Design as Integral Part of Make in India

Make in India must boost hi-tech design

Invecas, a Hyderabad-based startup, is designing a 7-nm chip for GlobalFoundries, which manufactures integrated circuits for the likes of AMD, Broadcom and Qualcomm. What is special is the cutting-edge nature of the startup's work, not its size or scale. The latest Intel chip, codenamed Kaby Lake, uses 14-nm technology. The next nodes in this progression are 10-nm and 7-nm technologies, and displacement of silicon with other materials. While a single sub-10-nm transistor has repeatedly been demonstrated since 2002, it has not been scale up to production levels. So, Invecas has lessons to offer for Make in India.

That lesson is that design has to be understood as a high-value activity preceding manufacture that deserves to get pride of place in Make in India. To the extent Invecas is doing R&D for GlobalFoundries, the intellectual property would accrue to the US firm. Suppose such cutting-edge work were being done by Indian companies for themselves or other Indian companies that can afford to

take the risk of investing large amounts of money in R&D without assurance of immediate success. Then would Make in India create real, sustainable value. Right now, with an antiquated mindset, India accepts as indigenous manufacture the slipping in of a battery in its designated slot of a separately imported complete cellphone unit, before the back cover is snapped on. Of course, this, too, is manufacture, but not one that will create significant value or upstream or downstream value chains.

GlobalFoundries was formed by merging the divested manufacturing arms of AMD and IBM with another firm. These units were divested because their parents found their manufacturing activity to be of low value. The further commoditised the manufacturing, the lower the value added at that stage. Designing the manufacturing process or designing the technology deployed in the manufacturing is where the highest value resides. Indian workers are equal to the challenge of creating such design, but Indian entrepreneurship is not. This is where Make in India must intervene.

End of Rail Budget Should Not Stem Data

The discontinuance of the annual rail budget, while welcome, must not mean drawing a curtain over railway accounts and performance indicators. The rail budget for the next fiscal would be incorporated in the general budget, and a separate discussion on railway expenditure is on the agenda for parliamentary scrutiny and oversight. Yet, such steps are hardly adequate or sufficient.

With annual revenues of almost ₹2 lakh crore, and with a huge investment plan underway, the railways do need to disclose monthly and quarterly data on physical and financial performance. The way ahead is to coagulate capital expenditure in a modular fashion that is very much linked to rising potential

for fare and non-fare revenues. Indeed, a complete change of track is warranted. To begin with, the railways do need to adopt commercial accounting norms to properly arrive at figures for assets and liabilities. In parallel, what is required is a time-bound move to corporatise the railways and run it in a more businesslike manner with customer and commuter focus, revamped rolling stock and up-to-date signalling for safety and dependability. Also speedily required is timetabled freight trains.

It is true that the railways has social obligations, and its ticketing website mentions the fact that passenger fares cover only about 57% of costs. However, doing away with the rail budget and ending the dividend payout on the capital-at-charge of ₹2.27 lakh crore would save the railways about ₹9,700 crore. The railways' joint ventures with state governments also need to be leveraged for social funding. Shamefully, some 40% of the railways freight earnings come from hauling mostly unbeneficiated coal. Hence the pressing need to replace babu culture with entrepreneurial culture in the Railways.

Charge for air ticket according to total weight: passenger + luggage

Pay-as-You-Weigh Should Take Off

The move toward turning passengers into freight was taken by Samoa Air in 2013 when it began charging passengers according to weight: one Samoan tala per kilo, including their baggage. Considering the airline flew mostly domestic routes and the nation is thought to be largely obese, this pay-as-you-weigh made sense. Subsequently, only Uzbekistan Airlines was reported to have also weighed in with the same caveat. However, there is no doubt that many other nations have overweight populations — especially among the segment that travels by air. Airlines are also looking for more ways to trim their flab and make bottomlines healthier, so looking at passengers as freight could be the next bright idea. In any case, passengers have become used to being likened to cattle, so the switch to cartons would not be a great comedown.

While a recent court case in the US is examining a legal challenge to this weight differential in pricing, there is a logic in the argument that since energy spent by an aircraft in flight is tied to the total weight it has to carry, it is unfair to make thin passengers subsidise the heavier ones as all tickets are priced the same. At a time when obesity is spiralling out of control in many countries, such a system could also prompt some people to finally shed adipose so that they can carry more by way of luggage on their future flights.

A ban on anonymous political funding is the right step to fight black money

Clarity Begins at Home

Nilanjan Banik

Earlier this month, while addressing party workers at the national executive meeting of the Bharatiya Janata Party, Prime Minister Narendra Modi underscored the need to bring transparency in political funding. With more than 90% of the banned currency notes back in the system, questions persist on the efficacy of the government's demonetisation move. Everyone is looking at the next course of action to fight black money.

The PM has argued that the poor and financially weaker sections supported the withdrawal of old high-denomination currency notes. The common perception is that rich and corrupt politicians disproportionately corner all the money — most of it in black.

A recent estimate suggests that income inequality — the gap between top 10 percentile and the poorest 50 percentile of the population — has been on the rise since 1995. The richest 1% Indians own 53% of the country's wealth. Income inequality is higher in India compared to Russia, the US, China and Brazil.

Critics, however, argue that the demonetisation move has not affected the rich and the powerful. Stories abound on how many opened shell companies, adjusting and transferring unaccounted money into their books of account. As a matter of fact, money changed hands from rural financially illiterate masses to these accounts. The poor sold their high-value currency notes at a discounted rate to middlemen.

Notwithstanding the debate on demonetisation, a look at data on declared assets of politicians makes one thing clear: they are increasingly becoming rich. And they have more than what their salaries would justify. A member of Parliament in India draws ₹50,000 per month as salary, while a member of legislative assembly (MLA) typically get a salary lower than this amount.

We examined official asset holding for recontesting candidates, or those who were sitting MLAs. The states considered were Bihar, Tamil Nadu, West Bengal and Uttar Pradesh.

Business of Politics

Consider. In 2015, there were 160 such candidates in Bihar who won the election in 2010 and contested again in 2015. The average asset holding of these candidates stood at about ₹2.5 crore in 2015. That's equivalent to the on-road price in Delhi of five top-of-the-line Mercedes-Benz C-Class cars. Between 2010 and 2015, the financial wealth of these candidates grew at an average annualised rate of 24.4%.

Even accounting for factors such as inflation, these are big numbers. But Bihar's economic growth looks tiny compared to the growth in the economic fortunes of the state's politicians. Between 2010-11 and 2013-14, Bihar's gross domestic product grew at an average annualised rate of 10.4%. Annualised per-capita income rose from ₹10,635 in 2009-10 to ₹15,650 in 2013-14, a modest annualised increment of 10%.

Take Tamil Nadu. There were 89 MLAs who recontested in 2016, having won the polls in 2011. The average asset holding of these candidates increased from ₹4.35 crore in 2011 to ₹8.63 crore in 2016. Between 2011 and 2016, the average annualised increase in asset holding for an AIADMK MLA stood at 16.8%. The corresponding figures for legislators in the DMK, DMDK, CPI, CPI(M), PMK and INC stood at 11.7%, 12.7%, 11.2%, 5.3%, 13.4% and 13.4%, respectively.

In West Bengal, 245 sitting MLAs recontested the election in 2016. The average assets of these candidates rose from ₹60.1 lakh in 2011 to ₹1.27 crore in 2016. Between 2011 and 2016, assets of top three MLAs, all from the TMC, witnessed the highest growth.

Uttar Pradesh is no different. Data for 2017 is yet to be released. However, assets of recontesting candidates between 2007 and 2012 tell the same story.

An intriguing question in the political economy is over politicians getting reelected despite adverse public perception. The answer, perhaps, lies in the shortsightedness of the voter, who cares more about living in the present even at the cost of an uncertain future (read: a hollow state exchequer).

West Bengal has a much lower per-capita income than Tamil Nadu. The TMC government has been distributing subsidised rice to poor and running the Kanyashree scheme for girls. It has also donated money for club funds (typically run by otherwise 'unemployed' party workers).

Blind Men and an Elephant

In Tamil Nadu, which has a much higher level of urbanisation and industrialisation, freebies include high-end consumer durables such as television sets, laptops for students, mixer-grinders and LPG stoves, besides heavily subsidised food canteens.

However, visionary politicians are not myopic. Here is a big chance for the prime minister. When it comes to black money, the elephant in the room is political funding. If the PM can amend the law to ban anonymous political funding (even a single penny), he can take the bull by the horns. The reform, of course, hinges on the outcome of the state election in Uttar Pradesh.

The writer is professor, Bennett University


FILE PHOTO

Demonetise anonymous funds

Data on declared assets of politicians makes one thing clear: they are increasingly becoming rich. And they have more than what their salaries would justify

WIT & WISDOM

"Women who seek to be equal with men lack ambition."

Timothy Leary
Psychologist

Attracting Talent: India Slips

India has slipped three places to the 92nd position on a global index of talent competitiveness that measures how countries grow, attract and retain talent. India's ranking is worst among the Brics countries...

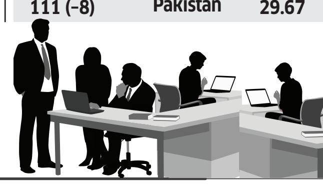
Top 10

Rank 2017 (change from 2015-16)	Country	Score
1 (0)	Switzerland	74.55
2 (0)	Singapore	74.09
3 (4)	UK	69.40
4 (0)	US	69.34
5 (1)	Sweden	69.14
6 (7)	Australia	69.06
7 (-4)	Luxembourg	68.66
8 (-3)	Denmark	68.59
9 (1)	Finland	68.56
10 (-2)	Norway	68.01

Select countries

Rank 2017 (change from 2015-16)	Country	Score
28 (2)	Malaysia	56.22
54 (-6)	China	45.34
56 (-3)	Russia	45.03
67 (-10)	South Africa	42.75
73 (-4)	Thailand	41.50
81 (-14)	Brazil	38.99
82 (1)	Sri Lanka	38.88
90 (0)	Indonesia	36.81
92 (-3)	India	35.65
111 (-8)	Pakistan	29.67

The GTCI 2017 index, which assessed a total of 118 countries, was released by Insead, produced in partnership with The Adecco Group and the Human Capital Leadership Institute of Singapore



CAMERADERIE


PTI

Yes, the Italian New Wave also got us De Sica's Bicycle Thieves.

NATARAJAN CHANDRASEKARAN

Epicentre of Techtonic Shift

Anjana Menon

The Tata group has shown pluck. Last week, it announced a new chairman — who is non-Parsi and non-peevish. Its choice of Natarajan Chandrasekaran is a departure from its usual tradition of picking from within the coiffed community. With his small-town roots and early vernacular education, Chandrasekaran is an unconventional outsider who has risen to become a remarkable insider at Tata House.

More importantly, he has one terrific advantage that sets him apart as leader for the future: he understands technology, the biggest disrupter in today's business environment.

In the three decades that he's been around with the group, and helped shape Tata Consultancy Services (TCS) into India's largest software services firm, much has happened in the world. Computing power has changed how we live and work. Technology has become the backbone for a raft of goods and services. Nearly everything that we take for granted today is an advancement of technology, be it public access to the World Wide Web, smartphones, credit cards, barcodes, online shopping, navigation systems, MRI scanning, digital photography or complex keyhole surgery.

The shifts in technology have been so rapid that it's easy to forget the demise of the disbelievers. Kodak lost its moment because it didn't think digital cameras would dominate, and Nokia couldn't see a smartphone coming even when it was the leader in mobile telephony.

As that was happening, technology created new giants such as Facebook, with a business model involving an innocuous task of socialising online.

In the last three decades then, it's technology that has created and recreated our business landscape globally. How we commute and holiday have been changed by the likes of Uber and Airbnb. And how we apply thinking will probably be shaped by IBM's Watson, a computer system capable of answering questions posed in natural language, or Google's Go, a free and open source programming language.

In a new world, there is every possibility that Faraday Future will be the Ferrari of the next 10 years, but cars themselves will be obsolete in another 25 years.

In all of this, Chandrasekaran's unique position is his ringside view of the constant innovations that are helping companies stay useful to consumers. TCS' role in that change could be a solution that helped a restaurant have a smarter kitchen through digital connectivity, or an automaker develop better parts through neural data trawling.

In short, TCS has remained in business because it's been able to help clients, in a multitude of industries in various geographies, survive the technology avalanche.

The biggest challenge to the Tata group today is no different from the problems that TCS' clients are battling: to ensure that they adapt fast and stay relevant.

There's other stuff that's Chandrasekaran's technology exposure will bring: an understanding of consumption and production in the new order. In the 'sharing economy', where usage takes precedence over ownership, Jaguar Land Rover will have to reimagine the role of the car. A Tata Steel might bring more efficiency into manufacturing by creating a digital twin that mimics production and spots efficiencies by analysing data. Or several Tata companies may extract greater productivity through additive manufacturing.

In Chandrasekaran, the Tata group may have a chance of getting their ducks in row, so they are at least better prepared. No one can predict firmly how technology will upend these firms, or how quickly a conglomerate the size of Tata will adapt.

To his credit, Chandrasekaran has also kept TCS high on the leader board without getting wrapped up in controversies. In the Tata House book, much is made of the culture of being understated and keeping clear of squabbles. Even ousted chairman Cyrus Mistry spared TCS the sledging he unleashed on every other group company.

In many ways then, TCS is what every Tata firm must want to be. The closest they can get there is by having the leadership that made it possible.

The writer is founder, Content Pixies


UMA KADAM

The changemeister with the founder

Citings

On System Dynamics

JAY FORRESTER

Chance intervened again when I found myself talking to people from General Electric. They were puzzled as to why their household appliance plants sometimes worked three or four shifts, and a few years later, had to lay off half their staff. It was easy to say that business cycles caused fluctuating demand, but not convincing.

After finding out how the corporation made hiring and inventory decisions, I did some simulation, using a pencil and a notebook. At the top, I put columns for inventories, employees and orders. Given these conditions and the policies being pursued, one could predict how many people would be hired the following week.…

Even if incoming orders remained constant, employment instability could arise as a consequence of common decision-making policies. This pencil-and-paper inventory control system was the beginning of system dynamics.… I didn't understand the nature of hi-tech growth companies as well as I wished to, and undertook to model such companies. The modelling afforded a lot of insights about why hi-tech companies often grow to a certain size and then stagnate or fail.

It moved system dynamics out of physical variables like inventory into more subtle considerations: the top management influence structure, leadership quality, the character of the founders, how goals are set, the interactions between capacity, price, quality and delivery delay, and how an organisation's traditions impact its decision-making and its future.

From "Inventing the Future"

the speaking tree

A Positive Reminder

MAULANA WAHIDUDDIN KHAN

A verse in the Quran reminds everyone that no one is so powerful that they can prevent the onset of death, "Every soul shall taste death" (3:185). However powerful a person might be, in comparison to death, every hero becomes a zero.

Death gives one this message, 'Even if you are a super-achiever, when it comes to death, there is no exception at all.' Death is the greatest reminder, which makes every person a man 'cut-to-size'. Ignoring the reality of death is not possible for any human being. Every death admonishes a person to live in his world with modesty.

According to a saying of the Prophet of Islam, "Remember death much, which demolishes all desires" (al-Tirmidhi). This means that the thought of death serves to make a person a realist. It is the reality of death that helps one to come out of wishful thinking. Death makes a person distinguish between 'what he is' and 'what he is not'. If a person focuses on 'what he is', it would bring about realism in his thinking.

On the contrary, if a person is governed by thoughts of 'what he is not', he would develop an unrealistic approach to life. It is realism that makes a person a right thinker. One who is a right thinker is in a position to do successful planning for his work; no one can place obstacles in the path to his success. Remembering death is the greatest source of wisdom for any person — it guarantees that one's planning will be realistic. There is no more stronger incentive than the thought of death to keep a person active on a permanent basis.

Chat Room

UP: The Game has Just Begun

Apropos 'Mayawati the Dark Horse?' by Arati R Jerath (Jan 16), it would be foolish to underestimate the power of BSP chief Mayawati. We will know the fate of Mulayam Singh's post-symbol loss strategy and whether Akhilesh will ally with the Congress in few days. But it's certain that if both Mulayam and son Akhilesh fight elections separately, one of SP's largest vote banks, Muslims, will in all probability shift to BSP. Then, Mayawati would have what it takes to upset the poll predictions.

BAL GOVIND
Noida

Sidhu Political Show on Air

Navjot Singh Sidhu's decision to embrace the Congress could prove to be a game-changer for the Grand Old Party that is struggling to reassert itself after a series of setbacks, both at the national and state levels. With his inclusion, the Cong-

ress would set its sights on the sizeable Jat Sikh vote, particularly in Punjab's rural belt, which has been a traditional vote bank of the ruling Akalis. The former cricketer, who is also famous for his sense of humour, could see his popularity rub off on the voters, besides rocking the boat of the principal opposition parties.

N J RAVI CHANDER
Bengaluru

Congratulations, Team Gujarat

The new format of the Ranji Trophy has given the opportunity to teams from lesser-known centres to make their mark on the national stage. Earlier, these teams would never qualify for the knockout stage. Congratulations to the Gujarat team for winning the trophy. One hopes the momentum will be maintained unlike Rajasthan that after two successive titles has faded away from the picture. The monopoly of Mumbai closely followed by Karnataka and Tamil Nadu needs to be challenged if cricket has to take deeper roots in India.

ANTHONY HENRIQUES
By email

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