Opinion

THURSDAY, DECEMBER 19, 2019

POWER STRUGGLE

Delhi chief minister Arvind Kejriwal

"When it is proved that the AAP is going to win Delhi elections with a huge majority, the opposition is deliberately spreading violence ... I do not need to tell who has the power to cause riots in the country"

Manmohan, Nandan, Modi, take a bow!

After Google tells the Fed to emulate UPI for its RTGS, a BIS paper recommends the Aadhaar-UPI model to the world

DOMINATED AS THE discourse is by big US tech firms like Google/Alphabet, Tesla, and Facebook/WhatsApp, few think of India, or Indian firms, when it comes to delivering top-class tech solutions, though Isro is the obvious exception here. So, it comes as a welcome surprise that, within a few weeks of one another, there have been two ringing endorsements of India's approach/work in the field of financial technology; in these days of intense political acrimony, the good news is the work on this was started by the UPA and used effectively by the NDA. Last week, Google recommended that the US Fed use a UPI-based system to build a new inter-bank real time gross settlement service (RTGS), and now, the Bank for International Settlements (BIS) has come out with a report that recommends other countries emulate the Indian four-pillar approach of providing digital financial infrastructure as a public good, encouraging private innovation by providing open access to this infrastructure, creating a level playing field through the regulatory framework, and empowering individuals through a data-sharing framework that requires their consent. Not surprisingly, earlier this year, Singapore announced an integration with UPI, while NPCI said that it will be rolling out its UPI service in UAE.

Through Aadhaar—which was started by then prime minister Manmohan Singh and former Infosys chief Nandan Nilekani—India developed what BIS calls the "identity rail," which was then used by prime minister Narendra Modi to dramatically increase financial inclusion through both the Jan Dhan Yojana as well as by getting banks to open low-frill accounts for them; more Indians now have bank accounts than the global average, and BIS quotes studies that show financial inclusion also helps boost income levels. On top of this, though not only related to Aadhaar, India created "payment rails"; NPCI's UPI is not based on Aadhaar, but was built as an open system by releasing the APIs so that anyone could build on its technology. That is also the reason that apps like PhonePe and Google Pay were able to score so well and make financial transactions accessible. Interestingly, unlike debit/credit cards or bank transfers that allow others to get access to your card/account numbers, UPI allows money transfers while masking the bank account number or even your name; the bank, of course, has these details, so this is not an invitation to money laundering. A big government push that went way beyond the initial demonetisation jump, and UPI's open architecture ensured that in January this year, barely 29 months after its launch, at ₹109,932 crore for the month, UPI transactions beat both debit and credit card transactions at merchant outlets—at ₹191,359 crore in October 2019, the number is a third more than that for cards. It is true that just 30% of these are P2M transactions of the type that debit/credit cards are, but the ramp up in volumes is a huge achievement.

If this wasn't enough of a revolution, BIS also speaks of the "data-sharing rails" that are designed to prevent data capture by the state or the private sector, and instead empower consumers and businesses to benefit from their own data. In 2016, RBI, which owns NPCI, established the legal framework for a class of regulated data fiduciaries, called account aggregators, which allows customer data to be shared within the regulated financial system with the customer's knowledge and consent. If the cost of the payments via UPI is much lower than other systems, the approach has also dramatically lowered the KnowYourCustomer costs, and also allows integration with other databases like the data on a merchant's sales via Flipkart or through the GST network. As a result, customers who were, till now, unbankable can now be profitably served by banks, generating new business for the banks, and lowering costs for the borrowers. Add to this, other low-cost innovations like DigiLocker, where you can get digitally signed certificates/records, and the Aadhaar-based eSign; and like the Aadhaar Stack, a Health Stack can, over a decade or so, completely change how public health services are delivered. And, all of this is in the public domain, unlike in several countries where the payment systems aren't interoperable and the data is owned by the payment company instead of the consumer.

PRESERVED IN BRINE

WITH OTHER DEPARTMENTS/BODIES HAVING ASSUMED MOST OF THEIR FUNCTIONS, THE MOST THAT SALT DEPARTMENTS CAN DO TODAY IS TO EXPLOIT THE LAND THEY OWN

Salt bureaucracy pounding salt

BIBEK DEBROY

Chairman, Economic Advisory Council to the PM
Views are personal

BEFORE ROY MOXHAM wrote his book, *The Great Hedge of India*, in 2001, not too many people had heard of the great hedge or the inland customs line. Even after his book, a sufficient number of people don't know about this bizarre hedge and its antecedents. The customs line, and the related hedge, started with the East India Company, but continued after 1858. The reason was high tax on salt in Madras, Bengal, and Bombay presidencies, especially Bengal. But, there were parts of India that were not part of British India, such as princely states. Therefore, in addition to "illegal" salt production in salt pans, salt would be smuggled into British India from elsewhere, similar to the current phenomena in states with prohibition on liquor. Hence, an inland customs line was gradually constructed, cutting across Punjab, United Provinces, and Central Provinces, to borders of Orissa. There were customs barriers and customs posts. However, even with guards, how does one enforce something like this? Guards are humans, amenable to bribery. Today, corruption is curbed by using information technology (IT) to reduce the human interface. Back then, it was done through a hedge interface, constructing a hedge made out of Indian plum, babool, karonda, and plants like that.

Allan Octavian Hume is one of the founders of Indian National Congress. As commissioner of inland customs between 1867 and 1870, he is the one who perfected the hedge, and made it an impenetrable barrier. At its peak, more than 14,000 people manned the customs line and the hedge. Gradually, as British territory expanded westwards, trade within the country freed and salt taxes standardised, the hedge withered away and remained a distant memory, until Moxham tracked it down and found its remnants near Etawah. Towards the end of the book, Moxham writes, "I had long ago accepted that the reason no one knew of the hedge was precisely because it had largely disappeared. If it had been better preserved it would have become a tourist attraction." On that stretch near Etawah, a road had been built over it. But, Moxham still found traces.

Pre-independence, there were several statutes on salt—Transport of Salt Act (1879), Indian Salt Act (1882), Madras Salt Act (1884), Bombay Salt Act (1890), Indian Salt Duties Act (1908), and so on. Protests against taxes on salt are powerful images of the struggle for independence. Post-independence, salt was delicensed in the second half of the 1990s and this removed references to salt in central excise and Salt Act (1944). This 1944 statute unified pre-independence salt legislation and had special provisions on salt, incorporating licensing while grandfathering rights of existing salt factories and salt works. But, taxes on salt were scrapped in 1947. However, since administrative machinery for salt still existed, government needed revenue for running this machinery. With salt figuring as Entry No 58 in the Union List of Seventh Schedule, at that time at least, Salt Cess Act (1953) was understandable. In 1978, we even had a High Level Salt Enquiry Committee, which, incidentally, recommended a removal of the cess. In 2016, this cess was scrapped. Roads of reform and GST (salt has 0% GST) have thus been built over the legacy of salt.

However, if you look hard enough, like Moxham, you will find vestigial traces. Department for Promotion of Industry and Internal Trade's Annual Report has a section on salt industry. India is the third largest producer of salt in the world (after China and USA) and the second largest producer of iodised salt (after China)—95% of production originates in private sector, 3.5% in cooperative sector. One reason why the Annual Report has a section on salt is because of the Salt Commissioner's Office. "The total area under salt production is about 6.47 lakh acre (Patta land, State Govt. land, Port land, Salt Department land). Out of this 59,946 acres land belongs to Salt Department for manufacture of Salt." Salt Commissioner's Office has headquarters in Jaipur, appropriately titled "Lavan Bhawan". There are regional offices in Chennai, Mumbai, Ahmedabad, and Jaipur, with some field offices too. What do they do? Standards are domain of the Food Safety and Standards Authority of India (FSSAI). Code on Social Security and Welfare has subsumed welfare measures. Planning is history. All that remains, is exploitation of land owned by Salt Departments, either by leasing out this land for salt production, or through monetising it. Recently, there has been discussion about monetising Mumbai's salt pan land in Ghatkopar, Wadala, Chembur, Bhandup, Trombay, Virar, and Bhayandar.

Most people don't know there is an all-India Central service known as Indian Salt Service, with both Groups A and B

"The 26 Quality Control Laboratories of the Salt Commissioner's Office, along with the staff could be transferred to the Public Health Division of the Ministry of Health and Family Welfare. Of the lands under the control of the Office of the Salt Commissioner, those which are now leased for salt production (about 45,000 acres) can be transferred to the States along with the responsibility for leasing of these lands. The States could be allowed to retain the lease rentals. The remaining lands can be vested in the Ministry of Urban Development which can take action or the disposal of these lands. The Office of the Salt Commissioner, along with all the field offices could then be closed down." This quote is from the 10th Report (July 2000) of Expenditure Reforms Commission, which also estimated 800 jobs would become "surplus". Most people don't know there is an all-India Central service known as Indian Salt Service, with both Groups A and B.

Junking sound regulation

Junk food regulation stalled by food industry, CSE claims

THE FINDINGS OF a lab-analysis of 33 popular junk foods from top-billed brands, including PepsiCo's Lays, Nestle's Maggi, and Mc Donald's, among others, by the Centre for Science and Environment (CSE) show consumers could be ingesting unhealthy amounts of salt and fat. The CSE tested the fast-food against yet-to-be-notified thresholds set by the Food Safety and Standards Authority of India (FSSAI), and all were in breach—indeed, one brand of snacks marketed as a healthier alternative to conventional offerings had twice the level of salt allowed in a day from a snack. But, the real shocker is CSE's assertion that consumers have been kept in the dark because the processed food lobby is thwarting the notification of the Food Safety Standards (Labelling and Display) Regulations that would replace the existing Regulations.

FSSAI had already taken five years—work had started in 2013—when it came up with a draft in 2018 that was sent to the health ministry for finalisation. The draft proposed that packaged food containing more than its prescribed thresholds of salt, transfats, added sugars, and other nutritional components that pose health risks carry a front-of-the-pack red mark to indicate these risks. But, following objections from the food industry, FSSAI sent the draft for review to a committee headed by B Sesikeran, a trustee of the International Life Sciences Institute (ILSI), in August 2018. ILSI is financed by Coca-Cola, PespsiCo, Nestle, Danone, and other food industry giants. While the final draft Labelling and Display Regulations—announced in June 2019—retains the 'red mark' provision of the 2018 draft, it dilutes several thresholds. For instance, as per the 2019 draft released after the Sesikeran committee submitted its report—the report was never made public—a product will have to be marked 'red' if the energy provided by the added sugar content is more than 10% of the total energy provided by 100g of the product. But, the 2019 draft dropped the 2018 draft's labelling requirement for total sugar in favour of 'added sugar'—that means the manufacturer doesn't have to inform the consumer about the naturally occurring sugar in the food. Also, the threshold for added sugar has been set at 50 g, the same as the 2018 threshold for total sugar.

Whether or not the food companies are stalling the notification of the regulations is difficult to say. But, given consumers have a right to know what they are consuming, the government must provide clarity on the notification of the regulations. *New York Times* reports that, in China, ILSI shares office space and staff with the body tasked with battling the country's obesity epidemic, and, in Brazil, its representatives occupy seats that were previously reserved for university researchers on food and nutrition panels. Against such a backdrop, the government needs to be very circumspect about the heft it allows food industry representatives in food standards regulation.

HealthyAPPROACH

Govt does well to cut costs and curb corruption; now, it needs to harness tech to deliver better

THAT AYUSHMAN BHARAT has been able to get over 19,000 hospitals empanelled and caters for over 11 crore beneficiaries, of which 68 lakh have availed its service, speaks volumes about its success. The scheme is certainly benefiting the poor in the country—a ₹5 lakh cover for beneficiaries in a country where, PHFI reports, 55 million people were driven to poverty due to out-of-pocket health expenses. Given its scale, the government working on bringing costs down is welcome—as per a *Business Standard* report, the government is mulling bulk-buying of medical devices like medical stents and selling it to its network of hospitals via its GeM website. If done correctly, this will ensure that hospitals get cheaper rates for medical devices.

While this is just one step, a recent interview by PM-JAY CEO in *Hindu Business Line* highlights that the government, by using technology, is also trying to curb instances of fraud. For all the good work done by the scheme, earlier this year, 111 hospitals were found cheating. Since July, the government has hired the services of SAS, MFX, LexisNexis, Optum, and Greenojo to use machine learning to detect such cases. While it is floating a tender to get more such companies on board, it would be better if India were also to implement Health Stack based on Aadhaar. An Aadhaar-based verification and storing of health records would ensure that cases of fraud and cheating are kept to the minimum. The government claims it was able to curb leakages worth thousands of crores using DBT; it is time it uses technology to save on healthspend.

MUDRA loans: Canary in the coal mine?

Mudra NPA issues may not seem meaningful right now, but they could pose a medium-term risk given there was no due diligence and the credit guarantee fund may prove insufficient

ANAND SWAMINATHAN & NIDHI SINGH

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LAUNCHED IN 2015, the Pradhan Mantri Mudra Yojana (PMMY) was floated with the singular aim to ease credit access to non-corporate, non-farm small/micro enterprises by providing small ticket loans (up to ₹10 lakh) at various stages of business development. The scheme works by directly providing loans through MUDRA bank (incorporated with a corpus of ₹20,000 cr) and by providing refinancing to more than 150 Member Lending Institutions (including banks and NBFCs). Until FY19, loans worth ₹8.6 lakh cr were disbursed, 45% of which are of ticket size < ₹50,000, across business segments.

During FY16-19, MUDRA loans disbursals have grown at a CAGR of 33%, and small ticket loans comprised 86% of the total MUDRA accounts. Among MLIs, PSBs have led disbursals, contributing 36% of the total disbursals till date (₹3 lakh cr), led by SBI, Canara Bank, and Allahabad Bank. However, NBFCs and MFIs have increasingly captured a larger share of total disbursals, from 2% in FY16, to 25% in FY19. Among private banks, IIB has had the highest total MUDRA loan disbursal at ₹27,100 cr.

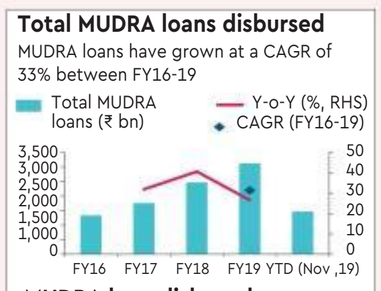
In spite of significant growth in MUDRA disbursals, total disbursals are in the range of 0.5-2% of outstanding loans for banks (excluding-IIB), while the NPA as of FY19 stood at 2.86% of total loans disbursed. The NPA range for PSBs varied between 2.7-8.1%, but MUDRA NPAs as a percentage of total outstanding loans continues to remain in the 0.1-0.4% range. Our sensitivity analys suggests, a 20% default from MUDRA disbursals can increase NPAs in the range of 0.7-1.2 percentage points for PSBs and 0.2-2.9% for private banks. Hence, while at current levels, MUDRA NPAs don't appear to be a meaningful threat for banks, a severe deterioration in the asset quality could potentially have significant impact on banks if macro risks go up.

Outstanding loans as of March 2019 stood at ₹7.4 lakh cr. MUDRA disbursals in FY19 were 29% of outstanding MSME loans and 3.6% of total outstanding loans. Interestingly, MUDRA loan disbursals as a percentage of MSME loans has increased from 19.4% in FY17 to 29.2% in FY19, while the disbursals as a percentage of total system credit was up to 3.6% from 2% in FY16, implying significant growth in these segments. Shishu loans (<₹50,000) continue to form the largest share of MUDRA loans disbursals at 44%, followed by Kishore (32%) and Tarun (24%).

While PSBs continue to dominate the lending of MUDRA loans, SFBs and NBFCs have been able to take over a significant portion of that, now up to 25% of the total disbursals MUDRA Loan disbursal as % of total outstanding loans for PSBs fell in FY19, while the trend remained flattish for private banks, with the exception of IIB, whose share has trended upwards, and will be further buoyed by the acquisition of BHAFIN.

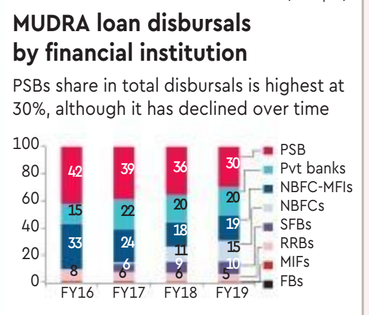
Total MUDRA loans disbursed

MUDRA loans have grown at a CAGR of 33% between FY16-19



MUDRA loan disbursals by financial institution

PSBs share in total disbursals is highest at 30%, although it has declined over time



MUDRA NPAs by banks

As % of total bank loans remain low

Bank	₹mn	% of MUDRA loans*	% of total loans**	% of total NPA
SBI	26,942	2.7	0.12	1.64
PNB	16,051	8.1	0.35	2.26
Bank of India	9,658	5.1	0.28	1.79
Canara Bank	9,215	3.1	0.22	2.44
Syndicate Bank	8,451	7.3	0.41	3.63
Union Bank of India	5,467	4.6	0.18	1.23
BoB	5,230	3.3	0.11	1.16
Bank of Maharashtra	4,497	6.6	0.54	3.32
Allahabad Bank	3,822	4.0	0.27	1.53
Total MUDRA NPA	172,515	2.86		

Source: Written answer to queries in Rajya Sabha, MUDRA
*Disbursed, **outstanding

While the scheme was touted as a significant step to ensure ease of credit to MSMEs, concerns regarding the loans have been highlighted by banks and RBI alike on the following accounts:

■ *Lack of due-diligence to meet targets:* As highlighted by recent commentary by RBI officials, a key concern with MUDRA loans has been the possibility of adoption of lower credit standards or lack of due-diligence on the part of PSBs to meet MUDRA disbursal targets that can significantly impact credit quality.

■ *Loan profile:* The average MUDRA loan disbursed in 2018 was of ₹45,034, as per *India Today*, with Shishu accounts comprising 86% of the total—not enough capital to start businesses. As such, these loans may be used for immediate funding/personal requirements, putting them at higher risk of default.

■ *Inadequate refinancing:* MUDRA was converted into a bank with a corpus of ₹20,000 crore in 2016 to provide refinancing for MUDRA loans. There are however two issues here : Inadequate capital to refinance loans that are now outstanding at ₹7.4 lakh cr; and caveats to banks' ability to refinance. It requires that banks lend at the base/MCLR rate to avail these benefits.

■ *No collateral*: The lack of collateral in MUDRA loans in itself creates significant risk for lending institutions, with no buffer against potential defaults.

■ *Credit guarantee fund with corpus of ₹3,000 cr may not be sufficient coverage*: Even though the Centre laid the foundation of a credit guarantee scheme, aiming to cover up to 50% of the default amount of the portfolio of banks, in the light of NPA ratios possibly stretching to high teens, from the ₹7.4 lakh cr outstanding amount, the fund won't prove adequate.

As per the latest numbers reported in response to a question posed in the Rajya Sabha, MUDRA NPAs stood at 2.86% of total loans disbursed, up from 2.52% in FY18; 30.57 lakh MUDRA accounts were declared NPA as of FY19. For individual PSBs, these numbers ranged from 2.7% for SBI to 8.1% for PNB.

Edited excerpts from BofAML's MUDRA loans—Canary in the coal mine? report dated December 11, 2019

LETTERS TO THE EDITOR

Students' agitation

Hats off to the students for opposing the NRC and Citizenship Amendment Act (CAA). The students are living proof that India is the land of Lord Buddha, Mahatma Gandhi and Dr BR Ambedkar with a lot of humanity. It is brave of them to stand up to the government and exemplify true patriotism. It is uplifting to behold the picture of Dr BR Ambedkar at the protest marches. Clearly, students who are the country's future do not want to live in a country that legalises discrimination of people. But, then the battle for secularism and common humanity is not that easy to win, when even the 'supreme' echelons of the judiciary appear to have joined the Hindutva choir. The larger message from the students' spontaneous protests is loud and clear: India, a beautiful patch of land on the face of the earth belongs not just to the upper castes, but to all manner of people. It is evident from students cutting across religious boundaries that BJP's divisive politics is coming apart at the seams. The Centre should learn to listen to students' *Mann ki Baat* and say after them, 'We are Indians and human beings', and keep their other identities to themselves. It is simply unthinkable that India's PM can betray his religious bias and hatred by speaking of clothes regarded unique to members of a particular religious community. This is not the way to win the '*vishwas*' of minorities. Hindu revivalists who harp on 'larger Hindu unity' day in and out, should first repudiate the notion of pure genetic pool and launch a national movement to promote inter-caste marriages. The ongoing protests affirm that India is not a kingdom and we are not subjects but, that our country is a pulsating democracy and we are citizens with cherished values. The bones of our forebears have been interred in this soil for at least over 65,000 years. The migration from Africa preceded the migration from Central Asia by over 61,500 years. The self-serving ruling elites cannot lord over us in the name of 'sanctified apartheid'. The time has come to define Bharat Mata; Mother India is all the people of India and not just the privileged upper castes.

— G David Milton, Maruthancode

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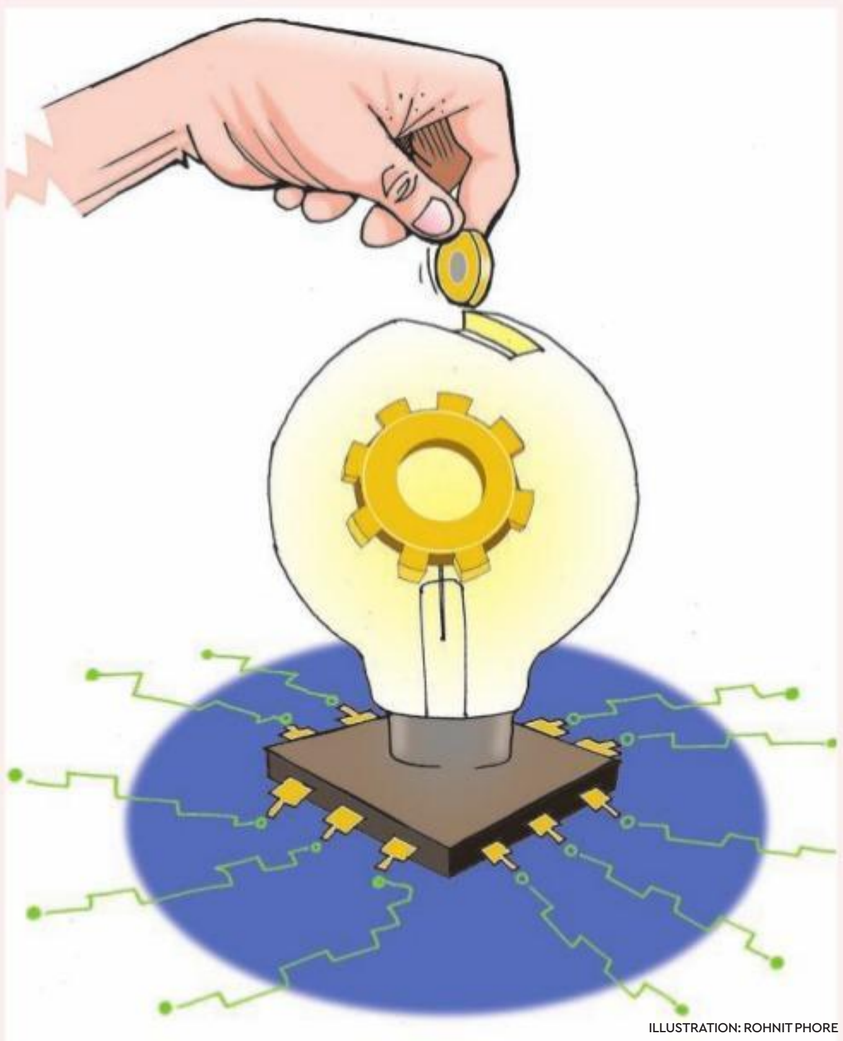

ILLUSTRATION: ROHNIT PHORE

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Three vital ingredients for path-breaking innovation

For robust socio-economic growth, India needs a framework that facilitates generation and curation of ideas

DEEP SCIENCE INNOVATION is the art of drawing fundamental scientific breakthroughs up the value chain into useful products and processes. The most successful innovations are the ones that quietly integrate into the very fabric of our daily lives. Prime examples are cell phones, cars, antibiotics, pacemakers and electricity; all of which have irreversibly transformed lives. So much so that one day, a generation wakes up and cannot imagine life was any other way.

Countries around the world have built extensive institutional machinery to harness the power of innovation in building and retaining socio-economic and political power. A leading example is the US, which soared after its scientists discovered how to weaponise nuclear energy and pioneer mass manufacturing. It remains a top economy today, fuelled by the world-class innovation of its universities and research laboratories. On the other hand, economies impoverished at the end of the Second World War, such as Japan and Germany, also bounced back quickly by focusing on innovation-driven growth in high-velocity domains like automobile manufacturing and energy. China's growth accelerated when it converged on capturing the semiconductor fabrication market in the 1980s, and it now dominates quantum computing, among other deep innovation verticals.

India's strengths in science and technology are renowned, as is our tenacity in scientific development, exemplified by the bold progress of our space and nuclear energy programmes. However, as a nation, we are progressing beyond distinction in individual programmes and towards collective excellence in innovation that reflects our bold economic vision. We need a nationwide mandate and structure to fuel sustained innovation efforts.

Several departments under the ministry of science and technology – biotechnology, for instance – have forged strong foundations to foster early-stage innovation. The NITI Aayog is laying out comprehensive policy initiatives in exponential technologies like artificial intelligence. There is the concept of a National Research Foundation to consolidate research efforts. A picture is starting to emerge from the jigsaw puzzle.

The next step is to establish a seamless value chain for idea-to-market technology development, much like the US and China have. Three ingredients are paramount – a framework that facilitates generation and curation of ideas, deep-tech investment strategies, and a bold vision with a clear view of how to realise growth in every focus sector.

Partnerships with leading global institutions in fundamental and application-based research will ensure our ideas and implementation strategies are globally-relevant

Continuous generation and curation of ideas

A free and continuous flow of ideas is the cornerstone of any innovative society. A holistic sector-agnostic framework to support idea-generation entails the following:

- Building the infrastructure in the form of world-class research labs with state-of-the-art equipment in universities and fundamental research institutions. An immediate requirement is to enhance the capabilities and capacity of existing labs and innovation hubs with proven track records.
- Curation of ideas must be multifocal by continually taking it up the idea-to-market value chain. Many entrepreneurs are developing solutions to India's considerable societal challenges. Regular interactions with the necessary stakeholders will facilitate swifter implementation of these ideas and solutions.
- Policymakers must systematically study India's needs and incentivise innovators to solve these.
- Partnerships with leading global institutions in fundamental and application-based research will ensure that our ideas and implementation strategies are globally-relevant.
- Incentivise young talent to continue with research and specialisation by ensuring they are economically taken care of through fellowships and grants. This will help retain talent by disincentivising them from joining a job just for a salary, or moving abroad in search of better opportunities.
- Intervention during the educational years to nurture talent in schools and colleges is essential. Widespread access to tinkering labs, world-class labs at universities, and other amenities are required.

Deep-tech investment strategies

Deep science innovation often constitutes a substantial amount of initial research, protracted testing and validation cycles, and an extensive generation of intellectual property (IP) that contributes to the embedded value of the technology. They have long-drawn runways, often requiring 10-15 years to actualise real returns. For this, we need patient capital from both private and government stakeholders.

Essential points here are:

- Government focus on innovation is mostly at the early-stage now, like grants for initial research and product testing. Deep science innovation needs robust follow-on funding to go beyond early development and thrive in the market.
- Infrastructure requirements in deep science innovation are higher than in tech and other internet-based solutions. They need support with scale-up test beds like pilots and production facilities, testing and quality labs, pollution clearances, industrial design and productisation, and decoding regulatory pathways.
- Create focused funding avenues for different deep science innovation entities like scientist-entrepreneurs, university research labs, innovation hubs, and India's top research institutions like ISRO, TIFR and CSIR. Dedicated investment opportunities to support India's top science talent will turbocharge the ecosystem.
- Tax benefits and incentives for private Indian investors to invest for the long term are necessary to secure large pools of capital. Innovation-driven nations like Israel, the US and others have built lasting ecosystems with such investor-friendly strategies.

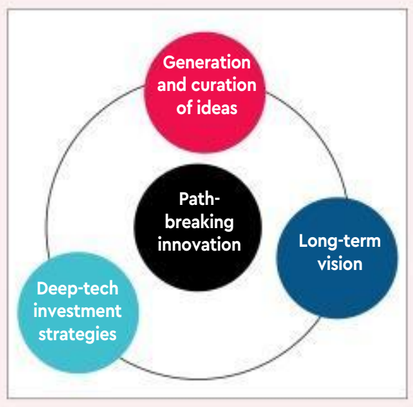
Long-term vision

India has already set an ambitious goal of $5-trillion GDP by 2025, and $10 trillion by 2030. Every growing nation needs an ambitious goal, so the interests of all the stakeholders are aligned. We then break this goal down backwards to understand what it means for timelines, implementation and achievability.

Specifically, we need to:

- Address domestic challenges, identify critical verticals that can accelerate India's socio-economic growth, and create long-term investment strategies for each. These include defence, healthcare, water-treatment technologies, energy, artificial intelligence and others.
- Within the broader policy goals, technology development needs special attention. For example, India has already set an exceptional zero-emission target for 2030. Now we back-calculate what that means for investment in renewables, electric vehicles and maglev technology. We identify which of these we already have a firm footing in, and which we need to accelerate. This focus will catapult India into a leadership role, especially around global issues faced by emerging economies.
- To ensure ongoing progress, corporate frameworks to track key performance indicators (KPIs) down to the last detail are useful. We can track every goal, target and organisation in this manner.
- The idea of a bold vision is that Indian society and quality of life will have advanced dramatically in 20-30 years. Globally-accepted markers like the Innovation Index are useful to track these disruptive changes.

Since economic liberalisation, India has slowly but steadily metamorphosed into an ambitious tribe on track to becoming a superpower. There is an infectious spirit of innovation in the air. To harness every bit of this spirit, we must recognise that it takes a long time to see the results of the investment of time and money in innovation; we cannot afford to waste any of it. By establishing frameworks around these three vital ingredients and implementing them systematically, we have a shot at assembling an innovation powerhouse that can drive India's growth for decades. We must get this right.



The $680 mn question

ANDY MUKHERJEE

Bloomberg

Other Indian businesses should treat Ambani's travails as a cautionary tale

ANIL AMBANI, THE younger brother of Asia's richest man, faces a $680 million legal test to answer one and only one question: Just what did he know about what his employees were doing on his behalf? Other Indian tycoons will take an abiding interest in his defense.

The $680 million is the amount Industrial & Commercial Bank of China Ltd is seeking to recover from the former Indian billionaire by invoking what they say is a personal guarantee he gave in 2012 to secure a $925 million loan for Reliance Communications Ltd, his mobile services firm that's now in bankruptcy. Ambani, whose older sibling Mukesh controls Reliance Industries Ltd, India's most valuable company, claims he never knowingly provided any guarantee.

In his version, he had only authorised his employees to furnish a non-binding "personal comfort letter" to lenders, including ICBC, China Development Bank and the Export-Import Bank of China. Somehow, that letter of comfort morphed into what the banks now argue to be an iron-clad guarantee under English law. "A truly remarkable feature of Mr Ambani's case," London Judge David Waksman said in his order Monday, "is that he has himself proffered no explanation as to why he should have been deceived in this way."

As to how personal assets were put at risk unbeknownst to the boss until RCom defaulted in 2017, the order noted that Ambani's lawyer had argued that his client's "position was that 'he hasn't got a clue' how all of this came about." Judge Waksman stopped short of awarding the summary judgment requested by ICBC, though not before characterising Ambani's evidence as "inexplicably incomplete, implausible and highly unlikely."

A trial will commence next year. Pending the verdict, the court may ask some or all of the claim to be deposited with it.

Ambani's representative focused on the the judge's decision to dismiss the banks' application for a summary judgment. "Mr Ambani has contested the proceedings and put up a strong legal defense, and will continue to contest the proceedings and seek leave to defend, without any conditions as to making of deposits or payments being imposed," the representative said in a statement, according to *Bloomberg News*.

This is the younger Ambani's second brush with the pitfalls of personal guarantee. Earlier this year, he managed to avoid a three-month prison term

This is the younger Ambani's second brush with the pitfalls of personal guarantee. Earlier this year, he managed to avoid a three-month prison term when his elder brother showed up just in time to settle the $80 million claim of Ericsson AB. The Swedish telecom equipment maker had obtained a contempt-of-court order to put Ambani in jail if the payment—which he had personally guaranteed—wasn't received by March 19.

Other Indian business families should treat Ambani's travails as a cautionary tale.

When India's economy was booming, and firms were greedy to use leverage to grow, many of their controlling shareholders liberally gave out personal guarantees to lenders. But the rosy assumptions behind aggressive, debt-fueled expansion have come unstuck for many borrowers in an economy that has slowed down sharply. The Ruia family recently lost its crown jewel — a 10 million-tons-a-year integrated steel plant in western India — to ArcelorMittal.

Even here, the former asset owners had backed their borrowings with personal guarantees, and State Bank of India, the main lender, had even made an attempt to enforce them. With Mittal's $6 billion check in the bank, that recovery may have now become a moot point. But from December 1, personal guarantees on corporate loans will be adjudicated under Indian bankruptcy law. That will put a healthy fear in the minds of Indian businessmen about borrowing too recklessly. Their own assets could end up getting liquidated together with those of their companies.

As for Ambani, he'll get his day in an English court to prove his lack of awareness. The bar is high, though. "I consider it extremely unlikely that his role was really limited to simply chairing board meetings with little or no interest or role in what RCom was doing, especially in the context of a major refinancing which was needed urgently," Judge Waksman noted.

This has all the ingredients of an engaging courtroom drama.

Gender parity at work in digital age

Gender equity has to be written in the code of the digital economy

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DIGITISATION IS THE best thing to happen for gender parity. Technology has the potential to give women unprecedented levels of economic and social autonomy by lowering the barriers to learning, work and entrepreneurship.

Mobile phones, the internet and digital platforms have opened up extensive opportunities for women. Fintech has given them independent financial existence and e-commerce has created the option of building online business with minimal knowhow and capital. Social media has opened access to business and professional networks, and online collaboration tools allow women to work or get things done without having to travel or spend a lot of time away.

Digitisation is also increasing women's presence at workplaces by making them feel more secure. GPS on mobile phones has allowed women to travel long distances and work late, by allowing them to share their movements. Women are also able to undertake jobs that were earlier the preserve of men, such as driving taxis. Digital taxi apps are attracting women drivers by assuring them of safety and matching women customers with women drivers.

Data and AI have emerged as the antidote for gender bias in hiring, assignments and promotions. As performance and potential get measured in data points, career progress becomes less dependent on touchy-feely evaluation of personality and attitude. Analytics offer women greater assurance against discrimination, provided the algorithms are trained on inclusive data. AI can also be used to identify the hidden biases in hiring and promotions in organisations.

AI has come to the rescue of women start-up founders, too. VCs have begun to focus more on the merits of the project and less on the experience or seriousness of women entrepreneurs. Data analytics and decision-aiding algorithms are doing a better job of breaking the glass ceiling than ideological schemes for fixing gender imbalance at work and in business.

However, despite all the good that technology can do for women, there is a gaping digital divide between men and women. According to the latest data on mobile phone ownership and connectivity, India has a gender gap of 26% in mobile ownership and 56% in mobile internet access; this is despite a substantial improvement in affordability of mobile phones and data packs.

The tech industry continues to be populated mostly by men. According to the latest gender gap report of the World Economic Forum, women form less than a third of a broad category of professional and technical workers in India. It is no surprise that India ranks 112th on gender parity among the 153 ranked countries. But the digital divide between genders is not just an Indian problem.

According to an OECD (Organisation for Economic Co-operation and Development) report on global gender divide in the digital economy, 15-year-old girls are half as likely as boys to aspire for careers in engineering, and three times more likely to end up in healthcare industry. Women are only 20% of the graduates in information and communication technology, and they are less than 10% of the investing partners in the top VC firms, adds the report. Nearly 90% of the software and AI algorithms are written by men, and a similar portion of innovative start-ups are founded by men. Women founders of start-ups get lesser funding, and are less likely to get acquired or have an IPO.

This male-biased growth of the digital economy has implications for gender parity in the future. According to an IMF paper, globally, about 180 million 'female' jobs are at a high risk of extinction because of automation. A lot of the clerical and customer-facing jobs that are dominated by women are being taken over by bots.

However, it is also likely that automation would favour women's attributes and would create more 'female' jobs than it would extinguish. It is easier to automate analytical intelligence than emotional intelligence. Invariably, women score much higher on emotional competencies such as empathy expression and conflict management.

Still, care has to be taken to ensure that women do not get funnelled into the roles of facilitating work and collaboration. Women's caring and conciliatory attributes must not be used against them to herd them in docile, subservient functions. The stereotyping has happened in digital voice assistants, and the default voice on most consumer devices is of women; the tone and vocabulary is more docile than bright.

Women themselves can make a big difference to gender parity in the digital age by getting more involved in the development of new technologies and products. More women need to pursue study of science, technology, engineering and maths to break into the tech industry, and build things from women's perspective. Even just as consumers and business leaders, women can shape technology with their insights about behaviour and priorities.

However, technology is just one piece of the gender parity puzzle. Mindset is still the key. Making parity a management task and sloganeering has not worked. Gender equity has to be written in the code of the digital economy.