


# RationalExpectations

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## NBFC crisis keeps getting worse

No resolution has been found for IL&FS,but new crises keep coming up; wait-and-watch by govt isn't quite a solution

**EVEN ON ITS OWN**, given its ₹100,000+ crore loan book, the IL&FS meltdown was a big enough shock to the country's financial system, a mini-Lehman as many put it. If it didn't result in a contagion, that was due to the government approaching the courts for a freeze on bankruptcy proceedings as well as putting in place a management team led by Uday Kotak to sell IL&FS assets, in quite the same manner as was done when the Satyam scam unfolded. While this saved off the IL&FS crisis, a similar problem is being seen in other large NBFCs.

In the case of IL&FS, for instance, apart from the issue of how much of the group's debts are related to assets on the ground and how much of this was inflated, it is becoming clear that there aren't that many buyers of infrastructure assets who aren't themselves stretched for cash. If that isn't worrying enough, with other NBFCs like Indiabulls, Dewan Housing (DHFL) and Reliance Capital in trouble, the country's financial sector is being buffeted by bad news in rapid succession and it is not clear how much more the economy can take.

There is, in all cases, the fundamental asset-liability mismatch since, in the absence of a deep bond market, the NBFCs are borrowing short and lending long. In such a case, market confidence is critical since that is what allows existing loans to be rolled over and fresh ones to be contracted. But with allegations of siphoning off dogging many NBFCs, apart from likely losses on loans to real estate developers with the realty market continuing to remain in the doldrums, the flow of fresh money has all but dried up. For a sector that saw lending skyrocket, especially after demonetization when there weren't too many investment avenues—between March 2012 and 2018, NBFC lending rose from ₹7.2 lakh crore to ₹17.6 lakh crore—this was the last straw; the inability to service loans resulted in these NBFCs being downgraded and that, in turn, further reduced their ability to borrow more so as to be able to service the loans.

While the better-off NBFCs like HDFC, LIC Housing Finance (LICHF) and Bajaj Finance are still able to raise finance, as Credit Suisse points out, HDFC and LICHF accounted for around 60% of the bond issuances in the first quarter of 2019. In Jan-March 2019, while HDFC raised ₹24,715 crore from the market, LICHF raised ₹13,704 crore and Bajaj Finance raised ₹3,280 crore; Reliance Capital and DHFL never raised anything; while Indiabulls raised ₹1,030 crore in January.

With large NBFCs in trouble, needless to say, this caused a huge problem in fixed income funds that had lent to NBFCs given how much value the funds lost. As a result, mutual funds have managed to reduce their exposure to the sector; while 30% of the AUMs of liquid funds were invested in the NBFC sector in August 2018, this was cut to 27% in March this year.

While the official stance so far has been that this is really an issue of solvency instead of inadequate liquidity since the better-off NBFCs have no problem raising money, and so the government will wait and watch, this is not good enough. It is not clear, for instance, whether the economy can take being buffeted by one NBFC meltdown or the other every other month. More important, since both banks and mutual funds have exposures to these NBFCs, there is always the fear of a spillover of some sort. Right now, with NBFCs not really growing their books, but trying to sell assets in order to retire existing debt (see graphic), the best option appears to be that of an orderly winding down.

While that leaves the vital question of who is going to be lending to the critical real estate/housing sector if NBFCs aren't going to be able to, this presupposes the existing assets of NBFCs will be able to cover the loans. That is unlikely to be the case, especially when it comes to loans given by NBFCs to realty developers; as in all other cases of companies in trouble, reasonable-to-large haircuts are almost certain. Indeed, for now, the assets being sold are the best ones; the haircuts will get larger as more assets need to be liquidated.

In other words, the government needs to look at an active solution, including taking over of some NBFCs or their assets—SBI announced a ₹45,000 crore plan to take over assets of NBFCs last October—and, if need be, making a budget provision for funding the gap between loans and assets; to the extent these NBFCs aren't going to be able to repay their loans from PSU banks, the government will have to, in any case, absorb this hit. Perhaps the budget will provide some clarity on the government's game plan; the economy cannot continue to grow at a reasonable pace if there is inadequate funding of a sector as vital as real estate or when so much of lending is in trouble.

# IlliberalACTION

As many as 119 were booked in Kerala between 2015-2018 for objectionable posts against the CM

**THERE IS NO** doubt Uttar Pradesh chief minister Yogi Adityanath and West Bengal chief minister Mamata Banerjee abused their power going after journalists and laypersons for "objectionable posts" on social media. But, while a section of the commentariat and many on social media, including troll farms, rushed to pillory Adityanath/Banerjee, it is important to point out that illiberal attitude exhibited by those in power isn't necessarily a preserve of only one party or the other. In fact, for many a crusader for liberalism on Twitter, likely ideologically left, it would have come as considerable embarrassment that 119 individuals were booked in Kerala between 2016 and 2018 for objectionable remarks on social media against chief minister Pinarayi Vijayan. While some of the posts included death threats and casteist slurs—where it can be argued that there was legitimate cause for action—there are a good many instances where the state government has acted against individuals for just critical or unflattering statements and posts. Indeed, 26 people have been arrested on related charges so far. Three were arrested for a harmless morphed photograph showing the CM feasting on a plantain leaf in the police station while a different person had been arrested last year for circulating a morphed picture of the CM in an unclothed state. Ironically, the CM's own reply in the Assembly over such arrests is a case of the "Emperor's new clothes".

While the opposition has rightly condemned Vijayan, it is lamentable that even the opposition has not called out the CM for infringing upon freedom of expression. Such action not only shows gross disregard for the fundamental freedoms of Indian citizens but also institutionalises draconian and unconstitutional actions through precedence.

● **GROWTH NUMBERS**  
ARVIND SUBRAMANIAN'S ATTEMPT TO ESTIMATE GDP INSTEAD OF EXPLAINING IT THROUGH CROSS-COUNTRY REGRESSION IS FRAUGHT WITH PROBLEMS

## The horse that is a hinny

BIBEK DEBROY

Chairman of the Economic Advisory Council to the PM. Views are personal



this is a regression exercise, there will be independent variables and a dependent variable whose behavior one is trying to explain. The dependent variable is real GDP growth. The independent variables are credit to the private sector, electricity consumption, export growth and import growth. Any postgraduate research student is asked to think really hard before estimating any econometric model. Real GDP growth as the explained variable? For a country like India? With shares for agriculture (primary sector) and services (tertiary sector)? I am not trying to explain real growth for manufacturing, but real growth for the entire economy. I suspect, if a research student tried to do this, the supervisor would ask him/her to go back and think again. In that process of thinking, willy-nilly, one would think of productivity too and about how that is being measured, or not being captured at all. Better still, one would think of compositional shifts in GDP within manufacturing alone. Implicit in all this, there are notions of growth theory and production functions.

There is also a difference between explanation and estimation. For instance, to take but one example, I have seen cross-country regressions where the explanatory variable is per capita GDP and the explained (or dependent) variable is human development index (HDI) scores. As in any regression exercise, there are countries bang on the regression line and there are countries off the line. For countries on the line, in this limited exercise, per capita GDP has been able to explain HDI behavior rather well. For countries off the line, per capita GDP hasn't been able to explain HDI behavior that well and one must look for explanations beyond per capita GDP. Simply because I have been unable to explain HDI behavior, I will normally not argue the HDI data are wrong. But this is

precisely what the former Chief Economic Adviser (CEA) has done in Part III of his paper. On the basis of those four explanatory variables, I haven't been able to explain real GDP growth. Had India been on the line, real growth would have been 4.5%. Since India isn't on the line, real growth of 7% must be wrong. We must shave off 2.5%. This is the substance of the headline-grabbing argument. Since the days of Simon Kuznets in late 1930s, economists (and statisticians, condemned a bit in the paper) have sought to measure GDP through various methods of national income accounting and have sought to make it better and more precise, the production approach and the expenditure approach and so on. And in the growth theory tradition, there are those who have tried to explain real GDP growth of countries. But to the best of my knowledge, this is the first time someone has tried to measure/estimate GDP in this way. Of course, there is always a first for everything.

It gets worse. Had that not been the case, one would have called this a mule, not a hinny. This estimation of GDP, not explanation, is not being done for a single country. It is a cross-country exercise, fraught with more problems. Indeed, that explains why those four explanatory variables were chosen. "These are available for a large sample of countries." This is choice based on convenience, not on what is reasonable. I should also think of countries with which India can reasonably be compared, such as emerging economies. Instead, "To ensure cross-country comparability, we exclude from the core sample 'atypical' countries

None of these alternative specifications have been tried out. Or, if they have been tried out, they have not been reported

which we define as oil exporters, small economies (population of less than 1 million), and fragile countries, experiencing conflict or other serious breakdowns/disruptions." Therefore, the comparison is with all middle income countries. A "dummy" is thrown in for India in 2011. For the uninitiated, a "dummy" is used to pinpoint a change, in this instance, change in national accounts in India. There are no dummies for other countries. To take but one example, there could have been a dummy for commodity prices, something that might conceivably have affected several countries. Note that none of these alternative specifications have been tried out. Or, if they have been

tried out, they have not been reported. To put it very mildly, there is a cavalier attitude in the way the paper goes about cross-country regressions.

The bottom-line agenda is simple. India is an outlier. *Ipsso facto*, Indian GDP (real growth) figures must be wrong. There are other outliers too. "Two prominent outliers are Ireland and China (there are others

too) but the difference with India is that their GDP growth is over-estimated in both time periods and by more than in the case of India." Therefore, we can ignore them and talk only about India. "So, instead of the reported headline growth of about 7 percent between 2011 and 2016, the results in this paper suggest a range for actual growth of between 3.5 and 5.5 percent." Such a growth rate evidently meets the smell test. It certainly does. With these kinds of growth numbers, say 4.5%, the tax numbers cannot be right. They too are smelly, like the fish sold by Unhygienix.

Since these new GDP growth numbers have been established beyond reasonable doubt (read statistical significance), the tax numbers must have been cooked up. No other logical conclusion is possible. That whinny by the hinny will no doubt be in the next working paper.

(Second of a multi-part series)

CM's reaction to the doctors' strike

An aged person of 75 had a heart attack and then passes away at the Nil Ratan Sircar (NRS) Hospital in Kolkata. But the relatives of the patient alleged that his death was due to the negligence of the doctors of NRS. As a result, within hours the relative of the deceased to organised a mob of 200 people, and attack the doctors with sticks and iron rods. Five persons were arrested and the West Bengal Chief minister, Mamata Banerjee, is busy issuing ultimatums to the doctors at her surprise visit to SSKM Hospital. Peoples are aggrieved that why she had neither visited the injured doctors at NRS, nor has she condemned the attack on the doctors or promised swift action against the attackers. Rightly the Calcutta High Court, reminded the striking doctors of the 'Hippocratic Oath' they take to ensure the welfare of all patients. But in solidarity with the protest in West Bengal, one side the Indian Medical Association has declared Friday "All India Protest Day" against the assault on junior doctors, and on the other side CM's nearest and Kolkata Mayor Firhad Hakim's daughter, Shabba Hakim's strong word condemnation: "As a TMC supporter, I am deeply ashamed at the inaction and the silence of our leader," Hoping *Didi* comes out with fairness and makes use of this opportunity to help improve the facilities and create an environment where our Doctors can serve in a better way. Also doctors should perform their duties and render excellent service for upholding their image of the novel service in the society; the treatment of the ones who need them badly.

— Bidyut K Chatterjee, Faridabad

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## Greener energy may mean slower growth

In future, as the world works to protect the climate by turning to low-carbon fuel sources, lower economic growth may be an unwanted consequence

**ECONOMISTS TEACH US** that resources don't just run out. As something becomes scarcer, its price rises, triggering a search for new supplies or the discovery of substitutes. We've seen it happen over the past two decades in the oil market, as dwindling reserves triggered the U.S. boom in oil derived from shale. Unexpectedly, the U.S. has surpassed even Russia and Saudi Arabia as the world leader in crude oil production.

Even so, the shale boom is already petering out, as we've nearly tapped most of the easily extracted oil, a comprehensive new study suggests. Huge investments and the drilling of nearly 10,000 new wells every year are now required to keep production at current levels. We're putting in ever more energy for every barrel we get out. That trend highlights a looming problem for our economy. It takes energy to find or produce energy, and, year by year, it requires ever more, as we turn to lower-quality energy sources, including oil from shale and tar sands. Things will get tighter still as we move into renewable sources, including solar and wind power. The weak economic growth of the past decade may be due, at least in part, to the changing nature of our energy sources. And in the future, as the world works to protect the climate by turning to low-carbon fuel sources, lower economic growth may be an unwanted consequence.

A half-century ago, a barrel of oil gave us around 100 times as much energy as we spent on finding the oil, drilling wells and pumping it out. This ratio—known as the energy return on investment, or EROI—has fallen below 10 for conventional oil produced in the

U.S., and to around 20 to 30 for conventional oil produced elsewhere in the world. The EROI from shale or tar sands is much worse, perhaps as low as 2.

Of course, it takes energy to do anything—from transporting materials to building satellites or running computers. Energy is linked to economic activity. Three years ago, economists Florian Fitzaine and Victor Court looked at the performance of world economies from 1960 to 2010 and found a correlation between periods of higher energy expenditures—the fraction of gross domestic product spent on obtaining energy—and lower economic growth. It makes sense: A society that devotes a larger fraction of its output to producing energy has less to spend on other useful outputs, such as research, education and manufacturing.

This link between energy and growth suggests that many of the advances that the global economy has experienced over the past two centuries have been due to the availability of cheap, high-quality fossil-fuel energy. Conventional oil and coal provided so much more energy than it took to produce that there was plenty of energy left for building cars, roads and airports, for manufacturing industrial goods, growing food, and investing in sophisticated science and medicine. But we're now about to enter a different era.

Some researchers argue there is a limit to how much energy a modern economy can devote solely to finding more of it. Beyond this limit, sustained economic growth becomes impossible. Empirically, Fitzaine and Court estimate, the U.S.'s limit is around 1.1% of GDP, which also implies a minimum average EROI of 8 to 13 from all energy sources. The average EROI for most

nations is currently higher, mainly because we still rely on oil, natural gas and coal for power. But the numbers are trending downward.

If we reduce CO2 emissions by turning from coal and oil to renewable energy sources such as solar and wind, we may have a chance to avoid the worst consequences of climate change. But we'll also be turning to sources with EROI values that are well below those for oil; estimates for nuclear energy give it an EROI of around 14, with lots of variation depending on a reactor's technology. Moreover, these numbers may be overly optimistic: Many estimates of EROI fail to include all the energy used start to finish, from finding the energy source to production to the final point of use. Current estimates for solar or geothermal energy see an EROI of roughly 10. Wind is somewhat higher, around 18, but only in some locations, and there are limits on how much wind energy we can expect to harvest.

We may find that a green-energy future is also one that lacks the vibrant economic growth to which we're accustomed. In that case, we'll have to divert more of our efforts to finding more energy, rather than to the activities that result in growth. That future is preferable to continuing to seek high-EROI fuels and magnifying the consequences of global warming, which will also spell the end of growth as we know it, while bringing many other problems as well. Either way, enormous social transformation is probably on the horizon.

This column does not necessarily reflect the opinion of the editorial board of Bloomberg LP and its owners



WITH PRAKASH JAVADEKAR TAKING charge of the environment ministry from the inert Harsh Vardhan, and hopes kindling of genetically-engineered brinjal and mustard being approved for cultivation, one wishes the government had a specialised communication agency for advocacy and outreach to create public opinion favourable for agri-biotechnology.

Although India approved Bt cotton, genetically-engineered to be toxic to the American bollworm, in 2002, and permitted another variant in 2006 (both of which farmers have embraced enthusiastically), those opposing these have been so successful in demonising the technology that no other crop—Bt brinjal, herbicide-tolerant (HT) cotton, or GM mustard—have got the nod for cultivation.

Javadekar is known to be in favour of the science. In December 2015, he told me that he was “determined” to approve GM mustard. But before he could take a decision, he was shifted to the ministry of human resource development. Any positive moves he makes now will be met with strong opposition from anti-GM activists, including the Swadeshi Jagaran Manch, one of the 36 organisations affiliated to the Rashtriya Swayamsevak Sangh, the mentor of the ruling party.

Over the past 15 years, both the UPA and NDA governments stalled; they did not approve new GM crops. Only a few political leaders support the technology. But farmers are restless. They’ve planted large tracts with illegal HT cotton. In May, a farmer in Haryana was forced to destroy his illegal Bt brinjal crop, which he found profitable because it required very few sprays against the fruit and shoot borer. On June 10, the Shetkari Sanghatana, founded by the pro-market and pro-technology Sharad Joshi, defied the law and planted illegal HT cotton and Bt brinjal near Akola in Maharashtra, demanding time-bound approvals and certainty in access to agri-biotechnology.

The government could learn from the Philippines, which set up a Biotech Program Office in 2000 to promote the responsible use of agri-biotechnology to sustain food security. It was educative to meet its director-coordinator Annalyn Lopez during a visit to Manila in April at the invitation and expense of CropLife Asia, which represents the agri-biotechnology industry in this part of the world.

Apart from overseeing research and development in biotech, developing skills in officials to regulate GM crops, and promoting policy research and advocacy, the Biotech Program Office strives for public understanding and acceptance of agri-biotechnology. “Communicating health and safety to laypeople is difficult as biotech is sophisticated,” says Lopez. “We are communicating to people who may not have a background in science.”

Both India and the Philippines are democracies, although the latter has a history of military dictatorships. India was first off on GM crops. It approved Bt cotton in 2002. The Philippines permitted GM corn resistant to the Asian corn borer in 2003. About 70% of yellow corn (there is a white variety, too) grown in the Philippines is GM corn, says Lopez. From 50,000 hectares in 2004, it now covers 642,000 hectares, with 470,000 farmers planting it. That’s 46% of the Philippines’ corn area. In India, 93% of the cotton planted in 2017 was of the GM kind.

Both India and the Philippines have strong anti-GM groups. In the Philippines, they have vandalised Golden Rice trials. Greenpeace moved its Supreme Court against Bt brinjal trials, which, in 2013, halted the trials, nullified the 2002 biosafety regulations, and temporarily halted all applications for authorisation of GM crop trials, commercialisation and imports. In 2016, it lifted its injunctions and recognised the newly-issued biosafety regulations. India’s Supreme Court is also quite adversarial.

Lopez says partnerships are important. Her office has enlisted TV broadcasters and print media journalists. It gives awards for biotech journalists since 2006. It publishes a biotech magazine

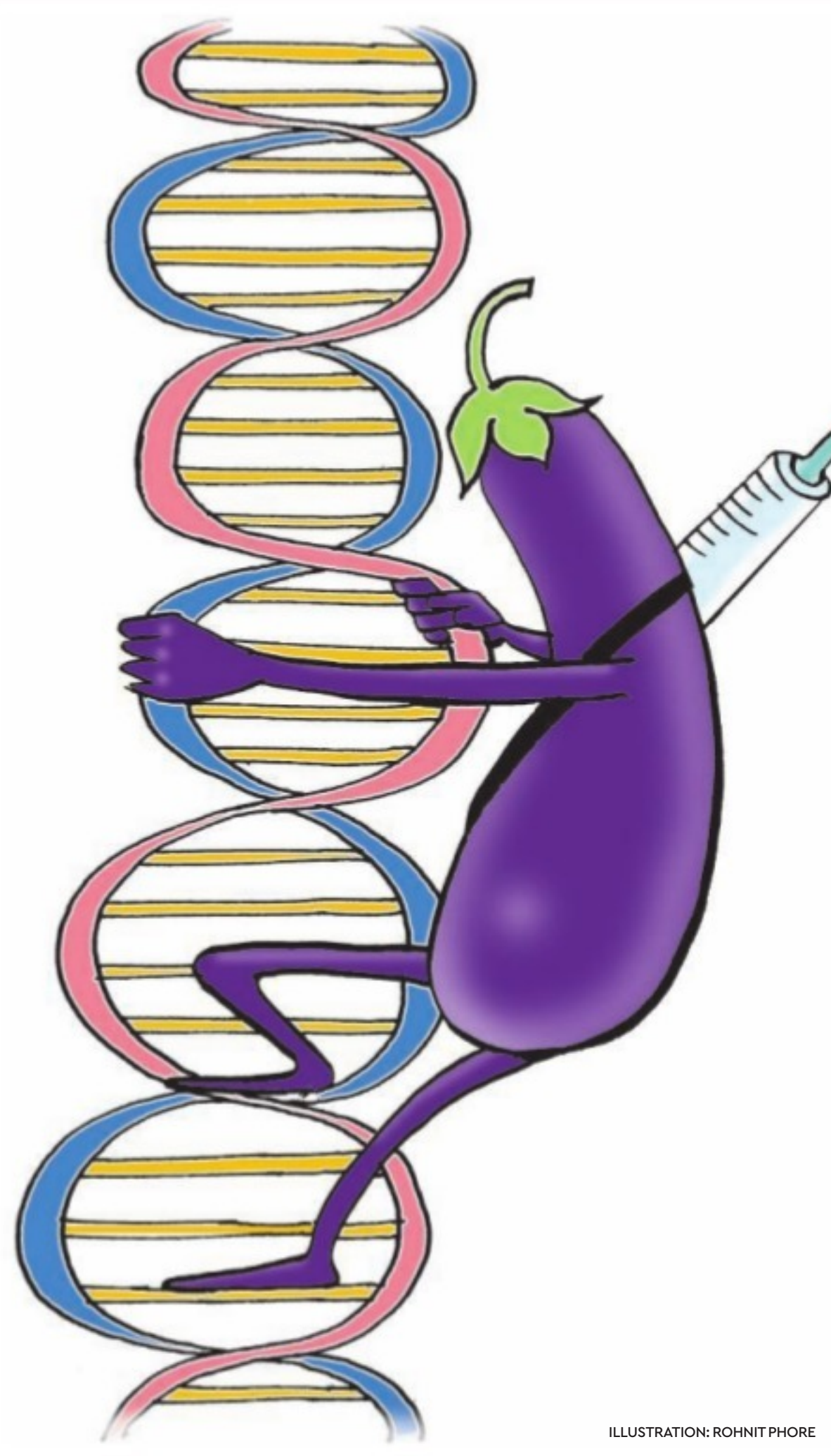


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## ● CHLOROPHILE

# Dispelling falsehoods about GM crops

What India can learn from the Philippines, which set up a Biotech Program Office in 2000 to promote the responsible use of agri-biotechnology to sustain food security

with uplifting testimonials. In 2011, it teamed up with the network of rural radio broadcasters. Many towns have declared their support for biotechnology. Lopez says her office has developed courses to educate their chief executives. In association with the Biotechnology Coalition of the Philippines, it pushes for

regulation based on science and evidence. The International Rice Research Institute and the Philippine Rice Research Institute are partners for Golden Rice bio-fortified with pro-Vitamin A beta carotene.

The Biotech Program Office encourages high school and college students to

opt for biotechnology courses. It has developed curricula for them. It holds short films, jingle-making and public-speaking contests on biotech for them. A computer game—biotech crops vs zombies—has been developed. Students participated in a fashion show with clothes made of GM corn kernels and cobs.

Lopez says her office reaches out to politicians who are neutral or don’t have a stand on GM crops. They may be the chairperson of a committee in Congress or influential in their political party. Once an appointment is secured, she makes sure that good communicators are fielded. These need not be scientists. They may be farmers who have a good story to tell about how GM corn has benefited them. Politicians are taken to farms so they can see for themselves that GM corn is no different from the non-GM variety. Regulators are also invited to engage with politicians; they explain the regulatory process and but don’t do advocacy so their integrity is not doubted.

Since the Philippines is strongly religious, Lopez says her office engages with religious leaders, too. Because of its outreach, a Catholic priest has become a member of a technical advisory committee on biosafety. A representative was also sent to an international *halal* conference, which said GM food is *kosher* because it does not contain pork.

In fact, through a presidential proclamation back in 2005, the National Biotechnology Week is also being regularly celebrated.

But well-funded NGOs pose a challenge, says Lopez. There are legislative proposals to disallow GM crops. Resolutions against them have been passed by local bodies. There is fake news in the social media. Consumers have low exposure to factual information.

“We have our own voice, make our own choice, and assert the right to technology. That is what we are driven by,” says Lopez.

In India, there is strong support for GM crops in scientific circles. The National Academy of Agricultural Sciences (NAAS) has passed a resolution in favour of the technology. It has supported GM mustard and even written to the Prime Minister not to withhold approval.

The apex regulator, the Genetic Engineering Appraisal Committee (GEAC), has recommended release of Bt brinjal and GM mustard for commercial cultivation. It has asked the Indian Institute of Horticultural Research (IIHR) in Bengaluru to study and report Bangladesh’s experience with Bt brinjal, so it can revisit the moratorium on release imposed in 2010.

The English national dailies have favoured GM crop technology through their editorials, though their reporters tend to support the activists.

But support for agri-biotechnology is diffused. The Department of Biotechnology has not invested in advocacy and outreach, though it funnels money to agricultural universities, almost all of which have departments of agri-biotechnology. At last year’s National Eligibility Test (NET), which is a gateway for assistant professorships in state agricultural universities, the most number of candidates were from the discipline of agri-biotechnology. But the choke on regulatory approvals makes all that teaching and research a humongous waste.

In 2015, Karnataka’s expert committee on agricultural biotechnology had advised the state government to set aside Rs 10 crore to support NGOs with acceptable proposals on public outreach so that correct information about the safety and benefits of GM crops could be communicated to the public and misinformation spread by anti-GM activists could be countered. The committee was headed by M Mahadevappa, a well-known rice scientist and former vice-chancellor of the University of Agricultural Sciences, Dharwad. It also wanted public outreach cells in agricultural universities for creation of awareness about biotechnology.

The BJP’s recent Lok Sabha election campaign is a case study in marketing. Javadekar could take some cues from it.

## ● INDIA-IRAN PTA

# Redefining trade

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## Why India should prefer the preferential trade agreement with Iran

INDIA AND IRAN have been important trading partners. With the US imposing sanctions on Iran, and pressure on other economies to cooperate, India has perhaps entered into a cobweb. The sanctions are likely to put pressure on her trade deficit. While importing oil from Iran, India has the advantage in being able to pay partially in rupees, and partially settled with food and pharma exports. Secondly, for four months, global crude oil price has been on a surge, by almost \$18 per barrel. This may exacerbate our CAD and domestic market prices, if not cushioned adequately. Thirdly, Iran oil is relatively cheaper, but US officials have assured its adequate supply from Saudi Arabia, the UAE and the US to avoid shortages, if any, after the sanctions.

Iran is India’s third-largest oil supplier. It is beneficial for India to import oil from Iran as it includes free shipping and insurance, besides payment in domestic currency, which others are unlikely to offer. Oil imports surged from \$4.6 billion to \$11.7 billion during 2015-16 to 2018-19 (April-February). As per ITC Trade Map UN Comtrade, crude oil import increased from 148 million tonnes in 2009 to 225.5 million tonnes in 2018, rising at 4.8% per annum. If India restricts oil imports from Iran, it may hurt agricultural exports. During 2018-19, the export of basmati rice to Iran was worth \$1.35 billion, which will have to be sold to others. It may adversely affect domestic prices, hence farmers’ incomes. Also, the time required to cultivate basmati rice is much longer than that needed to grow non-basmati varieties, which is likely to make it expensive for farmers in terms of opportunity costs foregone. Like basmati, tea exports worth \$130 million will also be under threat due to sanctions.

Earlier, when the US put sanctions on Iran, India did not stop trading. Britain, France and Germany had issued a joint statement to maintain economic ties with Iran despite the threat of American retribution. Now, Iran is aware that the EU, Russia, China and India are its allies, but will not be vocal in support due to scepticism about the nuclear programme. These economies may also feel they cannot do much to protect Iran’s economic interests without risking their own business. It appears the sympathy these countries have for Iran on political grounds is not enough to outweigh their own economic interests. This may add to Iran’s frustration as its economy has shrunk by 6% this year, after having contracted 3.9% last year.

A preferential trade agreement (PTA) with Iran would act as a catalyst for India. Initiated in 2016, India will discuss the fifth phase of negotiations with Iran. The PTA will be distinct from the existing one due to the scope of reducing tariff rates by 25-45%. Since Iran is not a WTO member, there is no obligation to keep tariffs in accordance with the specified bound rates, and bilateral trade flows will benefit both.

India’s total value of trade with Iran is estimated at \$18 billion (2018). The export basket consists of rice (46.4%), tea (4.4%), soybean oil cake (4.3%), carbon electrodes used for electrical appliances (3.3%), extracted oil essence (3%), uncoated paper and paper board (1.8%), and medicaments (1.4%). In contrast, key imports worth \$12.85 billion include 88% crude oil, with the remaining share comprising of chemicals (organic and inorganic chemicals) and fertilisers. Iran offers 10% import tariff or less on only 37.2% tariff lines, whereas still 17% of tariff lines are under 50% tariff and above. Major products of India’s interest facing high tariffs are basmati (45%), black fermented tea (30%), motor-cycles (65%), textiles (65%), glass microspheres (45%), new pneumatic rubber tyres (30%), filament yarn of polyester (40%) and woven fabrics (70%). A germane design of truncating tariffs through normal track under the prospective PTA will help India increase exports.

Another reason for favouring PTA is the Trade Intensity Index (TII) with Iran, which has remained more than one and increased from 3.4 to 4.13 during the last three years. It signals Iran to be a vital trading partner compared to China and Turkey where the TII has plummeted. In January 2014, Iran entered into an agreement with Turkey. Under this, Turkey granted concessions to Iran on 140 agricultural products, while the latter reciprocated the same on 125 industrial products. Entering into such an arrangement would be mutually beneficial for India and Iran.

From the above, it might appear that India has been caught, where choosing one possible scenario will create a bad taste for another. However, India can be diplomatic with the US in pursuing trade relations with Iran.

The PTA will be distinct from the existing one due to the scope of reducing tariff rates by average 25-45%

## HENRY MINTZBERG

A SCHOOL OF THOUGHT REFERS to a doctrine, a feeling, an intellectual tradition collectively shared by a group of people who share common opinion or outlook of a philosophy/discipline/belief or social movement. In strategic management, the Ten Schools of Thought model by Henry Mintzberg is a framework that explains approaches of defining a strategy; it can be in the form of a design, a plan, positioning, consumerist, cognitive (subjective); it can be learning; it can be power-centric; it can be culture-centric; it can be environment-centric; or it can also be configured (formative).

Mintzberg is a globally-acclaimed academician and author on business and management. The model describes each school in strategic perspective and provides a critical viewpoint; it acts as a good overview for strategic management.

**1. The Design School:** It’s responsible for development of the Strengths, Weaknesses, Opportunities and Threats (SWOT) model. Strengths and weaknesses of a company are mapped, along with opportunities and threats. The strategy is a fit between internal capabilities and external potentials. The CEO is a strategist who develops strategy and controls execution.

**A critical view of Design School:** Design thinking is a process that uses creative approaches from designers’ toolkits to solve problems. While it thrives on diverse

# The Ten Schools of Thought model

Evaluating Mintzberg’s 10 schools of thoughts for strategy formulation

VIDYA HATTANGADI

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participants, there are a multitude of factors that affect the process. These include personal behaviour and emotions, how information is searched for and processed, and how design variables are considered. Not much research is gone into it.

**2. The Planning School:** It has its theoretical roots in system theory and cybernetics. The process runs towards planning the entire strategy in a rigorous manner so that the firm gallops ahead.

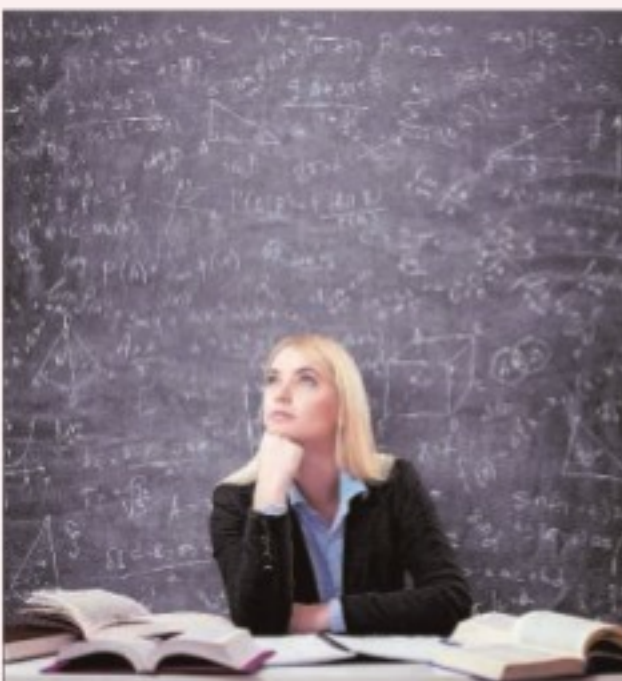
**A critical view of Planning School:** Criticality arises when something happens out of plan—when plans are made years in advance and changes take place either in the industry or in organisation, the process goes for a toss. Proper prediction is essen-

tial when using this school of thought.

**3. The Positioning School:** Its central focus is the industrial-economic angle, with the work of Michael Porter being particularly important. Competition and a competitive position are analysed on the basis of economic concepts; companies must choose one out of the three generic strategies: cost-leadership, differentiation or focus (niche market). This school is strongly influenced by economics.

**A critical view of Positioning School:** Here the strategy assumes the market will remain as it is; it does not take into consideration new entrants and their energy.

**4. The Entrepreneurial School:** In it, the environment can be influenced and



manipulated. Entrepreneurs are capable of bringing innovative products and services to the market, developed on the basis of characteristic dynamics, quite detached from the existing ‘laws’ of the market.

**A critical view of Entrepreneurial School:** The problem with this school is one question: Where to find a mature, experienced, talented and honest leader? If an organisation designs its strategies based on recommendations by the leader, he/she has to be a visionary and who takes responsibilities of success and failure of strategies.

**5. The Cognitive School:** The ‘cognitive’ has psychology as its root discipline. It considers the environment to be demanding and/or difficult to comprehend. In it,

the organisation depends a lot on ‘mental maps’ for making strategies. In particular, strategy is not so much planned, but rather incremental and ‘emerging’.

**A critical view of Cognitive School:** The cognitive model is not practical beyond a point. A firm cannot rely solely on surveys and research reports to find new ideas or to make connections with their customers.

**6. The Learning School:** Psychology is at the root. The human mind is complex and unpredictable. The nature of business environment, coupled with a decentralised distribution of knowledge, makes distribution of information complex. It has been observed that organisations which follow the learning school model make strategies looking at the past.

**A critical view of Learning School:** More than a strategy, this school looks like steering or guiding the company on the basis of previous roadmaps. It is not advisable to depend on decisions of the past because change is constant in the market.

**7. The Power School:** People in power call the shots. The power centres can be customers, suppliers, workers’ unions or leaders. The power school is very political at times; the cartel that is powerful negotiates, forms alliances and works for it.

**A critical view of Power School:** The trouble occurs when powerful people stop listening and do not take feedback for implementing improvement measures.

**8. The Cultural School:** A positive cul-

ture harnesses innovations and entrepreneurial culture. In this school, strategy formation becomes subject to a company’s unique values and subjective perspectives and styles of decision-making. Strategy formation is a process of social interaction based on the beliefs and understandings shared by members of an organisation. It’s most useful during M&As.

**A critical view of Cultural School:** During changes taking place in a firm, people resist it because they get used to an archetypal culture. Moreover, when a strong culture is built, direction becomes hazy.

**9. The Environmental School:** It’s situational, and gives importance to the environment; for example, in the IT industry, technology needs upgrades and is ever-changing. So, situational analysis is the most used tool in this school.

**A critical view of Environmental School:** Firms need to be agile; processes depend on the environment, which constantly changes. It is difficult for organisations to keep changing their strategies constantly.

**10. The Configuration School:** It’s one of the most preferred because its basic premise is that the strategy needs to be configured; it needs to be well-planned, well-delivered and well-configured.

**A critical view of Configuration School:** The organisation’s stable business needs to be disrupted, and the organisation has to be configured so that it reaches the successes it aims at.