

RationalExpectations



BSNL: Death by a thousand cuts

It can't be fixed and the assumptions made in the revival plan look dubious; better to spend ₹95,000 cr to shut it down

AILING PUBLIC SECTOR telco BSNL's FY19 losses may have almost doubled over the previous year to a whopping ₹13,804 crore, but given that it employs over 165,000 people—rival Bharti Airtel whose revenues are three times as much employs less than a tenth as many staffers—prime minister Narendra Modi will be loath to shut it down. Indeed, the presentations being made on various revival packages for both BSNL and MTNL (FY19 losses ₹3,398 crore on an income of ₹2,607 crore) are aimed at showing that a revival scheme is not just desirable, it is also a cost-effective solution. Nothing can be further from the truth.

An outright closure of BSNL, the estimate is, will cost around ₹95,000 crore; ₹20,000 crore for repaying its debt and the rest for a VRS package (see graphic). It is not clear how much BSNL will get from selling its assets, but whatever it does will lower this cost. Also, if some BSNL employees are transferred back to the government or to other PSUs, the VRS costs can fall.

While Modi doesn't want to be the man to put 165,000 people out of a job—who would?—he needs to look at the reality; and keep in mind that if he has to take the same decision of shutting BSNL down 4-5 years from today, as he probably will, he will be that much closer to a general election.

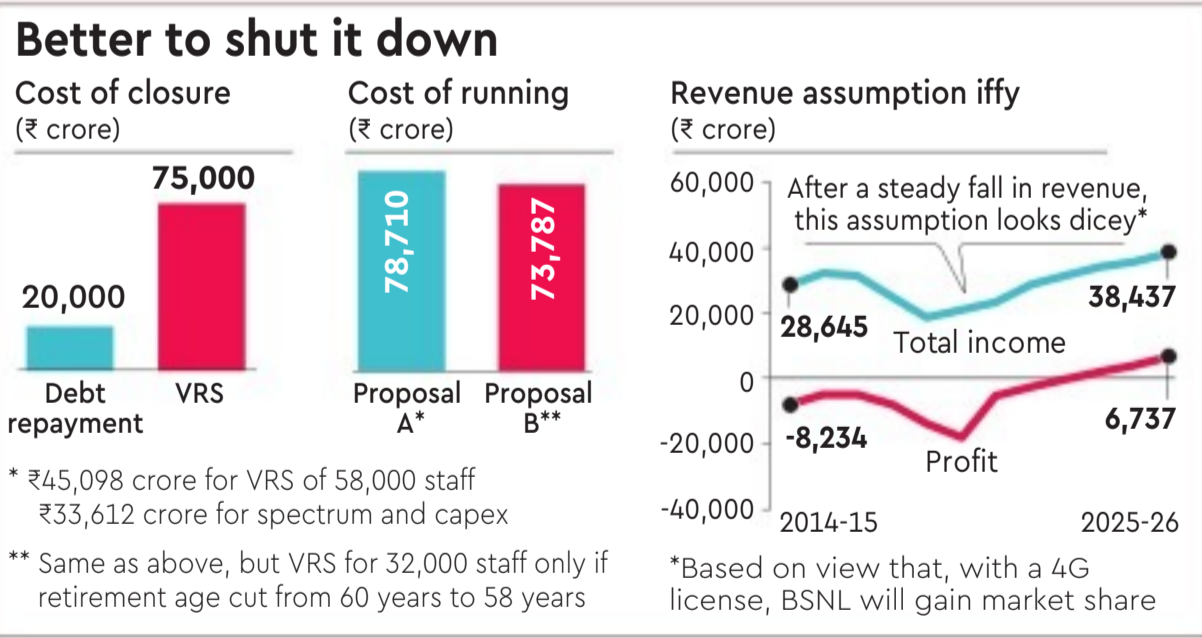
Two alternatives are being suggested, both involve retiring 50% of BSNL's staff that are more than 50 years old with a VRS package; the second one also reduces the retirement age from 60 to 58, so that less people need to be given a VRS. Both packages involve giving BSNL 4G spectrum for free as well as money for capex to deploy 4G services. Since the first option costs ₹78,710 crore and the second ₹73,787 crore, they don't look that much more attractive than the shutting-down option since, in the latter case, the problem is fixed once and for all.

The key here, and this is what Modi needs to understand clearly, is the manner in which the expenses are being justified, and dramatically reduced. Of the ₹45,098 crore VRS in the first option, the pension component is around ₹21,800 crore—this, it is being argued, has to be paid anyway when the staffers retire, so even though the payment is being advanced now, this shouldn't really be included in the costs. Similarly, since the VRS of ₹18,500 crore—and ₹13,000 crore for capex—is to be funded by a bond, the argument being made is that this isn't really a cost for the government; but it is, in fact, a cost for the government since the bond needs to be backed by a sovereign guarantee for anyone to even touch it. The ₹20,400 crore that spectrum will cost is, similarly, said to involve no cash outgo as the government owns the spectrum anyway. But, were this not to be given free to BSNL, it can be sold to a private telco for a similar amount; so it is a cost and, giving it free to BSNL is also unfair to private sector telcos who pay for their spectrum.

Apart from the fact that Modi needs to be aware of how the package will be made to look much smaller than it really is, he needs to realise the revenue projections can very quickly go awry. While BSNL's revenues fell by a third in the last four years, the projections see them rising by two thirds in the next four; the assumption is that, once BSNL gets 4G spectrum, it can offer services that its customers wanted all this while. This could well be true, but we've seen how the sector collapsed after Rjio's entry, so who is to say this won't happen again? Does the government have the ability to pump in money the way Reliance, Airtel and Vodafone-Idea did to fund their growth? Recall that when Air India was given brand new planes under the UPA—and ₹33,000 crore of cash since FY10—the hope was also that it would turn around; instead its losses rose 38% to ₹7,365 crore in FY19, a year in which Jet Airways all but shut down. In even the projections made, BSNL turns profitable only in FY24; were its revenues not to rise as dramatically as predicted, this obviously won't happen.

Interestingly, even if you go by the projections, BSNL will still be dramatically less efficient than the competition. Today, Bharti Airtel's employees service revenues of around ₹3.7 crore each while that for BSNL's staffers is only a little over ₹11 lakh. If 58,000 staffers take a VRS as per the first proposal and BSNL's turnover rises 80% by FY24, each employee will still be servicing revenues of just ₹32 lakh.

In other words, with the likelihood of BSNL being able to turn around quite iffy and the huge burden that keeping BSNL going will realistically place on the government—all bonds or bank borrowings of BSNL will devolve on government should it not turn profitable—the real decision before prime minister Modi is whether he wants to act firmly or just kick the can down the road for another 4-5 years. Apart from the fact that he will be facing an election around that time, whatever value he can get for BSNL will be further eroded; he could have, five years ago, sold both BSNL and Air India, even if for a pittance.



MissedSHOTS

Vaccination coverage for four diseases is stagnant since 2010; marginalised nations are the most vulnerable

WHO-UNICEF STUDY says global penetration of vaccination against four diseases—diphtheria, tetanus, pertussis (DTP) and measles—has remained stagnant at 86% since 2010. Due to this stagnation, around 19.4 million children have missed out on DTP3 and measles vaccination in 2018. Claiming that if the reach of vaccinations does not increase, preventing the resurgence of these diseases will be tough, the study reports that the vaccination rate should reach 95% globally and in individual countries to prevent large-scale outbreaks. The reasons behind the stagnation, the study says, are conflict, inequality and complacency. Children from the poorest and the most conflict-ridden areas are the worst hit. The study notes that out of the 19.4 million children classified as under- or non-vaccinated, 11.7 million come from just 10 countries—most notably, Nigeria (3 million), India (2.6 million) and Pakistan (1.4 million). This is despite raging vaccine denialism in the West.

Some nations flagged in the study also suffer from other major issues like rampant food insecurity. With increased chance of outbreaks of the four diseases, managing healthcare will prove a larger burden on the governments of the laggard nations. While these countries must realise the scale of the problem, the others must also know that their fates are tied in a globalised world, where there is conflict-related mass migration, including illegal immigration. This study is also critical of the 'anti-vax' propaganda. With the propaganda gaining ground in developed nations, there is a chance of contagion to the poorer nations. The state in developed countries must intervene against vaccine denialism and assure 95% vaccination coverage.

FROM PLATE TO PLOUGH
CONVERTING FOOD AND FERTILISER SUBSIDIES INTO DIRECT CASH TRANSFERS TO ACCOUNTS OF BENEFICIARIES WOULD ALLOW GOVT TO ACHIEVE ITS GOALS MORE EFFICIENTLY

Empowering farmers, empowering consumers

IN HER BUDGET speech, the Union finance minister (FM) said, "At the centre of everything that we do, we keep 'gaon, garib, aur kisan'". If so, here is a small mantra for her to transform lives of the poor and *kisan* in rural areas: just streamline food and fertiliser subsidies into direct cash transfers to accounts of identified beneficiaries through the JAM trinity platform (Jan Dhan, Aadhaar, and Mobile). If she can do that, she would not only empower the poor and farmers, but also usher in a tectonic shift in policy that can save her at least ₹50,000 crore per year. This she can invest in agri-R&D and better water management, ensuring food security in the country for the next 25 years and augmenting farmers' incomes. But can she do this?

Let us first talk about food subsidy. In the budget for FY20, food subsidy is provisioned at ₹1,84,220 crore, or let us say ₹1.84 lakh crore for ease. How many people are aware that the pending overdues of Food Corporation of India (FCI) stand at ₹1.86 lakh crore. Year after year, there is under-provisioning of food subsidy in the budget and FCI is asked to borrow more and more from banks so that the fiscal deficit of the budget can be shown to be under control. FCI loans from the banks have now crossed ₹2.48 lakh crore (see graphic).

Two things stand out. First, the budget is under-provisioning food subsidy, including overdues. There is more under the carpet (₹1.86 lakh crore) than in the budget (₹1.84 lakh crore). Second, the real deficit in the budget is much more than claimed.

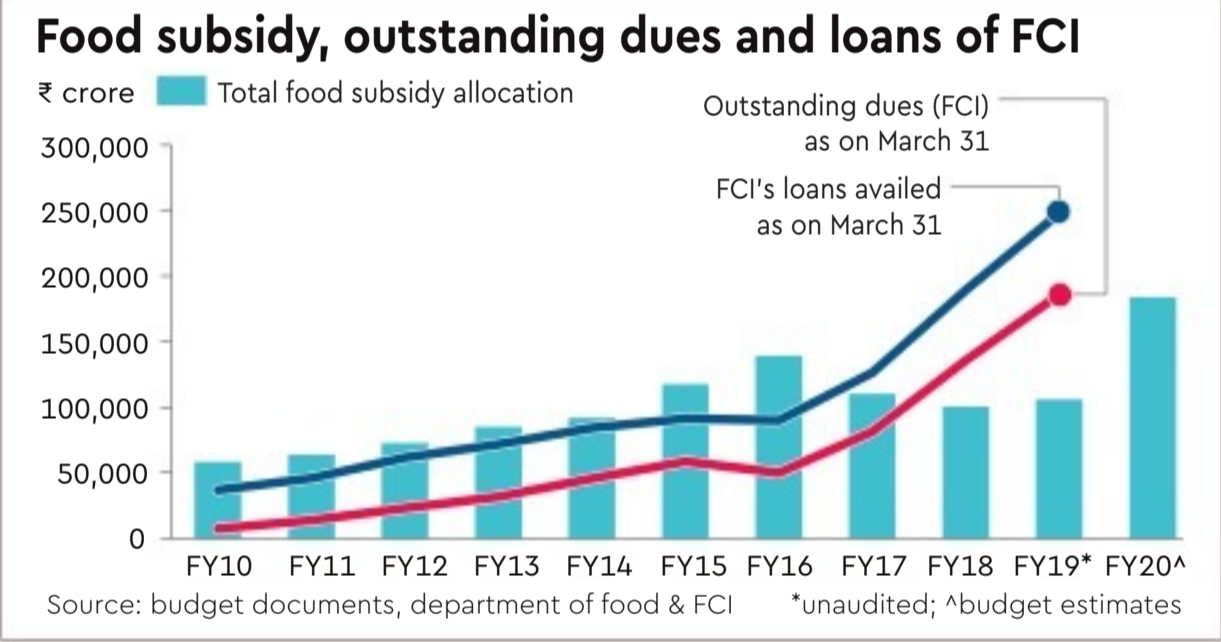
But, here, I am more concerned about efficiency, equity and sustainability of this entire gamut of food subsidy under National Food Security Act (NFSA), a remnant of UPA-2. Does she really think that 67% of the population covered under NFSA cannot afford basic food? There is more than 90% subsidy on rice and wheat under Public Distribution System (PDS) as



the economic cost of rice hovers around ₹35/kg and that of wheat at about ₹25/kg, and they are being sold in PDS at ₹3/kg and ₹2/Kg respectively. Interestingly, in rural areas, in majority of states, rice (paddy) is sold at less than the minimum support price (MSP). The landless labourers, and small and marginal farmers, most of whom are covered under PDS, produce these very staples. The government first buys paddy and wheat from rural areas and, after adding almost 50% cost for procurement, stocking and distribution on top of MSP price, sells back most of it to people in rural areas. There can't be a bigger stupidity than this because the government can achieve its ends in a much more cost effective way if it transfers equivalent amount of food subsidy in the form of cash to beneficiaries' accounts. With that cash, they will have the freedom to buy anything, be it rice, wheat, coarse cereals, pulses, or even milk and

eggs, etc, which would be much more nutritious and also signal the need for diversification in farms, in line with diversified diets.

The government can still keep some strategic stocks, gradually reducing procurement and shrinking the size and operations of FCI, especially from areas where water table is depleting fast, like the northwest of India. Further, the government has to think about whether the coverage under PDS must be 67% of the population or if it can be brought down to, say, 40%, or even 30%. Also, the NFSA allows to raise issue prices. Why does it need to be kept at ₹3/kg and ₹2/kg? It leads to massive diversion of PDS supplies to open market. The Shanta Kumar Panel had estimated that leakages in PDS are at 46%. Later on, the Modi government introduced POS machines and weeded out some fake ration cards. But, still, leakages continue, and rough estimates range from 30-40%, as Fair



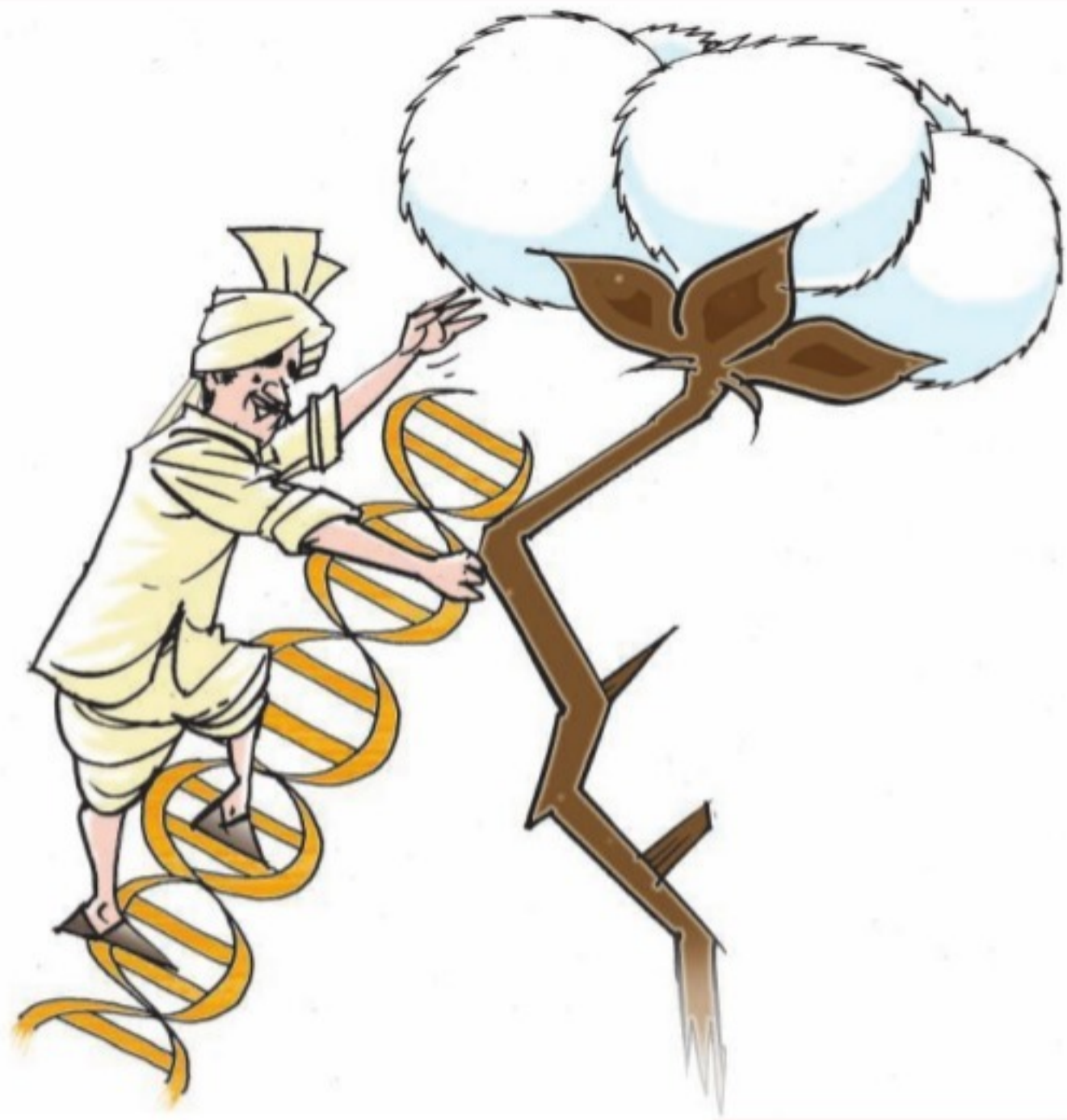


ILLUSTRATION: ROHINIT PHORE

BARUN MITRA

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KISAN SATYAGRAHA

Farmers' assess the economics of GM crops

Indian farmers have let the gene out of the bottle. They are the true masters of the field they survey, and of the genes they want. The only question is: How long will it take for the authorities to realise the futility of trying to put that gene back into the bottle?

FOR THE PAST few years, a lot has been said about "doubling farmers' income." Yet successive governments have either ignored or suppressed every attempt by farmers to improve their own income and welfare. The rapid spread of the Kisan Satyagraha illustrates the desperate plea of farmers for freedom to seek the technology of their choice. The *satyagraha* brought to the fore the concerns of some of the smaller farmers, and an opportunity to highlight their reason to demand access to new technologies, including GM crops. Here are two of their stories.

Budgeting for Bt brinjal

Jeevan Saini, a small farmer in Fatehabad district in Haryana, captured attention in May 2019. His half-an-acre of brinjal crop was ploughed, burnt and buried 15 feet deep by the local administration, on the charges that he was growing unapproved Bt brinjal. Jeevan, and his father Ishwar, own two acres of land in Ratia tehsil, and rent 4-5 acres more, growing a number of crops.

Jeevan had no idea of what GM was! He paid a high premium to buy saplings of brinjal in late 2017, from a seed vendor. The vendor told him that this new variety of brinjal attracts less pest and, therefore, reduces costs and improves productivity. So, Jeevan wanted to try it out on a half-acre parcel of rented land.

Brinjal and chilli are two crops that are very vulnerable to pests. Often, 50-80% of the crop would be lost due to pests. Pesticide consumption for these two crops is the highest among vegetables. Farmers often spray pesticides every 2-4 days—that's a total of 30-40 sprays per season.

Jeevan reckons that compared to traditional brinjal, his brinjal required to be

sprayed with pesticides only once in 15 days, significantly lowering his costs. Low pest infestation meant the marketable yield doubled compared to traditional varieties. The brinjal was healthier and larger, and, therefore, fetched a premium of 20-30% at the local wholesale market.

Jeevan and his neighbours sat down to work out the costs and benefits of the two varieties of brinjal. They agreed that Jeevan's brinjal cost a third less to grow. Accounting for labour and other related costs, the net profit for Jeevan ranged from ₹1.2 lakh per acre. In contrast, his neighbours incurred a net loss ranging from ₹0.7 lakh to ₹1.2 lakh per acre.

Curiously, the National Bureau of Plant Genetic Resources (NBPGR), which tested sample from Jeevan's field, found the brinjal to be genetically modified, and yet failed to identify the Bt protein in it.

Economics of HTBt cotton

A few months ago a small farmer from Yavatmal in Maharashtra explained his decision to sow HTBt cotton for the first time on the two-acre plot he owns with limited access to water in 2018. With the use of herbicide, his labour cost declined significantly, and weeding helped boost the yield. And for the first time he harvested over 26 quintals of cotton, and earned over ₹1.2 lakh. His productivity per acre was 13 quintals, which was more than double that of his neighbours.

Burdened with debt, this man survives more as an agricultural labourer, than as a farmer. It is in this desperate situation that HTBt cotton has provided him, and many others like him, a ray of hope.

Labour cost, at 40%, is the most significant part of operational cost for growing cotton. Weeds pose a serious challenge. They compete for nutrition and moisture, denting productivity of crops. The cost of weeding is significant, particularly in view of serious labour shortage in villages when they are needed the most. HTBt fits in well in that context.

Sitting along with his neighbours, this farmer detailed the various components of his costs for growing cotton over 5-6 months. From ground preparation and sowing, which begins usually in mid-June, to final harvesting in the first half of November, the cost per acre came to be around ₹30,000. His earnings from sale of 13 quintals of cotton per acre came to about ₹60,000. So, the farmer was happy to net a profit of ₹30,000 per acre.

Here lies the rub! Very few farmers are able to incorporate the monetary value of their own labour and that of their families towards farming. Which is why he has to rely on wages he earns as farm labour to provide for his family for the rest of the year.

Nevertheless, the experience of this small farmer, who didn't want to be named, shows the enormous difference HTBt cotton had made in his life. It had doubled his earnings. His enhanced cash flow meant that he could partly repay his loan to the moneylender, and expect a fresh loan for the next season.

His was a desperate gamble that paid off in 2018. Inspired by this experience, many of his neighbours are keen to sow HTBt in the current year. Yet the scarcity of seeds coupled with uncertainty about the quality means that all of them may not be as lucky this time.

The proof of the pudding

Indian farmers have repeatedly shown that they are far ahead of policymakers. Farmers' understanding of the science of genetics may be limited, but their assessment of whether it works in their condition or not is usually not off the mark. Their life depends on it.

Lakhs of farmers have been trying out HTBt over the past few years, and their experience and expectation is reflected in the growing demand for the next-generation GM technology. Likewise, Jeevan is unlikely to be alone. Hundreds, if not thousands, of farmers are probably growing Bt brinjal even without knowing it.

Indian farmers have let the gene out of the bottle. They are the true masters of the field they survey, and of the genes they want. The only question is: How long will it take for the authorities to realise the futility of trying to put that gene back into the bottle?

(Concluded.)

AI can redefine govt services

DEVROOP DHAR

The author is partner, Infrastructure, Government and Healthcare, KPMG in India

It can improve structural inefficiencies in the discharge of government services

THE PUBLIC SECTOR has a crucial role to play in India's growth story. It is through an effective and efficient public service delivery model that India can achieve inclusive and sustainable socio-economic development. In order to achieve this, the government has begun harnessing artificial intelligence (AI) in the delivery of public services such as education, health, social security and transport, among others.

AI is set to offer a competitive advantage over existing models of delivery of public services. Traditionally, the delivery models were simple, standalone departmental projects. However, the ability to use AI effectively has helped build more integrated and outcome-oriented models. So, it is critical for the government to support projects and improve government schemes through AI.

With increased adoption of AI, several existing jobs might become redundant. However, it may not result in job cuts in the government, rather it would lead to reskilling and creation of new jobs. It may also free up the time spent on mundane tasks, which can, in turn, be spent on improving quality of service to be delivered, with more time being given to planning, monitoring and reviewing.

According to the NITI Aayog, AI has the potential of adding \$957 billion to India's GDP by 2035, accelerating its annual growth by 1.3%. The NITI Aayog has urged various state governments to use AI in solving grass-roots problems; states have been asked to identify key tech-based projects that can be used to solve challenges in agriculture, education and health, among others.

AI can be leveraged by the government in multiple areas, like those that have a shortage of experts (for example, healthcare and legal systems), or those where a procedure

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needs to be evaluated to provide a binary answer or to identify predictable scenarios for a function or process based on historical data.

Leveraging AI will spawn significant changes, transforming many public service sectors in the future. Government services that can hugely benefit from the deployment of AI are:

► The government can have a chatbot answering complex but routine questions related to income tax and GST, based on wisdom from experts;

► A chatbot for citizens can address all queries about government schemes and benefits instead of people having to visit government offices or common service centres;

► Rule-based engines can be created by state governments for approval/rejection of applications;

► Robots can assist in healthcare, where AI can be used to improve diagnosis based on scans or X-rays or reports, powered by an engine created based on data from a large number of past reports;

► AI can play an important role in agriculture by providing information about soil types, nutrient levels, weather, etc. This is likely to help farmers significantly in taking informed decisions, increasing income and decreasing costs;

► Robots/drones, along with data from past scenarios, can be used for aerial surveys for disaster response/estimates;

► Machine learning can enable automated recognition for vehicle number plates and identification of potential cases of violation/crimes;

► Use of AI could release some time for government employees, which can then be utilised in improving quality of service, focus on audits/checks to help implementation of projects and schemes. For instance, even if a state government is able to free up 2-3% of an employee's time on an average and reallocate, it can lead to a significant number of people being available to better review and monitor scheme implementation, and provide better services to citizens.

There is no denying that AI has the potential to improve several existing structural inefficiencies in the discharge of governmental services and pave the way for economic transformation in India. While a start has been made, a sustained all-round effort is needed; AI should become one of the top agendas for the leadership to be able to derive maximum benefit from it. With the right kind of implementation, AI can impact thousands of lives.

Comparison between Bt brinjal & traditional brinjal varieties

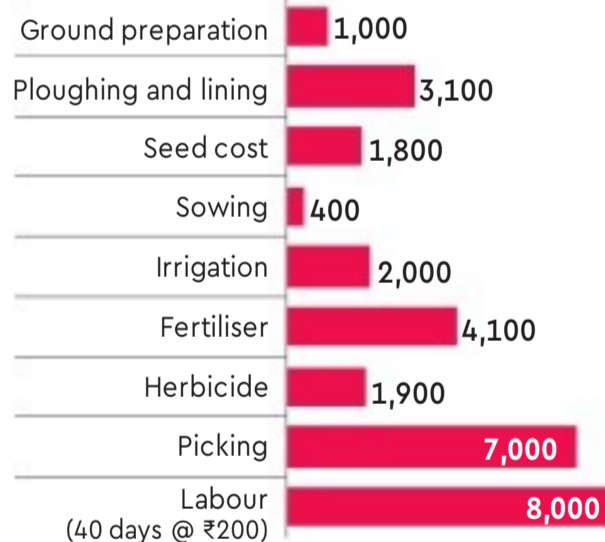
BT brinjal (Estimated cost per acre)		Non-Bt brinjal
Seeds/sapling	₹9,000	₹1,000
Ground preparation	₹2,000	₹2,000
Sowing & planting	₹4,000	₹4,000
Pesticide (for sucking pests + shoot & fruit borer)	₹25,000	₹80,000+25,000
Frequency of pesticide sprays	Once in 10-15 days	Every 2-4 days
Fertilisers	₹5,000	₹5,000
Irrigation		
Nominal electricity charges		Nominal electricity charges
Weed control	Labour cost	Labour cost
Labour (300 man days @ ₹300/day) per acre	₹90,000	₹90,000
Land rent (in Ratia tehsil) per acre	₹30-60,000	₹30-60,000
Total costs (approximately)	₹2,00,000	₹2,70,000
Production	300 quintal	300 quintal
Production losses	Negligible	About 30-50%
Average rate at the Mandi, ₹ per kg	10 to 15	7 to 10
Marketable produce	300 quintal	150-200 quintal
Gross earning (₹)	3 to 4.5 lakh	1.5 to 2 lakh
Net profit (₹)	1 to 2.5 lakh	-0.7 to -1.2 lakh

(1) In Bt, the losses are marginal, and the quality of brinjal is good, big and shining. Fetches up to 50% more in price than non-Bt. (2) In non-Bt, the production is nearly the same, but losses due to pests are in the range of 1/3 to 1/2. Also, the quality of the fruit, which is smaller, does not fetch as high a price.

Source: Compiled by Barun Mitra, following conversation with brinjal farmers in Haryana in May 2019.

Cost and benefit estimate from HTBt cotton

HTBt cotton, estimated cost per acre (₹)



Total cost (approx) ₹29,500

Production per acre 13 quintal

Sale of cotton @ ₹5,000/quintal ₹65,000

Source: Compiled by Barun Mitra, following conversation with HTBt cotton farmer in Yavatmal in November 2018

OIL EXPLORATION

Unleashing the animal spirits

Legacy policies for upstream need to be revisited

ASHU SAGAR

The author is secretary general, Association of Oil & Gas Operators. Views are personal



reserve-to-production ratio, sustain production for a longer period, improve facilities' utilisation and lower costs. These upsides exist globally, and are part of normal business operations. Such exploration ensures that all subsoil oil and gas is discovered and extracted, which, theoretically, should be of prime importance to a hydrocarbon-deficit country like India.

Exploration is a petroleum operation, and all petroleum operations are permitted in the PSC (production sharing contract) without let or hindrance. But, in India, the government decided to object to additional exploration, subsequent to the exploration period designated for the first discovery. Repeated representations by the industry

resulted in a policy guideline in February 2013, where such exploration was permitted but was ring-fenced till the FDP (field development programme) approval post the commercial discovery. As a result, the entire exploration risk, which was earlier shared between the operator and the government, was transferred to the operator alone. It also increased the threshold for developing a field in case of exploration success.

What is the result of such a policy? The operator risk has increased manifold, and it shall now only attempt those additional explorations where costs and risks are relatively low. Consequently, many potential oil and gas resources that might otherwise be discovered and subsequently produced



remain unexplored. Operators' income from the field also takes a dip. An unintended consequence is the drop in funds available for new bids. Actual experience shows that the amount of such additional exploration in ML (mining licence) areas has been minimal since this policy was brought. Could we have discovered and produced more oil and gas? Perhaps yes.

Policy is not a contract. It can be changed, particularly if the change furthers the objectives of contract, and is in the interest of both the parties. In this case, if the policy is changed and ring-fencing removed, then all exploration costs shall be shared between the operator and the government, as was originally in the PSC, versus the entire

cost being borne by the operator under ring-fencing. An unsuccessful exploration shall be a revenue-negative event for both the operator and the government (it must be noted the operator is bearing the entire cost, and loss to the government is only notional through reduced anticipated revenue). Given the scarcity of capital, the operator undertakes such exploration only after due diligence, but it accepts these losses if they occur. On the government side, the policymaker has to accept some revenue-adverse events may occur, but are justified because India needs to explore more. The probability favours the government getting much higher oil and revenue. This hiccup has so far proved insurmountable, particularly in view of past CAG reports.

The NELP (New Exploration & Licensing Policy, 1999), under which these contracts were signed, states expedited exploration and maximisation of production as the objectives. The previous government declared "production and not revenue" as the primary consideration for decision-making, which, if effective, would immediately reverse this policy. Yet despite many representations to revisit the policy and bring it in line with professed objectives, the policy continues, and current operators continue to suffer.

After doing a root-cause analysis of the above and many other policies that are similarly comatose, the industry requested the government to notify a policy statement

asserting the primacy of expedited exploration and maximisation of production rather than revenue as the objective. The logic formed the basis of some policies issued in February 2019. But, the policy statement, as requested, was not notified. Hence, there is no protection for the decision-maker if any amendment to the existing policy results in a theoretical adverse revenue to the government or a big gain to the operator—even if the same happens because of a big discovery and additional oil production. It is likely that in the absence of such a policy statement, the above and many other policies that require a revisit, to bring all processes in line with current and updated thinking, will not happen.

Not only is the inimical policy continuing, but it is understood that it is being interpreted even more rigidly by making the fence tighter, thus increasing risk and reducing exploration.

PM Narendra Modi has thrown a challenge to the industry to reduce imports by 10% by 2022. To achieve this, policies also must converge to extract the last subsoil molecule of hydrocarbons. To facilitate this, all legacy policies giving primacy to revenue need to be revisited, and demotion of revenue as only a secondary or tertiary objective needs to be notified. Once the processes of current E&P operators are consistent, not only will production increase, but will also release the spirits to boost participation from current and new companies.