



Policy Challenges 2019-2024

Charting a New Course for India and Navigating
Policy Challenges in the 21st Century



Policy Challenges

2019 – 2024

The Key Policy Questions for the New Government and Possible Pathways

Rapid urbanisation; growing energy demands; environmental degradation; declining agricultural productivity; weak human capital; generating productive jobs; new security threats; and re-positioning India in a changing global order—India today is at a critical policy juncture. This document is an effort to spark ideas and debate on how India can negotiate these challenges and build a cutting edge 21st century policy environment.

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Meenakshi Gopinath
Chairperson of the Board

Policy Challenges 2019-2024: A Foreword

Within the massive electoral mandate for Prime Minister Narendra Modi's NDA-II is embedded the corollary of a high threshold of expectations on responsive governance and effective administration. The *sabka saath, sabka vikas, sabka vishwas* mantra, needs both policy and programmatic initiatives that take on board the 'revolution of rising expectations' and 'aspirational' India in a rapidly changing domestic and global context. While the challenges are manifold, new opportunities for effective intervention do present themselves. The imperative is, of course – as was said in a different ideological context – to "seize the time and seize the hour".

This policy compendium by the Centre for Policy Research (CPR), speaks precisely to the issues at stake for NDA II, identifies the challenges and recommends innovative ways to address them. Policy veterans, experts, thought leaders, and researchers come together here to weave theory and praxis, based on sustained field experience and rigorous data analysis.

These essays are evocative, sometimes even provocative, invitations to serious and sustained dialogue around the eight core thematic clusters that CPR scholars engage with. These are: Foreign Policy and National Security; Climate, Energy and the Environment; Regulation and Resources; Urbanisation; Economy; Welfare; Federalism; and Inclusive Citizenship. The sheer range of issues and the diversity of positions are testimony to the lively debates at CPR that nurture continuous interrogation of the monocultures of the mind and sustain the centre as a non-partisan, credible, dynamic and progressive hub of policy dialogue and research.

The essays on *Foreign Policy and National Security*, speak to the challenges on the path of India's aspirations to global influence and its thrust towards expanding circles of engagement while being responsive to the security concerns of the region. This will require the shedding of older shibboleths and solipsism to craft a proactive assessment of emerging

opportunities in an expanded international role. They also draw attention to the challenge of China's rise, its increased resource deployment in the South Asian region and its implications for our 'Neighbourhood First' policy. One essay argues for the importance of crafting a 'sensible and effective China policy'. It calls for a realistic and dispassionate assessment of how Indian and Chinese interests interact in the region including a candid recognition of the fact that Chinese involvement in South Asia is gaining ground. China is already emerging as a security provider for many regimes in India's neighbourhood. Yet, another essay on India-China relations opts for a different track by pointing out the particular urgency for India to proactively blunt China's hegemonic ambitions in Asia and "preclude its domination from taking root". In an exhortation to not shrink from the possibility of deploying hard power, it calls for the framing of Indian foreign and security policies that have the potential to disrupt the existing world order to ensure its place at the high-table on its own terms. The essays on national security highlight the need to take a comprehensive approach 'encompassing domestic and external, economic and ecological challenges, highlighting the inter-linkages and feedback loops among them to formulate a coherent template for multi-disciplinary and multi sectoral interventions'. The premise is that a shrinking domestic vision cannot sustain an expansive vision abroad.

A critical issue that impacts India's political economy is the dynamic of center-state relations. The essays on *Federalism*, study the effects of federal tensions on social policy financing, interstate water cooperation and urban local governance. An innovative contribution in this segment is an essay advocating for a sub-regional approach to India's foreign policy that engages border states in crafting India's neighbourhood policy. The policy, it is argued, is better served by leveraging the location of border states to go hand-in-hand with the federalization of India's foreign policy.

The essays on *Climate, Energy and the Environment* offer far-reaching recommendations and also sug-

gest immediate short-term interventions to engage with the pressing challenges of Climate Change both globally and nationally. With the US retreat from the Paris Agreement, the essay on Climate Change argues for India to play an imaginative regional role and help lead a 'coalition of the willing' especially with regard to solar energy transitions. They also call for including more experts and specialized researchers in climate change negotiations; going beyond the discourse of seeing climate change agreements as a rich versus poor diplomacy battle and for more robust domestic climate change initiatives that address mitigation and adaptation with greater coordination between government departments.

Above all, a strong case is made for climate change considerations to be integrated into the government's development agenda. The erosion of environmental compliance mechanisms and the costs of environmental degradation due to industrial and development projects are highlighted. Together with recommendations for prioritizing air pollution as a public emergency, these essays represent a coherent vision of practical actionable initiatives to make Climate Change and Environment a policy priority.

India's environmental goals will only be met through a significant re-haul of India's energy system. This requires a shift in the policy paradigm for electricity from 'redistributive welfarism' to 'productive power'. 'Productive power' strategy seeks to promote industries with support from the centre and rationalizing the subsidy regime. It also involves revisiting the definition of electrification.

Essays in the *Regulation and Resources* segment come in for spirited discussion in the context of citizens' rights vis-a-vis land, water, ecology and technology. The essay on land rights based on studies by the Land Rights Initiative (LRI) of CPR, foregrounds pertinent facts about the pervasiveness of conflict over land – with 7.7 million people in India in conflict over 2.5 million hectares of land and with 66% of all civil cases in India being relat-

Foreword

ed to land or property disputes. The causes for this are manifold, including conflicting laws, multiple, overlapping jurisdictions, administrative non-compliance, and judicial pendency. Reforms include administrative and legal interventions including resolving administrative fragmentation and rationalizing land laws.

With the recent appeal by the PM to citizens to become sagacious users of water, the depletion of this precious resource is assuming greater visibility and importance. The essay on water highlights the crisis of water governance. Laws and regulations pertaining to the use of water among claimants, are broadly skewed against already disadvantaged groups with widely disparate rules for urban and rural areas and do not involve water protection. The essay makes a case for urgently reforming archaic laws to address fragmented governance and above all for the adoption and speedy implementation of the framework water legislation.

The third essay is focussed on environmental degradation of cities in the Himalayan mountainous zones. The essay makes case for a national endeavour steered by the Prime Minister that ensures sustainable urbanisation in the mountains with focused town planning, solid waste management, sustainable pilgrimage and tourism, green road constructions, rejuvenation of springs, key water sources and high altitude lake protection.

Data is emerging as an asset that cuts across multiple sectors. Better regulation in decision-making on data governance is thus critical. Since many new technologies break conventional borders and boundaries, India needs to develop strategies for better inter-agency cooperation. The essay on technology explores the imperatives of maintaining the balance between freeing technology of archaic and restrictive licensing regulations and the democratic tenets of the citizens' right to protect privacy. A rights impact assessment is recommended before induction of new digital and internet technologies.

Urbanisation trends come under sharp scrutiny—based on substantial body of research and domain knowledge that CPR has built around this field. The essays on urbanisation include an important recommendation to move policy away from an existing metropolitan bias. They highlight the need to recognize the diversity of urban spaces that constitute India's urban landscape, while pushing for an agenda that focuses on transitional 'rurban' spaces, where over half of India's industries are currently located and where industrial development, skill development and labour related policies can find fertile ground for innovation. Investments in small cities to "create quality jobs and develop skills, for rural and urban workers and build infrastructure that boosts the quality of life" is advocated as the way forward.

The current state of Indian cities may also help us understand the gender gap in labour force participation. The essay on female labour force participation draws on a study conducted by CPR scholars and others to argue that poor urban infrastructure, including transportation, is the primary barrier to women's participation in the labour market. This is an important contribution to our understandings of the phenomenon of declining female labour force participation in India.

The nation's macro-economic challenges, employment crisis, infrastructure deficit and agricultural distress are addressed in the essays on the *Economy*. The document warns against the middle-income trap that the Indian economy faces unless certain aspects of crony capitalism within the economy are addressed. This essay recommends a slew of measures to reform the economy, decrease the growing wealth gap and enhance competition in the markets.

This segment also identifies India's ailing infrastructure as the weak link in the economy and offers innovative approaches for tackling the bureaucratic and financial hurdles that are holding the system back. The essay on jobs argues for the establishment of a National Employment Strategy with regular action plans submitted

by the Ministries to be set up. But above all it calls for improving employment data in India and investing in human capital.

Solutions to India's agrarian crisis are offered in an insightful analysis of the shortcomings – both conceptual and operational – of the efforts to build a National Agricultural Market through technology. The essay advocates for reform in agricultural markets, subsidy regimes and procurement processes. It also calls for increased public investments to enable crop diversification so that farmers can make “complex production and marketing decisions as both climate change and global commodity markets redefine the nature frequency and extent of volatility”.

The essays on the *Welfare State* offer a deep examination of India's welfare architecture and the emerging strains on it. The document points to fundamental challenges including the excessive tendency to centralize and the unequal capacities of state governments to deliver services. Another essay, takes a deeper dive, offering a comparative analysis between MGNREGS and newly-launched PM-KISAN scheme to highlight the potential of inter-linkages.

This segment also focuses on the challenges of elementary education and the need to refocus the education system toward improving learning outcomes in schools. Another essay focuses on the poor quality of education data systems and argues for urgent reforms in data collection and offers recommendations for developing local data management systems, and making better use of data.

The final set of essays deal with one of the thorniest issues facing the country since its inception – that of *Inclusive Citizenship*. In a thought-provoking essay, deep contestations between tradition and individual rights are laid bare. It examines how the courts and legislatures are struggling to navigate these extremely complex challenges using case studies of judgments

like the Sabrimala Temple and Triple Talaq. In another essay, the weakening constitutional provisions for the protection and upliftment of Scheduled Castes and Scheduled Tribes are discussed.

Another essay focuses on the vexed issue of manual scavenging and makes important recommendations aimed at making efforts to eliminate this practice a reality. These include fixing responsibility and accountability for the safety and health of sanitation workers on employers who currently enjoy impunity and support for the families of sanitation workers transitioning out of manual scavenging.

Policy Challenges 2019-2024 is a CPR initiative that attempts to engage policy makers, researchers and concerned citizens alike in informed, objective and nonpartisan dialogue on the issues at stake for the government as the country enters a new decade.

The intention is to both raise the level of discourse on these matters and seek inputs from experts in the policy domain on where more in-depth research and analysis is required.

This compendium is a reflection of the continuing collective engagement of CPR researchers and analysts to build a body of credible scholarly work that simultaneously crafts a new lexicon for policy making. It is also an invitation to move from limits and to engage with possibilities!

Thank you!

Note from the President



Yamini Aiyar

President And Chief Executive

Today, India is at the cusp of a new phase in its development trajectory. Rapid economic growth of the last 25 years has fundamentally altered India's economy, society and polity. But these gains have also brought new challenges. Rising incomes and increased social aspirations have been accompanied with rising inequality, persistent weak human capital, continued under-employment, low agricultural productivity, and increased environmental degradation, giving way to new arenas of social conflict. Responding to these challenges requires India to negotiate many, often conflicting, tensions in our economy and polity. For instance, increased energy demands needs to be balanced with developing clean energy systems. Another example is India's urban transition which needs to be shaped in ways that are both sustainable and responsive to the differing needs of India's rural and urban populations. To explain, India faces the need to invest in improving agricultural productivity while at the same time transitioning large numbers of India's working population out of agriculture into non-farm employment in a manner that is responsive to the technology-led shifts in the labour market. To respond to emerging challenges India needs to build new state institutions. At the same time it has to strengthen its capacity to manage basic, everyday tasks from health and education to building infrastructure. As Prime Minister Narendra Modi has recently stated, "India is managing 21st century transitions with a 19th century administration."

India is confronting these challenges against the backdrop of growing uncertainty in the global world order which makes old tried and tested models of export-led growth harder to achieve in the present. The truth is that the development challenge India faces today cannot be solved through the models that India has deployed thus far. This is not just about "inclusive growth" but about India forging a new development deal, one that goes beyond the 1991 paradigm to focus more explicitly on equitable and sustainable growth.

This compendium of 31 essays by CPR scholars is an attempt to engage in a dialogue that furthers our understanding of the nature of the current challenge, develops new frameworks and identifies, where possible, specific recommendations for practitioners. This compendium is quintessentially CPR. It draws on years of deep, rigorous scholarship, asks difficult questions, and objectively assess evidence to offer a fresh perspective to problems old and new. The objective, as always, is to provoke debate and discussion in order to enrich policy and deepen our understandings of current challenges.

This document is also a tribute to depth and breadth of CPR's policy work. From matters of strategic relevance – India's foreign policy and national security to critical domestic concerns linked to our economy, environment, polity and society – regulation, federalism, economic policy, urbanization, welfare provision, inclusiveness, this is perhaps one of the few policy documents that address such a wide range of issues that shape contemporary India. Through this document, we hope to offer our readers a glimpse of the range of our intellectual engagement across sectors and disciplines but also the opportunity to explore their intersections.

I am truly grateful to all my colleagues whose commitment to the pursuit of excellence and willingness to seek answers to difficult questions has made this document possible. Also a special thanks to CPR's wonderful communications team that has worked tirelessly and patiently in helping us put this document together. And last but not the least, I would like to thank Sandeep Bhardwaj whose sharp insights and careful editing made this document a reality.

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In the current uncertain international system, India requires a foreign policy approach nimble enough to tackle the unprecedented. It also needs to be forceful enough to realize India's growing ambition to be considered a significant player in the world. CPR faculty offers a series of practicable measures for India to play a meaningful role in upholding the world order; ensure its national security; bring about institutional reforms necessary to realize its international ambition; find mutually-beneficial grounds for cooperation with China and develop a more decentralized framework for subregional cooperation within South Asia.



India's Foreign Policy in an Uncertain World

SHYAM SARAN

The foremost foreign policy challenge for the incoming government will be to adapt to a changing world order. Even as Western dominance has diminished, no power has emerged that is capable of inheriting its mantle. Therefore, the current phase of disruption and altered relations among states is likely to continue. It is also becoming clear that the US and China are moving from competition to confrontation. Balancing relations with these two countries will become more difficult and India will have to contend with pressures to join one camp or another. Against this geopolitical backdrop, the new government will have to fashion a foreign policy that offers opportunities for expanding India's strategic space even as it seeks to tackle increasingly complex challenges. Some of these are discussed below.

Challenges, Old and New

While dealing with China has always remained one of India's biggest foreign policy challenges, today the asymmetry in economic and military capabilities between the two Asian giants is expanding rather than shrinking. Managing relations with China has involved confronting it whenever Indian interests are threatened but also being willing to work together where interests are convergent. This has served India well and may continue to be the template for the foreseeable future. Currently China has been presenting a more benign and accommodating face towards India. This is the result of pressures it is feeling from the US, not only on trade but also in the realm of security. While China's current stance is tactical, India should take advantage of this window to advance

its interests wherever possible but without losing sight of the fact that the long-term challenge is to narrow the power gap with its northern neighbour. If the asymmetry continues to grow this will inevitably constrict India's room for manoeuvre.

Moreover, despite the Middle Kingdom's changed approach, New Delhi will continue to face challenges from it in at least a few aspects of foreign policy. India's subcontinental neighbourhood is the most critical for its national security, and China's presence and activism threatens India's dominant position. India is unable to match the resources China is able to deploy in the countries of the region. This trend is unlikely to change even if China adopts a relatively friendly posture towards India.

Pakistan is unlikely to abandon its use of cross-border terrorism as an instrument of state policy though there may be tactical remissions. Despite the Indian government adopting a more aggressive retaliatory policy recently, it is debatable whether this has changed Islamabad's strategic calculus.

The Gulf and West Asia remain important for India's energy security, for the welfare of the six million Indians who live and work there, and because sectarian conflict in the region can have spillover effects on the fragile multi-religious fabric of the Indian state. The new government will have to deal with the ratcheting up of sanctions against Iran by the US. India may have to cut its imports from Iran which is likely to adversely affect its relations with Iran. This may have severe repercussions: Iran is important to India not only for meeting its energy needs but, more importantly, because of the stakes involved in India's development of the Chahbahar port on the Iranian coast and the Northern highway into Afghanistan and Central Asia from it. Iran will also play an important role in Afghanistan where a political transition seems inevitable with the Taliban regaining a prominent political role. For the new government both Iran and Afghanistan will be key challenges.

Recommendations

1. Neighbourhood First: Against this background, the new government must add substance and energy to the "neighbourhood first" policy. Fresh emphasis must be laid on regular political level engagement and on expanding the density of economic and trade relations with neighbours. Proximity is a key asset in promoting economic relations but they also require investment in both physical connectivity and the smooth and speedy passage of goods and peoples across borders. India is the transit country for all its neighbours and its transport infrastructure is more than adequate to handle transit traffic from one end of the subcontinent to the other. It will gain more political leverage vis-à-vis its neighbours by becoming the transit country of choice for them rather than by restricting access. India's economic cooperation programmes in its neighbouring countries do not match China's, but they are significant. The Achilles heel is poor delivery on those commitments compared to China. The new government should set up an autonomous Economic Cooperation Agency to manage all its economic assistance programmes in foreign countries, including lines of credit, capacity building and project assistance. While such a proposal has been on the table for a few years now, without any action, the changed South Asian dynamic (with China rapidly expanding its footprint) necessitates its reconsideration on an urgent basis.

2. Pakistan: Relations with Pakistan remain hostage to its addiction to cross-border terrorism. Repeated efforts to improve relations with Pakistan have been stalled due to terrorist attacks inflicted on India by terrorist groups aided and abetted by Pakistan's military and intelligence agencies. As long as Pakistan enjoys a strong Chinese shield and the US seeks Pakistani support for its withdrawal from Afghanistan, India's efforts to isolate Pakistan internationally will have only limited success. On the other hand, rising tensions between India and Pakistan bring back the hyphenation between the

two countries and invite meddling by outside powers. The new government must find a way to bring about relative normalcy in relations with Pakistan without giving up the focus on terrorism. There are signs that Pakistan is uncomfortable with its heavy, almost singular dependence on China. It may be ready to balance this dependence through a measured improvement of relations with India. The opportunity of a summit with Imran Khan at the forthcoming Shanghai Cooperation Organization (SCO) summit may provide an opportunity to test this proposition.

3. China: For the foreseeable future, India is not in a position to single-handedly check rising Chinese power and influence. Therefore, it should seek to be part of a coalition of major powers which share its concerns about China. The new government must continue to strengthen relations with the US, Japan, Australia and South East Asia as part of countervailing and constraining Chinese power. India has been cautious about its role in the Quad, which is a grouping of the US, Japan, Australia and India, and serves as a forum for security consultations and cooperation. The new government should embrace a more significant role for the Quad while ensuring it remains below the threshold of a full-fledged military alliance. Australia should be invited to the next round of the Malabar Naval Exercise, which currently includes the US, Japan and India.

4. Engaging the World: Deepening relations with Europe – particularly with Germany, which is now the most powerful country in the continent – must continue to be high on India's foreign policy agenda even though Europe has been disappointingly unable to prevent the ongoing fragmentation of the European Union. Africa and Latin America will remain regions of interest, both for their economic potential and for imparting a global reach to India's foreign policy.

5. Russia: During the past few years India's relations with Russia have weakened despite regular summit

level meetings. There may be a perception that Russia is irrevocably committed to its virtual alliance with China. However, Russia continues to be a major power and is not about to become a subordinate ally of China. Central Asia and Eastern Europe, which it regards as its near neighbourhood, are precisely the areas where China's influence is expanding most visibly; this cannot but be a matter of concern to Russia. Furthermore, Russia remains a crucial source of high technology weaponry and military equipment, treating India as a privileged partner. The new government must review its Russia policy and endeavour to expand engagement with all levels of the Russian state.

6. India-US Relations: Despite the unpredictability of the Trump administration, India-US relations have been consolidated. This is reflected most visibly in defence and counter-terrorism cooperation. The challenge for the new government will be in managing the economic/trade pillar of the relationship, which has become a contested space over the years. India has been a major beneficiary of globalization. Its economy has seen rapid growth resulting from a more open trade and investment regime. The temptation to walk back from this must be resisted because this will push India towards the margins of the global economy, reduce its political leverage, and put paid to any prospect of catching up with China.

7. Strengthening MEA: Compared to other major countries of the world, India has an almost skeletal foreign service. In order to sustain foreign policy and live up to its ambitions of playing an active global role, India will need to significantly expand its foreign service corps. Moreover, the budget of the Ministry of External Affairs continues to be paltry compared to other ministries despite the critical role it plays in managing all aspects of India's external relations. It is imperative that sufficient resources are made available to the ministry to enable it to deliver on its critical mandate in a globalized world.



Time for Disruptive Foreign and National Security Policies

BHARAT KARNAD

Several mega-trends are visible in international affairs on the cusp of the third decade of the 21st century. After a trillion dollars spent on the 18-year old war with the Taliban in Afghanistan following a similar amount expended in Iraq and Syria, the US is drained of its wealth, stamina and will for military confrontations of any kind. A reactive and retreating America under President Donald Trump, besides generating unprecedented levels of uncertainty and anxiety, has accentuated the conditions of unusual flux in the international system. Second, with the old certainties gone, traditional alliances (North Atlantic Treaty Organization), trading regimes (Trans-Pacific Partnership), schemes of regional peace (Shanghai Cooperation Organization), and technology and supplier cartels (Missile Technology Control Regime, Nuclear Suppliers Group, et al.) are all alike in disarray; their concerns are now matters of contestation with China staking claim to the pole position vacated by the US. And finally, these developments are compelling major countries to try to protect themselves the best they can by handling things on their own, in

coalition with other similarly encumbered nations, and by exploring new security/military cooperation agreements. There is particular urgency in Asia to blunt China's hegemonic ambitions and preclude its domination from taking root.

State of Play

Unfortunately India finds itself on the wrong side of these trends in the main. This is because it has, in the new millennium, accelerated its efforts to join the very same nonproliferation regimes and cartels that had victimized it all along. Worse, by sidling up to the US and virtually outsourcing its strategic security to Washington, India's historical role as prime balancer in the international balance-of-power set-up—courtesy its hoary policies of nonalignment and its latter-day avatar, strategic autonomy—has been imperiled. This is at a time when doubts about the US commitment to other countries' security have increased along with the apprehensions of allies and friends. With security made a transactional commodity by the Trump

administration, treaty alliances have been weakened, unsettling West European and Far Eastern states traditionally close to the US.¹ India's trend-bucking policy, in the event, will only cement the growing perceptions of the country as unable to perceive its own best interests and to act on them. Its downgrade, as a result of its more recent strategies, to the status of a subordinate state and subsidiary 'strategic partner' of the US means that India will have restricted strategic choices. Its foreign and military policies will therefore lose the freedom and latitude for diplomatic manoeuvre that they have always enjoyed.

Thus, the 2008 civilian nuclear deal, for all practical purposes, signed away India's sovereign right to resume underground testing and froze its nuclear arsenal at the sub-thermonuclear technology level (as the 1998 fusion test was a dud). Agreeing to the Logistics Exchange Memorandum of Agreement and the Communications Compatibility and Security Agreement – the so-called 'foundational accords' – will, respectively, (i) permit the US to stage its military forces out of Indian bases and embroil India in its wars in the extended region, and (ii) to penetrate the most secret Indian communications grid, including the nuclear command and control network.

The Indian government's eagerness to cement the partnership is astonishing considering the trust deficit evident in a long history of duplicitous US behaviour and policies.² By clinging to a feckless and demanding US, India's profile as a fiercely independent state has taken a beating, distanced the country from old friends such as Russia (which is pivotal to balancing China and the US) and Iran (central to India's geostrategic concerns in the Gulf, Afghanistan and Central Asia), lost the nation its diplomatic elan, and has seriously hurt vital national interests.

Placating China is the other imprudent theme that Indian foreign policy has latched on to. It has molly-coddled its most dangerous adversary and comprehensively capable rival in Asia with giveaways – such as non-use of the Tibet and Taiwan cards, refraining from nuclear missile-arming states on China's periph-

ery as a tit-for-tat measure for Beijing's missile-arming of Pakistan, giving the Chinese manufacturing sector unhindered access to the Indian market through a massively unfair and unbalanced bilateral trade regime, etc. On the other hand, it has treated Pakistan, a weak flanking country, as a full-bore security threat when, realistically, it is only a military nuisance. This strategy is at the core of India's external troubles. It has practically incentivized Beijing to desist from peaceful resolution of the border dispute. It has also undermined India's credibility and credentials as 'security provider' to and strategic partner of a host of Asian littoral and offshore states fearful of an ambitious and aggressive China, as well as complicated the country's attempts at obtaining a tier of friendly nations around it as buffer.

A topsy-turvy threat perception has also meant a lopsided Indian military geared to handle Pakistan but incapable of defending well against China, even less of taking the fight to the Chinese People's Liberation Army (PLA) on land, air and distant seas; it is also laughably unprepared for future warfare featuring cyber pre-emption, remotely controlled armed drone swarms, robotic weapons systems managed by Artificial Intelligence, space-based weapons platforms, and clean micro-thermonuclear bombs. In the context, moreover, of a recessive foreign policy and a military that seems unable to wean itself away from imported armaments, it is almost as if the Indian government and armed services have given up on national security. This bewildering state of affairs is in urgent need of drastic overhaul and repair.

Geopolitical Vision and Strategy

Strong nations in the modern era have transitioned into great powers not only through expansive national visions, but also, more significantly, by pursuing policies disruptive of the prevailing order and multilateral regimes they had no hand in creating. India in the 21st century, on the other hand, seems content with the existing international system, measuring its foreign policy success in terms of entry gained or denied in congeries of international power (UN Security Council) and trade and technology cartels (Nuclear Suppliers

Group, Missile Technology Control Regime, etc.). In other words, it covets a place at the high table on terms set by other countries. It is not a mistake made by China or the US (or, to go back in history, Elizabethan England, Germany, Imperial Japan, the Soviet Union and now Vladimir Putin's Russia). The Indian government is hampered by its mistaken belief that upholding the current regional and international correlation of forces and mechanisms of order, and stressing its soft 'civilizational' power, will make the country great.

India with its many infirmities is in no position to undertake system disruption by itself.³ For India to rise as the premier Asian challenger to China and as the other economic-political-military power node in the continent in the shortest possible time – which should be the legitimate national aim and vision – requires a subtle but telling approach. It needs a double-pronged strategy. One prong should stress absolutely reciprocal positions and policies. Thus, Beijing's insistence on 'One China, two systems' should be met with a 'One India' concept. So, the non-acceptance by Beijing of all of Jammu and Kashmir (including the Pakistan-occupied portion) as inalienably Indian territory should lead to formal recognition of and relations with Taiwan; it should also spark off New Delhi's world-wide advocacy of a free Tibet and a free East Turkestan, and of campaigns against 'cultural genocide' and 'ethnic cleansing' in Tibet and Xinjiang.⁴ And China's nuclear missile arming of Pakistan should, even if belatedly, trigger India's transferring strategic missiles to the states adjoining China on land and sea to ensure that, like India, China too is permanently strategically discomfited.

Hamstringing China should also involve meta-measures to carve out separate, loose and specifically anti-China security coalitions from the two important groups India is part of. BRICS (Brazil-Russia-India-China-South Africa) is an entity dominated economically and trade-wise by China. This is something that arouses wariness in the other three countries, which can be mobilized to form a smaller, informal, security-cooperation-minded coalition, BRIS (Brazil-Russia-India-South Africa). It will assist

in hedging Beijing's military options and affect China's economic expansiveness. Likewise, the US's importance to international security has to be whittled away. The Quadrilateral (US-Japan-India-Australia) proposed by Japan's Shinzo Abe to contain China in the Indo-Pacific is problematic owing to the centrality accorded the capricious US. India could propose a different set-up – a modified Quadrilateral or 'Mod Quad' with India, Japan, Australia and the leading littoral and offshore states of South East Asia. resisting China's over-lordship and disputing its claims in the South China Sea, with a cooperative Taiwan accorded, to start with, observer status. This would at once define the strategic geopolitical face-off between 'rimland Asia' and a hegemonic 'heartland' China, and reduce the uncertainty attending on America's security role (given that the US and China, owing to their close economic and trading links, are inseparable). Mod Quad will clarify the strategic calculi of member states, while encouraging the US to contribute militarily to the extent it wants to at any time but as an outside party.⁵

BRIS and Mod Quad are extremely practicable geopolitical solutions to share the cost, divide the danger, and generate synergy from the wide-spectrum capabilities, singly and together, of the member states in these two collectives. At the same time, they would stretch China's economic and military resources and minimize the consequences of ambiguity attending on the US role. These new arrangements adhere to the time-tested principle of vision shaping strategy but geography driving it, which makes for cohesion and sense of purpose. BRIS and Mod Quad will enable their member states to be less inhibited in cooperating with each other to deal with the overarching security threat posed by China, but without the intimidating presence of the US (which, typically, pursues its own interests at the expense of any coalition it is a part of). They will instill in the Indian government's external outlook an outcomes-oriented, competitive bent. It may result, for instance, in getting the east-west Ganga-Mekong connectivity project – as a rival to China's north-south Belt & Road Initiative – off the ground.⁶

But BRIS and Mod Quad leave Pakistan out of the reckoning. Pakistan is strong enough to be a spoiler and, in cahoots with China, pose a substantial problem. More than 70 years of tension and conflict with India haven't helped. For a lasting solution it is essential to break up the Pakistan-China nexus. The military palliative for terrorist provocations – air and land strikes – will only drive Islamabad deeper into China's camp. A Kashmir solution roughly along the lines negotiated with General Pervez Musharraf in 2007 that Prime Minister Imran Khan has said Pakistan will accept, is a reasonable end state to work towards.⁷ But India can lubricate such an offer with policies to co-opt Pakistan (along with India's other subcontinental neighbours) economically, by means of trade on concessional terms, and easy credit and access to the Indian market for manufactures and produce. This will obtain the goal of unitary economic space in the subcontinent and lay the foundations for a pacified South Asia – the first step in India's long overdue achievement of great power. Such actions should, however, be preceded by several unilateral and risk-averse military initiatives (outlined later) to establish India's peaceful bona fides and to denature the Indian threat that Pakistan perceives. Simultaneously, prioritizing strategic and expeditionary military capabilities against China and for distant operations jointly with friendly states in the Indian Ocean Region and in Southeast Asia will secure India's extended security perimeter.

National Security Policy Priorities

Lack of money has never been the hitch. Rather, the problem has been and continues to be the misuse of financial resources by the three armed services with their faulty expenditure priorities. Intent on equipping and sustaining inappropriate force structures geared to the lesser threat, they have squandered the colonial legacy of expeditionary and 'out of area operations'. Consequently, they have shrunk greatly in stature even as they have increased in size.⁸ Persisting with thinking of Pakistan as the main threat long after it credibly ceased to be one post the 1971 war has resulted in an Indian military able to fight only short-range, short-duration, small and inconclusive wars. Indeed, so geared

to territorial defence and tactical warfare are the Indian armed services that they have paid scant attention to strategic objectives and to the means of realizing them. The political leadership, for its part, has shown marked lack of interest, and failure to articulate a national vision and to outline a game plan and strategy. It has chosen the easy way of relying on the armed services professionally to do the right thing by proffering the right advice – which they haven't.

Breaking the Pakistan-China nexus is an imperative. It requires the Indian government to first seed a conducive political milieu by making certain safe unilateral military moves. What the Pakistan Army most fears is India's three Strike Corps; if this 'threat' is denatured, a milieu with enormous peaceful potential can be created. Considering the nuclear overhang and zero probability of the Indian government ever ordering a war of annihilation – which is the only time when these armoured and mechanized formations will fight full tilt – three corps are way in excess of need. They can be reconstituted and the resources shifted to form a single composite corps adequate for any conceivable Pakistan contingency. The rest of the heavily armoured units can be converted to airborne cavalry, and to light tanks with engines optimized for high-altitude conditions; three offensive mountain corps can thereby be equipped to take the fight to the PLA on the Tibetan Plateau. The nuclear backdrop can likewise be changed for the better by India removing its short-range nuclear missiles from forward deployment on the western border and perhaps even getting rid of them altogether, because hinterland-based missiles can reach Pakistani targets with ease. These two moves made without demanding matching responses will cost India little in terms of security, establish a modicum of trust, persuade Pakistan of India's goodwill, and confirm China as the Indian military's primary concern. It will hasten normalcy in bilateral relations.

Tackling China at a time when it is widening the gap with India in all respects necessitates India using the playbook the Chinese successfully used against the US, that Pakistan has used against India, and North Korea against America, when facing an adversary with

a marked conventional military edge. It means revising the nuclear doctrine to emphasise Nuclear First Use (NFU) and deploying weapons to make this stance credible. Emplacing atomic demolition munitions in Himalayan passes to deter PLA units ingressing in strength across the disputed border is one tripwire. Another is to declare that any forceful Chinese military action that crosses a certain undefined threshold may automatically trigger the firing of canisterised medium- and long-range Agni missiles, now capable of launch-on-launch and launch-on warning. Additionally, the large numbers of Chinese missiles positioned in Tibet should be seen as the third nuclear tripwire. As there is no technology to reliably detect and determine the nature of incoming warheads, any missile PLA fires will reasonably have to be assumed to be nuclear-warheaded. Such a posture leaning towards action will create precisely the kind of uncertainty about the Indian reaction and response that will bolster its deterrent stance.⁹

Exorbitantly priced aircraft carriers are unaffordable and, in the age of hypersonic and supersonic missiles, a military liability. The Indian naval budget should instead

prioritize nuclear-powered ballistic missile-firing and attack submarines, and a surface fleet of multipurpose frigates. The Indian Air Force needs to radically cut the diversity of combat aircraft in its inventory, rationalize its force structure and streamline its logistics set-up. This will be facilitated by limiting the fleet to just three types of aircraft—the multi-role Su-30MKI upgraded to ‘super Sukhoi’ configuration in the strike and air superiority role and progressively enhanced versions of the indigenous Tejas light combat aircraft for air defence, the follow-on Advanced Medium Combat Aircraft for longer reach and bigger punch, and lease-buying 1-2 squadrons of Tu-160M2 ‘Blackjack’ strategic bomber from Russia as the manned, recallable, vector in the country’s nuclear triad.

Politically, the most difficult policy decision for the government will be to resume nuclear testing. This is absolutely necessary to obtain tested and proven thermonuclear weapons of different power-to-yield ratios. India has got by with a suspect thermonuclear arsenal for 20 years. It is time India’s strategic deterrent acquired credibility.

END NOTES

1. An unreliable US, in fact, so concerns its NATO allies that the French defence minister Florence Parly in Washington asked a little plaintively, ‘What Europeans are worried about is this: Will the U.S. commitment [to NATO] be perennial? Should we assume that it will go on as was the case in the past 70 years?’ See ‘French defense chief questions US commitment to NATO’, AFP, *RadioFreeEurope, Radio Liberty*, 18 March 2019, <https://www.rferl.org/a/french-defense-chief-questions-us-commitment-to-nato/29829763.html>.
2. Bharat Karnad, *Why India is Not a Great Power (Yet)* (New Delhi: Oxford University Press, 2015), 187–219.
3. For a detailed analysis of its various infirmities that preclude India’s becoming a great power anytime soon, see Karnad, *Why India Is Not a Great Power (Yet)*.
4. China sees itself as the main protector of Pakistan’s sovereignty and territorial integrity. Visiting Islamabad during the Pulwama crisis, the foreign minister Wang Yi declared: ‘No matter how things change in the world and the region, China will firmly support Pakistan upholding its independence and territorial integrity and dignity.’ See Sutirtho Patranobis, ‘China firmly with Pakistan, says Beijing as Islamabad raises Kashmir in top talks’, *Hindustan Times*, 19 March 2019, <https://www.hindustantimes.com/world-news/china-firmly-with-pakistan-says-beijing-as-islamabad-raises-kashmir-in-top-talks/story-5qM8HPgUQkl7ZwPCQEfh3O.html>.
5. Bharat Karnad, ‘India’s Weak Geopolitics and What To Do About It’, in Bharat Karnad, ed., *Future Imperilled: India’s Security in the 1990s and Beyond* (New Delhi: Viking, 1994), 19–20.
6. Bharat Karnad, *Staggering Forward: Narendra Modi and India’s Global Ambition* (New Delhi: Penguin-Viking, 2018), ch. 4.
7. Imtiaz Ahmad, ‘2-3 solutions available to Kashmir issues, says Pak PM Imran Khan’, *Hindustan Times*, 4 December 2018, <https://www.hindustantimes.com/world-news/2-3-solutions-available-to-kashmir-issues-says-pak-pm-imran-khan/story-AOHvnLYCspm1mOqHp74K6I.html>.
8. Karnad, *Why India is Not a Great Power (Yet)*, ch. 5.
9. Bharat Karnad, ‘Shifting the Nuclear Security Focus to China’, in Lieutenant General A.K. Singh and Lieutenant General B.S. Nagal, eds., *India’s Military Strategy in the 21st Century* (New Delhi: Centre for Land Warfare Studies and KW Publishers, 2019); Karnad, *Staggering Forward*, 344–349.



Need for a Comprehensive National Security Strategy

SHYAM SARAN

In the recent general elections, national security has emerged as a major political issue. However, the discourse over national security has been limited to dealing with specific security-related episodes such as terrorist attacks at Pathankot, Uri and Pulwama on the Line of Control with Pakistan; the stand-off with Chinese forces on the India-Bhutan-China border; and the security operations in the disturbed state of Jammu and Kashmir. A holistic discussion of India's national security rarely occurs in the public space or even within the government. The Indian state does not possess an overarching national security strategy (NSS) that comprehensively assesses the challenges to the country's security and spells out policies to deal effectively with them; of course such a strategy must be executed within the parameters laid down by the Constitution of India and the country's democratic political dispensation. In the absence of an overall strategy, the state relies on ad hoc responses of questionable utility. Moreover, it

possesses no mechanism that permits it to learn from its experiences. Ad hocism also neglects the broader political, social and economic context within which specific episodes must be located and understood.

A modern state confronts multiple and simultaneous challenges across several domains. National security cannot be confined to the use of the state's coercive power to overcome domestic and external threats. For example, threats to domestic peace and stability may arise from economic and social grievances. A knee-jerk reaction may leave these grievances unaddressed while the use of coercive power exacerbates rather than ameliorates the situation. For instance, left-wing extremism in India is rooted in the persistent exploitation of tribal populations.

Similarly, the vulnerability of our borders is linked to a large-scale smuggling and contraband trade that permits channels through which terrorists and

criminals find easy access. Such threats cannot be dealt with solely through enhanced military capabilities without addressing the drivers of illegal trade. It is recognized that the prolonged use of subsidies for ostensibly social welfare purposes creates arbitrage opportunities for cross-border smuggling. Such criminal activities often entrench powerful mafia groups with close links to politics. While groups of this sort constitute a serious threat to domestic security, the solution lies as much in the economic domain as in strengthening the state's law and order machinery. The NSS will need to acknowledge such cross-domain linkages and policy interventions.

For a modern state operating in an increasingly globalized world, the line between what is domestic and what is external is becoming increasingly blurred. For example, terrorism is a threat to domestic security but may have external links. Dealing with terrorism may require not only domestic interventions but also action on the external front. Issues related to water security may involve dealing with neighbouring countries with which India shares its major rivers. Thus a combination of domestic and external interventions may be necessary. It is only within a comprehensive NSS that such complex inter-relationships between domestic and external dimensions can be analysed and coordinated policy responses formulated.

We live in a technology-driven world; new technologies such as the Internet and digitization are enabling powerful tools for states to enhance national security but also creating new and serious vulnerabilities and security risks. Cyber security has become a major concern and it is only through developing advanced technological capabilities that a state has a chance of defending itself against cyber attacks. The NSS would enable the identification of critical infrastructure that may be vulnerable to cyber attacks, and the development of human resources capable of identifying attacks and protecting and restoring critical systems. Anticipating cyber attacks and hardening systems against them become ever more necessary as economic and governance activities increasingly rely on digital technologies. Ad hoc responses would

be grossly inadequate. A critical aspect is that in a democracy like India, the state's use of advanced digital technologies for surveillance and intelligence gathering must not violate the citizens' right to privacy and freedom of expression. There is a trade-off between enhanced security and the citizens' rights guaranteed by the Constitution, and this must be clearly spelt out for the people of the country and well-considered solutions put forward. National security must not become a justification for a surveillance state. The danger of relying on ad hoc responses is that they may cumulatively lead to a predatory and authoritarian state that limits the exercise of democratic rights. The NSS must deal with this dilemma upfront.

Technological change and geopolitical shifts are also impacting India's nuclear security. The country's nuclear deterrent must deal with the challenge of two nuclear-armed neighbours: China and Pakistan. Furthermore, the nuclear domain is becoming closely interlinked with cyber and space-related capabilities. The development of India's nuclear deterrent must take into account the impacts of such technological change. The overall nuclear security environment is also being affected by geopolitical shifts with the gap between the US and Russia on the one hand and China on the other reducing significantly. The older nuclear order anchored in bilateral US-Russia arms control arrangements is now unravelling because China remains outside these arrangements. A new nuclear order is becoming essential as we move into a world of multiple nuclear states. India will need to determine what role it should play in the shaping of this new nuclear order.

Ecological degradation and climate change have significant impacts on national security. There may be direct consequences of the melting of glaciers on the deployment of troops at high-altitude locations on India's mountainous borders. Sea-level rise as a result of global warming may inundate naval bases along the coasts. There may be large-scale migration of populations from low-lying coastal plains towards higher ground, and this may lead to social disruptions and economic distress, undermining domestic security. Therefore, the NSS must anticipate the consequences

of ecological degradation and climate change, and formulate coping measures.

Another oft-neglected dimension of India's national security that must be integrated within the NSS is strategic communications. It relates to the indispensable need, particularly in a democracy, to shape public perceptions through constant and consistent public outreach and to provide a channel for public opinion or feedback. This would enable the government to explain its policies, garner public understanding and support, and review and adjust policies on the basis of feedback received. This has become a far more difficult and complex challenge due to the spread of social media, the phenomenon of fake news, and the instant nature of news gathering and dissemination. Governments need to stay ahead of the news cycle, establish credibility as a source of authentic and reliable information, and shape public opinion rather than be reactive all the time. National security may be adversely impacted by the spread of false news by hostile elements within and outside the country using social media. This will require strong and advanced cyber capabilities, which may have to be constantly upgraded to keep pace with rapid technological advance.

An NSS for India needs to take a comprehensive approach, encompassing domestic and external and economic and ecological challenges, highlighting the inter-linkages and feedback loops among them and on that basis formulate a coherent template for multi-disciplinary and multi-sectoral interventions. Such a template would serve as a guide for a whole of government approach, ensuring that intervention in any one domain does not contradict or even negate intervention in another domain. It is only by having a big picture constantly at hand that contradictory and wasteful policies can be avoided. We should move towards a pattern of governance where interventions in one domain reinforce interventions in other domains.

Drawing up an NSS for India must be a key item on the agenda of the new government. This may be tasked to a group of eminent persons from different

disciplines who could consider India's national security in its multiple dimensions. In a democracy, an NSS should be citizen-centric and must reflect the values and beliefs of the people; at the same time, it must seek to raise public awareness of and shape public perceptions about national security issues. The proposed NSS must take the Constitution of India as its guide and its objective should be the safeguarding and consolidation of India's democracy. This approach would, for example, reject intrusive governmental intrusions into the lives of ordinary people, violating their rights enshrined in the Constitution.

In every domain of national endeavour there must be pursuit of excellence and high standards to enable India to compete successfully in a highly competitive and globalized landscape. Islands of excellence cannot be sustained in an ocean of mediocrity and low quality. This need not conflict with properly designed policies for affirmative action designed to reduce and eventually eliminate the consequences of long-standing social and economic disabilities suffered by sections of India's citizens. What is critical is the state's capacity to design, execute and evaluate interventions in different domains, and for this the institutions and processes of governance may need to be altered and strengthened. New institutions may be required to deal with newly emerging challenges. This, too, must be included in the NSS.

Previous exercises undertaken to promote national security could serve as useful reference material for the NSS. These include the Kargil Review Committee report (2000), the Report of the Naresh Chandra Task Force on Security (2012), and the document entitled 'Building Comprehensive National Power: Towards an Integrated National Security Strategy' prepared by the National Security Advisory Board (2015). Only the Kargil report has been made public. It is recommended that these reports and the NSS prepared by the new government should be public documents and open to public debate and review. A well-informed, vigilant and educated public opinion is the best assurance of national security.



Managing India-China Relations in a Changing Neighbourhood

ZORAWAR DAULET SINGH

The importance of India-China relations in India's overall foreign policy cannot be overstated. Not only is China's rise changing Asia's geopolitical landscape and the global balance of power, its involvement in South Asia in recent years has augmented its position from being India's largest neighbour to an engaged great power across the subcontinent. Unlike in the Cold War era, when a backward China had been confined to a limited role in South Asia's security and economy, four decades of reform and opening up to the world have equipped the country with the financial wealth, industrial strength and military capacities to pursue, should it choose to do so, an ambitious role in South Asia.

Thus, India's China policy choices are profoundly consequential for the Indian government. It entails opportunities as well as risks with implications across a gamut of issues such as India's global status and

effectiveness in international institutions, geopolitical security and economic transformation. The persistence of an unresolved border dispute in this context only reinforces the importance of crafting a sensible and effective China policy. As India's foreign secretary told members of the Lok Sabha in February 2018, 'We cannot see the relationship with China the way we perhaps saw it thirty years ago, or even 15 years ago ... both countries share the belief that this relationship is slated to become one of the defining relationships of this century, certainly in our region...' One of the areas that India's China policy needs to focus on is the neighbourhood because it is the arena where India-China competition and mistrust have tended to be most acute in recent years. If not managed sensibly, it could undermine India's interests and regional position, along with unravelling the prospects for cooperation on other important fronts.

The Policy Challenge

For the past decade, India and China have been working according to rival geopolitical visions. Although China has been a direct neighbour of South Asia and India since 1950, it is only in the past decade that Chinese policymakers have reformulated their regional policy to pursue more sustained political and economic relationships with several states in the subcontinent and the Indian Ocean littoral. Following Xi Jinping's foreign policy guidelines of 2013 and 2014, China has adopted a policy aimed at enhancing the development options of its neighbours as well as promoting new lines of communication or corridors with its southwestern periphery. Much of this impetus has been provided by the Belt & Road Initiative (BRI) – a grand connectivity plan that envisions a network of states economically linked to China through a variety of commercial-financial relationships and industrial projects. South Asia is one of five regions or subregions identified as areas to expand China's geoeconomic footprint.

Since the 1990s, India too has contemplated ways to reconnect with its South Asian neighbours and inculcate a spirit of integration and interdependence in the subcontinent. While this process has found bipartisan political appeal, the ideas, resources and institutions to advance meaningful regional integration remain at a fragmentary level. Nothing underscores the meagre level of interdependence than the following stark statistics: merely 5% of South Asian trade is intra-regional; intra-regional investments constitute less than 1% of total investment in the subcontinent.

Although India and China are today seen as regional competitors, neither power has succeeded in implementing its vision fully. Arguably, the main reason has been the inability of both countries to situate their rival visions in a region-wide approach. India has not fully come to terms with the utter lack of intra-regional trading and infrastructure networks; nor has New Delhi been able to allocate adequate resources and capacities or adapt or renew institutions

to match its aspirational rhetoric. Despite possessing far greater economic strength, and considering the scale and ambition of the BRI, China too has been unable to make a meaningful regional impact. Recent experience has proven that circumventing India – given its geopolitical centrality and market size – is not a viable path for any sustainable connectivity plan for the subcontinent.

Yet, unbridled competition poses grave risks for a fragmented subcontinent in the coming decades, a future that would undermine Indian interests far more than Chinese. Transforming South Asia must, therefore, be predicated on tapping India's unique advantages: the size of its domestic market, which makes any geo-economic plan's success dependent on India's participation and involvement, and the overt and subtle geopolitical influence the country continues to wield across the neighbourhood; it must also leverage China's financial and industrial capabilities to construct infrastructure and connectivity capacities in the neighbourhood.

In short, both countries have strengths that are not being fully leveraged to advance an open subregional geo-economic order. What has been missing from the policy discourse is an attempt to explore alternative futures and more constructive frameworks; there have been no attempts to visualize the changing regional setting in ways that would still secure vital Indian interests, advance stability and deepen regional economic development, while also enabling China to pursue its engagement with South Asia.

Intersection of Indian and Chinese Interests

The first step in such an exercise would be to undertake a brief assessment of how Indian and Chinese interests interact in the region. What can we observe about China's involvement in South Asia? China usually works with whatever regime is in power and avoids interfering in domestic political battles. Beijing's main priority is protecting its economic investments. In some cases where China has deeper geostrategic

interests, particularly in Pakistan and Myanmar, it has cushioned adverse reaction from the US towards these states. Hence, in limited ways, China is already a security provider—certainly at the political and diplomatic levels. And this factor shapes how many neighbourhood regimes now perceive China: as potential insurance against possible Western pressure and as a hedge against uncertainty about Indian positions in times of domestic crises in these states. There is little doubt that China's engagement has improved the bargaining position of India's neighbours vis-à-vis India and other major external powers.

India and China's regional policies suggest that there are both overlapping features as well as geopolitical faultlines at play. Both neighbours have a common interest in (i) managing non-traditional threats such as terrorism, extremism, separatism and distress migration that impact regime stability of smaller South Asian states; (ii) promoting secular and stable regimes; (iii) promoting open sea lanes and ensuring the security of their maritime trade routes; and (iv) geoeconomically connecting South Asia with East Asia.

At the same time, there are some key differences in India and China's regional approaches. First, China appears to be more interested in inter-regional interdependence and connectivity, while India is mainly interested in subregional integration. Put another way, China seeks to connect South Asia with China; while India seeks to bring South Asia closer from within as well as more connected with Eurasia and South East Asia. Second, there is a large measure of uncertainty about the geopolitical implications of the BRI in South Asia. India's main concern is that deeper connectivity between India's neighbours and China will reorient the foreign policies of South Asian states in ways that could eventually undermine Indian interests and challenge its claims to regional authority. More broadly, China's engagement in South Asia might also adversely influence domestic politics in the subcontinent and strengthen anti-India political forces; the latter could spill over onto the domestic politics in India's states, thereby impacting periphery security and

social stability. Third, a major faultline would be the militarizing of China's regional connectivity projects. Such a hypothetical scenario would pose military security challenges to India as well as place China in a position to act as a direct security provider in the subcontinent, an outcome that would have profound consequences for the geopolitics in the region.

Policy Recommendations

One of the key geopolitical challenges for Asia over the next decade is whether and how a rising India and a rising China can learn to be sensitive to each other's core interests while pursuing engagement with each other's neighbours. In the April 2018 'informal summit' in Wuhan, both political leaderships had sought to arrest the escalating tension and competition in the relationship. While their differences and disputes remain unresolved, both sides have come to recognize the costs and disadvantages of a semi-hostile and contentious relationship. In particular, building trust and 'strategic communication' in the neighbourhood have now been recognized by both leaderships as shared policy goals.

1. Capacity building and assisting weak states:

Although India and China have a common interest in regime stability, both sides have yet to explore structured cooperation on this front. One form such cooperation could assume is joint assistance of weak states through coordinated capacity enhancing projects and training programmes. Indeed, the April 2018 talks have laid a framework for 'India-China plus one', that is, India-China cooperation in third countries in the region.² In October 2018, India and China launched a programme to train Afghan diplomats as an initial step in a long-term effort for trilateral cooperation (India-China-Afghanistan).³ This confidence-building measure, albeit modest, has opened a window for precisely the type of coordination between two regional powers that has often been ambivalent of their shared interests. Such third-party cooperation should be extended to other states confronting domestic challenges; for

example, the two nations could together support Bangladesh's secular forces in their struggle against extremism or assist Myanmar in responsibly managing domestic order.

2. Coordinating geoeconomic plans: Lacking in finance capital and industrial resources, India cannot undertake the sole burden of lifting South Asia from underdevelopment and low interdependence, especially given the growing domestic claims within the country itself. If Indian requirements in the subcontinent are to advance connectivity (both within and between South Asian states) and deepen the developmental process, China's engagement can be nudged or leveraged in directions that also advance India's long-term interests. Building constructive regional partnerships are unavoidable and China is one of the key players that need to be engaged more strategically by India.

Can China's infrastructure projects increase South Asia's internal connectivity and economic interdependence? Much of the viability of logistical networks and energy projects is linked with India's economy and access to its large market. For example, hydropower projects developed by China with India as the main eventual market could be a form of trilateral cooperation. Another instance is China's construction of a new terminal at the Chittagong port in Bangladesh, which complemented India-Bangladesh coastal shipping cooperation.⁴ Similarly, projects like the BCIM (Bangladesh-China-India-Myanmar) corridor could reconcile India's vision to deepen connectivity with its smaller neighbours with China's vision to connect its southwestern provinces with South Asia.

More broadly, India-China geoeconomic coordination and cooperation, including through joint bilateral and multilateral projects, is necessary to avoid duplicating large infrastructure projects that could otherwise burden the region with excess supply-side capacities and fiscal burdens. India's official position on the BRI (beyond the China-

Pakistan Economic Corridor that contradicts India's sovereignty over Jammu and Kashmir) is based on legitimate questions around sustainability, viability, transparency and industrial benefits to the local communities of some of China's economic projects. India-China coordination in third countries could help in addressing these issues by giving India a say in the choice and design of projects, along with making China's economic involvement more in sync with the subregional political economy as well as with established international norms. The second BRI forum held in Beijing in April 2019 indicates Chinese leaders might be responding to the critique from India and other countries. The communiqué called for 'extensive consultation'; 'green', 'people-centred and sustainable development'; and 'high-quality, sustainable infrastructure' that is 'inclusive and broadly beneficial'.⁵ But for India to explore whether the BRI's adaptation does genuinely augur a consultative and sustainable geoeconomic approach by China in the subcontinent, its own position on the initiative needs to evolve such that its legitimate sovereignty concerns do not constrain the formulation of a more sophisticated policy.

3. Maritime cooperation: In recent years, India has recognized China's 'Malacca dilemma'—a reference to the long and insecure lines of communication through the northern Indian Ocean that China relies upon for much of its international trade—and its corresponding interest in improving the security of its Indian Ocean trade routes. China, for its part, too needs to reassure India on its port projects and the military aspects of its regional involvement, particularly in the South Asian littoral. Even as they recognize some of China's maritime security concerns, Indian policymakers must be prepared to counteract any attempts at militarization or conversion of Chinese infrastructure investments in South Asia into forward-basing facilities for the Chinese military. A failure to do so might impel other great powers to respond to China with their own military bases on the subcontinent's maritime periphery, a process that would pose adverse

consequences for regional geopolitics and also erode India's influence in the neighbourhood.

Competitive Coexistence in a Common Neighbourhood

India and China's policies are beginning to resemble each other. Just as Beijing's engagement with India's neighbours increases the status and bargaining position of these smaller states vis-à-vis India, New Delhi too engages with many South East Asian states who seek to hedge their dependence on China by developing more economic and geopolitical options. Yet, neither side is under any delusion that India's neighbours can be rallied against India or that India can rally South East Asian states to balance Chinese power. The balance of power simply would not allow such a thing in practice. The defence budget of the entire South East Asian region is about \$45 billion. China's is four times that figure and with far more modernized and balanced capabilities. Similarly, the asymmetry between India and its neighbours is even higher. In South Asia – with the exception of Pakistan – none of the other states are in any position to present a threat or challenge to India, even with outside assistance. This proposition is likely to be even truer over the course of the next five years.

If we look at the official rhetoric from the region, what stands out is a similar discourse being espoused by most of the smaller South Asian states. Nearly all of India's neighbours have expressed a preference for (i) non-alignment or strategic autonomy as a guiding principle in their foreign relations; (ii) multi-directional economic engagement with India, China, the US, Japan and other powers; and (iii) sensitivity towards India including publicly disavowing any move towards offering military facilities or bases to external powers and thus reassuring India on its vital interests. As one recent study observed, smaller South Asian countries 'largely still see India as

the dominant power in South Asia, suggesting that Chinese economic activity, while welcome, will not necessarily translate into major military or strategic gains'.⁶ Another discernible trend is that neither India nor China seems to be pressuring or cajoling smaller South Asian states to make hard choices, or persuading these states to adopt postures and policies that run contrary to the main interests of its regional competitor.

In short, we do not see a Cold War-style competition, which suggests some sort of a tacit acceptance of competitive coexistence in their overlapping peripheries. So while India and China are competing they are doing so within a framework of self-restraint. This could gradually pave the way for a conception of a regional order with informal norms on the 'rules of the game' in the subcontinent. Other things being equal, internally resilient and economically vibrant neighbours are likely to be in both India and China's interests. If stability in their overlapping peripheries is a common interest, it should pave the way for more sustained bilateral conversations to mitigate some of the uncertainty-induced competition and mistrust; these could also seek to proactively exploit the untapped overlapping interests likely to be emanating from China's growing involvement in South Asia.

Far-sighted and pragmatic voices in the West are advocating for 'stable competition' or 'responsible competition' with a rising China to avoid precipitating a second and costly Cold War. Indian policymakers must take the long view and pursue an approach of peaceful competition in the neighbourhood. India and China need to engage in a strategic conversation on the subcontinent and its various parts towards coordinating some of their regional connectivity visions and policies. The failure to pursue such a dialogue, and to arrive an understanding on an agreed framework for Indian and Chinese policies, would constitute a recipe for regional instability and a costly zero-sum rivalry that neither country can afford in a rapidly changing international environment.

Policy Challenges | CLIMATE ENERGY AND 2019 – 2024 THE ENVIRONMENT



Climate change is poised to have a profound and devastating impact on India's development agenda. With environmental quality across varied indicators only worsening – most recently in the form of rising air pollution – researchers at CPR offer a series of practical policy approaches in the areas of climate, energy and the environment. They argue that India must rethink its relationship with international climate negotiations and domestic climate policy, execute a well-conceived roadmap for air pollution control, strengthen the country's environmental compliance regime, and enhance electricity access for the poor.



Rethinking India's Approach to International and Domestic Climate Policy

NAVROZ K. DUBASH AND LAVANYA RAJAMANI

India has traditionally approached climate change as a diplomatic issue, insisting that the developed world – because of their disproportionate role in causing the problem – should lead the way in reducing emissions, and provide the developing world the finance and technology to do so. While this approach is entirely justifiable and has served India well in the past, there are compelling reasons for the country to rethink its approach to international and domestic climate policy. First, climate change is likely to have profound and devastating impacts in India, impacts that will make the task of development and poverty eradication considerably harder. Second, there are several cost-effective actions that India can take that serve its development as well as climate interests. Rethinking our approach would translate internationally into our joining, even leading, a ‘coalition of the willing’ that advocates for an ambitious and strong rules-based global climate regime. Domestically, it would translate into a proactive

exploration of lower-carbon opportunities for growth that foster development, while investing in climate adaptation and resilience. Rethinking our approach at the international and domestic levels, however, calls for strong institutions for climate governance.

This paper, after a brief context setting section, lays out elements of an approach to international and domestic climate policy that is likely to serve India well in the long run.

Context

Climate change, often characterized as the ‘defining issue of our age’, is predicted to have profound ‘impacts on natural and human systems on all continents and across the oceans.’¹ These impacts are likely to cause devastation in India, a country with 7500 km of coastline, extensive tracts of low-lying

areas, high population density, poor infrastructure and continued reliance on agriculture for livelihoods. With the 1°C warming that has already occurred since pre-industrial times, Himalayan glaciers have begun to retreat, and there has been a marked increase in the frequency and intensity of heat waves,² droughts, extreme rainfall events³ and floods. If the world warms to between 2.6°C and 3.2°C, as the UN climate secretariat estimates it will based on current country pledges, this will have serious, pervasive and irreversible consequences for India – not just in terms of impacts on peoples and ecosystems, but also on economic growth, livelihoods and wellbeing. Climate change is predicted, for instance, to reduce agricultural incomes by 15-25% by the end of the century in India.⁴

International Climate Policy

India's position in the international climate negotiations is set within larger geo-political developments that also inform and influence its broader foreign and energy policy. With the US retreat from the Paris Agreement, the Brazilian President Bolsonaro's equivocation on it, and the defeat of the Labour Party in Australia which advocated strong climate measures, the momentum that led to the Paris Agreement has begun to dissipate. There is a leadership and imagination vacuum in global climate politics, which India could seek to fill.

For example, India could reach out to China, which has long been its negotiating partner in retaining differentiated responsibility, to forge a mutually beneficial alliance on the global solar energy transition. India leads the International Solar Alliance and provides a substantial market, while China has technological leadership in solar panels and storage technologies. Both countries are involved in the Asia Infrastructure Investment Bank. As the Africa region develops its infrastructure, an India-China alliance could help provide a vision of and the technological and financial means for realizing a low-carbon yet cost-effective future. In addition, and consistent with this approach, India could seek to realize its potential

as a leader of vulnerable nations. Doing so would also be viewed favourably in the South Asia region, by vulnerable countries such as Bangladesh, Bhutan and Nepal. Notably, these measures allow India to be a climate leader even as it takes advantage of opportunities for economic and political gain; that is, they do not require the country to sacrifice economic gain and political position for climate policy.

Based on approaches such as these, India could join forces with others to form part of the 'coalition of the willing' in global climate politics. Such a coalition is a particular need at this juncture in the negotiations. With the conclusion of the Paris Rulebook negotiations in Katowice, Poland, in December 2018, the politically charged negotiations on obligations, rules and institutions are at an end, and the regime has shifted gears to the day-to-day business of implementation. The Paris Agreement builds on nationally determined contributions (or NDCs) from countries to reduce greenhouse gases, complemented by a normative expectation of progression and 'highest possible ambition' that calls for these contributions to be strengthened over time.⁵ These terms – 'progression' and 'highest possible ambition' – are not defined either in the Paris Agreement or its Rulebook. Further, while the Rulebook fleshes out informational requirements, and operationalises an enhanced transparency framework, global stocktake, and implementation and compliance mechanism, it still preserves, out of political necessity, considerable flexibility, autonomy and discretion for states; this is particularly evident in their near-absolute control over the content of their NDC.⁶ States could choose to exploit this discretion and create a political and implementation drag in the process, or they could choose to progressively strengthen their NDCs, enhance the quality of the *ex ante* and *ex post* information they provide, and trigger a virtuous cycle of ever ambitious actions necessary to meet the temperature goal of the Paris Agreement. It is in India's interest to be part of the 'coalition of the willing' – nations that seek to progressively strengthen their NDCs, and enhance their ability to meet the procedural requirements of the Paris Agreement and its Rulebook as well as the substantive objective of the climate change regime.

Specifically, first, India should provide information on its NDC, set against the larger context of its development aspirations and resource constraints.⁷ This information should include the planning processes the country has engaged in to reach its NDC, which in turn should include meaningful stakeholder consultations and attentiveness to the human rights impacts of climate change action or inaction.

Second, India should clearly explain how its NDC is fair and ambitious, and on what objective criteria and benchmarks. This approach would allow India to ask how these criteria and benchmarks could be applied to the NDCs of other countries as well, turning its long-held emphasis on the principle of equity in climate change negotiations into a practical and applied measure. It is by providing robust information in the context of its NDC that India can introduce into the global assessment of progress criteria and benchmarks which assess ‘relative fair shares’.

Third, in relation to ex-post tracking of progress in implementing its NDC,⁸ India should identify objective defensible indicators to assess its progress with its NDC, take proactive efforts to address capacity gaps in implementation and reporting, and gradually improve the quality, precision and detail of the information it provides. India’s implementation should demonstrate a high degree of ‘due diligence’ (best possible efforts) in meeting the objectives of its NDC.

Finally, in relation to the global stocktake process every five years,⁹ India should work with negotiating partners (such as South Africa) and vulnerable nations to ensure that the ‘hooks’ on equity in the Paris Agreement and the Rulebook are duly exploited. India should submit its vision of equitable burden sharing and ‘relative fair shares’ to enable a meaningful assessment, albeit a collective one, at the international level of progress towards the global temperature goal.

India’s ability to take a leadership position in this ‘coalition of the willing’ will require a substantial scaling up of the capacity and resources – human, financial, legal, research and institutional – it devotes to engag-

ing in international negotiations, and complementary backchannel processes.¹⁰ The country’s delegations to the climate negotiations are considerably smaller than those of other nations of comparable size and stature. The composition of the delegations tend to favour bureaucrats rather than experts, and there are limited formal channels for national positions to be informed by outputs from the growing research community working in these areas in India. In rethinking our approach to climate policy, international and domestic, India must also rethink its engagement with experts, and the processes for doing so.

Ultimately, the effectiveness of the Paris Agreement, given its hybrid architecture, lies in the strength of the NDCs that parties submit. The strength of the NDCs will in turn depend on international processes that can catalyse more ambitious domestic actions, as well domestic political will and institutional capacity for formulating and delivering ambitious NDCs. It is to these domestic issues that we now turn.

Domestic Climate Policy

As the reality of climate change looms, and its impacts become more real, India – as is true of other countries – increasingly needs to view climate change as a developmental challenge, and not simply as a diplomatic one. Simply put, climate change will make development outcomes more challenging. For example, global pressures to limit greenhouse gases and the emergence of new technologies will make it more complicated for India to power its industries and provide electricity to its citizens in conventional ways. Agriculture, on which a substantial portion of the population still depends for livelihoods, may be particularly hard hit. Cities and coastlines may be subject to disruptions from climate-related events. Water cycles may be disrupted, and the timing and availability of water through rainfall and in India’s rivers may shift. And heat waves and shifting disease vectors will complicate the problem of ensuring public health. Climate change is not an isolated challenge to be addressed by one part of the government;

it is a problem that requires mainstreaming of climate considerations through all sections of the government's decision-making apparatus.

As this discussion suggests, the institutional requirements of managing climate change are considerable. In the last few years, India has begun planning for climate change – including through a National Action Plan, eight national missions covering adaptation and mitigation, and 32 state action plans and greater investment in scientific infrastructure. Yet, a deeper dive into these efforts reveal that the research and analytical capacity in each of these areas is weak, coordination is limited, implementation is patchy across these efforts, and the strategic thinking for truly transformative approaches is lacking.¹¹

Building the capacity of Indian states to address the complex challenges of climate change is but in its infancy. The country needs to go much further down this path, devising and implementing a robust institutional structure that can generate appropriate knowledge, design policy and infrastructure interventions, coordinate across sectoral line departments and across scales of governance, ensure accountability for implementation, and provide an interface to business and civil society groups. Development remains India's number one priority. But development untouched by climate change is no longer possible. Addressing climate change adds to India's problem of developing adequate state capacity. A forthcoming edited volume coordinated by the Centre for Policy Research, *India in a Warming World*, explores how India can truly internalize climate concerns in both its energy consumption and natural resource sectors so as to address climate mitigation and adaptation.

Mitigation

Climate change mitigation, or the limitation of greenhouse gas emissions, has always been tied to India's global negotiating stance. If wealthier countries, and not India, are largely responsible for the problem, why should India undertake costly mitigation actions? A decade ago, the National

Action Plan on Climate Change proposed exploring actions that lead to both development and climate benefits. This principle of 'co-benefits' has guided our actions since, but actions that meet this principle have not been fully pursued and developed. Here, India's status as a late developer is an advantage: we have not, as yet, locked into energy production and consumption patterns, and so can take advantage of new technology and knowledge to build a lower-carbon development path.

India's cities provide a particularly good example.¹² The country is urbanizing rapidly, but much of urban India remains to be built. The next couple of decades afford an opportunity to set up cities where transport needs (and hence emissions but also congestion) are lower due to sensible planning that locates work and living spaces near each other; the travel needs that remain are met increasingly with high-quality public transport and walking (rather than private automobiles); new buildings are designed to need less cooling and heating through intelligent design. Planning processes for urban spaces need to be focused on the multiple objectives that a city should meet in these times – of livability, low congestion, efficient functioning and a small environmental footprint.

India's electricity system provides another instructive case.¹³ Long ridden with problems of unreliability, poor service and loss-making, Indian electricity is likely to be shaken up by the recent steep decline in costs of renewable electricity to levels where it is competitive with coal power. However, the transition is likely to be turbulent, and create winners and losers. For example, industries may choose to shift to renewables thereby increasing the financial burden on distribution companies. Coal-mining regions may, over time, have to move to other industries.¹⁴

Notably, these changes are inevitable and are being driven by global technology trends, not by national climate policies alone. Recently, Tata Power became the most recent example of a company that is planning to pivot from coal to solar for economic reasons.¹⁵ But planning for this future under the rubric of a transition

to a low-carbon economy could help unlock possible synergies between green power, energy access and energy security. Alternatively, failure to plan for this transition may be costly, particularly for the poor. Moreover, the likelihood of green, yet competitive electricity opens the door to electrifying other sectors, such as transportation and cooking. But the challenges involved in managing these transitions, in terms of hardware required, institutional rules and making sure potential losers are not left behind, are substantial and require immediate analysis and planning.

India's cities and electricity sector are but two examples. Mitigation also encompasses transportation networks (including for freight), industries, agriculture, forest management and use, and food consumption patterns, to name a few. For India, a consistent approach – built around understanding the synergies and trade-offs across multiple development objectives and climate mitigation – needs to become part of the policy framework across these sectors.

Adaptation

It is increasingly clear that despite our best efforts, countries collectively are unlikely to mitigate sufficiently to avoid at least some – potentially significant – effects of climate change.¹⁶ India, perhaps even more than other nations, has to pay considerable attention to the adaptation and resilience of its economy and society.

Doing so is as complex as reducing greenhouse gas emissions, and perhaps even more so. For example, adaptation in agriculture requires preparing India's agricultural systems for heat stress and unpredictable rainfall patterns against a backdrop of existing farmer distress, a creaky system of price stabilisation prone to rent-seeking, and highly inadequate insurance and risk management mechanisms available to farmers. In this context, large existing entry points into food security and employment, such as the public distribution system and the Mahatma Gandhi National Rural Employment Guarantee programme, could usefully be rethought and repurposed from

the perspective of providing climate resilience. In brief, the scale and scope of potential climate impacts require mainstreaming of climate considerations systematically across development programmes, rather than an approach that rests on marginal band-aids.

In another example, India's long coastline is particularly vulnerable to climate impacts.¹⁷ Climate change is likely to decrease the productivity of fisheries through changes in ocean temperature and acidity levels, already stressed by non-climate effects such as fertiliser run-off, with impacts on livelihoods of fisher communities. Because these effects are non-linear, beyond a point, coastal systems may be stressed beyond the point of recovery. In addition, extreme weather events and sea level rise are likely to reshape coastal zones and increase risks and costs of inhabitation on coasts. Addressing these challenges includes but goes beyond disaster preparedness. It requires, for example, co-ordinating the work of different departments, some of which have a protective mandate and others that seek to maximize production: these need to be harmonized around coastal resilience.

Apart from agriculture and coasts, urban areas, forests and water management also pose a complex challenge. In all these areas, the challenges of mainstreaming climate change are simultaneously scientific, economic, social and institutional.

Conclusion

As the spectre of climate change grows ever clearer, it is becoming increasingly obvious that pursuing development without internalizing climate change considerations risks ignoring a big piece of the puzzle. A central element of the new government's agenda must thus be to internalize and mainstream climate considerations.

Fortunately, in relation to international policy, addressing climate change can also bring economic and political gains. It can enable India to work its alliances to become a leader in an impending global clean energy transition. And it opens possibilities for the country to become a political leader, notably of vulnerable nations.

Domestically, there is considerable work to be done. This involves rethinking India's energy system in a world that prioritizes clean energy, including tackling the thorny question of remaking India's problematic electricity distribution sector. To manage impacts on

agriculture, coasts, cities, water and forests, the new government will need to invest in dedicated scientific and institutional capacity, tasked with internalizing the climate challenge and the implications climate change holds for development.

END NOTES

1. Intergovernmental Panel on Climate Change, 'Summary for Policymakers', in *Climate Change 2014: Synthesis Report, Contribution of Working Groups I, II, and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, edited by Core Writing Team, R.K. Pachauri and L.A Meyer (Geneva, Switzerland: IPCC, 2014), 6. [hereinafter IPCC]
2. In 2015, a heat wave in India killed more than 2000 people. See Stephane Hallegatte, Adrien Vogt-Schilb, Mook Bangalore and Julie Rozenberg, 'Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters' (Washington, DC: World Bank, 2017), 34.
3. O. Hoegh-Guldberg, D. Jacob, M. Taylor, M. Bind, S. Brown, I. Camilloni, A. Diedhiou, R. Djalante, K.L. Ebi, F. Engelbrecht, J. Guiot, Y. Hijioka, S. Mehrotra, A. Payne, S.I. Seneviratne, A. Thomas, R. Warren and G. Zhou, 'Impacts of 1.5°C of Global Warming on Natural and Human Systems', in *Global Warming of 1.5°C*, edited by V. Masson-Delmotte, P. Zhai, H.O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor and T. Waterfield (Geneva, Switzerland: IPCC, 2018), 263.
4. Ministry of Finance, Government of India, 'Climate, Climate Change, and Agriculture', in *Economic Survey 2017-18* (New Delhi: Government of India, 2018), 82.
5. Article 4(3), Paris Agreement, 2015.
6. Lavanya Rajamani and Daniel Bodansky, 'The Paris Rulebook: Balancing International Prescriptiveness with National Discretion', *International & Comparative Law Quarterly* 68 (4) (forthcoming, 2019).
7. Article 4(8), Paris Agreement, 2015.
8. Article 13, Paris Agreement, 2015.
9. Article 14, Paris Agreement, 2015.
10. See, for a full discussion of legal capacity constraints and their substantive effects on India's negotiating position, Lavanya Rajamani, 'India's Approach to International Law in the Climate Change Regime', *Indian Journal of International Law* 57 (1) (2017).
11. Vijeta Rattani, 'Coping with Climate Change: An Analysis of India's National Action Plan on Climate Change' (New Delhi, India: Centre for Science and Environment, 2018); Navroz K. Dubash and Neha Joseph, 'Evolution of Institutions for Climate Policy in India', *Economic and Political Weekly* 51 (3) (2016), 44-54; Sudhir Chella Rajan and Sujatha Byravan, 'An Evaluation of India's National Action Plan on Climate Change' (Chennai, India: Centre for Development Finance, Institute for Financial Management and Research and Humanities and Social Sciences, IIT Madras, 2012).
12. Radhika Khosla and Ankit Bhardwaj, 'Urbanization in the Time of Climate Change: Examining the Response of Indian Cities', *Wiley Interdisciplinary Reviews: Climate Change* 10 (1) (2018), e560, <https://doi.org/10.1002/wcc.560>.
13. Ashok Sreenivas and Ashwin Gambhir, 'Aligning Energy, Development and Mitigation', in *India in a Warming World*, ed. Navroz K. Dubash (New Delhi: Oxford University Press, forthcoming); Navroz K. Dubash, Sunila S. Kale and Ranjit Bharvirkar, eds., *Mapping Power: The Political Economy of Electricity in India's States* (New Delhi: Oxford University Press, 2018).
14. Navroz K. Dubash, Ashwini K. Swain and Parth Bhatia, 'The Disruptive Politics of Renewable Energy', *The India Forum*, forthcoming.
15. Press Trust of India, 'Tata Power to focus on clean energy, not to build new coal-fired plants: report', *The Hindu*, 23 April 2019, <https://www.thehindubusinessline.com/companies/tata-power-to-focus-on-clean-energy-not-to-build-new-coal-fired-plants-report/article26918672.ece>.
16. IPCC, 'Summary for Policymakers', in *Global Warming of 1.5°C*, edited by V. Masson-Delmotte, P. Zhai, H.O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor and T. Waterfield (Geneva, Switzerland: IPCC, 2018).
17. Rohan Arthur, 'Shoring Up: Climate Change and the Indian Coasts and Islands', in *India in a Warming World*, ed. Navroz K. Dubash (New Delhi: Oxford University Press, forthcoming).



Beyond Poles and Wires: How to Keep the Electrons Flowing?

ASHWINI K. SWAIN AND NAVROZ K. DUBASH

India's move to electrify every village and household in the country has been lauded as a success. Building on decades of targeted programmes and public investments by multiple governments, the country completed 100% village electrification in April 2018; a year after, it has electrified nearly all 'willing' households. Despite the time it took to get here, these achievements are important milestones in India's development trajectory. But does connecting households to the electric grid resolve the electricity access challenge? The answer depends on whether electrons flow through the wires and whether all consumers are served equally and adequately.

For electrons to flow and for there to be power for all, a vital policy issue to be considered is about the role to be played by the Government of India (GoI). Given the concurrent status of electricity, can the sector be a 'perfect crucible for making effective the cooperative-competitive federalism experiment that is now India'?¹

Challenges of Electricity Access

Once connected to the grid, consumers face multiple challenges to stay plugged in and realize the full benefits of electricity services. From the perspective of the poor, there are three key challenges that need to be overcome: unreliable supply, poor consumer service, and unaffordable bills.

Although India has become power surplus, many homes, especially those located in rural and low-income areas, have to bear with intermittent and poor quality supply. While government reports indicate 16–24 hours of supply to all homes, several surveys find lower supply hours, particularly, in the evening hours. Prayas Energy Group's Electricity Supply Monitoring Initiative found that less than 20% of rural locations receive continuous supply during 5–11 p.m. This pattern of unreliable supply can be explained by an inherent disincentive to serve the poor. While India's

average monthly household electricity consumption is as low as 90 kWh,² most households consume less than 50 kWh.³ India follows a consumption slab-based tariff system, where initial consumption slabs are charged significantly below the costs. This is one reason why electricity distribution companies (discoms) lose more than 50% of their cost in supplying to low-consumption consumers.⁴

Metering and billing irregularities are common, particularly in rural areas. The human resources of discoms have declined even as their consumer base has increased, leading to lower frequencies of meter reading and billing. Many discoms raise bills once in two months. In several cases, the first bill after the connection is raised after several months. Accumulated dues are often unaffordable to low-income households and increases the likelihood of payment default and subsequent disconnection. Irregular billing also causes a trust gap between discoms and consumers. A recent survey in Uttar Pradesh finds that consumers who are billed monthly are more likely to pay on time and in full amount; but those who are not billed regularly do not believe that their bill is based on actual consumption and are likely to default on payment.⁵

A major barrier to electricity access remains the concurrence between economic poverty and energy poverty. At the launch of Saubhagya, seven states (Uttar Pradesh, Bihar, Odisha, Jharkhand, Assam, Rajasthan and Madhya Pradesh) accounted for two-thirds of the un-electrified households in India. These states are home to about two-thirds of India's population living below the poverty line (BPL). Discoms in these states are already highly indebted, accounting for 42% of accumulated debts of all discoms as of March 2016. Discoms in these seven states have higher losses and revenue gaps than national averages. Despite continued state government subvention (or payment to discoms), all these discoms have been consistently running at a loss, accounting for about 47% of the loss in the electricity distribution business. In 2015-16, subventions to discoms amounted to 10% of these seven states' collective gross fiscal deficit and

accounted for 40% of total subvention from all states. The recent push for financial turnaround of discoms through a centrally designed scheme – Ujal Discom Assurance Yojana (UDAY) – has not achieved the desired results in many states.⁶ The fiscal space of these states and discoms is cramped by the need to accommodate the electricity subsidy. On the other hand, existing subsidized lifeline tariffs in these states are, ironically, higher than in states with high electricity access.⁷ Media reports suggest that 3.5 million households in Uttar Pradesh are unwilling to get an electricity connection despite the connection charge waiver and subsidized tariff at 50% of the actual costs.⁸

The Centre's Helping Hand

The responsibility for electrification has been shared by governments at the Centre and states. Successive governments at the Centre have played an important role through sustained policy directives, targeted programmes and financial support. The creation of a dedicated financing agency in 1969 – the Rural Electrification Corporation (REC) – helped boost village electrification in the 1970s and 1980s, when two-thirds of India's villages were electrified. To address low household electrification, the Centre launched Kutir Jyoti Yojana in 1989, with budgetary allocations to provide single-point light connections to BPL households. Rajiv Gandhi Grameen Vidyuti Karan Yojana, launched in 2005, extended free electricity connections to about 22 million BPL households, in addition to others who paid for their connection; it also electrified more than a million villages by 2014. The last 18,000 villages were electrified under Deen Dayal Upadhyaya Gram Jyoti Yojana, launched in 2015. Between 2017 and 2019, the central government sponsored an aggressive household electrification drive – the Pradhan Mantri Sahaj Bijli Har Ghar Yojana (Saubhagya) – to connect more than 26 million households to the electricity grid. With multiple interventions spread over decades and multiple governments, the Centre's thrust has been to connect villages and households to the electric grid, through funding the costs of erecting poles and stringing wires.

The state governments, with oversight on electricity distribution, have manoeuvred to keep electrons flowing through the wires. The key to the states' approach is redistributive welfarism: charging commercial and industrial consumers higher rates to keep electricity affordable for farmers and low-income homes. However, the pattern of electricity provisioning has been intricately shaped by electoral priorities, creating perverse incentives for serving the poor. The result is a low-level equilibrium where the poor are locked into cheap but intermittent, low-quality electricity. Because quality is low, many consumers feel empowered to default on their dues. The forces of inertia have prevailed over reform interventions to rationalize prices and enable cost recovery. Moreover, intermittent supply impacts business competitiveness. A survey conducted in Bihar, Odisha, Rajasthan and Uttar Pradesh suggests that 40% of rural enterprises rely on non-grid electricity sources as grid supply is unreliable and expensive.⁹

The Centre's thrust on connecting villages and households to the electricity grid has been realized, but is only a step towards universal access to modern energy. In 2014, a joint initiative between the Centre and the states – 24x7 Power for All – was launched. It had a state-by-state strategy with a shared goal to ensure round-the-clock supply to all consumer categories starting from April 2019. Despite a strong political mandate, the goal seems to be far from realized. Achieving universal access to electricity will require addressing problems around reliability, affordability, quality of supply and service that are persistently present across states. The new government at the Centre will need to revive its helping hand to support its state counterparts in dealing with diverse electricity access challenges that are entrenched in state-level political economies.

The Way Forward

The challenges to universal electricity access are at the state level and are, in part, beyond an individual state's capacity to address. Given that the poorest states will have higher costs of universal access, the

Centre needs to lend a hand. Simultaneously, the central government will need to steer planning and governance for better coordination and coherence across states. The Centre will thus continue to play a significant role in pursuing the goal of universal electricity access. Towards this, we suggest the following priority actions for the new government.

Beyond Redistributive Welfarism to Productive Power

To achieve universal access, India's electricity policy needs a paradigm shift from 'redistributive welfarism' (that prioritizes subsidized costs for the poor while compromising on the quality of service) to 'productive power' (that empowers and enables the poor to pay for better quality service through productive use of electricity).

Last year, the government proposed a set of amendments to the National Tariff Policy (NTP). These were aimed at a shift away from consumer category-wise tariff to a progressive load and consumption-based tariff for all. While this will not address the cross-subsidy burden on large commercial and industrial consumers, it will make electricity affordable to small industries and entrepreneurs that are currently charged a cross-subsidizing tariff.

Implementing these proposed amendments to the NTP in a time-bound and phased manner to make electricity affordable for productive use by the poor will be an important step. Availability of reliable electricity is necessary, but not sufficient to mobilize its productive use. The Centre will also need to develop a broad strategy around 'productive power', seeking to promote rural industries and businesses (such as agro-processing and cottage industries) with the required financial and infrastructure support.

Revisiting the Definition of Electrification

The existing definition of electrification, set out in 2004, emphasizes the existence of a basic electricity infrastructure, keeping the focus on grid expansion and household access to the grid. Now that the grid has reached nearly all homes, it is important to revisit the

definition, with a focus on ensuring access to reliable and affordable electricity for all.

Holding Discoms Accountable for Performance

Providing productive power requires that discoms are held accountable for performance. While the Electricity Act of 2003 (EAct) has made provisions for standards of performances (SoPs) to be met by the discoms, compliance and monitoring remain low, with significant discrimination across consumer categories. There is a need to implement a stricter legislative mandate for SoP compliance and equal treatment of consumers. Available technologies could be harnessed to monitor discoms' performance in this regard. The Centre has been promoting smart meters for automation of billing and consumer accountability. These meters can also be used to monitor supply quality and for consumer information. In 2013, the Centre made an attempt to make discoms and the respective state governments accountable by presenting a Model State Electricity Distribution Management Responsibility Bill. Rajasthan is the only state government to have enacted this bill. Some of the provisions of this bill were included in UDAY, but without any legislative mandate. These efforts can serve as a template for developing a framework to hold the discoms accountable for their performance.

Better Consumer Protection

The EAct included provisions for consumer protection. While the institutions for consumer grievance redressal—Consumer Grievance Redressal Forums at discom level and Ombudsman at state level—have been put in place, these avenues remain dysfunctional and often influenced by the discoms.¹⁰ There is a need to strengthen these institutions to protect the interests of consumers, hold the discoms accountable, and build trust between the two. This will require raising consumer awareness on the existence of forums for grievance redressal and making these forums accessible to all. Regular analysis of grievance records is required to understand patterns and discoms' performance. These analyses must be accessible to the public and used to make discoms accountable. The grievance redressal forums need to be redesigned to function independently from the discoms.

Alternative Service Delivery Models

The technological transformation in the sector, led by greater penetration of renewable energy, is likely to cause disruption in the electricity distribution structure. Discoms are likely to lose predictability in business and their significance as instruments of redistributive welfarism.¹¹ There has been resistance to past attempts to restructure the distribution business for efficiency gain—through promotion of franchisees and cooperatives, and separation of carriage and contents. The future uncertainties in electricity distribution necessitate planning for alternative service delivery models to ensure that the poor are not left out. The Centre needs to play the role of a catalyst by steering the planning at the state level, without imposing a single, standard model. Diversity in approaches and models will be crucial to manage state-level economic forces and specific electricity demands.

Strengthening the Rural Distribution Network

While the electricity grid has been extended to all corners of the country, the distribution network in rural areas remains fragile and prone to frequent breakdown. Although rural areas presently have low energy demand, the potential for demand growth is high. Distribution networks will require significant upgrades to meet future demand. As the discoms have little incentive to invest in rural networks and many states lack fiscal capacity, the Centre will be required to continue investing in the rural distribution network, until such time as rural consumers climb onto the virtuous cycle of receiving better service and being willing to pay more for quality. The Centre has been supporting urban distribution network upgrades through successive programmes¹². Similar interventions are required to upgrade rural distribution and ensure quality supply to consumers based in rural areas.

The Subsidy Conundrum

Even though the key to electricity reform in India is tariff rationalization, there is no doubt that, for the time being, electricity supply to the poor needs to be subsidized. These subsidy needs are concentrated in poorer states with limited fiscal space. In an interesting development, in the proposed amendments to the EAct

and NTP, the Centre has proposed to make subsidies a collective responsibility of the central and state governments. This is an important shift away from the earlier model where subsidy was the sole responsibility of the concerned state governments. If implemented, this would allow the subsidy-based approach to electricity to continue, with a shift from a rate payer-based cross-subsidy system to a tax payer-based fiscal subsidy system.

The Centre also seeks to promote direct benefit transfer (DBT) for subsidy payment to ensure better targeting. A reform in the subsidy mechanism, seeking to better target and rationalize subsidy, is an urgent need. But the proposed approaches are not free from limitations. Managing electricity subsidy demands with tax revenue will require the electricity sector to assert its claims for support in competition with several other possible uses of these funds; it will also limit the ability of states and regional political parties to make electoral use of electricity pricing, introducing political uncertainty. In addition, identifying and targeting legitimate subsidy demands to use DBT remains a challenge.¹³

The Centre's past guidelines to reduce and eliminate cross-subsidies in a timebound manner and raise revenue from low-paying consumers have been resisted by states. Rather, cross-subsidization and the gap between costs and revenue have gone up in several states. The new government must prioritize the subsidy conundrum and develop a transition plan to gradually reduce subsidies without compromising essential service for the poor. It should consider state-specific political economy forces and must embed a strategy to promote 'productive power' to enable the poor to pay. Large-scale adoption of specific tools or solutions should be based only on successful pilot experiments, after careful consideration of the costs and benefits; a strategy to manage the costs to losers from subsidy reform must be included.

Erecting poles and stringing wires across a country like India is an important step. But the work remains incomplete until high quality reliable power that enhances rural productivity is made available to India's poor. This must be the agenda, going forward.

END NOTES

1. Gol, *Economic Survey 2015-16, Volume I* (New Delhi: Department of Economic Affairs, Ministry of Finance, Government of India, 2016), 162.
2. Radhika Khosla and Aditya Chunekar, 'The journey towards energy savings begins from home', *Mint*, 8 June 2018.
3. Ashwini Chitnis, Sripad Dharmadhikary, Shantanu Dixit, Srihari Dukkipati, Ashwin Gambhir, Ann Josey, Sreekumar Nhalur and Ashok Sreenivas, *Many Sparks but Little Light: The Rhetoric and Practice of Electricity Sector Reforms in India* (Pune: Prayas Energy Group, 2017).
4. Sreekumar Nhalur, Ann Josey and Manabika Mandal, 'Rural Electrification in India: From "Connections for All" to "Power for All"', *Economic and Political Weekly* 53(45) (2018): 31-37.
5. Karthik Ganesan, Kapardhi Bharadwaj and Kanika Balani, *Electricity Consumers and Compliance: Trust, Reciprocity, and Socio-Economic Factors in Uttar Pradesh* (New Delhi: Council on Energy, Environment and Water, 2019).
6. Amandeep Kaur and Lekha Chakrabarty, 'UDAY Power Debt in Retrospect and Prospects: Analyzing the Efficiency Parameters', NIPFP working paper 244 (New Delhi: National Institute of Public Finance and Policy, 2018).
7. Ashwini K. Swain, 'In a state of energy poverty', *The Hindu*, 11 May 2018.
8. Utpal Bhaskar, 'UP lowers electrification target, claims all households electrified', *Mint*, 31 January 2019.
9. Shalu Agarwal, Nidhi Bali and Johannes Urpelainen, *Rural Electrification in India: Customer Behaviour and Demand* (Smart Power India & Initiative for Sustainable Energy Policy, 2019).
10. Ashish Khanna, Daljit Singh, Ashwini K. Swain and Mudit Narain, 'Transforming Electricity Governance in India: Has India's Power Sector Regulation Enabled Consumers' Power?', World Bank policy research working paper 7275 (Washington DC: World Bank, 2016).
11. Navroz K. Dubash, Ashwini K. Swain, and Parth Bhatia, 'The Disruptive Politics of Renewable Energy', *The India Forum* (Issue: July 5, 2019).
12. Such as Accelerated Power Development Programmes (2001), Accelerated Power Development Reforms Programme (2002), Restructured Accelerated Power Development Programme (2008), Integrated Product Development System (2014).
13. Ashwini K. Swain, Parth Bhatia and Navroz K. Dubash, 'Power politics at play', *The Hindu*, 9 October 2018.



Clearing our Air of Pollution: A Road Map for the Next Five Years

SANTOSH HARISH, SHIBANI GHOSH AND NAVROZ K. DUBASH

The Big Challenge

Air pollution levels are unsafe across the country, all-year round. While pollution levels spike to dangerously high levels during the winter in north India, those in several parts of the country are poor or worse for large parts of the year. High pollution levels are not restricted to cities; several industrial areas along with rural areas across the Indo-Gangetic plain are also polluted. There are several kinds of pollutants in the air: particulate matter, carbon monoxide, ozone, oxides of nitrogen and sulphur. Fine particulates (PM_{2.5}) form a useful proxy indicator for air pollution. The population-weighted annual average concentration of PM_{2.5} across the country, estimated using satellite data, was 91 microgram/m³ in 2017 – more than twice the national standards.¹

Air pollution is a public health emergency. The health impacts of poor air quality are staggering and of growing concern as we discover the full range and degree of its effects with new research. Air pollution is estimated to reduce the average life expectancy of a child born in India by at least 1.5 years.² In 2017, air pollution is estimated to have contributed to one in eight deaths in India.³ Cardio-respiratory diseases and lung cancer in adults, and acute lower respiratory infections in children, are the more commonly known impacts of air pollution. In addition, new research indicates a much wider range of health impacts of air pollution such as on birth weight, child growth, obesity and bladder cancer. There is growing evidence on the adverse impacts of pollution on cognitive abilities in children.

Multiple sources contribute at different regional scales.

Industries, power plants, vehicles, waste burning, road and construction dust, and household sources are significant sources of air pollution. At the national level, household burning of polluting fuels for cooking and heating purposes forms the single largest contributor to average PM_{2.5} exposure (in addition to the exposure to PM_{2.5} within these households themselves).⁴ Industries and power plants that burn coal are the second and third largest sources of exposure at the national level. Within cities, other sources like transportation, construction dust and waste burning play an important role. Because of these different geographical scales of influence, pollution control measures need to target different sources at appropriate levels. These different sources and scales make the role of the central government critical in framing policy at regional and national scales, coordinating implementation across states, and providing necessary financial and technical assistance.

The Existing Policy Framework

The National Clean Air Programme (NCAP), launched by the Ministry of Environment, Forest and Climate Change (MoEFCC) in January 2019, looms large over the newly elected government's policy landscape. The NCAP identified 102 non-attainment cities – which have particulate matter levels that exceed the annual standards – and set a reduction target of 20-30% by 2024. However, in its approach, the NCAP is a status quo-ist document, which adheres to city-specific templates from the past, and wholly misses addressing governance gaps. It reinforces India's policy response to air pollution, which has largely been reactive and overly reliant on administrative solutions. The existing regulatory design has proved to be entirely inadequate to meet the scale of the problem, and the monitoring and enforcement capacity of government agencies (such as the pollution control boards) is insufficient, especially for dispersed sources of pollution like vehicles, stubble and waste burning. An effective air pollution control strategy must break away from the status quo, and instead strategically prioritize key, implementable actions.

Air pollution reduction needs greater commitment from the executive.

So far, pollution control has largely been driven by the judiciary. The new government should assume leadership in crafting and implementing an effective national air pollution reduction strategy. This could take different forms. One important example is empowering and giving greater autonomy to pollution control boards (PCBs) to discharge their responsibilities and act against polluters. Currently, interference in the functioning of these boards is visible in multiple ways: (i) the boards are typically led by generalist bureaucrats despite court judgments that have backed domain experts for chairpersons and member secretaries;⁵ (ii) their funding is often dependent on grants-in-aid by the state governments; and (iii) routine administrative decisions like hiring need approval from the environment department. State PCBs also seem to be facing a trade-off between their functions of monitoring and enforcement, and promoting 'ease of doing business'. All of these curtail their ability to discharge their statutory mandate effectively.

The new government should also enable resolution when there are complex political and economic factors contributing to a polluting activity. For instance, consider the case of stubble burning where Minimum Support Prices, groundwater management, farm mechanization, the agrarian crisis, and unfavourable meteorology all contribute to episodic peaks in pollution in north India. Banning burning or subsidizing technical solutions such as 'Happy Seeders' are unlikely to solve the problem, unless some of the structural factors mentioned above are tackled through political negotiation.

A New Policy Agenda Strengthening the National Clean Air Programme (NCAP)

NCAP was a missed opportunity to outline a systematic strategy. Beyond the national outreach and the reduction targets, it is a compilation of ongoing efforts, and leaves the details of new efforts to future action plans. Specific gaps include:

- NCAP is largely a continuation of the traditional policy approach of developing long lists of unprioritized action points. It does not put implementation capacity at the heart of designing our mitigation policies, thus risking non-implementation.
- The programme is urban-centric, focusing on a limited group of cities, and following the National Capital Region template by relying on city action plans. However, air pollution is not restricted to cities, and air quality in cities is typically influenced significantly by sources from outside. Addressing this problem requires moving the conversation towards addressing pollution at regional ‘airshed’ levels, and having more flexible system boundaries for air pollution control. The NCAP does not outline a road map for defining these airsheds and developing processes that cut across jurisdictions and departments.
- NCAP misses addressing governance gaps directly. It introduces new committees at the central and state levels, and declares that individual ministries will ‘institutionalise’ action points in their charge. However, it does not specify what institutionalizing entails, and who would be held responsible if targets are not met, and what legal or financial implications would follow.

To strengthen the NCAP, there is a need to focus efforts on a prioritized shortlist of solutions in the short term, improve the enforcement capacity of the PCBs while increasing their accountability, and begin extensive consultations about governance reforms needed in the longer term. We elaborate on these below.

Prioritizing concrete actions

Given the number of sources that contribute to the problem, and the many mitigation efforts needed (several of which are included within NCAP), how do we prioritize policy efforts? Prioritizing solutions needs active consideration of the implementation capacity needed to introduce measures and enforce them. In

addition, we need to ensure that the programme does not adversely impact vulnerable groups.

In particular, with dispersed sources of pollution, such as transportation, households, waste burning and construction dust, administrative solutions that require monitoring and enforcement are likely to fail. Instead, enforcement could work better for policy changes targeted at higher, more centralized levels, where possible. For instance, with vehicles, although there is a pollution control mechanism in place, several issues inhibit inspections from being a reliable way to keep the on-road fleet within standards. These include low rates of compliance among vehicle owners in getting tested and compromised inspections (poor calibration of testing equipment and corrupted inspection results). Policy changes aimed higher up in the manufacturing process, such as the requirement to comply with Bharat Stage VI norms, are likely to be better implemented.

Keeping these factors in mind, three key priority areas within the NCAP are identified below.

• Power plant emission norms

India's formal regulatory infrastructure has traditionally focused on ‘point sources’, with good reason. Industries and power plants burning coal are the second and third largest sources in India (only behind the numerous but highly dispersed household sources of emissions), in terms of contributions to average national exposure to air pollution and the resultant burden of disease.⁶ Power plants are the largest source of sulphur dioxide and a major source of nitrogen oxide. Sulphur and nitrogen oxides are key precursors that react with other substances to produce secondary particulate matter. MoEFCC introduced new emissions standards for power plants in 2015, which required the installation of pollution control equipment. Although the power plants were required to comply with these standards by 2017, the Central Pollution Control Board (CPCB) later announced that the compliance date had been pushed to 2022, as per a timeline prepared by the Central Electricity Authority. Ensuring that these

standards are complied with, and the requisite control equipment installed by this revised timeline, if not at an accelerated rate, is critical.

- **Revamp Ujjwala to increase LPG use**

The Pradhan Mantri Ujjwala Yojana (Ujjwala) is an important initiative. While primarily an energy access programme, it has also tackled household solid fuel use, which is the largest contributor to pollution exposure in India. Ensuring universal continued usage of clean cooking fuels should therefore be a critical pillar of our air pollution control efforts. To facilitate continued usage of LPG, the government needs to ensure that prices are affordable for the beneficiaries, and in parallel, run campaigns to change behaviour and attitudes. This is unlikely to be a rapid transition, but some important first steps have been taken.

- **Invest in public transportation**

Reducing transportation emissions would require a combination of ensuring easy access to affordable public and non-motorized transport, while simultaneously working on reducing emissions from the vehicles on the road. Investments in clean public transport can reduce transport emissions as well as make mobility easier and cheaper, thereby improving the quality of life in cities. Planning the public transit strategy for the long term is key.

Strengthening regulatory capacity

The formal air pollution regulatory architecture in India is built around the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, and rules and notifications issued under these. As per existing law, the state PCBs have very limited flexibility to take action proportional to the polluting activity.⁷ Currently, they can send show cause notices, shut down industries through a closure notice or by shutting access to utilities, cancel regulatory consents, or initiate criminal prosecution by taking the industries to court. With court cases taking several

years to reach any meaningful conclusion, PCBs rarely pursue this route, and restrict themselves to either a rap on the wrist through show cause notices, or shut down the industries – making enforcement expensive and ineffective.

Strengthening the ability of the PCBs to tackle point sources could provide a pathway to a broader reform process. In the long term, India needs a modern environment governance structure with teeth, nimbleness and resources to plan and drive a multi-sectoral strategy. NCAP is largely silent on how this structure could look, and on a road map for reforms. We outline below near-term and long-term milestones to strengthen regulatory capacity.

In the near term, PCBs must be resourced better, and in parallel, be made more accountable through disclosure efforts.

- ***Increased resources of PCBs:*** Human resources currently available in PCBs are not sufficient to meet their mandate. There is a need to rapidly expand their capacity, particularly on the technical side. In the short term, existing vacancies in the CPCB need to be filled with qualified people. Working with CPCB and the states, filling up vacancies in the state PCBs should be another area of priority. Increased staff resources should translate to increased inspections and monitoring.

- ***Increased accountability through public disclosure of regulatory data:*** The operations of the PCBs are extremely opaque, and it is unclear to the public where the big polluting sources are, and whether they are compliant with regulatory norms. Ensuring that PCBs release regulatory information (details of consents granted, inspections, online monitoring data, enforcement actions, etc.) into the public domain would make the industries and state PCBs more accountable to local communities, civil society and the media.

Longer-term reforms will require extensive dialogue; therefore, it is important for the government to start deliberations early. We outline below three broad elements for change that should be considered in the reforms process.

- **Remove legal barriers for effective enforcement:** There is a need for statutorily empowering PCBs so that they can initiate systematic and proportional responses to polluting activities. Amending the law to allow for a more diverse regulatory toolbox, which includes both existing powers and additional ones such as levying financial penalties, would increase the flexibility of the PCBs and make them more responsive.
- **Institutionalized airshed-level management:** Tackling air pollution effectively requires looking beyond administrative boundaries and focusing on reducing emissions across the ‘airshed’ over which pollutants disperse. This will need new modes of coordination across city and state administrations, and across line departments; it may also require the creation of new authorities with wider jurisdictions. Airshed level regulation will require a regulatory rethink and would involve extensive consultations which should commence on priority.

- **Development of a sector airshed approach:** The long-term strategy will need a careful application of sectoral approaches at the airshed level, or the national or state level, which utilize an appropriate combination of administrative, technical, economic and behavioural solutions.

4. Concluding Remarks

Air pollution is a complex problem, with multiple sources operating at different regional scales, under the jurisdictions of disparate agencies, and requiring a variety of mitigation measures. We need to unambiguously acknowledge the terrible impacts of air pollution on our health, move beyond the urban-centric approach, and tackle each of the big sources with a sense of urgency. The policy for tackling air pollution needs to shift from the reactive approach we have taken so far to one that is more systematic: focusing on some efforts in the near term, and beginning the process to reform our environment institutions to make them better resourced as well as more nimble and effective in the longer term.

END NOTES

1. Health Effects Institute, 'State of Global Air 2019', <http://www.stateofglobalair.org/>.
2. Apte, Joshua S., Michael Brauer, Aaron J. Cohen, Majid Ezzati, and C. Arden Pope. 2018. "Ambient PM 2.5 Reduces Global and Regional Life Expectancy." *Environmental Science and Technology Letters* 5(9): 546-551. <https://doi.org/10.1021/acs.estlett.8b00360>.
3. K. Balakrishnan et al., India State-Level Disease Burden Initiative Air Pollution Collaborators, 'The Impact of Air Pollution on Deaths, Disease Burden, and Life Expectancy across the States of India: The Global Burden of Disease Study 2017, *Lancet Planet Health* 3: e26–e39 (2019).
4. S. Chowdhury et al., 'Indian Annual Ambient Air Quality Standard is Achievable by Completely Mitigating Emissions from Household Sources', *Proceedings of the National Academy of Sciences of the United States of America* 116(22): 10711-10716 (2019).
5. See, for example, *Techi Tagi Tara v Rajendra Bhandari & Ors* (2018) 11 SCC 734.
6. GBD MAPS Working Group, 'Burden of Disease Attributable to Major Air Pollution Sources in India' (Health Effects Institute, 2018).
7. S. Ghosh, 'Reforming the Liability Regime for Air Pollution in India', *Environmental Law and Practice Review* 4 (2015): 125-146.



Regulatory Reforms to Address Environmental Non-Compliance

MANJU MENON AND KANCHI KOHLI

In India, industrial, energy and infrastructural projects are legally mandated to seek environmental approvals under a range of central and state level laws such as the Environment Protection Act, 1986, Air (Prevention and Control of Pollution) Act, 1981, Water Prevention and Control of Pollution Act, 1981, and the Forest Conservation Act, 1980. Project approvals under these laws include environment and social safeguards or 'conditions', such as reducing the pollution load due to project operations, reforestation to make up for forest loss, and prohibition or limits on groundwater extraction. Projects are expected to comply with these safeguards during construction and through the period of operations. In case of mining projects, backfilling and ecological restoration of the land also form part of the safeguards. In effect, the purpose of conditional project approvals is to minimize and mitigate environmental and social harms caused by large projects.

During the first four decades of implementation of India's post-independence environmental laws, there was little or no emphasis on the status of compliance with conditions by projects. The focus was on the needs of the economy and national development on the one hand, and on the other hand, the social conflicts caused by land displacement. Even though legal clauses related to environmental compliance existed in these laws, projects operated with impunity, causing widespread degradation of the environment.

It is only in the last decade that environmental non-compliance by projects and the inability of existing institutions to enforce laws have come under the scanner. Since 2010, the office of the Comptroller and Auditor General (CAG) has produced environmental audit reports and reported on non-compliance. The courts have observed large-scale legal violations in spe-

cific sectors such as mining. Non-governmental studies have also recorded high rates of non-compliance.

Unable to brush the problem under the proverbial carpet, the government engaged in a series of hurriedly thought out mechanisms to deal with it. These include:

- Self-regulation through the use of pollution monitors or devices to capture and relay information on pollution and other performance indicators directly to pollution control board authorities
- Provisions for penalties, fines, bank guarantees and other financial disincentives based on the 'polluter pays' principle
- One-time amnesty schemes to violating projects and grant of short-term or temporary approvals to violators in an effort to bring them into compliance

But these measures have neither improved environmental performance of projects nor stemmed the flow of complaints and legal cases by affected people against polluting projects.

Why Should Compliance Be Addressed Urgently?

Robust and well-thought-out environmental compliance mechanisms are hardly seen as a necessity for India's development. In fact, governments have approached the idea of regulating projects as a liability and a drag on economic growth. They have been slow to implement existing regulations and selective enforcement has earned them the reputation of creating a 'license raj'. This can be seen in the Supreme Court's ongoing efforts to enforce the mandatory emission standards on coal power plants. Even though the standards have existed for several years as part of the consent permits issued under Air and Water Acts, the central government systematically dragged its feet on getting projects to comply with the norms.

Today, the impacts of unregulated projects have made it politically unfeasible for governments to ignore their effects on the economy and on people. The recent conflict due to the operations and proposed expansion of the Sterlite Copper Smelter in Tamil Nadu is a case in point.¹ The project was India's largest copper production plant but also causing toxic emissions, soil and water pollution. Despite numerous complaints and legal cases against the project's pollution, the company was allowed to continue its operations for 20 years. Last year, when the company sought permissions to expand its operations, there were massive local protests for over 100 days; they finally turned violent when the local police shot down 13 protestors. Sterlite also became a political flashpoint with the opposition party making it an important issue in their 2019 election campaign in the state.

There are numerous cases that are being litigated in court for non-compliance with environmental safeguards. These have resulted in huge financial implications for projects and for related economic sectors as a whole. The Goa mining case led to the total state-wide ban on mining since 2012. The National Green Tribunal imposed penalties of over INR 873 crores as fines for environmental violations in the first quarter of 2019 – an amount that is close to the total fines imposed last year.

Poor compliance causes critical environmental blowbacks in the form of severe water shortages, productivity losses and toxic air. While these conditions have been building up in most parts of the country, climate change dynamics add to these local conditions, making their impacts far more acute and complex. For example, areas already affected by large-scale water extraction for industrial purposes, coal washeries and thermal power plants could also face frequent and more lasting droughts. The visible effects of environmental impacts in eroding the positive gains of development have already caused a shift in mainstream economic thinking that traditionally ignored the economic cost of

degraded and damaged habitats. It is accepted that crisis management is hardly possible any more, and that there is a need to plan reforms and strategies for economic and environmental transformation. Environmental compliance systems will form a key part of these reforms.

The case for compliance as a bulwark of environmental regulation has never been more compelling than in the time of climate change. So far, the success or failure of compliance has revolved around the compulsions of domestic politics, but it is now tied to the geopolitics of climate change. After years of wrangling over who should do what to check global warming, nations finally thrashed out the Paris Agreement, which obliges every signatory to put in place, by 2020, a set of measures to meet their respective carbon mitigation targets. However, without a systemic and robust protocol to ensure compliance, India runs the risk of falling short of its targets. Therefore, it is imperative, not to mention politically expedient, for the political party coming to power after the 2019 general elections to set up, in the first place, a credible and effective mechanism of compliance with domestic regulations before it goes about honouring its Paris commitments.

Who Should Regulate Projects and How

Successive governments have emphasized the quantitative aspects of economic growth. They have focused on increasing the number of projects approved during their tenure and reducing the time needed for impact assessment and granting approvals. These projects have been accompanied by severe impacts as pollution and environmental degradation are viewed as the trade-off for growth. However, with over 16,000 centrally approved large projects operational and several others promised or in the pipeline, the scale of the problem has today expanded exponentially in both industrial and 'greenfield' or less industrialized areas. The government can neither ignore nor delay tackling this problem. Compliance with environmental and social safeguards is a necessary if not sufficient condition

to improve the quality of our economy's growth. The question, therefore, before the new government, will no longer be 'if' projects need to be regulated but of how to regulate and who will regulate. Given below are three sets of policy reforms with the potential to shift the government's approach to the problem of environmental compliance of projects and achieve better results.

Compliance-based approvals

Agencies implementing environmental laws view the procedures for grant of approvals as linear systems rather than cyclical ones. This problem is best illustrated by the number of flowcharts put out by them explaining these procedures. Compliance comes downstream in these processes and there is little room for feedback. Project performances on compliance almost never influence government decisions on project expansions, extensions or applications for permission by violating companies to set up projects in new areas. For example, the Kulda opencast mine operated by Mahanadi Coalfields in Sundargarh district of Odisha has violated several conditions of its approvals. Yet, it received approval for expansion and capacity addition twice in two years, for a period of one year each. The validity of environment clearances for mining projects is otherwise 30 years. This decision of the Expert Appraisal Committee (EAC) set up under the Environment Impact Assessment (EIA) notification, 2006, to review such projects was ad hoc, with no precedence and legal basis.

The lack of systemic mechanisms to address non-compliance in recent years has also created huge pressure on the bureaucracy to show legal compliance without affecting the financial status of ongoing operations. For this they have offered one-time amnesty to violating projects under the EIA, Coastal Regulation Zone and biodiversity laws. But these measures only improve the record of compliance on paper and not in reality. Now with so many projects already operational, it is crucial to place a very high bar on projects being granted approvals. The basis of regulatory procedures should shift from approvals

to compliance. Only those projects that have an established record of high compliance or which can surpass the compliance performance of others in the field, and certainly meet the legal standards, should be granted permits and approvals. The permissible standards for pollution are already pending major reforms. But these changes will prove futile if projects are not held to the highest compliance standards.

Third-party monitoring

The present practice of monitoring a project's compliance in effect involves two parties: the project proponent and the regulatory authority. This system has so far not been able to address the problem of non-compliance and has instead led to concerns of collusion and corruption. A review of this practice has resulted in recommendations that monitoring should be done by an independent third party. The environment ministry proposed an amendment to the EIA notification in September 2018 to include this recommendation. This is yet to be finalized. The 'third party' proposed in this amendment is expert government institutions.

In reality, the genuine 'third party' in this context is the communities who experience effects of non-compliance such as loss of livelihoods, poor living conditions and displacement. Although they have the greatest stake in remedying the damages caused by non-compliance, they are nowhere in the picture when project monitoring is done. This is contradictory to the participatory turn in environmental governance in several countries since the 1970s and the constitutional mandate for it in India. Data from our research on cases of environmental non-compliance in four states shows that when communities have been involved in collection of evidence, reporting of violations and official monitoring by regulators, environmental compliance can improve significantly. Their participation also helps regulators understand community priorities for remedial actions. Regulatory bodies in these states are beginning to recognize the benefits of community participation and are more open to including communities in procedures such as site visits conducted by them for monitoring.

But practices that foster community participation – such as social audits of projects (which provide access to monitoring data and formal spaces for interaction with affected people) – are yet to be systematized in environment regulation.

Integrated regional networks for compliance

India's environment regulations have largely been implemented with a project-centric approach. Approvals are granted to projects after their impact studies, cost-benefit analysis and environment management plans are assessed by regulatory bodies. These assessments routinely understate the potential impacts of projects, making them seem benign or operations whose impacts can be easily mitigated. Such assessments also generate quicker approvals from regulatory bodies, thus helping to meet the government's economic growth targets. For long, activists and experts have demanded cumulative impact studies so that the full range of project impacts can be ascertained prior to the grant of approvals. But such comprehensive studies have been done only in a few cases. Cumulative studies are needed not just at project levels but also for regions that are affected by environmental degradation.

Similarly, a project-based monitoring system is resource intensive and not very effective in terms of the overall outcomes. But if regulators could be reorganized as integrated regional networks, they could use the resources available to them more efficiently to improve environmental standards regionally. Multiple regulatory agencies within the concerned region could pool their expertise and human resources towards coordinated responses. Such a mechanism can bring an inter-disciplinary approach to compliance monitoring. The regions identified for such integration could cut across administrative boundaries such as districts or states. It could be at the level of large industrial sites like Special Economic Zones (SEZs) with multiple projects operating within them, metropolitan regions, entire districts or geographical regions already identified as critically polluted, or entire airsheds or river basins.

Although envisaged by law, such a regional approach to environmental governance has only been used in a few cases. It has been used in emergency responses to environmental pollution, such as the moratorium on industrial activity in Vapi, Gujarat, or the ban on mining in Goa. But a regional approach to systematically improve post-approval compliance of projects has not been envisaged. This is mainly because compliance with safeguards has rarely been the focus of regulation and institutional reforms to improve environmental compliance have never been on the government agenda. The ministry could develop pilots to understand the optimum scale at which such integrated compliance networks could deliver the most effective results. Given that the scale of the effects of non-compliance is such that they are no

longer restricted to project areas, a regional approach is needed to improve the outcomes of regulation.

Conclusion

Environmental compliance is a critical part of environment regulation. While regulatory actions have prioritized economic growth for several decades, the costs of environmental degradation due to industrial and developmental projects are no longer possible to ignore. These issues have become politically and economically salient in recent years. This paper makes three sets of recommendations for how environment regulation can approach the issue of persistent and pervasive non-compliance by projects. These reforms are critical to avoid the costly and harmful disruptions of development.

END NOTES

1. <https://www.firstpost.com/india/sterlite-protest-in-tuticorin-copper-co-has-faced-legal-battle-since-inception-over-environmental-concerns-4479191.html>. Land Conflict Watch and EJ Atlas have many cases of recorded land and environmental conflicts caused by operational projects.

Policy Challenges 2019–2024

ECONOMY



The Indian economy faces many challenges. Economists agree that many of the reforms implemented after the 1991 crisis are now losing momentum. New challenges are emerging due to the changing global dynamics and structural weaknesses in the economy. CPR faculty identifies some of the most crucial threats facing the Indian economy and offers a suite of solutions to stave them off. This includes discussions on the middle income trap that awaits India if structural reforms are not implemented, the country's ailing infrastructure, risks to its investments, the jobs crisis and the long ignored agricultural sector.



Big Potential, Big Risk: Underachieving Indian Capitalism and the Middle Income Trap

MICHAEL WALTON AND NOOPUR SEN

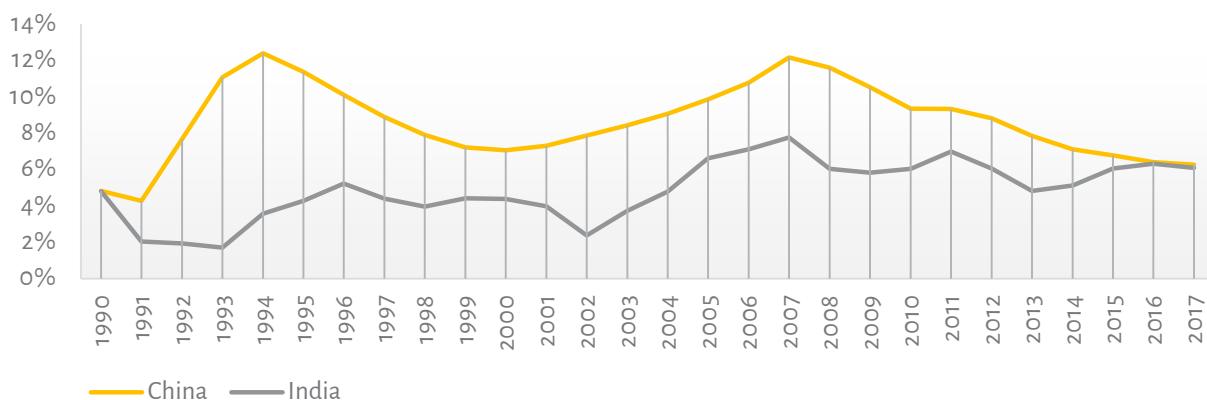
Can India Achieve Sustained Fast Growth? The Two Faces of Indian Capitalism

In the last few years, India seemed to have achieved the symbolic goal of growing faster than China (at least according to official statistics) and was frequently hailed as the fastest-growing large economy in the world (Figure 1). The Spring 2019 IMF World Economic Outlook forecast continued optimistic prospects, with a slight acceleration in growth to 7.5% by 2020, even as China and the advanced economies are projected to decelerate.

Is India's fast growth sustainable? Recent economic data indicates declining consumption, anaemic private investment, diminished corporate performance, agricultural distress and slowing GDP growth. (Questions have also been raised over the statistical robustness of recent growth.) Rathin Roy, of the Prime Minister's Economic Advisory Council, has raised the issue of structural problems leading to a 'middle income trap' linked to inequality and associated failures in productive employment growth.¹ The 2018 Economic Survey also referred to the challenges of productive transformation, human capital and agricultural distress.²

Figure 1: India overtakes China in the growth stakes

GDP per capita growth (3-year moving averages)



Source: World Bank

India's economy holds great potential, but there is a big risk that this will not be translated into reality. Relative to its income level, India has both a highly diversified economy and well-developed organizational capabilities in the business sector. These presage multiple opportunities to upgrade, reinforcing classic forces for 'convergence' as the country catches up with those at the technological frontier. These forces are complemented by the (potential) demographic dividend as young cohorts enter the labour force.

However, on current trends, India is en route to the Latin American path, in which episodes of fast growth tend to stall in the long run. Signs of Latin Americanization lie in the consolidation of what has been referred to as 'oligarchic capitalism', with its drawbacks of widespread informalization, rising extremes of inequality, and a corporate-financial nexus of bad assets that risks growth and macroeconomic stability.

Our interpretation of a middle income trap in this paper is an essentially political-institutional account, embedded in the nature of the relationship between the state and business and between the state and society. Indian capitalism has two faces: dynamic, competitive and productivity-oriented; and connected, rent-extracting and corrosive politics. Some sectors and companies are more 'rent-extracting' than others. But many face both ways. Large Indian companies –

such as the Reliance and Adani groups – seem to have both high productivity and high levels of influence. Then, beyond the corporate business sector, there are immense numbers of self-employed, small and medium-sized firms in the informal sector.

These features resonate vividly with characteristics of Latin America capitalism. This can be seen as having three types of enterprise: connected plutocrats with major influence over the state system (such as Carlos Slim in Mexico, and other Mexican billionaires), the rest of the business sector (that struggles with regulation, poor infrastructure and weak skill development), and a very large number of small-scale/informal enterprises (with weak access to formal credit, legal recourse, infrastructure and modern productive support systems). Countries such as Mexico and Brazil had their episodes of fast growth and then got stuck in a mix of low productivity, inefficient social policy, and periodic macroeconomic crisis.

As in Mexico or Brazil, capitalism in India operates in a system that is characterized by both formal rules and less formal deals. 'Deals' refer to both broad understandings and particularistic relations between the state and business. But 'rules' also matter. Rules can be in tension with deals when the latter aim to subvert the former, but hybrid arrangements – such as when rules are applied in the implementation of deals – are

common. Carlos Slim got his big break through the (legal) privatization of Mexico's telecom company by the then president, Carlos Salinas. Most of Mexico's other billionaires were also launched then. And this was when Mexico was already significantly richer than India today.

Rules matter when implemented well; they play the essential role of providing credible threats and penalties for unlawful deal-making, in addition to dealing with the array of concerns over standards, safety and protection. But an over-regulated, rule-based economy can crowd out investment and stymie growth. India's economy has evolved from being a case study in over-regulation to, functionally, a hybrid of rules and deals. Of the business-politics nexus, it can be said that 'the relationship can no longer be understood as either developmental or crony capitalist: it is both'.³

India's major growth acceleration occurred in the 2000s. It involved a striking growth in aggregate—and, in particular, private—investment and exports. Both faces of capitalism were manifest. There were significant strides in business capabilities and capitalist institutions. However, even as GDP skyrocketed, India's

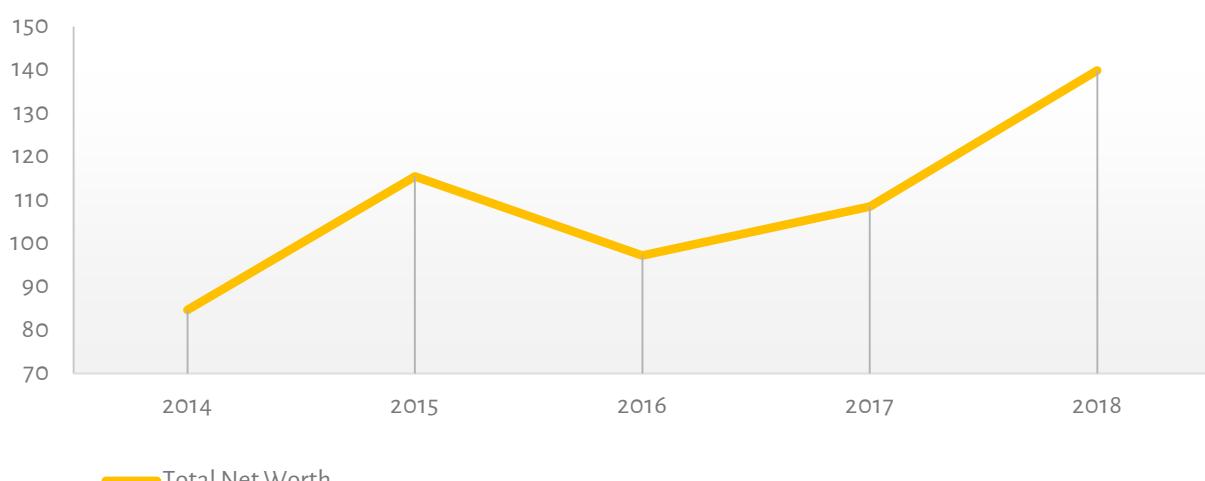
growth story was dogged by concerns over high-level corruption and rising inequality. A series of scams over natural resource allocation helped consolidate public anger around entrenched politician-business links, spurring a national anti-corruption movement. An elite coterie of Indians was seen to be pulling the strings of politics and business, and public sentiment rallied around these societal shifts.

While household surveys suggest inequalities are still much lower in India compared to Latin America, there is evidence of continued concentration of wealth and incomes at the top of the distribution. Combining tax data with household survey data, Chancel and Piketty estimate a large increase in the income share of the top 1%, matched by a corresponding decline in the share of the bottom half of the population.⁴ By this measure, the difference in income growth between the top and the rest of the distribution was even greater than in China and the US—both notorious for their inequality rise.

A more specific manifestation of growing inequality is the rise in wealth of India's billionaires, almost all of which is fuelled by business success (Figure 2).

Figure 2: The wealth of India's top ten billionaires rose rapidly between 2014 and 2018

Total Net Worth



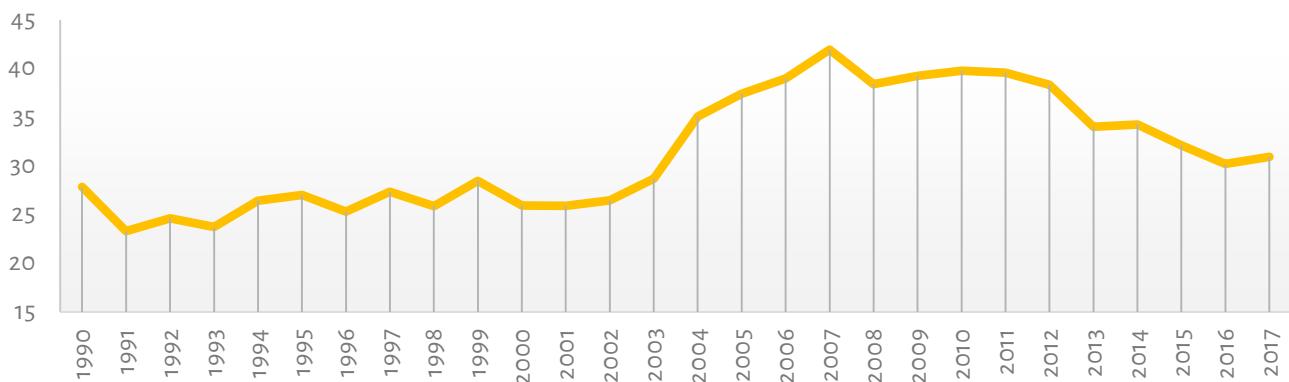
Source: Forbes.com

A crucial heritage of the period of heady growth has been a dramatic rise in reported non-performing assets (NPAs) in the banking system. NPAs are products, at least in part, of past state-business links, especially between public sector banks and influential businesses. NPAs were over 14% of gross advances in 2018 for public sector banks, with a still-high 8% for net NPAs (net NPAs are net of provisions).

This rise in NPAs, alongside recent setbacks to India's shadow banking industry, is a crucial constraint to the flow of credit and private investment, which has stalled in recent years. Gross capital formation as a percentage of GDP is hovering around 31%, its lowest since 2003 (Figure 3). Reported new investment proposals have also been falling steadily since 2015.

Figure 3: The rise and fall of India's investment rate

Gross Capital Formation (% of GDP)



Source: World Bank information base

Resolving the NPA crisis, an increasingly important policy priority in recent years, is necessary but not sufficient. The informal sector continues to dominate the economy, with over 80% of non-agricultural workers employed by the informal sector and Micro, Small, and Medium Enterprises (MSMEs) contributing over a third of GDP. Yet the IFC estimates that formal credit channels account for only 16% of debt financing in the MSME sector.

The Urgency of Action

Why is a focus on the functioning of Indian capitalism so important for the incoming administration?

For every administration that fails to put in place the institutional and policy preconditions for dynamic, inclusive development, there is a permanent loss in productive and human potential. Failure to act now means another cohort of India's youth being substantially ill equipped to participate in productive work, fostering further increases in inequality.

Even more critical is the risk of further entrenchment of business elites, with respect to their links to both the state and minority shareholders, creating an oligarchic capitalism that heightens resistance to future institutional transitions to dynamic, competitive capitalism.

Furthermore, the global economic context is much more anaemic than the ‘sweet spot’ of the early 2000s. Long-term growth is slowing throughout Europe and the US. Even China – the main autonomous source of growth in the global economy – is in the midst of both a long-term slowdown as its economy matures, and concerns over financial fragility.

Finally, global technological change will increase incentives for increased automation in the economy. This is likely to have profound effects on the work opportunities for India’s labour force, with as yet ill-understood consequences.

These developments will have major distributional dimensions that threaten political stability. The interaction between a consolidation of oligarchic capitalism and the less favourable global context is why the risk of a Latin American style middle income trap is so salient.

A Policy Agenda

Whether India realizes its growth potential or gets stuck in a middle income trap depends on both policy choice and institutional design. Avoiding the Latin American path of oligarchic capitalism and widespread informality involves building the basis for a dynamic, inclusive and competitive capitalism. This requires, in the resonant phrase of Raghuram Rajan and Luigi Zingales, ‘saving capitalism from the capitalists’.⁵ Rebuilding state-business relations in an open, competitive rules-based fashion is essential. We outline six complementary areas. The complementarity is critical, as is an overarching theme that without institutional deepening with respect to accountability, autonomy and transparency, these policies will be subverted.

(1) Resolution of NPAs: Critical to real credit flows, investor sentiment and the broader macroeconomic health of the system is the effective resolution of NPAs. While the Insolvency and Bankruptcy Code

(IBC) has set out a sound framework to resolve NPAs and shift power from promoters to creditors, translating the promise of the IBC into practice remains a challenge. RBI data available until January 2019 indicates that resolution has been approved in 66 cases so far, unlocking INR 800 billion for creditors. But the pace of resolution lags the Act’s guidelines – egregiously, in some cases. In addition, continued vigilance is required to ensure that tight eligibility guidelines for potential buyers do not translate to increased corporate concentration in key sectors. Underpinning the broader NPA challenge is the need to sustain the autonomy of the central bank, whose independence must be protected and unchallenged by the executive.

(2) Competition: Dynamism and innovation require competition. Many sectors are already concentrated, and there are risks of further concentration – in the consolidation following resolution, and in the future via network effects in platform-based sectors. This is vividly illustrated by the debates in Europe and the US over platform-based companies. This requires an empowered, autonomous competition authority, and also continued innovations in regulation in the wake of technological change. Mexico actually created a strong, autonomous competition authority, with a dynamic head who could not be removed by the executive. But its action on anti-competitive behaviour (including of billionaire-linked companies) got stuck in the judiciary – with lessons for India. Infrastructure and natural resources are a special case: while auctions are an important step, implementation is again crucial. The most notorious Latin America-wide corruption scandal of the recent past, involving the Brazilian conglomerate Odebrecht, involved a series of contracts won in competitive auctions for PPPs. The Achilles heel was in the renegotiation phase, when concessionaires often extract big advantages. An alternative design is to make renegotiation also subject to credible, third-party scrutiny and decision-making with transparent processes.

(3) Better rules: Shifting the balance to rules-based interactions requires better rules. There has been a plausible focus on the ‘Doing Business’ indicators and healthy interstate competition on the rankings. However, international evidence finds that these notional measures are often completely unrelated to actual experience, which depends on implementation. The GST reform should help in the long term, but the costs of participation often still seem to outweigh the benefits, especially for informal firms. Of specific importance are the complex areas of land acquisition and labour policy. While there has been a tendency amongst economists to fetishize labour flexibilization as the missing ingredient for labour-intensive industrialization (it is no panacea), the goal has to be delinking social protection from the labour contract if inefficient formalization is to be discouraged; this is a specific bridge to comprehensive social policies.

(4) Facilitating implementation: The bureaucracy has in the past been in the production line of converting politician-business deals into the prevailing rules. With the (desirable) anti-corruption motif, there is widespread reference to the ‘chilling’ effects on approval, from both business and bureaucrats. Some reduction in the excessive legal risks for bureaucrats have come with changes in the 13(1)(d) regulation in 2018 – which previously criminalized bureaucrats for any loss to the government, even if there was no intent – but the effects are still unclear. Additional action, such as new third-party processes for contract renegotiation just referred to, can help. This is an area where concerted exploration of implementation design is important.

(5) Inclusion: Deepening institutional support for small-scale and informal enterprises will require a whole suite of policy changes across sectors and along the value chain. Providing more robust support to MSMEs, including those in rural areas, will require enhanced infrastructure provision (along the lines of the Pradhan Mantri Gram Sadak Yojana), a

deepening of financial inclusion and access to credit, a data-driven reorientation of NRLM and urban skilling programmes, and finally, a revamping of CSR towards leveraging corporate comparative advantage in favour of supporting business enterprises instead of government programmes.

(6) Industrial policy: Finally, there is a potentially important role for sector-specific industrial policy. In this regard, India has both successes and failures. The auto industry has benefited from a series of state actions that led to a productive sector strongly integrated with global value chains, notably in Tamil Nadu. Sector-specific public goods, such as on National Automotive Testing and R&D Infrastructure Project, are also examples of successes. By contrast the Special Economic Zone policy often became associated with land deals. Effective 21st century industrial strategies require both close cooperation with the business sector and a focus on sector-specific public goods (rather than a bias towards protection or tax breaks), but also sufficient autonomy from business lobbies – or especially a politician-business nexus – to avoid consolidation of inefficiency and rent-extraction. Credible sunset clauses to support are one example of an instrument.

This is only an outline of policy domains. While the complementarity between them is vital, even more important is the way in which the state behaves in their implementation. And key to this are the checks and balances that lie at the heart of the accountability mechanisms that underpin state behaviour.

These are of two complementary kinds. First, there are checks and balances within the state: fundamentally in the independence of the judiciary, but also the full array of regulatory agencies, and the incentives that they face. India has had plenty of experience of accountability institutions, notably in the long-term independence of the Election Commission and the Supreme Court. Both, however, are increasingly seen as subject to influence, with

critical actors in both taking unprecedentedly public measures to decry perceived threats to institutional autonomy and conduct.

Second, there is the pressure from civil society, whether (weakly and imperfectly) via periodic elections, or through ongoing civil society activism over state performance, via many mechanisms. This is heavily influenced by the availability of information, for which the various kinds of media play a central role. Unfortunately, the traditional media in India is largely owned by big business, and mostly supine on state business concerns.

There is room to strengthen both the mechanisms of accountability that belong with the state, and those that belong with civil society. What is needed is a genuine

counterbalance in institutional and societal terms, complemented by strengthening, not weakening, of the capabilities of the state. For while India has a tradition of very high-quality individual state actors and a reputation for an overbearing state presence, a real issue is weaknesses in state functionality,

The Latin American experience shows that growth can occur for a while under conditions of oligarchic capitalism and widespread informality. India has immense economic potential, for which the business sector is crucial. However, unless there is a comprehensive agenda of policy and institutional change to create a dynamic capitalism, there is a risk of a Latin Americanization of India's path that will consolidate a middle income trap of low productivity growth and entrenched inequality.

END NOTES

1. 'Can't run world's fastest growing economy on employment support... Must create employment: PMEAC member Rathin Roy', *Indian Express*, 26 May 2019, <https://indianexpress.com/article/india/rathin-roy-indian-economy-employment-pmeac-idea-exchange-5748449/>.
2. Government of India, *Economic Survey of India 2017-18* (New Delhi: Government of India, 2018).
3. Aseema Sinha, 'India's Porous State: Blurred Boundaries and the Evolving Business-State Relationship', in *Business and Politics in India*, edited by Christophe Jaffrelot, Atul Kohli and Kanta Murali, (New Delhi: Oxford University Press, 2019).
4. L. Chancel and T. Piketty, 'Indian Income Inequality, 1922-2014: From British Raj to Billionaire Raj?', CEPR Discussion paper 12409 (Washington, DC: Center for Economic and Policy Research, 2017).
5. Raghuram Rajan and Luigi Zingales, *Saving Capitalism from the Capitalists: Unleashing the Power of Financial Markets to Create Wealth and Spread Opportunity* (New York: Random House, 2003).



Image Source: Dhiraj Singh | Bloomberg

A Relook at Infrastructure

PARTHA MUKHOPADHYAY

The cost and reliability of electricity and logistics is a major drag on our manufacturing ambitions, and sewage from our cities is killing our rivers. Yet, infrastructure has fallen off the policy radar, despite the continuing challenges—evident most vividly in the financial sector's non-performing assets. What is wrong and how can we fix it? We outline the key actions that need to be taken in the major sectors to make the sector financially viable and support our economic goals.

Electricity

Today, when our installed capacity is a multiple of our expressed demand (although the expressed demand may be less than our need), the objective of 24X7 power supply to consumers—whether industrial, residential or commercial—at efficient and competitive prices, should be within reach. What is stopping us?

Many of the challenges in power have been addressed elsewhere in this document by other colleagues, so I will be brief here. Renewable energy capacity in India has grown rapidly—as befits the progenitor of the International Solar Alliance. Installed capacity of wind, solar, small hydro (less than 25MW) biomass and other such sources have grown seven fold from 11,125MW (8% of grid capacity) in March 2008 to 77,642 MW (22% of grid) in March 2019.

The share of generation from these sources is now 9%. Yet, the share of thermal sources, primarily coal, remains at 78% - except that it now operates at an inefficient 60% plant load factor instead of 74% in 2008. We have been running to stay in place. The rising share of renewables has replaced the lack of growth in large hydro sources, an outcome which may admittedly have other environmental benefits.

Integrating the full spectrum of non-fossil fuel resources into the grid is thus more difficult than just increasing capacity of renewable sources. So, we may get to our 175 GW capacity target and yet not achieve much in terms of transforming the carbon-intensity of our electricity supply.

Gas plants, the vaunted mitigators of climate elsewhere, remain almost unutilised – running at just about one-fifth of their capacity, less than half of the levels ten years ago, largely because current tariff and access regimes make them uncompetitive and they have no fuel supply. Our troubles with domestic gas exploration – KG D-6 for example – has led to relative stasis in gas-related investment. Even as the LNG market is being increasingly delinked from oil, with recent prices in Asia dropping to multi-year lows¹, our terminals remain underutilised and under-connected. A world where a gas plant can import fuel, land it at a convenient terminal and transport it to its plant by paying an access charge to a network operator seems very far away.

There is one root cause: DISCOMs that do not collect money for power they sell. This one cause has many other manifestations – protective regulators who are reluctant to allow open access, tariff regimes without time-of-day prices, overgenerous feed-in mandates for renewable power, lavish cost-plus tariffs for legacy centrally owned plants with priority power purchase agreements with states, etc.

Given the complicated mess that our power sector has been in over the past many years, spanning all governments, transcending this will need a number of actions, across the generation, transmission and distribution segments. I advocate three, focused on tariffs.

First, industrial and commercial tariffs need to fall, leading, hopefully, to a spurt in jobs. They are much more than the cost of supply, ostensibly to

subsidise residential and agricultural consumers. We cannot kill industries to keep DISCOMs alive. The network has the technical capacity to achieve this objective – especially for industries that receive power at higher voltages. DISCOMs have used their universal supply mandate as an excuse to prevent industries from accessing competitively priced power. Allowing DISCOMs to procure incremental power and supply them at competitive prices to paying industrial consumers is within the power of the state governments. The alternative is open access – part of our electricity legislation for several years – but limited in its application by our state electricity regulators, which is result of a short-sighted approach to protect DISCOMs.

Second, residential and agricultural tariffs can be rationalised, and in some segments, raised. In the era of direct benefit transfers and income support schemes, price subsidies have outlived their utility. The reduction in fiscal support to the DISCOM can be redirected to targeted consumers as a cash transfer, to insulate them from the effects of the rise in tariffs. A more rational tariff regime may also lead finally to complete metering (one can trace exhortations to meter all feeders back to twenty years ago), and a credible accounting of electricity consumption.

Third, we need to extensively expand time-of-day pricing. Today, those that consume low cost base-load power bear the burden of higher-price peaking (and other) power because of averaging of tariffs. This is being debated for a long time and is even used in some segments in some states. It can also make the gas plants, at a time of low LNG prices, competitive, reducing our carbon footprint.

These tariff actions will create the enabling conditions for ensuring that our grid is no longer bankrupt. There will still be much work to revitalise DISCOMs and address the hysteresis of long years of embedded political economy constraints, before they can be made viable. But, this is a better way than UDAY and the creation of a national

distribution company, which is akin to a heart bypass, without changing unhealthy habits. At most, if necessary, the Central government can support the states in DISCOM reform by advancing bridging loans to tide over revenue shortfalls in the initial stages, if any.

There are many other areas for action. These include enabling a network that can integrate renewable power at the scale it is being envisaged; rationalising and modernising our coal plants – the capacity glut allows us to take some of them offline, temporarily, or even permanently, if necessary; streamlining our gas pipeline grid and pricing to allow gas plants to compete and provide balancing capacity for a renewable heavy grid, etc., etc. There are also many actions that need to be taken to grow an energy-related manufacturing sector. But, all of that is only possible when the final cash-generating end of the sector – distribution – is viable and healthy. It is time we took this head on.

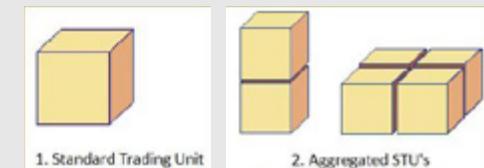
Telecom

The telecom sector, bar one firm, seems to be struggling despite increasing use, so much so, that one wonders whether the public monopoly before telecom liberalisation will return in a different avatar. Despite rapid growth and the spread of smartphones, we are yet to ensure that a seamless network covers our country with both reliable data and voice. Why are we in this situation?

One major reason is that spectrum is mispriced. It should be virtually free in sparsely populated rural areas. Unless there is congestion, there is no reason to price it. Yet, our current spectrum pricing model makes rural spectrum as expensive as that in cities. This is because Licensed Service Areas (LSAs) are congruent with telecom circles, i.e., states, mixing areas that are both abundant and scarce in spectrum. This does not allow rural spectrum to be separated and affects

spectrum availability across the LSA. Auctions are not necessarily efficient if the good being sold is incorrectly bundled. Instead, spectrum needs to be defined in much smaller geographical units (see Box).

Example of Standard Spectrum Trading Unit from Australia



The Australian Communications and Media Authority (ACMA) permits spectrum space to be traded in terms of standard Spectrum Trading Units (STUs). These STUs may be visualised as a cube. Its base covers a geographic area (length and breadth), while bandwidth is measured vertically. The geographic area is uniform and defined by ACMA (5 minutes by 5 minutes of arc, approximately 9x9 km) as a cell of its spectrum map grid. The frequency bandwidth of an STU is set at 1 Hz for all spectrum licence bands. Though a single STU may not be useful, its regular shape allows it to be combined with neighbouring STUs vertically (to provide increased bandwidth) or horizontally (to cover a larger area). Such an aggregation of spectrum space allows spectrum licences to be combined and subdivided. Every spectrum licence has a specified minimum contiguous bandwidth (MCB). Although an STU is the minimum amount of spectrum that can be traded, trading may be restricted if an STU does not meet the MCB.²

Source: https://www.acma.gov.au/Industry/Spectrum/Radiocomms-licensing/Spectrum-licences/spectrum_21

If one moves to define and sell spectrum over smaller geographical units, aggregate revenue may remain the same but places with excess spectrum may get more service providers. But, even if it falls, one must question whether the rationale for spectrum allocation is to raise fiscal resources or whether it is to expand connectivity across the country.

Another reason is that telecom services may be priced below economic cost, an issue for the sector regulator and Competition Commission of India to examine. If even the growing firm is sustained more by infusions outside the sector than its own surplus, then, as 5G becomes the global standard, we may find that Indian telecom sector is too under-resourced to adopt the new technology. This would not be a good outcome. Cheap prices now is too high a price to pay for outdated technology later.

Finally, our Universal Service Obligation Fund was supposed to bring data to our rural communities and transform their access to education and health. Yet, instead of schoolchildren learning from high bandwidth digital content, they are addicted to low bandwidth social media separating one from the other.

Logistics

Twenty years ago, the government levied a rupee of cess on petrol and diesel, to fund national highways, rural roads and, lest one forget, rail-over bridges. The humble but path-breaking cess of 1999 is now the monster eight-rupee road and infrastructure cess that no one protests paying. Why, then is our logistics still so outmoded?

Highways

There has been substantial investment in highways in the last administration. The adoption of models like Hybrid Annuity reversed a slump caused by concession models that transferred excessive risk to the private sector, who, regardless had bid

aggressively for projects. Public sector banks lent to them on the back of projected cash flows that never materialised. Post the 2008 Financial Crisis, banks were left holding unfinished projects. Most of these have now been restructured and restarted. However, the sector still needs to solve three challenges:

- (a) Barrier free movement for freight road traffic – trains, after all, are not stopped at state borders
- (b) Ensuring maintenance of the national highway network
- (c) Avoiding white elephant highways, while retaining an appropriate risk-reward framework

For a long time, open road tolling was not possible because offenders could not be identified, absent a national vehicle number database. Now we have one – VAAHAN – and we have e-way bills too. We should remove all our toll plazas and move to toll gantries, beginning with high traffic routes.

For highways on the BOT model, on annuity or hybrid annuity concessions, there is a built-in mechanism to penalise operators for poor maintenance. Is that working? What about highways on a BOT-capital grant model or those being tolled by NHAI? As the highway network expands and begins to age, a transparent mechanism to monitor and maintain the quality of roads needs to be rolled out.

Finally, hybrid annuity models do not transfer traffic risk to the private concessionaire. As the network grows beyond the obvious congested routes, there is a risk that roads will get built where there is no traffic, even in the near future. To forestall this, we should switch to concession models that limit the transfer of periodic traffic risk, but still retain transfer of lifetime traffic risk – like Least Present Value of Revenue models. For this, we need to familiarise our financial institutions with such methods.

PMGSY: Rural Roads

The construction of 600,000 plus kilometres of rural roads, over the last twenty years, across governments of different political persuasion is testimony to the consensus over rural connectivity. Many states now have supplementary rural roads programmes financed from their own budgets. It has undoubtedly played a major role in moving our workers off the farm, to new activities and locations. The maintenance of this network should now be our primary concern. The initial PMGSY contracts had a built-in maintenance period, many of which have now concluded. An institutional mechanism to maintain the PMGSY network needs to be put in place. One model can be the performance based CREMA contracts of Argentina, broadly similar to the initial PMGSY contracts, but for rehabilitation and maintenance, with penalties for not meeting performance outcomes.

Railways

Even the lowest tariff freight train makes more money than the Rajdhani. We need to shift the conversation around Railways from passenger to freight – a critical logistics function essential to support manufacturing. Currently, track capacity is exhausted running passenger trains. In the short term, it is necessary to: (a) prioritise signalling investments on a war-footing to expand capacity and (b) rationalise passenger trains, by combining capacity and retiring trains.

In order to determine which trains to retire, the Railways needs to develop the ability to cost each train, which it currently does not do. The passenger subsidy numbers bandied about are an artificial construct and an over-aggregated exercise. Developing this costing methodology is a priority.

The Dedicated Freight Corridors should also free up capacity by taking traffic away from existing lines. The transport of coal, which still makes up about half

of Railway's traffic, will slow down or even decline as coal power is reduced and produced progressively at the pithead. Can Railways fill this freed-up capacity with other cargo, containerized or otherwise, and with revenue generating passengers? Can it become a logistics company from a mere transporter from one station to another? The strategy that is chosen will have implications for number and types of locomotives and rolling stock. The e-commerce parcel segment is a good way to start this transformation. It will force the Railways to deal with inter-modality, a necessary ingredient for its medium-term survival.

Suburban passenger services are urban public service obligations. This activity needs to be separated and costed. Then it should be funded separately, as for example the urban metro rail projects.

Finally, the Indian Railways needs financial engineering. Today, a huge portion of its revenue is spent on pension benefits for its retirees. This is an obligation that will progressively reduce over time, as the effect of the National Pension Scheme begins to show. Railways can restructure this predictable liability to reduce its current expenditure and free up resources for investment.

Ports

Today, JNPT is quite possibly no longer the Indian port that handles the most containers. That position is likely held by Mundhra, a port owned by the Adanis, connected by a joint venture rail track to the Delhi-Mumbai rail corridor. Mundhra has an unfair advantage – it can decide its prices, JNPT cannot. The tariffs at our major ports (i.e., those owned by the Union government) are determined by the Tariff Authority for Major Ports (TAMP), an anachronistic holdover in a competitive sector. The Tariff Guidelines notified this year are a far cry from the price flexibility that Mundhra enjoys.

Not only are the tariffs rigidly determined, the structure of our major port concessions are designed to make it costly for our traders to transport. Between a third and a half of the tariff is shared with the government, depending on the port and berth, since the gross revenue share is the bid parameter. It means that tariffs could be reduced by half in some cases and the port would still be viable. Like spectrum, this is again an instance where the urge to raise fiscal resources prevailed over the need to ensure competitive logistics costs for our industry. It is time to take three actions.

First, disband institutions like TAMP, treat ports as a competitive sector, with tariff freedom for operators and improved competition oversight. This should be accompanied with a move away from a revenue share concession structure to a fixed concession fee.

Second, invest in port connectivity to spur inter-port and intra-port competition. The rising share of non-major ports indicates that there is growing inter-port competition, even with problems in road and rail connectivity. Added to this is intra-port competition, when there are multiple operators in a port.

Third, we need to re-examine our approach to coastal shipping. Our eastern ports, together with ports in Bangladesh, Myanmar and Thailand, can act as a sea-bridge to our northeast and integrate our industry with South East Asian value chains. The Bay of Bengal will buzz with crisscrossing ships.

Together, these actions, across road, rail and ports, along with regulatory action and investment to facilitate multi-modal transport, will reduce our logistics costs and make industry more competitive.

Water Treatment

Every major city in India kills at least one river. Even as Chennai dries and Mumbai drowns, Delhi blithely pollutes the Yamuna. Our farms mismanage water

and our cities poison it. Yet, with the possible exception of the National Mission for Clean Ganga, there is little programmatic effort – like the National Highways Authority for India for highways – to preserve our rivers and water bodies.

This is not just a matter of building sewers and sewerage treatment plants – a significant portion of such treatment capacity lies unused. We also need to consider the reckless destruction of even groundwater resources by industries that dispose their waste underground, aided by incapacitated pollution control boards – the corridor from Vatva to Vapi rivals the worst polluted areas of China – and the damage caused by chemical run-off from overuse of pesticides and fertilizer in agriculture.

More than inland waterways, river inter-linking and large dams, we need focus on wastewater.

The Digital Future

Even as we address these basic issues, digital technologies are changing the way infrastructure is provided, operated, charged for and maintained across sectors. These technologies permit services to be delivered more efficiently, less expensively, use less resources, cause less damage to the environment and reach a wider user base. This will not happen automatically or quickly but the process can be accelerated with an appropriate mix of regulatory mechanisms and financing tools.

The availability of funds is not the constraint that will restrain growth of digitally enabled infrastructure. The challenge is to design projects to balance risk and reward in a way that providers are incentivised to serve users well, while financiers are insured from the realisation of uncontrollable risks.

One such financial risk is the fast-obsolescing nature of these technologies, where yesterday's cutting edge is tomorrow's discard. This structural

risk can slow down the adoption of socially beneficial technologies. Slow adoption can also be engineered by those who will lose their investments from new technologies. This will need public action in terms of financing models and regulatory oversight.

Conclusion

Our infrastructure models are still operationally inefficient, financially fragile and future-unready, both

in terms of technology and the environment. For too long – across governments – we have focused on making money from infrastructure rather than seeing it as a service that can power growth and enable the transformation of India. If we did manage to convince our private sector to invest enough to get us to 8%+ growth, we will hit a wall of infrastructure constraints. We have lived too long off our earlier investment in the past few years. We cannot do so any longer.

END NOTES

1. Henry Hub, the US local benchmark and increasingly an alternative basis, vis-à-vis oil, for export pricing, has stayed below USD 3 per mmbtu for three fourths of the time over the last five years.
2. This is to avoid situations where spectrum trading leads to licences that are too small to be practical, resulting in inefficient use of spectrum and unnecessary administrative costs.



A Clarion Call for Just Jobs: Addressing the Nation's Employment Crisis

SABINA DEWAN

India's labour market is ailing. Addressing of the employment crisis has been mired in a raging debate over the scale of job creation, the availability of data, and which sources and indicators – unemployment or productivity and wages – accurately reflect the state of the job market. The new government has an opportunity to move beyond this debate, acknowledge what ails the labour market, and take measures to address the crisis.

What are the Challenges?

Only one in two Indians of working age, 15 years and above, participate in the labour force.¹ Only about

one in four women of working age, 23.3%, enter the labour market.² Female labour force participation has been declining since 2004 when it was 42.7%.³ This drop can be attributed to several factors ranging, for instance, from girls staying in education longer and delaying their entry into the labour market, to the ‘middle income effect’. A lack of demand from female friendly industries, such as apparel and footwear, and continuing social disapproval are both important factors.⁴ Other culprits include migration and the nuclearization of families where there are fewer women in the household to contribute to domestic work. Female or male, low labour force participation is a loss of precious productive potential.

Unemployment is also a loss of productive potential. Recent data suggests that unemployment rose to 6.1% in 2018.⁵ A rise in unemployment can largely be explained by the fact that more young people are acquiring an education.⁶ With education comes the expectation of a better job. Those who can afford to educate themselves also tend to be in a position to wait for the right job to come along.

Whether one buys the hotly contested unemployment figures or not, the possibility of a growing trend in unemployment is a matter of concern; but arguably more pressing, certainly in terms of the scale of the problem, is the issue of underemployment. The quality of jobs is as important as the quantity of jobs, and in India more people struggle with the former than the latter.

Most people in India cannot afford to be unemployed; they have to work to sustain themselves. Among those who are working, informal employment as a share of non-agricultural employment was 68.4% in 2018.⁷ Informal employment usually entails the sharing of low-productivity work, with poor wages and the absence of social protection.⁸

India's 361 million youth between the ages of 15 to 29 represent just under 27% of the country's population.⁹ Inspired by the narrative of an emerging market economy with high levels of economic growth, India's youth have rising aspirations. Yet economic trajectories are not built just on aspirations and potential, but also on opportunity. Many of India's youth face constraints in terms of opportunity arising out of low household income, caste, tribe, gender, special needs or religion. The inequality of opportunity in one's younger years manifests in an inequality of outcomes in adulthood.¹⁰

Enrolment rates have increased,¹¹ but learning outcomes remain weak,¹² especially for youth from vulnerable backgrounds.¹³ Skills training, especially short-term programmes, cannot compensate for years of poor education. Training may help a young

person get a job, but without the requisite levels of education and soft skills cultivated early on, these programmes are unlikely to offer economic mobility and career pathways.

If these challenges go unaddressed, the nation will squander its demographic advantage. This brief window, where the working age population constitutes a rising share in the total population with a relatively smaller dependent population, will slam shut in approximately two decades from now.

How Can these Challenges Be Addressed?

The nation needs a **National Employment Strategy** that will lay down specific goals in the following three areas:

- 1.** Generating productive and well-remunerated jobs, which entails making public allocations to support sectors that absorb more labour
- 2.** Making enduring, long-term investments in human capital through good quality education, skills and on-the-job training
- 3.** Strengthening labour market institutions
 - including thoughtful reform of labour regulations, the implementation of a statutory minimum wage, and provision of social protection, especially universal healthcare

Ministries should submit annual action plans laying out how they intend to realize the goals set out by the National Employment Strategy. The plans should follow a standardized template specifying (i) concrete actions, (ii) resourcing, (iii) metrics for success and (iv) timelines. These plans should be submitted to an appointed individual in the Prime Minister's Office (PMO) – a 'Senior Officer In-Charge'. Consolidating the plans under the PMO will also ensure coordination and coherence across different players. In the next five years, the National Employment Strategy should focus on the following.

BOX 1: Raising Productivity in Agriculture

With 44% of the employed in agriculture, it is the most labour intensive, though the least productive, of the nation's sectors.¹⁴ The common definition of structural transformation refers to a reallocation of economic activity away from agriculture to higher value-added sectors such as manufacturing and services. But transitioning such a large number of workers out of agriculture and quickly finding them gainful employment in other sectors is unlikely. A more realistic transformation could be one in which the focus is on improving productivity (and consequently wage levels), especially in agriculture. Increasing productivity is a better way to reduce unit labour costs than reducing wages.

Short-term cash transfers to farmers are the flavour of the season, but these address the symptom, not the cause. More effective would be investments in irrigation, energy and transportation infrastructure for rural areas, which will alter cropping patterns towards more labour-intensive and higher value crops. Programmes to ensure competitive pricing of inputs such as fertilizer and revising skewed subsidy structures are key. Addressing price volatility to give farmers access to fair compensation for their produce, coupled with a regulatory framework that breaks the culture of labour contracting and middlemen in farm employment, will help agriculture become more productive and also attract, absorb and retain more labour. Finally, providing access to land records and real crop insurance, especially to small-scale farmers, will also help protect them in case of a crisis, environmental or otherwise.

1. Generating productive and well-remunerated jobs by focusing on sectors that absorb more labour: Labour-intensive manufacturing

When seen through a jobs lens, the composition of growth matters even more. In addition to improving productivity and wages in agriculture (Box 1), the nation needs an industrial policy that fosters labour-intensive manufacturing. The National Employment Strategy should call for the formulation of an industrial policy that propels us beyond an ad hoc smattering of industrial parks and estates, special economic zones,

or model townships, to undertake a series of steps to enable the growth of manufacturing firms, especially small ones with potential.

Sectors such as agro-processing can be labour intensive and can boost both agriculture and manufacturing, but this requires developing domestic value chains and associated infrastructure. The industrial policy should actively address issues ranging from land clearances to access to power and tax incentives to help bolster manufacturing firms, especially small ones with the potential to grow.

In addition to developing modern domestic value chains, the nation's industrial policy should ascertain how to support the export capacity of firms and encourage participation in global value chains.¹⁵ This calls for a reassessment of current tariff structures, especially the inverted duty structure, to make manufactures more competitive. We must also leverage trade agreements and regional integration to gain market access and stake claim in relevant value chains.

The latter investments in manufacturing will spawn services in sectors such as logistics and transport. These sectors will be increasingly critical for job creation in the coming years. All of these steps must be embedded in sound physical and energy infrastructure, both of which will themselves absorb labour. The government should adopt a methodology

to measure the potential economic impact and multiplier effects of a given infrastructure project, especially with regard to its potential to facilitate direct and indirect employment. This should be a criterion in targeting public investment accordingly.

2. Make enduring, long-term investments in human capital: Education, skills and private sector engagement

If generating more labour market demand is one side of the coin, the other is making necessary investments in human capital. A National Employment Strategy should lay out a plan to make enduring, long-term investments in human capital through good quality education, followed by skills and on-the-job training.

The Ministry of Human Resource Development and the Ministry of Skills Development and Entrepreneurship should be merged to establish an effective school-to-skills-to-work continuum instead of separate education and skills silos. Skills training, especially short-term programmes, cannot compensate for a lack of quality basic education. As such, spending just 3% of GDP on education is inadequate¹⁶; we must allocate at least 6% to this most critical priority, making sure that the most vulnerable populations have equal access to quality learning. But equally important as more spending is reform of the current system to include, among other things, a greater focus on cultivating employability in school.¹⁷

As school curricula are reviewed, they must also consider nurturing employability in age-appropriate ways. Soft skills, from hygiene to confident communication, must be fostered from early ages. As a child progresses through secondary school, exposure to a range of trades such as the basics of growing food to cell phone repair, basic woodworking and beauty and wellness can instill adaptability, awareness and a work ethic. This form of ‘multi-skilling’ goes beyond the currently limited models of vocational education in secondary schools. These practices do not have to detract from a focus on

the basics: reading, writing and arithmetic; rather, they can root learning in practical application. All children in school, regardless of gender or other social groupings, should be exposed to a multitude of similar trades. Gender stereotyping in skills training is a disservice to the individual and to the mission of creating better employment for more people.

Another glaring gap in the current ecosystem is that training has been largely supply driven. Efforts to properly align training to the needs of the labour market have been deficient, and effective private sector engagement is lacking. Both of these must be rectified if the skills training system is to be operative.

First, market demand must drive skills training across providers. For this, there is a need to map demand such that the method not only examines the anticipated growth of certain large, formal sectors, but is also fine-tuned to take stock of the registered and unregistered enterprises of different sizes and in different geographies to align job seekers to the wide range of jobs that do exist.

Second, there is a need to reform the Sector Skills Councils (SSCs) to more effectively engage the private sector. The private sector is essential for on-the-job training, apprenticeships and internships; it is also critical for understanding market demand and the qualifications needed for different job roles. It is a valuable source of information to understand how demand projections may change in subsequent years: that is, which sectors will need how many workers, and when? This is particularly important as technological change alters the way people live and work at an unprecedented pace.

Yet the current channels for engaging with the private sector – the SSCs – have been inadequate; their efficacy has been marred by factors including endemic corruption, inability to conduct assessments and certifications effectively, and turf battles with other SSCs and stakeholders. The existing National Skill Development Policy needs to be updated and fine-tuned to, among other matters, reform the SSCs.

BOX 2: Reforming Sector Skills Councils

There is a need to clearly delineate the functions of the SSCs, including their specific role in assessments, certification and utilization of the Qualification Packs and associated National Occupational Standards. Based on the clear and specific functions ascribed to the SSCs, there should be guidelines that clearly state which regulatory bodies the SSCs answer to. They should be required to routinely self-report on their structure, composition and performance. This should include reporting on accounts in a timely and transparent manner. SSCs should be responsible for a revenue generation model that disassociates revenue from assessment, certification and QP-NOS utilization. They should reinforce (though not implement) compliance with existing labour and wage regulations. Each SSC should present a concrete plan for detailed demand mapping and employer engagement. These are a few ways in which the SSCs can be reformed to be more effective.

**3. Strengthen labour market institutions:
Toward a simpler labour code, a national
floor minimum wage, universal social
protection and better data**

Labour regulations are a subject of charged debate – one that seems perpetually inconclusive. The disagreement over whether these laws constitute rigidities that stymie firm and employment growth notwithstanding, most stakeholders agree that there is a need to simplify the existing labyrinth of Indian labour regulations. A clear and consistent labour code is inviting for business and investment. A National Employment Strategy should facilitate the simplification and rationalization of the nation's labour laws.

Minimum wages that serve as a floor, to ensure that all workers can afford to meet their basic needs, is a necessary part of a successful wage regime. Labour market regulations have to strike a balance between efficiency and equity. India's national floor level minimum wage was instituted in 1996,¹⁸ but it is non-binding. That is, it has no statutory backing under the Minimum Wages Act, or elsewhere. It is merely an

advisory floor limit for the state governments to align their wages to. A successful wage regime is one that is enforceable and provides compensation ladders; it is established through sound industrial relations and collective bargaining, and is periodically adjusted to ensure that wage growth aligns with changes in productivity and prices. This is what we need.

Social protection is about more and better workers – the complement to the ongoing quest for more and better jobs. To this end, basic social protection – health, pensions, maternity, death and disability benefits – should be made available to all through a combination of affordable social insurance and public provision of services, especially healthcare, that allow universal access. Currently only about 7% of the labour force has social insurance; even workers in some organized sector enterprises lack social insurance.¹⁹

Healthcare is perhaps the biggest concern when it comes to building a productive workforce with economic mobility. That public spending on health – for a country of over 1.3 billion that boasts high levels of economic growth – is barely over 1 percent of

GDP is unconscionable.²⁰ Millions are one healthcare emergency away from crushing debt and poverty. A National Employment Strategy should call for a simplification of the wide web of existing social insurance schemes, and pave the way towards government support for universal healthcare; this is an imperative for a healthy labour market. As technology, migration and urbanization upend traditional employment models, increasing the prevalence of contract and other flexible categories of workers, social protection becomes delinked from employment, which further reinforces the argument for public provision of universal healthcare.²¹

Data and evidence from the field must underpin the National Employment Strategy. ‘The lack of reliable estimates on employment in recent years has impeded its measurement and thereby the Government faces challenges in adopting appropriate policy interventions,’ wrote the government’s Chief Economic Advisor Arvind Subramanian in the 2016–2017 Economic Survey.²² The Survey goes on to acknowledge the many limitations of India’s labour market data including ‘partial coverage, inadequate sample size, low frequency, long time lags, double counting, conceptual differences and definitional issues’.

Efforts to gather more data more regularly and frequently with a consistent methodology, and making

the results public, are central to the success of a National Employment Strategy. Subsequent Strategies will be strengthened as more time series data becomes available to accurately assess labour market trends. Any data analysis must be textured with qualitative research that can yield nuances and insights, which are as important as those from broad-brush quantitative data.

A National Employment Strategy also needs political will and resources. Given the urgency of addressing the jobs crisis before the demographic window closes, the Strategy cannot be held hostage to an arbitrary fiscal deficit ceiling. Beyond how much a government spends, the composition of spending matters. That is, spending on the aforementioned areas is more likely to contribute to growth and to a wider distribution of its benefits than other forms of expenditure. In addition, there is a need to reassess existing tax and subsidy regimes to ensure that they are progressive, and that they garner more resources to realize the Strategy’s goals.

Suchha vikas will take work. Whether salaried or self-employed, whether on family farms or in manufacturing facilities, people across India’s culturally and politically diverse landscape rely on their work to earn a living, to fulfil family and social obligations, and to satisfy the aspirations that drive and motivate them daily. Politics and policy must take the necessary measures to deliver just jobs; India’s progress depends on it.

END NOTES

1. Annual Report: Periodic Labour Force Survey (2017/2018) National Statistical Office, Government of India Available at: http://www.mospi.gov.in/sites/default/files/publication_reports/Annual%20Report%2C%20PLFS%202017-18_31052019.pdf?download=1
(Labour force participation rate (LFPR) is here defined as the total number of employed and unemployed persons in the country out of the total population above 15 years of age.)
2. Ibid.
3. Ibid
4. S.N. Roy and P. Mukhopadhyay, ‘What Matters for Urban Women’s Work: A Deep Dive into Falling Female Labour Force Participation’, CPR, 2019.

5. Annual Report: Periodic Labour Force Survey (2017/2018) National Statistical Office. Government of India Available at:http://www.mospi.gov.in/sites/default/files/publication_reports/Annual%20Report%2C%20PLFS%202017-18_31052019.pdf?download=1
6. S. Dewan, 'Is the unemployment crisis for real?' *The Hindu*, 15 February 2019, <https://www.thehindu.com/opinion/op-ed/is-the-unemployment-crisis-for-real/article26272911.ece>.
Annual Report: Periodic Labour Force Survey (2017/2018) National Statistical Office. Government of India Available at: http://www.mospi.gov.in/sites/default/files/publication_reports/Annual%20Report%2C%20PLFS%202017-18_31052019.pdf?download=1
7. Annual Report: Periodic Labour Force Survey (2017/2018) National Statistical Office. Government of India Available at: http://www.mospi.gov.in/sites/default/files/publication_reports/Annual%20Report%2C%20PLFS%202017-18_31052019.pdf?download=1
Percentage of workers engaged in proprietary and partnership (P & P) enterprises among workers (ps+ss) engaged in non-agriculture and AGEGC sectors 2017-18 (PLFS)
8. S. Dewan and D. Prakash, 'The Evolving Discourse on Job Quality from Normative Frameworks to Measurement Indicators: The Indian Example', CSE Working Paper, January (2019: Centre for Sustainable Employment, Azim Premji University, 2019), cse.azimpromjiuniversity.edu.in/wp-content/uploads/2019/01/Dewan_Prakash_Job_Quality.pdf.
S. Dewan, 'Job creation: Not "how many", but "how good"', *Economic Times*, 1 March 2018, <https://economictimes.indiatimes.com/blogs/et-commentary/job-creation-not-how-many-but-how-good/>.
9. 'World Population Prospects: The 2017 Revision', Population Division, Department of Economic and Social Affairs (United Nations, 2017), custom data acquired via website.
10. M. Rama et al., 'Addressing Inequality in South Asia' (World Bank, 2015).
11. 'U-Dise Flash Statistics, 2016-2017', School Education in India (xxxxxx: National Institute of Educational Planning and Administration, 2018), http://udise.in/Downloads/Publications/Documents/Flash_Statistics_on_School_Education-2016-17.pdf.
12. Ibid.; ASER, 'Annual Status of Education Report (Rural)' (xxxxxx: xxxxxx, 2018), <http://img.asercentre.org/docs/ASER 2018/Release Material/aserreport2018.pdf>.
13. S. Dewan, X. Khan and X. Taneja, report forthcoming
14. Labour Bureau, 'Report on 5th Annual Employment-Unemployment Survey (2015-16), Volume 1'.
15. Exports to Jobs, 2019, <http://documents.worldbank.org/curated/en/255821551109391137/pdf/134845-PUB-9781464812484.pdf>.
16. 'Analysis of Budgeted Expenditure on Education 2013-14 to 2015-16' (Ministry of Human Resource Development, Government of India,), https://mhrd.gov.in/sites/upload_files/mhrd/files/statistics-new/ABE2013-16.pdf.
17. S. Dewan and U. Sarkar, 'From Education to Employability', JustJobs Network, 2017.
18. 'Report on the Working of Minimum Wages Act, 1948 for Year 1996' (Labour Bureau, Ministry of Labour and Employment, 1996).
19. S. Mehrotra, 'Laying the Foundation of a Just Society: Why Extending Social Insurance to All is an Economic and Moral Imperative', Presentation, 2017. Social insurance here refers to pensions, maternity, death and disability benefits.
20. 'Health Sector Financing by Centre and States/UTs in India, 2015-16 to 2017-18', compiled by National Health Accounts Cell, Ministry of Health and Family Welfare, Government of India, <https://mohfw.gov.in/sites/default/files/HEALTH%20SECTOR%20FINANCING%20BY%20CENTRE%20AND%20STATEs.pdf>.
21. Several South East Asian nations have carved out the fiscal space to provide universal healthcare to their populations in recent years. The system can be a combination of a contributory and government-subsidized scheme. In the context of India, the latter inevitably calls for collapsing other existing programmes and reforming taxation policies to garner more revenue to this end.
22. 2016-2017 Economic Survey, <https://www.indiabudget.gov.in/es2016-17/echapter.pdf>.



Back-End First: A National Agenda for India's Agricultural Markets

MEKHALA KRISHNAMURTHY

The new national government begins its term against the backdrop of an agricultural sector estimated to be growing at just around 2 percent, a poor *rabi* season across many regions of the country, and a period marked by the collapse of farm gate prices across numerous commodities. It is estimated that farm incomes might be growing at the slowest pace seen over the last fifteen years¹, even as there is a renewed policy vision of doubling them in a short span of time.² After a long season of repeated protests by farmers, agrarian distress remains very much in the spotlight.

The policy debate was initially dominated by the two longstanding demands of farmers' movements: higher, guaranteed Minimum Support Prices (MSPs) and farm loan waivers. More recently, the political

focus has centred on the promise of introducing income support transfers for farmers and the rural poor, with a range of state and national schemes having been proposed and rapidly rolled out in the field. While these schemes deserve close attention, a much more urgent need is to take a comprehensive and systemic approach to agriculture. This must include prioritising the deep challenge of reforming India's agricultural markets. Not only are agricultural markets a central element of the larger strategy to support and improve farmers' incomes, they are at the very heart of Indian development and the dynamics of growth, distribution and equity. Agricultural commodity markets are the connective tissue in the economy: connecting agricultural production, circulation and consumption, interlinking livelihoods

and logistics across the agrarian and non-agrarian sectors, shaping the relations between cities, small towns and villages, and those between local and regional markets for commodities and larger, national and global circuits of capital and commerce. There is therefore every reason to build on the existing momentum, knowledge and experience to forge a genuinely national agenda to reform India's agricultural markets.

Importantly, this time there is a unique context that has opened up for the pursuit of such reform: the ambition to create a National Agricultural Market (NAM). Indeed, this is an idea that has featured in policy documents over the last few years, dating back to 11th and 12th Plan mid-term reviews and task groups. It subsequently featured in the Union Budget in 2014 and 2015, and was finally launched by the Central Government in the form of eNAM in April 2016.³

Historically, the regulation of agricultural markets in India, especially at the primary level where farmers sell their produce, has come under state legislative acts and under the management of local market committees. As such, they are characterised by variation and fragmentation across regions and commodities systems. The move towards designing and facilitating a national market for agricultural commodities is therefore a transformative shift. However, eNAM, envisioned as 'a pan-India electronic trading portal which networks the existing APMC mandis to create a unified national market for agricultural commodities' has led into this ambitious effort with a singular focus on getting select local mandis trading online.⁴ Even so, the process of trying to get eNAM off the ground has forced, at least to some extent, a deeper engagement with existing physical markets and the varying conditions under which they operate. This has made it quite apparent that if the vision behind a National Agricultural Market is to be realised, we need to start from the back-end first. For this to happen, the central government needs to take both

a more *contextual* and more *comprehensive* approach to market reform.

Going back from the Dashboard to the Drawing Board

In its first phase of implementation, the eNAM scheme is reported to have networked 585 APMC mandis across 18 states.⁵ Of these, less than half (252 mandis) have shown evidence of any level of online trading activity.⁶ Field reports, including the findings of a high-level Government-appointed Expert Committee, provide a sense of the numerous challenges the initiative is facing on the ground.⁷ In many cases, computer terminals have remained in their boxes; in others, data from offline auctions or government procurement has been retrospectively entered into the e-NAM portal; some mandis have avoided moving high-volume commodities online due to delays in facilitating exchange; others only use e-NAM on a single day of the week or off-season before reverting to business as usual; and across the board there have been few takers for assaying and quality specification, with testing equipment remaining widely unused. In states where regulated markets are not the primary channel for local marketing and trade, mandi functionaries have struggled to attract buyers and sellers into market yards, let alone getting them to bid online. Where mandis are in fact dynamic hubs for local trade, open auctions or manual tendering are not always conducted in the first place or for all commodities; in such cases, moving buyers and sellers from no auctions to e-auctions is not an easy task. And even when auctions are common practice, enforcing a system of direct electronic payments for all transactions is a significant challenge for farmers, traders and commission agents with prior histories of credit advances and cash rotations.⁸

All this is not to say that electronic auctions and other price discovery mechanisms on a trading platform that enables both local and long-distance buyers to bid on farmers' produce is an inconceivable enterprise. On the contrary, there is little doubt

and growing evidence that farmers and traders across the country are capable of integrating digital technology and online platforms into their marketing practices.⁹ It does, however, force us to contend with the reality that agricultural markets are at once highly specific, diverse and differentiated in terms of their structure and organisation—across agro-ecological regions, land regimes, socio-economic groups, commodity systems, agro-commercial networks, and regulatory histories and priorities.¹⁰ For instance, different commodities cultivated in the same field follow diverse post-harvest pathways of exchange, trade and processing. The same commodity also typically moves across different states and even within the same state through different channels and intermediaries, a significant proportion of which are not formally regulated. When it comes to regulation itself, there is no single agricultural marketing act across states, some states don't have an act at all, and even a single state act is differentially implemented (and sometimes left largely unimplemented) across districts, blocks and commodities. Moreover, a great deal of regulatory work in agricultural markets doesn't happen through legislative acts but through the issuing of ad hoc government orders and even more extensively through informal (but often highly organised) industry associations and trading networks. In this context, building a National Agricultural Market cannot begin or end with electronic integration: it requires an enormous degree of field-based data and analysis; significant institutional, infrastructural and logistical investment; and deep regulatory reform, synchronisation and capacity building.

Learning from the first phase of e-NAM implementation, there is a need for a reorientation in the approach: states should not have to 'plug into' the e-NAM via a software; instead, they have to substantively buy into and participate in the process of creating a National Agricultural Market.

The challenge of reforming agricultural markets

Agricultural marketing reform is the proverbial 'hot potato': vital, visible, and politically volatile. When it comes to taking on major regulatory and policy reforms to open up and invest in agricultural markets, there are two key sources of resistance that are usually raised.

First, historically, the local traders, commission agents and regional processors who have, in different regions and periods, gained from the dominant regulatory regime often exercise considerable local and regional political power. This makes it very difficult for state governments to initiate and sustain deep and wide-ranging reforms to open up agricultural markets to competition. Moreover, in many cases, these same market actors work across input and output markets, while also financing (through credit) both agricultural production and household consumption, making them especially difficult to dislodge through isolated or piecemeal market interventions.

The second is the political purchase of the Minimum Support Price (MSP) and procurement, the most publicly prominent means of state protection of farmers in markets. But we know that in the vast majority of states and commodities across the country where MSPs are not backed by procurement operations, their declaration has no effect on the prices that farmers receive for their produce.¹¹ In the two states where the government has grown over the decades to become virtually the only buyer (i.e. wheat and paddy in Punjab and Haryana), it has effectively diminished or destroyed market competition—and crop diversification, reducing mandis largely to the role of seasonal procurement centres. And in states where public procurement is only partially and differentially implemented, it has tended to drive private trade undercover, generally to the detriment of those farmers who are already structurally constrained and unable to sell to state agencies for a variety of reasons (tenant farmers, sharecroppers, and

farmers in regions where procurement mechanisms are weak). Moreover, public procurement has often ended up strengthening the hand of the commercially and politically powerful in regional markets by routing procurement through intermediaries (e.g. arhatiyas/commission agents in Punjab)¹² or agro-processors (e.g. rice millers in West Bengal).¹³

These, then, have been the intended and unintended political consequences of state action—or as often, state inaction—in regional agricultural markets. However, they cannot continue to serve as reasons for resisting market reforms. There is now significant evidence to suggest that states need to change their approach to the status quo and at least some experience that demonstrates that they can find the will and the ways to do so. Following are a few recommended directions for policy and public investment in agricultural markets with a focus on strengthening the terms of exchange for farmers.

Strengthening primary markets through regulatory reform and public investment

There is now growing evidence that when farmers are actually able to choose between multiple market sites and options for the sale of their produce, they gain from improvements not only in terms of price, but also in other critical and closely related elements of commodity exchange, such as accurate weighing, reduction in marketing costs (for e.g. high rates of

commission, deductions based on quality etc.), and timely settlement of payment.¹⁴ This is why regulatory reform to open up the current APMC mandi system to competition from multiple channels and sites of exchange—including local traders, private corporations, co-operatives, producer companies, and other physical and electronic spot markets—is so important.

At the same time, the removal of statutory restrictions without concomitant public investments in enhancing the system's regulatory capacity and core market and logistics infrastructure is unlikely to yield sustained improvements. For instance, we have seen quite clearly from research in Bihar over the last decade that a blanket repeal of the APMC Act leads to both the proliferation of small, self-regulated private horticultural markets and staggering infrastructural holes in major agricultural markets in the state.¹⁵ We also have evidence that the presence and participation of farmers in competitive local wholesale markets is likely to increase the bargaining power of farmers even in bilateral negotiations with village-level traders and in contract farming arrangements at the farm-gate.¹⁶ Finally, we note that single-buyer channels (whether run by private corporations, state procurement agencies, regional processors, or farmers organisations) invariably open and close operations according to their own strategic requirements, tend to have strict quality standards and therefore higher rejection rates, and typically work with only select categories or networks of



producers.¹⁷ This is of course perfectly understandable and to be expected given the different commercial logics at play. But, it also strengthens the case for ensuring that farmers have access to multiple market sites, and especially to inclusive multi-buyer local wholesale markets that operate around the agricultural year. States therefore need to open up the marketing system by removing the APMC/mandicity of current agricultural marketing regulation *while simultaneously* increasing public investment in developing primary agricultural markets and in the state's own regulatory capacity.

This will involve working systemically on the regulatory design and structure of agricultural markets and then comprehensively identifying and addressing commodity and region-specific market requirements, both of which will need greater resource support and institutional capacity at different levels of market organisation. But, perhaps most importantly, serious and sustained investment in reforming agricultural markets will require much greater clarity on the remit of the state in markets where it plays multiple, conflicting roles well beyond the scope of primary agricultural marketing legislation. This extends to a whole range of commodity trade restrictions (on sale, stocking, movement, and export) that governments routinely and usually idiosyncratically impose and lift in markets. The Indian state will also continue to play a role in the procurement, stocking and distribution of certain major commodities, but these roles must not disregard and distort the functioning of agricultural markets. A recent example of this was the attempt to punish private traders for buying commodities below MSP in Maharashtra. This kind of action will only shut down not strengthen markets for farmers.¹⁸ At the same time, any national agenda for agricultural reforms must necessarily include a full range of context-specific measures to address the multiple structural constraints that Indian farmers face in the production and marketing of their produce. This requires a much greater understanding of the complex interlinkages between agricultural production, marketing, and consumption and much

deeper engagement with existing, expanding and intensifying forms of agricultural risk.

Farmers and markets: changing the terms of exchange

In the Indian context, where we have a vast and highly differentiated social and economic group of farmers, policies directed at strengthening the terms of their participation and exchange in markets must begin by understanding the structural constraints that different farmers, especially the large majority of small and marginal farmers, face in different commodity markets. These include constraints related to the ownership of and access to land (via a wide range of largely undocumented tenurial and sharecropping arrangements) and the extent and impact of the fragmentation of plots at the level of a single household. In recent times, the challenge of including landless farmers in income transfer schemes has rightfully received renewed attention, but tenant farmers, sharecroppers, and small and marginal farmers commonly experience a range of constraints in accessing resources essential for both agricultural production and marketing. Further, across regions, farmers experience diverse constraints and unfavourable terms in markets for credit, inputs, water, storage, transport and insurance, which in turn may be interlinked with agricultural commodity markets. Addressing these constraints requires engagement with a much larger set of agricultural institutions outside—but connected to—output markets for agriculture produce. Finally, even medium and large farmers in India rarely have access to risk mitigation instruments to support their participation in volatile domestic and global commodity markets.¹⁹ Each of these areas needs investments to support grounded research and analysis, a consideration of promising initiatives, policy design, and much greater institutional capacity and resourcing for context-specific implementation.

Diversification and scale: agro-ecology, agricultural markets and farmers institutions

The second critical relationship between production and markets involves farmers' capacities to respond to markets by changing their production decisions, often referred to broadly as the challenge of diversification. Here, it is now beyond evident that we have long been suffering from the ecological and economic consequences of cereal-centricity (wheat and paddy/rice) in agricultural policy. Over the next several years, central and state governments must chart a course to help farmers through a complex cropping transition in different regions. This requires a change in our approach to agricultural research, subsidies, and to public procurement, which needs to be developed into a more dexterous and limited intervention that does not blunt responses to both market signals and to signs of agro-ecological depletion. Procurement could potentially be directed to primarily cover neglected and underdeveloped regions and prioritise nutritious commodities—especially pulses and millets—along the lines of recent initiatives in Odisha.²⁰ States could also consider developing a framework for MSPs that incorporates risk and social externalities as proposed in the 2016 Committee Report on *Incentivising Pulse Production*.²¹ The very recent announcement of a set of incentives by the Government of Haryana to shift farmers away from the cultivation of paddy to other crops (such as maize, arhar, and soybean) is another sign that this is an increasingly urgent priority.²²

Agricultural markets will respond to changing domestic and global consumption practices and this is critical to the dynamics of diversification and scale. But, significant public investment needs to be directed towards enabling Indian farmers—who are already, given all the constraints, highly responsive and adaptive—to make complex production and marketing decisions as both climate change and global commodity markets redefine the nature, frequency and extent of volatility for farmers across the country. This calls for a long-overdue revival of a broken public agricultural extension system and the building up of resource support institutions and networks at all levels. Our imagination of farmer producer organisations (FPOs) must also go beyond viewing them only as commodity aggregators and extend to the roles that they can play in deepening and defending the interests of farmers in local, national and global agricultural markets. For this, local agricultural knowledge and decision-making capacities must be supported and strengthened as farmers weigh increasingly diverse and complex information, select risk mitigation measures, make calculated trade-offs, and prepare for frequent changes and disruptions to their systems of agricultural production and marketing over the medium and long-term. Indian farmers already deal with all of this, day after day, season after season; the state must now take very seriously its role in continuously strengthening the terms of their engagement in agricultural markets.

END NOTES

1. Niranjan Rajadhyaksha, "The mounting challenge of a two-speed Indian economy." *Mint*, 6 March 2019.
2. In 2016, Prime Minister Modi announced the goal to double farmers income by 2022-23 and constituted a high-level national Committee on Doubling Farmers Income.
3. Nidhi Aggarwal, Sargam Jain and Sudha Narayanan, "The long road to transformation of agricultural markets in India: Lessons from Karnataka." IGIDR Working Paper, November 2006, p. 3.
4. eNAM website: www.enam.gov.in
5. According to the Doubling Farmers Income Report (Vol. 4), India has an estimated 6600 regulated wholesale markets yards (principal and sub-market) operated under 2284 APMCs. They estimate there are also approximated 23,000 rural periodic markets accessed by farmers.
6. <https://enam.gov.in/web/mandis-online>
7. The *Report of the Expert Committee on Integration of Commodity Spot and Derivative Markets* chaired by Ramesh Chand (NITI Aayog) has a section listing observations of the operational and infrastructural issues faced by eNAM, pp. 40-42. There have also been numerous field-based reports in the media of eNAM implementation across the country.
8. There is an extensive literature in history, economics and sociology on the interlinking of markets for credit and commodity marketing across Indian regions, especially the role played by *arhatiyas* or commission agents. Credit advances and delayed settlement are a common feature across most agricultural markets.
9. Aggarwal et al report on progress in Karnataka, the state currently with the most extensive experience with transitioning to e-auctions and interlinking mandis. "The long road to transformation of agricultural markets in India: Lessons from Karnataka". IGIDR Working Paper, November 2006. There are also reports on Farmer Producer Organisations (FPOs) participating in futures markets through the NCDEX.
10. See for instance, Mekhala Krishnamurthy, "The Political Economy of Agricultural Markets: Insights from Within and Across Regions" in IDFC Foundation (ed.) *India Rural Development Report 2013-2014*, Orient BlackSwan, 2015. Also, PS. Vijayshankar and Mekhala Krishnamurthy, "Understanding Agricultural Commodity Markets" Introduction to special issue, guest-edited by the authors, of the Review of Rural Affairs, Economic and Political Weekly, vol xlvi No. 52, December 2012.
11. State procurement takes place in only a small number (around 22 of 26) commodities for which MSPs are announced and there are wide variations in the extent of procurement even for the two most extensively procured commodities, rice and wheat. See, for instance, Shoumitro Chatterjee and Devesh Kapur, 'Six Puzzles in Indian Agriculture', India Policy Forum 2016-17.
12. Sukhpal Singh and Shruti Bhogal, "Commission Agent System: Significance in Contemporary Agricultural Economy of Punjab", *Economic and Political Weekly*, Vol. L, No. 45, 2015.
13. Barbara Harriss-White, *Rural Commercial Capital: Agricultural Markets in West Bengal*, Oxford University Press, 2008.
14. Shoumitro Chatterjee, 'Market Power and Spatial Competition in Rural India', January 2019; Dilip Mookherjee et al, "Middlemen margins and asymmetric information: an experiment with potato farmers in West Bengal", *Review of Economics and Statistics*, Vol. 100, Issue 1, 2018; Devesh Kapur and Mekhala Krishnamurthy, 'Understanding Mandis: Market Towns and the Dynamics of India's Urban and Rural Transformations', CASI Working Paper, 14-02, 2014.
15. Vijay Intodia, 'Investment in Agricultural Marketing and Market Infrastructure: A Case Study of Bihar'. Research Report. National Institute of Agricultural Marketing, Jaipur, 2012. Sukhpal Singh, 'APMCs: The other side of the story,' *Hindu Business Line*, 8 February 2015.
16. Sudha Narayanan, "Inflections in Agricultural Evolution: Contemporary Commodity Complexes and Transactional Forms in Interior Tamil Nadu". *Economic and Political Weekly* 47 (52): 84–94.
17. Richa Kumar, "Elusive Empowerment: Price Information and Disintermediation in Soybean Markets in Malwa India", *Development and Change*, Vol. 45, Issue 6, 2014. Mekhala Krishnamurthy, "States of Wheat: The Changing Dynamics of Public Procurement in Madhya Pradesh", *Economic and Political Weekly*, Review of Rural Affairs, vol xlvi No 52, December 2012.
18. In 2018, the Government of Maharashtra tried unsuccessfully to introduce an amendment making it illegal for private traders to buy produce below the state-declared MSPs by imposing fines and a jail terms. The move resulted in the shutdown over major mandis in the state.
19. The need for better integration of spot and futures markets has been recently revisited by a committee led by Ramesh Chand and much more work is needed to design instruments that farmers can access and utilise to hedge their risks in agricultural markets.
20. The Government of Odisha launched a Millet Mission for the promotion and support of millets in tribal areas (<http://www.milletsodisha.com>) and in 2018-19, the state launched a millet procurement programme focused on ragi.
21. Arvind Subramanian, Report on *Incentivising Pulses Production through Minimum Support Price and Related Policies*, September 2016
22. In May 2019, the Government of Haryana announced a set of incentives on the input and output side (free seeds, cash transfers, MSPs) to encourage farmers to shift away from water-intensive paddy cultivation to crops such as maize, pigeon pea, and soybean.



Of Investment and Jobs

PARTHA MUKHOPADHYAY

Despite showing very healthy headline growth, there are continuing concerns about Indian economy's attractiveness for investment and its potential to provide jobs. The solutions for these fundamental issues are not simple, but many simplistic recommendations abound. Which are the false hopes that one must not harbor?

Interest Rates and Investment

In principle, a fall in corporate investment can be attributed to two factors, viz. (i) an increase in interest rates and (ii) changes in expectations about the future, as shown in Figure 1. A reduction in the expected future growth, e.g. from 8% to 5% per year would mean that the corporate sector would invest less, since they expect to cater to a lower demand. This is illustrated by a downward shift in the demand curve from E_{High} to E_{Low} . So, even at a low interest rate of OL, the investment falls from OD to OB. In addition, if

there is rise in interest rates from OL to OH, driven in part by higher government borrowings, it falls even further to OA, assuming low interest elasticity. In this context, the RBI Business Expectation Index, shown in Figure 2, has improved since the lows of 2016, but not by much. To put it bluntly, business sentiment has been tepid. In Figure 1, an improvement in sentiment, i.e. a move of the investment demand curve from E_{Low} to E_{High} , even if interest remains relatively high at OH, would increase investment from OA to OC, much more than that achieved by a reduction in rates from OH to OL. To grow investment, improvement in business confidence is needed. Business will always look for a lower interest rate, since it reduces their cost, but a low interest rate alone is unlikely to lead to a jump in private investment.

The critical policy question is thus: what will improve business confidence?

Figure 1: Expectations and Investment

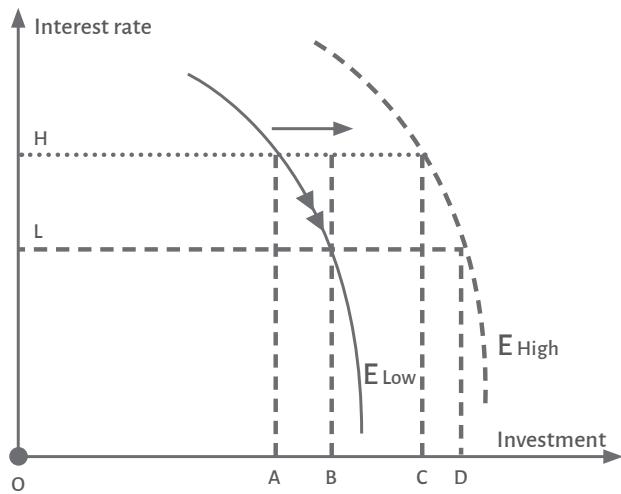
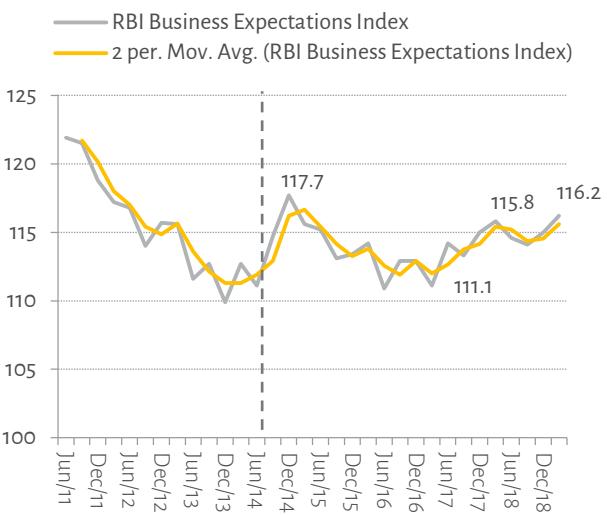


Figure 2: Trends in Business Expectations



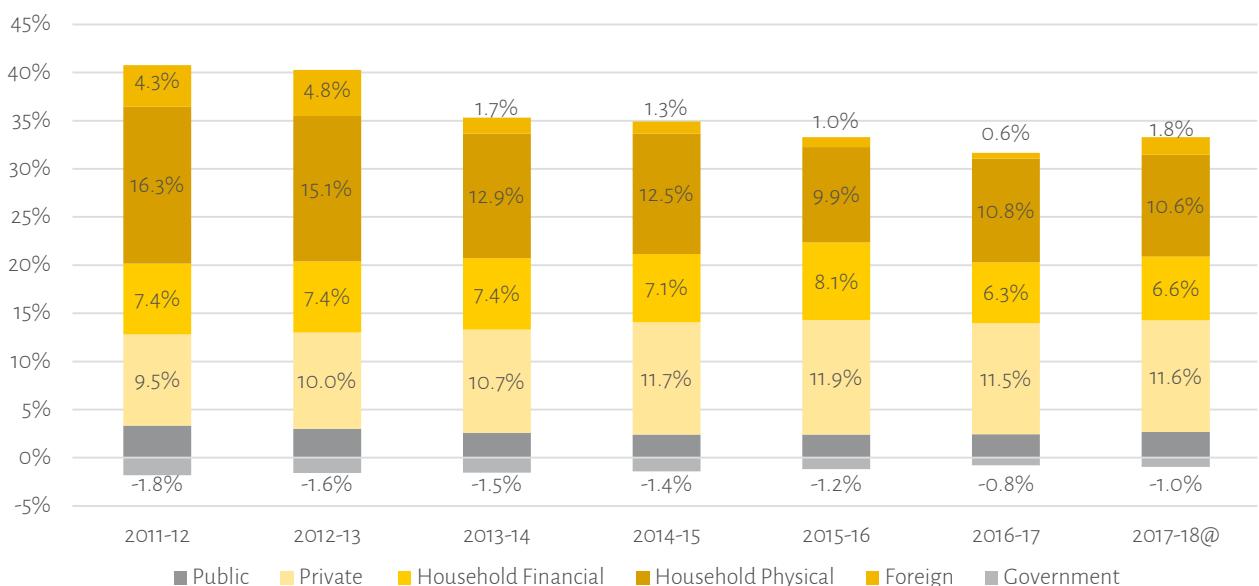
Source: Reserve Bank of India Quarterly Industrial Outlook Survey

However, the core issue in the fall of the investment rate is not that of corporate investment, but that of household savings and investment, as seen in Figure 3 and 4. Investment in physical assets, mainly dwellings, took a hit in 2013-14 and has yet to recover. Post 2016, there has been some understandable reallocation away from financial assets to physical assets, but the aggregate has continued to be low, compared to historical highs of 2011-12. While the voter has

entrusted his confidence in the current government, the household does not seem to have as optimistic a view about the future.¹

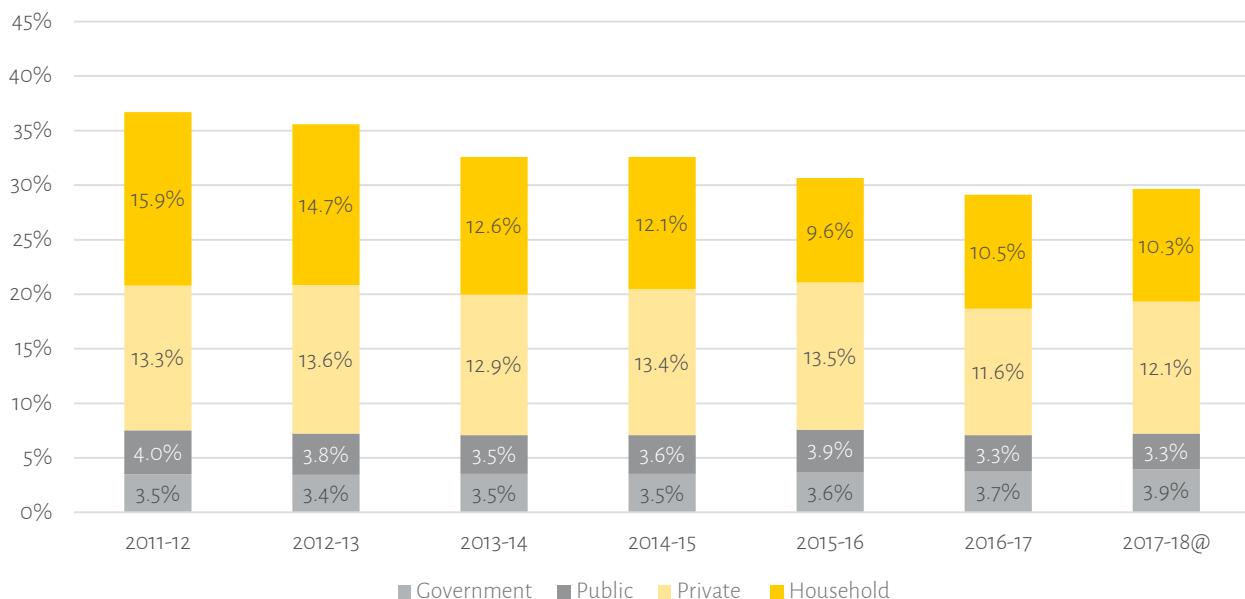
Thus, as with business, the policy question is: how to improve household expectations? The growth of good jobs will certainly help and improved agricultural income (beyond income support schemes) are major areas of action, if the household is to feel more confident.

Figure 3: Savings Supply



Source: National Account Statistics, percent of GDP (current prices)

Figure 4: Gross Capital Formation



Source: National Account Statistics, percent of GDP (current prices)

Which is better for job growth - Manufacturing or Services?

There is much handwringing about India's premature deindustrialisation and the need to revive manufacturing, in order to generate jobs. It is often posited as a choice between manufacturing and services. This is a false dichotomy.

It is important to recognise that in 1996, there was a 10 percentage point gap between India and China with respect to percentage of total employment in industry. In 2018, the gap had reduced to 4 percentage points. In urban areas, manufacturing is almost a fourth, 23%, of our workforce. Could our manufacturing sector be larger? Certainly, but that is not the whole story.

The nature of work more generally in both manufacturing and services sectors is undergoing significant transformation. The advent of the "gig economy" and technologies such as additive manufacturing (mass customisation vis-à-vis mass production) foreshadows a future of work that is likely to be very different from what is seen today in both manufacturing and services. The consequence of these changes is likely to play out over an extended period of

time but it is important for us to recognise the kind of action that is needed now, as such changes occur in the future. Three issues, on the characteristic of services, the role of education and nature of social security, are important to point out.

Services embedded in manufacturing: First, as the World Economic Outlook from the IMF points out, manufactured goods now have an increasing share of services. Across all countries, such service inputs in the total production value of manufactures rose by about 6 percentage points on average between 1995 and 2011. This occurred due to both compositional effects as well as changes in manufacturing practices such as a more dispersed value chain. However, such service inputs in manufactured goods account for only about 12% of overall value added in the service sector. Over the same period, the share of services in aggregate value added increased by 7 percentage points; of this 6 points corresponded to a rise in final expenditure on services rather than spending on service as intermediate input. So, while manufacturing is becoming more service-intensive, services by itself is growing as a final consumption good. As seen in Figure 5, the share of basic necessities in total consumption is declining rapidly, while that of transport, miscellaneous items,

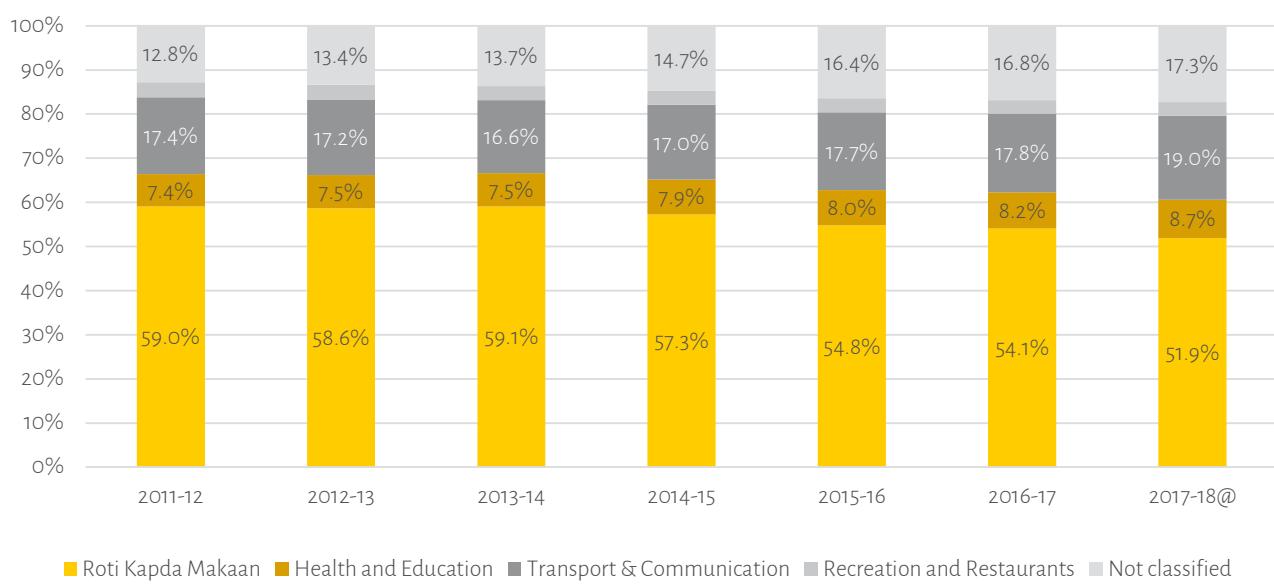
health and education is growing. Thus, as non-durable consumption (mostly basic goods and food) share is declining, the share of services is rising (Figure 6).

But, this is just the domestic consumption scenario. The emphasis on manufacturing must be associated with an export oriented strategy. India's share of the world market is small enough for there to be substantial room for expansion—especially if one can become part

of global value chains. For this, attention to reliable and competitively electricity supply and logistics efficiency is key to delivering goods on schedule.

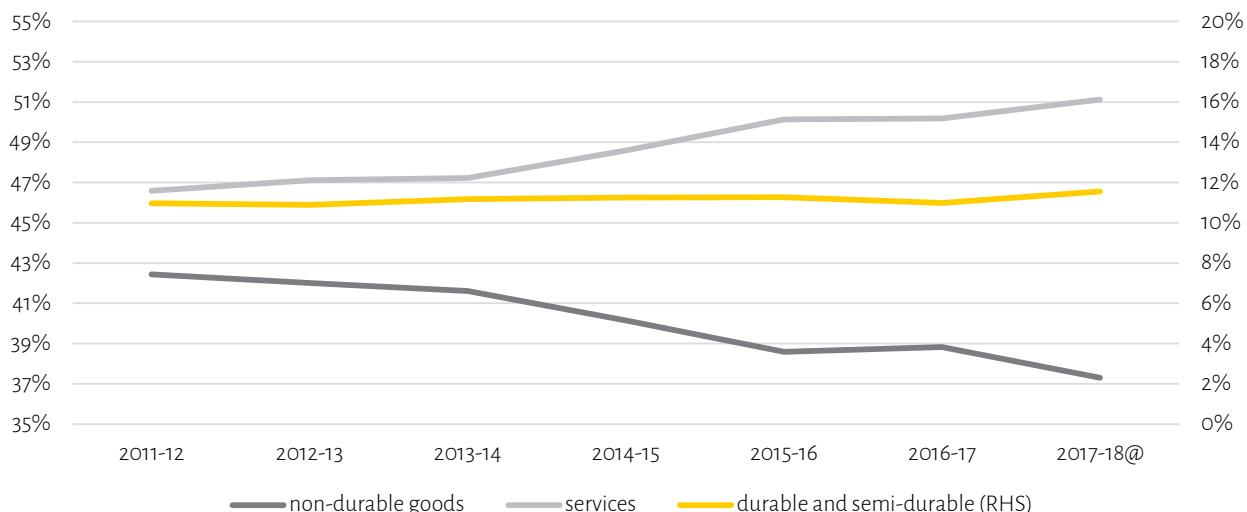
A broad-based job creation strategy will build upon domestically oriented services (externally oriented high-end services will continue to generate high value but limited employment opportunities) and externally oriented manufacturing.

Figure 5: Consumption Basket



Source: National Account Statistics, percent of GDP (current prices)

Figure 6: Growing Share of Services



Source: National Account Statistics, percent of GDP (current prices)

Lessons for Education: Second, the fast changing nature of technology means that specific skills are likely to be less valuable, because they will become obsolescent over the lifetime of a worker. It is therefore important that education be seen as much more than training for the workplace, because the training that one will receive at a given point in time will last a worker only for relatively short period. Education has to evolve to a system where the core knowledge that is transferred is learning how to learn. In addition, it is also important to recognise that persons could need to acquire new skills and knowledge multiple times during their working life. As such, it is important to provide for an educational and training architecture that would permit workers to acquire new knowledge and skills at a relatively low cost, as and when needed. Learning how to learn and lifelong learning are thus two characteristics of the education system that is needed to respond to the working environment of the future.

Social Protection: Third, the current architecture of most social security systems globally, including that of India assumes that a worker will be employed in a single job for extended periods of time. During this time the person is expected to make contributions into the social security system. These funds, including matching contributions from the employer are invested in a regulated manner and eventually upon the worker's retirement, the return on these funds (and pension, if any) will meet the worker's expenses during retirement. Additional elements of social security like

health insurance are often provided by the employer with the worker contributing a part, the whole, or none of the premium. These old assumptions about social protection are now increasingly invalid. A worker can change jobs multiple times. A person is occasionally in a formal job and occasionally self-employed or in informal employment. In such a situation it is imperative that the social security system including pensions, retirement benefits and health insurance be delinked from employment and made portable.

Conclusion

In conclusion, one critical takeaway is the importance of expectations. Price signals are an important component of this but there are many other factors involved in how business and households look to the future—and both are important, if India is to be on a sustainable high growth path.

The second takeaway is that we cannot afford to choose between manufacturing and services. Services have served us well and continue to be a larger part of the global economy and consumption basket. Even manufacturing now has substantial embedded services. We must recognise this, even as we pay more attention to generating more manufacturing jobs.

Finally, as the Fourth Industrial Revolution begins to affect our economies, we will need to pay more attention to the structure of education and the architecture of social security systems.

END NOTE

1. Of course, fear about the future may increase precautionary savings, but these are likely to be invested in physical assets.

Policy Challenges | THE WELFARE STATE 2019–2024



One of the most significant aspects of the India story is its slow transition into a modern welfare state. The country is experimenting with new instruments of welfare schemes like cash transfers, even as it confronts the old challenges of investing in its human capital. The pursuit of these instruments is revealing deeply contested questions underlying the overall framework. CPR faculty offers a holistic analysis of India's overall welfare architecture and some of its key components like education and income support schemes, to reveal these challenges and means to tackle them.



The Opportunities and Challenges Confronting India's Welfare Architecture

YAMINI AIYAR

Over the last five years, India has taken important steps towards significantly reforming its welfare architecture ranging from direct benefit transfers (DBT), Ayushman Bharat and income support (PM-Kisan) to the implementation of the 14th Finance Commission's recommendations. However, underlying these reforms are important unresolved and deeply contested questions about the architecture of the welfare state. In particular, the questions revolve around centralization and capacities of various levels of government to deliver. The welfare policy under the new government will necessarily have to confront these questions and the opportunities and challenges they present. The ability of the new government to navigate this terrain will determine its effectiveness and capability to deliver high-quality public services to India's poorest.

Technology, Income Support, Citizens and Bureaucracy

Technology has been at the heart of the welfare reform project over the last decade. In 2014, when the National Democratic Alliance (NDA) first rode to power, it embraced Aadhar and DBT.¹ In March 2014, only 28 schemes used DBT to transfer funds. By May 2019 this had increased to over 400. In January 2019, the first national attempt was made, with the launch of PM-Kisan, to use the DBT architecture to introduce a basic income support programme in India. However, excessive reliance on technology to implement DBT has exposed three crucial limitations of the system: the last mile problem, lack of accurate data to identify the beneficiaries, and alienation of the citizenry.

The key rationale for scaling DBT and moving towards direct cash transfers through income support programmes is its ability to curb payment leakage and improve efficiency. In making the case for a Universal Basic Income (UBI), the 2017 Economic Survey argued that by moving resources directly into beneficiary accounts, income transfers have the potential of cutting down bureaucratic layers.² This could curb discretion, simplify monitoring and therefore reduce corruption.

However, recent studies show that far from reducing bureaucracy, getting the DBT architecture right calls for significant bureaucratic intervention. From opening accounts to promoting financial literacy and facilitating bank transactions, local bureaucrats are critical to DBT. This is best highlighted in a recent NITI Aayog-commissioned process monitoring the use of DBT to access the Public Distribution System scheme in three Union Territories (Chandigarh, Dadra & Nagar Haveli and Puducherry).³ The study found that 20% beneficiaries reported non-receipt of payment even though official records indicate a transfer failure rate of less than 1%. This gap is not a consequence of leakage; rather, the study attributed the gap to lack of beneficiary awareness/knowledge of transfers and administrative issues (including payments being made into bank accounts not accessed by beneficiaries), or processing errors.

This problem of administrative preparedness is also highlighted in a forthcoming World Bank report. The report argues that DBT requires sophisticated financial management and technical skill sets that are beyond the current bandwidth of the local, sub-district bureaucracy. In various states, some of the key financial management tasks have been outsourced to private players and state IT cadres. However, capacity, just in terms of sheer human resources, remains a problem. Moreover, anecdotal evidence suggests that that DBT has at least in the short run increased rather than reduced the workload at the front line. Front-line officers are now responsible for tackling citizen claims and disputes on personal authentication, financial address information, payment settlements, etc., but without any improvements in human resource capacity and with skill sets remaining unchanged. This has caused significant, non-trivial disruption at the last mile.⁴

Importantly targeted programmes like PM-Kisan require bureaucrats to identify eligible beneficiaries. To do this, critical data—such as land records and Socio Economic Caste Census surveys—needs to be regularly updated, and disputes between citizen claims and official records need negotiation. Doing this right requires bureaucrats to dialogue with citizens, coordinate across departments and absorb feedback—a skill that Indian bureaucrats simply do not possess. Countries like Brazil and Mexico have invested in large cadres of social workers at the local government level to do just this. But in the rush to bypass bureaucrats through DBT and transfer cash directly into bank accounts, this crucial investment has been ignored. Strengthening the basic capacity and capability of front-line bureaucracy—notably in terms of its human resources, even if its only task is to move money—will require empowering local governments with skills and resources to be genuinely responsive to citizen needs.

However, responsive governments require active citizen participation. Digitized efficiency risks casting citizens as passive recipients of government largesse instead of as active claimants of rights. This is not mere romantic activism. Technology by its very nature creates centralized systems that are distanced and bewildering for ordinary citizens in ways not different from the frustrating everyday encounters we have all had with call centre agents. Digitized welfare systems genuinely risk closing off spaces for citizens to complain, protest and demand accountability when rights are denied. The point here is not to argue against administrative efficiency; rather, I wish to highlight risks that need to be addressed. A balance needs to be struck between efficiency gains through centralized control and responsiveness through decentralized, citizen-centric governance. Striking this balance will be a critical challenge for the new government. One important way through which this challenge can be met is through strengthening the implementation of the Right to Information Act, particularly the mandatory requirements for proactive disclosure of information to citizens. But for information to be empowering, it must be relevant for citizens. This requires citizens to be actively engaged with the government in the

process of generating information. Some governments, notably Rajasthan, have begun experimenting with ways of identifying relevant information through regular dialogues with civil society and building fora for making information available to citizens offline.⁵ These experiments ought to be studied and replicated.

Regulation vs. Public Provision

The launch of Ayushman Bharat in October 2018 marked the beginning of a significant architectural transition in India's welfare system – from direct provisioning (government-run hospitals and schools) towards financing citizens (through income support and health insurance) and regulating private providers. But this transition poses a critical challenge. How does a state that struggles with routine tasks build capability to regulate a sector as complex as healthcare?

A functioning health insurance system must ensure that patients are not under-treated; nor over-treated or over-charged. Ensuring this requires adaptive price setting, strict regulation, third-party monitoring and quality improvements in public sector hospitals.⁶

Pricing: Getting prices right is the central dilemma in any insurance programme and one that all countries struggle to solve. This is because prices need to fulfil the dual function of ensuring 'neither too much, nor too little'. But costs for the same procedure are likely to differ across hospitals because of quality, location and capacity. Therefore, a single price can never ensure that both constraints are effectively met, and in fact, it is certain that these prices will never be the 'right' prices. Moreover, if the price is too low for a hospital, it will either choose not to enrol in the scheme, or it will deny services. When the price is too high, the hospital will make additional profits, or worse, try to convince patients to receive services when they are not needed.

The one thing that countries implementing large-scale insurance programmes have in common is a large analytical and data centre that continuously examines procedures, procedure coding and charges from the insurance scheme. Prices have to be frequently negoti-

ated and updated based on the data, and this is a job for specialized teams of hundreds in each state.

Regulation and insurance fraud: In tandem, insurance schemes require creating a strong regulatory framework for fraud control. India's current regulatory environment is seriously weak. A study has shown that all 17 insurance ombudsman offices in India are currently vacant with a backlog of 9000 complaints.⁷ Gaps in the current regulatory framework imply that there is no established procedure for settlement of claims, redress of consumer behaviour against rejection of claims, or even penalties for rejecting claims in violation of existing regulations. This in turn creates incentives for regular violation of norms by insurance companies. Not surprisingly, the complaints rate in India is markedly higher than comparable jurisdictions across the globe. The success of PMAY is now intrinsically tied not only to the functioning of the health department, but also the criminal justice and court systems. A new, stronger legislative framework for regulation and insurance fraud is urgently needed.

The only way to ensure that these conditions for implementation success are met is through massive investments in a skilled workforce. In the US, the (largely) single purchaser Medicare scheme employs 6000 people to cover 44 million beneficiaries. These are all highly trained administrative staff handling insurance audits, pricing and medical records, dealing with anti-trust cases and fraud, and examining billing issues in each state. India has nowhere near this scale of staff. Consider Uttar Pradesh where the scheme may cover 50% of the population, or 100 million people. That would imply that the administrative staff to run a single purchaser scheme should be above 10,000. Across India most state insurance schemes and the Rashtriya Swasthya Bima Yojana (RSBY) have been run by trusts and offices employing fewer than 100 staff. In UP, the RSBY headquarters has only 42 staff. The point is simply this: running a scheme as complex as a large-scale health insurance programme requires people. Since the expertise currently does not exist (at least at this scale), PMAY will have to develop the necessary institutions to train these professionals.

Finally—and this is a lesson that applies more broadly to the dilemma of public vs. private provisioning—there is no getting around the critical need to strengthen public systems. Specifically in healthcare, in the long run well-functioning public hospitals will provide a much-needed backstop against predatory practices, denial of service and overcharging in the private sector. Especially in districts where competition is limited, public hospitals will limit the monopoly power of the private sector, flush with the new money from the scheme. A framework for transferring resources from the scheme to help government hospitals improve their quality is just as important as funding flows to the private sector.

The Centralization vs. Decentralization Tug of War

A critical underlying issue that influences the dynamic of welfare provisioning is that of financing India's welfare scheme. Scholars of federalism in India have characterized India as a 'quasi-federal' or a federal system with a 'centripetal bias'. In this context, the Union government has historically played an important role in financing welfare-related schemes; the dynamic of fiscal federalism and Centre-state relations is a critical ingredient that influences the implementation of welfare policy.

In the last five years, India has transformed its fiscal federal architecture, devolving unprecedented levels of independence and resources to its states. However, in doing so it has created a new dilemma—one of disparities between state governments in their ability to deliver welfare and other services. Effectively, this has meant that in absence of central support, the states with lower capacity to design and implement continue to fall further behind high-income states, widening regional disparities across the country.

This is not to say that the recent changes in India's fiscal federal architecture should be rolled back. These include the dismantling of the Planning Commission; the establishment of the NITI Aayog and the GST Council as new institutions for negotiating Centre-state relations; and the implementation of the recommendations of

the 14th Finance Commission that sought to enhance fiscal decentralization to states by reducing central government control over state spending. At one level, these changes were long overdue. Historically, India's fiscal federal architecture has been extremely centralized. The delegation of fiscal powers and responsibilities specified in the Constitution reflects a 'centripetal bias' with the Centre having "overwhelming and overriding" economic powers.⁸ To put it in perspective, states incur 60% of government expenditure but collect only 40% of revenue.⁹ All state borrowing is subject to approval from the Union.

The Planning Commission, with its mandate of centralized planning, emerged as a critical instrument for centralizing India's fiscal system. To illustrate, calculations by the 14th Finance Commission reveal that between 2005 and 2012, central government spending on state subjects increased from 14% to 20% and that on concurrent subjects increased from 13% to 17%. The bulk of this expenditure took place through specific-purpose transfers or Centrally Sponsored Schemes (CSSs) financed and monitored through the Planning Commission's plan funds, making CSSs one of the most important vehicles of central transfers to states. To illustrate, during the 11th Five Year Plan (2007-2011), scheme-specific transfers accounted for over 40% of central transfers to states. Importantly, these schemes, as argued comprehensively by Avani Kapur in this volume, were designed and implemented in an extremely centralized, tightly controlled, one-size-fits-all architecture that undermined state flexibility.

States have long complained about fiscal centralization. From as far back as the 1969 National Development Council meeting to consultations with the 14th Finance Commission in 2013, state governments have argued strongly against the centralized nature of CSSs and encroachment by the Centre on the constitutional mandate of state governments. Chief Ministers, in particular, have resented having to seek Planning Commission approval for state plans. Several commissions noted the negative consequences, as articulated by state governments, of the proliferation of CSSs and recommended reduction in their quantity and greater flexibility in their

design. This deep centralization coupled with the fact that the post-liberalization era had rendered the centralized planning process irrelevant made the need for reforming (and even dismantling) it urgent and critical.

The setting up of the NITI Aayog and the implementation of the recommendations of the 14th Finance Commission to enhance fiscal devolution to states marked an important juncture in fiscal federal relations in India. However, it also brought to the fore an important new fault line in the centralization vs. decentralization tug of war that has shaped the dynamics of fiscal federalism in the country. The future shape of federalism in India will depend significantly on how the new government navigates this fault line and the institutional space it creates for re-negotiating Centre-state relations.

The primary challenge for fiscal federalism in India comes from the country's growing regional disparities or what has been recently identified as India's 'developmental imbalance'.¹⁰ Governance capability is the primary driver behind these expanding disparities. To illustrate, a study that ranked governance performance (defined as public service delivery) of 19 major states in 2001 and 2011, highlights the large and persistent development distance amongst states in terms of per capita income and service delivery outcomes.¹¹ In infrastructure, the density of state highways in Karnataka, at 10.8 km per 100 sq km, was five times that in Odisha at 1.95 km per 100 sq km in 2011. Power availability in Bihar in 2011 at 117 kWh was three times higher than 36 kWh in 2001, but it was still only 1/15 that of Gujarat at 1559 kWh. In the social sectors the literacy rate of Bihar in 2011 at 47% was only about half that of Kerala at 91%, while the infant mortality rate of 91 per 1000 newborns in Odisha in 2001 was nearly nine times the rate in Kerala. Importantly and unsurprisingly, governance (bureaucratic capacity and decision-making processes) is the critical ingredient for moving the needle on service delivery improvements in low-income states like Bihar and Madhya Pradesh.¹² This exposes, as the study argues, a critical tension between high-income states and low-income states. High-income states have the capacity to design and implement their own schemes and can better leverage fiscal decentralization. Low-in-

come states need CSSs, with their centralized design and implementation structure, simply because they lack planning capabilities.

The Planning Commission, with its plan funds and CSSs, played an important (albeit imperfect) role in responding to these governance deficits by designing and financing (through plan funds) schemes linked to core public services. And for all its flaws, it gave states (through the National Development Council) access to an institutional space for debating and exercising some leverage over plan funds. Moreover, the Planning Commission played a critical coordination function. CSSs, linked to plan funds, were administered by line departments but the Commission played a critical policy coordination function, linking schemes to state plans and determining resource availability. Further, the five-year plans and plan allocations enabled states to broadly predict the quantum of plan funds they were likely to receive, ensuring somewhat predictable expenditure over a five-year cycle.¹³ With the disbanding of the Planning Commission, this role has been taken over by the finance ministry and line departments. As a result, the last five years have arguably witnessed an even greater centralization of schemes. In fact, recent analysis of state budgets highlights that in the last few years, the share of central schemes as a percentage of overall central expenditure has increased from 9% (for Central Sector/CS and CSSs respectively) in 2016-17 to 12% (CSSs) and 9% (CS) respectively.¹⁴

The response to the institutional vacuum left behind by the dismantling of the Planning Commission cannot be one of simply reintroducing the planning and budgeting functions of the Commission, albeit with greater flexibility to states. This is because despite their intent, CSSs as an instrument have been unable to effectively respond to the challenge of regional disparity. Low-income and weakly governed regions are simply unable to utilize CSS funds. As central schemes increased in the last two decades, central spending increased in richer rather than poorer states. In 1990-91, CSS and CS spending accounted for 1.22% of total expenditure in Gujarat and 13.9% in Rajasthan.¹⁵ This reversed in 2013-14. Spending in Rajasthan dropped to 3.2% and

increased in Gujarat to 13.12%. This trend is even more acute at the district level. Based on an analysis of six key schemes, the 2016 Economic Survey highlighted that India's poorest districts received barely 40% of the total funds allocated to a state.¹⁶

The primary fault line in India's fiscal federal architecture is this: fiscal centralization, arguably critical for poorer states, has in fact benefited richer states. Addressing this challenge will require a significant overhaul of existing financial instruments available with the central government. Specifically, it will need a careful rebalancing of the centralization vs. decentralization dynamic in ways that provide necessary governance support to poorer states while ensuring fiscal autonomy. Crucially, the Centre needs to reorient its role from being a micro-manager of schemes and programmes to playing a far greater strategic role, building national policy frameworks and providing technical capacity to states to enable and empower them to plan, design and implement social policy

programmes. Balancing these tensions and reshaping the role of the Centre requires the creation of institutional spaces for Centre-state deliberations. This can be achieved through a revitalized Inter-state Council (ISC) tasked specifically with creating a deliberative space for Centre-state dialogues on welfare policy and negotiating the tensions that have come to shape Centre-state fiscal relations. The 14th Finance Commission had recommended the creation of such a body. The new government must implement this recommendation with urgency.

Welfare policy in India is poised at a critical juncture. Reforms of India's welfare architecture over the last five years present new challenges and fault lines that need resolution, if India is to move towards creating a new 21st century welfare architecture. India doesn't need new schemes; rather, it needs consolidation and balancing between competing welfare strategies. Getting this right will require significant investments in state capacity. This is the welfare task for the new government.

END NOTES

1. DBT leverages Aadhar and banking penetration to move money directly in to beneficiary bank accounts
2. *Universal Basic Income: A Conversation With and Within the Mahatma* (pp. 173-212). New Delhi: Govt. of India, Ministry of Finance, Economic Division.
3. Muralidharan, K., Niehaus, P., & Sukthankar, S. (2017, September). *DIRECT BENEFITS TRANSFER IN FOOD: Results from One Year of Monitoring in Union Territories* (Rep.). Retrieved https://econweb.ucsd.edu/~kamurali/papers/Other_Writing/20170905_UT_DBT_Report.pdf
4. Aiyar, Y., Bhattacharya, S., & Pritchett, L. (2019, March 14). The Solutions State: Why the digital needs the human. *The Indian Express*. Retrieved from <https://indianexpress.com/article/explained/the-solutions-state-why-the-digital-needs-the-human-5625290/>
5. Narayanan, R., Swamy, R., & Dey, N. (2019, April 4). The politics of information. *Indian Express*. Retrieved from <https://indianexpress.com/article/opinion/columns/the-politics-of-information-aadhaar-mgnrega-5657288/>
6. This section draws on a joint article co-authored with Jishnu Das and Jeffery Hammer. Das, J., Aiyar, Y., Hammer, J. (2018) "Will Ayushman Bharat Work?" <https://www.cprindia.org/news/7239>
7. Patnaik, I., Roy, S., & Shah, A. (2018, May 21). The rise of government-funded health insurance in India (Working paper No. 231). Retrieved https://www.nipfp.org.in/media/medialibrary/2018/05/WP_231.pdf
8. Rao, M. G., & Singh, N. (2006). *The political economy of federalism in India*. New Delhi: Oxford University Press.
9. Reddy, Y. V., & Reddy, G. V. (2019). *Indian fiscal federalism*. New Delhi, India: Oxford University Press.
10. Kelkar, V. (2019). Towards India's New Fiscal Federalism. *Seminar 717: The Union And The States*, 717, 34-38.
11. Mundale, S., Chowdhury, S., & Sikdar, S. (2016). *Governance performance of Indian states 2001-02 and 2011-12* (No. 16/164).
12. Mundale, S. (2019). The Case For A Radical Transformation. *Seminar 717: The Union And The States*, 717, 38-43.
13. Aiyar, Y., & Tillin, L. (2019). The Problem. *Seminar 717: The Union And The States*, 717, 10-13.
14. Roy, R. (2019). Changing Fiscal Dynamics. *Seminar 717: The Union And The States*, 717, 18-22.
15. Ibid, 22.
16. *Eight Interesting Facts About India* (pp. XI-XIV). (n.d.). New Delhi: Govt. of India, Ministry of Finance, Economic Division.



Should PM-KISAN and MGNREGS Co-Exist?

YAMINI AIYAR AND PARTHA MUKHOPADHYAY

The PM-KISAN (Pradhan Mantri Kisan Samman Nidhi) scheme, announced in January 2019 and expanded in this government's first cabinet meeting, is the first major Union government income support scheme. States, notably Telangana and Odisha, have introduced such schemes earlier. How should PM-KISAN be taken forward?

The move to cash

Several direct benefit transfers, cash transfers and income support schemes have been both discussed and implemented at the national and regional levels in the last few years. Direct benefit transfers involve replacing generalised subsidies with traceable targeted cash, e.g., the PMUY's transfer of a subsidy per cylinder of LPG to a designated bank account, vis-à-vis the earlier subsidy per cylinder, leading to a low price for all.

Cash transfers can be of three main types. The first is (i) replacement for in-kind transfers, e.g., school vouchers

or food stamps instead of public education or public distribution of foodgrain – such cash can only be spent on specific items of expenditure. The second is (ii) conditional cash transfers, where use is unrestricted, but its receipt is conditional on observable actions by the household, e.g., sending children to school, getting them vaccinated, etc. or characteristics of the individual, e.g., old age pensions. The third type, i.e., (iii) an unconditional transfer of cash, is an income support scheme.

Objectives of PM-KISAN

An individual can receive income support for a variety of reasons. PM-KISAN could have two objectives (i) to compensate for inefficient capital markets, e.g., enable timely purchase of agricultural inputs without high-cost borrowing, and (ii) as a supposedly more efficient anti-poverty measure. These are feasible objectives to focus on. In the first case, the transfer amount would depend on agricultural expenditures involved. With the

second, the choice is between trying to compress the income distribution, by targeting larger support to the bottom of the distribution and a less informationally demanding “rising tide lifts all boats” design—which appears to be PM-KISAN’s choice—and possibly justification for the relatively small transfer, compared to state schemes.

Quasi-universality—minimal targeting

The advantage of keeping the income support low, i.e., not very large in relation to rural income in the bottom quintile, is that the number of beneficiaries can be large—and the scheme quasi universal. It also reduces the incentive of excluded households to try and game the system and become beneficiaries. PM KISAN’s amount of Rs. 6000 per family in three instalments is about ten percent of family expenditure for the bottom rural quintile. However, this amount, especially in three instalments, may be ineffective in easing borrowing constraints for farm inputs and PM-KISAN should thus be seen as primarily an anti-poverty tool.

It is instructive to compare PM-KISAN with Odisha’s KALIA scheme. First, like KALIA, PM KISAN’s transfer is invariant with respect to landholding—which imparts a certain progressive character to the transfer, unlike Telangana’s Ryuthu Bandhu. Second, if it is implemented the way it is in Odisha, it may not exclude many households. Many agricultural labour households, who are the largest group of poor likely to be excluded if the scheme only targeted farmers, can still be beneficiaries if even those with tiny amounts of landholding are included, as in KALIA. However, it is not clear how the beneficiary selection, which is a state function, is occurring and will occur in PM-KISAN.

The share of landless households—those with less than 20 square metres of land—varies considerably across states. While, in 2013, it was 5.4% in Odisha (considerably less than the national average of 7.4%) it was more than 20% in Uttarakhand, 15% in Andhra Pradesh, more than 12% in Gujarat and Maharashtra and more than 10% in Karnataka. Will these households be included in PM-KISAN? The answer is not clear. That said, it is also possible that many of

these landless households are non-agricultural workers living in rural areas—not landless labourers.

To ensure that the landless are included, in addition to the transfer to farmers, KALIA also has a support scheme for those engaged in non-farm work. Its design is somewhat restrictive, but it includes a limited number of livelihood activities for which support is provided.

Beneficiary Database

Operationally, the use of exclusion instead of inclusion criteria is preferable, but the underlying database used for implementation is of major importance. The quality of the database would depend on the extent of information available to the enumerators and how frequently it can be updated—both of which point to the local government as the preferred locus of implementation, a coordinated instead of centralised data repository. This does run the risk of over inclusion, but if the income support is not excessive and the exclusion criteria are clear and designed to only exclude the upper tier of local elites, this risk should not be very large.

The extent of targeting is both a matter of design and of implementation: what criteria and who chooses? In Odisha, the list of beneficiaries was prepared at the local level and was then pruned at upper bureaucratic levels, using a variety of secondary databases relating to land ownership and employment (government employees were excluded). It claims it was able to exclude large farmers, because it had previously built a land records database and a foodgrain procurement database that required land ownership data to prevent round-tripping sales. In the latter database, the incentive is to show a higher amount of land, so that the household is able to sell a higher amount of food grain to the procurement agency. Linking the two databases created a list of large landowners, who could be excluded. This shows the importance of existing state capacity and prior action in successfully implementing new income support schemes. In states where such groundwork has not been laid, PM KISAN

could have catalysed the building of that capacity, and improved on the use of the databases used for the initial implementation of PM-KISAN.

However, in the PM-KISAN scheme, such databases are now no longer needed, since the landholding ceiling has been removed and there is only an exclusion criteria related to employment. One hopes that at least one collateral benefit of the PM-KISAN scheme will be a verified database of state government employees (the excluded category).

A pertinent question to ask would be whether the trade-off – reduced administrative costs and minimal targeting errors of exclusion by expanding the scheme to larger landowners, vis-à-vis an increase in the amount for the original beneficiaries – is worth it for a primarily anti-poverty scheme.

MGNREGS vs. PM-KISAN

Does PM-KISAN make MGNREGS, which despite its initial scepticism, has continued to receive support from government, redundant? Should the MGNREGS budget be diverted to PM-KISAN? A major advantage of the design of MGNREGS is that it is well targeted, due to self-targeting. A beneficiary is required to perform relatively unpleasant work for relatively little money – as such, those who have other opportunities for employment will choose not to seek benefits under MGNREGS. It thus targets agricultural labour households, more than cultivators, and is complementary to PM-KISAN; though agricultural labour households could also receive income support from PM-KISAN, as explained earlier, if farmers with micro-holdings are included in the list of beneficiaries.

Another collateral benefit is that the MGNREGS wage can act as minimum wage support for the broader workforce. For this to be effective, workers must be reasonably sure of obtaining employment through MGNREGS. In India, where a large number of rural residents are not land owners or land leasers, but farm and non-farm labour, e.g., in brick kilns, etc., this wage support function of MGNREGS can help many beyond

its direct beneficiaries. A wage floor can lead to more political support for MGNREGS, from labour, but it can also lead to determined opposition from employers, especially if productivity gains (e.g., from efficiency wages) do not result from an increase in wages.

However, this self-targeting feature is not costless. If the beneficiary has to give up other work to benefit from MGNREGS, the net benefit to the beneficiary is reduced. In addition, there is material cost, since employment is generated by building an asset, like a pond or a road, which needs material beyond labour. In return, one gets an asset – but is it a durable quality asset, necessary in its context?

While previously, many MGNREGS assets were public assets, a large majority of them are now built on individual farms of small or SC/ST farmers, e.g. farm ponds, livestock sheds or houses. There is thus, a strong incentive to monitor quality. This also means that there may be considerable overlap with the beneficiaries of PM-KISAN. In that respect, MGNREGS and PM-KISAN are complementary in a different sense – in that it may improve use of the infrastructure built on individual farms through MGNREGS and, potentially, raise local demand for agricultural labour.

The case for replacing MGNREGS with PM-KISAN is therefore weak.

However, in order to fully leverage the complementarity to MGNREGS some inter-linked steps need to be taken to improve MGNREGS implementation. Key amongst these are:

a) Matching budget provisions to demand: While, in the last five years, the government significantly enhanced MGNREGS allocations, these were still not sufficient to meet pending liabilities, i.e., additional expenditure incurred by States over and above budgetary allocations. According to data analysed by Centre for Policy Research's Accountability Initiative, this amount rose from Rs. 724 crore in FY 2014-15 to Rs. 5,932 crore FY 2018-19 (till December 2018).

b) Paying Wages on Time: An important consequence of pending liabilities is delayed wages—a long-standing problem which is worsening. Recent changes in payment mechanisms—ostensibly to reduce corruption, including linking payments with Aadhaar—have served to exacerbate this problem (Dreze, 2017). The primary delay occurs after administrative paper work is completed, when funds are to travel to the State government account and onward to beneficiaries.

c) Linking wage payments to state minimum wages and rural inflation: Another consequence is stagnant wages. Since 2017, MGNREGS wage hikes have been 2.7% in 2017 and 2.9% in 2018 (Indian Express, 2018). Moreover, according to CPR's Accountability Initiative's analysis more than half the states in 2016-17 paid an average wage that was less than the notified wage rate. We think that the government should reconsider its decision to accept the recommendations of the Nagesh Singh committee delinking MGNREGS wages from state minimum wages.

Taken together, this weakens the ability of the MGNREGS wage to act as wage support for the broader workforce—a benefit that goes beyond the direct beneficiaries. Unless work is available on demand and wages are paid on time, the wage floor is rendered ineffective.

d) Strengthening the role of Gram Panchayats in asset creation: Early in its previous term, the government sought to ensure that assets created were durable and effective. The primary approach was to emphasise “convergence” by linking assets created under MGNREGS to other asset creation programs. Prominent amongst these are rural housing and sanitation schemes.

While, in principle convergence is likely to improve overall efficiency, in the specific context of MGNREGS, this has served to undermine the legally mandated role of Gram Panchayats. The design of MGNREGS is a unique opportunity to alter the implementation architecture for rural service delivery by devolving 50% of the funds to Gram Panchayats. A critical role envisaged for them was to prepare a shelf of works linking assets to be

created under the MGNREGS to locally relevant needs—likely to create better assets than a plan prepared in New Delhi and state capitals. Early studies on the quality of assets created under MGNREGS attest to this fact. However, convergence undermines this role. The emphasis on convergence ought to give way to the harder task of building Panchayat capability—including basic human resources—to develop shelves of work, including assets needed to improve infrastructure on local SC/ST and small farmer lands. This becomes even more salient as rural housing and sanitation is saturated and the need for infrastructure to improve agricultural productivity remains.

Fertiliser and Electricity Subsidies: The case for enhancing PM-KISAN by reorienting fertiliser and perhaps even electricity subsidies is stronger. The amounts involved are larger, the subsidies are regressive (in that larger farmers get more), and environmentally damaging: the overuse of chemical fertilizer harms the soil and subsidised electricity leads to overuse of groundwater. By one calculation eliminating the fertiliser and power subsidy in Punjab in 2013 could have financed an annual transfer of about 92,000 to every cultivator or 50,000 to every agricultural worker. PM-KISAN can be used to transform fertilizer and electricity subsidies into a size-independent cash transfer, which will not only make them progressive, but leave the small farmer better off than before. It will also improve environmental sustainability by spurring growth of reduced-chemical agriculture.

Additional Taxes: The final option is to finance PM-KISAN by using revenue from increased tax efficiency or higher rates. One may want to use this sparingly given the other demands on the budget.

Safety Net, Not Springboard

Providing a safety net is just one function for government. In a rapidly growing and aspirational country like ours, we need to also think about reliable springboards to enable rural children and youth access the potential of the modern non-

farm economy. PM-KISAN is a safety net, it is not designed to be a springboard. This still requires large investments in public education and health and it is here that the technology of cash transfers may prove counter-productive.

Income support can occasionally deliver a large bang for the buck, e.g., by easing cash constraints, it can lead to less indebtedness and better price realisations by obviating the need to enter into buy back arrangements at low pre-set prices. It can also encourage diversification of incomes, by enabling investment in non-farm activities and increase household savings by reducing essential expenditure (e.g., by enabling households to buy more from PDS when stocks are available). It can also allow investment in better education for children. Many of these effects are seen in SEWA's Madhya Pradesh cash transfer experiment. Additionally, if fertiliser subsidies are converted into equivalent cash transfers, the savings from low chemical agriculture (as demonstrated in Andhra Pradesh's Rythu Sadhikara Samstha) could again lead to higher levels of household capital accumulation. But, these collateral benefits are not the primary objective of cash transfers.

Moreover, full participation in the modern economy is beyond this. It needs a focus on learning and educational attainment, for which early childhood health and nutrition is critical. A move from free public health care to subsidising broad based tertiary health insurance is essentially a use of public resources for private delivery. Even if it is more efficient, its use for early childhood and primary care is limited. Similarly, school vouchers, right to education mandates on private schools, etc. all tend to absolve the government of its obligation to provide education. This is an entirely untested strategy. Evaluations so far, do not indicate that privately provided education is better; at best, it achieves the same poor outcomes at less cost. No country has managed to have a broad based education for their citizens based on private schools, as we appear to want to do.

Beyond safety nets, if we wish to build a reliable springboard for our children and youth, we will need to build consensus on making resources available and on the mechanisms of delivering high quality basic services such as health and education, safe water supply, etc. Here, cash is not always king.

END NOTES

1. Other reasons include: (i) to allow him or her not do work s/he finds excessively displeasing just to keep maintain a basic minimum standard of living (a question of choice and dignity), (ii) to allay apprehensions that people cannot find work after the advent of Industry 4.0—a move from temporary short-term unemployment assistance to a long-term, if not permanent, income support, (iii) redistribute income—taxation takes, transfers give, etc. It is clear that the PM-KISAN support is not designed to meet objectives (i) and (ii), nor should it be. We are not at the stage of development where this can be an objective. Nor does (iii) appear to be an explicit objective of this government.
2. See <http://pib.nic.in/newsite/PrintRelease.aspx?relid=187508>
3. In 2009, Andhra Pradesh paid nearly 68% wages within the stipulated 15 day period. However this number was significantly lower in Rajasthan and MP at 10% and 23% (World Bank, 2017).
4. A study conducted by Rajendran et al in 2017 used administrative data MIS data, to analyse over 9 million transactions across 10 states in FY 2016-17. They found that only 21 per cent of the payments made in FY 2016-17 were made on time. In another study conducted for FY 2017-18, the authors found that only 32 per cent of the wage payments made in the first two quarters of the financial year had been made on time.
5. <https://www.thehindubusinessline.com/opinion/qubi-can-wipe-off-farmers-tears/article24381521.ece>



Image Source: Hindustan Times

Schooling is not Learning

YAMINI AIYAR

India's children are schooling and not learning. As the recently-released Draft National Education Policy (NEP) states, 'India now has near universal enrolment of children in primary schools. Gender parity has been achieved and the most disadvantaged groups have access to primary schools.' Yet, at the current time, there is a severe learning crisis in India, where children are enrolled in primary school but are failing to attain even basic skills such as foundational literacy and numeracy. The harsh reality is this: schooling is not learning. Strengthening education in India requires the new government to recognize the urgency of this reality and the gravity of India's learning crisis. India needs to ensure, in mission mode, that every child in grade 5 has achieved foundational literacy and numeracy.

Understanding the Problem

India's learning crisis is a widely acknowledged fact. Since 2005, the Annual Survey of Education Rural (ASER) has served as a repeated reminder that barely

50% of students in standard 5 in India can read a standard 2 text. Several other studies, including the government's own recently conducted National Assessment Survey (NAS) 2017, point to low levels of learning.

This crisis begins in the early years of schooling. Moreover, learning profiles are flat. In other words, if a child falls behind expected learning levels in the early years of schooling, sitting in classrooms, year after year, and progressing to higher grades does not ensure that the child catches up. Even the simplest skills like reading a simple passage remains out of reach of an alarming number of students. Drawing on a series of rigorous studies of learning profiles in India, economists Lant Pritchett and Amanda Beatty estimate that four out of five children who go into a grade not able to read will finish the grade still unable to read.¹ Even as children struggle with basics, the curricula and associated textbooks are designed in the expectation that children have acquired grade-level skills and can progress onwards. Pritchett and Beatty

refer to the phenomenon as the ‘negative consequence of an overambitious curriculum’.

Additionally, several studies highlight that there are wide variations in student learning levels within a classroom. In the 2018 ASER survey, in the average standard 3 classroom in Himachal Pradesh, 15.5% students could read words but not sentences; another 24% could read a standard 1 text while 47.4% could read a standard 2 text.² The result is a significant divergence between rates of learning and curriculum expectations. Another study by Muralidharan and Singh, with a sample of 5000 students spanning grades 1-8 in four districts of Rajasthan, finds that the average rate of learning progress across grades is substantially lower (about half) than envisaged in the syllabus and curricula. As a result, the vast majority of students struggle to cope and in the process learn very little.³

Against this background the focused, goal-oriented push for achieving foundational literacy and numeracy in elementary schools strikes at the heart of the problem. As the NEP emphasizes, ‘the rest of the Policy will be largely irrelevant for such a large portion of our students if this most basic learning (reading, writing, and arithmetic at the foundational level) is not first achieved’.

Moving from Policy to Action

The NEP offers an important starting point to develop a mission mode, goal-oriented approach to improving foundational skills in India. It also offers a fairly detailed set of powerful policy ideas, from redesigning curriculum to a national tutors’ programme, teacher training and community participation. But achieving these goals is not just about policy direction. Rather, it is about shifting mindsets and changing institutional culture. This can only be achieved through a fundamental overhaul of how elementary education is financed and governed.

The reality is that in its current architecture, the education system is designed and incentivized to cohere around the goal of schooling inputs (enrolment, access,

infrastructure) rather than learning. All planning, financing and decision-making systems are aligned to this goal. To illustrate, annual plans, targets and budgets are delinked from the articulation of learning goals. Instead, they are based on infrastructure goals determined through U-DISE (Unified District Information on School Education), a specifically created database for critical education indicators other than learning. Recent efforts to measure learning outcomes at the district level, such as the NAS, are not integrated into the planning and budgeting cycle. As a result, plans have little to do with learning needs and interventions specific to improving learning outcomes command relatively paltry money. In 2018-19, quality-specific interventions accounted for a mere 19% of the total Government of India (GoI) budget for elementary education.⁴

Schooling goals inevitably privilege hierarchical, top-down delivery systems that seek accountability through easily verifiable, logistical targets (number of classrooms built, statistics on teacher qualifications, etc.). This attitude has permeated down to the classroom. Easy-to-measure metrics, ‘syllabus completion’ and ‘pass percentages’ have held our classrooms hostage. The result has been a deeply centralized education system in which the central government determines priorities, rather than privileging school/student specific learning needs; this leaves the entire education bureaucracy busy collecting information and monitoring targets relevant to New Delhi rather than schools and children.

Altering this schooling culture is not a simple matter of changing syllabi and textbooks, introducing new pedagogy, and improving training. It requires a complete overhaul of the organizational structure and associated incentive systems in which education stakeholders, from bureaucrats to teachers and parents, are embedded. The education architecture needs to move towards a bottom-up, decentralized delivery system, which privileges the classroom and its specific learning needs. This will make the implementation of NEP’s specific recommendations a reality. The transition to a decentralized system can be achieved through the following key reforms.

Improving the Financing of Education

Despite being on the concurrent list, elementary education financing is disproportionately dependent on central programmes. This is because most of the states use the bulk of their own finances (up to 90% in some cases) towards payment of wages and liabilities. GoI schemes (such as Sarva Shiksha Abhiyan, now renamed Samagra Shiksha) are thus the only source of funds available to states for non-wage expenditure. These schemes privilege an extremely centralized, one-size-fits-all, schooling-focused planning, budgeting and decision-making system. States, in this architecture, have little room for orienting spending to their specific learning needs.

From tied line-item funding to block grants

The first step towards shifting to an education system that prioritizes foundational learning is to overhaul the GoI financing system. One way is by putting states in the driver's seat, and providing them with flexible financing aligned to the achievement of clearly articulated learning goals. Specifically, the government should create a new funding window for foundational learning that gives states two untied grants.

The first untied grant would be for states to meet school infrastructure requirements. The Right to Education Act (RTE) mandates that all states meet a set of infrastructure and teacher norms. States should estimate their infrastructure requirements over a three-year period, which the Centre can fund annually.

The second grant should be a formula-based, untied learning grant financed over a period of three to five years. Funding through this window should be based on a long-term learning strategy articulated by state governments and linked to clearly articulated annual learning goals. Since this is an untied grant, the Centre will no longer need to busy itself with negotiating line-item expenditure. Rather, it can focus on providing technical support and guidance to states.

From an annual to a three-year planning and funding cycle

In the current annual government financial and administrative cycle, it takes a minimum of six months – usually up to November (well into the school year) – for money to move and new programmes to be implemented. This is a result of long administrative processes linked to getting plans and projects approved, procuring materials and finally ensuring funds reach their final destination. Studies by CPR's Planning, Allocations and Expenditures, Institutions Studies in Accountability (PAISA) point out that the bulk of the money usually reaches schools and districts midway (and often at the end) of the annual financial year. Consequently, programmes have a late start, and also an early end to meet year-end financial needs. This needs to change. The planning cycle needs to move away from an annual cycle to a three-year cycle (with annual financial approvals) so states, districts and schools can plan better and ensure continuity in implementation.

Improving the Assessment System

To institutionalize a culture of accountability and ensure that states have access to and utilize regular, reliable data on learning outcomes, a significant effort will need to be made to improve the quality of data collection on learning-related indicators. An important start has been made through the restructured NAS implemented in 2017 and the NITI Aayog's School Education Quality Index (SEQI). However, there are several gaps. The current tools are linked to the achievement of grade-level competencies. But to be useful, especially at the school level, what they need to capture are gaps in foundational literacy and numeracy. This will enable teachers and planners to assess how far students are from these basic skills. Without this critical data point, states are unable to determine the level at which to orient their learning levels. In sum, for assessments to be useful in addressing the learning crisis, they need to be aligned to foundational learning skills and not grade-level learning outcomes. Further, the quality of data collection needs to improve. The NEP has recommended setting up a Central Education Statistics Division. This recommendation must be implemented urgently.

Moving beyond States to Districts and Schools

An education system decentralized to states is simply too large to effectively respond to the diversity of learning needs in school and classrooms. In recognition of this, education policy has, on paper, made the district the unit of planning. However, traditionally, districts have little flexibility in making plans or control over budget. If the education system is to genuinely move towards a focus on classrooms and students, this has to change. Just like states, districts too ought to articulate learning goals over a period of three to five years, and have the flexibility to develop plans to meet these goals. To incentivize districts, GoI and states could create a learning improvement fund that interested districts could compete for.⁵ However, doing this will require a massive capacity building effort by the state and Centre to empower districts to make plans. An interesting parallel is Kerala's People's Plan of 1996 in which the state planning board launched a year-long campaign to work with the Panchayati Raj system to develop the first ever 'people's plan'. The central government could create a small capacity building fund for states to develop a similar plan campaign. Of course, an effort such as this must not be restricted to districts, and should be extended to schools and parent-led school committees as well.

Teaching at the Right Level

India's learning crisis has two challenges. The first is to ensure that students entering the school system do not fall behind in the first place. An important suggestion in the NEP that must be implemented is to integrate pre-school learning with the formal elementary school system. Further reforms related to curricula and teacher recruitment, training and performance management will likely help redress problems encountered within schools.

However, the second and arguably greater challenge relates to students already in school, many of whom

desperately need to catch up. For this cohort of students, there is today a significant body of evidence suggesting that efforts to match classroom instruction to student learning levels (rather than the traditional age-grade matrix), or 'teaching at the right level', implemented in mission mode, can result in significant and relatively speedy gains in foundational learning levels. Many state governments and even individual districts today are beginning to experiment with implementing versions of teaching at the right level (TARL) in their schools. These efforts need to be supported and scaled up with both technical and financial resources. To do this, a specific FLN fund and technical partners at the GoI level could be established for districts to draw on to implement the TARL initiative. This could be linked to the NITI Aayog's Aspirational District Programme to ensure high-level buy-in and institutional convergence at the GoI level. Efforts to assess foundational learning levels, using ASER-like tools, are already underway. These need to be scaled up now.

From Assessments to Learning and Doing

One of the most damaging consequences of a centralized, schooling-focused implementation system is that it has undermined the professional roles of teachers and school-level administrators, casting them as passive rule followers, collecting data and implementing orders from the top. It isn't uncommon for teachers in schools to describe themselves as mere clerks in an administrative system, taking them away from their primary teaching responsibilities. This view is reinforced by the fact that the career ladder for teachers – as they move to becoming headmasters, cluster- and block-level officers, and finally district education officers – is primarily focused on administration rather than supporting teaching/learning. Recognizing this problem, the NEP pushes for reducing administrative work and improving teacher training and support infrastructure.

But these reforms will only work if they are accompanied by a significant cultural shift in how education reforms are debated and implemented. This shift must place teachers and frontline officers at the centre of the attempt to reshape classroom pedagogy. Consider this: in the last three years, significant efforts have been underway to move the needle on measuring learning outcomes. These include the NAS and SEQI referred to earlier. However, none of these assessments are geared towards the teacher or frontline administrators – such as the cluster resource centre coordinators and block resource persons charged with mentoring and providing academic support to teachers. These assessments thus merely function as tools for monitoring performance rather than as diagnostic tools that can strengthen the pedagogical support structure for teachers, motivate them and assist them in improving teaching practices. For teachers and frontline administrators, this merely reinforces the view that they are no more than disempowered cogs in the wheel, primarily expected to follow orders and complete administrative tasks.

Evidence from a number of experiments, most recently in Uttar Pradesh where teachers are using mobile apps to review and track progress of student outcomes on a regular basis,⁶ shows the way. It suggests that one way of moving the needle on teacher motivation, and reasserting their primary professional identity as teachers charged with imparting learning to students, is by empowering them with data and enabling them to use this data in their classrooms. This also ensures that academic support staff have the tools to engage in a meaningful discussion with teachers on how to improve learning in schools. Building on these experiments to use technology and empower teachers with student assessment data in meaningful ways can go a long way in improving learning in schools. There is an urgent need to recast the assessment of learning outcomes as a diagnostic tool that teachers can and should use, from its current role as a mere monitoring tool for the central and state governments. This is arguably the most important reform that must be institutionalized if India is to move towards the goal of universal acquisition of foundational literacy and numeracy skills in the next five years.

END NOTES

1. Lant Pritchett and Amanda Beatty, 'The Negative Consequences of Overambitious Curricula in Developing Countries', Working Paper 293 (Center for Global Development, 2012), <https://www.cgdev.org/publication/negative-consequences-overambitious-curricula-developing-countries-working-paper-293>.
2. <http://www.asercentre.org/Keywords/p/337.html>; Karthik Muralidharan and Abhijeet Singh, 'Learning levels will not improve by spending more on education', Hindustan Times, 17 April 2019, [https://www.hindustantimes.com/columns/learning-levels-will-not-improve-by-spending-more-on-education/story-Ej6tQgP6f9\]OTQj6HuvnO.html](https://www.hindustantimes.com/columns/learning-levels-will-not-improve-by-spending-more-on-education/story-Ej6tQgP6f9]OTQj6HuvnO.html).
3. Muralidharan and Singh, 'Learning levels will not improve...'
4. 'Samagra Shiksha, Gol, 2019-20', Budget Briefs 11(1), Accountability Initiative (New Delhi: Centre for Policy Research, 2019), https://accountabilityindia.in/sites/default/files/pdf_files/SS%202019-20.pdf.
5. See also Rukmini Banerji, 'Improving Children's Learning: Challenges and Priorities for the New Government', Ideas for India (xxxx: International Growth Centre, 2014), <https://www.ideasforindia.in/topics/human-development/improving-childrens-learning-challenges-and-priorities-for-the-new-government.html>.
6. Shobhini Mukerji, 'A Quiet Revolution: The Case of Primary Education in Uttar Pradesh', Ideas for India (International Growth Centre, 2019), <https://www.ideasforindia.in/topics/human-development/a-quiet-revolution-the-case-of-primary-education-in-uttar-pradesh.html>.



The Numbers Game: Suggestions for Improving School Education Data

KIRAN BHATTY

In the context of the declining quality of public education, governance has emerged as an important explanatory variable, quite distinct from the education variables more commonly cited, such as teaching and learning practices or curriculum and textbook quality. An important component of the governance architecture in any sector is its information and data regime, as all aspects of monitoring, planning and policymaking are dependent on it. A look at the data system in the education sector in India reveals that there is much amiss at all levels of data collection and use.

This is not to deny that compared to a couple of decades ago, considerable energy and investment have gone into building a regular school-based decentralized data collection system in India. This District Information System for Education (DISE), set up after Sarva Shiksha Abhiyan (SSA) was launched in 2001, and now called Unified-DISE (U-DISE),¹ collects data from 1.5 million

schools (government and private) and provides report cards up to the secondary stage for every state, district and school. It is remarkable that this data is compiled and School Report Cards prepared and uploaded on the website on an annual basis. Education data from households is also being collected by Panchayats and compiled annually in Village Education Registers. A few states have supplemented this with data from Child Tracking Surveys, which enumerate the population of school-going children. In addition, the Ministry of Human Resource Development (MoHRD) commissioned three rounds of household surveys in 2006, 2009 and 2014. The SRI-IMRB surveys, as they are called, collect information on children in the age group 6–13 years who are out of school. Other large household data sets have emerged too, in addition to the National Sample Survey (NSS) and Census, such as the National Council of Applied Economic Research's (NCAER) Indian Human Development Survey (IHDS-I, 2004–5 and IHDS-II,

2010-11), the Annual Status of Education Reports (ASER) since 2005, and now the Socio-Economic Caste Census (SECC). All of them provide data on education indicators and school participation in some form.

However, in the midst of this ‘feast’ of data sources, we get varied, often contradictory evidence on basic indicators such as the proportion of children out of school, the extent of improvement in retention levels, the learning outcomes and the quality of education. Even in areas of education finance, such as teacher appointments and salaries, we do not have an authentic database. Hence, despite the fact that the coverage and scope of data collection by the government has increased enormously with many more indicators added, nagging questions remain about the quality, utility and purpose of the data, with obvious implications for planning and policymaking. Further, with multiple sources of data – both governmental and non-government – in operation, data neutrality also cannot be assumed.

This paper highlights the methodological as well as administrative anomalies in the system, and points to the need for greater decentralized management of data as well as collaboration across agencies for purposes of standardizing definitions and methods of estimation. It further emphasizes the need for public verification of data to ensure authenticity as well as validation across sources to reduce bias.

Methodological Discrepancies

Definitions and Methods of Estimation

The methodological difficulties begin with the range of definitions and methods of estimation used for important indicators by different government and non-government agencies collecting data. For instance, estimates for out-of-school-children (OOSC),² all collected through household surveys, are based on different ‘questions’ asked by investigators employed by each source. The NSS, for example, asks, ‘How many children are currently attending school?’, while the Census enumerators ask questions related to ‘status of attendance in an educational institution’. The MoHRD survey, on the other hand, claims to follow both the

sampling and methodology used by the NSS, and yet arrives at vastly different results. The NSS and MoHRD surveys, which are based on a sample, then extrapolate from their figures the proportion of children that are out of school as a percentage of the population of children in that age group. Using this method, the NSS 71st round (2014) has pegged the figure at a little less than 10% of the child population, amounting to nearly 20 million children, while the MoHRD (SRI-IMRB, 2014) estimates put it at 3% and thus approximately 3 million! The 2011 Census, on the other hand, suggests that more than 15% children in the same age group do not go to school, thus giving us a wildly differing figure of almost 40 million.

Similarly, the figure for the total number of teachers in a school turns out to be not as simple a statistic as it sounds, with teachers being routinely sent on deputation to other schools.³ Thus, it is unclear whether a teacher who is on deputation from another school is to be counted in her current position or in her original school; or does she end up being counted in both? Similarly, information on the employment status of teachers has only two categories in the DISE format – regular and contract – whereas multiple categories that do not fit precisely into these categories also exist (voluntary, assistant, etc.), resulting in highly inaccurate data being collected on such an important indicator. Other gaps in the data collected include: information on salaries paid out by each state to the different categories of teachers and measures of learning outcomes on a regular basis. The problems are compounded by the fact that formats for collecting data are designed centrally and do not take into account local specificities; nor are teachers – often the primary data enumerators – adequately trained to fill the formats.

Validation and Verification of Data

Another aspect of data credibility that has proved to be a weak link in the data collection process is verification and validation of data. While the rules for DISE dictate that 10% of the sample be randomly cross-checked, DISE itself is unable to verify that this process is either regularly or adequately carried out, due to lack of capacities available at the frontline for the process. In addition, the education departments

ignore the evidence presented by other government or non-government sources to validate and thus improve the credibility of their data. Data validation faces some mundane difficulties as well, related to different methods and time periods used for estimating different indicators by the agencies that collect data. For instance, the Right to Education (RTE) Act talks about children between 6 to 14 years age, but practically all data agencies (except those under MoHRD) use different age groups when compiling education data, making comparison quite difficult. Similarly, the dates and periodicity of data collection vary across sources. ASER is an annual survey; NFHS followed a six-yearly pattern initially but has now slipped to 10 years since the last survey. IHDS thus far has maintained a gap of six years between its two successive surveys. While NFHS-3 and IHDS-1 roughly cover the same period (2004-5 and 2005-6), neither corresponds to the Census dates, but IHDS-2 (2011-12) does. NSS also follows a different time period for its education surveys.

Administrative Anomalies

The Purpose of Generating Data

Different agencies plan their data collection for different (and specific) purposes, and not necessarily for planning or monitoring education and hence for education policy. For example, the education rounds of NSS are part of the survey on social consumption, which in turn seeks to assess the benefits derived by various sections of society from public expenditure incurred by the government.⁴ The population census, on the other hand, is the primary source of basic national population data required for administrative purposes and for different aspects of economic and social research and planning.⁵ The non-government sources also have unique purposes in mind, again not necessarily with education as the primary objective. Thus, NFHS is essentially a health and nutrition survey that also collects data on select education parameters. Similarly, IHDS is geared towards the larger goals of human development and poverty, especially the links between education, skills and livelihood. Only ASER is solely dedicated to education, specifically learning

levels. However, it does not tell us how the levels of learning vary with student enrolment or attendance, or any household factor.

What is more surprising is that even the data collected by MoHRD and state education departments, though admittedly for the purpose of monitoring and planning education, is not geared towards policy goals. Instead, data collection and analysis are guided by their use in taking stock of the provisioning of schools, rather than as a mirror of their functioning. Unsurprisingly, therefore, school surveys focus on collecting information related to (i) broad indicators of infrastructure and teacher availability; and (ii) student enrolment and distribution of incentives. Both these sets of data showcase administrative efforts rather than education progress. Even the household survey (MoHRD's SRI-IMRB) is used only for estimating OOSC. No effort is made to use disaggregated data to understand the problems of specific groups of children or schools.

A second conundrum associated with the purpose and use of education data relates to the fact that planning and policymaking are extremely centralized processes. Thus, data – however collected – plays a limited role in the planning and policy processes. For instance, the Project Approval Board at the MoHRD that approves



annual plans and budgets (AWP&Bs) for the states does so on the basis of the finances allocated to it by the Ministry of Finance and the norms of expenditure specified by the central ministry (MoHRD). While the AWP&B for a state reflects the needs of the state, eventual allocations differ widely from it, as they are based on what is made available by the Ministry of Finance through processes that do not involve the education sector. Of course, state plans are themselves based on a process of aggregation that does not involve a genuine decentralized planning process. This is evident from the fact that dissemination strategies are not aligned with the goals of decentralized planning, as data is largely unavailable in usable form at the local or school level. In fact, local data management systems are virtually non-existent, putting paid to the idea of decentralized planning. Thus, while it is true that schools are now asked to prepare their plans through the School Management Committees, in fact what is submitted by them are copies of the DISE format—presumably as indicative of the status of schools and thus reflective of their needs! Eventually, therefore, at the district level—and probably also at the state level—DISE data is referred to for determining the state AWB&P.

Limited State Capacity

A second and perhaps overarching problem confronting the data regime in education is that of limited capacities to design, collect, analyse and use data throughout the government structures, from the central to the local. DISE is run almost entirely on the shoulders of data entry operators of the education departments at the district and block levels. Data that is collected from the ground up amounts to a process of simple aggregation resulting in the loss of specifics, such that by the time it reaches the central level, it barely reflects the ground realities and can hardly serve the needs of the people. The aggregation itself is still done manually at the block level in many states with digitalization appearing only at the district level. Further, implicit in the collection process is a conflict of interest, especially with DISE data as it is entirely dependent on formats filled by teachers. It is well established that teachers might be incentivized to represent information in ways that inflate facts, such as student enrolment.⁶

In addition, the departmental staff at the state level have not acquired the understanding, through their own qualifications or through training provided by the government, of the relevance and importance of quality data or its use in the planning or policy process. For instance, innumerable formats are designed for monitoring schools, but none of that data is put to any use.⁷ In fact, it is not even referred to in the monitoring or review meetings held at the block and the district. Unfortunately, the personnel involved in collecting and collating that information are themselves unable to gauge its importance as they see it as simply a chore—of ‘filling formats’. With the import of the data completely lost on them, they are unable to use it in a constructive fashion, making the entire exercise redundant.

The Way Forward

The new draft National Education Policy, 2019, in recognizing the paucity and limitations of the education data regime, has called for “a major effort” in data collection, analysis and organization. In particular, it proposes the establishment of a new Central Educational Statistics Division (CESD) as an independent and autonomous entity at the NIEPA. It has also suggested the maintenance of a National Repository of Educational Data (NRED) within NIEPA, which will include specific indicators common to under-represented groups (URGs), in an attempt to track their participation and performance. Building a local data base for drop out and out of school children, using social workers to collect information, as opposed to teachers, is another welcome suggestion. Making State Assessment Survey (SAS) results available transparently to parents, teachers, SMCs members and the community could also add to community participation in the learning outcomes of students, as well as validation of the data and accountability to the people.

Key issues that the CESD and related authorities will nevertheless need to deal with are mentioned below:

- (i)** Improving definitions, standardizing them across sources, and using improved methods of collection and estimation of basic indicators.

(ii) Developing capacities of the data regime and giving a greater role to data users, especially the education officials at different levels of government ranging from the national to the local. Necessary technical skills, if provided, will enable them to be cautious when collecting data, as also to interpret and use it appropriately, such as when making plans.

(iii) Providing support to monitoring agencies, such as the school management committees, school complex management committees, social audit groups, and education researchers to allow them to publicly verify data that is officially collected. This requires building a local data management system—at the level of the school or Panchayat or School Complex—that has more than out of school data, as proposed by the NEP, and is publicly available. It would go a long way in facilitating not just local monitoring but also the development of school development plans. In the current situation, the lack of computing facilities at the local level inhibits the maintenance of data, as paper records tend to be poorly maintained and not updated. As a result, even the information that is generated in the school is sent up to the next level for digitization at a higher level where computing facilities are available, at the district or block level, as the case maybe. The digitized information however, does not flow back to the school, for the same reason. As a result, no institutional memory is built up for purposes of tracking change or progress in a school. Ideally the format should be verified, by the parents and larger community, before being sent up to ensure accuracy.

(iv) Reducing bias by validation through the use of multiple data sets. Validation of data against different sources, especially in the case of data used for policy, can ensure that bias is factored in and therefore a more judicious use of data is effected. Multiple data sets have other uses as well. For instance, while any single data set cannot collect information on all relevant issues, data collection is known to be a very expensive and time-consuming process. Thus, information collected by NSS on household expenditures—which demonstrates that 70% of all OOSC in urban areas are concentrated in the lowest quintile, while in rural areas they are in the lowest two quintiles—is relevant information that can and should be used by the education department without having to repeat the exercise. Similarly, NFHS data provides linkages between education participation and family health, also of importance to the education department.

(v) Making better use of data through proactive collaboration of different government and non-government agencies. For instance, if household and school data were available in the same portal, it would maximize their use. Similarly, if the NSS education rounds were better coordinated, along with standardization of definitions of important indicators, it would greatly help in serving the cause of education goals. Streamlining the planning process to enable planning based on decentralized data will go a long way towards improving the use of data at the local level as well as ensuring a more genuine decentralized planning process.

END NOTES

1. U-Dise or Unified-DISE is a database of all students from grades 1 to 12.
2. Non-government sources do not collect information on this variable at the national level.
3. It is common to send a teacher appointed to a particular school to another, if there is a shortage in the other school. While shortages exist in a very large number of schools, such deputation typically takes place if the demand for more teachers is raised loudly enough or the political configuration is such that the school is able to draw a teacher towards their school, typically creating a shortage in the school from which the teacher is deputed!
4. <http://mail.mospi.gov.in/>.
5. http://censusindia.gov.in/Data_Products/Library/Indian_perceptive_link/Census_Objectives_link/censusobjectives.htm
6. See Bhatty, Saraf and Gupta, 'Out-of-school Children in India: Some Insights into What We Know and What We Don't', *Economic and Political Weekly* 52(49) (2017)
7. See Bhatty and Saraf, 'Does Government's Monitoring of Schools Work?', CPR Working Paper (New Delhi: Centre for Policy Research, 2016).

Policy Challenges 2019–2024

FEDERALISM



Center-state relations in India are at a crossroad. In the last few years, India has undertaken significant reforms aimed at transforming the institutional and financial landscape for negotiating center-state relations. However, these reforms highlight important tensions like how best to harness center's resources, technical capacity and potential to negotiate conflict, while preserving the constitutional rights of the states; growing regional inequality; and the relationship of center and the state governments with the local governance. Negotiating these tensions requires rethinking the institutional landscape for managing center-state relations. CPR faculty examine these issues through the lens of social policy financing, urban local governments and the challenge of inter-state water conflicts. An important new contribution is to examine the potential for deepening the role of states, specifically border states, in Indian foreign policy.



Towards ‘Cooperative’ Social Policy Financing in India

AVANI KAPUR

A unique feature in India's federal architecture is the pivotal role played by the Union government in financing and monitoring social welfare programmes, and in ensuring that all states have adequate resources and are held accountable for meeting social policy goals. During 2000-2018, the Government of India (GoI) spent over Rs 14 lakh crores on social services.¹ A significant proportion of this expenditure is met through Centrally Sponsored Schemes (CSSs) – a specific purpose transfer from the Union to states, usually in the form of schemes.

While the practice of using specific purpose transfers dates to the pre-Independence era, over time, CSSs have emerged as the primary vehicle through which the GoI finances and directs state expenditure towards national priorities. Their dominance can be seen in their sheer numbers and the quantum of money flowing through them. During the 11th Five Year Plan (2007-2011), there

were 147 scheme specific transfers accounting for over 40% of total central transfers to states.² This increased significantly in the 12th Plan period. Of the total Rs 8.61 lakh crore transferred by the Union government to states between 2012 and 2015, Rs 5.88 lakh crore (68%) was released as assistance under CSSs.³

The importance of CSSs as a fiscal instrument lies in the fact that they are the primary source of non-wage, uncommitted funds available to states. With a majority of states' own resources tied to wages, pensions and other committed liabilities (sometimes over 80-90%), CSSs were designed as a top-up to augment state expenditure, allowing them to address infrastructure and human development deficits.

In principle, the rationale for CSSs is sound and in keeping with first principles: fiscal equalisation to ensure

that minimum standards of public services are provided to all citizens. Over time, however, the design and proliferation of CSSs have undermined this very rationale. Richer states with better administrative capacities have been able to capture a larger share of CSS funds, resulting in a significant misallocation of resources.

Analysis by the Economic Survey 2016-17 of the six top CSSs—Pradhan Mantri Awaas Yojana (PMAY), Sarva Shiksha Abhiyan (SSA), Mid-Day Meal (MDM), Pradhan Mantri Gram Sadak Yojana (PMGSY), Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and Swachh Bharat Mission (SBM)—found that under no scheme did the poorest district receive even 40% of the total resources. In fact, for the MDM and SBM, the share was under 25%.⁵ Other studies of the SSA and National Health Mission (NHM) found similar results—that is, states with poorer health indicators did not necessarily get larger per capita transfers.⁶

Moreover, the centralised nature of CSSs often makes them an inefficient tool to address state-specific needs and has undermined the autonomy of states to undertake expenditure decisions based on their local needs.

Recognising these limitations, numerous attempts have been made to restructure schemes and restore them to their rightful place—the states. The last major impetus came with the adoption of the recommendations of the 14th Finance Commission, which increased state governments' share in tax devolution by 10 percentage points. The resultant decrease in the fiscal space available with the GoI reiterated the need to significantly decrease and restructure CSSs. This led to the constitution of a committee of chief ministers under the aegis of the NITI Aayog. The committee made several recommendations including scheme rationalisation, determination of a transparent criterion for interstate allocation, and greater flexibility in and creation of an institutional mechanism for centre-state negotiation.

The changes that followed were minimal. While schemes were reordered under ‘umbrella’ programmes, within each umbrella programme, sub-schemes continued as before. As per the Union Budget 2016-17, even after the creation of 28 umbrella programmes, there were 950 Central Sector and CSS

sub-schemes accounting for about 5% of the GDP and 9% of the total GoI expenditure.⁷ Three years later, in the Interim Budget for 2019-20, Central Sector Schemes constituted 12% of GoI expenditure, up from 9% in 2016-17; CSSs accounted for another 9%.⁸

More importantly, there was no real change in the design or implementation of the schemes. Meetings for the planning of education and health programmes continued as before, and the notification to allocate 25% as flexible, discretionary funds was not reflected in many of the scheme planning documents. Instead, the disbandment of the Planning Commission has resulted in an institutional vacuum with respect to planning. CSSs now fall under the domain of central ministries, leading to further centralisation of social policy financing.

A call for rationalising CSSs, however, has again gained momentum. The GoI recently committed to evaluating all CSSs before fresh appraisals are made and making scheme approval coterminous with the Finance Commission cycle. Accordingly, the Development Monitoring and Evaluation Office (DMEO) under the NITI Aayog has invited proposals to evaluate 28 umbrella CSSs under 10 sectors. Real change in social sector financing, however, will only be visible if the current design of CSSs is completely overhauled, in addition to the scheme rationalisation being carried out.

Before I offer some indicative steps on how this can be achieved, it is useful to highlight some of the main inefficiencies in the current design of CSSs. Broadly, these can be classified into four interrelated areas: planning failures, implementation failures, fiscal inefficiencies and administrative red tape. Each of these is described below.

Planning Design Failures

Budgets for CSSs are determined based on incremental plans prepared by the respective state governments and approved by a committee at the central level. This has given individual ministries significant discretion in determining scheme design and approving state-specific plans and budgets. There is often an inherent tension between union government priorities and

states' perceived needs. However, since GoI controls the purse strings, central priorities dominate. To illustrate: in 2010, the Bihar chief minister had launched several state entitlement schemes for education, such as cycles, uniforms, etc. In its SSA budget, thus, the state proposed a low allocation for entitlement. However, the GoI's own prioritisation of entitlements meant that despite no demand, Bihar's entitlement budget under SSA was enhanced by over 200%. In another example, in 2013–14, one state government wanted to use the SSA budget to provide vehicles for block-level officials to improve school-level monitoring. The approval board at the Centre, however, denied this request as purchase of vehicles was not permitted under SSA rules.⁹

Implementation Failures

CSSs are typically designed by the Union government but implementation rests with the state and local governments. Most CSSs come with rigid guidelines for execution which privilege a top-down, 'one size fits all' model with fixed norms and unit costs. For the NHM, for instance, the guidelines lay down fixed population norms to set up health facilities. These, however, underestimate requirements in states such as Rajasthan and Madhya Pradesh which have a population density lower than the national average.

More importantly, even granular implementation details such as hiring processes, training modules and schedules, communication strategies, etc. are laid down by the Centre. Consequently, states and local governments have very little flexibility in adapting implementation based on their specific jurisdiction. The problem is even more acute at the point of service delivery. In education, for instance, if a school wants to spend more money on buying teaching material rather than painting walls, the norms simply don't allow it. Similarly, a survey conducted by Accountability Initiative in 2013 found that the pressure to meet RTE infrastructure requirements resulted in money for boundary walls being sent to all schools in Himachal Pradesh even though construction couldn't be undertaken due to land unavailability.¹⁰

Fiscal Inefficiencies

Most CSSs are designed as a cost-sharing programme between the Union and the states. With the division of CSSs into 'core', 'core of the core' and 'optional', states are expected to contribute 50%–60% of the total approved budgets from their own plan funds.¹¹

Within a scheme, however, the matching ratio is uniform across states irrespective of their fiscal capability. Release of funds by the GoI is contingent on states releasing their own share and meeting other conditionalities such as the submission of Utilisation Certificates (UCs). This has three important consequences with respect to distribution of resources. First, the uniform fund-sharing ratio often makes it difficult for the low-income states to put in their requisite share. As subsequent fund release is contingent on states submitting their share, this has an effect on the total quantum of money received particularly by fiscally weaker states. Thus, while Karnataka may perform better than Bihar on most development indicators, it may also be able to avail the CSS grant by making its matching contribution, while Bihar may find it difficult to put in its share. Second, the presence of conditionalities for fund release means that there is a considerable difference between the approved allocation and actual grants. In 2016–17, for instance, only 85% of total NHM approved budgets were released. These differences are amplified at the state level. Thus, while Bihar (one of the poorest states) received 79%, Gujarat and Haryana (fiscally stronger states) received over 100%.¹² This creates uncertainty in implementing schemes and invariably states with greater shortfall in services levels suffer the most. Finally, the fixed fund-sharing ratios may create perverse incentives for the states to try and get additional CSS funds, even if they do not need it.

Layered Bureaucracy and Administrative Red Tape

Finally, detailed and rigid guidelines, complex paperwork and numerous conditionalities for fund release under CSSs have also created considerable administrative red tape, resulting in inefficiencies in approvals and

fund flows. The situation is exacerbated by the fact that for some CSSs, the Union government has set up parallel institutional structures responsible for CSS implementation in states, thereby creating a new stakeholder in the implementation process. Under the SSA and NHM, for instance, scheme planning and implementation rests with autonomous bodies known as State Implementation Societies.¹³ The multiplicity of roles means that even simple tasks require approval and technical sanctions from different authorities. A study of the NHM in Uttar Pradesh conducted by Accountability Initiative found that it took a minimum of 22 desks through which the file had to pass for the release of funds from the Treasury to the State Health Society (SHS). Other studies have found that the figures for Bihar and Maharashtra stood at 32 desks and 25 desks, respectively.¹⁴ Possibly as a consequence, release of funds from the SHS to the Treasury took as long as five months in Maharashtra and over three months in Bihar and Uttar Pradesh.¹⁵ Delays at one level have a knock-on effect and often funds reach the last mile in the last quarter of the financial year.

Five-step Process in Reforming the CSS Design

These challenges highlight the need to move away from past reform efforts (which have focused on minor tweaks in CSSs) towards the first principles of the rationale behind specific purpose transfers. This will require a five-step process.

Moving from a Schematic to a Sectoral Approach

The first step is to limit the number of schemes. One way of doing this is to link finances to ‘national goals’. The committee of CMs on restructuring CSSs laid out nine key areas as part of the National Development Agenda for Vision 2022. It recommended that instead of the previous government’s strategy of bundling schemes under 22 umbrella programmes, funds could be released specifically for priority areas rather than multiple sub-schemes. This would give states the flexibility to plan activities within each priority area as per their own development needs. Steps in this direction have already been taken. The recently launched Samagra Shiksha – an overarching programme for school education extending from pre-school to class 12 – merged three previously independent CSSs. In theory

the scheme allows states to prioritise interventions and sectors as per their need. Preliminary analysis of the scheme budget shows that indeed states are making decisions in keeping with their specific needs (albeit still guided by the GoI). Thus, while Uttar Pradesh and Bihar – which continue to lag behind in elementary education – allocated over 80% of their Samagra Shiksha budget for elementary education, states such as Haryana and Himachal Pradesh have focused on secondary education, allocating over 40% to the same. Similar steps should be taken in other sectors.¹⁶

Moving towards Block Grants

Having identified priority areas, the next step would be to ensure states have enough resources to fund these areas. Instead of allocations being linked to detailed and cumbersome planning and budgeting processes with restrictive, centralised guidelines, block grants could be given to states. This would allow for prioritisation of different inputs and secure greater ownership by state governments. An example of this can already be seen in the Rashtriya Krishi Vikas Yojana (RKVY), a CSS established in 2007 to rejuvenate falling agricultural growth rates. Unlike most other CSSs, RKVY offers the flexibility to a state to choose activities under the scheme that most suit its requirements. Projects are prepared by the departments concerned and then scrutinised by a committee under the state government’s Agricultural Production Commissioner. Most importantly, project approval is not done by GoI but by the State Level Sanctioning Committee (SLSC), chaired by the Chief Secretary and with representatives from the Ministry of Agriculture and NITI Aayog as members.

Ensuring Equitable Interstate Distribution

Third, interstate distribution of the normative block grant portion of funding amongst states can be based on a formula that takes into account aspects like population, area and proportion of difficult areas, along with sector-specific needs. Differential cost-sharing norms that take note of the shortfall in service levels could further assist in ensuring that the distribution of funds fulfils the criteria of need and equality. Moreover, the formulaic nature of the grants will ensure predictability of fund flows and allow for better planning.

Reforming the Public Finance Management System

The fourth step is streamlining inefficiencies in the approval and fund flow process. This can be done by building a just-in-time Expenditure Information Network (EIN) which brings all expenditure units under one system. The first step in this process was undertaken in 2017, when the GoI mandated all CSS expenditure to be routed through the Public Finance Management System (PFMS). The system envisages each implementation unit to be under one system, thereby allowing GoI and states to monitor funds at different levels. The problem, however, is that the system still functions as a push system, with funds being routed through multiple levels requiring approvals at every stage. By moving towards a pull system, each implementing unit could have the ability to automatically withdraw funds as needed. A defined resource envelope and appropriate access codes would ensure that funds are not misused.

Augmenting Capacity of the Evaluation Office

Finally, instead of focusing on monitoring the nuts and bolts of implementation, the GoI must build its capacity to develop a credible database on monitoring outcome indicators on a real-time basis. Currently, an inherent weakness in the CSS design is its focus on inputs. This creates perverse incentives for the entire administrative machinery to focus on ensuring adequate inputs, or at best, meeting output targets. Here, the DMO's role could be expanded by investing in systems to generate regular, credible and granular data on various outcome indicators and to conduct concurrent evaluations of key programmes. Over time, performance on outcomes could be linked to additional financial incentives available to states.

END NOTES

1. 'Reserve Bank of India Handbook of Statistics on the Indian Economy', Public Finance Statistics. Available at: <https://dbie.rbi.org.in/BOE/OpenDocument/1608101727/OpenDocument/opendoc/openDocument.faces?logonSuccessful=true&shareId=0>.
2. B.K Chaturvedi, 'Report of the Committee on Restructuring of Centrally Sponsored Schemes (CSS)' (New Delhi: Planning Commission, Government of India, 2011).
3. NITI Aayog, 'Report of the Sub Group of Chief Ministers on Rationalisation of Centrally Sponsored Schemes' (New Delhi: NITI Aayog, 2015). Available at: <http://niti.gov.in/writereaddata/files/Final20Report20of20the20Sub-Group20submitter20to%20PM.pdf>.
4. Y. Aiyar and A. Kapur, 'The Centralization Vs Decentralization Tug of War and the Emerging Narrative of Fiscal Federalism for Social Policy in India', *Journal of Regional and Federal Studies* 29(2) (2018): 187-217.
5. Ministry of Finance, 'Universal Basic Income: A Conversation With and Within the Mahatma', *Economic Survey 2016-17*, Chapter 9. Available at: <https://www.indiabudget.gov.in/es2016-17/echapter.pdf>.
6. M.G. Rao, 'Central Transfers to States in India: Rewarding Performance While Ensuring Equity' (New Delhi: NITI Aayog, 2017).
7. Ministry of Finance, *Economic Survey 2016-17*, Chapter 9 'Universal Basic Income: A Conversation With and Within the Mahatma'. Available at: <https://www.indiabudget.gov.in/es2016-17/echapter.pdf>.
8. Rathin Roy, 'Changing Fiscal Dynamics', *Seminar Magazine* (2019) : 717.
9. Aiyar, et al. 'Rules versus Responsiveness: Towards Building an Outcome-Focussed Approach to Governing Elementary Education Finances in India'; Accountability Initiative Working Paper (New Delhi: Centre for Policy Research, 2015).
10. Accountability Initiative, 'District Report Cards, 2014' (New Delhi: Centre for Policy Research, 2014).
11. The Centre provides 90% for Northeast and Himalayan states.
12. Accountability Initiative, 'National Health Mission, 2017-18', Budget Briefs (New Delhi: Centre for Policy Research, 2018).
13. In NHM, it is known as State Health Society.
14. M. Choudhury and R.K Mohanty, 'Utilisation, Fund Flows and Public Financial Management under the National Health Mission', NIPFP Working Paper Series (New Delhi: National Institute of Public Finance and Policy, 2018). Available at: https://www.nipfp.org.in/media/medialibrary/2018/05/WP_2018_227.pdf.
15. Accountability Initiative, 'National Health Mission, 2017-18', Budget Briefs (New Delhi: Centre for Policy Research, 2018).
16. Accountability Initiative, 'Interim Budget 2019-20', Samagra Shiksha Budget Briefs (New Delhi: Centre for Policy Research, 2019).



Bridging the Local: Beyond the 73rd and 74th Amendments

MUKTA NAIK, SAMA KHAN AND SHAMINDRA NATH ROY¹

Cities are seen as the key drivers of growth and managing urban expansion is a major policy challenge. But Indian urbanization is marked not just by expansion but also by the transformation of a large pool of rural areas. Together, these two factors contributed about 40% of urban population growth between the 2001 and 2011 censuses, with an equal contribution coming from natural growth, and the rest from migration. India's urbanization is thus as much a story of its large megacities as it is a story of the in situ transformation of its rural population, not just in the periphery of cities but also beyond.

Indian Urbanization on the Ground: A Rurban Story?

In India, very large cities coexist with a dense network of small towns. The six major urban agglomerations

—Delhi, Mumbai, Kolkata, Bengaluru, Hyderabad and Chennai—had about 74 million inhabitants in 2011. They are followed by a series of secondary metropolitan areas—state capitals and other big cities; all these million-plus cities accounted for a little under a third (31%) of the urban population in 2011. Some are recent upstarts like Gurugram, but most have been around for some time, as medieval or colonial cities.

While the large cities are commonly regarded as growth engines, urban growth in the past decade is not concentrated in these but is actually quite evenly distributed across various urban categories and locations. One-third of the fastest growing cities are small towns—40% of the urban population in 2011 lived in small towns of less than 100,000—and their economic activities are confined to the development of specialized clusters involving cities of various sizes as well as villages.

Not all these towns are administratively ‘urban’ or statutory towns (STs), but they are counted as urban by the Census since they are above the demographic and economic threshold of being ‘urban’. These settlements are known as census towns (CTs). Together with smaller STs, they bridge the gap between India’s large cities and rural areas as nodes that supply essential goods and services to the hinterland.

While the CTs are administrative villages that are counted as urban, there are many villages that do not cross the Census threshold but show visible non-agricultural functions. Together, these new ‘rurban’ spaces are slowly becoming a vital part of India’s settlement hierarchies, and their importance is rising in terms of filling the spaces between the interconnected city systems. They provide two main kinds of crucial linkages: between rural and urban, spatial and economic.

Spatial Periphery: While the peripheries of large cities like Delhi, Mumbai or Kolkata are growing at a faster rate than the core cities, growth of population and construction is occurring around smaller cities as well, and across different geographical locations. For example, Mallapuram, which used to be a small municipality of 10,000 people in northern Kerala during Census 2001, grew to an urban agglomeration of 1.7 million people by 2011. This growth came from CTs – administered by panchayats – around the city, which constituted 80% of the population of the Mallapuram urban agglomeration in 2011.

Spatial Corridor: Rurban areas are also emerging along industrial corridors, combining cities of different sizes and villages between two distinct city clusters to create an extended urban region. For example, many such settlements connected to textiles and light manufacturing stretch along NH 45, from Bengaluru to Salem in southern India. Such spaces blur the inter-urban boundaries while facilitating integration of the rural with the urban.

Economic Aspects: Economically, non-agricultural activities are spatially diffused, much of it outside the larger cities. In 2005, the share of the districts where the

largest 50 metropolitan areas are located was only 41% of the total non-farm value added in the country. As per the latest Periodic Labour Force Survey (PLFS), 2017-18, about 45.8% of the manufacturing employment in India is rural. In these rurban areas, economic activities are not just non-farm but also agricultural, with returns from farms and remittances being invested in services like transport and retail trade. Even in large cities, stringent land use regulations and urban density policies can push firms beyond the formal city boundaries. The pace of manufacturing employment growth was fastest (41%) over 1998-2005 in rural areas adjacent to the largest metropolitan cities.

In India, therefore, it may be more accurate to characterize this phenomenon as a rural-urban gradation, not just in terms of economic indicators like non-farm activities but also in terms of other measures like built-up growth or night-light intensity. These places are also not very different from smaller towns in terms of consumption levels or investment in private assets like septic tanks or motorized two-wheelers. Neatly classifying such settlements as urban or rural biases our understanding of India’s structural transformation and its associated welfare outcomes.

Dichotomous Governance

Yet, our administrative structure valiantly attempts to govern India’s settlements across clear administrative boundaries of rural and urban. The Constitutional framework of rural and urban governance, introduced by the 73rd and 74th Constitutional Amendments – gram panchayats in the case of villages and municipalities in the case of urban areas – reflects this dichotomy. This is historically evident at both state/ local and union government levels. Only the STs are administrative urban areas, and are governed by an elected urban local body (ULB) constituted by Article 243 P & Q of the Constitution, which varies across different sizes and scales; they include municipal corporations, municipalities or municipal councils, and nagar panchayats or ‘transitional urban areas’. The criteria to designate (or declassify) a place as a ULB and categorize them across different scales are a prerogative

of the state governments. These criteria vary across states, from population cut-offs to workforce character, revenue generation capacity, etc. What is recognized as a ULB in one state may not be so in another.

CTs and villages, which constitute the rural-urban gradation, are not designated as administratively urban by the state, and continue to be governed by the appropriate gram panchayat. However, socioeconomic changes in these rapidly transforming spaces make them appear quite similar to formal urban areas in terms of economic activities, human capital and the nature of services required by the citizens.

This administrative classification also results in differences in functional domains and financial incentives of the rurban areas and smaller STs. The 11th Schedule of the Constitution places important functions like agriculture, irrigation and housing under the ambit of panchayats, while the 12th Schedule places urban planning, land use, water supply, roads, bridges, health sanitation and slum improvement under the purview of municipalities. But the states are not obliged to transfer these functions to local bodies, and there is variation across states as to the extent of transfer. These functionally distinct structures for rural and urban mean that a panchayat may not be able to pursue policies that respond to the changes happening in its jurisdiction.

At the Union government level, where the focus is more on financial incentives and grants for development, there is historically a sharp differentiation between rural and urban, where Union schemes have given preference to rural over urban in centrally sponsored schemes (CSSs). For instance, the estimated allocation for Swachh Bharat Mission-Grameen (SBM-G) is Rs 134,386 crore, which is about seven times the support for the urban counterpart, SBM-U. As a result, many states prefer rurbanizing places like CTs to remain rural, rather than classifying them as urban, to benefit from the larger budget for rural development. Indeed, in 2004, Tamil Nadu switched the classification of over 500 urban areas to rural, to obtain more funds from the central government.

The Dissonances

Gap in services: Differences in governance across the formal urban (ULBs) and rurban settlements is responsible for the gap in public services like piped sewerage or in-house water connections across them, despite a private demand for these services. Although these rurban spaces—that is, the CTs and large villages—are very different in economic structure, built-up area and services from other rural settlements, they are not capacitated to meet their changing requirements of services such as drainage, septage management or street lighting. This is because all of them are governed by the same rural governance structure. Even within the urban periphery, public service provisions like piped sewer falls off sharply once the formal administrative boundary of the core city is crossed. In most cities, it is lower in all settlements around the core city, and drops markedly with increasing distance from the core city.

Resistance to reclassification: One consequence of this ‘denied urbanization’ is that citizens resist state government proposals to reclassify their areas as ULBs. While there is regional variation, several services, especially sanitation, are individualized due to poor provision of sewerage network, piped water facilities, etc. However, Article 243 X of the Constitution permits the ULBs to collect taxes and duties, as authorized by the state legislature. Hence, the absence of property taxes and higher subsidies in rural areas can drive strong local interest to retain the rural-urban binaries, as people are often reluctant to pay extra for the services that they have already self-provided. The inadequate provision of public services in smaller towns adds strength to this preference.

Resistance to integration: Concomitantly, in large metropolitan areas where public services may be the responsibility of parastatal agencies (such as metro water boards), people prefer to be in smaller municipalities rather than become part of an expanded core city. For example, 18 new municipalities were created around Hyderabad in August 2018 to regulate land development in the city's peripheries. In the course of this process, the elected representatives of

the erstwhile gram panchayats negotiated with the government to make the areas separate ULBs instead of merging with Hyderabad, as they feared taxes may be higher in the latter case.

Employment: These unequal service provisions across the rural-urban spectrum affect the economic transformation of rurban areas. While some specific labour-intensive manufacturing industries are moving out of the municipal boundary, growth restrictions prevent significant employment growth in such districts. In some of these districts, there are concentrated clusters of well-developed household industries, such as the carpet and handloom clusters of Uttar Pradesh or bidi clusters of West Bengal. These, if integrated with the wider economic geography, can enhance the growth machine and provide substantial local employment.

Transport: This is another issue that falls between two stools. The movement of labour and the spatial distribution of jobs in urban peripheries are linked to the availability of multimodal and intermediate public transport like three wheelers, but there is no clear functional domain in the rural governance framework to regulate this. As a result, despite having a low cost of operation, these modes are pushed to the fringes rather than becoming an integral part of the public transit system, making it harder for labour to access employment.

Over time, these limitations can have repercussions on the future growth of CTs and bigger villages, where large sections of the workforce are only precariously engaged in non-farm jobs as small entrepreneurs or casual workers. Even where necessary factors to provide a more solid non-farm transformation are present, the prevailing functional and fiscal domains can prove to be a bottleneck for such growth. Overcoming these dichotomies could result in significant employment growth.

Policy Recommendations

The onus of prevailing over these rural-urban binaries in the governance framework and integrating a variety of interlinked rural-urban functions is on both the Union and federal levels of government.

State: At the state level, the effort should be to make the functional domain flexible in case of rurban spaces. Even within the prevailing framework of the 11th and 12th schedules, it is possible to make such provisions. For example, the 12th Schedule does not make any distinction between the categories of urban areas like municipal corporations, municipal councils and nagar panchayats in devolving urban management functions. The language of the Act does not restrict the states from devolving functions from the 11th Schedule to ULBs or from the 12th Schedule to panchayats. Using this flexibility, states can transfer certain functions – such as permitting building licenses, sub-divisioning and readjusting land for variable uses, or regulating permits and lay-out routes for transport modes such as e-rickshaws – to the rurban areas.

The size-insensitive character of the urban governance framework can also be used to functionally empower smaller ULBs or panchayats to provide ‘urban’ services so that citizens in CTs and other rurban spaces get the desired levels of services and incur an obligation to pay, where appropriate. However, these devolutions should be made keeping local capacities and political environments in mind.

More coordination in land use and key infrastructure across the rural-urban gradation is necessary, especially in transport, water treatment plants, solid waste management, etc. As most rurban development, especially in the periphery and along corridors, usually follows the trunk routes of transport infrastructure, urban planning needs to occur simultaneously with the expansion of transport networks. The use of spatial data over time can help with this.

There is also a role for mechanisms (some defunct in many states) like the District Planning Committee (DPC) and Metropolitan Planning Committee (MPC) to institutionally coordinate between rural and urban local governments. These or similar structures can also enable states to blend funding from various sources to address the needs of rurban spaces.

Union: At the Union level, there is an urgent need to break out of the hardcoded definition of rural and urban. There is wisdom in being cautious about absolute conversions of CTs into STs. Given the variety of circumstances under which CTs are formed, states would need to deploy a case-specific approach to leverage their urban characteristics.

Designs for central schemes must not impose restrictions by typology of location because services in rurban areas need a fit-for-purpose approach. For example, SBM-G focuses on constructing twin-pit latrines on a priority basis in rural areas, but many rurban spaces (where the use of septic tanks was already high at the start of the scheme) would have been served better by efficient septage and faecal waste treatment management. Therefore, hard coding of central scheme interventions by specifying technologies for urban and rural spaces should be avoided.

At the implementation level, states must have the flexibility to evolve modus vivenda to address rurban needs. For example, given how mobile labour is, states should be able to use funds from the National Urban Livelihoods Mission (NULM) in a variety of locations, including peripheries and corridors. Similarly, although the affordable housing scheme Pradhan Mantri Awas Yojana (PMAY) avoids some of the pitfalls of hard coding by supporting state- and region-centric variations in materials and technology, PMAY-Urban – rather than PMAY-Rural – may be more suited for peripheral villages.

Disassociating schemes from their location is hobbled by the existence of separate ministries for rural and urban development, but schemes like SBM that do not come under these ministries can choose to function outside of this binary. For example, the central scheme for working women's hostels has transcended this binary; since its inception in 1972-73, it has been catering to urban, rural and even semi-urban areas where employment opportunities exist for women under the umbrella of the Ministry of Women and Child Development.

Another approach is to allocate funds from different schemes to fill the gap in key infrastructure and bridge the service vacuum between rural and urban. The Shyama Prasad Mukherji Rurban Mission (SPMRM) is a step in this direction, but its location within the Ministry of Rural Development limits its ability to aid 'urban' spaces.

Conclusion

With cities and their associated economic engines beginning to be viewed as connected to their peripheries and as part of a wider city system throughout South and South East Asia (rather than in isolation), this is a good moment for the new government to introduce an integrated approach to urbanization, bridging the artificial divides of the 11th and 12th schedules. It is time to build mechanisms that can facilitate inter-ministerial interlinkages. It might even be prudent to imagine a single ministry of local governance in the long run. For now, a category-agnostic approach to central government schemes and an architecture that allows states to respond flexibly would enable India to leverage the latent opportunity in rurban spaces.

REFERENCES

- Centre for Policy Research. (2016). Integrating intermediate public transport within transport regulation in a megacity: A Kolkata case study. Working Paper.
- Chatterjee, P. (2011). Democracy and economic transformation in India. In Understanding India's New Political Economy (pp. 33-50). Routledge.
- Chatterjee, U., Murgai, R., & Rama, M. (2015). Employment Outcomes along the Rural-Urban Gradation. *Economic and Political Weekly*, 50(26), 5-10.
- Denis, E., Mukhopadhyay, P., & Zérah, M. H. (2012). Subaltern urbanisation in India. *Economic and political weekly*, 47(30), 52-62.
- Desmet, K., Ghani, E., O'Connell, S., & Rossi Hansberg, E. (2015). The spatial development of India. *Journal of Regional Science*, 55(1), 10-30.
- Joshi, B., & Pradhan, K. C. (2018). Officiating Urbanisation. Working Paper. Centre for Policy Research.
- Mehta, L., & Karpouzoglou, T. (2015). Limits of policy and planning in peri-urban waterscapes: the case of Ghaziabad, Delhi, India. *Habitat International*, 48, 159-168.
- Mukhopadhyay, P. (2017). Does Administrative Status Matter for Small Towns in India? In Subaltern urbanisation in India (pp. 443-469). Springer, New Delhi.
- Mukhopadhyay, P., Zerah, M. H., Samanta, G., & Maria, A. (2016). Understanding India's urban frontier: what is behind the emergence of census towns in India? The World Bank.
- Nandi, Sangeeta and Shama Gamkhar (2013): "Urban Challenges in India: A Review of Recent Policy Measures," *Habitat International*, Vol 39, July, pp 55–61
- PIB (2016): "States Asked to Convert 3,784 Urban Areas into Statutory Urban Local Bodies," Press Information Bureau, Ministry of Housing and Urban Affairs, Government of India.
- Pradhan, K. C. (2013). Unacknowledged urbanisation: New census towns of India. *Economic and Political Weekly*, 43-51.
- Randhawa, P., & Marshall, F. (2014). Policy transformations and translations: lessons for sustainable water management in peri-urban Delhi, India. *Environment and Planning C: Government and Policy*, 32(1), 93-107.
- Ruet, Joel and Stéphanie Tawa Lama-Rewal (eds) (2009): *Governing India's Metropolises*, New Delhi: Routledge India.
- Samanta, Gopa. "The politics of classification and the complexity of governance in census towns." *Economic and Political Weekly* 49.22 (2014): 55-62.
- Shaw, A. (Ed.). (2007). *Indian cities in transition*. Orient BlackSwan.
- Sivaramakrishnan, K. C. (2013). Revisiting the 74th Constitutional Amendment for better metropolitan governance. *Economic and Political Weekly*, 86-94.
- Sivaramakrishnan, K. C., Kundu, A., & Singh, B. N. (2005). *Handbook of urbanization in India: an analysis of trends and processes*. Oxford University Press, USA.
- Sivaramakrishnan, K.C. (2002). Turning urban, staying rural. *The Hindu*. Accessed from <https://www.thehindu.com/todays-paper/tp-national/tp-tamilnadu/turning-urban-staying-rural/article27833464.ece>, at 26/06/2019.
- Swerts, E., Denis, E., & Mukhopadhyay, P. (2018). Diffuse Urbanization and Mega-Urban Regions in India: Between Reluctant and Restrictive Urbanism? In *International and Transnational Perspectives on Urban Systems* (pp. 237-262). Springer, Singapore.
- Vishwanath, T., Lall, S. V., Dowall, D., Lozano-Gracia, N., Sharma, S., & Wang, H. G. (2013). Urbanization beyond municipal boundaries: nurturing metropolitan economies and connecting peri-urban areas in India (No. 75734).

END NOTES

1. The authors gratefully acknowledge the inputs of Kanhu Charan Pradhan while writing this piece.
2. Only if the core city is taken into account, not the entire urban agglomeration.
3. A census town is a settlement which has a population of 5000 or more, a population density of more than 400 persons/sq.km, and a male main workforce participation of 75% or more. All STs, which constitute an urban local body (ULB), are automatically defined as urban. Unlike India, many countries rely only on a population size to distinguish between rural and urban areas. If only population size was used to identify census towns in India, and villages with more than 5,000 inhabitants were considered urban, the share of the urban population would increase by about 15 percentage points.
4. For example, the growth rate of the core city in the Mumbai metropolitan region is 0.4% while the periphery grew at 3.6%, within 2001-11.
5. NSS 2011-12 consumer expenditure data reveals that a small town consumer spends about 70% of a consumer in million-plus cities. However, their spending pattern is very similar to large cities, with similar amounts being spent on items like conveyance, rent or consumer durables, as in million-plus cities. The share of households which owns a motorized two-wheeler is 28% in these rurban areas, and 27.8% in smaller STs, which has a population of less than 50,000. The share of households with septic tank is 58.8% in rurban areas, while it is 55.7% in smaller towns.
6. The share of households with in-house access to water is 35% in villages, 59% in rurban areas (CTs and large villages) and 62% in smaller STs, which have less than a hundred thousand population.
7. For example, the share of households connected to the piped sewerage network is 86% in the municipal area of Hyderabad, but drops to 50% in the other ULBs and 27% in the all the CTs in the Hyderabad metropolitan (HMDA) area. The share of villages with piped sewer in HMDA is 7%. Interestingly, the outgrowths of HMDA, which are also rural but are contiguous to the core city, have a higher share of piped sewer coverage at 52%.
8. The interests of the state governments to reclassify the CTs or other forms of rurban spaces into ULBs also varies by the shifting growth trajectories across states. While states like Gujarat reclassified 24 CTs to STs within 2001-11, UP chose to not reclassify any of them into formally urban categories.
9. There are a lot of self-provisions of public services like roads, piped connection of water to households in some of the richer peri-urban neighbourhoods of larger cities (Randhawa et al, 2014; Mehta et al, 2015).
10. Accessed from <https://timesofindia.indiatimes.com/city/hyderabad/59-new-municipalities-from-august-1-to-boost-suburbs-infra/articleshow/64970632.cms>, at 24th April, 2019.
11. The Kolkata city is dominated by yellow taxis and auto-rickshaws, while the periphery is served by a variety of different modes of IPT services like the batter operated e-rickshaws, and diesel-fuelled vehicles like Tata Magic and Piaggio Ape. A lack of regulations at the RTA, police and local levels lead to contestations across there different kinds of services, which leads to operational issues and easy movement in the peripheries, instead of facilitating the services (CPR, 2016).
12. An analysis of the 6th Economic Census (2012-13) data shows only about 20% of the CT population resides in such kind of settlements where the share of manufacturing to total workforce is more than 50%.
13. The ambiguous part of the act has usually led to different responses from the state governments so far. There has been persistent resistance from the state governments to implement the provisions of the act in totality, and issues like water and sanitation management remains the prerogative of parastatal agencies under the control of state governments for a majority of cities. Very few financial and human resources functions have been transferred to municipalities and ULBs remain weak highlighting the unwillingness of the state to relinquish its control over the urban (Nandi and Gamkhar 2013, Ruet and Tawa Lama-Rewal 2009).
14. While MPCs have rarely been set up in most states, they have been only involved into mere consultations while dealing with issues, rather than any active involvement in planning functions (Sivaramakrishnan, 2013).
15. During May 2016, the erstwhile Ministry of Urban Development came out with a notification that asked all the 28 states to take 'immediate and necessary action' to convert all the census towns (CTs) into statutory urban local bodies (STs) to promote planned development.
16. An ongoing CPR analysis of the PMAY-U data shows that approximately eighty villages have been included in the projects enlisted under PMAY-Urban, most of which are neighboring larger Urban local bodies.



Interstate River Water Governance: Shifting the Focus from Conflict Resolution to Enabling Cooperation

SRINIVAS CHOKKAKULA

Interstate Rivers and National Water Security

India's 29 states and seven UTs (Union Territories) share its 20 major river basins. This simple framing presents how India's water security is embedded in a canvas of deeply interdependent interstate hydrogeographies. The country's water security is defined and determined by how its interstate rivers are governed.

The current state of policy and institutional set-up for interstate river water governance, however, does not inspire confidence. Interstate river water disputes emerge and recur frequently. Their adjudication involves long delays, characterized by adversarial litigations. States often defy judicial directives from either the tribunals or the Supreme Court, leading to constitutional crises. Implementation of the tribunal awards/decisions suffers from an acute absence of reliable interstate

institutional models or mechanisms. Each escalation or recurrence of disputes causes huge costs to the economy. Antagonistic politics and politicization characterize interstate river water relations.¹ On the other hand, the implementation of interstate river development projects and rejuvenation programmes, too, is impaired by the larger void of a robust ecosystem for interstate coordination or collaboration.

The history of interstate river water governance of India partly explains this state of affairs. Since Independence, such governance has been driven by exigency-driven contingent responses. The policy ecosystem is primarily set to respond to the exigencies of conflicts and has remained oblivious to the idea of interstate cooperation. There is practically no reliable mechanism for interstate coordination and collaboration over river

waters. A simple fact attests to this assessment. The Interstate (River) Water Disputes Act, 1956, for resolving interstate river water disputes has been amended at least a dozen times. Yet another amendment Bill was tabled before the Parliament in 2018. In contrast, the River Boards Act, 1956, enacted at the same time as the former and meant to enable interstate collaboration, has never been touched since its inception. Further, it has never been used to create any boards, not even once! For some inexplicable reason, the river boards created so far draw on alternative and ad hoc channels – of notifications of the government, state-bifurcation laws or separate Acts of Parliament. The Act has remained untouched even when it was found unusable for the purpose for which it was intended.

The constitutional division of powers with respect to water and its implementation is the other reason. The subject of water is listed under Entry 17 of the State List. This, however, is subject to Entry 56 of the Union List pertaining to the regulation and development of interstate rivers.² In the initial years of single-party dominance, the negligence in definitively carving out the Centre's role has led to the states assuming unfettered and exclusive powers over water governance. Ramaswamy Iyer has called it the 'wilful abdication of its role' by the Centre.

This trajectory of evolution has contributed to the entrenchment of territorialized perceptions and competitive approaches of states towards water resource development. This has been aided generally by the transformation of Indian state and polity over the years. The initial single-party dominance has given way to coalition politics, leaving greater room for subregionalism and territorialized assertions of states.

An outcome of this for the center-state relations over water governance is the increasing resistance of states to any attempt by the Center to assert its role under the Entry 56, over interstate river water governance. Central institutions like Central Water Commission (CWC) and Central Ground Water Board (CGWB) are perceived to be increasingly irrelevant. States pursue their respective territorial visions of water resource development with little or no appreciation for the cumulative impact, with adverse implications for national water security.

Ambitious Plans and Ambiguous Foundations

Several practical reasons necessitate this revisiting of interstate river water governance with particular focus on Centre-state relations. The country has set itself ambitious plans for greater economic growth, and these depend on strong and reliable interstate river water cooperation. These plans have both development and conservation goals. The development projects are not just the conventional supply augmentation, but also include inland waterways. Over 105 proposed inland waterways pose new challenges for interstate river water governance.³ The controversial interlinking of rivers has received patronage from consecutive governments, yet has not made much headway, partly due to the hurdles of interstate coordination.

The flagship programme of Ganga rejuvenation is a response to the intensely stressed river ecosystems. It has received unprecedented attention and investments. Yet the 'blind spot' with respect to the tenuous Centre-state and interstate relations remains an unaddressed challenge. Fully funded by the central government, this programme may have some temporary impact. But sustaining it over a longer term will require a deeper institutionalization of the programme among the states, in addition to closer interstate coordination and collaboration.

The necessary strategic shift towards broader Integrated Water Resource Management (IWRM), also proposed by the National Water Policy 2012, will itself require a consensus among states. A simple articulation of national policy will not achieve compliance by states. The historical geographies of uneven water resource development among states will require deliberations over the trade-offs in shifting to IWRM. The shift has to be led by the Centre with the consent of the states.

Above all, there are the new challenges of coping with climate change-linked risks. This big unknown adds to the problem of interstate coordination with its uncertainties over space as well as time. Interstate collaboration and cooperation is central to coping with the risk of disasters such as floods.

Shift Focus to Enabling Cooperation

In order to realize the development goals of these ambitious projects, and in the interest of longer-term water security, the government has to begin proactively engaging with the challenge of interstate river water governance. This requires a fundamental strategic shift, away from the current reliance on conflict resolution, and making deliberate efforts to enable and nurture an ecosystem for interstate river water cooperation. Such an ecosystem is useful for dispute resolution as well in essential terms. Interstate river water dispute resolution often fails because there are no reliable mechanisms for implementing the tribunal awards or decisions. It can only be possible when the states party to a conflict collectively contribute to 'giving effect' to the decisions. Thus, interstate river water cooperation ecosystem is a necessary condition for effective conflict resolution.

This intricate link, in fact, accentuates the emerging understanding about the nature of transboundary relationship when rivers are shared between territorial entities. The binary of either conflict or cooperation is a flawed premise to address the challenges of transboundary river sharing. Instead, it is increasingly evident that the complex political ecology of transboundary river water sharing constitutes a coexistence of conflict and cooperation.⁴ The design of policy and institutional solutions has to acknowledge this character, and cannot rely on legal instruments alone. It has to be supplemented with other elements of the ecosystem: policy, institutions and politics.

First, there has to be clearly articulated policy intent. The next iteration of the National Water Policy must declare the creation and nurturing of an ecosystem for interstate river water cooperation as one of its priorities, and enunciate specific steps towards setting the process in motion.

Second, politics have to make the policy reforms possible. In view of the historical evolution of Centre-state water relations in practice, the policy and institutional reforms for interstate cooperation will have to be built on a political consensus for adoption of this path. In other

words, the water agenda has to be elevated for a federal consensus, say, along the lines of the GST reforms. At the core of this consensus will be the need for the Centre to (re)position itself. The political process has to aim at redefining the Centre's role under Entry 56 of the Union List, considering the emerging challenges of interstate river water governance. This does not mean reorganizing the constitutional division of powers, which is likely to face vehement resistance from states. Instead, the goal will be to redefine the existing Centre-state division of powers in terms of functional and operational responsibilities required to pursue the ambitious plans and programmes. For instance, the Union government may assume a preeminent role in credible data gathering and providing knowledge and capacity inputs.

The idea of building federal consensus for water reforms is not new. The need for such a political process and forum was felt before as well. For instance, the National Water Resources Council has been created under the aegis of the Ministry of Water Resources. The National Development Council is another forum for such federal deliberations. These forums failed to deliver for a variety of reasons. A key reason is their failure to assuage states about their neutrality and objectivity in enabling deliberations; they are perceived as politically subjective and serving the agendas of the particular political regimes in power.

The Inter-state Council may be nurtured as an institutional space for these federal deliberations. The Constitution provides for the Inter-State Council for the specific purpose of interstate coordination. This crucial federal forum has been neglected and undermined due to its ill-conceived purpose and location. The Inter-State Council has been ill conceived as a department of the Ministry of Home Affairs and is seen as politically subjective. Instead, it should have been conceived and cultivated as an institution at par with other institutions serving key constitutional functions for deliberative democracy.

Article 263 providing for the Inter-State Council incidentally follows the peculiar Article 262 that provides for barring the jurisdiction of the Supreme Court. The constitutional framers were conscious of the limitations

of the courts in addressing challenges posed by interstate river water disputes; they also realized that a robust deliberative process is essential for their resolution. The success stories of water reforms in other comparable federal contexts—for example, Germany or Australia—are often celebrated. Central to these success stories is a strong institution offering a space for federal deliberations: the LAWA (Working Group of the Federal States) in Germany, or the COAG (Council of Australian Governments) in Australia. The Inter-State Council has to serve a similar function to pursue the proposed reforms. Just like these deliberative spaces, the Inter-State Council can be a permanent deliberative forum to take forward reforms. The Council's scope, however, may not be restricted to water resources; it can have working groups for different sectors serving the purpose of interstate coordination.

The third element is to develop strong and resilient institutional models for interstate coordination, compliance or collaboration—primarily to give effect to any interstate project, programme or agreement. A River Basin Management Bill, 2018, has been proposed for the purpose, replacing the River Boards Act, 1956. But it assumes that centrally driven river basin authorities can serve these functions. Some states have already resisted this conception. It is unlikely that these authorities will be effective without a consensus about the functional roles of the Centre and states, and the operational domain of river basin authorities. The Bill does not build on such a consensus; instead, it assumes that inclusion of representations from states is sufficient to make the institutions work. River Basin Authorities, or any other forms of interstate institutional models, need to emerge from and build upon the contours of the respective functional spaces emerging from the federal consensus. An enduring and empowered deliberative forum, such

as the Inter-State Council, will enable such consensus building and evolution of collaborative solutions.

The fourth factor is pursuing an effective strategy for interstate river water disputes resolution. This requires a course correction. A historical understanding of the unusual approach—of barring courts' jurisdiction and setting up tribunals for adjudication—reveals that these arrangements were conceived with the intent of ensuring finality to the resolution, in a swift manner. Deliberative approaches were integral to tribunals' adjudication of the disputes. This was the approach used by the first generation of tribunals, constituted for Krishna, Godavari and Narmada disputes. Over time, the subsequent amendments to the Act have turned tribunals into courts and have increasingly incentivized adversarial litigations. This is one of the reasons for extended delays in giving away awards. The recent decision of the Supreme Court modifying the Cauvery tribunal award is just another instance of this trend. Extending Supreme Court's jurisdiction opens up additional layers of judicial litigation. The processes of adjudication by tribunals needs to be reviewed, with due attention to courts' limitations in addressing interstate river water disputes. The Centre must consider strengthening the adjudication with deeper integration of deliberative processes, and building on the cooperation ecosystem. The Interstate River Water Disputes Amendment Bill, 2018, by proposing a Permanent Tribunal, has made a feeble attempt to incorporate this element, while continuing with the adversarial character of tribunals' functioning. A Disputes Resolution Committee has also been proposed, to attempt resolution through mediation. Its proposed composition, however, does not inspire confidence.

END NOTES

1. To illustrate, the Supreme Court is currently deliberating on the suit filed by the Tamil Nadu for a compensation of about INR 25,000 crore for crop losses due to alleged failure of timely release of Cauvery waters by Karnataka in just one season.
2. This was the basis for enacting the River Boards Act, 1956.
3. The National Waterways Act, 2016
4. N. Mirumachi, *Transboundary Water Politics in the Developing World* (Oxford: Routledge, 2015).



The Future is Federal: Why Indian Foreign Policy Needs to Leverage its Border States

NIMMI KURIAN

India's neighbourhood policy makes for a feel-good narrative of reimagining borders as bridges and speaks a comfortable cosmopolitan language, laying claim to a universal vision of globalism. The country's diplomatic engagement has begun to acquire a level of diversity and complexity in recent years with a host of subregional initiatives such as the Bay of Bengal Multi-Sectoral Initiative for Technical and Economic Cooperation (BIMSTEC), the Mekong Ganga Economic Cooperation (MGC), and the Bangladesh China India Myanmar Economic Corridor (BCIM). The past five years have seen a further deepening of this idea at the substantive as well as rhetorical levels with initiatives such as the Neighbourhood First policy, the rechristened Act East policy, Prime Minister Modi's high-profile visits to South Asian capitals, and the setting up of a States Division at the Ministry of External Affairs (MEA).¹

But for all its enthusiastic rhetoric, there is a curious paradox at the heart of India's subregional discourse. While the border states are projected as bridges between India and the neighbourhood, in actual practice India's neighbourhood policy remains unambiguously top-down and continues to be firmly led and steered by New Delhi. This is both puzzling and problematic since the notion of subregional cooperation is fundamentally premised on making geographically proximate border regions within two or more countries important sites of cooperation. Standing this logic virtually on its head, it is New Delhi that has regularly hosted BIMSTEC's Working Groups on regional governance issues such as disaster management, customs cooperation and regulation of passenger and cargo vehicular traffic. A comparison with the working of China's subregional discourse is both revealing and sobering. China's border province

of Yunnan, for example, regularly hosts the Greater Mekong Sub-region Working Groups on a range of regional governance issues such as environment, tourism and agriculture. The centralising impulse is again all too evident in India's discourse on border trade, for instance in Dharchula, Uttarakhand, an ancient border town located on the trans-Himalayan trading routes with Nepal and China. Trade permits required to conduct trade are no longer issued at the border but instead in Dehradun, the state capital, entailing protracted procedural delays and costs. Taken together, dichotomies such as these represent a classic instance of suboptimal subregionalism at work, a discourse that has clearly ended up aiming low and hitting lower.²

These dichotomies also indicate that there has been virtually no political incentive to invest in an institutionalised two-way engagement between national and subnational policy actors.³ This is a cause for serious concern and can result in institutional gridlocks between the Centre and states at a time when international engagement by border states is increasing. If recent trends are anything to go by, resource conflicts between the national and subnational governments could be a potential minefield. Bihar's demand for an equity stake in power projects being executed by India in Bhutan as well as the Teesta river dispute between India and Bangladesh arising out of the deadlock between the Centre and West Bengal bring out the inadequacy of existing institutional arrangements in negotiating such conflicts. This is also adding an edge to domestic resource conflicts as can be seen in the recent constitutional dispute between Nagaland and the Centre wherein the Centre contested Nagaland's claim that Article 371 (A) of the Constitution conferred upon it the right to develop its natural gas reserves. If New Delhi does not attempt to fill this policy vacuum, these growing federal-state conflicts will erode overall state capacity in damaging ways. The capacity or the mandate of existing institutional forums such as the MEA's States Division or the Inter-State Council, in their current makeup, to mediate and resolve these conflicts is open to debate. Recalibrating these federal-state

platforms to more effectively anticipate and address such challenges has to be the first order of business for the Indian government.

When Practice Meets Policy

By privileging the formal, state-led, inter-governmental processes, Indian diplomacy has ended up completely overlooking a range of practices at the border regions that are fundamentally reshaping India's engagement with its neighbourhood. Subnational-steered policy networks need to be recognised as a field of governance in their own right, with a capacity to rescale India's foreign policy beyond solely national frames. Local networks, both formal and informal, can work with – and not necessarily at cross-purposes – with the Centre on regional public goods. What is most striking about India's evolving subnational diplomacy is the sheer diversity of transborder exchanges being steered by border states in terms of their nature (formal and informal); activities (social, economic, cultural, political); duration (sustained and episodic); and actors (public and private).

Bottom-up market-driven processes of economic integration are today resulting in the rise of a new set of stakeholders with stakes in subregional integration processes.⁴ There are three reasons why a serious engagement with these processes is vital. First, there is growing evidence that border regions are beginning to effectively engage the Centre to deepen subregional integration processes. The effects of this lobbying can be seen in India's decision to open 70 border haats along its boundary with Bangladesh, with 35 along the border with West Bengal; 22 at the Meghalaya border; five in Tripura and four in Assam. Tripura recently successfully lobbied the central government to permit the export of surplus power to Bangladesh. Second, direct transborder subnational links have on occasion bypassed the Centre to break difficult logjams and bottlenecks. A case in point is the construction of the 726 MW Palatana gas power project in southern Tripura. Given the challenges in transporting heavy equipment to Tripura due to the

difficult terrain, Bangladesh allowed transhipment of heavy turbines and machinery through its territory. Bangladesh's decision to allow transhipment became a critical factor in the successful completion of the project. Palatana will be bookmarked in India's evolving subnational cross-border engagement as arguably one of the first instances of subregional problem solving. Third, the greatest discursive potential of subregionalism arguably lies in its capacity to position the local as a central actor in the governance agenda. It will be suboptimal to conceive them as mere agents for monitoring the implementation of service delivery systems. Consultative processes between key institutional actors have to be both continuous and inclusive, bringing together relevant local line departments and officials across all levels – from planning, through monitoring to implementation. The locational advantage of border states as primary points of contact with the neighbourhood can also help plug critical transboundary governance gaps. For instance, border regions can play an important bridging function by facilitating networked governance in subregional Asia. Several such networks – such as the Asian Environmental Compliance and Enforcement Network (AECEN), South Asian Biosphere Reserve Network (SeaBRNet), Asian Network of Sustainable Agriculture and Bioresources (ANSAB), Freshwater Action Network South Asia (FANSA), Himalayan Conservation Approaches and Technologies (HIMCAT), and South Asian Network on Environmental Law (SANEL) – are already in existence.

The Future is Federal

Nudging Indian foreign policy towards a practice-based template has the potential to incorporate a rich and hitherto untapped corpus of domain and field knowledge that national-level policymakers have no means of acquiring on their own. Policy need not always dictate practice; instead, policy and practice need to co-evolve into an institutionalised two-way flow of communication. Institutionalising consultations with a new set of border stakeholders such as legislative bodies both at the central and state levels, media and civil society organisations can go a long way in ensuring that these actors become informed interlocutors in shaping India's evolving neighbourhood policy. A lot will, however, depend on the feedback loops that are put in place for creative ways of power sharing, institutional learning and adaptation to produce inclusive outcomes. It is only then that one can create a level playing field and a measure of parity between central and state level policy actors. India's neighbourhood policy has the potential to produce a modest but valuable space for border states to become active partners in framing and fashioning the terms of India's engagement with its neighbourhood. But this potential institutional innovation in Indian foreign policy is neither guaranteed nor infallible. If it is to succeed, leveraging the location of border states needs to go hand in hand with the federalisation of India's foreign policy.

END NOTES

1. Ministry of External Affairs, Government of India. 2014. https://mea.gov.in/lok-sabha.htm?dtl/24347/Q_NO687_SEPARATE_DIVISION_FOR_CENTRESTATE_RELATIONS. The political signalling has however been neither consistent nor credible. For instance, while Prime Minister Modi projected his government's Neighbourhood First Policy, the then Chief Economic Advisor Arvind Subramanian has been on record in 2014 stating that 'regional economic integration in South Asia is not a first priority for India', *The Hindu*, 29 September 2015.
2. Nimmi Kurian, 'Indian IR's Subregional Moment: Between a Rock and a Hard Place?', CPR Policy Brief, November 2015.
3. The Inter-State Council, a forum designed to bring all Chief Ministers to work on operationalising the coordination mechanism between the Centre and the states, was convened in 2017 after a gap of 12 years.
4. Nimmi Kurian, 'Subterranean Subregionalism: Interrogating the Role of Borders in Indian IR', Research Journal of Social Sciences 24 (1&2) (2016).

Policy Challenges 2019–2024

URBANISATION



In the last three decades, Indian cities have emerged as centerpiece of the country's growth story. Not only have they expanded rapidly in size and wealth but they have also become the beating heart of India's economy and society. However, our understanding of cities and urban governance remains outdated. Using new research, CPR faculty recommends a range of new ideas to reform urban governance and to make cities more prosperous and inclusive. The following essays look at the artificial barriers in internal migration that hinder social mobility, the failures of urban design which discourage female participation in the labour force and explore the linkages between formally-planned and informally-evolved aspects of Indian cities.



Multiply Urban ‘Growth Engines’, Encourage Migration to Reboot Economy

MUKTA NAIK

On the cusp of its demographic dividend,¹ India seeks to boost economic growth by transitioning large numbers of its working age population out of low productivity agricultural work, which currently absorbs 44% of the country's workforce.² While farm productivity is vital, urbanisation remains a key opportunity for large-scale employment transitions to the relatively productive non-farm sector. Moreover, cities have the potential to be ‘engines of economic growth’ for national economies, powered by an increase in productivity and innovation that emerges from the clustering of firms and labour, and tacit information spillovers between them.³

Key Urban Challenges

To leverage the urban opportunity, India needs to address three significant challenges: how to move people, how to broaden the scope of urbanisation, and how to improve the quality of urbanisation.

Migration mitigates poverty, yet barriers to long-term migration persist. Internal migrants constitute about 28.3% of India’s workforce. Another estimated 40-100 million short-term migrants do not permanently move their residence, but power critical sectors of the industry including agriculture, manufacturing and construction.⁴ Moreover, short-term migration is a key avenue for rural households to diversify their income and access employment in more urbanized and developed regions; in this, migration is a counterbalance to regional imbalances in the country. Worryingly, the urban wage premium exists only for well-educated migrants. For less educated rural migrants in the city, the wage premium kicks in only when they find regular employment; until then they remain casual workers likely to move through rural and urban locations without putting down roots.⁵

Policy documents have acknowledged the Constitutional guarantee for free movement within India and recognized that the unfettered movement of human capital to where it is required is fundamental to India's economic development.⁶ Yet, labour mobility remains a neglected area of public policy. Migrants are often unable to access social protection, including access to subsidized food and housing. They face political exclusion because there is no system that enables the participation of absentee migrant voters in elections. Moreover, inter-state migrants from socially backward categories stand to lose access to affirmative action provisions because SC/ST lists are prepared by states. State-level domicile provisions continue to keep migrants out of higher education and formal employment. Moving people, therefore, requires attention to economy, society and institutional design.

India's urbanisation is dispersed, but metros get most of the attention. Urban policy in India since the mid-2000s has focused on transforming metropolitan areas—large urban spaces that sprawl across districts and incorporate multiple municipal (and rural) entities—into economic powerhouses. This has reflected in the Government of India's urban schemes over time. The Jawaharlal Nehru National Urban Renewal Mission (JNNURM) exhibited a clear metropolitan bias.⁷ Recent schemes such as the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and the Smart Cities Mission have also favoured metros and million-plus cities.

Policymakers have barely paid attention to the dispersed spatial nature of India's urbanisation. It is driven not by the large-scale migration of villagers to the metropolis, as is popularly imagined, but by the natural growth of large city populations, and the *in situ* transition of large and dense villages into census towns through demographic and economic changes.⁸ This trend, which is likely to continue,⁹ indicates that India's urban vision need not be limited to the larger cities. In fact, the growth of small towns beyond the economics of large agglomerations is a key emerging trend in India that needs to be understood and valorized.¹⁰ Given the scale, diversity and spatial spread of urbanisation processes in India, it might be entirely feasible to create hundreds of economic powerhouses in multiple locations that can trigger economic mobility for millions and reduce regional inequalities.

Cities are messy and exclusionary, and urbanisation processes are top-down. Indian urbanisation is caught in a paradoxical situation where, despite the attempts to address infrastructure and service gaps in larger cities, they remain increasingly unliveable as well as exclusionary.¹¹ For residents, the economic opportunity represented by the city is countered by disincentives like higher costs of food and housing, bad air quality, inefficient transport and inadequate basic services. In urban policy, however, the messiness is perennially attributed to in-migration, slums and poverty; its perceived antidote is a planning regime that seeks to indiscriminately transpose Chandigarh-like order—replete with grids and single land-use zoning—on cities and even transitional rural spaces. This imagination does not recognize the diversity of spaces that make up urban India, nor does it acknowledge the need for bottom-up efforts to build housing, provide services and organize transport.

Driven from the top, urban development schemes have shaped cities in particular ways; there has been no serious effort to decentralize power to urban local bodies—as mandated by the 74th Constitutional Amendment—or equip cities with adequate numbers of urban managers and technocrats. Cities are struggling with providing basic services and raising revenue. Instead of being handled by the directly elected government that runs the municipal corporation, critical planning functions related to land use and zoning; infrastructure and design interventions that can respond to local needs for public space, improved transport and safe streets; and economic functions related to industry and employment are carried out by state government-run institutions (development authorities, industrial development corporations and transport corporations). This makes it hard for governments to respond to localized problems, or tap into community initiatives.

Policy Recommendations

India needs an integrated approach to urban policy, which recognizes the diversity of urban spaces in India, focuses on strengthening city governance systems, and is migrant-friendly.

Multiply urban growth engines. That India is moving towards a spatially dispersed urban system is good news, as it offers an opportunity to intervene in places that are yet to replicate the mistakes of large cities. We need to replace the imagination of transforming Mumbai into Shanghai—an onerous task—with a mission to transform hundreds of small cities across India, say in the size range of 100,000–600,000 people, into economic powerhouses. We must draw confidence from the successes of such cities the world over, which have been hotbeds of innovation and transformation.

The government must reorient central and state government schemes to include small cities, as a means of signalling their inclusion into India's urban growth narrative. Not only will funding go much further in a small city, if designed in a non-prescriptive way schemes could allow for solutions to emerge from the ground up, thereby encouraging entrepreneurial energies and public institutions to collaborate. Contrary to expectations, these abound in small cities across India. In Odisha, for example, a state government scheme to grant titles to slum dwellers is leveraging the Pradhan Mantri Awas Yojana (PMAY) to set off a mini construction boom in small towns. In Kishangarh, Rajasthan—a city of 150,000 people—local business elite have leveraged infrastructure (such as a new airport, a private logistics park and a dedicated rail freight corridor) to position the city as a global centre for processing domestic and imported marble and granite, generating work for both migrants and locals.

A focus on small cities also helps villagers, given half of India's rural-urban migration is to smaller cities. Placed at the mobility cusp, investments in small cities can go much further than basic infrastructure to create quality jobs and develop skills, both for rural and urban workers; they can also build infrastructure that boosts quality of life (transport systems, street lighting and public spaces).¹² With over half of India's industries located in what is currently classified as rural,¹³ policies related to industrial development, skill development and labour must also focus on transitional 'rurban' spaces. This would call for an integrated response to urban and rural development that recognizes spatial diversity and responds to the wide variety of settlements across the country.

Un-think rigid planning regimes, empower local governments. The rigid master plans of our cities—and not all of them have plans—have been ineffective in strategically coordinating service provision and market forces to sustain economic growth. The governance and management of metropolitan areas might require a *sui generis* approach,¹⁴ given the complexities of their problems and the multiplicity of governance actors and institutions. But here too, solutions that are locally incubated must be emulated. For instance, the secret to Kolkata's reliable, affordable and well-connected auto rickshaw system, is localized legislation to circumvent the vagaries of central laws and the involvement of representatives of rickshaw unions in key decisions like route planning.¹⁵ Certainly, a serious attempt to devolve power to urban local bodies and activate district planning committees is a necessary prerequisite to planned urbanisation.

Beyond the logics of planning, a plethora of bottom-up initiatives must find representation in urban reform strategies, with the key objective of making cities efficient and pleasant places to live, work and socialize. Some of these initiatives deliver lasting solutions, such as the public library in Panaji, Goa, that is open seven days a week to all residents to read, study and interact, or South Canara's privately operated bus system that transports thousands every day within and between the towns and villages of the coastal region. In other cases, they narrate a story of continuing struggle. In resettlement colonies like Bhalswa in Delhi, residents have been instrumental in bringing in services and amenities through protests, negotiations and legal representations with elected officials and bureaucrats over 15 years. Their resilience and persistence eventually resulted in partially mitigating the deep failures of the resettlement policy.

Therefore, instead of viewing the presence of informal settlements purely as failures of planning, Indian cities must leverage the vast amounts of investments residents have already made through auto-construction by extending basic services to informal settlements. Further, cities must amend statutory planning documents to include a variety of tenure typologies that promote mixed-use, mixed-income neighbourhoods and include rental housing. Similarly, in order to find context-specific solutions to house the homeless, ensure spaces of livelihood for street vendors, treat faecal sludge from

septic tanks, and transport women safely to places of work, cities need to un-think the rigid plan and partner with communities, civil society and entrepreneurs to find workable models.

Enable labour mobility and improve governance of migration. Finally, a focus on the portability of social protection could be key to knocking down barriers for migration, enabling rural workers to reduce risks as they find regular employment and social acceptance in the city. Immediately, the government has the opportunity to amend legislations so as to facilitate the registration of migrant construction workers in schemes under the Building and Other Construction Workers Act. This programme has an unspent pool of nearly INR 200 billion for social benefits of this highly mobile and vulnerable group.¹⁶ Similarly, delinking individuals from household ration cards and a digital recordkeeping system would enable migrants to access Public Distribution System benefits wherever they might be. Experiments with smart card systems are already underway, with

the Rashtriya Swasthya Bima Yojana (RSBY), but need strengthening and improvement. Overall, ramping up universalized social protection in education and health, including critical interventions like Integrated Child Development Scheme (ICDS), is likely to incentivize long-term migration to cities over time.¹⁷

Key Takeaways

With the thrust of urban change occurring in small towns and densifying villages, the incoming government must seize the opportunity of incubating a large number of economic powerhouses in dispersed locations. A reorienting of investments towards small cities, a push towards decentralization, and keen attention to bottom-up context-specific solutions will provide pathways out of rigid planning and governance models that have not delivered. As cities become better places to live and work, dismantling barriers to migration will become imperative for the equitable distribution of economic opportunities and benefits.

END NOTES

1. See pages 30-34 in the Economic Survey 2016-17 (New Delhi: Economic Division, Department of Economic Affairs, Ministry of Finance, Government of India, 2017).
2. Modelled International Labour Organization estimate for 2018, <https://data.worldbank.org/indicator/sl.agr.empl.zs>.
3. G. Duranton, 'Cities: Engines of Growth and Prosperity for Developing Countries?', Working paper no. 12 (Washington D.C.: Commission on Growth and Development, 2008); World Bank, ed., 'Urban Policy and Economic Development: An Agenda for the 1990s' (Washington, DC: World Bank, 1991).
4. P. Deshingkar and S. Akter, *Migration and Human Development in India* (2009); R. Srivastava, 'Labour Migration in India: Recent Trends, Patterns and Policy Issues', *Indian Journal of Labour Economics* 54(3) (2011): 411-440.
5. P. Mukhopadhyay and M. Naik, 'Moving from Principle to Practice', in *People on the Move: Advancing the Discourse on Migration & Jobs* (JustJobs Network, 2018).
6. MoHUA, 'Report of the Working Group on Migration' (New Delhi: Ministry of Housing and Urban Affairs, Government of India, 2017).
7. S. Khan, 'The Other JNNURM : What Does It Mean for Small Towns in India?', Working Paper No. 4 (CPR: 2014).
8. Pradhan 2013
9. Roy and Pradhan predict that in Census 2021, the share of India's urban population will continue to grow beyond municipal limits in census towns, both under the influence of metros and also in more localized forms away from metros.
10. E. Denis and M.H. Zerah, *Subaltern Urbanisation in India: An introduction to the Dynamics of Ordinary Towns* (New Delhi: Springer, 2017).
11. Indian cities rank poorly on the Mercer Quality of Living Survey 2019. See <https://www.mercer.com/newsroom/2019-quality-of-living-survey.html>; A. Kundu, and L. Ray Saraswati, 'Migration and Exclusionary Urbanisation in India', *Economic and Political Weekly* 47(26 & 27) (2017): 219-227.
12. M. Naik and G. Randolph, 'Migration Junctions in India and Indonesia: Re-imagining Places, Re-orienting Policy', Policy brief (JustJobs Network and Centre for Policy Research, 2018).
13. E. Ghani, A.G. Goswami and W.R. Kerr, 'Is India's Manufacturing Sector Moving Away from Cities?' (National Bureau of Economic Research, 2012).
14. See Partha Mukhopadhyay and Mukta Naik's op-ed titled 'For equitable growth, India must rethink the urban', *Hindustan Times*, 17 December 2018, <https://www.hindustantimes.com/analysis/for-equitable-growth-india-must-unthink-the-urban/story-7FvJDsWGVWoXedl5XJGyh.html>.
15. Arora et al., 'Integrating Intermediate Public Transport Within Transport Regulation in a Megacity: A Kolkata Case Study' (New Delhi: Centre for Policy Research, 2016).
16. S.N. Roy, Manish and M. Naik, 'Migrants in Construction Work: Evaluating their Welfare Framework' (2017).
17. Mukhopadhyay and Naik, 'Moving from Principle to Practice'.



Image Source: Max Pixel

Regularizing Unauthorized Urban Industrial Areas¹

PARTHA MUKHOPADHYAY AND EESHA KUNDURI

Informality and functionality are intricately interlinked in our cities, for ‘the informal city is very much the functioning city’.² Policymakers, urban local bodies and government agencies need to move beyond dichotomies such as formal and informal, planned and unplanned, and recognize the interconnections among these. The relationship between manufacturing and urban planning needs to be redefined. More attention to informal manufacturing in our cities – where women constitute a visible segment of the workforce – and facilitating its connections to the formal segment will bear rich dividends, not just in supporting manufacturing, but also in raising female labour force participation, another critical policy goal.

Beyond Slums and Vendors: Factories

Two strands of discussion appear to dominate the discourse about cities and informality. First, the auto-constructed nature of most urban neighbourhoods,³ and the need for regularization and *in situ* upgradation of informal settlements. Second, promoting and supporting informal livelihoods like street trading and hawking. There is, however, another form of informal activity that is central to our cities: informal manufacturing and informally employed workers in formal manufacturing. Even when regularization is initiated, the focus in cities across the country – whether in Delhi, Bengaluru or even the smaller towns of Maharashtra – has been on residential and commercial

activity, and rarely on industrial activity. Importantly, these enterprises constitute a significant source of urban employment, particularly for women, and as such, call for policy attention.

The question of informal manufacturing is not only a question of registration and tax status of an enterprise – indeed it may well be registered – it is also about the tenuous relationship between manufacturing and urban planning, and needs to be understood in this context.

Industry and the City: The Case of Delhi

Delhi's industrial landscape is dotted with several small-scale industries, wherein garment and footwear manufacturers comprise the largest share, followed by electrical machinery production and repair services.⁴ Industrialization in Delhi has been marked by contestations over space, and the relocation of 'hazardous and noxious industries', 'large and heavy industries', and 'non-conforming industries' to peripheral areas of the city. This relocation was upheld by the Supreme Court in 1996, and in its immediate aftermath, resulted in unemployment for the urban poor and migrant workers who had come to depend on these industries for their livelihoods.

Currently, Delhi has industrial activity spread over 28 planned estates, four flattened factory complexes, and 22 industrial areas 'notified for regularization'. The areas 'notified for regularization' or 'non-conforming' industrial areas, as they are otherwise known, are spaces of manufacturing activity that have emerged in residential areas, particularly around urban and rural villages in response to a range of market demands. Many of these unplanned industrial areas could be said to have emerged on village lands earmarked for residential (abadi) and/or agricultural use. While there are some planning exemptions within village boundaries – lal dora areas – these do not extend to industrial activity. Thus, these areas are unplanned, unauthorized and 'non-conforming' in the sense of being located in areas not zoned for industrial use.

The Master Plan for Delhi (MPD), 2021, states that unplanned industrial areas are eligible for regularization if more than 70% of the plots in the area are engaged in industrial activity and subject to fulfilment of other stipulated conditions. It lays down guidelines for the redevelopment of these areas, pertaining to aspects like road widening, provision of services, adherence to pollution control norms, and development of open spaces and parking facilities, among others. The redevelopment plan is required to be formulated by the local body or landowning agency in consultation with a society of landowners in the industrial area, which should be mandatorily formed.⁵

In practice, however, most non-conforming industries have been subject to sealing drives to close them down, and there has been no push for their redevelopment – from the owners of small-scale enterprises in these areas, local bodies or concerned government agencies. Industrial activity is seen as largely operating in violation of MPD provisions, as a source of pollution, and therefore, as an aberration to a larger vision of the city. When the Supreme Court first ordered industrial relocation, units in non-conforming areas were asked to apply for plots in the new industrial areas that were developed (mostly on the fringes): a little over 50% of the applications were found eligible and allotted plots. The approach to regularization has been entirely focused on relocation; units that were allotted plots but continue to function from the non-conforming areas (and did not shift for a variety of reasons), those that were found ineligible for an alternative plot, and those that function in violation of various industrial planning regulations are all subject to being closed down.⁶

In the push to create world-class, clean and green cities, the emphasis often seems to be on the knowledge economy – IT and IT-enabled services – with manufacturing activity relegated to the fringes of cities. The Delhi case starkly illustrates this. Further, in interviews, industrialists argued that Delhi is an unfriendly space for industrial growth,

and emphasized the gradual shift of manufacturing hubs to the neighbouring state of Haryana, alluding to agglomeration benefits and tax incentives, among other reasons.

But relocations are disruptive processes: they adversely affect both factory and home-based work for those engaged in them (particularly disadvantaging women), disrupt local work networks, and increase search, time and distance costs for new jobs. In Chennai's Kannagi Nagar resettlement colony, located along the city's IT corridor, a study found that 'Industrial relocations increase the costs for workers to access their jobs, and depress real wages due to the fall in demand for certain kinds of work.⁷ As nearby factories shifted further away, they found it adversely limited work and livelihoods.

Planned and Unplanned Industrial Areas: Co-located and Interlinked?

While the MPD 2021 and the Industrial Policy for Delhi, 2010–21, distinguish between planned and unplanned industrial areas, narratives from the field stress the linkages between these two typologies of areas. In both these areas, industries are engaged in a range of manufacturing activities spanning, *inter alia*, footwear, auto parts, garments, plastics, steel, etc. and are typically described as 'business-to-business' (B2B) enterprises that supply raw material and intermediate products to bigger firms in the vicinity. In interviews in an industrial area in northwest Delhi, factory owners in both the planned and surrounding unplanned areas spoke about interlinked activity chains: footwear straps manufactured in an unplanned area, for instance, supplied to factories manufacturing soles in the planned areas; sorting of residual cloth received from textile hubs like Jaipur and Gurgaon to be sold in a *kattar* (residual clothes) market. Owners in the planned areas also talked of a 'broken chain' due to ongoing action in the city to close down the unplanned factories, at the time of field research.

The two kinds of industrial areas are also linked in the sense of labour circulation. Being located close to each other, they draw upon the same pool of workers residing in nearby *bastis*, urban villages, resettlement colonies and unauthorized colonies.⁸ Workers typically access work through local networks of contractors and neighbours, and move between planned and unplanned areas based on availability of work.

Women's Work and Unplanned Industrial Areas

Unplanned industrial areas also provide relatively flexible work arrangements that some women may prefer. In earlier fieldwork in east Delhi, for instance, some women reported preference for work in workshops on the periphery of an urban village on account of spatial proximity and the ability to return home during breaks, particularly to attend to children.⁹ Another study makes a similar observation in its distinction between large apparel firms and smaller workshops in Tiruppur in Tamil Nadu.¹⁰ In more recent fieldwork in Delhi, a female worker, who works for daily wages in an unplanned area and looks for work every day, stated she preferred this arrangement over earning a meagre wage in the authorized industrial units, where they are often expected to work overtime.

Co-located planned and unplanned industrial areas also create home-based work opportunities for women, which are localized and driven by spatial networks of *jaan-pehchaan* (familiarity). Although home-based work can be low-paying and precarious, it may be preferred by women for reasons of flexibility and legitimacy. It enables women to manage housework and childcare responsibilities along with undertaking paid work from home. It is seen as a legitimate work choice for many women, for whom going out to work in factories is often accompanied by notions of stigma and shame.¹¹ In the areas studied, home-based workers were involved in a whole spectrum of work, including

putting threads into bookmarks, taping of speaker components, making decorative pieces, making buffs for machines, polishing steel, making bindis, fixing insoles and upper parts for footwear, etc. Most of this work is outsourced from factories in planned as well as unplanned industrial areas; many of these are small workshops operating within urban villages and unauthorized colonies. Women are remunerated at piece rates. In the absence of designated work spaces, work is carried out by groups using shared spaces, such as common courtyards of tenements or cots outside their homes in bastis. Contractors and sub-contractors (often female) who bring the work to the women are often embedded as residents, thereby leveraging their connections and building relationships of trust.

Key Policy Takeaways

Regulate and regularize existing industrial areas

Instead of pushing industries to city peripheries and industrial parks with poor transport connectivity, we need measures to regulate existing industrial areas in the city, while ensuring their conformity to environmental, safety and labour regulations. The latter two are particularly important in light of several cases of factory collapses and blatant violations of labour safety and welfare. But they should not be used as an excuse to drive away factories themselves. It should also be noted that when it comes to regularization/redevelopment of unplanned industrial areas, ‘unrealistic planning norms’ continue to hinder.¹² Industrial planning norms, thus, need to be modified to allow more flexibility in redevelopment of unplanned areas. In this, planners can draw upon instances of regularization of residential areas such as unauthorized colonies in Delhi and *gunthewaris* in Maharashtra.¹³ Like residential and commercial areas, the regularization of industrial areas too needs to become a part of our urban planning discourse.

Redevelop and redesign neighbourhood amenities to encourage female labour force participation

A key benefit of regularizing these industrial clusters is the retention of a number of female jobs. Redevelopment of industrial areas must thus be accompanied by interventions in the nearby residential settlements in a manner that encourages more women to participate in the labour market. In the case of home-based workers, workspaces are intertwined with living spaces, creating constraints on space. Women make do with whatever little community spaces they manage to access. It is essential for cities to recognize that urban neighbourhoods are not just residential ones, and develop amenities from the perspective of both work and living. This would involve redesigning neighbourhood amenities like community halls for multiple uses, including common workspaces for home-based workers with amenities like toilets, lighting and ventilation (in the manner of the co-working spaces that have emerged to support modern start-up and innovation ecosystems).¹⁴ Urban local bodies should be sensitized and empowered to do this.

Conclusion

In line with unauthorized residential and commercial areas, the regularization of unauthorized industrial areas needs policy attention, not only because they are deeply imbricated with authorized industry and are essential to the growth of manufacturing, but also because they provide flexible work options to many women, who would otherwise not be in the workforce. This can be done, in many instances, without harming the environment. Indeed, the planning philosophies that underpin the guidelines that render them illegal may no longer be appropriate, given technical progress and the imperatives of compact, mixed-use cities. This entire approach of excluding industry, particularly the informal sector, from our cities needs to be discarded.

END NOTES

1. We draw upon Eesha Kunduri's research engagements in Delhi's industrial areas to illustrate issues in this note. Some of the examples here draw upon field interactions over August 2018 to January 2019, conducted with Ritika Gupta, as part of the IWWAGE-IFMR initiative at ISI, Delhi, led by Farzana Afridi.
2. P. Mukhopadhyay, 'Formality and Functionality in Indian Cities', *Seminar* 617 (2011): 2-8.
3. Auto construction refers to the process by which residents access resources, materials and 'permissions' and lay out settlements and construct houses on their own. It is not necessarily 'self-built', in that it may involve the use of masons and contractors for the construction of houses as well as common infrastructure, such as drains, etc.
4. GNCTD, *Industrial Policy for Delhi: 2010–2021* (New Delhi: Department of Industries, Government of National Capital Territory of Delhi, 2010).
5. DDA, *Master Plan for Delhi 2021*. Reprint (New Delhi: Delhi Development Authority, 2010), <https://dda.org.in/ddanew/pdf/Planning/reprint%20mpd2021.pdf>.
6. Interactions with officials at the Municipal Corporation of Delhi (Civic Centre Office) and Delhi State Industrial and Infrastructure Development Corporation Ltd. (DSIIDC), as part of the IWWAGE-IFMR study (at ISI, Delhi) referred to earlier.
7. K. Coelho, T. Venkat and R. Chandrika, 'Housing, Homes and Domestic Work: A Study of Paid Domestic Workers from a Resettlement Colony in Chennai', *Economic and Political Weekly* 48(43) (2013), 39–46.
8. S. Sharma and E. Kunduri, "Working from Home is Better than Going Out to the Factories" (?): Spatial Embeddedness, Agency and Labour-Market Decisions of Women in the City of Delhi', *South Asia Multidisciplinary Academic Journal (SAMAJ)* (2015), <https://journals.openedition.org/samaj/3977>.
9. Sharma and Kunduri, "Working from Home is Better than Going Out to the Factories" (?)'
10. G. De Neve, 'Fordism, Flexible Specialisation and CSR: How Indian Garment Workers Critique Neoliberal Labour Regimes', *Ethnography* (2012): 1–24.
11. Sharma and Kunduri, "Working from Home is Better than Going Out to the Factories" (?)'
12. For instance, the MPD 2021 guidelines for redevelopment of unplanned areas stipulate a minimum reservation of space: 10 % for 'circulation / roads / service lanes', 'parking and loading / unloading areas', infrastructure such as pump house, fire station and police post; and 8% for 'parks / green buffer'. Given the density of most unplanned industrial areas, such norms render redevelopment infeasible.
13. A. Bhide, 'The Regularising State', *Economic and Political Weekly* 49(22) (2014): 92-100.
14. Discussions with Shalini Sinha of WIEGO and Firoza Mehrotra of HomeNet South Asia.



The Challenge of Indian Cities and Female Labour Force Participation

NEELANJAN SIRCAR

According to the International Labour Organization, female labour force participation in India dropped from 35% in 1990 to 27% in 2014.¹ The gender gap in labour force participation in 2014 was 53 percentage points,² and urban female labour force participation in India has all but stagnated for the last two decades.³

This has occurred in a context of rising per capita income—which accelerated in India from the 1990s onward—and a significant reduction in fertility rates. Indeed, standard economic theory predicts that as countries move from lower income to middle income (as India is doing), women leave the workforce as there is less need to engage in the most arduous forms of labour—such as in agriculture and brick kilns—for a bit of extra money. As incomes rise sufficiently,

it is argued that women are offered white-collar jobs and re-enter the labour force—as in the West.

But India's numbers are far worse than what standard theories predict. A recent World Bank report found that the country is ranked 121st out of 131 countries in the female labour force participation rate, and much worse than many of its neighbours.⁴ In fact, Sri Lanka's female labour force participation stabilized at around 35% decades ago, and Bangladesh consistently demonstrates well over 50% female labour force participation.

Most worryingly, India is losing its most educated and productive women.⁵ National Sample Survey (NSS) data shows that women who have passed higher secondary have the lowest female labour force

participation in India.⁶ This is to say nothing of the ‘marriage penalty’ or ‘child penalty’ for women who drop out of the labour force due to marriage and childbirth. It is increasingly obvious that standard economic theory has it exactly backwards. We can’t wait for incomes to rise: incomes in India will stagnate unless we find ways to get women, especially the most economically productive among them, back into the labour force.

What can policymakers do to draw women back into the labour force?

Answering this question necessitates a closer look at the data. Recent research shows that the decline in female labour force participation in India is largely due to a drop in women entering the labour force in rural India.⁷ In plain language, this means that as rural incomes rise, women prefer not to do the backbreaking work of agricultural labour—which is understandable. But even then, there is still significantly greater female labour force participation in rural areas compared to urban areas. In other words, even with rising incomes, women in urban areas are not entering the labour market. The important question is this: why are women refusing or unable to enter the labour force in urban areas, where higher wage and higher skill jobs are available in greater numbers?

The challenges of integrating women into the labour force will only be accentuated as India continues to urbanize. From 2001–2011, the urban population growth rate was 2.4 times that of the rural population growth rate in India, significantly higher than any other decadal urban–rural population growth ratio in the country’s history. We expect this process to accelerate. India is likely to see its urban population rise from 338 million in 2010 to 875 million in 2050; the increase of 497 million between 2010 and 2050 is the largest projected growth in urban population in world history.

Of course, the country will continue to manifest pernicious patriarchal norms that prevent women

from entering the labour force. However, as our data shows, women themselves are quite willing to work – and the men in the household are supportive of it, despite these patriarchal norms. But it is Indian cities that are not hospitable to women entering the labour force. The proximate policy challenge for increasing female labour participation, thus, centres around managing rural–urban transitions and making cities hospitable places for women to work.

Why Are Indian Cities So Inhospitable to Women Wanting to Work?

Our understanding of female labour force participation must necessarily encompass a broad swathe of economic activities and opportunities. Labour force participation may be ‘formal’ or ‘informal’, given that most labour in India is in informal sectors. Labour force participation may also include entrepreneurship activities, from operating stores and food stalls to trading. It has been widely recognized that the role of many women in household duties – and its contribution to household economic productivity and expenditure saving⁸ – is rarely measured properly. Nonetheless, one must acknowledge the importance of female labour force participation outside the home. The opportunity to engage in economic activity outside the home increases the marginal value of employment, and it is also more likely to break discriminatory gender norms that coerce women to stay at home. Thus, no matter how incomplete the definition, standard measures of female labour force participation are important in and of themselves.

From an economic perspective, a woman’s decision to participate in the workforce is broadly viewed as a consequence of evaluating two trade-offs. First, as aggregate household income increases, the marginal benefit of entering the labour force is thought to decrease; that is, if there is sufficient money in the household, there are weaker incentives to get a job. Second, the incentive to join the labour force decreases as the opportunity costs (psychic

or financial) of leaving home increase; that is, if it is particularly difficult to carry out necessary tasks at home while working, an individual would be less likely to work a job outside the home. These economic trade-offs, in turn, interact with urbanisation in particular ways to negatively impact opportunities for women to enter the labour force.

In rural India, agricultural work is typically near the home, so there is a natural source for female employment. Even in non-farm work, rural India has demonstrated the capacity to employ women. For instance, more women than men availed of the opportunities provided by the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) – often, small infrastructural work near the village.⁹

In urban India, on the other hand, such a natural source of women's employment rarely exists near the home. Industries like construction tend to be less preferred by women and also tend to discriminate against women in hiring. This obliges women in urban India to look far from home for suitable employment. Unfortunately, the lack of safe transport for women to travel significant distances creates obstacles to working outside the immediate locality. If women are unable to procure safe and stable transport to and from a place of work in urban spaces, they are unlikely to enter the labour market, which likely negatively impacts female labour force participation.

These challenges help explain why urban women, among the most skilled in the population, are often missing from the labour market. In principle, more well-off and educated women should be able to command higher wages and better jobs, which would facilitate their entry into the labour force. But availing of these jobs often implies that women have to travel far for a suitable job. Thus, while a section of economists continue to argue that urban Indian women simply choose to stay at home as income rises, the real reason for low urban female labour force participation may well be the increased 'costs' of entering the labour market.

A Data-Driven Perspective

While the aggregate data shows a worrying trend of declining female labour force participation, we still lack systematic large-scale data on the labour market behaviour of working-age women. I have been conducting a wide-ranging study of female labour force participation jointly with Apurva Bamezai, Devesh Kapur and Milan Vaishnav. The research is taking place in four cities – Dhanbad, Indore, Patna and Varanasi – and the surrounding peri-urban and rural areas of each city. In each of the four urban areas (and surrounding areas), 3500 households are to be surveyed. In each household, a working-age female and the (usually male) primary wage earner is to be interviewed. This allows us to understand not only women's own perceptions about the labour market but also possible constraints from men in the household.

Preliminary data from completed surveys in Dhanbad, Patna and Varanasi reveal important trends. In each of these three cities, only 20-30% of working-age women are (or have ever been) in the labour force. This is consistent with the overall national employment numbers described above. If a woman is in the labour force, she is 20 to 30 percentage points more likely to be engaged in agriculture compared to her working male counterpart. This suggests that even when they are able to enter labour force, a disproportionate number of women are engaged in labour near the home.

There is little evidence that women are willingly opting out of the labour force, as posited by the theory of income effects. Among working-age women who have never been employed, we find that 60-70% of women are willing to work if offered a suitable job.¹⁰ Somewhat surprisingly, a very similar percentage of male respondents believe that the woman should be allowed to work if offered a suitable job.

In each of these three cities, less than 30% of women feel 'very safe' travelling alone at night, compared to more than 40% of men. Our preliminary analyses also indicate that perceptions of easy, safe travel are

major determinants of whether a woman is willing to enter the labour force. Taken together, this provides suggestive evidence that the city can be inhospitable to women who are willing to enter the labour force, even if there is support at home.

The Way Forward

Declining female labour force participation is a deeply worrying trend that must be reversed if India is to accelerate its economic development. Strong patriarchal norms still exist in India, but, as discussed here, low female labour force participation is about much more than social conservatism. A major cause for few women in the work force is how Indian cities discourage women from entering the labour force.

Fundamentally, women are not joining the workforce in urban India because urban infrastructure is failing

them. The data suggest that there exist both a desire for women to work and support at home for it, provided there is stable and safe transport to and from work. Indeed, recent work by Girija Borker has shown how the safety of the Delhi Metro provided many college-going women the opportunity to attend high-quality colleges far from home.¹¹ A similar principle is likely to encourage greater female labour force participation as well.

But the challenges of each Indian city are unique and context-specific. There are a number of complicated social factors that impact female labour force participation, and it would be foolhardy to generalize too much from the data we have collected. Ultimately, more systematic large-scale data collection on women's labour choices is required, as this is the only way to identify actionable policies to address India's low female labour force participation.

END NOTES

1. International Labour Organization, 'Key Indicators of the Labour Market Database', 2016, <http://data.worldbank.org/indicator/SL.TLFC.ACT.FE.ZS>.
2. World Bank, 'World Development Indicators', Database, 2015.
3. Stephan Klasen and Janneke Pieters, 'What Explains the Stagnation of Female Labor Force Participation in Urban India?', *The World Bank Economic Review* 29(3) (2015):449-478.
4. Louis A. Andres, Basab Dasgupta, George Joseph, Vinoj Abraham and Maria Correia, 'Precarious Drop Reassessing Patterns of Female Labor Force Participation in India', World Bank Policy Research Paper No. 8024 (World Bank, 2017).
5. It is worth noting that women who are college graduates do show somewhat higher levels of labour force participation. But this is likely explained by the fact that households with the most liberal attitudes towards female work allow their daughters to complete college and not get married as early, and display a host of other factors likely to encourage female labour force participation.
6. Farzana Afridi, Tara Dinkelman and Kanika Mahajan. 'Why Are Fewer Married Women Joining the Work Force in India? A Decomposition Analysis over Two Decades', IZA Working Paper No. 9722 (2016).
7. Ibid.
8. Ashwini Deshpande and Naila Kabeer, '(In)Visibility, Care and Cultural Barriers: The Size and Shape of Women's Work in India', Ashoka University Economics Discussion Paper 04/19. (2019).
9. Economic Survey 2018.
10. This is consistent with recent evidence from the NSS. Erin Fletcher, Rohini Pande and Charity Maria Troyer Moore, 'Women and Work in India: Descriptive Evidence and a Review of Potential Policies', HKS Working Paper No. RWP18-004 (2017).
11. Girija Borker, 'Safety First: Perceived Risk of Street Harassment and Education Choices of Women', Working Paper, 2018.

Policy Challenges | REGULATION AND 2019 – 2024 RESOURCES



Regulating India's resources, be it land, water, ecology or the Internet, remains one of key challenges confronting the government today. In each case, the system is burdened with archaic legal structures, cumbersome judiciary and bureaucracy and the inability or the lack of desire to adapt quickly. Be it an age-old problem like land ownership or an emerging domain like digital technologies, the Indian state's Achilles heel remains the same – lack of rational and overarching regulatory frameworks. In the following essays, CPR faculty offer broad principles and specific suggestions to develop holistic approaches to deal with the challenge of regulating India's resources.



Understanding Land Conflict in India and Suggestions for Reform

NAMITA WAHI

An estimated 7.7 million people in India are affected by conflict over 2.5 million hectares of land, threatening investments worth \$ 200 billion.¹ Land disputes clog all levels of courts in India, and account for the largest set of cases in terms of both absolute numbers and judicial pendency. About 25% of all cases decided by the Supreme Court involve land disputes, of which 30% concern disputes relating to land acquisition.² Again, 66% of all civil cases in India are related to land/property disputes.³ The average pendency of a land acquisition dispute, from creation of the dispute to resolution by the Supreme Court, is 20 years.⁴ Since land is central to India's developmental trajectory, finding a solution to land conflict is one of the foremost policy challenges for India.

Understanding Incidence and Pendency of Land Conflict in India

Legislative and administrative factors are responsible for the high incidence of legal and extralegal conflicts over

land, and judicial factors are behind the pendency of land disputes. Competing historical and current policy narratives of property rights over land, have resulted in the coexistence of numerous, conflicting laws leading to legal disputes over land. This is the legislative factor. This problem is compounded by administrative failure to comply with the rule of law. This is the administrative factor. The pendency of conflict, in turn, is a result of legal and evidentiary barriers in bringing land disputes to court, largely due to administrative and judicial incapacity; this prevents expeditious resolution of land disputes. This is the judicial factor.

Conflicting narratives, policies and land laws create land disputes

There are two conflicting narratives about ownership and management of land in India. The first narrative – inherited from the British colonial state⁵ – views common land, or land that is not privately owned, as merely

a commodity, no different from labour and capital, with the state as the ultimate owner.⁶ This claim to ultimate ownership gives the state the power to redistribute land at will, as largesse to selected beneficiaries.⁷ Such state acquisition of land has historically been the source of considerable dispute. According to estimates by CPR's Land Rights Initiative (LRI), these disputes constitute 30% of all land litigation in the Supreme Court over the past 70 years. LRI's comprehensive study of land acquisition litigation before the Supreme Court over a 66-year period, from 1950 to 2016, reveals that all litigation is with respect to privately held land. In contrast, data from the Land Conflict Watch project reveals that the vast majority of current, on-ground, extralegal conflict over land is with respect to common lands.⁸ Thus, it is clear that in the face of state acquisition of land, when people have legally recognized land rights, they go to court. Where their rights are insufficiently recognized by law, they protest on the ground.

The second narrative – articulated by the ‘people’, including farmers, both landowners and tenants; and other traditional communities, such as cattle grazers, forest dwellers, tribals and fisherfolk – views land as an economic, social and cultural resource over which multiple groups exercise property rights. Usually, after intense on-ground contestation, the property rights of certain groups like Scheduled Tribes (STs) and tenants have been protected by the Constitution⁹ and statute,¹⁰ while in case of other groups like fisherfolk,¹¹ their rights are protected by custom and, often, executive action.

As a consequence of these two historically competing policy narratives, the constitutional, legislative and administrative framework governing land is as fragmented as the land holdings in India.¹² Enacted at different points of time, land laws clash with each other, because they seek to articulate in law these two competing narratives. For instance, the provisions of the Forest Rights Act, 2006, are in conflict with those of the Indian Forest Act, 1927, and the Forest Conservation Act, 1980, and are also threatened by proposed amendments to the Indian Forest Act.¹³ Legal conflicts also arise when laws are enacted or amended at different times to appease different stakeholders. For instance, the Right to Fair

Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR) Act has, in the five years since it came into force, been amended by seven state legislatures.¹⁴ This will likely create more legal disputes with respect to land acquisition, because the original RFCTLARR Act provisions had been included with a view to addressing growing conflict over land acquisition.¹⁵ Moreover, in many states, we find laws that provide for eviction of unauthorized occupants over public lands coexisting with laws that provide for regularization of unauthorized occupation, thereby creating potential for dispute/conflict at the level of law itself.¹⁶

Finally, the legislative landscape is complicated by the fact that many subjects pertaining to ‘land’ are in the ‘state’ and ‘concurrent’ lists of the Constitution, leading to a multiplicity of original and active land laws.¹⁷ Yet, there is no official comprehensive database of all land laws in India. A first of its kind, ongoing LRI study estimates that India has over a thousand original and active central and state land laws.¹⁸

The problem of ‘multiple laws’ is exacerbated by the fact that these laws are administered by numerous government ministries at the central level, and departments at the state level. These include, for instance, the ministries of Law and Justice, Rural Development, Mining, Industries, Infrastructure, Urban Development, Tribal Affairs, Home Affairs and Defence.

Administrative non-compliance with law also creates and prolongs land disputes

Where laws are clear, disputes and conflicts arise because of administrative non-compliance with the rule of law due to both unwillingness and incapacity. The LRI study of all Supreme Court cases on land acquisition during 1950–2016 shows that 95% of the disputes arose because of administrative non-compliance with the legal procedure for acquisition of land, including the process of computation of market value compensation for land acquired.¹⁹ Around 34% of the disputes involved irregularities in completion of the procedure for acquisition. Almost half of such cases concerned with procedural irregularities involved administra-

tive unwillingness to comply with the rule of law. The remaining half of the cases involved administrative incapacity to comply with the rule of law, in part because of governmental failure to regularly update administrative manuals based on changes in the law. Moreover, the government was more likely to lose than win these land disputes before the Supreme Court.²⁰

Additionally, since colonial times, land in India has been broadly administered by the revenue and forest departments. But there have also always existed disputes between both departments as to which land belongs to which department. This in turn creates and prolongs land disputes.

Finally, legal disputes over land are also created by evidentiary barriers for establishing rights over land in the absence of documentary proof²¹ because of outdated/no land surveys²² and inaccurate/outdated land records²³ in most states. The Department of Land Resources has sought to resolve the problem of inaccurate land records through the 'Digitisation of Land Records Modernisation Programme'. However, unless the government makes a serious attempt to update land records on the ground to reflect the property rights of all landowners, digitizing them would not eliminate the problem of inaccurate land records.

Judicial reasons cause pendency of land disputes

Once a land dispute goes to court, serious judicial incapacity leads to pendency of disputes. First, a major cause for pendency of all disputes is India's low judge-to-people ratio.²⁴ Land cases form more than half of all civil cases and constitute over a quarter of cases before the Supreme Court; they also have the longest pendency compared to other cases. Hence low judge-to-people ratio particularly prolongs resolution of land disputes. Second, the judiciary, particularly at its lowest levels, lacks the financial, technical and infrastructural capacity necessary to resolve disputes quickly.²⁵ Finally, poor enforcement of court decisions by the government, and limited judicial capacity to follow up on such enforcement, especially when such decisions go against the government, also lead to prolonging of land disputes.

Policy Recommendations for Reducing Incidence and Pendency of Land Disputes

Eliminate legal conflicts. No government has ever attempted an exercise to rationalize existing land laws. But this is the need of the hour. The Law Ministry and Law Commission are best positioned to conduct or commission such an exercise. This would involve, first, the creation of an exhaustive database of all land laws in India. Once such a database of laws is created, the Law Ministry and Law Commission must identify, and Parliament must repeal, laws that deny rights of certain groups of people, particularly women,²⁶ and eliminate genuine conflicts between laws.

Improve administrative willingness and capacity to implement the rule of law: The government must take steps to ensure greater administrative capacity and willingness to implement the rule of law. In addition, we need greater coordination between government departments dealing with land, transparency of land administration, and better access to land data. This can be achieved by undertaking the following measures.

- » The Department of Land Resources, currently under the Ministry of Rural Development, is the nodal agency for coordination of land policy across states. But land is not merely a rural concern. As India becomes increasingly urbanized, the government needs to have a more comprehensive imagination of land requirements for rural and urban populations. The creation of a separate Ministry of Land to serve as the nodal agency for coordinating land policy across different types of land is critical.
- » There needs to be a coordinated effort between the Ministry of Law and Justice, Department of Land Records, Ministry of Environment and Forest, Ministry of Tribal Affairs, state boards of revenue, and state forest departments to resolve conflicting land laws and streamline land administration.
- » All government departments dealing with land, and particularly those involved in land acquisition, must update administrative manuals in accordance with changes in legislation and judicial precedent.

- » Through dedicated interdepartmental meetings and other coordination, government must resolve land boundary disputes between the revenue and forest departments.
- » The government must devote financial and technical resources to conduct land surveys and update paper records to reflect property rights of all the people, as opposed to digitization of existing records that are substantially inaccurate.
- » The government must ensure better skills training so that officials dealing with land have both the knowledge and the capacity to implement the rule of law. Institutional mechanisms should be designed to incentivize compliance with, not defiance of, the rule of law.
- » Given the low success rate of government appeals, the government must carefully evaluate the likelihood of success of an appeal before pursuing it. Government officials must be incentivized to not appeal cases that have little likelihood of success following such an evaluation. This would go a long way in reducing pendency of land disputes.
- » The government must wholly commit to transparent land administration and comply with its obligations under the Right to Information Act, 2005, to make digitally accessible all land laws, executive notifications, rules, circulars, etc. pertaining to land administration. In addition, the government must open up to public scrutiny departmental data on compliance with land laws.

In addition to legislative and administrative reforms, judicial reforms can go a long way towards reducing the pendency of land litigation in India. The first step in this direction would be the implementation of key recommendations of the Law Commission.²⁷ These include:

- » Changing the base for determining sanctioned posts for judges from ‘Judge: Population Ratio’ to ‘Rate of Disposal Method’²⁸

- » Filling up all existing vacancies
- » Increasing the retirement age of subordinate judges to 62; and those of High Court and Supreme Court judges to 65 and 68 years respectively.
- » Greater financial allocations to the lower and higher judiciary, to enable infrastructure, technical and skills upgradation

Some states like Bihar have created separate land tribunals for expeditious resolution of land revenue cases. This model should be studied, and if found effective, should be replicated in other states.

Conclusion

Land conflict in India, both legal and extralegal, has existed from colonial times because of the imposition by the British state of the notion that all land not privately held belongs to the ‘state’. This concept has been continuously resisted by the ‘people’ who were disempowered by the colonial state’s deprivation of their legal property rights under precolonial administration. Over time, competing ‘state’ and ‘people’ narratives over land have led to conflicting policy and legal interventions. This has, in turn, led to legal disputes over land. Even when laws are clear, administrative failure to comply with the rule of law, due to unwillingness and incapacity, contributes to the incidence and pendency of land disputes. Serious judicial incapacity in turn prolongs pendency of land disputes.

Due to the increasing population pressure on land, and the corresponding demand for land to fuel the development engine, the scale and scope of land conflict today has assumed gigantic proportions, stalling development projects and threatening livelihoods and investments. Equitable and efficient intergenerational management of land is necessary not just for India’s economic development, but also for its political and social stability. Therefore, working towards resolving land conflict, in light of the above policy recommendations, is an imperative agenda for the new government.

END NOTES

1. Land Conflict Watch, <https://www.landconflictwatch.org/>.
2. This is based on preliminary findings from a CPR Land Rights Initiative study, and is also consistent with findings from a comprehensive quantitative study of the Supreme Court's caseload between 1993 and 2011. See Nick Robinson, 'A Quantitative Analysis of the Indian Supreme Court's Workload', *Journal of Empirical Legal Studies*, 10(3) (2003): 570-601.
3. Daksh, 'Access to Justice Survey, 2016', <http://dakshindia.org/wp-content/uploads/2016/05/Daksh-access-to-justice-survey.pdf>.
4. Namita Wahi et al., 'Land Acquisition in India: A Review of Supreme Court Cases from 1950 to 2016' (New Delhi: CPR, 2017).
5. Articles 294 and 295 of the Indian Constitution stipulate that the Indian state succeeds to all property, claims and assets of the British state.
6. B.H. Baden Powell, *The Land Systems of British India* (Oxford University Press: 1892); B.H. Baden Powell, *A Manual of Jurisprudence for Forest Officers Being a Treatise on Forest Laws* (Calcutta, 1882).
7. An LRI study estimates that there are 102 laws of land acquisition alone, including state amendments to the Land Acquisition Act, 1894. *Supra* note 4.
8. 'Land Conflicts in India: An Interim Analysis', <https://rightsandresources.org/en/publication/land-conflicts-india-interim-analysis/>.
9. Article 244(1) and Article 244(2), read with the Fifth and Sixth Schedules respectively, create special protections for land rights of Scheduled Tribes in geographically demarcated areas, known as Scheduled Areas.
10. Starting with the Bengal Tenancy Act, 1885, almost each agrarian state has laws protecting tenancy rights. Similarly, the Forest Rights Act, 2006, recognizes land rights of Scheduled Tribes and other forest dwelling communities.
11. A prolonged movement has sought the enactment of a Fishing Rights Act, along the lines of the Forest Rights Act.
12. 86.21% of all land holdings in India are small and marginal holdings taken together (0.00-2.00 ha). See Census of India.
13. Nitin Sethi et al., 'Modi government plans more draconian version of colonial-era Indian Forest Act', *The Wire*, 21 March 2019, <https://thewire.in/rights/modi-government-plans-more-draconian-version-of-colonial-era-indian-forest-act>
14. These include the states of Tamil Nadu, Gujarat, Rajasthan, Maharashtra, Telangana, Andhra Pradesh and Jharkhand. See Namita Wahi, 'How central and state governments diluted the historic land legislation of 2013', *The Economic Times* <https://economictimes.indiatimes.com/news/politics-and-nation/how-central-and-state-governments-have-diluted-the-historic-land-legislation-of-2013/articleshow/63764378.cms>.
15. Jairam Ramesh et al., *Legislating for Justice: The Making of the 2013 Land Acquisition Law* (New Delhi: Oxford University Press, 2015); Namita Wahi, 'The Story of Jairam Rajya' *India Today*, June 2015, <https://www.indiatoday.in/magazine/books/story/20150622-jairam-ramesh-land-acquisition-law-book-819874-2015-06-11>.
16. Ongoing LRI study on 'One Thousand Land Laws'.
17. Article 246 read with the Seventh Schedule of the Constitution of India.
18. CPR 'Land Laws' Database; see: <https://www.cnbcv18.com/legal/hundreds-of-indian-land-laws-cause-confusion-conflict-researchers-2640041.htm>.
19. Wahi et al., 'Land Acquisition in India'.
20. *Ibid.* p. 28.
21. Sections 61-64 of the Indian Evidence Act, 1872, emphasize that documents must be proved by primary evidence, that is, presentation of the document itself. However, many people with legally recognized land rights do not have documentary proof for the same. This makes judicial resolution of land disputes extremely difficult.
22. Much of the northeastern part of India, including the state of Assam, has never been fully surveyed. The last full land survey for the state of Bihar happened in 1950s-1960s.
23. Former Minister for Rural Development notes that the state's failure to fairly compensate those who lost land under the 1894 Act arose due to inaccurate land records, rampant undervaluation of sale deeds, and absence of land markets in many rural areas. See Ramesh et al., *Legislating for Justice*.
24. Two reports – the 245th Law Commission Report on 'Arrears and Backlog: Creating Additional Judicial (Wo)man power' (2014), http://lawcommissionofindia.nic.in/reports/Report_No.245.pdf, and the 230th Law Commission Report on 'Reforms in the Judiciary: Some Suggestions', <http://lawcommissionofindia.nic.in/reports/report230.pdf> – highlight this as a major cause for disputes.
25. *Ibid.*
26. Bina Agarwal, 'Gender and Legal Rights in Agricultural Land in India', *Economic and Political Weekly* A39 30(12) (March 1995).
27. *Supra* note 24. (Q: Pl give direct source)
28. 245th Law Commission Report, 29.



Protecting Water While Providing Water to All: Need for Enabling Legislations

PHILIPPE CULLET

India is facing an increasingly dire water situation. The NITI Aayog in 2018 warned that the country is facing the ‘worst water crisis in its history’.¹ This is a crisis of availability of water with various states facing increasingly frequent and/or acute water scarcity for at least some part of the year. With increasing water use and more erratic monsoons, per capita water availability in the country is progressively decreasing. An associated challenge is the country’s dependence on groundwater. This is particularly significant because the overwhelming majority of the population depends on groundwater for its domestic water needs; for crores of people water is a source of constant worry in a context where water tables are rapidly falling and water quality rapidly diminishing. It is also a concern for irrigators since the bulk of irrigation today depends on groundwater. Juxtaposed

against this water scarcity challenge is a crisis of abundance reflected in the frequent floods that afflict several states on a regular basis.

However, the most critical challenge of all is that of governance of water. On the one hand, the governance of water is organized largely around laws and institutions tasked with allocating and regulating use of water among various claimants. On the other hand, water protection is seen as an environmental mandate that remains largely distinct from water governance, even though water is an integral part of environmental governance. This makes for poor outcomes since protecting water is necessary to ensure availability today and in the future and thus conditions water use. The failure to effectively protect water is an increasingly significant cause of conflicts among different water users.

The challenge of water governance primarily emerges from an inappropriate and insufficient legal framework. This challenge can be broken into different components.

- » The rules governing access to water are often drawn from old case laws that gave primary control over water to landowners.² This is problematic because there is no mechanism to coordinate the cumulative use of a river by all riparian landowners, leading to potential over-exploitation. It is also inappropriate because it gives only landowners rights over a resource that every person needs to use on a daily basis for drinking, food and domestic needs. In addition, it precludes any basin-wide or aquifer-wide protection measures since control over water is organized around the claims of individual landowners. This is particularly problematic for groundwater where each individual landowner has the right to take as much groundwater as they please, to the extent of depriving other users of the same aquifer and without considering the need to avoid use beyond replenishment.
- » One of the specific problems with the above scheme is that the rules for surface water and groundwater are not the same. It was determined in the nineteenth century when the connections between the two were not well understood. This has led to the very unfortunate situation where rules for surface water and groundwater are different. Moreover, most water laws centre around issues related to surface water, leaving groundwater unregulated, even though this is the critical issue today. The largest use of water, irrigation, is mostly governed by laws that consider irrigation to be sourced from surface water when in reality farmers rely overwhelmingly on groundwater for irrigation.
- » The responsibility for governing water is divided between different institutions, from panchayats/municipalities to states and the Union. The

Constitution gives primary responsibility to states, while the local dimensions of water governance have been confirmed in the 72nd and 73rd constitutional amendments and the Union has some powers concerning matters that go beyond the state level. The recognition that water needs to be addressed at all levels is an excellent starting point. In practice, however, even though the Supreme Court has repeatedly stated that the state at each level is a ‘public trustee’,³ this is not yet reflected in legislation, leading to unnecessary governance conflicts.

- » The rules in place for drinking water supply are separate for urban and rural areas, with different supply norms for rural and urban residents.⁴ This fragmented governance is problematic since urban areas increasingly rely on water from beyond the municipal limits, thus making it imperative to address problems arising jointly.
- » As we have seen, the rules treat surface water and groundwater separately. They also view pollution as an environmental matter and usage as a water sector matter.

As this brief description highlights, there are vast gaps between regulation and practice, as well as gaps between the existing parts of the regulatory framework. These issues have been critical concerns in the water sector and policymakers at different levels have tried to address them. This has led to various law-making initiatives at the state and central levels. In keeping with the constitutional mandate, states have adopted a number of water laws over the past couple of decades. This is commendable since it reflects a recognition that a number of issues can only be effectively addressed if legislation is adopted. At the same time, states have generally not engaged independently in developing new water laws and have tended to react to policy priorities set elsewhere. The resultant patchwork of laws does not necessarily address the most critical issues.

The new government needs to focus, in particular, on two initiatives: a framework water legislation and a model groundwater law. Both of these have been in the making since the beginning of the decade, having been proposed and developed by the last two governments at the Centre. They need a much stronger push to ensure a strong legal framework for water that allows India to face the challenges of the 2020s.

Towards Framework Water Legislation

The medley of water laws that exist in most states is deficient in that these laws are not centred around any set of principles governing the water sector as a whole. Principles have been laid down by the higher judiciary over time but they have not been enshrined in legislation. This is a gap that impedes effective governance of water and prevents water conflicts from being resolved on bases that are clear for all users.

In the absence of framework legislation in any state, the Planning Commission of India took the initiative of drafting such a law in 2011.⁵ The underlying idea was to ensure that all institutions concerned with water could rely on a single frame of reference so that water governance becomes more transparent and accessible. The drafting of framework legislation was taken up again by the Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWRRDGR) in 2015, leading to an updated draft known as the National Water Framework Bill, 2016.⁶

There is a strong need to ensure that all water and all water uses are governed by the same principles, and that protection and use principles are clearly linked. The new government must ensure that this draft is taken up and adopted so that the country is better prepared to face the increasing number of water crises that are likely to beset a number of states in the 2020s.

Need for Comprehensive Groundwater Legislation

Groundwater is and will remain the primary source of water for most water uses for many years. Existing groundwater regulation is extremely dated; the principles were laid out in the 19th century and have not been updated. Recent regulatory interventions focus on top-down attempts to control usage; they are failing because they neither consider the broader aquifer-level protection nor reflect the fact that groundwater use is, first, a local issue to be addressed at the local level. The rapidly deepening groundwater crisis calls for an entirely new perspective on groundwater protection and groundwater rights.

The central government has played an important role in providing models that states can use to develop their own legislations. A first generation of model legislation promoted between 1970 and 2005 focused essentially on introducing new control measures for groundwater use without addressing either the rights to groundwater or the need to protect, manage and regulate groundwater at aquifer level. In 2011, the Planning Commission of India took up the challenge of drafting a comprehensive groundwater model law addressing protection and use from the local level to the state level.⁷ In 2015, the MoWRRDGR decided to go back to the draft of the Planning Commission and requested an updated version. This was delivered in 2016, and submitted for comments to states and the NITI Aayog; a revised version incorporating comments was submitted in 2017.

The new government should ensure that the Model Groundwater (Sustainable Management) Bill, 2017, is taken forward at the earliest.⁸ Where it exists, state groundwater legislation based on the old model legislation is woefully incapable of addressing today's challenges; in any case most of these Acts exist mostly on paper. The Bill is an appropriate template that the central government must formally adopt and promote to address the rapidly worsening situation in terms of falling water tables and diminishing water quality besetting vast areas of the country.

Priorities for the New Legislature

The water sector has been the object of much attention from policymakers for several decades. Most regulatory interventions have, however, been largely piecemeal as reflected in the fact that most water laws are sectoral (for instance, irrigation-specific) and fail to address the unavoidable connections amongst different uses and between surface water and groundwater. Some of the most glaring gaps, such as a missing framework of principles governing the water sector, have been partly filled by the Supreme Court and the high courts. This is an appropriate start but does not affect the governance of water on a daily basis at the local level, which is determined by the laws in place. Further, the lack of comprehensive legislation to address groundwater leads to a situation where the most important aspect is not regulated by comprehensive regulation, contributing to the increasingly dire situation in many states.

The new government should immediately make use of the two existing drafts prepared in the previous legislature and take them forward:

- » The adoption of the model law for groundwater – the Model Groundwater (Sustainable Management) Bill, 2017 – is crucial to ensure the equitable and sustainable use and protection of groundwater.
- » The adoption of a framework legislation based on the National Water Framework Bill, 2016, will ensure that there is a set of overall principles for the entire water sector reflecting legal developments in recent decades. This will ensure that all actors in the sector have the same point of reference in their interventions.

END NOTES

1. NITI Aayog, Composite Water Management Index (2018), 27
2. For example, *Debi Pershad Singh v. Joynath Singh* (1897) L.R. 24 I.A. 60 (Privy Council, 7 April 1897) for surface water and *Acton v Blundell* (1843) 152 ER 1223 for groundwater.
3. *MC Mehta v. Kamal Nath* (1997) 1 SCC 388 (Supreme Court of India, 13 December 1996).
4. NITI Aayog, Composite Water Management Index, 46.
5. Draft National Water Framework Act, 2011, http://www.planningcommission.nic.in/aboutus/committee/wrkgrp12/wr/wg_wtr_frame.pdf.
6. The text is available at http://mowr.gov.in/sites/default/files/Water_Framework_18July_2016%281%29.pdf.
7. Model Bill for the Conservation, Protection and Regulation of Groundwater, 2011, in Planning Commission, *Report of the Steering Committee on Water Resources and Sanitation for Twelfth Five Year Plan* (New Delhi: Government of India, 2012).
8. An earlier draft is available at http://mowr.gov.in/sites/default/files/Model_Bill_Groundwater_May_2016_o.pdf.



Safeguarding the Fragile Ecology of the Himalayas

SHYAM SARAN

The states of India which share the Himalayas are also its principal sentinels. Adaptation to climate change must become an integral part of their development strategies. The special vulnerabilities of this ecologically fragile region need to be recognized, as much as its rich natural resources in terms of forests, water wealth, biodiversity and tourism potential. While a number of long-term measures are included as part of the National Action Plan on Climate Change, 2008, several key and urgent interventions are vital to prevent the further degradation of the Himalayan ecology and to preserve their life-sustaining role for millions of our citizens. This includes those residing not only in the Himalayan states, but also in the entire Indo-Gangetic Plain. It is the perennial rivers arising from the snow mountains that sustain livelihoods in the plains. The new government must prioritize the safeguarding of the fragile ecology of the Himalayas among the issues requiring urgent attention.

Sustainable Urbanization in Mountain Habitats

The cities in the Himalayan mountainous zones are increasing in size and number. They exhibit the same degradation that plagues our cities in the plains: growing dumps of garbage and plastic, untreated sewerage, chronic water shortages, unplanned urban growth, and heavy pollution from increasing vehicular traffic. This phenomenon will only exacerbate the impact of climate change. The following immediate interventions by all the concerned states, supported by the Union government, are necessary:

(i) Town planning and adoption of architectural norms

Given the ecological fragility of mountainous areas, it is imperative to halt the unplanned growth of new settlements. Instead, there should be consolidation

of existing urban settlements to be governed through land-use planning incorporated in a municipal master plan. These designated settlements would be provided with all basic urban facilities, such as water supply, waste disposal and power, before further civilian growth is permitted. State authorities will prescribe regulations taking into account the particularities of the local ecosystem, including seismic vulnerability, the need to respect local aesthetics and harmony with nature, and the optimum population load the settlement can sustain, given the availability of water and power. Consolidation of urban settlements would also preclude the need to construct a larger number of road links to a multiplicity of destinations, which would cause further damage to the fragile ecology.

There are 12 Himalayan towns included in the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), which could serve as models in this regard.

Further action points may include:

- (a) Municipal by-laws to be amended, wherever required, to prohibit construction activity in areas falling in hazard zones or across alignments of natural springs, water sources and watersheds near urban settlements. There will be strict enforcement of these by-laws, including through imposition of heavy penalties and compulsory demolition of illegal structures.
- (b) The National Building Code will be revised by the central government, in consultation with the concerned state governments, to take into account the specific requirements of urban settlements in the Himalayan zone, including recommendations on the use of local materials and local architectural practices.
- (c) The state governments concerned will set up state-level urban arts councils, under relevant legislation, to oversee the implementation of the National Building Code for mountain areas and of respective master plans for designated urban settlements.

- (d) The compulsory use of solar water heaters, rainwater harvesting and appropriate sanitation facilities will be incorporated in the National Building Code and municipal by-laws in the concerned states.
- (e) Construction activity will be prohibited in catchment areas of cities, including along mountain lakes and other water bodies. Their feeder channels will also be kept free of building activity.

In order to enable these decisions to be implemented urgently, it is necessary to draw up, as soon as possible, a comprehensive state-wide inventory of such water resources and their channels, which could then be declared fully protected zones.

(ii) Solid waste management

The following policy directives could be considered:

- (a) The use of plastic bags should be banned in all hill towns and villages. This has been done with commendable success in the states of Himachal Pradesh and Sikkim.
- (b) Potable local water, certified by a designated state authority, may be provided through all commercial outlets, such as local shops and restaurants. This would discourage the use of bottled water, which adds to toxic plastic litter in hill towns and along trekking routes. This has been done successfully in Leh and promotes local employment. More recently, the use of water ATMs to dispense clean drinking water at affordable rates is being popularized and would be especially suitable in hill towns, pilgrim centres and tourist locations.
- (c) Each state must establish facilities for the composting of biodegradable household waste and recycling, and reuse of other types of waste. This may be done through public-private partnership wherever feasible. This will be followed by amendments to municipal by-laws that make the segregation of household waste mandatory, to be

accompanied by a focused awareness and public education campaign.

(d) An appropriate state tax or levy on all major commodities using plastic and/or non-biodegradable packaging that enter hill towns must be explored. This will create incentives to manufacturers of these goods to use/develop environmentally friendly packaging.

Promotion of Sustainable Pilgrimage

The following measures to promote the healthy and sustainable development of religious pilgrimage to the many sacred and holy sites scattered all over the Himalayas may be considered:

(i) A comprehensive inventory of key pilgrimage sites in each state would be drawn up, which would include analyses of the ecological capacity of each site, based on its location and fragility. The Union government will assist in this exercise, which would be carried out by multidisciplinary teams including engineers, scientists, ecologists, cultural anthropologists and respected NGOs.

(ii) In advance of the results of the above exercise, a plan must be developed to harmonize the inflow of pilgrims with the local environment's capacity to cater to the needs of pilgrims. These include the sources of several Himalayan rivers, sacred lakes and forest groves. The selected sites would be

listed through public consultation and consensus, and publicly announced. There may also be restrictions on the months of the year when these sites would remain open, to allow recovery of the ecology during the off-season, or on the numbers of visitors. Uttarakhand, for instance, has recently issued guidelines restricting the daily number of pilgrims to the Gangotri glacier (Gaumukh) to 150. In this context, plans to allow year-long access to high-altitude pilgrimage sites at Badrinath and Kedarnath should be abandoned.

(iii) The construction of roads should be prohibited beyond at least 10 km from protected pilgrim sites, thereby creating a much-needed ecological and spiritual buffer zone round these sites. These areas, like national parks and sanctuaries, could be maintained as special areas with minimal human interference, respecting the pristine nature of these sites. Where there are existing roads within the 10-km buffer, vehicular traffic should be allowed only beyond this limit.

(iv) Each designated pilgrimage site should have a declared buffer zone where development activity will be carefully regulated. Local communities residing in or around these sites must be given a role in the management of the buffer zone and encouraged to benefit from pilgrimage activities through providing various services to pilgrims. This has been tried out with some success in the Periyar Tiger Reserve in Kerala.



(v) At all entry points to designated buffer zones, pilgrims will be advised to take back all waste, in particular non-degradable items. Provision may be made to sell them waste collection bags, which could be made by local communities using local materials. Such waste may be collected and sorted out at special collection points outside the buffer zone, for disposal. A fee may be charged for the same.

Commercial and Adventure Tourism

The measures listed for regulation of pilgrim traffic in the Himalayan zone would also apply, to a large extent, to the promotion of ecologically sustainable tourism in the Himalayan region as a whole. The following interventions may also be considered:

- (i) Homestead tourism could be promoted in this area and commercial hotel tourism of the three- to five-star variety discouraged or prohibited. Local communities will be encouraged and enabled to provide homestead-based tourist facilities, through a package of incentives and capacity building. The successful experience with homestead tourism in Ladakh is a good example.
- (ii) Each state will set up a homestead tourism audit and certification agency to promote standardized and quality practices in designated tourism zones. These would include key environmental guidelines, such as the use of solar energy, use of organic produce, recycling of waste, cleanliness and hygiene, courtesy, knowledge of local culture and landscape, among others. This will also help educate tourists about the importance of safeguarding the Himalayan ecology.
- (iii) Recognizing the adverse impact on Himalayan ecology of unrestrained expansion in vehicular traffic, each state should impose an entry tax for vehicles entering important hill towns. A similar tourism tax or trekking charge may be levied for all ecologically fragile zones. The proceeds from such taxes should be used for creating better facilities (for example, clean toilets, tourist shelters) and for benefiting local communities.

(iv) Parking fees for private vehicles in hill markets and hill towns need to be raised substantially to discourage such traffic, thereby reducing both congestion and pollution. Each hill town will designate the central parts of the town as walking areas, with access provided by pollution-free electric or CNG buses.

Green Road Construction

Roads are the lifeline of this remote and inaccessible region. However, the construction of roads must fully take into account the environmental fragility of the region. The concerned state governments must consider promulgating, as soon as possible, the following guidelines for road construction in hill areas.

- (i) Environmental Impact Assessment should be made mandatory for the construction of all state and national highways, and expressways of more than 5 km length, including in the extension and widening of existing roads. This will not apply to inter-village roads.
- (ii) Road construction must provide for the treatment of hill slope instabilities resulting from road cutting, cross drainage works and culverts, using bio-engineering and other appropriate technologies. Cost estimates for road construction in these areas should henceforth include estimates on this account.
- (iii) Plans for road construction must provide for disposal of debris from construction sites at suitable and identified locations, so as to avoid ecological damage and scarring of the landscape. Proposals for road construction must henceforth include cost estimates in this regard.
- (iv) Hot mix plants must only be set up at least 2 km away from settlements. These sites should have a minimum open area of 200 sq metres and should be already devoid of vegetation.

- (v) All hill roads must provide adequate roadside drains and, wherever possible, be connected to the natural drainage system of the area.
- (vi) Alignment of proposed roads should avoid fault zones and historically landslide-prone zones. Where this may not be possible, adequate measures must be taken to minimize associated risks, in consultation with experts.

Water Security

The importance of the Himalayas as a natural storehouse and source of water must be acknowledged fully. The region is already under water stress, with the drying up or blockage of many water sources and natural springs. The following immediate actions are necessary:

- (a) Each Himalayan state must initiate a state-wide programme for rejuvenation of Himalayan springs and protection of high-altitude lakes.
- (b) The government must provide legislative protection for mountain lakes, natural springs and key water sources, and prohibit construction activities along these water bodies.
- (c) Relevant bodies should inventory mountain springs (active and dormant) and also carry out detailed geological mapping to identify spring recharge zones.

Building Environmental Awareness

- (a) Local festivals and fairs must be utilized to spread environmental awareness, with the protection of the environment being linked to local cultures and festivals.

- (b) Central and state governments must together organize an annual festival of the Himalayas to celebrate local cultures, which demonstrate ways of sustainable living for resilient societies in harmony with the pristine nature of the Himalayas. This will also expose the rest of the country to the importance of the Himalayas in India's national life.

Safeguarding the Himalayas: A National Endeavour

There are grave concerns about the challenge the country faces from the impact of climate change on the fragile and life-sustaining ecology of the Himalayas. This spectacular mountain chain is inextricably linked with India's civilizational ethos and the spiritual and cultural sensibility of our people. It is necessary to initiate and develop a truly national endeavour to safeguard the pristine ecology of the Himalayas. A coordinated approach between the Union and state governments in the Himalayan states is imperative if we are to successfully meet this challenge. It is in this spirit that the prime minister should convene a meeting of the chief ministers of the Himalayan states. The deliberations at the meeting, and the adoption of certain urgent and specific guidelines and decisions, would be the first step in formulating a comprehensive and ambitious national mission for sustaining the Himalayan ecosystem. The prime minister and the chief ministers should meet annually to exchange views, share experiences, review progress and evolve practical and effective measures to make this national mission a success.



Regulating New Technologies: Three Central Principles

ANANTH PADMANABHAN

Technology has significantly driven India's growth over the past decade. Be it the rise of well-funded startups and 'unicorns', the imaginative use of technology for governance, or the emergence of India as a hub for R&D activity and a test bed for product innovation, technology is an important driver for growth in India. A 2018 report by the Startup India Initiative states: 'The ecosystem comprises of over 14,600+ Startups, approximately 270 incubation & business acceleration programs, 200 global & domestic VC firms supporting home-grown Startups, and a fast-growing community of 231 angel investors and 8 angel networks. India also boasts of being home to the 3rd largest unicorn community, with over 16 high valued Startups having raised over \$17.27 billion funding, with overall valuation of over \$58 billion.'¹

But with this exponential growth comes a set of policy and regulatory challenges. First, government policy and the regulatory framework need to be aligned to enable the growth of a robust technological ecosystem, rather than impede it. The global competition for leadership positions in emerging technology domains, such as artificial intelligence, drones, gene editing and other areas, has become aggressive, with China becoming a lead contender. This global race demands impactful innovation policies that ease up creative and inventive activity, but in a responsible manner.

Second, as various incidents post 2016 demonstrate, the rise of the digital has created new vulnerabilities and new types of harm to individual and group rights. A digitally connected ecosystem is rife with security concerns, which are exacerbated when digital literacy

does not keep pace with digital use. Moreover, with personal data becoming a critical tool for monetization and profiling, the incentive for both industry actors and the state to secure such data and respect individual privacy is quite low. Both the Facebook–Cambridge Analytica controversy and the unrestricted seeding of Aadhaar data in multiple databases to build a 360-degree view of citizens indicate distinctive kinds of threats to individual and community rights. Therefore, respect for privacy and individual/community rights must be externally imposed, with regulations playing a part in this process.² In short, developing an indigenous regulatory framework for new technologies is a pressing need for India. Three central principles are integral to this transition.

Three Central Principles

The first principle for regulators and policymakers to bear in mind is **clear identification of the problem that regulation must address**. While this is not unique to the technology context, there are a few specificities in this field that make this principle worth emphasizing. Often, technological change affects sectors that are under an existing regulatory apparatus, as seen in the case of online cab aggregators or food delivery services. When regulators attempt to transplant this apparatus to a new factual reality, a common mistake is to assume that regulations must address the same set of problems as witnessed in the earlier non-tech scenario. But in doing so, the regulatory response addresses more problems than required, because technology-enabled models are likely to sort out at least some concerns.³ This response also presents the danger of under-inclusion as new challenges raised by technology-based models may be missed in the process. Therefore, it is imperative to clearly identify surviving and new problems caused by technology, separate those that demand immediate regulatory attention from others that may only require a wait-and-see approach, and then develop targeted regulatory and monitoring strategies for each of these concerns.

For instance, the draft e-commerce policy released for discussion in 2019 defines 'e-commerce' as including 'buying, selling, marketing or distribution of (i) goods,

including digital products and (ii) services; through electronic network'. Evidently, this is an extremely wide definition that brings within regulatory control a wide range of activities from online retail to app-based health delivery. The document also attempts to outline policy for a host of different problems: data; infrastructure development; e-commerce marketplace regulations such as anti-counterfeiting, anti-piracy and foreign direct investment; consumer protection; payment related issues; export promotion; and content liability exemption, among others. The concerns of social media are far removed from fashion retail, and consumer woes pertaining to online travel booking differ vastly from digital health solutions.⁴ The unfortunate result is a heavily diluted effort that portends regulatory overreach. To avoid this in the future, regulatory approach must shift course from deciding in advance the range of business activities that need regulation to identifying the specific problems that proposed regulations must address, under the first principle discussed above. Inability to do so would only cause apprehension and uncertainty for businesses, and extremely ineffective and diluted protection for citizens.

The second principle is to **prioritize a risk-based and responsive regulatory approach**. When regulating unfamiliar territory, as is mostly the case with new technologies, proclivities to entirely ban an activity or create restrictive pre-activity licensing models are high. The bureaucratic instinct to play safe and apply a 'precautionary principle' comes at the cost of innovation and entrepreneurship.⁵ Moreover, because many new technologies have cross-cutting impact, even these decisions are taken in silos with one agency or regulator taking a more pro-technology view while another acts more restrictively.

The changing stance on data localization in India suffers from failure to adopt such a risk-based approach. At the heart of this debate is whether private entities must be compelled to store the data of Indian citizens in servers located within India. A compelling rationale offered in support of this measure is that law enforcement officials find it difficult to investigate criminal misconduct when data resides in servers located else-

where. Another rationale offered is the threat to national security because of the possibility that foreign governments can spy on Indian citizens, taking advantage of the fact that their data resides in servers within their jurisdictions. A third rationale argues that localization can help advance a domestic artificial intelligence and data ecosystem, as done by China previously.⁶ But amidst these multiple narratives, there is no clear study from the Government of India or any of the regulators about the extent of harm caused because of servers residing outside India, the less restrictive measures that could equally address any of these concerns.

To address these concerns, the regulation of emerging technologies should be risk-based and responsive. This new approach involves detecting undesirable or non-compliant behaviour, responding to that behaviour by developing tools and strategies, enforcing those tools and strategies on the ground, assessing their success or failure, and modifying approaches accordingly.⁷ By valuing these processes, the overall approach towards regulation changes in an organic manner. Risk assessment involves multi-stakeholder conversations and an engagement with data that goes beyond projected fears and growth narratives. It entails creating a mechanism meant to gather the requisite information, including engagement with technical bodies. Finally, it also brings about some consensus among different regulatory bodies regarding the kind of enquiry involved, if not the answers to such enquiry. A healthy debate on the risks surrounding a new technology is essential for the creation of a proportionate regulatory framework that balances innovation and protection effectively.

The third principle is to **value democratic principles and fundamental rights**. The rise of the Internet and digital technologies has resulted in a loss of traditional state power and authority, leading to reassertion of control on the part of the bureaucracy. This reassertion now presents itself in the form of various regulatory controls such as demands to keep the privacy baseline low so that the state can easily access private communications, attempts to monitor online speech and to impose criminal and civil liabilities upon those expressing

unpopular or undesirable views, and restrictive business requirements on private actors such as data localization. These controls, increasingly justified on the basis that China has relied on similar interventions to successfully build its innovation ecosystem, carry extremely harmful consequences for the future of democracy in India.

While many of governmental interventions do not come from a place of mala fide intent, it is important to be reminded often, as a polity, and especially so for policymakers and regulators, that India is built on a foundation of democratic values and crucial constitutional safeguards. As our experience with Section 66A of the Information Technology Act, 2000 – subsequently struck down by the Supreme Court in *Shreya Singhal v. Union of India*⁸ – demonstrates, the impetus to regulate online behaviour or technological innovation should not emanate from a deep-seated desire to command and control. Such a desire is likely to result in unconstitutional behaviour and impermissible inroads into the fundamental rights of citizens, including free speech and expression and the freedom to do business. While realities such as the virality of fake news in the age of social media raise serious concerns, responses cannot be built on the assumption that a strong state (like China) can put a stop to these concerns. Moreover, often responses of this kind change the very dynamic of citizen-state engagement in a democracy, leading to possible misuse and a surveillance architecture that evokes fear.

Recommendations

The regulatory interventions coinciding with India's period of technology-led growth have been a mixed bag. Privacy may have found its ally in the Indian Supreme Court, but the data protection bill has long been in the works without much-needed push from the government to formalize it as a legislation.⁹ Moreover, many of the safeguards against misuse of Aadhaar data, emphasized by the Supreme Court when upholding the validity of the Aadhaar Act, have been watered down through a recent ordinance that bypassed legislative scrutiny.¹⁰ The data localization debates reveal uncoordinated action between different power centres within

the government, resulting in both business unpredictability and the fear of censorship through architectural changes to the Internet. Recent proposals in the realms of e-commerce and intermediary liabilities do not indicate well-thought-out measures of regulation that factor in the capacity for enforcement, the impact on fundamental freedoms including speech and business autonomy, or the proportionality of state action.¹¹

Yet, there have been some green shoots as well. The drone policy is one such, coming as it did from a place of outright ban on the technology in 2014 to a state-of-the-art reg-tech solutions like Digital Sky and Regulations 1.0, in 2018, that leave room for further iterations that match the pace of technological advances in this sector.¹² The Telecom Regulatory Authority of India's position on net neutrality has been largely well received across the range of different stakeholders. On digital payments, the government has displayed considerable sensitivity towards various concerns ranging from innovation in the sector to consumer dispute redressal mechanisms and competition concerns. In all these cases, what comes through is some degree of mindfulness to the central principles outlined here. The government should now build on these early successes to develop appropriate regulatory toolkits.

Any regulatory intervention in the field of technology policy must begin with an insistence on a clear outlining of the harms involved and a mapping of the various alternate policy measures that could be potentially taken to address these harms. This is a good starting point for citizens and other stakeholders to develop awareness of the challenges that the state wishes to address, and the fit between these challenges and the proposed regulatory measures. The European Union has insisted on similar measures as part of its 'Better Regulation' principles.¹³ The responsibility cast on the regulator to explain why it is regulating in the manner it proposes can make a significant contribution towards providing certainty, accountability and curbs on arbitrary intervention.

Regulation of new technologies should also enable experimentation with bespoke regulatory approaches and tools, as well as with innovative market solutions,

both in a contained low-risk environment. 'Experimental regulation' seeks to achieve this objective by providing exceptions to, or exemptions from, existing regulation in a ring-fenced environment.¹⁴ In many countries, experimental regulation has taken the form of sandboxing schemes. The UK Financial Conduct Authority's Project Innovate is a live example of regulatory sandboxing for financial technologies. Other jurisdictions such as Australia, Singapore, Switzerland, Hong Kong, Thailand, Abu Dhabi and Malaysia have also been experimenting with similar initiatives.¹⁵ India needs to create more comprehensive thinking across multiple regulators about the efficacy and modalities of such regulatory sandboxes.

As many of the new technologies cannot be confined in clear terms to the regulatory jurisdiction of any one regulator, India also needs to develop strategies for better inter-agency coordination. The data localization controversy revealed how different regulatory and recom-mendatory bodies were at odds with each other on how to address this issue. Because data is a cross-cutting asset across multiple sectors, it is imperative to build better coordination and some uniformity in decision-making on matters of data governance. In the US, the Obama administration had created an Emerging Technologies Interagency Policy Coordination Committee to tackle the problem of siloed decision-making. Israel has estab-lished an inter-agency team to coordinate regulation of virtual assets. India must learn from these exercises and build a more coordinated regulatory strategy for data governance as well as other realms of new technology.

Finally, important regulatory interventions should also carry the mandatory requirement of a rights impact assessment. The current relationship between regulators and civil society is mostly one of direct acrimony and distrust, especially when it comes to regulating the Internet and digital technologies. The only way to usher in a structured change is to mandate a clear rights impact assessment, where the regulator must necessarily gauge the implications of the proposed regulatory approach on fundamental and human rights. Many instances of excessive and harsh regulations can be pre-empted at an early stage if this mechanism is built into the regulatory process.

END NOTES

1. 'States' Startup Ranking 2018' (New Delhi: Department of Industrial Policy & Promotion, 2018), 7-8, https://www.startupindia.gov.in/content/dam/invest-india/compendium/Startup%20India%20-%20National%20report_Final%20Version_web.pdf.
2. Alvin Chang, 'The Facebook and Cambridge Analytica Scandal, explained with a simple diagram', *Vox*, 2 May 2018, <https://www.vox.com/policy-and-politics/2018/3/23/17151916/facebook-cambridge-analytica-trump-diagram>; Rachna Khaira et al., 'UIDAI's Aadhaar software hacked, ID database compromised, experts confirm', *Huffington Post* (11 September 2018), https://www.huffingtonpost.in/2018/09/11/uidai-s-aadhaar-software-hacked-id-database-compromised-experts-confirm_a_23522472/.
3. Ryan Hagemann, 'A regulatory framework for emerging technologies', *1776*, 16 March 2016, at <https://www.1776vc.com/insights/regulation-emerging-technology-government-drones-hyperloop/>.
4. See Ananth Padmanabhan and Arjun Sinha, 'White Paper on Regulating E-Commerce in India: Need for a Principles-based Approach' (New Delhi: Centre for Policy Research, 2019), <http://www.cprindia.org/research/reports/white-paper-regulating-e-commerce-india-need-principles-based-approach>.
5. Darcy Allen and Chris Berg, 'Regulation and Technological Change', in *Australia's Red Tape Crisis*, edited by Darcy Allen and Chris Berg, 218, 226-227 (Queensland, AU: Connor Court Publishing, 2018).
6. Compare, in this regard, the Reserve Bank of India Directive RBI/2017-18/153 dated 6 April 2018 with the draft National E-Commerce Policy.
7. Julia Black and Robert Baldwin, 'Really Responsive Risk-based Regulation', *Law & Policy* 32(2) (2010): 181.
8. (2015) 5 SCC 1.
9. *K.S. Puttaswamy v. Union of India* (2017) 10 SCC 1; Surabhi Agarwal, 'Personal Data Protection Bill only after new government takes over', *Economic Times*, 4 January 2019, <https://economictimes.indiatimes.com/tech/internet/personal-data-protection-bill-only-after-new-government-takes-over/articleshow/67374919.cms>.
10. *K.S. Puttaswamy v. Union of India* (2019) 1 SCC 1; Zaheer Merchant, 'Supreme Court refuses to entertain challenge to Aadhaar ordinance, tells petitioners to approach High Court', *Medianama*, 8 April 2019, <https://www.medianama.com/2019/04/223-supreme-court-refuses-to-entertain-challenge-to-aadhaar-ordinance-tells-petitioners-to-approach-high-court/>.
11. See 'Draft National E-Commerce Policy: India's Data for India's Development' (New Delhi: Department of Industrial Policy and Promotion, 2019), https://dipp.gov.in/sites/default/files/DraftNational_e-commerce_Policy_23February2019.pdf; 'Draft Information Technology [Intermediaries Guidelines (Amendment) Rules], 2018' (New Delhi: Ministry of Electronics and Information Technology, 2018), https://meity.gov.in/writereaddata/files/Draft_Intermediary_Amendment_24122018.pdf.
12. 'Civil Aviation Requirements', Series X, Part I, Issue I: Requirements for Operation of Civil Remotely Piloted Aircraft System (RPAS), F. No. 05-13/2014-AED Vol. IV (New Delhi: Directorate General of Civil Aviation, 2018), <http://dgca.nic.in/cars/d3x-x1.pdf>.
13. 'Better Regulation Toolbox' (European Commission, 2017), http://ec.europa.eu/smart-regulation/guidelines/docs/br_toolbox_en.pdf.
14. Sofia Ranchordas, 'Innovation-Friendly Regulation: The Sunset of Regulation, The Sunrise of Innovation', *Jurimetrics* 201 (2015): 55.
15. *Regulatory Sandbox: Making India a Global Fintech Hub* (Deloitte, 2017), available at <https://www2.deloitte.com/content/dam/Deloitte/in/Documents/technology-media-telecommunications/in-tmt-fintech-regulatory-sandbox-web.pdf>.

Policy Challenges | INCLUSIVE 2019 – 2024 CITIZENSHIP



India is no stranger to the challenges of inclusion, be it in the matters of religion, caste or even labels of employment. However, in the recent years, its goals of pluralism and tolerance have come under significant strain. In the process, the concept of Indian citizenship is being challenged in unprecedented ways. In this section, CPR faculty examine several aspects of Indian society where the question of inclusion has come to the forefront or should be brought there. The section discusses how courts are struggling with the challenge of reconciling tradition with citizenship, how the constitution is grappling with protecting the Scheduled Castes and Scheduled Tribes and how sanitation workers being denied the right to safe and dignified work.



Courts, Tradition and Citizenship

SHYLASHRI SHANKAR

Muslim wives have finally rid of the Damocles' sword of triple talaq, homosexual men and lesbian women are free to express their sexuality without fearing arrest, and adulterers can make the choice to commit such acts without being penalized by the Indian state. These judgments of India's Supreme Court, particularly in the arena of religious freedom, have evoked approval from liberals who call it 'progressive', anger among those who value 'tradition' and 'religious commandments', and disquiet among those who wonder if balance between conflicting freedoms has indeed been achieved, and whether courts ought to be in this fray.

The issues involved are threefold: (i) how can traditional values cohere with the concept of citizenship (this question concerns the role of tradition in creating a community, and the extent to which that sense of belonging to a group or a community is an important feature of our citizenship);

(ii) to what extent can a pluralist democratic polity reconcile tradition and religion with the concept of equality without losing the diversity; and (iii) whether the state ought to play the primary role in mediating these conflicts, and if so, which institution of the state should take on the responsibility.

I will discuss these issues in the context of the Sabarimala temple judgment and argue that the institutions of the state ought to be the last resort for such issues, not the first one, if we want to inculcate the values of engaged citizenship. The task of the government and the courts is to create a safe space where citizens can engage in these debates.

On 3 October 2018, a 4-1 majority of a Constitution bench of India's Supreme Court held that the Sabarimala temple's practice of barring the entry of women between the ages of 10 and 50 was unconstitutional. The temple authorities had

justified the exclusion of a sub-set of women from the temple as an ancient tradition. They pointed to Section 3(b) of the 1965 Kerala Hindu Places of Worship (Authorisation of Entry Act), which allows the exclusion of ‘women at such time during which they are not by custom and usage allowed to enter a place of public worship’. Hence, said the temple authority, they had the right to bar the entry of women of menstruating age into the Ayyappan temple in Sabarimala. Opponents of the practice highlighted other constitutional provisions such as Article 25(1), (freedom of worship), Article 26 (freedom of religious denominations to regulate their own practices), and Articles 14 and 15(1) (equality and non-discrimination), and Article 17 (banning untouchability).

The majority judgment said women as individuals had the right to freedom of worship (Article 25) and barring their entry contravened that right. It laid down that the Sabarimala custom did not constitute an essential practice of religion, and even if it was (as Justice Khanwilkar said), it did not matter because Sabarimala was not a separate religious denomination from Hinduism.

The sole dissent by Justice Indu Malhotra disagreed on the following grounds: that the equality provision (Article 14) did not override the right to religious freedom (Article 25); and that ‘constitutional morality in a secular polity would imply the harmonisation of

the Fundamental Rights, which included the right of every individual, religious denomination, or sect, to practise their faith and belief in accordance with the tenets of their religion, irrespective of whether the practice is rational or logical’.

The Sabarimala case highlights an area where judges have often disagreed with one another. This is on the contours of the balance between the principles of equality and non-discrimination on the one hand, and protecting the freedom of faith, belief and worship guaranteed by Article 25 and Article 26, on the other. The judicial disquiet pertained to whether and how the court ought to deal with group-created traditions that conflicted with the principle of equal access. What the judges were asking in the Sabarimala judgment was this: which agency – individual citizens, the state, political parties and civil society organizations – should be the channel for creating the textured citizenship that promotes openness, tolerance and diversity?

The Sabarimala pilgrimage is like a haj for devout Hindu men who conform to strict rules of behaviour (fasting for 41 days, sleeping on the floor, wearing a mala and black clothes, and eschewing material temptations) prior to their trek to the temple of Lord Ayyappan, a celibate deity. While Hobsbawm is right in saying that traditions are invented, if tradition creates a sense of belonging, if to belong and be part



of a group also means to exclude other groups, and if in our daily lives we purposefully elect to undertake particular activities that create such communities (and exclude others from that community), then who should map these contours?

The majority and minority opinions in the Sabarimala case gave different answers, and both used the concept of ‘constitutional morality’ to make their argument. Justice Chandrachud (concurring with the majority ruling) linked the exclusion of women from the pilgrimage to the larger issue of patriarchy as a social institution that needed to be transformed so that women (like Dalits – and here he linked the issue to untouchability and the Indian Constitution’s mandate to deliver social justice) gained access to public spaces such as temples. Justice Indu Malhotra (dissent) said constitutional morality in a secular polity meant harmonizing other rights with the fundamental right to practise religion.

The recent triple talaq judgment too highlights the dissension among judges in this sphere. The majority ruling said the question to be considered was whether triple talaq was legal: ‘Whether what is Quranically wrong can be legally right is the issue to be considered in this case ... What is held to be bad in the Holy Quran cannot be good in Shariat and, in that sense, what is bad in theology is bad in law as well.’ They based their judgment on the 1937 Act whose purpose ‘was to declare Shariat as the rule of decision and to discontinue anti-Shariat practices with respect to subjects enumerated in Section 2 which include talaq’. Since no practice against the tenets of Quran was permissible under this Act, and triple talaq was antithetical to the Quran, the practice of such a mode was bad in law as well, they said. They ended with the view that ‘it is not for the Courts to direct for any legislation’.

The minority opinion (which included the Chief Justice) implied that constitutional protection was given to triple talaq, and therefore it was up to the Parliament, not the courts, to pass that law. It directed the

Union of India to undertake that process taking into consideration the advances in Muslim personal law. Their stopgap arrangement ‘till such time as legislation in the matter is considered’ was ‘injuncting Muslim husbands, from pronouncing “talaq-e-biddat” as a means for severing their matrimonial relationship’.

These issues do not have easy resolutions particularly in the 21st century where technology and higher literacy have created pathways for ideas to travel globally, and where citizenship is being exercised in more vocal ways. Belonging, as British sociologists like Yuval-Davis and Mike Savage point out, is not an essential or purely discursive concept, but is socially constructed, embedded and processual; people reflexively assess whether they feel comfortable in a place in relation to their life and to their positions and roles. When you embark on a haj or a pilgrimage (for example, to Mecca or to Sabarimala), you are also choosing to be part of a community of believers of that tradition.

Traditions create social cohesion. Unlike convention, which displays a habit or routine, tradition has a significant ritual or symbolic function. Tradition imposes invariance: drums cannot replace the bugles that signal the end of the Beating the Retreat ceremony. In 1983, British historians Eric Hobsbawm and Terence Ranger edited a volume entitled *The Invention of Tradition* where the contributors explored examples of invented traditions in Scotland and colonial Africa, and the pageantry of monarchy in Great Britain, Victorian India and 20th century Europe. Tradition is invented for three types of reasons, they say: (a) those establishing or symbolizing social cohesion of groups; (b) those establishing or legitimizing institutions (pomp and pageantry); and (c) those whose main purpose was socialization, the inculcation of beliefs, value systems and conventions of behaviour. If Hobsbawm and Ranger are right that tradition is invented to create social cohesion, then changing tradition, as done in the Sabarimala judgment, comes at a high price.

One may argue that the Sabarimala judgment will trigger a new and more inclusive tradition and create a larger community. However, it is the court, an institution of the state, which has created this new tradition. What is the problem with that, you may ask. As philosopher Roger Scruton says,

by citizenship I mean a specific form of communal life, which is active, not passive, towards the business of government. The citizen participates in government and does not just submit to it. Although citizens recognize natural law as a moral limit, they accept that they make laws for themselves. They are not just subjects: they appoint the sovereign power and are in a sense parts of that sovereign power, bound to it by a quasi-contract which is also an existential tie. The arrangement is not necessarily democratic, but is rather founded on a relation of mutual accountability.

Mutual accountability implies that the state—that is, the legislature, executive and the judiciary—must respect a citizen's need and ability to create a patchwork of belonging and unbelonging, as long as these do not unduly harm the rights of other citizens. There lies the problem for India's courts.

The constitutional diktat to the Indian state to create the conditions for social justice has meant that the judiciary has become involved in assessing whether a religious practice coheres with or contradicts social justice. The concept of 'essential practices of religion' was coined because the court had to make a distinction between matters of religion and matters of secular activity amenable to state regulation. Here, we see the practical implications of the twin constitutional injunctions on the Indian state: to address the historical inequities meted out to Scheduled Castes and Scheduled Tribes while pursuing a vision of inter-religious bonhomie through the guarantee of religious freedom and secularism. Social justice meant that the state had to answer legal challenges to its intervention in reforming the religious practices of Hindus such as allowing entry

of the lowest castes into temples and abolishing untouchability. The fulfilment of inter-religious bonhomie called for caution in dealing with the large Muslim minority who remained after the Partition, and took the form of non-intervention in the religious practices of Muslims and Christians.

Analysis of case law reveals that the concept of 'essential practices' crops up in the court on issues where the state has to regulate the secular functions of a religious group (applies to all religions), or when the state has to undertake social reform among Hindus, or when a religious practice is at odds with a constitutional directive to the state. Essential practices, in relation to Hindu custom such as untouchability and temple entry that contravened a constitutional command, were treated differently (that is, the state's interventions were allowed) by the court compared with practices (such as excommunication among Bohras) that did not contravene a constitutional command.

The wording of the majority opinions in these recent judgments on decriminalizing homosexuality and adultery, ending the practice of divorce by triple talaq among Muslims, and ending gender discrimination suggests that these judges are trying to create a just and equal order for individual citizens (liberty, equality and fraternity) by removing the archaic practices of discrimination in group activities. The wording of the minority opinions suggests that these judges want the political arm of the state (the legislature and executive) to create such an order.

It does not help that in the past four decades, there has been a growing attempt by politicians to send contentious political issues to the courts so that they themselves do not suffer the backlash during elections. Fragmented vote banks, unstable coalitions and fractured legislatures are cited as possible reasons for such transference. The judiciary, on its part, is aware that by choosing to decide on such questions, it risks non-implementation of its judgment, and a consequent decrease of its prestige and authority.

Recently, the Bombay High Court said women could not be barred from entering the sanctum sanctorum of a Sani temple, a practice that has a 100-year-old footprint. This was after 400 women activists tried to enter the core shrine area and were stopped, and two activists approached the court through public interest litigation. Another Sani Shinganapur temple, this one in Ahmednagar, had to allow women to enter the temple premises in 2011 – women were barred before that from even stepping into the temple premises – after rationalists carried out a mass awareness campaign. It is this kind of dialogue and compromise that I am alluding to – one where state institutions play little or no role, and if they do, it is the last resort, not the first one. Otherwise, we risk creating an anodyne and sterile citizenship bereft of deliberate and articulated choices to belong or not belong to a tradition, and also of the ability to transform social practices in association or in dialogue with fellow citizens, without necessarily involving the state.

As deliberative spaces increase in an age of high connectivity and social networks involving a more literate and connected citizenry, the next government faces three challenges in this space.

- 1.** First, it has to create enabling conditions for the concerned groups to challenge and deliberate with one another in safe spaces (virtually and in person) so that they use the representative and judicial institutions of the state as the last and not the first resort. Political representatives, that is, lawmakers, should enter the picture only after a level of consensus necessary to create a stable solution is achieved. The process of active citizenship implies that the principles for a just order are forged by each citizen through a process of contention and engagement within a safe space provided by the government.
- 2.** Second, when state institutions are tasked with resolving such contention, the implementation of orders (for example, a judgment) ought to be carried out promptly even when the decision does not resonate with the ruling party's stance.
- 3.** Third, and most difficult for the new government, is how it plans to restrain its party members and other politicians from transferring contentious political questions to courts, and also to impose self-restraint in pushing through constitutional amendments by citing election manifestos.



In Need of Structural Repairs: The Social Justice Project

D. SHYAM BABU

A conspicuous feature of Indian society is the caste system, which is birth-based and hierarchical. In that system, Brahmins (priests), Kshatriyas (warriors) and Vaishyas (tradespeople) are defined as the twice-born and hence upper castes, while the Shudras (artisans) are the servile caste whose sole purpose is to serve the top three castes. The Dalits (former ‘untouchables’) are outside the caste system, hence the moniker Panchamas (the fifth caste, or the outcastes)—a group seen as not even fit to be part of the fourth, servile group, the Shudras. However, recent policy innovations aimed at bringing about inclusive growth have sought to blur these distinctions in such a way as to turn the social justice project under the Constitution of India on its head. It is one thing to assert that every group that needs the state’s support must get it, but it is altogether different to say that

the highest in the caste system are as eligible for the state’s patronage as the lowest.

Parts III and Part XVI are the heart and soul of the Constitution. While Part III grants to all Indians the fundamental rights akin to any other democracy, Part XVI addresses the special needs of certain sections – the Scheduled Castes and Scheduled Tribes (SC/STs) and others – who were not in a position to access their rights primarily due to the caste discrimination they suffer from. This section (from Articles 330 to 342) is based on the assumption that while the SC/STs are the victims of caste, there might be other ‘socially and educationally backward classes’ left out of development and in need of the state’s help. As the founding fathers were not sure of the identity of this latter group, they stipulated the establishment

of a commission under Article 340 to find out who these classes were and recommend measures to help them; this group came to be known as the Other Backward Classes (OBCs). While the exercise to identify those in need of help has proven to be a never-ending process, it seems to have now entered a phase of chaos.

Of late, two amendments to the Constitution (123rd and 124th amendments) have sought to effect social engineering of a problematic kind. While the 123rd's import is that Shudras (OBCs) are as badly off as Dalits and tribals (SC/STs), the 124th equates the upper castes—Economically Backward Classes (EBCs)—with Shudras. The blurring of well-recognized social cleavages appears to extend the logic that acknowledging social divisions like caste accentuates those divisions. These two legislative innovations coupled with two other related developments, discussed below, have turned the social justice project under the Constitution on its head.

Recent Developments

NCBC

Through the 123rd amendment the government has set up the National Commission for the Backward Classes (NCBC). Its earlier avatar was a mere entity created by an Act of Parliament; the new version is 'Constitutional'. The amendment inserted a new Article, 338(B), which falls in Part XVI. The new Article is actually a replica of Article 338 under which the National Commission for the SC/STs (NCSCST) was set up. In the early 2000s, the government bifurcated the NCSCST into two: one for the SCs under the original Article 338 and the other, Article 338A which is a replica of the former. Given the almost similar condition of these two groups and the felt need for an exclusive commission for the STs, the bifurcation was amply justified. However, the same treatment for the NCBC amounts to clubbing OBCs with the SC/STs. There are two dangers implicit in the move.

One, under Sub-clause 5(b), all three commissions are enjoined 'to inquire into specific complaints with respect to the deprivation of rights and safeguards' of their respective wards. It is incorrect to assume that OBCs are similar to the SC/STs to such an extent that they need similar safeguards. A logical corollary is that an ill-defined right is bound to kick off a new breed of litigation. The aim of the Constitution is to pull the SC/STs out of their low condition but the new NCBC is by default designed to push OBCs into a condition similar to the SC/STs. In other words, the 'reform' will end up converting OBCs into SC/STs.

Two, under Clause 8, all three commissions are given 'the powers of a civil court trying a suit'. The original provision in the case of SC/STs is due to the fact that these two groups are systematically subjected to discrimination, intimidation and violence. Moreover, in many instances of 'atrocities' against these two groups, the accused happen to be the OBCs. Therefore, next time an instance of atrocity is reported wherein the OBCs are the alleged perpetrators, the NCSC or NCST will find itself pitted against NCBC.

Quota for EBCs

Through the 124th amendment the government introduced 10% quota in educational institutions and central government jobs for EBCs. Phase 1 of our quota system sought to help the victims of caste (the SC/STs), and phase 2 focused on those who are mere left behind in the caste system (OBCs). The current phase 3 is geared to benefit those who are at the top of the caste heap, the upper castes, who are not the victims of caste system but its perpetrators. It cannot be anybody's case that the poor among the so-called upper castes do not deserve state patronage. Under Article 340, the founding fathers did envisage a mechanism to help the needy ('socially and educationally backward classes') but what they had in mind was allocation of financial resources ('the grants that should be made for the purpose'), not setting aside quotas. Although the finer point is a lost cause, the issue deserves attention as it has the potential to make the whole social justice project unworkable.

Verdict on the SC/ST Act

Another fairly recent related development is the Supreme Court's verdict in March 2018 wherein it sought to 'dilute' the SC/ST Atrocities (Prevention) Act, 1989. The Supreme Court reasoned that the misuse of the Act was so rampant that it needed to provide safeguards for those falsely accused under the Act. The ensuing controversy hinged on two opposite arguments: one holds that the atrocities suffered by the SC/STs still remain widespread, not warranting any dilution of the Act, and the other view holds that misuse of the Act is sufficiently widespread – the apex court's position in the judgment. So far, only opinions have been flying back and forth, but the nation has no idea of the facts. Therefore, even though the matter is sub judice, there is an urgent need to revisit Part XVI, and the laws and institutions that emanated from it, along with collecting instances of use and misuse.

Money without Motive

Separate budgetary allocations for the betterment of SC/STs are classified under two heads: the Scheduled Caste Sub-Plan and the Tribal Sub-Plan. The logic behind these plans is that the government must allocate resources for the welfare of these two groups and the percentage of those allocations must be in proportion to their population in the country. However, the allocations are split vertically and horizontally, resulting in the extraordinary situation of some departments receiving large amounts (sometimes hundreds of crores) under these plans with no or insufficient guidelines on how to spend the money. In the past, the Planning Commission was the nodal agency for this head but it didn't do a great job. Although the NITI Ayog is now the nodal agency, it has expressed its inability to discharge this duty. Therefore, no agency or ministry is bothered about a large chunk of budgeted amount (in the range of one-fourth of the national budget). For example, this year a few scientific and agricultural research institutions suddenly woke up less than a month before the closure of financial year to the fact that they needed to spend money on the welfare of SC/STs.

Broad Policy Direction

The government must revisit Part XVI of the Constitution with the aim of according its social justice project the dignity it deserves. Moreover, the recent toxic accretions would, if not removed, erode the whole mechanism. For example, in the context of reservations in educational institutions and quotas in government jobs, the OBCs are equated with the SC/STs. It will be a small step to extend the logic to political representation for the OBCs in the Lok Sabha and state assemblies. Therefore, the government must:

- Rephrase Article 338B through an amendment so as to redefine the aims and objectives of the NCBC. OBCs are truly in need of state support in terms of improving their educational and social standing, but equating them with the Dalits will push them artificially into the ranks of the latter. It will not serve the nation to increase the number of Dalits.
- Re-categorize OBCs and EBCs as a single group under Article 340, since the EBCs among the upper castes are 'educationally backward classes' and the OBCs are both 'socially and educationally backward classes'. A way to solve the caste problem is to put in place policies that will eventually reduce the number(s) of its victims. And clubbing OBCs and EBCs will be the first step in that endeavour.
- Appoint a statutory study group to examine the working of the 1989 SC/ST Atrocities Act to assess the extent of the Act's misuse and whether the misuse warrants remedial measures. Every Act/legislation is liable to be misused, but we must ascertain the degree of that misuse to introduce remedial measures to protect the innocent.
- Create a nodal agency to determine how the thousands of crores of rupees allocated under the SCSP and TSP are to be spent. This is an extremely sensitive area as it has the potential to create disaffection against SC/ST employees who are meant to be the beneficiaries of these schemes.



Safe and Dignified Sanitation Work: India's Foremost Sanitation Challenge

ARKAJA SINGH AND SHUBHAGATO DASGUPTA

India's continued focus on sanitation has resulted in increasing toilet coverage and disposal infrastructure: the Swachh Bharat Mission has reported an increase in toilet coverage from less than 40% to above 98% in the period from 2014 to 2019, while the total capacity of disposal infrastructure has increased from more than 4716 MLD (CPCB 2013) to 6190 MLD.¹ This effort is, however, undermined by the continued persistence of manual scavenging and unsafe sanitation work. It is estimated that five million people in India are engaged in sanitation work (that is, work relating to the cleaning and management of toilets and human excreta), of which two million are likely to be engaged in 'high-risk' work such as cleaning sewers

and septic tanks.² Moreover, much of this sanitation work is performed in degrading and demeaning conditions, and for low wages and in insecure working conditions. These poor conditions reflect the continued indifference of the society at large, and an incomplete understanding on the policy side of what the sanitation challenge consists of. Crucially, workers (and the families of sanitation workers) remain trapped in circumstances in which they have to keep performing unsafe and humiliating sanitation work, in spite of the heavy price they have to pay for it. This is India's foremost sanitation challenge; addressing this issue in a comprehensive manner should be the cornerstone of India's next sanitation policy.

The term ‘manual scavenging’ in Indian law refers to the practice of manually carrying human excreta. In the historical context, this refers to the practice of removing excreta from dry latrines and railway lines – practices that were prohibited by the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993, and sought to be eliminated through government investments in pour-flush toilets and rehabilitation schemes. The proliferation of modern sanitation technologies brought, in addition, new forms of manual scavenging work, which include manual and unsafe cleaning of drains, sewer lines, septic tanks and latrine pits. A new law in 2013 – the Prohibition of Employment as Manual Scavengers and Their Rehabilitation Act, 2013 – covered this work too, and mandated a list of safety equipment to be provided in cases where manual entry into underground sewerage infrastructure was unavoidable. Needless to say, both old and new forms of manual scavenging work persist. In this note, we consider the issues and challenges of sanitation workers who deal with human excreta, and in the maintenance and management of sanitation infrastructure.

Sanitation workers bear the multiple stigma of offensive and unclean work, low wages and a highly dangerous form of employment that results in long-term health impairment and an unacceptably high chance of accidental death. Sanitation work in India has a long association with caste-based oppression. Almost all the sanitation workers who deal with human excreta are from certain Dalit castes and communities. Such work can also be extremely dangerous: excreta contained in enclosed spaces create a mix of poisonous gases (methane, hydrogen sulphide, carbon monoxide, sulphur dioxide, ammonia, nitrogen dioxide and traces of carbon monoxide) that can result in loss of consciousness and death. Safai Karamchari Andolan has recorded close to 2000 sanitation worker deaths, but experts believe that actual figures could be even higher if a complete count was possible.

High-risk sanitation work is also increasingly informalized. From recent reports of sanitation worker deaths, and our engagements with sanitation worker networks, we learn that the deceased workers often had no institutional relationship with the owner of the infrastructure, but were hired either by contractors responsible for infrastructure maintenance or on-the-spot for a specific job.³

Incomplete Policy and Strategy Thus Far

India's policy attention to sanitation workers is heavily oriented towards rehabilitation of manual scavengers (by training them for alternative income generation), and some limited forms of compensation and welfare support (as mandated by the Supreme Court). And yet, the schemes for compensation and welfare have been severely underperforming.⁴ The findings of an ongoing study are that families of sanitation workers are unable to get meaningful training or financial support for alternative employment from government programmes designed for this purpose.

And yet, how does this square up with the high levels of investment in sanitation? India's faulty metrics count toilets constructed, sewage pipelines laid, and treatment facilities constructed, but pay little attention to safety standards in design and maintenance. We have also ignored the service networks and workers who are expected to maintain this infrastructure. As a result, deaths of sanitation workers are being reported even from new and sophisticated treatment infrastructure – whether government-owned sewage networks, Sewage Treatment Plants, or on-site facilities owned by high-end hotels, malls and residential societies. On the other hand, more than half of India's toilet users rely on septic tanks and leach pits for their waste disposal,⁵ but little attention is paid to safe design and maintenance norms for these tanks and pits. There is, for example, no technical reason why cleaning of household containment tanks should require manual entry – as the de-sludging of tanks

is a relatively simple mechanical operation—and yet, deaths of workers during septic tank cleaning is reported with sickening regularity. It is even more ironic that many of these deaths are reported from India's highly developed and urbanized towns and cities, where safer waste management practices could have easily been put in place.

India's policy framework supports our selective inattention to sanitation work. While sanitation programmes and policy consider the question of sanitation work as an after-thought, if at all, issues of safety and dignity of the workers are left to a different ministry. All of the public investments and policy frameworks for sanitation are made by urban and rural development ministries, who keep no track of the impact these investments and policies have on sanitation workers. The Ministry of Social Justice and Empowerment, which has no hand in planning and investments of sanitation infrastructure, is responsible for counting and identifying manual scavengers; it is allocated funds to provide for a few compensation, rehabilitation and welfare measures.

On the institutional side, there is a confusing mix of public and private roles: public authorities consider themselves responsible only for drainage and sewerage, leaving residents who use septic tanks and leach pits much to their own devices. And on their part, drains and sewers owned by the public authorities are often of poor technical specification. Mixing of storm water, sewage, debris, silt and solid waste further compromises the functioning of these drains and sewers, resulting in frequent blockages that require human intervention. On-site sanitation users meanwhile understand little of their on-site infrastructure, and usually rely on low-end informal cleaning services. This inattention is no doubt not accidental, but made possible by our collective social disregard for the lives of sanitation workers.

On the legal side too, municipal and environmental laws cover the sanitation and wastewater disposal—making no reference to sanitation work—whereas a different legal framework applies to manual scavenging. These latter laws address only the 'employer' of manual scavengers, but not the owner of unsafe infrastructure (except to the extent that they cover dry latrines). Moreover, in actual practice the laws become relevant only in case of the death of manual scavengers, and even then we do not know of a case of successful criminal prosecution under these laws. At present, no legal responsibility rests on owners of infrastructure—whether public agencies or private owners of septic tanks, pits and on-site treatment facilities—to ensure safe design and operations of their infrastructure. The legal responsibility for deaths, when they occur, is also easily passed on to intermediary contractors, especially when the owner is a public agency, corporate body or residential society.

What the Government Needs to Do

We suggest a new paradigm in which safe and dignified sanitation work is placed at the front and made the organizing principle around which the definition of 'safe sanitation' is rearticulated for future sanitation programmes. We also need to recognize that undoing several centuries of caste oppression and decades of policy neglect is not going to be an entirely technocratic exercise, but will require an actionable commitment from the government to eliminate all forms of demeaning and unsafe sanitation work.

Supporting the families of sanitation workers in transitioning out of manual scavenging and unsafe sanitation work is critical to this promise. Community activists stress that it is crucial for families to move out of sanitation work altogether, in order to escape the social stigma and caste

identification that comes with sanitation work. For this it is not enough to offer small loans to make sanitation workers self-employed entrepreneurs, as current government programmes do, but to make comprehensive provisions for income security, dignity and education. Providing salaried employment or income-generating assets could help replace the lost income from manual scavenging work far more effectively than self-employment schemes, especially considering that sanitation workers tend to have no prior entrepreneurial exposure or business networks.

The problem of sanitation work itself is no less important, and for that, the voice of sanitation workers is crucial. Sanitation workers associations could be organized at city and state levels, and such sanitation workers' groups must have a role in the formulation of sanitation policy, and in the planning and design of infrastructure. Sanitation workers groups also need to be involved in the implementation of welfare schemes, and in negotiating fair and dignified working conditions applicable to both public and private employers.

On the part of the government, the eradication of manual scavenging should be made a primary responsibility of local governments. They should be held responsible for: (i) ensuring the complete elimination of all forms of manual scavenging and unsafe sanitation work within their jurisdictional limits, and (ii) providing jobs, income support and welfare measures to help families break out of the cycle of manual scavenging and unsafe sanitation work.

To reflect this shift in paradigm in legal terms, we suggest that the same agency (ideally the local government) that is responsible for ensuring the elimination of manual scavenging and unsafe sanitation work is also funded to design and build its sanitation infrastructure. Much of this infrastructure is currently being designed, financed and built

without focus on appropriate design features for its safe operation and keeping local conditions in mind. The local government (or other single-point agency) should also be responsible for ensuring that organized and mechanized sanitation services are available to replace low-grade and risky services in which the safety risk is borne by the workers themselves.

We also need clear legal recognition that the owners of infrastructure – whether local government, housing communities or individual residents – are responsible for ensuring that their infrastructure can be cleaned and maintained without putting workers into direct contact with excreta, or in unsafe conditions. This is especially important considering India's heavy reliance on on-site sanitation infrastructure, septic tanks and leach pits, but also for on-site treatment facilities for real estate developments.

National and state governments need to take charge of the policy shift, to ensure that local governments given the responsibility for delivery of infrastructure and services are also made legally and institutionally responsible for ensuring the complete elimination of manual scavenging and unsafe sanitation work. National and state governments also need to set up technical standards for safety in each element of sanitation infrastructure. In addition, they should see that local governments have the staff, capacity and funds to bring about this change. Finally, they should announce clear safety related targets and progressively monitor the transformation of the sanitation infrastructure and services to incorporate safety elements in partnership with representatives from sanitation workers' groups and associations.

END NOTES

1. CPCB, 2017.
2. Dalberg Analysis, 2018, <http://sanitationworkers.org/wp-content/uploads/2018/04/Phase-1-Understanding-the-Problem-Part-I.pdf>.
3. There is no systematic evidence of the nature of employment of sanitation workers. In recent sanitation worker deaths in a sewage pumping station in Jahangirpuri owned by the Delhi Jal Board, in a private gated community in Moti Nagar, and in a Taj Vivanta hotel near Khan Market, all in Delhi, the workers were engaged on a monthly basis by contractors responsible for maintaining the infrastructure. On the other hand, workers who died cleaning sanitation infrastructure in Lajpat Nagar, Dabri and Lok Nayak Hospital were freelance workers who were hired for a job-fee for a specific assignment. (Sources: multiple newspaper reports, interviews).
4. Accountability Initiative, 'Budget Briefs: Self Employment Scheme for Rehabilitation of Manual Scavengers (SRMS), 2017-18' (New Delhi: Centre for Policy Research, 2018), https://accountabilityindia.in/sites/default/files/pdf_files/Self%20Employment%20Scheme%20for%20Rehabilitation%20of%20Manual%20Scavengers_o.pdf.
5. Toilet waste could be disposed through a sewer network of closed, specially designed pipes that carry toilet waste along with other wastewater to treatment facilities. It could also be managed through on-site solutions – by evacuating it from household septic tanks or leach pits from time to time (de-sludging operations) and carrying it in specially designed trucks to treatment facilities; or using various technologies that provide on-site treatment. It is also often handled suboptimally, through open drains and water channels, or through a mix of sewage pipes, open drains and on-site containment systems.



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