

# Opinion

SATURDAY, APRIL 27, 2019

**ONLY SUSTAINABLE EXPANSION**  
Christine Lagarde, IMF managing director

History has taught us that, if not managed carefully, infrastructure investments can lead to a problematic increase in debt... the Belt and Road should only go where it is needed



## BEYOND ELECTIONEERING

WHAT IS STRIKING IN THE ELECTION DISCOURSE IS THE LACK OF FOOTPRINT OR SOUND BITE REGARDING THE LONG RUNNING AND EXISTING SOCIAL PROTECTION PROGRAMMES

# Public programmes in the time of election showers

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## Apple & Qualcomm are FRANDs again!

Apple settled with Qualcomm as few others had its technology edge; the move also settles the canards about excessive royalty

**G**IVENTHATAPPLE contributed around 12-13% of Qualcomm's revenues at the peak, it is not surprising that the two ending their billions-of-dollar lawsuits sent the latter's stock soaring 23% immediately. Apart from a six-year global patent licensing agreement, Apple is believed to have paid Qualcomm around \$5-6bn of pending royalties. When the two snapped ties in 2017, and Apple started producing devices without Qualcomm chips, the latter's stock crashed 17% between December 30, 2016 and January 27, 2017 which is few days after Apple filed its first lawsuit. And from \$57.18 on April 15 this year, the stock soared to \$79.08 on April 17, the day after the settlement.

The fact that Apple has got back with Qualcomm underscores the quality of the latter's technology since, while Apple had started working more with Intel, it didn't have the same edge. And with Qualcomm supplying 5G modems, Apple's rivals like Samsung had a head start. Once Apple- Qualcomm patched up, Intel said it would quit the 5G modem market.

The *Washington Post* ([wapo.st/2PuyEBb](http://wapo.st/2PuyEBb)) quotes from a presentation Qualcomm ([bit.ly/2L1nTyD](http://bit.ly/2L1nTyD)) made during the trial that shows how, even while Apple argued Qualcomm's royalties were too high, it acknowledged its technology was superior. Qualcomm argued (see graphics) that while Apple talked of price-gouging, a royalty of \$7.5 per device was a small part of what Apple's devices retailed at. In 2017, the presentation said, while Apple's net sales were \$229bn, Qualcomm's revenues were just \$22bn, and this includes sales from other clients as well. Qualcomm also showed that, while the speed of mobile device downlinks and uplinks was rising rapidly, the prices of chip fell equally fast.

More important, the Apple- Qualcomm rapprochement should help end the needless controversy over royalty-gouging in India by firms like Ericsson. It has been argued, by Apple amongst others, that the patent regimes followed by firms like Qualcomm and Ericsson could make royalties prohibitive. If each innovator wants 3-4% of the device sale price as royalty, some argued, overall royalties could rise to even 25-30% of a device's price due to 'patent stacking'. While this is a theoretical possibility, the reality is different. For one, only firms with several strong patents, like Qualcomm, can command such rates. Nor do all firms want a royalty, some trade their patents for a better deal while using other firms' patents. IDC data confirm this since prices of smart phones fell from around \$453 in 2007 to around \$135 in 2016 while tablet prices have fallen from \$701 in 2010 to \$223 in 2016; none of this would be possible if 'patent stacking' was taking place in any meaningful manner.

Falling prices are directly related to the licensing model followed. In traditional patent models, such as in pharmaceuticals, a license to manufacture can be given to one or two firms, but this is exclusionary in the sense that they alone can manufacture. In the Qualcomm model, licences are given to any manufacturer, as long as it agrees to pay a reasonable royalty; it has to be this way since any phone could be using hundreds of patents at the same time. An industry standards body examines all patent applications for innovation etc and declares some of them to be Standard Essential Patents (SEPs); these SEPs are to be available to anyone on a Fair Reasonable And Non-Discriminatory (FRAND) basis. The technology that a Qualcomm supplies an Apple, for instance, is available to everyone; indeed, because of this, there has been an explosion in the number of device manufacturers, whether phones or tablets, and that is what has made prices crash.

Another argument is that royalty should be based on the value of the component being sold, say a chipset, and not on the phone's price. While this sounds reasonable, the patent does not always reside at the chipset level, it can be anywhere in the network because the technology is for the overall system, not just for a component; if a patent helps utilise spectrum more efficiently, for instance, should the chipset-maker pay royalty, or the telco or the handset manufacturer? A Qualcomm can charge each phone-user a royalty and also charge each telco something, but charging this to just the device makes licensing simpler.

Another version of this argument is that an absolute value should be charged instead of pegging the royalty to the handset price. This also sounds reasonable since, if the same chip is used in a \$100 handset and in a \$1,000 one, it seems unfair that the patent-holder gets \$3 in the first case and \$30 in the other, assuming a 3% royalty rate. But since the \$1,000 phone is better able to unlock the technology's potential because of a bigger screen or better video capability, for instance, a higher royalty in absolute terms is reasonable. In any case, royalties don't scale up in a linear fashion, there is a cap beyond a certain value.

While there are several ongoing disputes between Ericsson and some device manufacturing firms like Intex and Lava in India, and the Telecom Regulatory Authority of India (TRAI) is also examining the issue of how royalty rates should be charged, it is important to keep in mind that, with FRAND terms, technology suppliers are offering more and more capabilities to more and more device manufacturers, as a result of which the customer is benefitting; and more so since device prices also continue to crash even as they get more powerful. The Apple- Qualcomm patch up, above all, is testimony to that.

## Welfare Nudging

Behavioural science has proven to be extremely effective in bettering the impact of government policies worldwide

**M**ANY POLICIES ARE aimed at influencing people's behaviour. The most well-intentioned policies can fail, however, if they are not designed to be compatible with the way people actually think and make decisions. This is where behavioural science comes into policymaking. A foundational understanding of human behaviour can lead not only to more effective policies, but enhanced decision-making and well-being. In 2015, the World Bank became one such entity that began to explore the relevance and potential benefit of behavioural insights to development policy, and now there are 202 public entities, including countries and development agencies that are working towards this objective. These entities have come together to pool their resources and knowledge in the Mind, Behavior, and Development Unit (eMBDeD) initiative.

So far, they have worked together on over 85 projects and have compiled and published their findings. Countries like Poland, Kosovo and Guatemala join India in attempting to rationalise their tax regimes. These are great examples of low-cost interventions that can yield high returns and which focus on making it easy for the end-user. Another method that focuses on the mindset of the citizen is that of improving user touchpoints and service deliveries. This can vary from incentivising energy efficient behaviours, to increasing preventive healthcare and reducing debt. Governments that do end up adopting this not only improve the lives of citizens, but also raise trust levels between themselves and the people they serve. Utilising behavioural science can also increase empathy, donations as well as civility. In Canada, for example, units are applying behavioural science principles to increase contributions to fundraising initiatives. Although behavioural science has grown by leaps and bounds within these countries, policymakers around the world should continue making further efforts to better the impact of their policies.

**T**HE BUILD-UP TO the 2019 elections inter alia has been characterised by competitive claims of formulae and formula to address poverty with rallying cries of surgical strikes, final assaults and "it is achievable". In these schemes of things, cash handouts seem to be of essence in the election season. In the market for disadvantage (demand for recognition and supply of solutions), social protection programmes play an important role. Social protection schemes are meant to mitigate the immediate impact of shocks (for example, price fluctuations) and smoothen consumption, over time. The thinking has also evolved to emphasise graduation and self-reliance where households are enabled to meet their needs consistently.

What is striking in the election discourse is the lack of footprint or sound bite regarding the long running and existing social protection programmes. Have we even heard that we will reform the public distribution system of food or the employment guarantee scheme to make them more effective and more risk mitigating? Is the direct cash transfer of different types more salient for the poor? Is it an implicit acknowledgement that the current social protection ecosystem is broken?

The aim of social protection programmes should be longer-term development and enabling people to move permanently out of poverty. Could a system like cash transfers per se, without increases in production and productivity, be a final assault on poverty? Sooner or later, ₹6,000 will become insufficient or unaffordable and revisions or adjustments would become a holy grail that cannot be touched. There are several lessons from the current social protection systems themselves that need to be taken into account:

■ Role of social programmes should

## MAMATA PRADHAN & DEVESH ROY

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be to address various vulnerabilities; hence they should be both objective-driven and community-driven rather than instrument-driven.

■ From the policy perspective, we need to understand that institutions once created tend to persist. Hence, what gets introduced needs to be well thought over. If not, schemes will continue to be dominated by design and management issues such as targeting, coverage, leakages, fiscal and political sustainability.

Take the case of the Public Distribution System (PDS) for example. Despite being a universal right, control over ration cards has become a strong instrument for discriminating against women, the lower castes and the economically less powerful. For example, in our research in Bihar, Odisha and Uttar Pradesh on PDS, discrepancy in National Food Security card distribution was quite stark. In our surveyed sites in the tribal districts of Odisha, for example, the major issue was that many were left out from the 'beneficiary list', and these were people who earlier had a BPL card. While officials accepted that there has been confusion about the selection criteria, they did not have clarity on even the basics as to what they should consider as *pucca* (cemented) houses and *kaccha* houses, characteristics that were used as proxy means for selection. This apart, several stories around

the discrepancies in issuing cards were narrated which added to the women's and lower caste's struggle with the PDS. For example, one ST woman from an Odisha village who had availed of a house loan under the Pradhan Mantri Awas Yojana (PMAY) was denied a ration card, though the house does not even have a cemented roof. Another respondent had her name cut off from the BPL category and was

**Sooner or later, ₹6,000 will become insufficient or unaffordable and revisions would become a holy grail that cannot be touched**

included in the APL category since her two sons were studying in a government college. Yet another female respondent had not been issued the NFSA card since her husband was working as a helper in an automobile company and earning ₹6,000 per month. Even in the long-running system i.e. PDS and with Odisha a comparatively well-functioning state, the identification of the poor is a first-order problem. All the cash transfer schemes will have to confront a basic question i.e. who is a poor and how well are they targeted?

Our research shows that a bottom-up, demand-led, evidence-based, sequential and iterative approach to social protection is likely to be more politically and economically sustainable than any, although well-intended, ideologically-driven initiative. Assessing how the system responds to changing conditions of vulnerability and aspirations across heterogeneous groups is the major thrust of the find-

## Spearheading the global push to end TB

Rather than passively implementing policies that come from above, affected communities should be part of the policy development process, with community recommendations reflected on paper and in on-the-ground initiatives

## POONAM KHETRAPAL SINGH

Regional director, WHO South East Asia Region Office

**E**ACH OF THE WHO South-East Asia Region's member states have played a critical role in the global push to end TB by or before 2030. In 2017, for example, health ministers from across the region issued a call for action, highlighting the measures needed to rout the disease. That was built on the following year by a statement of action, which pledged intensified efforts to achieve that outcome, even as domestic funding reached unprecedented levels. In the same year, at the UN General Assembly, member states vigorously canvassed for a political declaration on the fight against tuberculosis, which was subsequently endorsed. And in key forums within the region and beyond, member states continue to advocate with the passion and force required to chart path-breaking change.

Region-wide commitment, resolve and action is to be commended. It is also vitally important. The South-East Asia Region is the world's most TB-affected region, with the life-threatening disease having serious social, political and economic impacts. Not only does the region account for 44% of the 10 million people globally that fell ill with TB in 2017, it also makes up more than 50% of the 1.27 million TB deaths which, when TB-HIV mortality is accounted for, is estimated to be 1.6 million annually. Significantly, TB remains the region's leading cause of death and lost productive years in the crucial 15-49-year-old age group, impacting the prospects of individuals, families, communities and countries. The region is also home to a growing number of drug-resistant cases of the disease, threatening the control of TB generally, as well as health security specifically.

In recognising and commending member states' leadership at the global level, it is nevertheless imperative they implement in full, and without delay, the

UN's Political Declaration, leveraging its impact to maximum effect. That means ensuring that by 2022, 18 million TB patients are diagnosed and effectively treated (including 1.5 million children), more than 500,000 patients with drug-resistant TB are successfully treated, and preventive treatment is provided to around 12 million people at risk of developing the disease. Though this is a considerable challenge, achieving these outcomes is both possible and necessary.

To that end, intensifying active case-finding, especially amongst high-risk groups, is essential. In 2017, for example, around 1.5 million TB cases either failed to be notified or received treatment of uncertain quality. That is of deep concern. As modelling shows, intensified case-finding can dramatically reduce case incidence while also ensuring all patients receive quality treatment. In pursuing this core strategy, member states should develop a joint roadmap on how they can harness novel diagnostics (alongside community engagement) to find missing cases, as well as how people-centred treatment can be provided to all.

Covering all groups at risk of developing TB with preventive treatment should also be prioritised. This is especially important given the need to treat latent TB with new drugs that are more effective in preventing latent cases becoming active. Importantly, all plans should be aligned with WHO guidelines, which also recommend treating childhood, adolescent and adult contacts of TB cases, alongside other at-risk groups such as people living with HIV or those who are immuno-compromised. If adequately implemented, the region can reach many more than the 12 million targeted for treatment.

Third, all partners should support the supply of first-line drugs via south-

south cooperation, precisely as India has offered to do. At present, several of the region's countries are producing drugs and diagnostics, while others are testing new technologies that show great promise. This should be taken advantage of, with member states leveraging the opportunity to make substantial savings that can be used on priority interventions or in the event of unforeseen circumstances, including outbreaks. Royalty-free technology transfers will meanwhile improve access to diagnostics and the efficacy of outreach, facilitating significant region-wide progress.

Fourth and finally, community engagement, including capacity building, must be a core priority of all countries, whether low- or high-prevalence. Rather than passively implementing policies that come from above, affected communities should be part of the policy development process, with community recommendations reflected on paper and in on-the-ground initiatives. As part of that, they should also be empowered as advocates who are able to monitor the quality of services and support outreach efforts. This will help ensure all people receive the life-saving care required.

WHO will continue to provide technical and operational support to these and other pursuits as part of the region's flagship priority of accelerating efforts towards ending TB. As high-level backing at the international level advances, and member state funding mechanisms are streamlined (as they must be), the possibility of charting dramatic progress will be enhanced. That is an outcome we should all work towards. Indeed, now is the time to reflect on the momentum already developed and embrace the responsibility leadership entails. Now is the time to show that we—the WHO South-East Asia Region—can spearhead the push to end TB once and for all.

ing from our research. There is constant movement in and out of poverty and a top-down approach in all the proposed schemes is not likely to succeed. In case of PDS, in Odisha, for example, there was very little preference for direct cash transfers due to infrastructure and social trust issues.

There were major quality of services issues and it is a presumption that different cash schemes would be magically different, the possible political payoffs notwithstanding. In case of food subsidy, 94% of those from tribal Odisha districts do not prefer cash transfer over PDS. This is partly attributable to a lack of awareness about how banks operate, resulting in a fear of the unknown. Also, in the surveyed areas, the bank density is quite low. Additionally, there have been prior experiences feeding into this fear. In some Odisha villages, people did not receive money promised for building houses under the PMAY housing scheme. Additionally, the respondents were apprehensive of having to pay commission to the bank officials. They also thought that money might be misused, not just by men in buying local alcohol but also by women addicted to local tobacco. Since banks are far away, this translates into spending on transportation. Travelling and queuing up to claim their entitlement obviously involves both the opportunity cost in terms of foregone income opportunities and the time involved in the process.

Improvement or innovations in any programme are incumbent upon taking into consideration the demand side in order to ensure that the system is responsive to needs of stakeholders. The rationale for needs and preference assessment is that when programmes are well-aligned with the community's needs and preferences, they can result in economically and socially desirable outcomes. When what is provided by the programmes is not in line with the preferences and needs, it can result in sub-par outcomes.

## LETTERS TO THE EDITOR

### Modi's road show in Varanasi

The massive road show by PM Narendra Modi and the cavalcade as part of the nomination gala took Varanasi by storm. Of course BJP cannot be blamed or envied for events choreographed and telecast to appeal to the wider audience. There is no denying the fact that the spectacle was staged to present Modi as a larger-than-life character. Modi must be made to tower over other leaders as he runs his party's campaign as a one-man band and attempts a recreation of the 2014 Modi wave. He succeeds as both a marketer and a marketable product. If there is one leader who exemplifies 'personality cult' at its glorious best in today's India, it is Modi. It is a given that Modi's popularity is on edge on account of the unfulfilled promises and unmitigated distress among the impoverished multitudes. It is a sign of the times that observing religious rituals publicly has become the most effective way of electioneering — G David Milton, Maruthancode

### KKR's horror patch continues

Kolkata Knight Riders's horror patch continued as they succumbed to a battling Rajasthan Royals team at Kolkata. Skipper Dinesh Karthik ploughed a lone furrow for the home team, smashing an enterprising 97 not out off only 50 deliveries as the rest of his teammates failed to fire. With half the side back in the hut for only 98, the Royals were bailed out by teenager Riyan Parag (47) and Jofra Archer (27 n.o.), both of whom chanced their arms and succeeded. KKR's sixth defeat on the trot has put their confidence at a low ebb — Ravi Chander, Bengaluru

● Write to us at [feletters@expressindia.com](mailto:feletters@expressindia.com)

**ALOK KUMAR & SEEMA BANSAL**

Kumar is adviser, NITI Aayog, and Bansal is director, Social Impact, Boston Consulting Group. Views are personal

**I**N OUR FIRST two articles in this series, we described two broad areas of work, and within those five interventions that can significantly improve the quality of public education. The first is to fix education delivery structures by thoughtful consolidation of sub-scale schools, filling teacher vacancies and rationalising excess teachers. This will ensure that the base condition of having a viable-sized school with the right number of teachers exists. The second is to address the core gaps in teaching and learning in these schools — ensuring teachers teach based on students' learning levels rather than simply completing the prescribed syllabus, far stronger teacher training to improve their own ability to teach, and rethinking secondary, vocational education to provide relevant pathways to higher education and employment.

However, these ideas will be impactful only if we can take them with fidelity to the last mile. And to do that, we need the entire machinery of the education system to come together and make change happen. However, we typically see a few challenges on the ground. Communication channels between the education directorates and the schools are completely broken, with information reaching teachers late or often not at all. There is little data on learning being systematically generated in schools and fed back—so decisions around how to improve education programmes, or even whether to continue them, are often educated guesswork. Across all levels of the system, especially in block and district offices, there are a large number of vacancies. And people in position are burdened with administrative tasks and paperwork, often to the detriment of their actual jobs—like providing academic support to schools. Transforming the quality of education will necessitate that we strengthen the system at all levels. Only then can what we do in schools or with teachers really make a difference.

Our experience across the three SATH-E states and lessons from others, we propose three system-strengthening initiatives that can amplify the impact of these programmes.

**DATA DRIVE**

First, we need to strengthen the education organisation. The core challenge is to get the NEP (National Education Policy) research and training and the DIET (District Institute for Education and Training) to work together. On the first fundamental of education, like curriculum design or assessment design and analysis are often missing. Additionally, in several states, field offices have vacancies as high as 50%. We need to fill these vacancies with the right people who have the relevant skills.

Maharashtra, for example, has filled SCERT and DIET vacancies by selecting and training qualified teachers from within the system through a competitive process. They have also instituted a stringent annual performance review mechanism. Beyond vacancy filling, we need to make sure that individuals across the organisation have the relevant skills to work with data and technology or planning and performance management, which are becoming increasingly relevant. This will require rewriting job charts, mapping out the skills needed, providing targeted training and, moreover, on-the-job support. The silos and redundancies that have traditionally existed across the organisation also need to be broken down. For example, in most states, teachers' salaries are paid by 3-4 different directorates (due to different teacher cadres and different sources of funds)—the department needs to be restructured and common human resources (HR), management information system (MIS), etc, functions created.

Second, we need to put in place strong MIS systems built on real-time, accurate databases. The reasons for this are twofold. A well-planned MIS can drastically reduce the amount of time spent on repeated data collection and paperwork. With process automation, for example, head teachers can spend less time on paperwork (in one state, we saw as many as 40 registers required at the school point) and more time mentoring teachers—and the same is true at all levels of the system. Equally important, without a comprehensive, up-to-date MIS system, there is no single source of truth on metrics like teacher attendance or learning levels, basis

which policy decisions can be made. For example, in Jharkhand, with real-time school monitoring data now available, the state can identify the bottom 2,500 schools and provide targeted support. In Odisha, school staffing norms are being revisited and the availability of school-wise enrolment data is enabling the state to accurately assess the financial implications of the changes. Communication and feedback channels can also be strengthened through technology, eliminating the Chinese whispers that lead to poor implementation at the last mile. In Rajasthan, for every office order released, the state can map through the MIS which district, block officers have logged in and seen it, and can follow up with those who haven't. The impact of investing in MIS and data systems cannot be overstated.

Finally, we need to radically rethink the culture of the education department. And build one of delivery and accountability, shifting the vocabulary to quality and performance. Every individual needs to have clear outcomes to work towards and a work plan to achieve these, with regular reviews at all levels. Failure to meet academic goals must be called out and dealt with appropriate action, and good performance (on outcomes, not just inputs) should be rewarded. Building a new outcome and purpose-driven culture will take a consistent, top-down push by the leadership. Through harder accountability measures—such as performance reviews and incentives—and equally, softer measures like better communication and empowerment. The pivot to quality outcomes can also be driven by demand from parents and community representatives. Delhi has worked on re-energising school management committees (SMCs) and holding parent-teacher meetings (PTMs) such that parents can participate in the decision-making, partnering with teachers to deliver better learning and holding them accountable.

Truly transforming public education and making a quantum leap in student learning in India will require bold measures. It will require us to take a comprehensive approach at scale, rethinking traditional delivery models and adopting technology at an unprecedented pace. It will require changing the way we manage public finances and making education budgets more flexible. It will require the public sector to become far more agile in its pace of decision-making. All of this do and a drop together of the bureaucracy, civil society and the private sector. Our results can be a tangible shift in the quality and competitiveness of our public schools.

Petroleum products are important source of revenue for government (Total tax collections; ₹ crore)



**IMPROVING LEARNING OUTCOMES**  
**Making the system work for better schools, better teacher**

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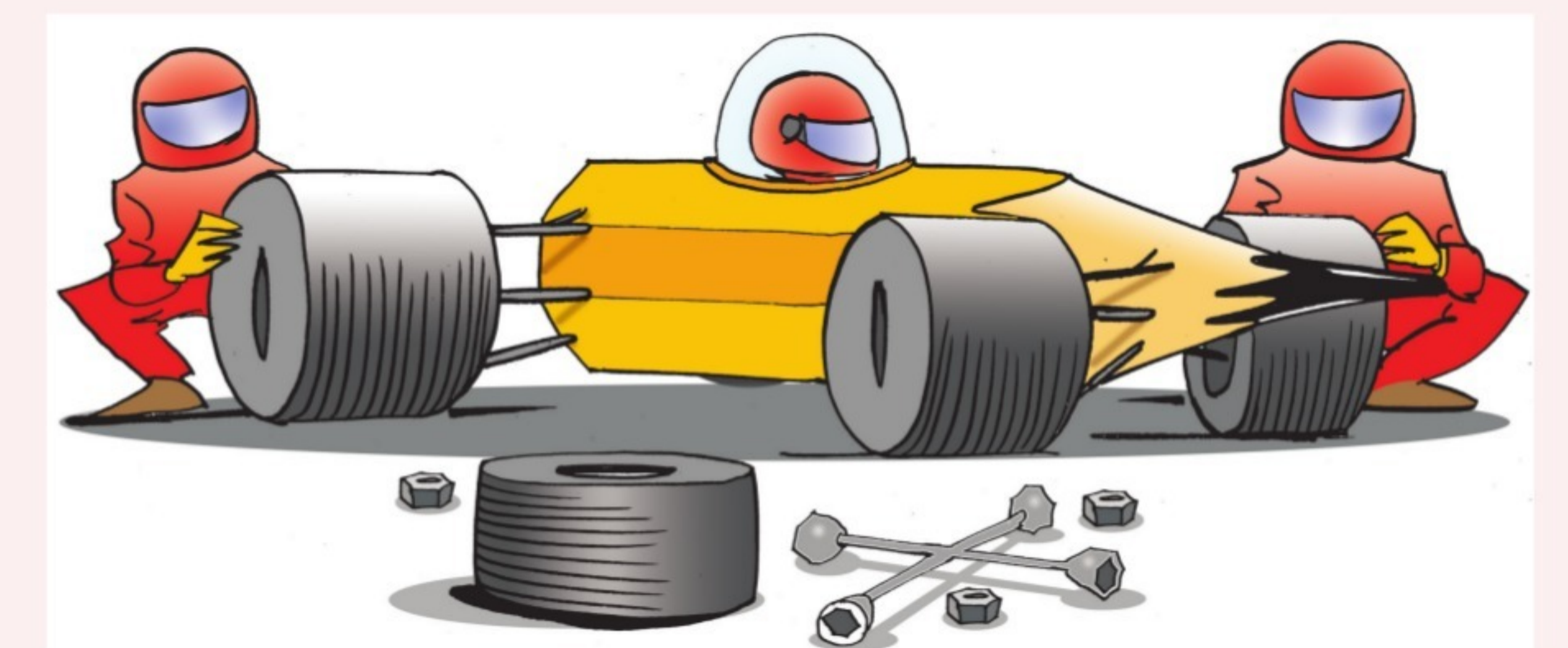
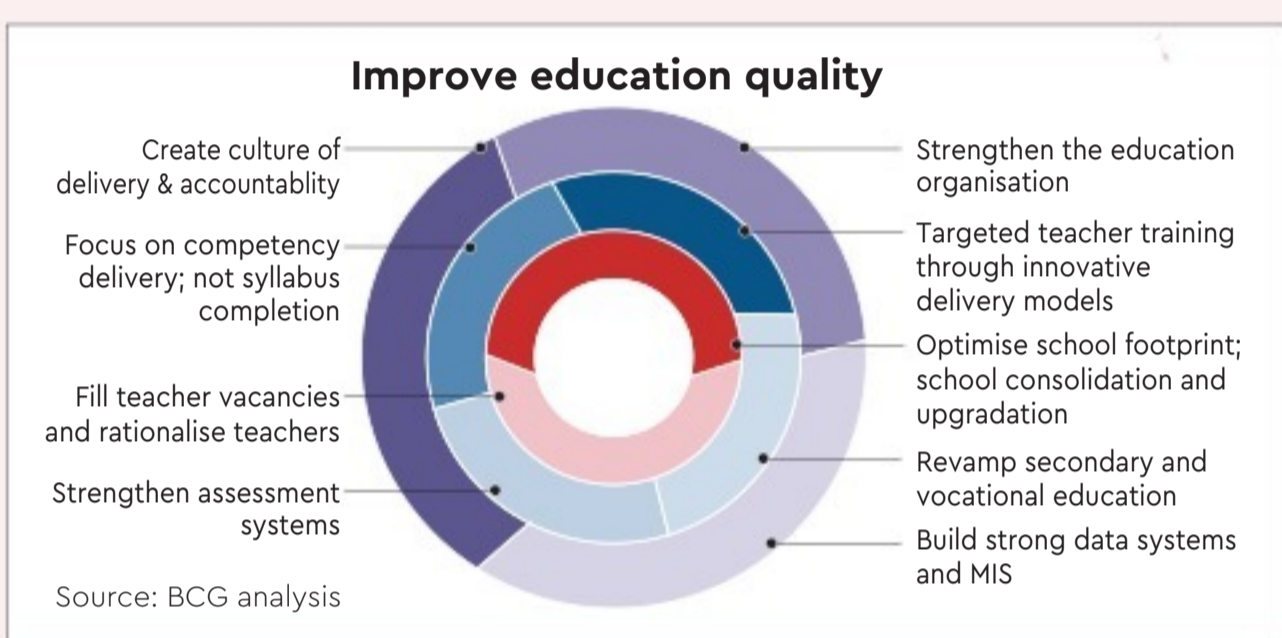


ILLUSTRATION: ROHNIT PHORE

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**Iran sanctions fuelling oil price rise**



US sanctions have taken a toll on Iranian oil exports



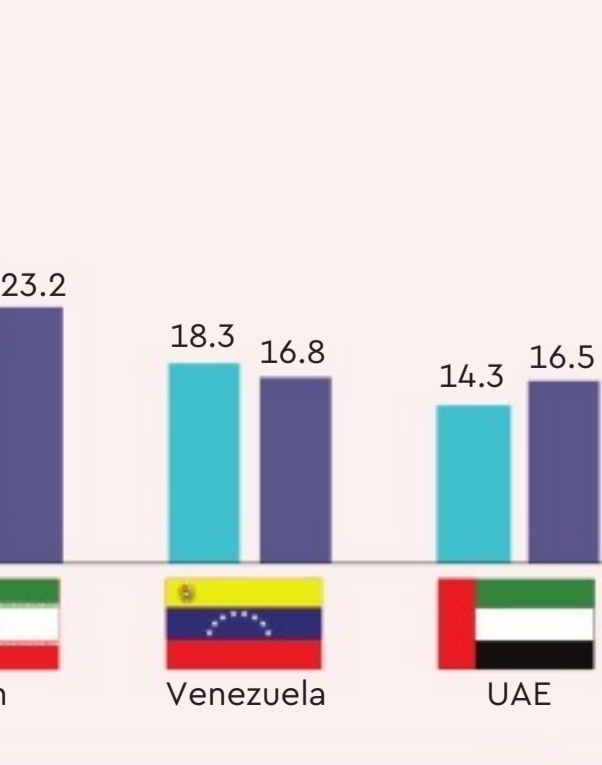
Growth in global oil demand likely to slow down



India's crude oil import grows



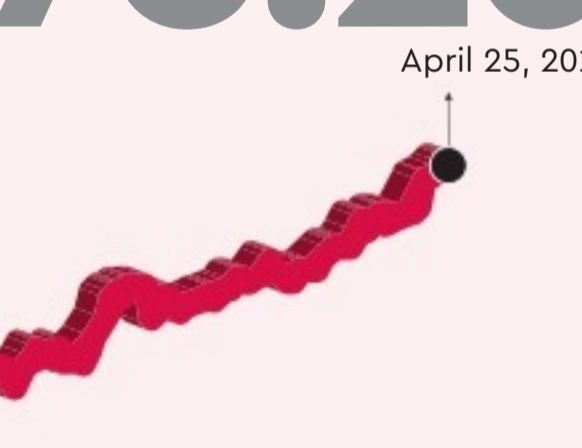
Iran is the third largest supplier of crude oil to India and diesel



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**Domestic oil production drops**



Petroleum products are important source of revenue for government

(Total tax collections; ₹ crore)



\*Till Dec; annualised  
 Source: Ministry of commerce, DGCIIS, Bloomberg