisations can participate in the political process.

At one extreme, the government runs a closed policy process, which emerges with announcements without warning. While many State organisations in India today behave in this fashion, such processes raise concerns about democratic legitimacy. We need to move to a participatory process of policy making. This would generate natural interfaces through which civil society organisations could be useful in improving policies.

Sometimes, it is felt that civil society maturation has to take place on its own, and then at some point, when civil society organisations possess organisational capabilities, State processes can utilise their capabilities. This sequencing is an incorrect one. It is all too easy for powerful State structures to exert a chilling effect upon the emergence of civil society capabilities.



Democracy bestows rights and also imposes obligation of participation. But this obligation requires crafting of a structure that enables engagement. State structures have to first open up to participatory governance.

Democracy bestows rights and also imposes obligation of participation. But this obligation requires crafting of a structure that enables engagement. State structures have to first open up to participatory governance, after which there will be greater incentives for the development of capabilities in civil society. One way to think this through is to create these platforms at the local governance level – the incubation of this idea should be a priority to propel transformation.

Education for civic learning

The paper on civic learning raises a novel set of issues at the intersection of education and citizenship. We in India have gone too far into an instrumental view of education, that emphasises knowledge of English and Mathematics. High school graduates in India perhaps think that democracy is a system, an elected monarchy, where one king is replaced by another through elections.

The emphasis on Science, Technology, Engineering and Mathematics (STEM) in the post-independence period, and the atrophying of the Humanities and Social Sciences, lies at the foundation of the difficulties faced in Indian democracy today.

But the purpose of universal elementary education is much larger than preparing children to become assembly line products for the market: it lies equally in preparing children to become citizens. In some sense, teaching quantitative subjects is relatively easy as performance can be readily be measured. But some things that cannot be measured must still be managed. Bringing some knowledge and insight into the humanities and social sciences, on a population scale, is essential for the health of Indian democracy. This calls for investments in the education infrastructure – in technology that is accessible to both students and teachers to learn and re-learn but also in training programmes for educators.

The emphasis on Science, Technology, Engineering and Mathematics (STEM) in the post-independence period, and the atrophying of the Humanities and Social Sciences, lies at the foundation of the difficulties faced in Indian democracy today.

The paper shows tangible pathways through which education can induce civic learning. We view this not as a problem of enhancing human capital alone. Education is viewed as a fundamental foundation of the Republic.

1.3 Macroeconomics and Finance

The big policy questions

The task at the Ministry of Finance consists of building fiscal, financial and monetary institutions. Macroeconomic and financial stability creates the preconditions for economic growth and the resourcing of the exchequer; we ignore this at our peril.

Fiscal policy, financial policy and monetary policy are specialised subjects and tend to have distinct subject matter experts. However, the issues in the three areas are intricately intertwined.

Macroeconomic and financial stability creates the preconditions for economic growth and the resourcing of the exchequer; we ignore this at our peril.

At present, government borrowing is done by forcing financial firms to buy government bonds. When we graduate from this to a market-based process, this will improve the resource allocation. The bond market will generate signals informing the government and savers about imprudent borrowing, and help nudge the government towards more responsible fiscal policy. The bond market will serve the borrowing requirements of the top 200 companies, and thus free up resources of the banking system for others in the economy. The bond market will create an effective monetary policy transmission, through which small changes in the policy rate by RBI will have a significant impact upon inflation in the future. This will make RBI more successful in achieving its legal objective of 4% CPI inflation, while requiring smaller rate hikes to control inflation.

Tax administration needs to be put on sound foundations of the rule of law.

There are serious weaknesses in tax policy and tax administration. Tax policy needs to go to lower rates, such as a 10% GST, a 20% corporation tax and a 30% peak individual income tax. Alongside this, all cesses and surcharges need to be removed. Tax administration needs to be put on sound foundations of the rule of law. The draconian powers of tax officers, which include phone tapping and raids, need to be ended.



Financial regulation in India veers, too often, into intrusive micro-management of products and processes. As is well understood from other experiences with central planning, this rule-by-bureaucrats works poorly. As an example, a slew of regulatory changes from 2017 onwards have harmed the liquidity of the equity market, thus reversing one of the important success stories in the Indian economic reforms of the 1990s. Deeper financial regulatory process reform is required, to change the way financial regulators are governed and the processes that they employ, to restore the rule of law. The Financial Sector Legislative Reforms Commission (FSLRC) has worked out these process improvements, that will induce state capacity at regulators.

The Indian failures on financial regulation, tax policy and capital controls have led to a flight of capital to financial markets out of India.

The Indian failures on financial regulation, tax policy and capital controls have led to a flight of capital to financial markets out of India. A steadily rising proportion of the trading activity in the top two financial products - Nifty and the rupee - now takes place outside India. This should be used as a barometer of progress in domestic reforms.

The banking crisis derives from failures in financial regulation and from public sector ownership. Process improvements in financial regulation will help address the former. There is a need to stop bringing taxpayer resources into public sector banks, and initiate the privatisation of the smallest 20 public sector banks.

GDP measurement

While the Indian official statistical system has many difficulties, one hot spot of concern has been the National Account Systems (NAS). Improving the NAS has not been a priority of policy makers. However, there are direct links between the NAS and the fiscal policy process.

The essence of the work of the Ministry of Finance is to form a sense of the state of the business cycle, and craft the institutional frameworks of fiscal, financial and monetary policy which reduce macro-volatility.

GDP estimates drive the targets for tax collection: if GDP is overstated, the targets given to (say) the income tax authorities are too high, and can lead to excessively over-zealous tax collection.

Similarly, if GDP is overstated, then a target for bond issuance (which is typically expressed as per cent to GDP) can result in excessive claims upon the financial savings of the economy. Sound NAS estimates thus have a direct link with sound fiscal planning. Fiscal planners should demand that financial and human resources go into sound institutional capacity for NAS.

More generally, the essence of the work of the Ministry of Finance is to form a sense of the state of the business cycle, and craft the institutional frameworks of fiscal, financial and monetary policy which reduce macro-volatility. This requires sound NAS estimates.

GDP data tends to be used as a scorecard by the government, and by the larger political environment. When GDP is mis-measured, the feedback loops that are generated tend to go wrong. As an example, if GDP growth is over-estimated, the government is likely to become more complacent about its achievements. Sound NAS institutional capacity improves the feedback loops of politics.

In recent years, concerns about the accuracy of NAS estimates have come to centre stage. The first milestone should be a thorough statistical audit which evaluates the new systems, while falling back on the old systems. The NAS estimates have started utilising firm data from the MCA-21 system. This data is relatively unproven, and it is not used for any other purpose but this. NAS is too important an application: MCA-21 data should only come into use for the purpose of NAS after it has been widely utilised by researchers for myriad other applications and is considered well trusted.

The National Statistical Commission must be granted autonomous and constitutional status. The template of the Election Commission will serve well – it would enable overhauling the structure into a hub and spoke system of collection and enable cross country analysis.

The many episodes of controversy over national data have created an audience of doubt and conspiracy. The series of incidents and commentary that followed stain the otherwise credible cloak of Indian data-scape. It is very important for India to protect and strengthen the credibility of its word and that is reflected in how it treats data. It is clear that the data authority, the National Statistical Commission, be granted autonomous and constitutional status. The template of the Election Commission will serve well – it would enable overhauling the structure into a hub and spoke system of collection and enable cross country analysis.

Bankruptcy

The Bankruptcy Code, which was enacted in 2016, is a major step forward for India. However, the early evidence gives cause for concern.

The Code had envisaged that cases at the NCLT are decided in 180 days, and may go on to 270 days in special cases. The empirical evidence shows that this is not coming about. Only half the cases are



finished with a generous delay of 365 days. If we look at the largest cases, which arguably matter the most for the economy, only 10% of the cases are finished in 365 days. As of writing, we have a track record of completing just 3 of 12 big cases within 20 months.

A rethink is required of the management processes of the bankruptcy reform, in order to solve this problem. The key constraint is the lack of data and research. Decisions are being made every day, by policy makers, based on the opinions of practitioners who have access to anecdote. The work plan consists of establishing a statistical system, then engaging in a research program based on this statistical system, and then implementing the deeper changes in a research-driven way. The issues mentioned in this paper (on sound operations of courts) are highly relevant in making NCLT work better, and NCLT could be a valuable second place where the reform is implemented.

A rethink is required of the management processes of the bankruptcy reform.

The biggest bankruptcy cases involve large incentives for private persons to try to reshape and/or delay the working of the institutional apparatus. On one hand, this is about the slow and careful engineering work, of building a robust institutional apparatus. Alongside this, the important work of the bankruptcy reform will require sustained political support. Each case that goes wrong sets up the wrong precedents in court, and increases the incentives for private persons to invest in directly unproductive profit-seeking (DUP) activities.

The important work of the bankruptcy reform will require sustained political support.

GST

One of the most important developments in the Indian fiscal system is the introduction of the GST. The experience thus far has however, been disappointing. The gap between expectations and reality is grounded in the fact that the GST as implemented substantially diverged from the original vision of the 'flawless GST': one low rate, one administration, comprehensive base, full integration with imports (GST on imports) and exports (zero rating of exports).

Important sectors of the economy have been left out of the GST. As argued in the paper, these include petroleum, property, alcohol and electricity. These need to be unified into the GST system so as to broaden the base and curtail if not preclude politically opportunistic and distortive taxation.

The gap between expectations and reality is grounded in the fact that the GST as implemented substantially diverged from the original vision of the 'flawless GST': one low rate, one administration, comprehensive base, full integration with imports (GST on imports) and exports (zero rating of exports).

GST is neutral to international trade because it does residence-based taxation. A key principle of tax policy is that if we tax non-residents, they will take their business elsewhere: the only rational tax base for the Indian tax authorities is residents of India. This requires that exports be zero-rated. The lack of zero-rating of exports in the present GST constitutes an important burden upon the export sector.

GST is neutral to international trade because it does residence-based taxation.

The administrative strategy chosen for the GST, including the IGST and the e-way bill, have major deficiencies. The paper analyses these in detail and shows how these can be solved.

The appropriate GST rate for India is a single rate of 10% on all goods and services. There is a close connection between the existing use of high rates and the other existing design flaws. A reform package can solve all these at one shot.

The appropriate GST rate for India is a single rate of 10% on all goods and services.

Universal Basic Income (UBI)

There has been much debate about 'Universal Basic Income'. The paper on this subject argues in favour of continuing this debate. Other authors have emphasised the practical problems of the UBI: If we multiply Rs. 5,000 per person per year by 1.35 billion people, this is an expenditure of Rs.6.75 trillion. There is always the risk of an unpopular government raising the payment per person. The introduction of the UBI is, thus, likely to hamper fiscal soundness, even if it is accompanied by removing all existing poverty programs and subsidies.

There are deeper concerns about the UBI. The foundations of economics teach us that redistribution should be a one-time task, after which the market process should work well. The UBI, in contrast, envisions redistribution year after year, forever. It is worth asking what deeper problems there are, in the working of the market economy, and addressing them at the root cause.



The principle problem that democracies must worry about is empowerment. The question that begs to be asked is if there is sufficient investment and impetus to make the delivery mechanism fair and universal. The idea of UBI is seductive as it lures politics into the ghetto of pay and move-on politics. The call on the induction of UBI must be preceded by creation of access to goods and services – an obligation no state can shy away from or hide behind a wall of money.

The foundations of economics teach us that redistribution should be a one-time task, after which the market process should work well. The UBI, in contrast, envisions redistribution year after year, forever.

1.4 National Security

Foundations

We now turn to national security. As the paper 'India's National Security: Challenges and Opportunities' emphasises, we cannot see defence in isolation. It is tightly mated to two domestic issues: the economy and internal security.

The narrative of the unipolar world, the end of history has been challenged by events of the past years. There is the reluctant super power, the United States and then there is the aggressively aspiring super power China.

When India has internal difficulties, these are exploited by external threats. There is thus an intimate connection between internal security and external security. Prevention is better than cure: We need to solve our internal difficulties at the root cause.

The root cause of a great deal of our problems is located in weak economic growth and the malfunctioning political system. National security and economic security are intertwined and interconnected in every possible way from the funding of the military apparatus to implementation of human development that is inclusive. A half-way house leads to disaffection – often leveraged by political interests.

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Disaffected youth all over India, who feel alienated and hopeless, drift into extremism. To solve this problem at the root cause, we have to make liberal democracy flourish and we have to make the economy flourish.

A flourishing liberal democracy is one in which there are many voices, power is dispersed, and outcomes are continually negotiated in a polite manner. Where the political process of negotiation breaks down, we set the stage for extremism.

A flourishing liberal democracy is one in which there are many voices, power is dispersed, and outcomes are continually negotiated in a polite manner. Where the political process of negotiation breaks down, we set the stage for extremism. A flourishing economy is one in which markets and private enterprise work vigorously, thus producing jobs and prosperity.

This has to be seen not just at the level of the overall country but at the level of each homogeneous region of the country (on average, seven districts make up one homogeneous region). We need economic dynamism in every homogeneous region, so that households are optimistic and believe in the Republic. We also need a strong process of migration into the most prosperous areas, so that disaffected youth have one intermediate choice (migration) before drifting into extremism.

Traditionally, high GDP growth has been seen to be conducive to national security because we in India spend a stable 2.4% of GDP upon the armed forces (taking into account all aspects of defence spending). Through this, a higher GDP induces higher resourcing of the military. This is particularly problematic in India given that Chinese GDP is now many times larger than India's. However, we need to see this differently. A higher GDP generates a more satisfied populace, and prevents internal threats.

The broader failures of state capacity in India also afflict the security agencies. Alongside the difficulties of the courts, the police is one of the weakest arms of the Indian State. Fundamental reforms need to be undertaken, to achieve greater capability in the police.

In most arms of the Indian state, there is a feedback loop from transparency about State action, criticism of State action, and remedial action. This feedback loop is the weakest when it comes to national security, as the activities of internal and external security agencies are shrouded in secrecy.



Similarly, state capacity constraints harm the military also. As an example, the difficulties of the Indian government procurement process are visibly seen as the difficulties of procuring defence equipment. The three fundamental process failures of the government- HR, finance and procurement - equally harm the security agencies.

In most arms of the Indian state, there is a feedback loop from transparency about State action, criticism of State action, and remedial action. This feedback loop is the weakest when it comes to national security, as the activities of internal and external security agencies are shrouded in secrecy. There is a weak expert community, as an independent expert is unable to obtain information and conduct research. We need to embark upon an array of actions which address this, including reduction of secrecy, controlled release of information to the legislature and accountability through legislative committees, greater activism by the CAG which is able to obtain secret information and release reports into the public domain, etc.

Foreign policy

'Foreign Policy Outlook for India' argues that the prime focus should be upon our region.

There is a 'gravity law' in international integration, which suggests that the greatest opportunities for the mobility of goods, services, people, capital and ideas lies with our nearest neighbours. Engagement across the border is valuable, and the greatest opportunity for engagement lies with the countries nearby. India vastly underperforms reasonable benchmarks on the scale of mobility within the region.

There is a 'gravity law' in international integration, which suggests that the greatest opportunities for the mobility of goods, services, people, capital and ideas lies with our nearest neighbours. Engagement across the border is valuable, and the greatest opportunity for engagement lies with the countries nearby.

We need to do much more in order to foster regional integration. The presence of friction with so many South Asian countries suggests there is need for improvement in our foreign policy strategies. Amicable relationships at the level of diplomacy should be accompanied by a great increase in the five channels of engagement. For the elite of all South Asian countries, India should be a second home and a safe haven, a place for business and professional opportunities, for managing their globally diversified financial portfolio, and for getting education for their children.

The immediate problem that India now faces is the inroads that China is making in South Asian countries. These initiatives need to be combated. The odds are in our favour: for each South Asian country, the value of a positive partnership with India – given the opportunity in the five kinds of mobility – is greater than the usefulness of a partnership with a faraway country, even if that faraway country has a GDP which is many times larger than India's.

Defence

The paper on defence technology highlights that India has a long-term stability around the concept that 2.4% of GDP will be the total spend on all aspects of defence. The problem, however, lies in the split between salaries and pensions versus non-salary costs.

How to evolve India into a low-headcount military, that has world class training and equipment?

The bulk of the cost of a modern, sophisticated force lies in equipment and consumables. In India, however, the bulk of our expenditure goes into salaries and pensions. In the early 2000s, when the New Pension System was being introduced, there was a plan that was discussed with the armed forces, about bringing the NPS into the armed forces also. This was not implemented, and instead the debate went on into One-Rank-One-Pension (OROP). OROP is an extremely expensive decision, one that sharply raises the cost of salaries + pensions for the military. Holding the 2.4% number intact, it will squeeze the resourcing available for equipment.

From this difficult starting condition, the puzzle of policy makers remains the same: How to evolve India into a low-headcount military, that has world class training and equipment? This journey has been complicated by OROP, but the fact remains that this journey has to be undertaken.

There is a need to strengthen the achievements of recent decades in purchasing from the private sector (both in India and abroad). This will yield cost saving, and will generate spill overs for the private sector of the high technology that meets military requirements.

The military procurement process has shaped up as a major bottleneck for large weapons systems. Alongside this, there is a need to strengthen the achievements of recent decades in purchasing from the private sector (both in India and abroad). This will yield cost saving, and will generate spill overs for the private sector of the high technology that meets military requirements.



1.5 Human Capital

Elementary and secondary education

There are two outstanding facts about education in India. The first is that faced with the choice between free public schools and paid private schools, parents are voting with their feet and exiting public schools. There has been a secular increase, over the last 20 years, in the share of parents opting for private schools. This is taking place in both urban areas and in rural areas.

The second outstanding fact is that children in Indian schools (whether public or private) do not learn a lot. The ASER surveys of learning outcomes have repeatedly demonstrated that basic skills are lacking in a large fraction of children who are ostensibly enrolled in school.

In the last 20 years, with the sharp nominal increase in expenditures on education, coupled with the exit of parents from the public system, the true PPE has risen to very high levels.

For the public system, it is important to obtain a system-scale measure of Per Pupil Expense (PPE). This measures the input that the Indian state is putting into education. In the last 20 years, with the sharp nominal increase in expenditures on education, coupled with the exit of parents from the public system, the true PPE has risen to very high levels.

These difficulties suggest that there are important concerns about the existing policy frameworks. The mere intensification of these policies will not solve the problems.

The bang for the buck of the public system can be measured by juxtaposing PPE and learning outcomes. Independent research has demonstrated that this bang for the buck is superior with private schools. This suggests there will be gains from putting public money behind the decisions of parents, i.e. by paying the public system's PPE as a subsidy per child for a parent who opts out of the public system. Our loyalty should be to children and their learning outcomes, not to the public system.

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The Indian elite is complacent about the problems of education in India, as it believes that its children are getting a world class education (e.g. by preparing for the IIT entrance test) even if the

children of the middle class show poor results in the ASER data. Given the number of students now in schools and the magnitude the problem, the issue will haunt India for years to come. The problem of poor learning outcomes needs to be addressed now.

Health

Our prime focus should be on the health of the population. Our dream for India should be to get a healthy populace. Everyone is vastly better off if a person does not get sick in the first place. The first battlefield is the traditional conception of public health, of disease prevention.

India has one of the weakest immunisation programs in the world. If we did better on the number of diseases covered, and the operations of immunisation programs, fewer people would get sick.

India has one of the weakest immunisation programs in the world. If we did better on the number of diseases covered, and the operations of immunisation programs, fewer people would get sick. Water and sanitation are well established as the root cause of a great deal of infectious disease. Fighting disease vectors such as mosquitoes matters, and we seem to do this less than we did in the 1970s.

New battlefronts have opened up in preventive health. Air quality has become a first order issue. There is carnage on the roads. We are proud of our new roads, but the highway engineering is weak, and we have one of the highest accident rates per vehicle-kilometre in the world. Failures of policy are making disasters such as floods more frequent and more harmful, and earthquakes more harmful.

The administrative boundaries of our Ministries of Health are part of the problem. Most of the deep determinants of the health of the people are outside Ministries of Health. This gives an excessive focus upon health care, which is under the purview of Ministries of Health. If NHAI tries to get more vehicle-kilometres done at the lowest possible cost, they will tend to short-change the issues of road safety and disaster resilience.

We need to reorient our policy strategies so as to bring health risk into the thinking of all departments of government, and achieve state capacity in the traditional areas of public health. This will reduce the need for health care.



We need to reorient our policy strategies so as to bring health risk into the thinking of all departments of government, and achieve state capacity in the traditional areas of public health.

Alongside this, we also need to rethink health care. India is drifting into a purely private system, where patients buy health services in an episodic manner. This system works poorly. When doctors are paid per procedure, the doctor has an incentive to over-prescribe procedures, and doctors make more money when patients are sickly. Payment per procedure generates wrong incentives.

Fundamental change is required in the management of public sector health care, so that it can be more useful to the populace. At the same time, it is hard to roll back the clock on the emergence of a large private health care sector. Fundamental system thinking is required in order to create a health care system that serves the interests of the citizens.

Gifted children

The upper tail of cognitive capacity is unusually important for the possibilities of a country. At present, we are wasting a large fraction of the innate talent present in the populace, through a schooling system that is oriented around the capabilities of the average student.

A curriculum that is feasible for the average student is inefficient for a S. Ramanujan.

A curriculum that is feasible for the average student is inefficient for a S. Ramanujan. The mainstream education system imposes a certain regimentation. While this is harmful for all students, it is particularly harmful for gifted children. We need the upper tail of society to be mavericks, to be free thinkers who will challenge authority and social mores. A country which domesticates its brightest is wasting talent.

The paper 'Nurturing Gifted Children' argues in favour of modifying the National Talent Search process to more effectively identify the extremities of capability, early in their life, and to establish modified educational frameworks through which this talent can be best nurtured. This talent pool will feed into the upper tail of the OECD PISA measurement, when (at a future date) we will obtain this evidence on a country scale.

Pension reforms

The Cabinet decision for the New Pension System was in December 2002, it was applicable for all civil servants from 1/1/2004 onwards, and the PFRDA was created through legislation enacted in

2013. The NPS now has 5.8 million civil servants, 21.2 million private persons, and Rs.2.34 trillion of assets under management.

The work program in reforms now consists of carrying the NPS through to its original conception of a 'flawless pension system'.

The work program in reforms now consists of carrying the NPS through to its original conception of a 'flawless pension system'. This is reminiscent of the work program in GST, of going back to the 'flawless GST' as originally envisioned.

In the case of the NPS, this involves defragmenting the NPS into a single NPS, going to a world of 4 asset classes and 3 fund managers, recruitment of fund managers through auction, and a focus on low fees and expenses. These timeless values of pension system design have been gradually eroded over the years, and there is a need to get back to them.

Now that the NPS is working well, all aspects of the Indian pension system should be converged into the NPS. This includes superannuation funds, gratuity, EPFO, etc. As emphasised above, the perpetuation of the old-style pension for military employees, coupled with OROP, was the wrong direction for defence policy, and we need to develop plans for shifting military employees into the NPS.

All aspects of the Indian pension system should be converged into the NPS.

There is a need to separate out NPS Trust as the owner and operator of the NPS, and PFRDA as the regulator of the NPS. As and when the FSLRC recommendations are implemented, PFRDA will be merged into SEBI.

As with the bankruptcy reform, a key gap in the NPS work lies in databases, research, and incremental improvements based on sophisticated research.

Jobs

'Reforms for Job Creation' deals with the question of jobs, which has now come to centre stage in India. It is often said what can be measured can be improved. The primary problem of addressing the jobs crisis is that not enough is known. There is a need to urgently design a system to collect real time data on employment so that the picture is clear. At another level it is important to understand a perspective of what may be or could be. This calls for perspective planning on what the future forces of disruption could be and what this will entail -- in education, skilling and re-learning programmes.



One positive development is the role of private research and their new capabilities in the statistical system.

The primary problem of addressing the jobs crisis is that not enough is known.

CMIE now surveys a panel of 170,000 households, three times a year, and is able to produce fine grained data on employment such as a daily frequency unemployment rate. The key findings of the CMIE survey are disturbing: India has a very low labour force participation rate; the problems are highest with women, the young and the old.

Economic downturns result not just with unemployment among women-young-old, but their exit from searching for jobs.

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The most important foundation for addressing this problem lies in sound macro/finance policy. When macro/finance policy conducts itself well, we will have high investment, and that investment will generate jobs. When India makes policy mistakes such as introducing trade barriers, jobs are lost. In other words, the most important determinant of jobs lies outside the field of labour.

The most important determinant of jobs lies outside the field of labour.

Within the field of labour economics, there are three areas for work. The first is the reduction of the burden of labour law. The decision of a person to start a business, or to grow the headcount of employees, is critically shaped by the burden of labour law. The introduction of more procedures, greater penalties, and particularly the criminalisation of violations, has led to a reticence in setting up a business or growing one.

There is a need to scale back what is dubbed as 'the raid raj', to foster the initiation, continuation and expansion of MSMEs.

Going beyond labour law, the burden of dealing with the government, and with the arbitrary power of investigative agencies, is shaping up as a barrier against setting up or running an MSME in India. For big firms, the problem is solved by having large legal teams, expensive lawyers, and having the ability to deal with the threats of an investigative agency. For smaller firms, the problem is insurmountable. There is a need to scale back what is dubbed as 'the raid raj', to foster the initiation, continuation and expansion of MSMEs. Enforcement agencies need to be tied down to

operate under the rule of law, criminalisation of economic offences must end, and penalties must be smaller.

One key gap which hampers the labour market is the problem of vocational education. The government has embarked on a fundamental redesign of the skills framework, with the establishment of the NCVET as a regulator. This vision emphasises private certification agencies, private training agencies, regulation by the government, and skills vouchers. This is a sound strategic direction. The full implementation of this framework in coming years will yield a better functioning skills ecosystem. The key element of the puzzle is creating state capacity at NCVET.

There is now a direct connection between the jobs agenda and the gender agenda, as we see the weakest labour force participation rate among women.

The Chinese say women hold up half the sky. Across the world every developed economy has grown and benefited from higher participation of women in the workforce.

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We see that in an economic downturn, women are the ones who are likely to lose jobs and even exit the labour force. There is a need for a special focus on creating conditions of skilling and personal safety, through which women can become first class participants of the labour market.

1.6 Growth Accelerators

Trade policy

India has gradually emerged into an important part of global trade. From a domestic point of view also, as the paper on trade reforms points out, trade in goods and services amounted to 41% of GDP in 2017. These developments are of a far-reaching scale. As an example, we in India are often pessimistic about the problems of agriculture, but food exports from India have grown dramatically to about \$40 billion a year. There is now no room for the lingering strains of export pessimism or autarky.



The agenda for policy now consists of three pillars. The first pillar is to identify and remove overt or less visible tariff restrictions, so as to get all tariffs to 5% or less.

About half of global trade takes place within firms, so being a good host to multinationals is essential for India to participate in the global trade system.

The second pillar consists of identifying and addressing non-tariff barriers to trade. This includes the traditional agenda of improving infrastructure and tax administration at ports and airports. It also includes the removal of a variety of restrictions against foreign firms. About half of global trade takes place within firms, so being a good host to multinationals is essential for India to participate in the global trade system. This requires fair play and national treatment for MNCs, and solving problems such as those faced by Vodafone (retrospective taxation) or Walmart (barriers against FDI).

There is also an urgent need to improve the institutional structure so that obligations and commitments to WTO and the credibility as a global player are not affected by decisions taken - anti-dumping et al. Given the matrix of world trade in volume and value the sustenance of the multi-lateral system and WTO is essential.

India is an important beneficiary of an open world trade system and is now unable to free ride on the work done by the US in building a global free trade environment.

The third pillar consists of participating in the international system and helping reshape it into a more open order. The United States has exited the role of championing open borders. India is an important beneficiary of an open world trade system and is now unable to free ride on the work done by the US in building a global free trade environment. India must now collaborate with others who value an open trade system and participate in free trade groupings such as the Trans Pacific Partnership (TPP).

National innovation ecosystem

There was an age when an innovator was a lonely tinkerer, much like an S. Ramanujan. We are now in a world of an innovation ecosystem, comprising many moving parts, which reinforce each other and give us a better translation from the upper tail of gifted children into the production and exploitation of knowledge.

India must deeply engage with globalisation, with free movement of goods, services, people, capital and ideas. This will constantly expose us to new ideas and spur innovation.

The first foundation of the innovation ecosystem is competition policy. No firm in India should feel safe and comfortable that it will make money. The process of creative destruction – the birth and death of firms – should pinch all firms. This will spur firms into innovation. The entire agenda of competition policy, including anti-competitive barriers created by the government and barriers against foreign competitors, need to be removed to increase the pressure on firms operating in India.

The second foundation of the innovation ecosystem is open minds and open borders. India must deeply engage with globalisation, with free movement of goods, services, people, capital and ideas. This will constantly expose us to new ideas and spur innovation. A sophisticated and globalised financial system will bring ample resources to bear upon supporting practical (excludable) innovations, and government would fund public goods of knowledge.

Great universities would look into the Indian backyard, and solve problems that pinch real people in the backyard.

The third foundation of the innovation ecosystem is sound universities. We in India see that we require 'world class universities', and we have begun moving towards that. There is a danger of chasing the score – the mechanical measurement of publications and citations and foreign – and not actually achieving the intellectual ferment. Great universities are deeply connected into the rest of the country, and not isolated ivory towers. Great universities would look into the Indian backyard, and solve problems that pinch real people in the backyard. Great universities are about debates, discussion, dissent, and intellectual outlook.

The fourth foundation of the innovation ecosystem is the extent to which the government's spending on high technology (defence, space, nuclear) is channelled through universities and private firms. If a new Main Battle Tank is built by DRDO and its associated government agencies, the capabilities will be poor, and the project will fail to energise innovation all across the economy. If, instead, the MBT is built primarily by contracting-out to universities and private firms, the work will get done and enormous positive externalities will be reaped. This issue works at two levels: research contracts by government and the public procurement system.



Privatisation

The purpose of privatisation is to free up resources (capital, labour, land) from inefficient public management, and put them into private hands. This will yield GDP growth.

The first question to address in the field of privatisation is: What to privatise? It is better to privatise a firm like Air India, that operates in a competitive market, as opposed to a monopoly like Coal India or ONGC. If Coal India became a private monopoly, we would face great difficulties in the space of competition policy.

What to privatise? It is better to privatise a firm like Air India, that operates in a competitive market, as opposed to a monopoly like Coal India or ONGC.

Of the firms that are to be privatised, some are defunct and others are not. For the defunct firms, it is sometimes efficient to sell off assets such as land separately as this is more transparent. When assets move from public hands to private hands, we get GDP growth.

Small going concerns can be sold off through an outright auction. For large going concerns - e.g. BHEL - the best outcome that is desirable is for the firm to become a dispersed shareholding company, with no promoter. This will be achieved by dribbling out shares every day on a stock exchange, e.g. selling 0.05% of the company every day, which adds up to the sale of 12.5% of the shares per year.

**Small going concerns can be sold off through an outright auction.
For large going concerns - e.g. BHEL - the best outcome that is desirable is for the firm to become a dispersed shareholding company, with no promoter.**

A key frontier in privatisation consists of selling off PSU financial firms. There may be a case for owning SBI, but not for the other PSU banks. At the same time, the path to privatisation of finance firms first requires the creation of regulatory capacity. Hence, the task for the coming years should primarily consist of building a sound financial regulatory capacity, as envisaged by FSLRC. After capable financial regulators are in place, the privatisation of PSU financial firms can commence.

Land reforms

Land, labour, capital and enterprise are the four factors of production, and in India, we have serious difficulties with all four. A tangible work program is required in the field of land, so as to

result in easy access to land for commercial applications, and easy tradability of land, all across the country.

A tangible work program is required in the field of land, so as to result in easy access to land for commercial applications, and easy tradability of land, all across the country.

A key friction in the land market is uncertainty about property rights. Improvements in land title recordkeeping, and in the administrative + IT systems through which private persons interact with them, are required. The pre-existing systems vary considerably across various locations in the country. A broad-based effort is required which involves local knowledge, local research, and local solutions.

There are many restrictions to the transferability of land. These need to be identified and removed. They derive from various paternalistic considerations in the past, but we now understand that reducing the ability of a title holder to sell land always harms the title holder. The public land records must include documentation of pending litigation. This will reduce legal risk when private persons examine the public records.

Finally, there are important concerns about the biggest owner of land in India: the government. It is hard to justify the extent to which the government owns land. A public management strategy needs to be adopted of centralising the information about public land holdings, and initiating a steady process for selling of this land. This would be analogous to the privatisation process, in shifting land from public to private hands.

There are important concerns about the biggest owner of land in India: the government.

1.7 Climate Change and Sustainability

Better management of environment and climate change

Environment has become a casualty in this march for human economic progress and its impact on water resources, bio-diversity, waste generation and the very quality of air that we breathe, have become serious concerns. The oceans that absorb over 70% of CO₂ emissions are already getting acidic and losing their capacity to absorb more. Average Sea level is already rising at 2-3 cm per decade that would make vast coastal areas uninhabitable within 20-30 years, forcing millions of climate refugees inland. But the 'climate change' alone threatens to overwhelm all those concerns with its global scale impact and the silently-building dangerous potentials.



The present model of Fossil-Fuel dependent economic growth is not sustainable. Unless very drastic and coordinated emission-reductions can happen globally within the next 12 years, human civilization is heading for extraordinary financial stresses and livelihood losses. The pinch is already begun to hurt and for young children of today who may be over 80 years old in 2100, normal organized modern life that we enjoy today, may become truly impossible.

India needs to make a massive shift to renewables, some of which is already underway. There is a great deal of stranded coal-fired generation capacity: some of this may not be worth completing given the present outlook on carbon prices and the prices of renewables-based electricity. Decentralised energy systems need to come up in campuses and communities all over India. It can combine with advances in energy storage technologies (Batteries) to provide 24x7 renewable clean power in the future.

A key carbon-sink is forests. All across the country, we need to protect habitats from wood-cutting, which will give a resurgence of forests.

Alongside a sharp decline in the share of coal-fired electricity generation and the oil-gas based transport system, the future lies in electric mobility. This requires foresighted strategic thinking spanning multiple ministries. An important priority in 2019 is bringing the requisite technological capacity into this problem.

A key carbon-sink is forests. All across the country, we need to protect habitats from wood-cutting, which will give a resurgence of forests. Beyond the natural carbon sinks, the national policy must also encourage induction of modern technology inputs for alternate clean energy options as well as technology solutions for carbon sequestration and storage.

Improving wildlife conservation

There are strong scientific moral and practical reasons in favour of the protection of the natural habitat and all forms of life. The moral imperative involves seeing beauty and the divine in every living creature. Human-induced extinction is a tragedy of the highest order. The practical reasons include the desire for knowledge of biology and ultimately ourselves, the possibilities for developing drugs and nutritional supplements, the revenues associated with ecotourism and the impounding of carbon in forests.

This requires prioritising forest land. At least 10% of India should be in "Conservation Priority Landscapes" (CPL) and 60% of India should be in "Multiple Use Landscapes" (MUL). The legal system requires modifications to enshrine this principle. Systematic effort is required in removing

human settlements so as to consolidate forest land, establishing corridors for movement of wildlife and enlarging forest land through fiscally financed land purchases coupled with private initiatives such as the Nature Conservancy.

There are potentially important interconnections between wildlife conservancies, ecotourism, and profit opportunities.

Wildlife tourism is an emerging and powerful force that needs to be harnessed in favour of genuine ecotourism, and away from destructive aspects. There are potentially important interconnections between wildlife conservancies, ecotourism, and profit opportunities. Wildlife tourism offers unique opportunities for high wage jobs for the local population, including indigenous peoples, as has been demonstrated in Africa and in other parts of the world. It is no longer a fringe aspect of the biodiversity agenda.

Many traditional government programs view a forest as a collection of trees, even if the trees are an artificial monoculture. There is a need to shift away from this 'farm forestry' notion of a forest to the true biodiversity of a natural forest.

Forests need to be off limits for infrastructure projects such as roads or railway lines. When connectivity is required, infrastructure projects should be required to take long routes which avoid going through forests. India is now rich enough to afford more expensive infrastructure projects in this respect. Similarly, forests should be off limits for renewable energy projects.

The traditional organisational culture of forest management emphasises economic exploitation, and freely veers into manipulation of habitats and structures. This needs to shift towards a prime emphasis on protection of biodiversity, with an emphasis on the issues of protection of natural habitat from economic exploitation, land purchases and relocations.

The role of the State needs to be kept to a minimum – to the areas where coercion is required, which is the monopoly of the State – and other aspects should be dominated by non-government actors.

The field of biodiversity in India has an excessive domination of the State. There is a need for a greater role for science, and civil society. This connects with the larger themes of fostering civil society in India. The excessive intrusion of the state machinery, state funding and state coercion is a harmful phenomenon. The role of the State needs to be kept to a minimum – to the areas where coercion is required, which is the monopoly of the State – and other aspects should be dominated by non-government actors.



1.8 Infrastructure

Water

When water is used, from a river or from a well, there is a classic eco-nomics problem of the "tragedy of the commons". Each person faces no cost in over-utilising the scarce resource.

Water is a silent crisis and there is a need for a 360-degree review of conditions – ground water, storage, usage, pricing, management practices. There is need to use technology to collect and analyse hydrological data. Given that agriculture uses over 80 per cent of water, India needs to redraw the cropping map to conserve water and improve yields. There is also a dire need to induct innovations from across the world.

A legal architecture needs to be developed in India, through which water use is metered and priced. This will solve the tragedy of the commons. This will require comprehensive metering of water use. There is a strong analogy between electricity and water. If use is free, there will be perpetual shortages. Once use is metered and T&D losses are tracked down and eliminated, then there is no deeper crisis in the inadequacy of either electricity or water.

In reverse, we have the problem that is also present with air quality: A person who pollutes the commons faces no consequences. A legal architecture needs to be developed in India, through which persons who pollute the water or air face adverse consequences. This will require complex inter-state litigation, where the state of UP needs the ability to sue the state of Delhi for the dramatic increase in water pollution in the Yamuna which takes place in Delhi.

Public private partnership

In the early 2000s, India embarked on an emphasis for public-private partnership in the end of infrastructure. This grand push has run into severe difficulties.

We have learned that the Indian State requires more, not less, institutional capacity in order to do PPP infrastructure as opposed to PWD infrastructure.

Complex policy work is required, in understanding and addressing the difficulties faced by PPP infrastructure projects. In recent years, there has been a reversion to public sector infrastructure projects: between 2011 and 2018, the relative proportions of private to public infrastructure projects shifted from 2:1 to 1:1. While this may appear expedient in the short run, the fact remains that the public sector on its own builds poor assets. The only viable path for India is to learn how to run PPP-based infrastructure.

We have learned that the Indian State requires more, not less, institutional capacity in order to do PPP infrastructure as opposed to PWD infrastructure. We must embark on this capacity building. As in other fields, each relevant department of the Union government or state government needs to be ensconced in a set of deep contracts with intellectual institutions, so as to bring greater capacity into the work.

Alongside this, much more effort is required in the subtleties of administrative law and dispute resolution, in order to make PPP contracts work. Conceptually, a construction project is a one-off contract between a government and a private person. In contrast, a PPP contract is a 25- or 50-year relationship between a government and a private person. Through this duration, events will inevitably induce renegotiation. It takes greater institutional capacity, and the presumption of good faith on both sides, in order for the two parties (the government and the PPP vendor) to successfully partner in this fashion.

From the viewpoint of construction of the State apparatus, it is useful to think of the elements as Planning-Contracting-Developing-Regulating. The planning role involves envisioning new assets such as a port and the associated highway and railway systems. The contracting function is like NHAI, where contracts are given out to vendors. The developing function is about building the new assets. Finally, there is the steady state of regulating a private person who owns an infrastructure monopoly, focusing on quality of service and supernormal profits.

A systematic public administration effort is required on establishing the structures for planning and contracting. The modern Indian thinking on the better working regulators and courts needs to be applied into all areas of infrastructure.

A natural balance sheet transformation that will assist the infrastructure sector involves a State sector that identifies completed projects, which have successfully generated user charges for one year, and sells these off to listed infrastructure utilities.

A natural balance sheet transformation that will assist the infrastructure sector involves a State sector that identifies completed projects, which have successfully generated user charges for one year, and sells these off to listed infrastructure utilities. The private sector will fare best at owning and operating these utilities, while tapping into the vast resources of the equity market and the bond market. The money obtained by the State sector in these transactions would then be ploughed back into initiating new projects.



This is an ideal partnership where the State sector addresses the early political and regulatory risks of a project - where the State sector has a comparative advantage - and the private sector contributes financing and takes care of the asset for long decades.

Telecom and Last mile connectivity

While India has made great strides in mobile telephony, great challenges remain.

The legal framework for telecom was established in 1885, 1933 and 1997. It is now time to take the modern Indian knowledge about process design for drafting laws (as was done for FSLRC and BLRC), the modern Indian knowledge about the working of regulators, and a contemporary understanding of the difficulties of the telecom sector, and do a full rewrite of law governing telecom. This law will also need to address the difficulties associated with State surveillance of electronic communication, as have been identified in the corresponding chapter on privacy.

While India has made great strides in mobile telephony, great challenges remain.

India is one of the weakest countries in the world in terms of opening up the electromagnetic spectrum, under the two mechanisms: spectrum as property and spectrum as common goods. Substantial new work is required in removing government squatting upon spectrum, and freeing up spectrum to better uses. This will also involve shifting spectrum allocated for radio and television transmission into spectrum for data communications.

When spectrum is allocated by auction, this generates efficient utilisation, but it creates an inappropriate extent of excessive taxation of the sector. This needs to be addressed by modifications in the strategy of taxation for the sector, and more importantly by making so much spectrum available that the price of spectrum collapses.

Conventional approaches on access for poor people - government ownership of BSNL coupled with the Universal Services Obligation (USO) - are working poorly. There are much more effective ways to use public resources to foster greater telecom inclusion, such as initiatives to fund towers, share towers and share base stations between telecom vendors. These can be synergised by the government.

India is one of the weakest countries in the world in terms of opening up the electromagnetic spectrum.

A key area for progress involves public Wi-Fi. Elsewhere in the world, coffee shops and club houses have free Wi-Fi. In India, this has been held up by difficulties with KYC, with right of way and the shortage of spectrum. Law enforcement agencies should not have access to the identity of each user of a Wi-Fi network, as this constitutes a system of mass surveillance. Local solutions are required on addressing the problem of right of way. Finally, additional electromagnetic spectrum needs to be freed up (E and V bands) through which greater high-speed Wi-Fi connectivity can be obtained.

| **A key area for progress involves public Wi-Fi.**

Electricity

India is at an important moment in the transformation of electricity. On one hand, there is the old reforms agenda, of separating out generation, transmission and distribution. This includes (a) the issues of interconnectivity regulation, where systems of transmission and distribution must be neutral to the persons who wish to transport electricity and (b) the problem of putting an end to the theft of electricity.

| **The financial condition of the electricity sector remains precarious, despite many modest attempts at addressing the problems including those of recent years.**

These issues were well understood by the 1990s, but remain a burning priority today. The financial condition of the electricity sector remains precarious, despite many modest attempts at addressing the problems including those of recent years.

Alongside these, we now face a new set of problems. The first is the credit crisis in a large stock of private projects, which are now likely to go into the bankruptcy process, where some capacity can possibly be melted down as scrap or dismantled and exported. The second is the looming problem of global warming, which requires an accelerated transition by India towards renewables.

The global collapse in the cost of capital goods for renewable energy generation, and energy storage, is a great benefit to India which is able to build capacity at low prices. Technological developments in storage have made possible a new world of distributed energy systems, which will be particularly useful in India, where a great deal of distribution infrastructure is creaky.

These developments weigh against the usefulness of the traditional workplan of coal-fired generation.



This calls for strategic thinking in developing and articulating a main plan about how this sector will evolve. Without an agreed strategy, there will be a lack of coherence in the actions of the Union government, state governments and private persons.

The global collapse in the cost of capital goods for renewable energy generation, and energy storage, is a great benefit to India which is able to build capacity at low prices.

Urbanisation

London and New York work well because they have a directly elected and accountable political leadership. The cities in India work poorly because they do not. The top priority in urban reforms lies in carving out a place for a political leadership of Pune that is entirely responsible for urban governance in Pune, without the involvement of the Government of Maharashtra.

This involves funds, functions and functionaries. The funding of city governments will be solved by sending a slice of the GST, which is a consumption tax based on a destination principle, to the city. This aligns incentives at the city level: When a city government creates greater prosperity and consumption, their tax revenues would go up.

London and New York work well because they have a directly elected and accountable political leadership. The cities in India work poorly because they do not.

One pathway towards city governments lies in making states smaller, to the point where the main feature of a small state is the governance of one city. This is a pathway through which city government can be achieved without requiring deeper changes in the system of government. This only requires action by the new Parliament.

The funding of city governments will be solved by sending a slice of the GST, which is a consumption tax based on a destination principle, to the city.

There is a lot of interest in digital technologies and potential applications in urban governance. However, the binding constraint in India lies in the 19th century concepts about clarity of city government. We should not over-estimate the gains from layering computers on top of weak institutional foundations.

1.9 Conclusion

The problems that we face in India are daunting and complex. It will take tremendous intellectual capacity to understand the problems and develop solutions. The process of public complaint and criticism must be replaced with participation and democratic negotiation. This will refine ideas and improve the work. It is easy to dismiss the slow process of debate and refinement of ideas, of high faulting discussions taking place in air-conditioned seminar rooms. But this process is of essence in actually understanding problems and solving them.

The process of public complaint and criticism must be replaced with participation and democratic negotiation.

In India, we often encounter a cult of speed ('jaldbaazi', in Hindustani). Everyone is angry about our public policy failures and everyone wants to move fast. There are some areas where the solutions are known and there is general acceptance and these can arguably call for accelerated implementation. However, the urge to generalise the call for speed could endanger social harmony and engender low quality answers. Social equity and efficiency demand development of data, intellectual capacity, debates about solutions, and carrying a large community along. We need continuous conversation, negotiations between different interest groups of society, through which reforms are modified to reduce the pain, and bargains negotiated through which the losers are compensated. The plea for strong-arm tactics is both unfair upon the citizenry, and betrays a lack of understanding of the complexity of the public policy process.

Social equity and efficiency demand development of data, intellectual capacity, debates about solutions, and carrying a large community along.

When we look back at the areas where India has fared well in the past, a key factor that was present in each area of success was a self-appointed team of persons who were passionate about the field, who stayed engaged in that field for about 20 years. We need to create capable and large teams, spread out all across the country, who will nurture each area of work. When these teams are disrupted, the institutional memory is lost, and mistakes are made by new people who have little understanding of the richness and complexity of the landscape. To do economic policy in the Ministry of Finance in 2019 requires memory of what is in the files of the Ministry of Finance in the 1990s, and relationships with key persons that go back many decades.

A repeated theme of the problems that we see is the gap between a reform as originally designed and the reform that was actually implemented. In the case of GST, NPS, bankruptcy, telecom,



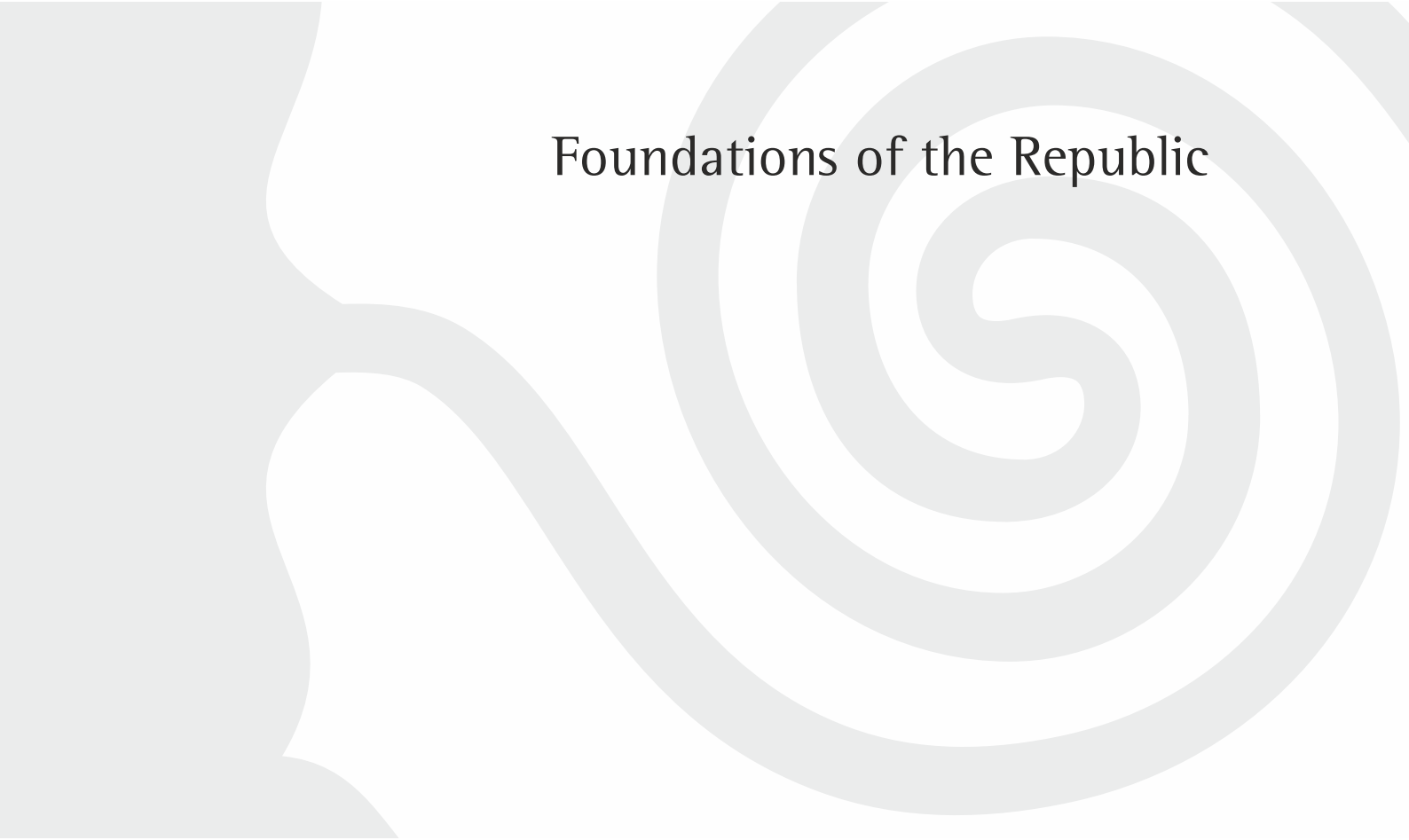
equity market, etc., the reform began with a 'flawless' design. But over the years, what has actually been implemented is far from this flawless design. These problems are coming about through the lack of institutional memory.

The administrative structures of government are not a useful organising framework for this process of policy reform as a societal activity. Most important initiatives in the field of health (water, sanitation, air quality, road safety, etc.) do not lie in the Ministry of Health. Pension reforms in India was invented in the Ministry of Welfare, and then executed by the Ministry of Finance, neither of which have administrative control of the EPFO. If a Ministry of Commerce is the only one thinking about international trade, we will fare poorly in trade reforms. We have to build coalitions for reforms, and a pool of experts, which cut across the almost arbitrary administrative boundaries of government.

It is abundantly clear that there is a need to build a constituency for change and continually build and expand coalitions of cooperation to take the process forward. Innovating India 2019 is an effort to lay the path for the first conversations for the next decades.

Section 1

Foundations of the Republic





TRANSFORMING STATE CAPACITY IN INDIA

Over the past quarter-century, India has transformed dramatically in four domains; social, economic, political and global. Unfortunately, India's core governing apparatus has not enjoyed the same kind of rejuvenation that has touched these four domains; in many ways, India is a twenty-first century economic and diplomatic entity powered by a nineteenth century state.

Various commissions such as the Second Administrative Reforms Commission of 2005 and the National Commission to Review the Working of the Constitution (NCRCW) of 2000 and various Law Commissions of India have analysed what plagues Indian governance and tried to find solutions. The frailties associated with governance in India fall into three categories: Personnel, Paperwork, and Process. India is highly undermanned in personnel terms and it is over-bureaucratized when it comes to paperwork and the process. The three branches of government – executive, legislative and judiciary – face challenges related to transparency, efficiency, productivity and accountability, to name a few.

Recommendations

a. Foster competition for reforms in bureaucracy.

The central government has initiated a modest experiment to recruit experts for key bureaucratic positions via lateral entry. Successive governments must evaluate the lessons of the new drive of the current government to usher in new talent into government from the private sector. Increasing competition within the talent pool is crucial to ensure that the most qualified individual with specialized expertise is placed in a suitable post for optimum performance and results.

b. Digitalise the judiciary system.

The Courts should adopt digital alternatives for inefficient, time-consuming procedures. India needs to digitize the most basic elements of the judicial process—such as the issuance of summons and notices, the filing and management of new cases, the submission of basic court documents, and even perfunctory hearings.

c. **Outsource the excess administrative work given to judges.**

There are certain tasks which the judiciary currently performs which could be usefully outsourced to others. India should create a new tribunal administrative services agency akin to the backend judicial support offices. This new tribunal services agency could provide backend support and handle all financial, human resource, and information technology needs of tribunals, freeing up more of the court's time for judicial work.





DECENTRALIZATION: ISSUES AND THE WAY FORWARD

The 73rd and 74th amendments of the Constitution grant constitutional status to rural and urban bodies; however, India has not fully harnessed the concept of decentralization. This is exemplified in India's badly managed cities.

Decongestion, delegation and devolution are the three aspects of decentralization. Many have their own administrative arrangement for managing cities/ towns in which the city/town administrator is given little or no autonomous power to perform functions. This has led to mismanagement of the cities due to two reasons: firstly, they face a crunch of financial resources which increases their dependency on the State and secondly, they face constraints while hiring human resources which adversely affects their functioning and service delivery.

Recommendations

a. Give autonomy to ULBs.

Urban Local Bodies (ULBs) should do the need assessment of local communities and they should receive autonomy of work to provide the needed services.

b. Formulate a comprehensive and effective HR policy.

The functions performed by Urban Local Bodies largely depend on the people who are working on it. Therefore, it is essential that work is assigned according to the skills of individuals for optimum utilization of human resource. Adequate financial resources must follow so that there are no unfunded mandates.

c. Make ULBs financially independent.

ULBs should be permitted to explore the financial market especially through instruments such as municipal bonds which are untapped in India. This way they will be able to generate financial resources for themselves as well as carry out expenditure with responsibility and accountability.

d. Enable intergovernmental resource transfer.

Leverage urban land values through Public Land Management Companies (PLMCs) and use of Land Based Fiscal Tools (LBFTs) to raise resources. Charging premium and generally charging FSI, as well as property tax, impact fees, development charge are some of the LBFTs that are in practice. These resources can then be used for financing the much-needed urban

infrastructure which will provide livelihoods and cater to liveability needs of citizens. Given that land is a state subject, it is to be expected that a high percentage of the revenues raised should be shared by the states with its cities.





ENABLING CIVIL SOCIETY FOR IMPROVED POLICIES AND GOVERNANCE

Community-embedded, diverse, small and large civil society organisations are vital contributors of dispersed and unique local data to policymaking and governance. In India, the Planning Commission engaged with Civil Society Organizations (CSOs) for planning and drafting the national budgetary priorities. These organizations are necessary as a strong fifth pillar of democracy pressing for overall accountability, transparency and performance of the state. Including civil society in governance is essential for creating a 'good' society to promote and protect the will of the citizens.

CSOs governance functions may slow down decision-making, but are critical to a healthy democracy, and to ensure that government projects, decisions and policies are timely, cost-effective and for the general benefit of all stakeholders.

Recommendations

- a. **Increase public participation and transparency in bill making/amending process.**
Indian policy drafting typically incorporates a process of public consultation. Responses are invited for many proposed bills in the Parliament, but the suggestions and critiques are visible only to the drafting body. All comments must be made public so that interested parties know what others have proposed, and thereby help facilitate greater collaboration among CSOs.
- b. **Organise the process for decision making.**
We should set up mechanism of organised 'public hearings' of committees of parliament or state legislatures on issues of public interest. These committees should be made a part of an organised process of discovery, investigation and design in public affairs. They should also be empowered to participate in subject matter decisions.
- c. **Engage with CSOs as advisors to the government.**
Central and state governments now regularly engage with consulting firms on a variety of reform areas. However, it is unclear if the quality of advice and action rendered are in the best 'public' interest. Therefore, different CSO services or issues should be classified and a pool of the 'best in class' should be set up and paid to advise the government.

d. Engage with CSOs for more authentic data.

CSOs have exceptional ears to the ground and can bring to light information that escapes traditional data collection. Commissioning CSOs to run independent surveys and gain non-quantitative feedback can provide access to vital and more authentic information. This feedback loop is critical for policy success and should be used by the government.





EDUCATION FOR CIVIC LEARNING

The need of education for civic learning and democratic engagement for building citizenship is particularly relevant for the Indian society which is characterized by a high degree of diversity in its social, ethnic, racial and religious belonging. It is observed that community determined values that influence the behaviour of people from diverse groups are often contradictory to democratic norms and practices.

Education has the potential to cultivate democratic norms of behaviour and positive citizenship by enabling youngsters to work, interact and participate in civic life with people representing diverse cultures and perspectives. At present, school and higher education for civic learning has not become the main component of the Indian education system. It is not totally absent, but is largely confined to service-learning programmes, and courses on human rights and gender which are being selectively implemented.

Recommendations

a. Reform curriculum.

The curriculum should be reformed to include themes that deal with diversity, inequalities, poverty, discrimination associated with caste, ethnicity, gender, race and colour. It must use examples to incorporate the experiences and perspectives of wide range of groups from a variety of cultures and groups within a pluralistic society. This knowledge should be imparted through special courses to all students irrespective of their discipline.

b. Develop individual skills and capabilities to deal with diversity and disparity.

This will require new pedagogical methods and teaching strategies that would help students from diverse ethnic and cultural groups to attain skills and attitudes needed to function effectively within a democratic society. These methods include inter-group dialogue, cultivating mixed-peer groups and activities such as ethnic clubs, cultural affairs and social events.

c. Motivate students for action and democratic engagement.

The educational system must encourage students to take up community engagement and collective action for public good. This includes assignments and projects that include study and engagement with deprived groups and minorities, collective action for addressing common problems and achieving greater public good and practising working in a pluralistic society.

d. Study and adopt practices from civic education models in other countries.

The Indian education system can adopt best practices from civic education models from other countries/regions such as the USA, Scotland and Greece. The American civic education system rests on four elements namely knowledge, values, skills and actions; the Scottish model emphasizes on infusing the curriculum with rights-based approach and ethos, whereas the Greek model adopts cross-curricular themes and optional subjects within disciplines to impart citizenship education. We can study these models and adopt practices and approaches customized to our needs.





IMPROVING DATABASE CREATION AND MANAGEMENT IN INDIA

Availability of credible regular and multidimensional data is sine qua non for effective policy. India has an elaborate system of administrative data generation supplemented by various agencies such as the National Statistics Commission, State DSE, NSSO, CSO in addition to usual routine administrative sources. However, these systematic arrangements need to be revitalised with new technologies and sense of business intelligence as today, almost every field in India faces issues of data availability, quality, and access. Whatever is available is sparse, irregular, of poor quality, or inaccessible to the public. This severely impacts quality of both public and private sector research, implementation of government programmes, and overall public awareness of contemporary challenges.

These are several physical/technical/natural data inventories that need to be created, nurtured, detailed and updated. Topics such as female labour force participation, water resources, child welfare, small NGOs, grassroots innovations, unorganised workforce in manufacturing industry, rural health and education are in dire need of better methods of data collection and validation, and greater availability of information in the public domain. Availability of data alone can generate timely and informed policy alternatives responses with minimum regulation and processing lag.

Recommendations

- a. **Modify the overarching institution to facilitate collection, validation and dissemination of data.**

The government should restructure the central-level institution with branches at state-level for data management. These State government departments should employ methods of networking and improving coverage (subject or item as well as geographic coverage) frequency, accuracy and cross validation. It will enable them to capture online and updated information resulting in big data approach. It should also serve as a one-stop depository of all government-collected data and facilitate third-party assessment for the validity of data.

- b. **Create network of universities, NGOs and research centres.**

The overarching institution must also create a virtual data network of universities, think tanks, research centres and NGOs across the country. This will allow access to and dissemination of robust primary and secondary data and spur innovation, developmental work and research at national level.

c. Build public-private partnerships.

The government should encourage various ministries to tie up with NGOs, universities and institutes, and research centres to obtain continuous, authentic and ground-level data. The government must also collaborate with technology centres and the corporate world to obtain and disseminate latest technological, industrial, financial and economic information.

d. Measure granular data and update it continuously.

India needs to set up systems of reliable, high-frequency data that will show the extent of the problems at a granular level. The finer the level of detail of the data, the more precise and accurate the solutions can be. Upon collection and storage, the data should be sliced by region, sector, gender, type of job etc. for public consumption. It should also be updated regularly with the help of other public/private institutions.





NITI AAYOG 2.0: TOWARDS INDIA'S NEW FISCAL FEDERALISM

Federalism has determined and sustained India's economic growth post liberalisation, as well consolidated India's democracy and diversity. Our approach to federalism is idiosyncratic. Distinguished jurist Nariman calls it "quasi federalism". We think it is better described as "cooperative federalism", where governance has a multi-level form with evolving relations between different levels of government.

We want to argue that fiscal federalism has been one of the most important pillars for the success of our enduring democracy. Fiscal federalism has provided the oxygen for the unique cooperative federal model of ours. This mainly comprises allocation of rights and duties related to taxation and expenditure responsibilities and system of transfers between the different jurisdictions/levels of government such as Centre, State and local governments.

However, regional growth imbalance still exists in India's federalism and fiscal federalism aims to tackle the two important issues of vertical and horizontal imbalances. Vertical imbalance which occurs due to asymmetry in powers of taxation and expenditure vested in different levels of government such as Centre, State and local elected governments, while horizontal imbalance refers to States' differential capacity to tax. In our country we also need to address the third imbalance viz, developmental imbalance which occurs due to differential growth rates.

These three imbalances together lead to regional disparities and internal migration, resulting in socio-economic and political tensions and can be a threat to democracy. To meet this challenge, we need a new approach to fiscal federalism (towards the New Federalism) which is built on four pillars comprising of the Finance Commission and three new pillars viz, Fiscally empowered Third Tier Governments, flawless GST and NITI Aayog 2.0.

Recommendations

a. Strengthen NITI Aayog 2.0 with resources.

Capital or Revenue grants and either conditional or unconditional transfers should be given by NITI Aayog 2.0 to states. It will help mitigate growth imbalances by promoting accelerated growth of lagging States and sub-regions. It would enable lagging States to build infrastructural capacity in the form of roads, ports, railways and digital connectivity as well as power supply, access to credit and improved governance. NITI Aayog 2.0 will need

the resources amounting to 2-2.5 % GDP to provide grants to States for mitigating growth imbalance.

b. Play an active role in policy making.

NITI Aayog 2.0 should disperse knowledge-based advice and provide national and long-term plans for policies. For this, it should actively participate in decision making of the government. NITI Aayog 2.0 is to be a different entity working on structural issues such as removal of regional imbalance; it will not be involved with the States' annual expenditure programmes but will be involved in determining the investment of resources for transforming the states and ultimately the country.

c. Adopt a conditional transfer policy.

Conditional transfers or grants essentially imply transfers from relatively rich States to other lagging States. In order to maintain political support for such transfers, there is a need to demonstrate that these are purposeful, effective and bring positive gains to all the States in the long run. The benefits of their sacrifice will need to be effective and equitable.

d. Start an Independent Evaluation Office.

An Independent Evaluation Office of the NITI Aayog will be extremely important as an instrument to improve development outcomes and accountability of transfer of resources and provision of grants by NITI Aayog to states.

e. Democratised decentralisation through fiscal empowerment of tier three of government.

In addition to strengthening NITI Aayog 2.0, we also need to empower urban local bodies (ULBs) and Panchayat Raj Institutions (PRIs). For progress, we need effective democratic decentralisation through which we strengthen the third tier of governance fiscally. To achieve this, the following actions are needed: a) Ensuring adequate empowerment of State Finance Commissions. This can be achieved by amending Article 266 of the Constitution to include a consolidated fund for Municipalities and Panchayats, and Articles 243H and 243X to ensure that revenue allocated by the Central and State Finance Commissions to Municipalities and Panchayats do not form part of the consolidated fund of the State and instead the funds flow directly to the consolidated fund thus created. Also, the 73rd and 74th amendments need to be vigorously implemented and b) a Constitutional Amendment should be made to enable both States and the Centre to share an equal percentage of their Goods & Services Tax (GST), i.e., of State GST (SGST) and Centre GST (CGST) with the third tier of government. This will provide local government bodies with a buoyant fiscal base.

Section 2

Macroeconomics and Finance





ISSUES IN INDIAN MACRO POLICY

The present Indian Ministry of Finance was not designed to suit the requirements of macro policy in a \$2 trillion open economy. In 2015, the legal foundations of RBI were modified to establish a CPI inflation target. There are weaknesses in the design of the associated monetary policy committee. Important reforms of tax policy have taken place, but at the same time this work program contains basic flaws. Automatic stabilisers have come about on taxation and expenditure in limited ways. Currently, there is a need for fiscal, monetary and financial institution building.

The purpose of a macroeconomic policy is to create an environment of stability from the risks of various fiscal, currency, and financial crises. A stable macroeconomic arrangement involves giving people ample of mechanisms for risk transfer and for this, strong institutions are required because if institutions are weak, probability of crisis increases and quality of crisis management falls which causes the maximum harm to the economy.

Recommendations

a. Reorganise the Ministry of Finance.

Reorganization of Ministry of Finance is required, adapting the recommendations made in the Kelkar Committee report of 2004 in the current context. It is time to raise the state capacity in financial regulation – the roadmap for reform in RBI and SEBI has been constructed by the FSLRC in 2015.

b. Reform taxation and tax administration.

GST should have a comprehensive base and a single rate. A sound tax policy must be associated with good state capacity in tax administration. The tax administration should be characterised by low compliance costs for private persons, predictability and fair play.

c. Manage inflation, not exchange rates.

RBI policy framework should focus on maintaining CPI inflation at 4% and let the exchange rates to be determined by the market forces.

d. Allow foreign and private banks.

To encourage the competition and yield better results, entry barriers should be removed for foreign and private banks.

IMPROVING GDP MEASUREMENT

GDP measurement along with sectoral and state wise GDP estimates form the bedrock of the economic planning process. While the changes brought in the latest revision in GDP series (especially use of MCA21 datasets) has created considerable debate, there are many longstanding methodological issues that have not been addressed in the latest revision. The paper divides its recommendations in two parts: Part I deals with the challenges of the latest revision and Part II deals with recommendations to resolve longstanding issues.

Two important macroeconomic indicators of the health of the economy are private sector investment and exports, growth of which from 2012 to 2017 has been stagnant. On the contrary, according to the Central Statistics Office's revised way or new series of calculating GDP, India is the fastest growing economy in the world. These discrepancies have raised questions and doubts about the accuracy and veracity of the GDP estimates and dented their credibility.

Unclear indicators of economic activity leading to misclassification of companies, blowing up estimates of available companies to account for the missing ones, use of single deflator to calculate real value added distorting real magnitude, using a Wholesale Price Index(WPI) assigning less weight to service sector as a deflator, and State-level GDP estimates away from ground realities are some of the key problems that may have led to miscalculation of the State GDPs, inaccurate sectoral estimates, as well as overall overestimated growth rates.

It is necessary to recognise these multidimensional problems in the system of GDP measurement and adopt comprehensive measures to produce a credible GDP series for the economy.

Recommendations

a. Establish a Committee for Statistical Audit.

An independent committee of national and international experts must be constituted with the mandate and authority to diagnose the problems with the new series and recommend ways to resolve them. The findings of the committee must be made publicly available for the sake of accountability and transparency.

b. Resolve issues related to Ministry of Corporate Affairs (MCA21) database.

Greater clarity and transparency need to be provided about the MCA21 database and about the methodology used to compute the manufacturing sector estimates. The database



should be made publicly available. Documents should be released explaining the precise method and parameters used for blowing up the sample estimates for the universe of companies. Instead of scaling up the data on the available companies, alternative methods for blowing up should be explored. The classification of companies in the MCA21 database needs to be reviewed to ensure that they are categorised appropriately.

c. Revise methods of deflation.

There are two sets of recommendations to deal with deflator issues. First, currently there are no good service sector deflators and CSO uses a combination of the WPI and the CPI for deflating nominal service sector estimates. Using WPI to deflate service sector estimates is problematic because WPI does not capture the service sector. Instead the relevant components of the CPI can be used to deflate the service sector estimates, because the CPI has extensive information on price movements in various subsectors of services. Down the road, an appropriate service sector price index needs to be developed. Efforts also must be taken to develop a Producer Price Index (PPI) which would be an ideal deflator for nominal GDP estimates. The second recommendation is regarding the use of single deflator to calculate growth which overestimates GDP growth. Therefore, CSO should adopt the method of double deflation through research (either internally or commission external research).

d. Improve data collection and management.

The frequency of surveys such as National Sample Survey Organization (NSSO), Employment & Unemployment, Unincorporated Non-Agricultural Enterprises, Consumption Expenditure etc needs to be increased and the time lag between successive rounds needs to be brought down. The revision of base year of the GDP series must always be aligned with that of all the price series. Instead of Economic Census, other surveys which are at present infrequently conducted, such as the Directory of Establishments, Own Account Enterprises and updating the Business Registers need to be conducted more frequently and regularly to facilitate the collection of systematic data on different entities operating in the unorganised sector. Code of Practice (CoP) subjects the official statistics to standards of data quality and periodic reviews of methodology and mandates a consistent policy on updating data sources and methods. All statistical agencies, both at national and state levels, must be made to adhere to this Code of Practice.

e. Increase engagement with stakeholders.

A consistent communication policy to regularly engage with data users is of crucial importance for re-establishing the credibility of the CSO. More efforts should be made to keep the data users informed about the changes in data sources and estimation methods in a timely manner. Another aspect of the engagement is to provide research support to academic experts to encourage research on measurement issues in national accounts statistics.

f. Explore new data alternatives.

With rapid changes in the nature and volume of economic activities, traditional sources of collecting data will eventually fall short of the requirement. New systems like the Goods & Services Identification Network (GSTIN) and digital transaction records that generate detailed product or service level information on three key items, value, volume and prices, need to be explored to produce reliable price indices and consumer expenditure estimates.





BANKING REFORMS

The recent problems of rise of non-performing assets, slowdown of credit growth and weakness in banking regulation in India are intrinsically linked to the issue of government ownership of public sector banks. Public sector banks are not allowed to fail, and they are repeatedly re-capitalised by the government. This has given the sector an environment of lax regulation in the face of poor performance, poor consumer satisfaction and regulations that reduce competition both for the banking sector and within the banking sector, underlining the need for privatisation.

Internally, both public and private sector banks are in need of an improved governance framework leading to transparency, accountability and effective monitoring of risk management. A resolution framework, as proposed by the Financial Resolution and Deposit Insurance (FRDI) bill, is also critical to tackle bank failures.

Recommendations

a. Tackle non-performing assets on priority.

Lenders should be required to put in place resolution plans within 180 days after a default. If resolution plans are not implemented, lenders are required to put in single or joint insolvency applications under the Insolvency and Bankruptcy Code 2016. Public sector banks have come up with a new plan referred as 'Sashakt' which aims at setting up an asset management company which will buy stressed assets from the banking sector.

b. Privatising public sector banks.

Privatisation of public sector banks will push them to work for performance, as when private sector banks raise capital, they must convince investors of their profitability which pushes them towards result-oriented tasks.

c. Foster competition in banking sector.

In general, there has been low competition in the financial services sector due to domination of banks and the role of the banking regulator in protecting banks. Infusing and improving competition in the sector can lead to growth in size of money market mutual funds, bond markets and fintech.

d. Improve banking regulation and governance.

Improvements should be made in transparency, accountability and governance framework of the RBI and its Board. All draft subordinate legislation should be published with statement of objectives and cost-benefit analysis, inviting comments from public. Within banks, internal audit and control mechanisms with effective monitoring of risk management should be instituted, in accordance with the policies approved by the board. Regular feedback and assurance mechanisms should be put in place. The Board should be fully responsible for governance and be accountable to shareholders for performance.

e. Institute a specialized resolution regime for financial reforms.

The objective of micro-prudential regulation is to reduce the probability of failure. A Financial Resolution and Deposit Insurance (FRDI) bill was proposed. This has been withdrawn in the current session of Parliament due to political opposition to some clauses in the bill. Concerns need to be addressed and the bill brought back soon.





BANKRUPTCY REFORMS

The enactment of the Insolvency and Bankruptcy Code (IBC) in 2016 was a step towards institutionalising a governing legal framework for default borrowers and making debt contracts work. It is a single law for all borrowers other than financial firms for insolvency resolution. The power to implement the IBC is given to the Insolvency and Bankruptcy Board of India (IBBI) as regulator, Insolvency Professionals (IPs), Insolvency Professional Agencies (IPAs) to operationalise resolution processes and the National Companies Law Tribunal (NCLT) as the adjudicating authority over cases of firm insolvency resolution.

While the law was passed with alacrity and implementation done with full force, there are several factors such as delays, pro-restructuring, consistently unfavourable decisions by the NCLT, and mismatch between the rate of emergence of the problems of distressed enterprises and the ability of the key IBC institutions to deal with it - that have yielded less than satisfactory results.

The law envisaged that the Corporate Insolvency Resolution Process (IRP) would finish in 180 days or within a maximum of 270 days, but over 90% have not been completed within this time frame. It is necessary to analyse why these four disruptions are increasingly appearing in the new insolvency system, and how to implement countermeasures to correct these.

Recommendations

- a. **Diagnose the difficulties of Insolvency and Bankruptcy Code (IBC) using quantitative research and evidence-based approach.**

Policy actions for reforms need to take place in an evidence-based and research-based framework. Through 2019 and 2020, researchers need to be brought into the reform process through project management by establishing and studying datasets, grading the performance of the ecosystem as a measure of the impact of the law, identifying sources of failure, and drafting modifications to the law. An independent agency should generate a monthly report card representing the average delay and recovery rate of cases that completed the IRP in the month, in the class of cases where the default took place no more than two years ago.

- b. **Enhancing transparency at all stages of insolvency procedure.**

The Bankruptcy Legislative Reforms Committee (BLRC) Volume 1 (2015) has a sound framework governing disclosure of default which needs to be implemented. A widely

accessible case management software system must be urgently established where once a case is filed at NCLT, it should get a unique and publicly accessible web page. All events and legal documents should appear on this web page, with dates attached. All documents must be text searchable (i.e. not scanned images) with limited barriers against access to this data. IBBI must release all the data about insolvency cases and structured orders should be published by NCLT.

c. Fill the gaps in IBC institutional apparatus.

A competitive industry of information utilities, on the lines of NSDL and CDSL, had been envisaged by BLRC instead of Public Credit Registry (“PCR”) built by RBI. The framework with multiple competing private organisations, as designed by BLRC, is superior to a public sector monopoly. Therefore, an industry of competitive self-regulating organisations such as NSE and BSE should be established. There is a need to establish a long-term work plan for bankruptcy reform in 2019 that would play out through end-2021 and then deliver results over 2022–2024 by developing teams at MCA, IBBI and MoF.

d. Expand capacity and generate economic awareness of NCLT.

Given a rapidly escalating workload and facing gaps in adequate resources, the NCLT should build administrative capacity and capacity building of the members. The project management, and a capable leadership team, will be required for building the Indian Courts and Tribunals Service (ICTS) which is an operational agency working Financial Sector Appellate Tribunal (FSAT) at the Ministry of Finance. In addition, effort is required to increase the knowledge and awareness of the NCLT members on the economic objectives of the law to deliver decisions in a consistent manner. In 2019 and 2020, 15% of the work hours of NCLT judges (i.e. 300 hours/year for each person) ought to be devoted to knowledge building, in order to deliver a stronger NCLT going forward.

e. Amend RBI regulations to encourage banks’ participation.

RBI rules must be amended to align themselves to force banks to use valuations which are at the recovery rates as seen in the data produced by IBC for sound banking regulations. Also, use of IBC needs to be shifted away from solving bank NPAs to being the centre-piece for the development of a robust credit market. Inaccuracy and uncertainty about the true recovery rates slows the development of credit market and is one of the factors behind the inefficacy of SARFAESI Act, 2002. An expert committee is required which will design amendments to SARFAESI to bring it in line with IBC and with modern economic thinking.



TOWARDS FLAWLESS GST

The implementation of the Goods and Service Tax in July 2017 is a shining example of cooperative fiscal federalism in India, but it is yet to settle down. Complications between centre and states resulted in compromises such as excluding a number of items from GST and revising operational protocols with respect to tax structure and administration. Within the first year of implementation, significant variations have cropped up between the budget and the actuals, with only collections from compensation cess proceeding on track.

The monthly return format has not yet been finalized. The invoice matching system has yet to be implemented. The GoI has significantly amended the CGST/IGST/Compensation Acts in August 2018 and its impact is yet to be felt. The process of the simplification of the rate structure is still ongoing and much needs to be done to meet to originally envisaged goals.

Recommendations

- a. **Implement Integrated Goods & Services Tax (IGST) as a substitute to State Goods & Services Tax (SGST) for interstate supplies.**

Implementing IGST instead of SGST for interstate supplies would nullify arbitrage incentives. There would be no need to adjust part of the IGST collection to the Central Government account. This will lead to a simpler, more efficient IGST which will have a lower compliance burden and provide a better estimate of GST revenue collection.

- b. **Charge zero tax rate for exports.**

Levying IGST on exports and providing for subsequent refunds thereafter is in stark contrast to prevailing international practice where exports are charged zero rate of tax i.e., they are not liable to pay any tax. The GST Council should revert to the pre-GST practice of truly zero-rating exports.

- c. **Discontinue the e way bill.**

The e way bill should be discontinued and the compliance burden on trade and industry reduced after taking three steps. First, the Goods Receipt/Lorry Receipt issued under the Carriage of Goods Act is recognised as an official document in the GST Act. Second, the invoice matching mechanism in the GSTN is activated. Third, the exemptions given to the road transport sector in the GST framework are withdrawn. This sector should be treated on

par with the rail, air and sea freight sectors and the reverse charge mechanism provided exclusively to the road sector should be withdrawn.

d. Publish the operational meetings of GST Council.

The GST Council must follow previously agreed procedures for calling of meetings, fixation of agenda, recording of minutes and publishing them. To maintain transparency its proceedings should be made public and the press and visitors should be allowed to attend its meetings.

e. Expand the tax base and optimally utilise collected revenue.

Petroleum products, transactions in immovable property, alcohol for human consumption and consumption or sale of electricity should be included in the GST tax base. Government must allocate 2% of GST revenue to local governments, with the central government taking a reduced share on the base of an improved GST with a smaller band of rates and limited exemptions.





TOWARDS FDI 2.0

The traditional view of Foreign Direct Investment (FDI 1.0) focuses on investment in assets and not on its equity structure including public shareholding. This helps many Multinational Corporations (MNCs) earn supernormal profits in the country they invest in. These profits are shared with the parent company which boosts the economy of the parent nation and the nation in which they invest does not benefit and remains underdeveloped. Countries like China followed a protective method of FDI in which they created their own internet companies to stop MNCs from coming in. It is infeasible for India to follow such a protective policy and miss the opportunity to generate billions of dollars of domestic market capitalization.

In order to achieve higher growth and yield maximum returns from MNCs, India should undertake a new FDI policy i.e. FDI 2.0 and distribute the wealth generated by MNCs with India. To distribute the profits of MNCs, listing should be used to harmonize interests of all stakeholders including Indian consumers, the government and investors by pursuing an equitable logic, rather than accepting the current situation of 'winning MNCs taking it all'. It would be a potent extension of Make in India under FDI 2.0 which can be favourable for growth of Indian economy. It is estimated that listing of MNCs India subsidiaries alone could add 33% to NSE Market Cap.

Recommendations

a. List MNCs in India.

Global MNCs' market value must be equitably distributed across nations in such a way that value derived out of a particular nation must be available to investing citizens of that nation. This initiative is more relevant today due to financialization of Indian society and to make capital markets vibrant and valuations more reasonable.

b. Use tax incentivisation for listing of non-internet MNCs.

MNCs where the foreign parent holds more than 51% equity and are listed in India should be eligible to domestic company tax rate whereas MNCs where the foreign parent holds more than 51% equity but are not listed in India should be subjected to suitably higher differential tax rate.

c. Allow Internet MNCs to trade in India.

For listing internet MNCs, US\$ denominated Parent MNC Shares should be 'Admitted for

Trading' on Indian bourses. Foreign stocks investment should receive tax treatment at par with domestic stocks. Government of India needs to persuade parent MNCs to allow trading of their shares in India within 3 years and make their continued unrestricted India market access conditional to it. MNCs would readily agree to the proposal as it does not involve issue of any new shares for listing in India. Also, MNCs need not comply with listing norms in India. Necessary changes should be made in existing regulations across RBI, SEBI and MCA. The smallest S&P 500 stock has at least \$4 Billion market cap and NSE/BSE could admit S&P 500 Stocks. For example, Mexican Stock Exchange manages the International Trading System through an electronic conduit to trade shares listed in other stock exchanges. India could replicate such systems.

d. Update existing foreign investment instruments.

Address all the issues in using Liberalized Remittance Scheme (LRS) for buying foreign stocks. The LRS operation should be smooth and should work like Amazon 1-Click functionality.

e. Generate awareness among Indian investors.

To eliminate 'home country' bias and correct the perception that Indian stock returns have always been higher than global stock returns, awareness should be created among Indian investors. A qualitative and strategic use of forex investment with potential for appreciation should be considered by the investors.



Section 3

National Security





INDIA'S NATIONAL SECURITY: CHALLENGES AND OPPORTUNITIES

In a changing world order, the relevant security issues for India are the challenge of ISIS; the rise of China and its Pak nexus; Indian economic interdependence and competition in the global arena; the impact of power shift from the Atlantic to the Pacific; the economic and social meltdown of the idea of EU, Brexit and refocusing of regional blocs; the place of NAM and similar approaches.

India's role and importance in any new dispensation is important because of its peninsular geo- location and as a middle riparian state for water resources, its proven track record as a confluence of civilisations, free market, demographics and largely benign credentials. Internally, India's security concerns lie in growing socio-economic inequality, inter-state water cooperation, challenges of social media and cybercrime, proliferation of extremist propaganda, and poor conditions of our armed forces, police and judiciary.

Recommendations

a. Focus on internal geopolitics for national security.

All states except Telangana, Madhya Pradesh, Jharkhand, Haryana, Delhi and Chhattisgarh are frontline states with land or sea border. It is essential to recognise that all of them have a critical stake in addressing trade issues, blue economy growth, and the challenges posed to national security along land and maritime boundaries. Specifically, the strategic significance of Andaman & Nicobar and Lakshadweep Islands deserves serious attention from Indian authorities to guard against China's perceived interest to access Indo-Pacific region and maritime dominance.

b. Tackle extremism and fundamentalism with priority.

Swift executive and judicial actions and holistic reforms in recruitment, service condition positing, promotions, transfer, reward and penalization in police and judiciary must be prioritised to enforce law and tackle extremism and fundamentalism. Other actions such as pushing for inclusive social reforms, and including border communities (north-eastern, Tibetan, north-western) into mainstream society through soft options such as culture, media and entertainment are also necessary.

c. Reform and reformulate defence policies.

India needs to devise a military strategy and a resource-allocation mechanism that properly supports its foreign policy goals and creates a defence organisation that is conducive to producing the types of joint fighting forces to support the strategy. Our military's acquisition programme also needs to be reformed.

d. Engage in research and integrated execution.

It is important to have a Policy Analysis Wing to analyse why and which policies fail or succeed. A culture of integration and cooperation needs to be nurtured with participation of Government Institutions for sound decision making on issues of common dangers such as extremism, climate change, energy and water shortages and ensuring peaceful use of outer space and cyberspace.

e. Develop technological capacity to tackle security challenges.

At least 3-4 cyber security clusters need to be built with co-operation between the government, industry and academia. Universities and institutions need to introduce courses in defensive and offensive cyber capabilities to develop efficient human resources in the field. There is a need for public-private partnerships to harness the potential of cyber and space technology, as well as incentivising National R&D and Innovation effort in defence technology.

f. Prioritise 'blue water economy'.

Given the emerging salience of the Blue Water Economy, a Maritime Commission or Maritime Affairs, under the charge of Cabinet Minister is essential. This Ministry would act as the focal point of India's maritime policies and interests and can have a direct linkage or authorities over different ministries, departments or organisations involved presently in ocean related matters. The efforts will not only provide enhanced understanding of complex underwater environment in IOR for mitigating medium related distortions but will also significantly contribute towards improved stealth assessment for Indian warships.





DEFENCE: GOOD BEGINNING BUT MUCH WORK REMAINS

The issue of defence procurements has attracted large attention in public discussion. The new Draft Defence Production Policy 2018 released by GoI aims to reduce current dependence on imports and to achieve self-reliance in development and manufacturing of several weapon systems/platforms by 2025. The armed forces have been struggling to keep their arsenal up-to-date for long, due to neglect and unstructured acquisition.

Thanks to a combination of emergency procurement and revamped management system, the Indian Army's ammunition stock, inventory of spares and maintenance of existing critical equipment is up-to-date for the first time since the Kargil War of 1999. However, given the already high levels of defence costs and expenditure, a dysfunctional procurement process, and a dire need for financial and technological boosts, much remains to be done to ensure a robust defence procurement and manufacturing industry in the country.

Recommendations

a. Right size the forces.

Taking actions like implementation of One Rank One Pension for the armed forces can add to growing salary and pension bills to the government and hence requires adjusting the size and composition of the forces in such a way that the expenditure is proportionate to the political returns for the government.

b. Improve efficiency of fund utilisation.

The MoD budget is already 33 per cent of the capital expenditure of the government and 11.58 per cent of the overall expenditure, making it impractical to expect more funds. The currently available pool must therefore be redistributed as per areas of priority and urgency and utilised in a more efficient and effective manner.

c. Build capabilities of domestic sector and then expand FDI in defence.

The draft Policy proposes 74 per cent Foreign Direct Investment (FDI) via the automatic route in niche technology areas. In order to prevent bigger, outside players from buying out smaller Indian entities, the final policy guidelines must make sure to impose limits to foreign investment in Indian companies as part of the offset obligations.



FOREIGN POLICY OUTLOOK FOR INDIA

India has so far maintained a delicate balance of keeping good, peaceful and mutually beneficial relations with major nations. In the current global scenario, India faces the challenges of trade protectionism, anti-immigration policies, religious fundamentalism and terrorism, an unstable and distrustful neighbourhood and China's aggressive economic and military policies. India needs to rework on shaping its foreign policy, enabling it to take in its stride complex and rapidly evolving global circumstances. The focus areas of foreign policy are/should be South Asian neighbourhood, India's relations with the USA, Russia, and Japan, India's policy towards South East Asia and Africa, and energy security.

Recommendations

a. Establish a dialogue with other nations.

India's strategy in the Indo-Pacific region must be a combination of modernisation of armed forces, efficient intelligence, eternal vigilance and intense engagement and dialogue with neighbours as well as major powers such as the US, Russia and Japan. Particularly, a high level of diplomacy and dialogue should be maintained with China to open Chinese markets for Indian goods and services.

b. Expand foreign policy to the society.

There is a growing thought in government circles as well as common public and media in India that foreign policy must no longer be the preserve of only the elite and restricted to passport and visa matters but should be disseminated among the masses. This thought needs to be strengthened and brought into action. Demystifying foreign policy will only enhance India's image abroad and add to the country's external strengths.

c. Maintain friendly relations with oil exporting countries.

Although India is intensively engaged in promoting renewable sources of energy it is still largely dependent on oil for meeting its energy requirements. In the interest of energy security, India must maintain actively cooperative and friendly relations with oil supplying nations such as Saudi Arabia, Iraq, UAE, Iran, Kuwait, Nigeria, Angola and others.

d. Pursue the 'Act East' policy more actively.

India must continue to deepen its Act East policy based upon three elements- Commerce, Connectivity and Culture to create greater goodwill and assurance among the countries of



East and Southeast Asia with respect to India, especially in the light of China's aggressive economic and military policies in both regions.

e. Focus on the South Asian neighbourhood.

India needs to focus on its immediate neighbours and Pakistan to secure its relations in the neighbourhood. The government should prioritise actions such as accelerating the Pancheshwar hydel project with Nepal, supporting Bhutan through economic growth and people-to-people interaction and greater collaboration with Afghanistan through cultural exchange, trade cooperation and stronger connect through the Chabahar port of Iran. At the same time, a pragmatic approach should be taken towards dealing with Pakistan. These actions will bolster India's position and equip it to deal with Chinese incursions in the neighbourhood.



CIVIL LIBERTY IN THE AGE OF DIGITALISATION-PRIVACY

The age of digitalisation has created a public policy conundrum over balancing the benefits of big data with threats to the right to privacy due to growth in technology and big data. In an environment of pervasive surveillance and intrusive technology, available both to the State and private sector, there is a need for improved legislative protection of privacy rights.

India has traditionally had weak regulation of surveillance and oversight, with major problems such as lack of statutory basis for various law enforcement and intelligence agencies (LEAs), lack of judicial oversight, illegal way of obtaining evidences and absence of a data protection law to name a few. Currently prevailing system is inadequate and ill-equipped to deal with the privacy incursion caused by rapidly changing technologies and business models of technology giants such as Google, Facebook, Amazon.

Therefore, provisions incorporated in the future legal regime should aim to (i) better balance privacy and security concerns, (ii) reduce the threat of surveillance, and (iii) stave off a potential adverse judicial ruling.

Recommendations

a. Undertake comprehensive surveillance reforms.

The government must undertake comprehensive surveillance reforms – either through the data protection law (by incorporating a new Chapter on surveillance in Justice Srikrishna’s Draft Personal Data Protection Bill, 2018 [“Draft Bill”]) or through separate legislation – before the Court gives a final decision. Rightful provisions for individuals and intermediaries should be made to challenge and seek appropriate redress against unauthorised surveillance activities. Additional requirements beyond existing framework of surveillance for telecom licenses should be removed.

b. Amend laws for incorporating judicial oversight and accountability mechanisms.

Parliament should amend the law to provide for judicial oversight in cases where civil liberties are being impacted in the name of national security or public emergency. With judicial oversight, Law Enforcing and amending Agencies (LEAs) must become transparent in their functioning. Central and State Governments and the LEAs should provide an overall account of their functioning (e.g. number of requests, type of and average duration of



surveillance carried out, reasons for the same etc.) and their budgetary outlays for setting up accountability mechanisms. The government should pass the Intelligence Services (Powers and Regulation) Bill, 2011 to provide a statutory basis for all LEAs and to regulate their functioning.

c. Incorporate data protection and privacy principles into current laws.

Three principles should be incorporated in the current law for data protection; necessity, collection limitation and purpose limitation. Necessity would determine whether there is an alternative way of acquiring the information. Collection Limitation, would limit amount of data intercepted, monitored, or decrypted, or such calls are tapped, as are necessary/required for specific purpose of the competent authority. Under purpose Limitation, data that is collected, monitored, intercepted, decrypted by one of the notified agencies/Central/State Government should not be disclosed to any other body without a judicial warrant.

d. Establish Data Protection Authority (DPA) to enact data protection law.

The Data Protection Authority (DPA) should ensure transparency in the discharge of its functions and engage in public consultation before notifying important regulations. It should include part-time expert members, and the process of the selection of its members should be more detailed. Most importantly, the regulatory and adjudicatory function should not both be housed within the DPA, and the appointment of the Adjudicating Officers should not be completely at the behest of the Central Government.

e. Clarify certain terms and their definitions.

Definition of sensitive personal data should be amended to provide for contextual classification, to allow for flexibility such as communication surveillance data. Definition of harm should include harms that may arise in the future/ due to technological innovations. Standards for non-consensual processing of personal and sensitive data should be clearly defined. The terms “service” or “benefit” have to be defined, term “strictly necessary” has to be given some meaning while permitting non-consensual processing for sensitive personal data.



Section 4

Human Capital





ESSENTIAL INNOVATIONS IN INDIAN HEALTH SYSTEMS

India has made impressive progress in combating infant and maternal mortality, eradicating polio, and establishing itself globally as a credible and cost-effective manufacturer of medicines. However, many significant challenges such as malnourishment, infectious diseases and wide access to primary healthcare remain. India spends 4% of its GDP on health care and has recently started the Rashtriya Swasthya Bima Yojana and National Health Protection Mission to enable low-income consumers access secondary and tertiary health care facilities. However, the private sector, despite being heavily fragmented, still dominates India's healthcare scenario.

Financing and provisioning are key areas for reform: funds in the public healthcare are not utilised optimally and access to healthcare across the country is poor due to insufficient facility readiness, low provider skill and clinical management capacity

Recommendations

- a. **Tackle delays in financing and expenditure in public health sector.**
This can be done through proactive use of the Ways and Means Advances facility¹ made available to the state governments by the Reserve Bank of India. The number of line items in state health budgets should be reduced, and the system must gradually move to a block grant focusing on outputs and outcomes rather than detailed supply side controls.
- b. **Increase total quantum of pooled funds to lower out-of-pocket individual expenses.**
This can be done through increasing tax-financing to 2.5% of GDP by 2025, improving collections of the Employee State Insurance Scheme and expanding it to all formal-sector employees, and allowing families and sections such as self-help groups of women to buy into the recently announced National Health Protection Mission.
- c. **Improve access to and performance of public primary facilities.**
Regionalise certain areas of healthcare such as obstetric care and focus on high-volume facilities with strong referral linkages from lower facilities. More holistic actions could be creating high capacity Public Sector Units (PSUs) at the state level which would receive all the health-related finances (from the state as well as under the National Health Mission) and be responsible for all the government-owned health facilities and personnel.

d. Regulate private healthcare access, cost and quality.

This can be done through positioning a strong National Health Protection Mission as a benchmark price-setter and as a design partner of the Insurance Regulatory and Development Authority (IRDA). The hospital licensing process should be strengthened (to tackle uneven healthcare supply across the country). A comprehensive price-control mechanism should be devised to exert control on all healthcare prices and to limit market forces through multiple measures.

e. Engage private sector in primary healthcare.

By giving private healthcare providers free/subsidised access to technology, training and basic healthcare products, they can be roped in to offer better and a wider range of primary healthcare at 'reasonable' fees. Government can develop a strong system of auditing and accreditation of private healthcare providers to control quality and promote such accredited healthcare providers actively.





ELEMENTARY AND SECONDARY EDUCATION IN INDIA

Elementary and secondary education in India are in dire need of reforms in five areas – student welfare, teacher empowerment, physical infrastructure, curriculum/content quality, and planning and assessment. Access to all stages of schooling, reforms in teacher recruitment and capacity building, importance to early childhood education and vocational training and improvement in conditions of schools and classrooms are crucial for effective learning outcomes and holistic development of students, as well as increased employability as and when they enter the workforce.

Concepts and ideas such as flexible and holistic curricula rooted in indigenous knowledge and systems and restructuring school stages to suit students' cognitive development stages should also be explored to augment the performance of elementary and secondary schools across the country.

Recommendations

a. Restructure curriculum framework.

National and state curriculum frameworks for school education from early childhood to higher secondary must be developed once every ten years aligned to the values of the Constitution. Curriculum should be flexible, broad and reflective of diverse local culture and knowledge, incorporating creative arts, crafts and oral expression, especially those rooted in indigenous knowledge and skill systems.

b. Integrate vocational education and non-academic subjects with formal education.

Vocational Education must be an integral part of the secondary school curriculum with all students opting for both vocational and general subjects. Students must also be offered a variety of learning experiences that help them meet their curricular goals without any 'hierarchy' of subjects. Music, sports, arts, drama must be an integral part of the curriculum, and vocational and general subjects must be accorded the same importance

c. Provide easy access to quality education.

Equitable physical access to quality education can be ensured through consolidating schools but keeping norms flexible to account for demographic, geographic or other considerations. Care must be taken that the first stage of school, namely for 4-8-year-olds, must be close to habitations. Measures such as transport allowance, cycles, etc., must be provided to assure access for older children.

d. Ensure physical safety and overall wellbeing of children.

An inclusive and safe environment must be assured in all schools with adequate barrier-free infrastructure as per the law, safe and nutritious meals, health support, safe drinking water and functional toilets, and adequate play spaces for sports and other activities. Guidelines and processes for ensuring physical and emotional safety in schools, including prevention of sexual abuse must be implemented across schools. Education related to sexual and reproductive health must be integrated into the curriculum.

e. Empower teachers.

Teachers must be empowered to design classroom pedagogy, choose curricular material and select assessment processes. The teacher must have autonomy to use a variety of modes and methods for assessment, with a focus on assessment for development using continuous and comprehensive evaluation (CCE). To enable teachers to perform effectively, teacher education, both pre- and in-service, must be overhauled; institutions for teacher development must be strengthened with all vacancies filled on priority.

f. Establish standards and assessment.

Sampled learning assessments to check overall 'health' of the system must be conducted and the findings must be utilized for systemic improvement. Standards for teachers, teacher educators, applicable to both public and private institutions, must be set, and a system of accreditation of teacher education institutes, and of licensure, certification and performance management must be evolved based on these standards. Institutional performance must be assessed every three years based on clearly articulated criteria. A school quality assessment and accreditation system must be put in place with a holistic 'institution building' approach.





NURTURING GIFTED CHILDREN

“Gifted” is an all-encompassing term used to signify high ability and talented children who have the potential to accomplish exceptional success in one or more domains such as numerical, logical, social, scientific, entrepreneurial, political or artistic. According to the United States National Society for the Gifted and Talented (NSGT)² the definition of Gifted includes all areas of a child’s life: academic, artistic and social.

This creates unique challenges as well as opportunities for positioning India in a global context, in the coming decades. Considering that India’s population will exceed China’s population in the next few years, a unique ecosystem to nurture and support gifted children will be required.

Much is being done by the government on formulating the National Policy on Education (NPE), reforming teacher education through the National Council for Teacher Education (NCTE), amending the Right to Education Act (RTE), strengthening distance education through the UGC and improving primary and secondary education. However, gifted children have their own set of special needs and requirements and their educational goals cannot be fit into a standard, one-size-fits-all curriculum.

Recommendations

a. Prioritise primary and secondary education a lot more than it currently is.

The 12th Five-Year Plan (2012-2017) had recommended Rs. 27,466 crores to be allocated to Rashtriya Madhyamik Shiksha Abhiyan (RMSA), but only Rs. 19,372 crores were allocated and even lesser were spent. Enrolment has steadily increased until 2015 but India’s overall spending on education as a percentage of GDP is still much lower than its counterparts in BRICS. Public spending on education must, at bare minimum, meet the recommended amount and more investment must be considered.

b. Move towards semi-inclusive model of schooling.

The all-inclusive model is the most common model in Indian public school where everyone in the class is taught at the same level irrespective of their potential. We must move to a semi-inclusive model in which there are after-school programs that offer extra coaching/training to a small number of students with higher potential in addition to the regular classroom instructions. This is more common in western countries with after-school programs such as GATE (Gifted and Talented education), however, we also found the tribal MENSA program run near Pune by Dr Narayan Desai in agreement with this model.

c. Reform teaching and teacher education.

This can be done by giving teachers the flexibility and autonomy to design their teaching methodology and lesson plans as per students' potential and ability, making teacher training programmes more professionalised and research-focused, making National and State Eligibility Tests (NET and SET) more competitive and focused on critical thinking, and restricting active teaching hours to a lesson time of 35 mins daily.

d. Reform curriculum and learning techniques.

This can be done through measures such as unit-based learning, introducing 'Theory of Knowledge' as a subject for secondary grades and allowing gifted children to pursue self-paced learning. Multiple forms of accelerated learning which include entry into school, non-graded classroom, grade skipping, curriculum compacting, concurrent enrolment, grade telescoping, and levelling within the grades must also be introduced.

e. Reform the education system.

Certain reforms which need to be carried out are centralising curriculum while leaving delivery up to states, multiple testing points for gifted children, incorporating the concepts of 'Self-selection, Opportunity, Autonomy, and Acceleration' in education of teachers and gifted children, and smoothening the transition from schooling to higher education.

f. Facilitate distance education.

This can be done through promoting and facilitating e-learning, investing in infrastructure and staffing at examination centres for online courses, and free and open education with voice-over in local dialects in rural areas. In an innovative move, gifted children from private schools can teach those from the public as part of after-school community programs.

g. Reconfigure the National Talent Search Exam (NTSE).

For early identification and enriching the gifted students accordingly, the exam should be conducted for 8th standard students. NTSE should be designed in all regional languages than current mode of Hindi or English to encourage participation from rural and tribal students. All learning material should be provided free of cost or at discounted prices to families who are unable to afford it. Besides this, online e-learning resources should be made available to students who have the potential for self-learning. Lastly, the scholarship amount and awards should be revised from INR 1250 per month for Std. 11th and 12th, and INR 2000 for bacculaureate and post- bacculaureate studies to INR 1450 and INR 2400 respectively.



REFORMS FOR JOB CREATION

Two major events in India - demonetisation in November 2016 and GST implementation in August 2017 had deep impacts on jobs in the Indian economy. However, the exact extent and nature of impact remain unclear. Rising unemployment rate in organised as well as unorganised sectors, unavailability of data, skill gaps, worsening condition of education and mal-addressed issues of vocational training are currently the challenges related to employment in India. India needs to create a skilled workforce that is employable as well as high productivity jobs and move surplus workers away from agriculture. This needs to be done against the backdrop of a high incidence of informal employment in the country and a global trend of changes in the nature of jobs.

Recommendations

a. Amend labour laws.

There is a dire need of labour law reforms to boost manufacturing investment. Reform here will include, for example, giving the employer the necessary flexibility to adjust his workforce as per evolving economic situations. The government must create a single Labour Code that will synchronise definitions of basic concepts across various applicable Acts.

b. Focus on MSME for future job creating sector.

The key to job growth lies in the MSME sector. The government must work specifically towards easing business regulations for the MSME sector through actions such as removing bottlenecks in access to credit. In order to exploit the potential of emerging technologies, the MSME sector must be skilled in latest exponential technologies. The current efforts by MSME Ministry to set up new high-tech technology tool rooms and upgrade existing ones in some of the key industrial clusters need to be expanded across the country.

c. Set up business facilitation centre for future Technologies and Jobs.

In order to encourage start-ups, the government can play a crucial role as a technology promoter, strategic partner, first buyer of new exponential technology application through innovative public-private partnerships, etc. The government should work with private companies to set up business facilitation centres where individual businesses can work with new technologies. Such centres across India will not only employ a large number of skilled staff but will also be an opportunity to impart skills to unemployed youth.

d. Develop a labour market information system.

Demand for emerging skills needs be spotted and addressed quickly through making available necessary training and certifications and creating a labour market information system. The government should set up systems to collect and disseminate reliable, high-frequency data on employment sliced by region, sector, gender, type of job etc. in order to spot such demand and other trends in the economy. There should be special emphasis on data related to female labour force participation. For this, India needs to develop an agile public-private partnership (e.g. industry-academia linkage). Planning and execution of jobs and skill commissions should be done at state and district levels, where the granular information on education, skills and job options is available. Delhi should only provide the guidelines, technical infrastructure and funding.

e. Upgrade formal education, vocational training.

The implementation of the Right to Education should involve State Chief Ministers more actively as they can assess the exact needs of their respective states and provide services according to the needs ensuring appropriate allocation of resources and better results. Universities need to transition towards a learner-centred education model where learning and work go hand in hand. Vocational education and training should be merged with formal education and mobility between the two should be made possible to reduce the social stigma.

f. Create rural jobs in non-farm activities.

Agricultural growth with a shift in focus from food security to income security can increase the potential for employment and welfare enhancement in the sector. In addition to large scale “on-farm” investments in irrigation, “off-farm” investments in post-production activities like storage, transport, and marketing should be made to complete the supply chain as they are likely to generate significant employment within agriculture.





UBI

An important objective of public expenditure is to provide all citizens with access to a minimum level of goods and services which include pure public goods such as defence, law and order, etc. and quasi-public goods such as public health, education and sanitation. In order to ensure that maximum people are benefitting from provisions and schemes of Government and reduce the inequitable growth, measures like Universal Basic Income (UBI) are referred.

UBI is a framework providing minimum economic security to all citizens and is based on a rate of growth which is more inclusive and equitable. It is considered as a negative income tax through which those getting less from engaging in economic activity are given some income which is taken from those getting more. States typically use UBI to reduce the income inequality. UBI is usually confused with poverty alleviation instruments such as basic targeted income or an income subsidy to the poor. Rather than providing subsidies, Government could finance UBI by reducing them because participation in growth will help in ending poverty.

Recommendations

a. Intervene for inclusive growth.

Markets fail to secure a desired income distribution even before the economy is at fully potential or even when resources are fully employed, therefore the State must intervene to correct this.

b. Prioritise the provision of public and quasi-public goods.

UBI alone cannot tackle unequal income distribution. The inefficiency in the system of providing public and quasi-public goods is the root cause of inequality. Therefore, with UBI, priority should also be given to increase the efficiency in creation and distribution of these goods. Through measures such as cuts in subsidies or rationalising other transfers the provision of public and merit goods can be enhanced.

c. Improve tax-GDP ratio.

The tax-to-GDP ratio should be improved to tackle budget constraints and expand government's pool of revenue, in order to facilitate not only the effective implementation of UBI, but also of creation and distribution of public and quasi-public goods.

PENSION REFORMS

UN population projections indicate that India will face an ageing population in the coming decades. The current pension system is fraught with problems; there is no single arm of the government to look after it, leading to gaps in information, and an inconsistent pension policy.

The NPS arose from Project OASIS but has substantially diverged from the original design of the project in aspects such as fund management and multiplicity of schemes. Its implementation for civil servants has been problematic with alleged complaints of mismanagement on transferring the contributions to the accounts of employees.

Further, the existing system of defined contribution (including NPS, PF, EPF, EPS) covers only about 8-10% of the workforce. There are challenges in implementation of the IGNOAPS and IGWPS cash transfers. Setting up the OROP for the armed forces is also likely to lay significant stress on the national budget and increase our fiscal burden.

Recommendations

a. Review governance mechanisms of all provident funds.

Provident Fund organisations would only administer the schemes i.e. serve as the collection mechanism. At the outset, the EPF may choose one fund manager (regulated by the PFRDA) to manage contributions of its members; eventually EPF members should be given the choice of choosing the EPF fund manager or other PFRDA regulated fund managers and DB plans such as the EPS should be closed for new members. Statutory pension systems need to come under the PFRDA and would serve as a collection entity for their respective members. The NPS Trust would become an independent entity and the administrator of the NPS.

b. Reform fund management.

The fund management function of the provident funds should be handed over to the Pension Fund Managers (PFMs) licensed and regulated by the PFRDA, and the mechanism for the handover needs to be developed. Structured monitoring of investment performance vis-a-vis benchmark returns, and risk management must be ensured. Valuation norms with respect to bonds need to be revisited with a focus on moving towards a market-to-market valuation of all funds. For existing DB funds, DC-DB schemes and DC funds that offer guaranteed returns, there should risk-based capital and liquidity requirements, as well as a



requirement of an actuarial valuation on an on-going basis, that is published in the public domain. Also, the policy should reorient itself to the vision of Project OASIS.

c. Establish a coherent exit policy for all pension funds.

A policy of phased withdrawal should be considered, while in parallel measures to develop annuity markets undertaken. The current policies of allowing premature withdrawals (For example, PFs provide lumpsum withdrawal at retirement) from pension funds should be reviewed so that members do not retire with low balances diminishing the purpose of having a vehicle for retirement saving.

d. Review the NPS.

It is necessary to evaluate the departure of the NPS from the vision of Project OASIS and reasons for the same, as well as problems in current processes and implementation. The NPS must also be benchmarked against global best practices. This should be followed by an implementation plan to bring back the NPS to its original vision. Similarly, an assessment of the adequacy and efficiency of the IGNOAPS and IGNWPS program should also be undertaken.

e. Innovate distribution strategies.

In order to address all strata of the population in all locations, strategies such as engaging with organisations such as unions and cooperatives that might help enrol members, use of fintech and carrying out a sustained awareness of campaign about the NPS should be used. Special efforts should be made to make the NPS work for civil servants as they can be flagbearers of the scheme. Implementation of NPS in the informal sector, and voluntary coverage of pensions must be undertaken only after careful and extensive thought and deliberation.

f. Constitute working groups to initiate analysis and reforms in pensions.

The Ministry of Finance should constitute working groups which would manage and analyse the financial and historical pension-related data, engage with research experts in the field, and coordinate with different financial agencies relevant to the functioning of the pensions system, in order to generate quality information, analysis and reforms within the pensions system.

Section 5

Growth Accelerators





PRIVATISATION

Over 1200 state-owned enterprises (SEs) at the central and state level have assets worth over USD 500 billion. However, they also include large loss makers eating up vital public resources which could be used to finance healthcare, education and roads, ports and rail infrastructure needs of the country. Till now, despite positive results of divestment, privatisation of management, and even full privatisation, successive governments have resorted to partial privatization (share sales), mainly to raise resources to finance budget deficits.

Instead of aggressive privatization and use of freed-up resources to build public infrastructure, India chose the public-private partnership (PPP) model which has not performed well. There is a case to keep power, oil and defence-related companies in state hands, but the scenario is changing rapidly, and these sectors too can be privatised. Privatisation or merger of state-owned banks is also needed to deal with critical issues such as non-performing loans and scams.

Recommendations

- a. **Prepare a ten-year plan to privatize and improve the performance of its PSEs.**
The plan could have two 5-year phases with Phase 1 focused on PSEs that need closure or where outright sale in PSEs in manufacturing, mining and services will not disrupt provision of goods and services to citizens. Phase 2 could be reserved for PSEs where alternate service provision options are needed with reforms in those sectors.
- b. **Strategize separately for Maharatnas, Navratnas, Miniratnas and companies without Ratna status.**
The plan for privatising PSEs must vary as per their status and sector. Maharatnas must be left in state hands with serious restructuring and better leadership to make them world-class companies. Most Navratnas must be privatised, while the Miniratnas must be sold off. Miniratnas in manufacturing and service sectors must be immediately sold off. Those without Ratna status, especially PSEs like those for food and fertilisers, should be closed and replaced with more holistic systems to meet the goals they were created for.
- c. **Restructure financially the PSEs which are to be sold/privatised.**
Financial restructuring may be needed for many PSEs as they often have a web of

complicated financial relationships or are saddled with large debts. In the case of partial privatization, prepare the company for listing on the stock market. This can help create value as the listing requirements will improve transparency and move the company to adopt common financial and governance standards.

d. Set up a fair and transparent process for sale of PSEs.

Russian style or Latin American style privatization—where most of state assets were sold to “oligarchs”—must be avoided. Transparent processes, competitive bidding and ensuring that some of the funds are set aside for worker compensation are vital for successful strategic disinvestment. Open market sales (share sales) should be designed to widen ownership and create a greater public stake for the sales. Employees should also be provided shares – employee stock option plans (ESOPs) – in privately managed companies so that they do not oppose the sale and gain a share in the upside post privatization.

e. Invest proceeds of privatisation in development.

The proceeds from the privatization and sales of assets of closed firms should not go back into the budget but instead should be put into the National Infrastructure Investment Fund and used to pay worker compensation so that the people can visibly identify how the proceeds are being utilized.

f. Privatised or merge state-owned banks.

It may be better to have at best two PSU banks for meeting ‘so-called’ social functions i.e. lend to rural sector and provide banking in remote areas, and free up the rest to do professional commercial banking.





NATIONAL INNOVATION ECOSYSTEM: FROM LEAPFROGGING TO POLE-VAULTING

India has shown the way for grassroot innovations i.e. getting more performance from less resources for many people. However, we have a long way to go mainly due to three reasons: protected economy and no competition before 1991 providing no incentive for innovation, failure in commercialising science in India and by Indians, and absence of a powerful national ecosystem comprising of physical, intellectual and cultural constructs.

We have made progress as our journey on Global Innovation Index (GII) shows but we have a long to go. The obstacles need to be removed and for this, the journey from an idea to the product to its commercialisation need to be facilitated by a robust national innovation ecosystem. Such an ecosystem ideally includes idea incubators, technology parks, a conducive intellectual property rights (IPR) regime, balanced regulatory systems, strategically designed standards and proactive government support systems, to name a few.

The innovation in technology, complemented by changes in other levers of right economic model, social engagement, and public policy can not only leapfrog our innovation ecosystem but also help our country pole-vault into the next orbit of growth and prosperity.

Recommendations

a. Enable commercialisation of innovative ideas.

Ideas need to be incubated. Therefore, we should build incubators across every Indian university, clusters of colleges, etc. There should be sector-specific innovation clusters, which bring all innovation players with domain expertise from academia, industry, finance, etc. together. There should be Technology and Innovation Parks across the country. There is a need to increase angel funding, early stage financing as also venture capital by an order of magnitude.

b. Increase expenditure on research and development, especially in fundamental sciences.

India's R&D investment was less than 1% for the past three decades which needs to be increased to 2% of GDP. The reason behind this is that most of the funding (around 70%) in India comes from the government. Particularly, investment in R&D in fundamental sciences, which form the basis of many life-changing innovations and technologies, must be prioritised way more than it is currently. The private sector must be incentivized innovatively

to increase its investment. We must provide tax incentives to private sector's R&D efforts and judicious government support in a public-private-partnership mode, especially for risky science-led-innovation-based product development that is aligned with national priorities.

c. Formalise grassroots innovations.

With the help of micro-venture capital funds, creation of small enterprises and greater number of jobs should be encouraged with special focus on informal innovation. In order to develop these informal innovations and link it to formal systems, special funds should be provided

d. Launch and implement more aggressive public sector initiatives.

Government should act as 'first buyer' and 'early user' for small, innovative firms and manage consequent risk, especially for those products and services, which meet Government's stated goals. Government should set up regulations to successfully drive innovation either indirectly, through altering market structure and affecting the funds available for investment, or directly, through boosting or limiting demand for particular products and services. It should also set standards that can create market power by generating demand for innovation.

e. Promote innovation through various governmental departments/ministries.

All ministries should be mandated to publish long-term demand forecasts, engage in continuous market analysis to identify potential breakthrough solutions and offer professional training on legal options to promote innovation. They must also foster a strategic dialogue between end-users, industry, and procurement agencies.

f. Design an Innovative Public Procurement Policy.

The Public Procurement Policy should be based on the three pillars of talent, technology and trust. To achieve this, a legal framework should be designed, which should include easily understandable definitions, guidelines and templates based on the ASSURED matrix³. For speedy implementation, an online hub 'Innovation Procurement Platform' should be created. Procurement agencies from ministries should be given specific targets for innovation procurement. Powerful e-procurement and IT tools should be used to carry out proper risk assessment.





REFORMING INDIA'S AGRICULTURE

As man's primary occupation, agriculture has been developing continuously since its inception. Development in agriculture has witnessed variations due to geographical area, use of technology, research and development, investment, government support and policies. The evolution of agriculture began with mass-migration of various plant species across regions and various climatic zones.

Agriculture 1.0 included discovering and cultivating varieties having greater yield and greater survival capacity, which were also supplemented by artificial cross-breeding across varieties. The 2.0 version was a blend of agriculture with international trade which encouraged additional migration of plants in the industrialisation era. Mechanisation of agriculture, which is now practised all over the world is the feature of Agriculture 3.0. The degree of mechanisation varies globally due to differences in average farm size and land-man ratios across countries. Agriculture 3.5 witnessed technological developments in agricultural inputs in the form of artificial synthesis in laboratories and production of insecticides, pesticides, micro-nutrients and weedicides etc. Agriculture 4.0 is a melange of development so far and promises to incorporate Artificial Intelligence in farming which will help farmers gain higher yields with less crop damage.

Recommendations

a. Develop Precision Agriculture (PA).

Precision Agriculture (PA) and integration of digital technology such as greater use of 'micro-natural extracts' instead of the presently popular 'chemical approach', production of soil-like substance, rapid organic decomposing, and hydroponics should be developed. Widespread awareness should be generated about these influential trends in the agriculture sector so that large number of farmers start to adopt digital technologies to run their businesses.

b. Provide infrastructure and expand post-harvest process.

Improvements should be made in harvesting, packaging, pre-cooling, cold chains, retailing, and market reach and access for agricultural products. Backward and forward linkages of every aspects of agriculture should be more organised, articulated and catered by visible service sector economy within agriculture. It should also include demand and supply of nature of human skills, employments opportunities within rural areas.

c. Undertake land reforms.

In order to encourage an innovative and competitive investment in agriculture, land dealings should become open and flexible in the market.

d. Create Institutional framework for higher returns to farmers.

The Government of India should provide an institutional framework for competitive markets for farmers to participate and break the extant monopolies or oligopolies of few traders who presently control the so-called regulated markets.

e. Formulate farmer beneficial trade policy.

Industrialised countries have produced historical legacy of tilting terms of trade against agriculture and in favour of non-agriculture sector. This needs to be reversed for some period. For example, as China allowed and tolerated higher food inflation while liberalising and dismantling pervious collective farms. India should formulate more stable, open and predictable export-oriented trade policy for agriculture produce.





TRADE POLICY REFORMS

International Trade now includes goods and services, foreign direct investments (FDIs), global value chains and technologies. India needs to move from restrictive trade policies to trade facilitation policies.

Usually, ease of trading focuses on domestic policies, including in the area of facilitating the operation of domestic exporters and importers. However, greater market access abroad requires more active bilateral/multilateral engagement with trade partners in areas of easing regulations and establishing cooperation. India must also participate more in Free Trade Agreements across the world and monitor them to ensure their sustainable and smooth implementation.

Recommendations

a. Obtain feedback from domestic exporters.

A database needs to be developed from the feedback by the domestic exporters regarding key obstacles faced by them in terms of domestic policy constraints, in addition to infrastructural or logistical problems. This tool would identify those issues which have the largest constraining impact on exports.

b. Establish a body to coordinate between relevant government departments.

This body would coordinate amongst various ministries involved in the trade and will be headed by a Minister level person in Prime Minister's office. Regular review and periodical brief should be provided to the Prime Minister.

c. Improve domestic trade policies.

The focus should be on ease of doing business and on facilitation and simplification of policy procedures. The government should assess gaps in trade between developed countries and India, establish a trade facilitation index, and develop a highly responsive system for resolving queries.

d. Establish and upgrade domestic training centres.

As India would adopt a facilitation policy, more staff will be required to work on various areas and for this India needs to activate and upgrade the training centres. This can be done in collaboration with other countries, with whom we can partner in developing cross-country training programmes.

e. Develop export hubs.

MSME sector will play a vital role in developing the export hub in India. We should establish discussion platforms as a hub for “lead firms” to interact with domestic firms, in particular SMEs, to catalyse and help develop capabilities and linkages with global value chains. This process needs to be supported with relevant information base to help lead firms identify possible opportunities and address any gaps. A beginning can be made using large firms with FDI in India.

f. Play a more active role in trade at global level.

India should actively participate not only in WTO rounds and agreements but also in bilateral or multilateral or free trade through negotiations for developing the trade regime in India and reap the benefits of it.





LAND REFORMS

Land is a factor of production, and the smooth functioning of the land market has important cascading effects on agriculture, access to credit, capital investments and economic growth. Laws that affect above mentioned measures are not adequate for the requirements of today's economy. Therefore, there is a need to reconsider the legal and administrative structures that currently affect the functioning of the land market. There are three kinds of issues related to the efficiency of land markets in India today: sub-optimal quality i.e. a lack of reliability and accuracy of land records, restrictions on transferability including leasing and high degree of property-related litigation, and administrative delays. As can be seen, all three issues are interrelated. Therefore, there is a need to address all three issues simultaneously in order to create a more efficient land market.

Recommendations

a. Improve land records.

The Central Government's flagship project, the Digital India Land Records Modernisation Programme (DILRMP) must be re-oriented towards outcome-based incentives. The DILRMP must be geared towards measuring outcomes as opposed to measuring outputs by increasing flexibility in its implementation, creating fiscal incentives for better performing states, and reserving a proportion of the disbursement of funds based on the score of the individual state on an index for property record and services. Non-state alternatives to improving land records such as title insurance⁴ must be initiated. Open access technology for allowing start-ups and entrepreneurs to access land records and build customised products through open APIs should be created.

b. Reduce restrictions on transferability.

Restrictions on land transfers should be liberalized immediately. Proposed model of land leasing law and its further rationalisation would require doing away state permissions in leasing completely. In urban areas, there is scope to reduce the restrictions imposed on rental agreements. In addition, restrictions on bank foreclosures with respect to land belonging to marginalised groups need to be liberalised progressively. A similar conditional fiscal transfer as Jawaharlal Nehru National Urban Renewal Mission (JNNURM) mechanism can be developed to repeal land rental, leasing and ownership restrictions in both urban and agricultural land.

c. Reduce litigation and administrative costs.

In order to reduce litigation and administrative costs, courts need to be encouraged to publish cause-lists and decided cases in a way that they can be easily accessed by state revenue departments and municipal bodies to update land records. There is a need for research and identification of the causes of land disputes, through systematic examination of court cases and identifying legal provisions that lead to disputes in courts.

d. Develop an 'Ease of Land Transaction Index'.

The Central Government should identify causes for delays in land related transactions in the land administration process, for example at the stage of survey, registration, taxation and mutation. These administrative processes must be streamlined in each state for ease of transactions in land. An "Ease of Land Transactions Index" can be developed in order to encourage state governments to take progressive steps to implement such reforms.

e. Create platform for sharing administrative strategies with State Governments and to build capacities to implement reforms.

The reform measures proposed above will require significant capacity addition through knowledge transfers, fiscal support and in technical expertise and human resources. It is therefore important for the Central Government to develop knowledge-sharing platforms for state governments to compare and learn from each other's policy successes and failures on land reforms. Such platforms, where all state governments and the Central Government can collaborate to develop expertise on land-related issues, can support administrative strategies.



Section 6

Climate Change and Sustainability





BETTER MANAGEMENT OF ENVIRONMENT AND CLIMATE CHANGE

Steady growth in global population combined with increasing demand for energy have led to unprecedented exploitation of fossil-fuels. Environment has become a casualty in this march for human life-style progress and its impact on water resources, bio-diversity, waste generation and the very quality of air that we breathe, have become serious environmental concerns.

India has been ahead of many countries in establishing the framework and structure for environmental protection and climate action with well-articulated policy objectives. However, effective implementation has been poor without adequate accountability and often misguided political priorities. Unless very drastic and coordinated emission-reductions can happen globally within the next 12 years, human civilization is heading for extraordinary financial stresses and livelihood losses. The pinch is already begun to hurt and for young children of today who may be over 80 years old in 2100, normal organized modern life that we enjoy today, may become truly impossible.

Recommendations

a. Reduce fossil fuel use and boost RE (renewable energy) generation.

Share of Renewable Energy (solar+wind+Biogas) in India's energy basket must go up from present 20% to 40% by 2030 and over 50% by 2040. We must formulate an aggressive policy thrust for (i) significantly reducing electricity demand by drastically improving energy efficiency and bringing lifestyle changes, and (ii) an integrated plan to boost RE generation (including solar, wind, biogas, small hydro and even nuclear) to facilitate moving away from fossil fuels without compromising development goals.

b. Encourage DG (distributed generation) of RE.

Policy orientation must encourage distributed generation (DG) of Renewable Energy (RE) like rooftop solar that can be used with zero losses. DG is well suited for wind and biogas generation with all the added advantages of decentralization that would encourage citizen empowerment. Proper choice of technology and pricing for 'Net-Metering' by DISCOMs can hugely boost roof-top generation and innovative micro-grid based efficient use of electric power.

- c. **Prioritise electric mobility.**
Transition to electric mobility must be prioritised, but it needs to be combined with parallel infrastructure development for charging of all the electric vehicles with distributed solar charging stations or with other RE sources.
- d. **Encourage research and development.**
National policies must encourage robust R&D and innovations for higher efficiency solar, wind and other clean technologies and invest for acquiring the latest in carbon sequestration and storage (CSS) technologies
- e. **Empower and activate local government bodies.**
Local governments must become proactive not only for climate action but also for preservation of rivers and water bodies and expanding the green cover of the city. Most of the construction by 2030 will be new structures yet to be built. This offers an enormous opportunity for city planners to create resilient cities with robust energy and water conservation practices, efficient garbage disposal including its reuse for energy generation, and rapid enhancement of carbon sink capacities. For this to be effective, it is necessary to have empowered and strong city governance, as well as active civil society participation.
- f. **Incentivise lifestyle changes.**
Environmental policies must incentivise the rich class to consciously move to low carbon economy. Through instruments such as a 'carbon tax', market forces could drive the new low-carbon economy. India should take a lead in this regard and introduce a national 'Carbon Fee' of perhaps Rs 1000 per Ton of 'CO₂E_q' emission at source.
- g. **Prioritise calculation of 'Green Gross Domestic Product (GDP)' for sustainable economic development.**
Recommendations of Prof Partha Dasgupta Committee report (2013) on Green GDP should be accepted. The committee's evaluation of economic progress, that includes the value of the stock of country's natural, human and physical assets, continues to be debated for possible revision to the definition of growth in the context of increasing climate change concerns. India should adopt green accounting system which is expected to account for the use of natural resources as well as the costs involved.





IMPROVED WILDLIFE CONSERVATION IN INDIA

Despite occupying just 2.2% of world's land area India harbours 13% of its bird species and 7% of the mammals as well as significant diversity of other animal and plant taxa. Two primary laws govern conservation of wildlife and its habitat: The Wildlife Protection Act of 1972 (WLP) and the Indian Forest Act of 1927 (IFA). After 1990s, political support for conservation declined and violations of earlier conservation laws ratcheted up, clashing against attempts to speed up development and redress social grievances.

The primary problem is expansion of state-centric conservation model beyond its legitimate domain of wildlife law enforcement. Despite increased funding, progress has stalled. Wildlife research, monitoring, habitat management, tourism, public education, and rural development activities on forest boundaries are being stifled. India made significant wildlife gains between 1970-1990s due to enactment of strong conservation laws, which are now at risk unless policy innovations that imbibe scientific talent and private enterprise are put in place.

Recommendations

a. Adopt the 'Sustainable Landscapes Policy' framework.

Under this framework, India's geography should be spatially categorized as 'Conservation Priority Landscapes (CPL)', 'Multiple Use Landscapes (MUL)' and 'Intensive Development Landscapes (IDL)' and conservation laws should vary with landscape category, thus mitigating the inherent contradictions between conservation and development objectives.

b. Expand wildlife habitats and improve their connectivity.

This can be done through various measures such as eliminating 'honey combing' by human settlements, reducing fragmentation, improving connectivity through purchases, swaps and long-term lease of private lands, forging partnerships with private sector tourism industry and farmers in CPLs to create new 'wildlife conservancies', privatising farm forestry, and creating clear policies to prevent intrusion of linear infrastructure (roads, railways, canals, pipelines and transmission lines for power, gas etc.) in CPLs either through diversions or ecologically sound design and construction.

c. Manage and enhance quality and diversity of wildlife habitats.

Reducing pressure of illegal hunting and wildlife trade through law enforcement is the most critical need. Preparation of wildlife management plans and annual plan of operations for

reserves should be entrusted to qualified independent professional ecologists, finance experts, engineers and wildlife managers. These plans should set ecological and conservation goals and prescribe scientific monitoring of progress towards them. Such planning and monitoring activities should work like independent ecological audits of reserve management. All fragmented funding schemes should be consolidated into a single integrated funding scheme, and a zero-based budgeting approach with a transparent tracking/auditing mechanism should be adopted.

d. Prioritise capacity building and public awareness and support.

This can be done through creating a qualified, professional cadre for wildlife management in each state, assigning ecological auditing of wildlife and habitats to specialised experts, and amending the Wildlife Protection Act suitably to encourage universities, specialized wildlife research institutions and qualified scientists to take up both academic research and research necessary to address conservation needs. The government should also rope in wildlife filmmakers, photographers, natural history writers, amateur naturalists, citizen scientists and nature clubs that leverage and broaden public support for wildlife conservation.



Section 7

Infrastructure





WATER POLICY REFORMS

The per capita availability of water in India has fallen from 5200 m³ in 1951 to 1588 m³ in 2010, and per capita surface water availability is likely fall to 1191 m³ by 2050, thereby converting the country from being 'water-surplus' to 'water-stressed'. India is characterized by an enormous spatial and temporal variability in average annual rainfall, as well as unequitable distribution of water between and within urban and rural areas, as well as economic sectors, with agriculture (especially water-intensive crops such as sugarcane) consuming 80% or more of the annual water available.

Inefficiency in water supply, ad hoc imposition of water tariffs, lack of authentic, updated and regular data especially on transboundary rivers, lack of uniformity in policies/laws regarding urban water use, problems of groundwater ownership, high level of river pollution and inadequate environmental flows in rivers are major national water issues. While several laws and governance framework to tackle many of these issues exist, they need to either be enforced effectively, or be accompanied with by-laws and rules for effective implementation, or both. There is also a need for River Basin Agencies and Integrated River Basin Plans (IRBPs) for holistic development of water resources.

Recommendations

a. Review all existing water laws and policies and establish fresh laws where necessary.

Urban water laws across the country should be made internally consistent and unambiguous. Fresh laws should be constituted for sewage treatment, groundwater ownership, and citizens' Right to Water. Before sanctioning any developmental project, a Leak Detection Project must be made mandatory for all Local Bodies through adding the necessary clause to the 73rd Amendment of the Indian Constitution. A Water Framework Law must be created to align different policies at State and Central levels in order to avoid internal contradictions and ambiguities, as well devise the by-laws and rules required to implement them.

b. Create equity in water use, especially in irrigation.

Water stored in all reservoirs built with public/budgetary finances must be distributed as per a cropping pattern based primarily on agro-climatic zones, in order to create greater equity in the use of water for irrigation.

c. Create a national platform for all hydrological data.

All hydrological data on Himalayan rivers must be immediately declassified and placed in public domain. The NWIC must be given the mandate to reconcile and periodically validate (say every three or five years) all hydrologic data procured from States and Union Territories. Such data should include information on snow-fall, evaporation, glaciers, tidal hydrology, river geometry changes, erosion, sedimentation, etc. and should be available in the public domain.

d. Enforce volumetric measurement and supply of water.

Digital/automatic/volumetric measurement must be made obligatory through statutory provisions for all water uses/sectors, as well as sewage generated, treated and discharged. Water supply should also be volumetric, and tariffs levied should be commensurate to the volumetric supply. Modern technology must be used to measure and automate the distribution, purification and treatment of water, which would then render effectiveness to water-balance studies.

e. Improve and maintain health of rivers.

River pollution and closing-river-basins, especially in the peninsula, must be tackled on priority. All cities and municipal corporations should be directed by the MoEF to comply with the CPCB / SPCB norms and peninsular states lying in the Godavari, Krishna and Cauvery Basins must be directed to comply with the Tribunals directive regarding the volume of water to be reserved as Environmental-Flows.

f. Establish River Basin Agencies (RBAs) and Integrated River Basin Plans (IRBPs).

All States and Union Territories should be directed to statutorily establish RBAs, mandated to prepare Integrated River (sub) Basin Plans. In the case of inter-state river basins, the NWIC should then be asked to integrate and reconcile the sub-basin plans. Such plans should be prepared without prejudice to the ongoing process of inter-state water disputes and resolutions being conducted by the duly constituted Tribunals.





REFORMS IN THE PUBLIC PRIVATE PARTNERSHIP MODEL IN INDIA

India offers today the world's largest market for PPPs. With the current demographic transition and the consequent growing need for better infrastructure, it is important for India to mature its current model of PPPs, as it is an important instrument for creating infrastructure in the country. This would require a change in the attitude and mind set of all authorities dealing with PPPs, including public agencies partnering with the private sector, government departments supervising PPPs, and auditing and legislative institutions providing oversight of PPPs.

The dominant primary concern is the optimal allocation of risks across PPP stakeholders. Inefficient and inequitable allocation of risk in PPPs can be a major factor in PPP failures, ultimately hurting the citizens of India. The Model Concession Agreement (MCA) has rarely addressed project specific risks due to the "One-size-fits- all" approach. A rational allocation of risks can only be undertaken in sector and project-specific contexts.

Recommendations

a. Revisit the PPP model.

Currently, fiscal PPP contracts focus more on fiscal benefits, but the focus should instead be on service delivery for citizens. The government must improve fiscal reporting practices and performance monitoring. State owned enterprises or public sector undertakings should not be allowed to bid for PPP projects, and PPP structures should not be adopted for very small projects, since the benefits are not commensurate with the costs. A number of stalled projects need to be kick-started, and sector-specific institutional frameworks should be developed to address them.

b. Manage and allocate risk optimally across all stakeholders.

Risk allocation should be specific to the sector and project, but at the same time, the government should develop a generic risk monitoring and evaluation framework encompassing all aspects across project development and implementation lifecycle. MCAs for each sector must be reviewed to capture the interests of users, project proponents, concessionaires, lenders and markets, and facilitate successful project delivery.

c. Strengthen institutional capacity.

The government should establish a national level institution to function as a centre of excellence for PPPs. It should also enable research, review and roll out of capacity building activities for different stakeholders and promote more nuanced and sophisticated models of contracting and dispute redressal mechanisms.

d. Establish a dispute resolution mechanism.

The government should establish a quick, equitable, efficient and enforceable dispute resolution mechanism for PPP projects. PPP contracts must contain clearly articulated dispute resolution structures that demonstrate commitment of all stakeholders and provide flexibility to restructure within the commercial and financial boundaries of the project.

e. Strengthen PPP contracts.

Private players in PPP must be protected against loss of bargaining power over time and due to external developments by allowing for renegotiations in the PPP contract. Renegotiated contracts must include full disclosure of long-term costs, risks and potential benefits; comparison with the financial position for government at the time of signing the contract; and comparison with the financial position for government at the time prior to renegotiation.

f. Encourage zero coupon bonds or discount bonds.

PPPs in infrastructure are typically very high-value contracts, with huge capital and operating costs, making it difficult for their developers to cope with any financial losses. The Ministry of Finance should allow banks and financial institutions to issue zero coupon bonds or deep discount bonds for sourcing long-term capital at a low cost for PPP projects. These will not only lower debt servicing costs in the initial phase of the projects, but also enable the authorities to charge lower user charges in initial years.





CHALLENGES OF LAST MILE CONNECTIVITY

While the number of Internet users in India is expected to reach 500 million by mid-2018, the number is unevenly distributed across geography and demography. Mobile penetration in rural India remains as low as 18% and the gap between digital haves and have-nots is exacerbated further as the world moves further towards online information and services.

The Draft National Digital Communications Policy 2018 (DNDCP 2018) released by the GoI in early 2018 highlights the importance of bridging this gap; it has identified spectrum as a key natural resource, promised to create jobs in the digital communications sector, and supported Industry 4.0 as well as the idea of shared infrastructure between smart cities. However, it is crucial that we look towards other innovative methods of bringing connectivity to all corners of the country.

Recommendations

- a. **Successfully complete the implementation of BharatNet⁵.**
Infrastructural work is completed under Phase 1, but gram panchayats and their residents remain without functional internet. Deployment of broadband internet to individual households, institutions, government buildings and educational centres through gram panchayats, and skilling of panchayat officials should be undertaken with immediate effect.
- b. **Promote and deploy community networks to connect rural and hard to reach areas.**
Community networks use unlicensed spectrum from an available backhaul of existing mobile towers and line-of-sight technology, through which internet connectivity can be distributed to households within a 20-meter radius. In addition to setting up such networks, training should be given to local people to maintain them. Various community ownership, entrepreneurial and cooperative models should be explored to involve local communities in the operation and maintenance of these networks.
- c. **Increase Internet connectivity coverage through community radios.**
Community radios, along with a significant rural presence and relationship with rural communities, have the existing infrastructure to set up community networks and distribute internet connectivity. These should be leveraged and with extra skilling and minimal costs, Internet connectivity should be distributed to community members.

d. Enable individuals and NGOs to become Internet Service Providers.

Ease regulations on licensing so that small businesses and NGOs can provide Internet services to rural, tribal and remote regions of the country. As a result, communities in these regions would not have to depend on large telecom operators and their business interests to gain Internet connectivity.

e. Lift restriction on using TV white space spectrum.

White Space refers to the unused broadcasting frequencies in the wireless spectrum. Television networks leave gaps between channels for buffering purposes, and this space in the wireless spectrum can be used to deliver widespread broadband Internet. TV White Space technology utilises lower-frequency UHF signals that can penetrate obstacles and cover uneven ground without requiring additional infrastructure; this is especially useful in areas with rugged or forested terrain.

f. Deploy public Wi-Fi hubs across the country.

The DNDCP 2018 targets 5 million Wi-Fi Hotspots to be set up by 2020 and 10 million by 2022. TRAI's recommendation of allowing Public Data Offices (PDOs) to resell Internet services through yesteryears' PCOs type set-up must be taken up. Public Wi-Fi should focus on Tier 2 and Tier 3 cities, towns, and villages.





TELECOM SECTOR REFORMS

The Indian telecom sector currently boasts of the second largest subscriber base in the world, consisting of over 1.19 billion subscribers⁶. This includes an active wireless user base of about 1.02 billion. Along with the high number of users, data consumption trends are also on the rise. As of September 2018, wireless Internet users consumed an average of 8.32 GB of data per month, which is about 70 times higher than the data consumption in 2015⁷. These developments have however been accompanied by concerns of increasing stress in the sector with growing losses, debt pile, price war, reduced revenue and irrational spectrum costs. Other than these, there are four areas of concern, namely old governing legal framework, high spectrum costs and government fees, charges, large part of spectrum reserved for government and defence purpose, and unsatisfactory implementation of BharatNet Project under Universal Services Obligation Fund (USOF).

Recommendations

a. Restructure legal, regulatory framework of the sector.

Formulate a new law that accounts for the convergence of telecommunication, broadcasting and information technology services. It must incorporate India's modern thinking on the design and functioning of regulatory bodies, including terms of the independence and accountability of the agency and scope of its legislative, executive and quasi-judicial powers. Mandatory inter-agency coordination between the telecom regulator and other regulatory agencies is a solution requiring the agencies to enter a memorandum of understanding to govern their joint working and co-ordination mechanisms. New laws should also include governing communication surveillance that incorporate necessary oversight and accountability mechanisms, including provisions for judicial review of surveillance decisions. Regulatory framework of telecom sector also needs a sophisticated data management system that enables electronic logs and supports analytics of data on spectrum utilisation, tariff filings, QoS audits etc., aiding more informed policy-making and supervision and translating into better consumer outcomes.

b. Rationalise fees and charges.

At present, wireless operators in India pay for spectrum through auction determined prices in addition to which they are also liable to pay between 3 to 8% of their Adjusted Gross Revenue (AGR) towards spectrum usage charges (SUC). The SUC needs to be rationalised based on an estimate of the actual costs incurred in administering and monitoring the usage

of the allocated spectrum. License fees should also have a rational link with the costs of administering the licence agreements. The telecom sector has also been advocating a reduction in the applicable GST rate from 18% to 12%. The calculation of SUC and license fee is linked to the computation of the operator's Applicable Gross Revenue (AGR), which should essentially amount to the exclusion of non-telecom revenues.

c. Assess spectrum management.

A periodic reassessment of the actual spectrum usage by Government agencies should be done to enable spectrum re-farming and harmonisation activities. The framework for license fee and royalty applicable to 'captive users' of spectrum also needs to be revisited so as to incentivise the efficient use of spectrum by Government agencies. For the development of telecommunication infrastructure, the Indian Telegraph Right of Way Rules, 2016 should be studied in detail to provide for a streamlined process for the setting up of underground infrastructure (optical fibre) and over-ground infrastructure (mobile towers) by telecom companies.

d. Revise the BharatNet Project.

A state-agency led model of implementation through Bharat Broadband Network Limited and three other public sector undertakings should build a systematic mechanism for periodic external audit of the project's progress for its successful implementation.





INDIA'S POWER SECTOR

As of March 2018, India's total installed power generation capacity was 344 Gigawatts (GW). Of this, 223 GW was thermal (coal, gas, diesel), 7 GW nuclear, and 114 GW renewables (hydro, solar, wind, others). In order to achieve the goal of 'electricity for all', India clearly needs policy interventions and amendments for large scale electricity generation. Power consumption according to the Paris UN Climate Change Conference should be extended to nuclear power and the control of nuclear power should partially move away from the Department of Science and Technology to Ministry of Power, to ensure that there is proper source integration in national plans.

Policy intervention should focus on two areas; a) management of natural resources used at various stages of energy production and for ancillary use, b) management of power across production to retail value chain.

Recommendations

a. Reform policies in the sector.

The Govt. of India should adopt the World Energy Council concept of 'Energy Trilemma' (uninterrupted availability, equitable and affordable access, environmental sustainability) as the basis of its energy policy. It should also formulate policies to encourage R&D in battery technology, enable state govts. to exit commercial operations of discoms and allow exploring minerals like lithium and cobalt and buying mines internationally. It should designate the Central Electricity Regulatory Authority (CERC) as the nodal agency for all power policy formulation and restructure Power Finance Corporations and Rural Electrification Corporations as finance utility projects.

b. Reform thermal power generation.

The National Thermal Power Corporation (NTPC) should be the only central firm to operate in the thermal power generation space. It should invest only in large power plants which are 1 GW and above. All thermal plants older than 25 years in operation should be retired. No new power plants should be allowed to set up without guaranteed coal linkages. The thermal power policy should eventually lead to a few large plants owned by NTPC with power purchase agreements (PPAs) with states based on the clause of ensured future supply of coal. This should apply to private players too.

c. Give greater priority to renewable (solar and wind) energy.

India should invest in local manufacturing capabilities for solar panels and create an R&D policy to keep pace with changing technology in this sphere. Between 2019 and 2022, the government should focus on creating a sustainable and viable solar manufacturing ecosystem. Both solar and wind power generation should be given the status of core infrastructure sector, so that acquisition of resources like land and water for these projects becomes easier across the country.

d. Privatising discoms.

The government should create a 15-year roadmap for state governments to exit the commercial operations of discoms. This policy should be built with a consensus building approach and should be binding on state governments. The discom privatization roadmap should be based on the principle of separating content from carriage. The state governments should continue to own the carriage function which should essentially morph into regional power transmission.

e. Transmit electricity in proportion to different sectors.

The Power Grid Corporation should be split in two parts – a government owned utility firm which provides the assurance function of carrying power, and a government owned engineering firm, which can compete with private sector for engineering contracts on commercial basis. There should be a 100% feeder separation for agriculture and renewable sources like solar pumps should be used. Constant investment should be made in transmission utility function to ensure power transfer from energy surplus states (usually North, East, and North East) to energy consumption areas (usually West and South).

f. Include Private Sector.

The government should announce a time-bound two-year process with a proper framework to resolve the problems faced by private thermal power producers. The content, which implies the last mile power distribution to actual consumers, should be a completely private function over the next 15 years. Consumers should be able to switch between private providers in the way they can today change between mobile operators. Consumer-based functions like metering, billing, customer service, and complaints should be with private players. These players should also introduce pre-paid vouchers to ensure small ticket consumers make the best use of power access. Smart power meters should be made mandatory for all classes of consumers manufactured by global companies.



CHALLENGES OF URBANIZATION

According to 2011 census, 32% of India's population is urban. While the proportion has increased over the years and promises to expand substantially in the coming decades, urban infrastructure and governance have not kept up with the pace of growth.

City governance is currently fragmented, and hence our urban regions do not enjoy real autonomy. Regional development authorities too need more autonomy and a clearer mandate. Also, it is necessary to clearly define the touch-points and areas of work to avoid overlaps between the regional development authority and the municipal corporations. The 'Smart City Mission' needs stronger implementation and clear ownership and accountability. Strategic areas such as creation of new cities, empowered city leaders and setting up regional development authorities need to be looked at. The tactical areas include improvements in the processes and execution of our local civic bodies.

Recommendations

a. Create the new 'Golden Quadrilateral' Network 2030'.

The 'Golden Quadrilateral' project of the first NDA government must be expanded to include more corridors such as Mumbai – Kolkata, Delhi – Bengaluru and Pune – Hyderabad, bullet trains to connect the four major cities, multiple airports in top 10 cities, and increased network of airports in smaller cities.

b. Reshuffle authority structure in urban governance.

We need to constitute a 'single authority' for the city. This could be a mayor elected either directly or by corporators. Similarly, larger metro areas which could have multiple municipal corporations need a single Regional Development Authority. The municipal corporations and Regional Development Authorities should also be given the mandate to fully implement the Smart City Projects which are currently implemented separately.

c. Improve tactical governance at city level.

A culture of 'service levels' and quality (in design and work) needs to be implemented. Local ward offices and central municipal offices must function like 'private organizations' that are 'customer focused'. City officials and administrators should have clear ownership over specific areas and should take proactive view on addressing local issues. Process

improvement initiatives (like SPC, Six Sigma) need to be implemented to continuously improve processes across the organization.

d. Establish a single authority to govern public transport infrastructure.

Transport mobility plans for the next few decades should be drawn up with the explicit aim to increase proportion of citizens using public transport. A single urban transport authority for each urban area should be created to provide a 'seamless' interface and connectivity to citizens through a multi-modal public transport system combining regional rail, metro-rail, bus transit, ride-sharing, and other options. Importantly, cities should be incentivised to adopt electric public buses and should have 100% electric public bus fleets by 2030. Citizens should be disincentivised to use private vehicles by levying enhanced parking charges, congestion charges, vehicle taxes, fuel taxes etc.

e. Reform traffic management and infrastructure.

Each urban area should have a good ring-road infrastructure which distributes development in periphery instead of already dense city centres. Parking should not be free; a clear premium on road usage should be calculated and variable parking charges depending on time, day, location, special events etc. should be levied. Law enforcement capabilities of traffic police should be upgraded through better processes, technology and more manpower. Traffic and local police need to be more accountable to the city authority.

f. Upgrade water supply systems.

A master plan for water abstraction and supply systems in the coming decades should be prepared by all cities. 100% water-metering must be made mandatory and a clear roadmap for the same must be prepared. Water pricing should be based on usage, and not as a flat fee. Similarly, plans also must be drawn up for water recycling and sewage water treatment. All new buildings must be required to have water recycling systems in place. Water supply and sewage treatment infrastructure must be repaired, upgraded and maintained regularly.





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¹These are loan facilities to meet temporary mismatches in the receipts and payments of the government.

²Giftedness Defined: National Society for the Gifted & Talented (NSGT):

<https://www.nsgt.org/giftedness-defined/>

³ASSURED Successful Innovation Matrix stands for A-Assured, S-Scalability, S-Sustainability, U-Universal, R-Rapid, E-Excellent, D-Distinctive to help in evaluating success of the innovations.

⁴Title insurance is a private, market-based mechanism under which a private insurer conducts an examination of the relevant property and compiles a thorough report of the rights and encumbrances on that piece of property based on which the insurer undertakes to indemnify the title insurance holder against any defects in the title of the property the insurer was not able to discover during its examination.

⁵The mission of BharatNet is to provide 100 mbps broadband connectivity to all gram panchayats to increase broadband penetration in rural areas and foster socio-economic development.

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