THE HINDU BusinessLine
WEDNESDAY, AUGUST 14, 2019

Broadening the band

RJio's disruption of the broadband market is good for consumers but raises regulatory concerns

Reliance Jio's aggressive plans to roll out optical fibre-based broadband services could be a game-changer for the industry and consumers alike. Though the tariff plans are yet to be unveiled, the commitment to offer speeds of 100 Mbps for ₹700 per month is in itself disruptive in a market where users do not get more than 20-30 Mbps on average. Add to this freebies such as free fixed-line telephone, premium streaming video applications, video-conferencing facility, TV channels and a host of other entertainment content and it becomes a compelling proposition for the consumers. When it comes to adopting digitisation and online platforms, Indian users are among the top globally.

The growth in consumption of video and online content has been growing exponentially over the last two years. However, when it comes to network quality, India is well behind global benchmarks. Until recently, mobile operators adopted a piecemeal approach in establishing a high-speed broadband infrastructure. The scenario changed in 2016, after RJio launched 4G services at price points that were drastically lower than the prevailing tariffs. But when one billion Indians get online and start consuming data, then the existing wireless networks will not be enough to support that demand. In this context, RJio's move to start offering optical fibre-based broadband service is not just timely, but also extremely critical for the future of India's digital dreams. Optical fibre networks have the capability to carry much more data than a wireless network, because the latter's capacity is dependant on the quantum of radio spectrum. Mission-critical applications such as healthcare and education can proliferate only when there is a robust optical-fibre broadband backbone.

RJio's move will clearly disrupt many sectors, especially the media and entertainment industry, just like it did in the telecom sector. Post RJio's entry into telecom, there has been a massive consolidation, with most of the remaining players struggling to survive. This is where regulatory authorities should step in to ensure that RJio operates on a level-playing field with respect to other companies offering a similar type of service. For example, the recent tariff order by the TRAI bars DTH operators from offering annual pricing plans or packages where they can get all channels for a fixed fee. Users have to pick channels on *a la carte* basis or subscribe to bouquets. This has led to a spike in monthly payouts for most subscribers. Now, RJio is offering TV channels bundled with its broadband connection. The TRAI should make sure that the same rules apply because it should not matter whether the medium of accessing TV channels is via satellite or through the optical fibre. The regulator should also ensure that RJio honours rules related to Network Neutrality, wherein it does not misuse its position to throttle content that does not reside on its platform. The Competition Commission of India should also be watchful against the creation of a monopoly, as that could be detrimental to consumers in the long term.

New era of pervasive agricultural subsidies?

The attempt to use power subsidy to control groundwater withdrawals, as in Punjab, ignores certain ground truths

M DINESH KUMAR
A NARAYANAMOORTHY

Managing India's groundwater has become a big challenge for policymakers. Over the years, the challenge has become very complex, with political economy taking dominance over hard science. Since groundwater overdraft is also linked to subsidised power supply to agriculture, researchers had explored how the mode of electricity pricing supplied to agriculture could be changed to control groundwater abstraction and to achieve the goals of efficiency, equity and sustainability.

The most frequently suggested instrument for controlling groundwater draft was the metering and pro-rata pricing of electricity.

In India, there is a large body of research which raises scepticism about the viability of metering irrigation pumpsets, claiming that it is political suicide for any government to even think about installing meters in farmers' field, and that whenever it did do so, it led to fall of the government.

However, there was no reality check on this claim. A study by the World Bank in 2001 in Punjab and Haryana showed that farmers are willing to pay for electricity if quality power supply is assured. More curiously, even after the government in West Bengal successfully introduced pro-rata pricing of electricity in the agriculture sector in 2006, this false narrative continues.

Scan & share
https://bit.ly/31H3VWR

Electricity pricing conundrum

An idea which came from a prominent research group recently is direct delivery of power subsidy to agriculture. The idea was to make sure that farmers get free power, but the power utility reduces its subsidy burden gradually by incentivising the farmers to use less electricity, thereby saving both groundwater and electricity. It involves metering of agricultural power connections, but no metered tariff.

This model, adapted by the power utility of Punjab, involves offering cash incentives to well-irrigating farmers who use less than a designated quota of electricity each season. The individual's quota is decided on the basis of the connected load and the season. For one HP of connected load, a farmer is entitled to 200 units a month during the kharif season and 50 units per month during the winter.

The farmer gets a cash incentive of ₹4 for every unit of electricity saved. This pilot project implemented in 135 farms across Punjab, has shown reduced electricity consumption by around 60 per cent of the farmers, while nearly a third of the farmers had increased electricity consumption even after accepting the scheme. The claim is that the farmer had 'saved' electricity and the corresponding groundwater equivalent. To know the validity of this claim, we should know the rationale behind fixing the quota based on the connected load.

Chosen capacity

In a given year, season and locality, the power demand will be a function of the cropped area and cropping pattern. Hence the rationale of fixing the quota on the basis of connected load can be said to be 'sound' only if the farmers have correctly chosen the pump capacity, taking into consideration the actual quantum of energy required for irrigating farm and the number of hours that the power supply is available. But this may not be the case in reality.

Possibly, many resource-rich farmers have chosen over-sized pumps. In such cases, their energy quota will be much higher than what is required to irrigate the plot even at the current excessive levels of dosage. The reason for maintaining the high-level of irrigation dosage could be that it can be rewarding from an economic perspective as it might result in yield improvement, whose value is more than the economic incentive they get by saving water.

Power subsidy may not create any incentive to save electricity or groundwater

Hence, these resource-rich farmers will be able to keep their power consumption much below the allocation or 'quota' while continuing with inefficient irrigation, and yet be able to claim the cash incentive; whereas a resource-poor farmer, who has a low-capacity pump might end up using the full quota of energy or even more. Ideally, the 'energy quota' for deciding on the incentive should have been fixed on the basis of the actual land holding cultivated by the farmer during a particular season which determines the water and energy requirements for irrigation. The point is that the current subsidy structure may not create any special incentive to save either electricity or groundwater in Punjab.

Now, for the time being, let us assume that the farmers are really saving energy by reducing groundwater pumping through efficient irrigation methods. Will this help conserve groundwater in Punjab? The answer to this question lies in a nuanced understanding of the State's groundwater balance.

It is quite well-known that the irrigated paddy fields as well as rainfall contribute to the recharging of shallow groundwater during the monsoon season in alluvial Punjab. Therefore, groundwater storage change is the net effect of the gross draft and the 'total recharge', the latter being the sum of rainfall infiltration and irrigation return flows. The gross abstraction equals the water consumed by crop added with the soil moisture depletion after crop harvest, soil moisture storage and the deep percolation or irrigation return flows.

Therefore, reducing the gross draft might only result in a reduction of return flows and change in moisture storage, so long as the farmers don't choose a crop or variety with lower evapo-transpirative requirement, which is unlikely as it might lead to yield reduction.

Wasteful attempt

But the people who designed the project seem to be completely unaware of this. Only a fraction of the total water applied (around 1,200 mm) to the field for kharif paddy actually gets consumed by the crop. Since the evapo-transpirative demand for kharif paddy in Punjab is around 450-480 mm, the rest of the water is available as return flows to groundwater. Hence, even if the farmers reduce the amount of water applied to irrigated paddy fields to reduce electricity consumption, there won't be any groundwater saving.

One wonders how on earth the farmers are offered a heavy cash incentive of ₹4 for saving a unit of electricity, while the actual cost of supplying it (₹5.12/unit) is only a little more than that.

Instead of offering cash incentive for the fictitious power saving, the agency should start working on establishing (volumetric) water use rights amongst the groundwater users, fix equivalent energy quota, and then start monitoring groundwater and electricity use.

No doubt, these are extremely difficult measures and would require great degree of coordination among various departments — water resources, electricity and agriculture. But once they are initiated, there won't be any need for promoting efficient irrigation technologies and water-efficient crops. Farmers will take up these measures on their own, without any subsidy support.

Kumar is Executive Director, Institute for Resource Analysis and Policy, Hyderabad. Narayanamoorthy is Senior Professor, Department of Economics and Rural Development, Alagappa University, Tamil Nadu. Views are personal.

Shale gas exploration: Addressing water issues

The Environmental Impact Assessment of 36 fracking projects in three States is flawed. It overlooks impact on water resources

MPRAM MOHAN
SHASHIKANT YADAV

In May 2019, the Ministry of Environment, Forest, and Climate Change (MoEFCC) granted its first environment clearance to a private entity for exploring shale gas reserves in West Bengal. This is addition to the 2018 clearance to a state-owned enterprise for exploration in Gujarat and Andhra Pradesh.

The Environment Impact Assessment's (EIA's) reports of these projects propose fracking in 36 wells (20 in West Bengal, 11 in Gujarat and five in AP) with fresh water requirements of 3.5-6 million litres per activity in each well. The EIA reports clarify that these environmental clearances are sought only for preliminary exploration of shale gas reserves. Nonetheless, the Directorate General of Hydrocarbons (DGH) estimates that the commercial production of shale gas would require multiple fracking activities in each well with water requirement of up to nine million litres per fracking activity. As of today, 56 sites across six States have been identified for fracking, and according to the World Resources Institute, all of them fall under 'water stress' zones, having limited supply of fresh water.

Internationally, countries pursuing shale gas production have faced serious water management issues in fracking activities. Fracking has now been banned in Bulgaria, France Germany, Ireland and the Netherlands. Countries that are pursuing shale gas extraction (the US, Argentina, the UK and China), have made fracking-specific water regulations.

The EIA reports seem substantively inadequate, as they do not clearly address fracking-specific water issues. Compounding this, the MoEFCC is also yet to come up with a fracking-specific EIA manual.

Sourcing of water

Fracking involves the creation of fractures/cracks in non-porous, low-permeable rocks by injecting a large amount of water mixed with sand and chemicals (fracking fluid) at very high pressure, allowing shale gas to escape from dense rocks. In the EIA for fracking 20 wells in West Bengal, uniquely, sourcing 3.5 million litres of waste water generated from the oil and gas extraction activities has been proposed. This is very different from the DGH's suggestion and international experience. The EIA reports for fracking 11 wells in Gujarat and five in AP estimate freshwater requirement

Fracking leads to serious water issues

up to six million litres per well sourced through "privately owned tanker" and "nearby water sources", without disclosing any specific sourcing channels. This raises several doubts regarding the potential impact on the local community, drinking water sources, land, etc.

Additionally, the extensive usage of water during fracking generates a considerable amount of 'flow-back water', the fracking fluid that returns to the surface once the pressure used to inject the fracking fluid eases out. Studies have reported that the flow-back water is up to 30-40 per cent of the total water used and is reported to have higher contamination than the fracking fluid. Unfortunately, the EIA reports do not mention any specific method to treat or dispose flow-back water, but casually refer to waste-water treatment plants. The United States Environmental Protection Agency in several sites noted fracking-induced methane seeping into drinking water and groundwater sources.

The MoEFCC assesses the suitability of any new project in light of its impact on the environment and overall sustainability by constituting an 'Expert Appraisal Committee'. The committee raises project-specific 'Terms of References' (ToRs) after studying the nature, scale, location, and potential impact of the proposed activities. The project proponent is required to explain the issues raised in ToRs comprehensively.

The DGH has proposed fracking-specific ToRs that the MoEFCC may issue to a project proponent. The ToRs require a project proponent to: disclose adequacy for handling the flow-back water; make and maintain a dedicated website/portal disclosing the water quality data and use of chemicals in fracking fluid; and a fracking-specific community sensitisation plan. Surprisingly, none of these ToRs was taken into consideration by the MoEFCC while granting environmental clearances. Instead, the MoEFCC in the guise of 'specific' ToRs issued general terms of reference normally used for conventional oil and gas extraction activities.

Since the water cycle during fracking is more complicated than the conventional oil-and-gas extraction, issuing such common ToRs seems a grossly inadequate application of mind at best. The National Green Tribunal has also expressed concern over such prototypical ToRs.

The way forward

In the pursuit of becoming a natural-gas-based economy, the government has implemented various policies to foster the exploration and production of shale gas. Although the environmental clearances granted to fracking are to carry out exploring shale-gas project, these should not become a prototype for preparing the EIA reports. A considered assessment of risk and benefit based on international experience and specific water management issues in India needs to be undertaken.

The MoEFCC should identify issues of shale-gas fracking activities in each proposed site on the yardstick of the DGH's fracking-specific ToRs.

Mohan is Associate Professor, IIM-A. Yadav is a legal researcher based in New Delhi. Views are personal.

FROM THE VIEWSROOM

'The dog it was that died'

Harsher penalties and punishment needed for cruelty to animals

When heavy rains pelted down on Mumbai recently, a little brown dog took shelter in a swank building in the heart of the city. A familiar scene, anywhere in the world. When there's bad weather, humans and animals alike take temporary shelter.

But it's what happened next that brought good citizens in the city out on the roads in protest. 'Lucky', the dog, was beaten up allegedly by the building's guards and died after battling hard for life for about 13 days. Whether the guards acted on their own or on instructions from the building's residents/caretakers is something the police will have to investigate, as concerned citizens had officially reported this act of animal cruelty. The guards are reportedly out on bail. Even if they are punished under The Prevention of Cruelty to Animals Act, 1960, the maximum penalty for a first offence of animal abuse is, hold your breath, ₹50. People working in animal welfare have called for harsher penalties and punishment; some recommend a ₹25,000 penalty and a jail term of three years. And here's the chilling reason why the government should take these recommendations seriously. According to information in the public domain from police departments, medical professionals and people who profile serial killers link violence against animals to signs of aberrant violent behaviour that is more likely to target humans as well — children, women, the elderly, anyone vulnerable.

Citizens need to be sensitised on being compassionate to humans and animals as cohabitants on Earth with equal rights. But the law needs to do its job and crack down on the perpetrator of the crime, the security guards in this case, and anyone else who may have instructed them. Because when all other raging discussions on Lucky fall silent, to quote Oliver Goldsmith here, "the dog it was that died."

PT Jyothi Datta Deputy Editor

LETTERS TO THE EDITOR

Send your letters by email to bleditor@thehindu.co.in or by post to 'Letters to the Editor', The Hindu Business Line, Kasturi Buildings, 859-860, Anna Salai, Chennai 600002.

PSB woes

This refers to the editorial 'Wrong targets' (August 13). The issues facing public sector banks are the government's own making. Apart from corporate NPAs, most of the bad assets come under the category of government schemes. The government conceives an idea to please the masses and directs the PSBs to implement it without giving enough time to study the pros and cons of the scheme. The PSBs are forced to grant loans without verifying viability or carrying out a thorough credit appraisal. There are instances where entrepreneurs also lose steam halfway through and wind up projects. Most government-sponsored schemes have met the same fate since the time of the IRDP and the PMRY, or wherever a subsidy component is involved. If a study is conducted into the amount involved in all such schemes put together, the findings will be heart-breaking. What the government can do in such cases is appoint an agency of experts to study each case thoroughly, identify serious entrepreneurs who are capable of undertaking the venture and direct the nearest bank to finance it.

It should be the government's responsibility as well to see the project through and ensure that the repayments are made promptly.

KC Varghese
Kottayam

Corrective measures

With reference to the editorial 'Wrong targets' (August 13), the 16 accountability KPIs proposed by the government to augment public sector bank performance is nothing but old wine in a new bottle. PSBs are the conduits for direct and indirect implementation of various government schemes. While there is a need to keep up the credit appraisal, risk management, and internal control measures in banking, it should be equally important to ensure the proposed reforms are not infected by policy paralysis and regulatory and political interference at every stage. Before inflicting any new scheme of targets, it is advisable to take corrective measures to address issues related to talent deficit, weak credit assessment, and the unhealthy practice of cross-selling other products by banks.

Sitaram Popuri
Bengaluru

RERA awareness

This refers to 'No place to call home' (August 13), which was informative, carried a redress mechanism, and educated home-buyers/readers. RERA is definitely an answer. However, a lot of awareness must be spread about it. We need to have regular seminars on RERA in banks, new upcoming housing communities, and colleges. Regulators are doing their best, and if home-buyers attempt to understand the nitty-gritty of RERA rules provided by bankers and home-loan experts, it will lessen the pain points in future.

NK Bakshi
Vadodara

Political conflict

With reference to 'BJP attacks Chidambaram over 'provocative' comments on Kashmir' (August 13), there can't be two opinions about the fact that the former Finance Minister P Chidambaram's alleged remarks stating that the BJP wouldn't have abrogated Article 370 had Jammu and Kashmir been a Hindu-dominated State, doesn't behove a senior politician of his stature. Ironically, the top leadership of both the CPI and the CPI (M) has also jumped into the fray by questioning the rationale behind the Centre's move.

However, it also goes without saying that despite the government's determination to divide J&K into two separate Union Territories, the journey ahead may not be any smoother, but more so due to some inherent 'internal' factors rather than any 'external' ones.

Kumar Gupt
Panchkula

Quick redevelopment

Apropos 'In the last 3 years, flood fury has killed 6,000' (August 13), flood damage and human sufferings in all the States are both short-term and long-term in nature. The Central government should assist the respective State governments to rehabilitate the affected people. Equally important is redevelopment of infrastructure. The State governments should quickly assess fund requirements.

KU Mada
Mangaluru

Published by N. Ravi at Kasturi Buildings, 859 & 860, Anna Salai, Chennai-600002 on behalf of THG PUBLISHING PVT LTD., and Printed by D. Rajkumar at Plot B-6 & B-7, CMDA Industrial Complex, Maraimalai Nagar, Chengleput Taluk, Kancheepuram Dist., Pin: 603209. Editor: Raghavan Srinivasan (Editor responsible for selection of news under the PRB Act). ISSN 0971 - 7528