Opinion

MONDAY, OCTOBER 14, 2019

INTERNALLY OURS

Union home minister Amit Shah

Kamal Dhaliwal—Overseas Congress Chief, met Jeremy Corbyn and said the situation is not normal in Kashmir. I want to ask Rahul Gandhi, what does your party want to do by discussing matters of country

Welcome global progress on taxing tech MNCs

Finalising exact parameters of the OECD proposals will take time, but there is an agreement on how to tax them

THE EQUALISATION LEVY India imposed on the advertisements that global firms like Google and Facebook generate from India may have crossed ₹1,000 crore, but this was never a tax on the incomes they earned out of the country; indeed, as the name makes clear, this was merely a way to ensure advertisements on Google/Facebook paid the same level of GST as was paid when an advertisement was put in an Indian newspaper/online venture. The 2018 budget sought to tax their profits by extending the concept of Significant Economic Presence to firms that had no permanent establishment in the country, but this was never really exercised, probably because the government wanted to see how the global consensus on taxing global—mainly the US, actually—tech firms evolves.

Though it will take another 14-16 months for a final consensus on how the taxing is to be done, since digital firms don't need to have a physical presence (permanent establishment, in tax jargon), OECD's draft framework is a good start. It builds on the global consensus on Base Erosion and Profit Shifting (BEPS), or the need to prevent firms from shifting their base of operations—to tax havens—and thereby eroding the tax base of countries. Unlike India's equalisation levy or even the Significant Economic Presence clause that was a unilateral move by India, the OECD concept paper is the result of a global consensus since even countries like the US found large US corporates had structured their operations in such a way that the US didn't get all the taxes it should have. The exact details of the tax proposal need to be hammered out, and that could be a contentious exercise.

Under the plan, a certain share of the firm's profits will accrue to the country where it is based or where it has a Significant Economic Presence; assuming India operationalises its rules for MNCs like Google. Another part of the profit, to be called the 'non-routine profit'—there is no clarity on how much—will be divided up between countries based on where the firm's sales take place. This is likely to be an issue where there will be considerable discussion since, for instance, the US would like to tax most of Google's profits while other countries will argue the profits accrue from their jurisdictions. Taxing a firm like Google also throws up unique challenges. It will have a large number of customers in countries like India while the share of advertisement revenue it earns from here may be much lower; but surely, the Indian taxman will argue, the data obtained from Indian customers on Gmail or Google Maps will be contributing to Google's ability to generate more ad revenues from even customers in the US? There will be several other such challenges that will come up and keep local taxmen busy for a long time, but the important point is that, as in the case of the WTO and trade, there is a global consensus on the need to tackle BEPS-type issues together. This has worked quite well in the case of tax havens already, and the effect of this cooperation can also be seen in the letter that officials of the US, the UK and Australia recently wrote to Facebook on the need to ensure traceability of information for law enforcement agencies.

Insure all bank deposits

Deepak Parekh right to draw attention to this issue

HDFC CHAIRMAN DEEPAK Parekh has done well to draw the government's attention to how "brutally unfair" it is that while tens of thousands of crore rupees can be written off via loan waivers or corporate loan write-offs, there was no system in place to protect the common man's savings. While Parekh said this in the context of thousands of depositors whose money is stuck in the Punjab & Maharashtra Cooperative Bank, the larger problem is that bank deposits of just upto ₹1 lakh are insured—so, if a bank fails, whether a depositor has ₹20 lakh or ₹50 lakh of deposits, the government only guarantees her getting ₹1 lakh back. As SBI chief economic advisor Soumya Kanti Ghosh points out in the context of the need to raise the amount of deposit-insurance, the amount of insured deposit in India is just 0.9 times the country's per capita income; this number is 4.4 times in the case of the US and 7.4 in the case of Brazil.

Given most politicians in the country are focused on only the poor, they think the amount of insurance is sufficient; after all, over 61% of deposits in banks are of less than ₹1 lakh. This, however, is short-sighted, apart from being unfair. There is no reason to believe that just because people earn more, it doesn't really matter if they lose their savings. But even in terms of being pragmatic, it is important to hike this limit since, while 61% of depositors have less than ₹1 lakh in the bank, they account for just 7.8% of the deposits in banks according to Ghosh's data. So, if banks are to fail, and richer depositors lose their money, the country's financial savings will also be hit in a big way. Ghosh's data show that just 0.2% of bank deposits are of more than ₹1 crore; you would think it doesn't really matter if these deposits are not insured and the depositors lose their money, but around a third of all deposits in the banks are made by this category of depositors!

Indeed, there is a larger lesson here for politicians in terms of their approach to the well-off. The recent hike in the income tax surcharge on the rich suggests that the government feels it is okay to soak the rich. A look at the direct tax data, however, should make politicians rethink. Of the ₹7.2 lakh crore of direct taxes paid in FY17, over a third was paid by 480 firms/individuals who had an income of over ₹100 crore; in terms of the number of taxpayers, they were just a little under 0.001%! If India's tax, savings and consumption base rests on a fairly small segment of the population, no government interested in sustained growth can afford to ignore the interests of the better off, no matter how politically insignificant they are.

CompetitiveCOUNT

India slipping on the global competitiveness index is worrisome, structural reforms are now urgent

INDIA SLIDING 10 places in the global competitive index is a problematic trend, but, as argued by this paper earlier (*bit.ly/314xAsb*), it is the cost of doing business and the risk of doing business that matter more than the ease of doing business. Even if a Delhi or a Mumbai has managed to make it easier for a company to get a power connection, that can hardly be the reason behind an MNC, Indian or otherwise, deciding to invest here. This may also hold for the global competitiveness index. In the latest rankings, the country held its position in terms of macro stability and market size, but factors like ICT adoption and mean years of schooling that is keeping it down. Although the report does highlight rising NPAs and trade to be irritants as well—India is ranked 106 of 140 countries in terms of non-performing loans and 131 in trade openness—primarily, it is structural problems concerning education, etc, that need to be addressed, and data highlights that India has made progress on these terms.

But what is worrisome is its standing amongst its peers. A primary reason for India's dramatic fall in the rankings is not the country's own failings, but others fixing these problems more efficiently. So, while India witnessed a marginal dip from 61 to 62 in 2018, others like Vietnam have done better in terms of performance. India may be the leader in South Asia—at 68, it ranks higher than Sri Lanka (84), Bangladesh (105) and Pakistan (110), but it is the second-worst performer in the BRICS grouping. Competitors gaining a considerable lead does highlight an issue—with China ceding space, India would have to do better to attract global investment.

FROM PLATE TO PLOUGH

IMPROVING PROCESSING AND DIRECT BUYING FROM FPOs COULD HELP CHECK LARGE PRICE VOLATILITY OF VEGETABLE LIKE TOMATO, ONION, POTATO THAT EXPORT BANS AND STOCKING LIMIT

Time to TOP up

ASHOK GULATI & HARSH WARDHAN

Gulati is Infosys Chair Professor for Agriculture and Wardhan is Consultant at ICRIER
Views are personal

LAST MONTH, ON September 13, when onion retail prices crossed ₹40/kg in Delhi, government was hyperactive and imposed MEP of $850/tonne. Later on, as prices went further up to ₹50-60/kg, stocking limits were imposed on traders and exports of onions were banned. It created problems in neighbouring countries, especially Bangladesh, inviting a sharp jibe from visiting PM Sheikh Hasina on how this ban, without any notice, affected her cooking and she had to instruct her cook to prepare all vegetables without Indian onions. But now, when tomato retail prices have gone beyond ₹50/kg across the country, what will the government do? Will PM Hasina have to cut down even Indian tomatoes from her cooking, and forced to turn to China? Anytime, same situation may arise even in case of potatoes. Such knee jerk reactions like export bans or stocking limits on traders only show hollowness of our policies. We can certainly do better in addressing large price volatility of basic vegetables.

Tomatoes-Onions-Potatoes (TOP) are the three basic vegetables that face extreme price volatility, and the government often finds itself on the edge in fulfilling its dual objectives of ensuring remunerative prices for farmers and affordable prices for consumers. Accompanying graphic presents Wholesale Price Index of TOP since 2012. With a coefficient of variation (CV) of 52%, onion is most volatile, followed by tomato (47%) and potato (31%). Potato is least volatile because of higher processing-to-production share (7%) than onions (3%) or tomatoes (1%), and also because of large storage facilities for potatoes. In fact, of the total 8,000 plus cold storages in India, 90% are used for storing potatoes. But tomatoes can't be stored for long. The current spike in tomato prices is due to lower supply from major tomato producing states like Maharashtra and Karnataka owing to heavy rains.

The government had announced 'Operation Green-TOP' with an allocation of ₹500 crore in its budget of 2018. The idea was to build value chains of TOP on lines of 'Operation Flood' (AMUL model) for milk in such a way that will ensure higher share of the consumer's rupee to farmers and also stabilise their prices. The scheme is nested with ministry of food processing. But so far the progress is tardy. The AMUL model is based on large procurement of milk from farmers' cooperatives, processing, storing excess milk in skimmed milk powder form during flush season and using it during lean season, and distributing milk through organised retail network. Milk does not pass through any APMC, involves no commissions, and farmers normally get 75-80% of the consumer's rupee, as per AMUL's claims.

But, TOP are mostly traded in APMC markets, with layers of *mandi* fees and commissions, and farmers get less than one-third of consumer's rupee. In a forthcoming ICRIER-NABARD study on '*Deconstructing Value Chains of Tomatoes, Onions and Potatoes*' we estimate farmer's share to be 32.1%, 29.1% and 26.6% of the consumer's rupee for TOP respectively. This cries for massive reforms in APMC.

For stabilising retail prices of fresh TOP, and ensuring higher share of consumer's rupee to farmers, policy makers need to focus on three things.

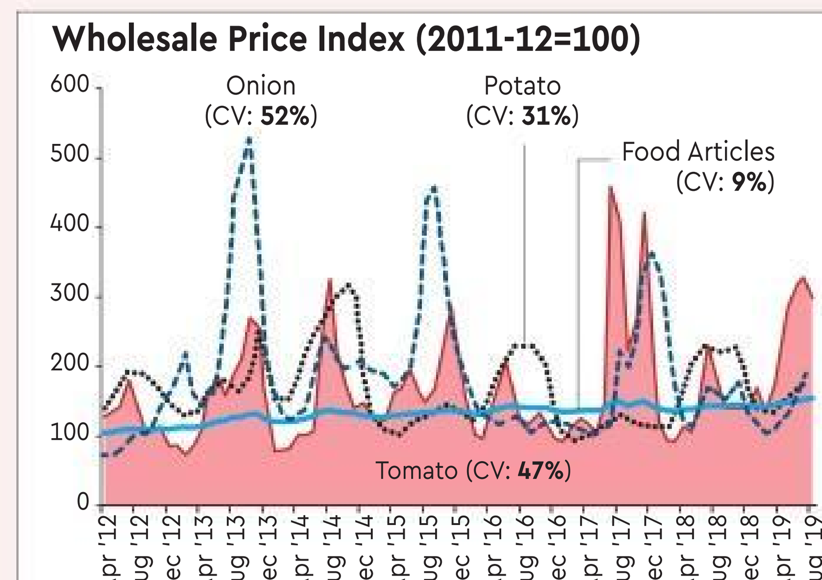
First, buffer stocking with ample storage has to be created. While potatoes and onions can be stored, repeated stocking limits on onion traders discourages private investments in modern cold storages. For inviting large private investment in storages, Essential Commodities Act has to go. If the government feels that traders are colluding to rig the market, then Competition Commission of India should look into it. The government banning exports or imposing stocking limits is not a solution.

Second, increase processing capacities for TOP. Since, buffer stocking for tomatoes is not possible, processing remains the only solution. For this, GST for tomato puree and juice should be reduced from 12% to 5%. Milk and most milk products attract 0 to 5% GST. To propagate the use of processed products (tomato puree, onion flakes, powder) among urban and bulk consumers (hospitals, schools, armed forces), government should run campaigns in association with industry organisations, as was done for eggs. Most of the advanced countries use large quantities of processed tomatoes and onions, which can be stored conveniently. India needs to have time bound targets to process and export at least 10-15% of TOP production. While India exports 10-12% of onion production in fresh and dehydrated form, it exports less than 1% of tomatoes and potatoes production (see graphic). It is time India starts using these relatively new products, like dehydrated onions, tomato puree, shredded potatoes and frozen *tikkis*/French fries, etc, the way they adopted milk powder, ginger-garlic paste, and frozen peas.

Third, direct buying by organised retailers from FPOs through contract farming, bypassing the *mandi* system, should be encouraged. Like dairy cooperatives, TOP cooperatives and retail outlets like *Safal* across the country should be opened. With over 400 *Safal* outlets across Delhi-NCR, onions are being sold at ₹25/kg when retail prices are hovering between ₹50-60/kg. Similar thing could have been done for tomatoes. However, this will require value chain development starting with market reforms along with infrastructure overhaul of existing APMC *mandies* in the country. With crumbling infrastructure, many APMC *mandies* are running over their capacity. Our visit to Kolar *mandi*, one of the largest tomato *mandi* of the country spread over 20 acres, revealed that the operations of the *mandi* have spread out to the adjoining areas. For better functioning, it requires at least two to three times more land and much better infrastructure. These reforms and investments can be undertaken on PPP basis, commissions can be reduced, contract farming encouraged, along with setting up of private *mandies* for better efficiency.

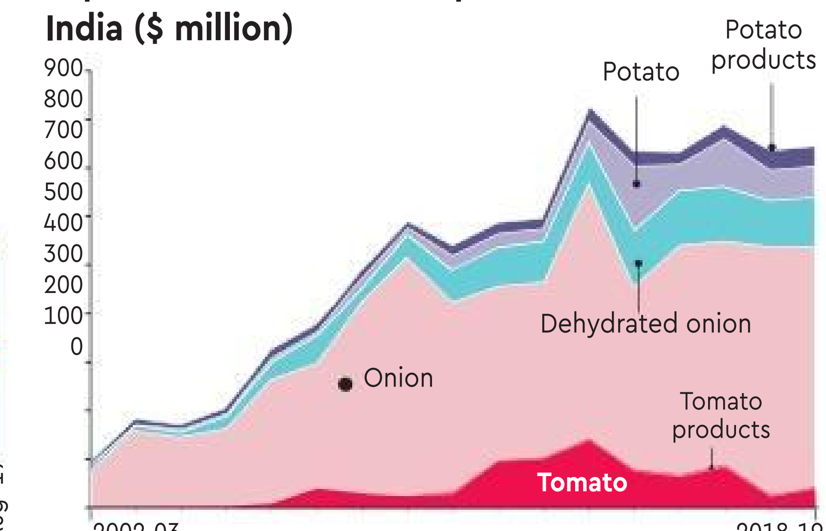
Government needs to find a sustainable solution for price stabilisation of TOP, than taking temporary ad hoc measures. It is time to TOP up!

Wholesale Price Index (2011-12=100)



Source: Office of Economic Adviser

Export value of fresh and processed TOP from India ($ million)



Source: Directorate General of Foreign Trade

Priming India for higher growth

The govt must nudge small farmers towards better-paying, non-farm jobs, and junk the thinking that prized state-ownership

MEGHNAD DESAI

Prominent economist and labour peer
Views are personal

CHINA HAS JUST celebrated the 70th anniversary of the Communist takeover in 1949. It boasts that it grew by 8.1% per annum on average over 1952-2018. This comes to an increase of income 54 times its value in real terms in 1952. China's income didn't grow steadily each year at 8%. It grew at just the same rate as India for the first 25 years after 1950. In 1975, India and China had the same per capita income. China's growth began after Deng Xiao Ping reversed the Mao-era policies that had not just crashed the economy, but cost 50 million lives by then. China's growth happened in the last 20-25 years. The CAGR has to be ~twice 8.1% to achieve that.

Now, compare India. Over 70 years since 1950, India increased its income by 28 times. India grew at around 3% for the first 30 years, 1950-1981. Then, the growth rate stepped up to about 5% for the next 22 years. It is in the last 15 years, 2003-2018, that the growth rate went up to 7.7%. In those last 15 years, income grew four times. Thus, in the first 40 years, it grew seven times, and, then, in the last 15, four times. Such is the magic of compound growth numbers.

Look at India's experience in the three phases. The first phase of 1950-1981 is dismal. India pursued import substitution. This meant not benefiting from foreign trade and not letting its cotton textile industry increase exports. Industrialisation was capital intensive. Agriculture was neglected on the idea that the problem was redistribution of output from landlord to tenant and not of growth or productivity. It was a disaster. The long-run, secular effects of this strategy is that we still have far too many people living in agriculture with two-thirds of the farmers practising subsistence-level agriculture. Agriculture has not grown even as fast as 5% on average for five years at a stretch. While there is a lot of romanticism about the *kisan*, agriculture is the biggest obstacle to achieving high growth rates. The most urgent need is now to help farmers to move out of agriculture and into some other activity which can afford them a better livelihood. Subsistence-level farmers already rely on non-agricultural activity to supplement their incomes, as a Nabard survey shows. Instead of giving farmers ₹6,000 and having them stay on the farm, the Centre should be give a substantial sum to leave farming.

In the second phase, 1981-2003, a sort of realism crept in. The economy crashed due to the oil price shock. Indira Gandhi abandoned self-sufficiency and took a large loan from the IMF. Rajiv Gandhi began borrowing money from abroad (from NRIs). He liberalised imports, though he didn't reform the industrial economy to increase exports. The economy crashed again, and, in 1991, another emergency loan had to be taken. This taught India that it had to borrow abroad to grow. It had to let its economy to benefit from international trade. So, in 1991, PV Narasimha Rao liberalised the economy, cutting tariffs and abolishing quotas. The growth rate increased to around 5%, higher than the 3% previously, but was still inadequate. Still, neoliberalism was denounced by the Left in the Congress and outside.

The Vajpayee government, in the last five years of this period, began to free the government policy from blind faith in state-ownership. Slowly, it began to divest. The big delusions of the first generation of economic planners—import substitution, neglect of agriculture, self-sufficiency and state-ownership—were abandoned, though very unwillingly. Vajpayee's was the first government that dealt with international trade and capital movements in a grown-up manner.

The stage was set for the third and latest act. India prepared itself to thrive as an open economy. Luckily for India, there was a global macroeconomic boom from 2003 to 2008, and, after a crisis, enough countries reflated to avoid a severe depression. This helped India.

So, what is next? The first step is to have an ambitious programme to transfer farmers out of farming to other jobs. The government could make it a condition of debt cancellation that the debtor farmer would quit agriculture. The second task is to abandon the preference for state-ownership. It was always an economic folly whichever political label it carried. It was the biggest waste of scarce money in a desperately poor country to flatter the egos of an elite. A large-scale sale of state-owned enterprises is urgent. The BJP has no investment in the ideology of Fabian- or Soviet-style socialism that Congress had. Modi 2.0 can erase all the surviving obstacles to rapid growth that Nehru-Gandhi put in place.

Modi 1.0 began to build a comprehensive welfare state with Swachh Bharat, Ayushman Bharat, electrification, pension schemes which cover the workers in informal sector, farmers and the elderly, etc. The time has come to give it a rounded shape and dig deep foundations for it.

Whether income gets to $5 trillion or not by 2024 is irrelevant. What matters is that each year is better than the last.

LETTERS TO THE EDITOR

RSS chief's speech

In his Dussehra speech RSS *sarsanghchalak* Mohan Bhagwat declared that 'lynching is a Western concept'. In response CPI (M) General Secretary Sitaram Yechury tweeted 'Lynching is an inhuman concept, period'. Bhagwat's problem is with the use of the word, 'lynching' more than with the act of lynching itself. Lynching by any other name does not make it less felonious. As a *desh bhakt*, he cannot bear the Indian ethos being besmirched by lynchings. Even so, he cannot deny the occurrences of lynching seen by the whole world. Semantics cannot alter the fact that cow vigilantes masquerading as cow protectors lynched weak and vulnerable Muslims and Dalits any number of times. Mohan Bhagwat must reflect on the role of his cultural organisation in creating an atmosphere conducive to the commission of a heinous crime as lynching. But for the patronage and the hope of being feted, cow vigilantes won't be on the prowl. RSS *sarsanghchalak* has conveniently traced the term 'lynching' to a story in 'a separate religious text'. In the Indian context defenceless Implicit in Bhagwat's statement is his admission that lynching is the last thing a civilised society can countenance. Couched in his 'semantic exercise' is also an attempt to paint the lynchings as some 'small, sporadic communal incidents which have not been one-sided'. RSS sarsanghchalak is obliged to repudiate lynching and other forms of violence and free the country from religious hatred.

— G David Milton, Maruthancode

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MONEY CALL

Cashing in on digital payments

Now that smarter, faster, more secure, cost-effective and transparent channels of digital payments are in place, and the pace of economic formalisation has picked up owing to GST, RBI can confidently pursue its vision of a less-cash society

CASH IS STILL the king. Despite availability of digital channels in various forms—debit card, credit card, mobile wallet, QR code, AePS, Aadhaar Pay, NEFT, IMPS, UPI and internet banking, and 700 million active mobile connection, cash commands a dominant presence in day-to-day transactions. Demonetisation and involvement of PM Modi, in promotion of digital payments, certainly contributed to a change of mindset, but, people are extremely comfortable with cash. Even those holding multiple cards, carry cash with the apprehension that card-swipe may fail or the service provider may still not be digital payments ready.

With a series of policy announcements during the past six months, one wonders why RBI has become suddenly proactive (to the extent of being obsessive) on digital payments. Paragraphs are devoted to policies on payment system in the monetary policy statement. As this relentless push for digital payments goes on, it would be helpful if there is a general appreciation of the cost of cash, which has been increasing year-on-year.

Cost of Cash

The primary cost of cash is printing and circulation. Before these notes come into circulation to meet transactional needs, a lot of logistical work is undertaken in the background. RBI being the sole note issuing authority in the country, as per statute, has to bear the cost till it is made available to commercial banks, and becomes "money in circulation".

Notes are printed at two note-printing presses of RBI—Mysore and Salboni. These are supplemented by two printing presses at Nasik and Dewas, owned by the government. After printing, the boxes of notes are transported throughout the country via a network of currency chests managed by commercial banks. For disturbed areas and hilly terrain, note boxes are often airlifted. There are about 3,800 such currency chests, where notes are stored. The notes are a property of RBI and banks act as custodians. When banks withdraw cash to meet the needs of their customers, they gets debited in the books of RBI for the value of currency notes withdrawn. The notes are supplied free of charge to the banks. In the reverse flow, banks get the credit from RBI when they deposit the soiled and mutilated notes to the chest. This helps ensure circulation of clean notes. The soiled notes, withdrawn from circulation, are transported back to RBI. They are shredded under the supervision of RBI officials.

This life cycle of currency note has three cost components—first, the cost of printing and continuous research to make the notes counterfeiting-proof. Second, the cost of transportation to chests and withdrawal of soiled notes for destruction. This cost, along with the cost of maintaining the currency chest is almost two-times the cost of printing. The third component—often forgotten—is the cost of personnel responsible for handling transactions at cash counters in utility companies, railway stations, and department stores.

As per RBI report, the cost of printing during 2018-19 was as high as ₹4,811 crore. As per a rough estimate, total cost for all three components would be in the range of ₹70,000-80,000 crore a year. This does not include the cost of destruction of notes due to natural calamities, and insuring them in transit. The cost of dealing with cases of theft, snatching and robbery is yet another cost component. Running a network of 2,35,000 ATMs also adds to these costs.

Ills of Cash

Cash makes creation of black money easier and leads to corrupt practices. During elections, the politicians get their funding mostly in cash. It is not uncommon for a part of a part of the property deal to be paid in cash, to evade higher taxes. The characteristics of anonymity and non-traceability make it convenient for financial transactions, but injures the economy creating a leakage from tax revenues.

As we move towards becoming a $5 trillion economy—currently we are at $2.8 trillion—the per capita income is likely to double from $2,000 to $4,000 giving a fillip to higher spending capacity. The ever-increasing need for cash will exert pressure on RBI's capacity, and force RBI to incur additional cost in printing and distribution. For costs to be kept at manageable level, the only way seems to be to wage a war against cash. This can be done by creating conditions whereby people would willingly migrate to digital payments. For India, to claim the position of a less-cash society, like Sweden, Norway, Singapore or even UK, China or South Korea, the percentage of digital transactions to all retail payments have to grow five times from the present level of 15% to 70-75%.

Digital platforms need to be robust, scalable and self-reconciling, for people to be compelled to give up cash. Moreover, grievances need to be handled promptly

Now that smarter, faster, more secure, cost-effective and transparent channels of digital payments are in place, and the pace of economic formalisation has picked up owing to GST, RBI can confidently pursue its vision of a less-cash society.

Digital platforms need to be robust, scalable and self-reconciling, for people to be compelled to give up cash. Moreover, grievances need to be handled promptly. In this context, RBI's plan for Creation of an Acceptance Development Fund and pilot districts in each state for total migration to digital payments is timely. RBI has a choice to make, it can either allow cash to be the king and augment its note printing capacity, or have its Payments System Board invest more time and energy on promotion of digital payments. Going by the recent initiatives, RBI has clearly chosen the latter. The war has begun, let us see how it plays out.

Combatting air pollution

PP SANGAL

Former ISS and UN Consultant. Views are personal

Delhi needs a coordinated approach if it wants to reduce air pollution by 65%

MEDIA REPORTS HIGHLIGHT that Delhi government, NGT, CPCB, Supreme Court appointed EPCA, government of adjoining states viz. Punjab, Haryana and UP and their PCBs have all swung into action in in fighting air pollution. But, the real test lies coordination.

Air pollution in Delhi is a result of presence of PM2.5 and PM10 particles, carbon-dioxide, carbon mono-oxide, nitrogen oxides, Sulphur di-oxide, etc. The main sources of pollution are the transport system, construction/demolition activities, road sweeping, coal-fired energy plants and brick-kilns, and most importantly, rice stubble burning in bordering states in winter months of October and November.

According to the scientists at NASA, there may be a spike in farm fires this winter. Crop harvest in Punjab and Haryana, this year, may be the highest in several years owing to longer stay of monsoon and some local factors. Consequently, much more paddy straw, say about 200 lakh metric tons, is likely to be generated increasing farm fires. Here, it may be noted that 1 ton of stubble releases 2 kg of SO2, 3kg of particulate matter, 60 kg of CO, 1,460 kg of CO2 and 199 kg of ash. NASA has found this in advance by calculating a Normalised Difference Vegetation Index (NDVI)—a measure devised for greenness that can indicate crop or vegetation cover. NASA data shows that between 2002 and 2018, maximum number of stubble burning cases (18,000) were reported was in 2016. This year, we expect that the figure to be 16000, but, fearing detection by satellite the farmers may put fire in small patches.

According to CPCB report, the annual average of PM 2.5 levels during 2016-18 at 115 mg/cubic meter (three times the safe limit of WHO) are 25% lower than the average during 2012-14. But, Delhi's average level needs to be lower by 65% to meet the standards under the National Clean Air Action Plan.

Cloud seeding and artificial rains can play an important part in bringing down air pollution. IIT Kanpur has been awarded a project by CPCB for this

It is necessary to review the steps taken by the government:

- Guidelines for the construction agencies for avoiding and controlling dust are not strictly followed.
- The four civic bodies have 56 mechanical sweeping machines, but are not effectively utilising them owing to poor maintenance and non-availability of spare parts. According to a TERI study, the average road length swept is 38 km per shift, instead of expected road length of 80-100 km per day. Dumping of dust (a machine collects 1.13 to 4.1 tons per shift) is another problem.
- There is a need to reduce stubble burning by increasing awareness among farmers and providing happy seeders and other necessary mechanical devices.
- Measures like staggered office timings, banning diesel gen-sets and shutting of industrial units based on coal and biomass and brick-kilns during winter is not being done.

Besides these following measures need to be taken:

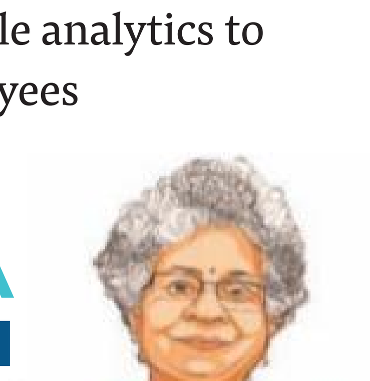
- Planting of saplings should be done in very large numbers to compensate for highly reduced green cover.
- Increase the number of public transport buses drastically. In fact, during the last decade, the number of buses has gone down to 5,500 from 6,329. We need 11,000 buses to meet the demand.
- Cloud seeding and artificial rains can play an important part in bringing down air pollution. IIT Kanpur has been awarded a project by CPCB for this.
- Install gigantic air purifiers; NEERI is working on a smaller variant WAYU to cater to an area of 500 sq. kms.
- Introduce congestion pricing. This means that vehicles owners need to pay extra to enter the busiest and most congested parts of the city. We have already identified 12 such hotspots in Delhi. Singapore, Stockholm and London are doing this. The recent RFID system (introduced by the School of Planning and Architecture) for commercial vehicles entering Delhi is an example of congestion pricing which has worked.
- Create vertical gardens and provide water sprinklers behind all two-wheelers.

Employee first

Firms are increasingly turning to people analytics to achieve better efficiencies from employees

VIDYA HATTANGADI

Management thinker and blogger



PEOPLE ANALYTICS, CONSISTS of data analytics, which uses computer skills, mathematics and statistics with descriptive techniques and predictive models to gain valuable knowledge. The insights from people analytics data is used to recommend action or to guide decision making rooted in business context. People analytics is also known as talent analytics or HR analytics. It helps managers to make decisions about their employees or workforce. It is a form of big data—worker-related data to see and predict patterns. In particular, HR departments use people analytics to make better decisions about all aspects of HR strategy, with the goal of improving business performance.

People analytics is a broad area that encompasses all aspects of acquiring and managing employees, and has largely come to replace its predecessor term, HR analytics, though that term is still in use. Besides HR analytics, talent analytics and, in some cases, workforce analytics may be used synonymously with people analytics.

FedEx Corporation is a company with a track record of being successful in this regard. FedEx believes that its success lies in the hands of how efficiently its employees perform. FedEx Express' volumes vary day-to-day. The delivery routes are designed to meet a specific demand, but the couriers must expand or reduce route coverage based on volume changes. A heuristic-based vehicle routing approach is used to solve this problem. All deliveries for a specific day are verified for a facility. The delivery routes are then optimised based on volume and drive time. The solutions are provided to the delivery couriers. A classic location analysis model is used to solve this problem. The number of shipments to and from every customer needs to be determined. Those packages must be divided into courier routes. The distance to begin each route as well as the return to building for each route must be determined. The company discovered that well-treated employees are top producers, resulting in positive company growth. In 1973, FedEx developed, and still practices, its "People-Service-Profit" philosophy, denoting excellent care of its employees. The company tracks employee satisfaction with its annual Survey-Feedback-Action, and uses people analytics program. Post-survey, management and employees meet to discuss the analysis results, address problems and interpret how to resolve them. FedEx uses people analytics successfully.

People analytics is beginning to help more companies in their recruiting, performance measurement, compensation and most importantly retention efforts. People analytics can help organisations to understand which candidates to hire, which employees are doing well, who's receiving sufficient compensation and how employee retention can be improved. Ideally, people analytics can improve on instinct and gut feeling; for example, showing that, in some cases, a diploma certificate makes for a better employee than a master's degree holder.

However, an upsurge of interest in people analytics points to its expansion into new territories, especially with the use of predictive analytics. Its use is moving beyond HR into other functions such as finance, marketing, operations, logistics and research and development.

In addition, tools are being developed to expand the use of analytics. Increasingly, companies are looking up to vendors rather than building their own tools as analytics models become more extensive. For instance, some enterprise resource planning (ERP) vendors are including people analytics platforms meant to help senior executives understand attrition rates, employee costs and employee engagement profiles for specific segments and managers. People analytics are also increasingly used to analyse teamwork and organisational relationships, which may take on finely tuned meaning as companies replace hierarchical models with more collaborative ones.

Sometimes the insights from HR data can be simple, but effective. Xerox is extensively using this to find out how to retain its customer service employees. Employees who stuck with their jobs longest tended to be the ones who lived nearby and had reliable transportation. Findings like these helped Xerox decrease its attrition rate by 20% in a pilot program, which was later extended.

IBM has also experimented with business applications for workforce science. In 2012, it spent $1.3 billion acquiring recruiting and training company Kenexa, which has a large store of data from surveying and assessing 40 million job applicants, workers and managers a year. One of the results of analysing all this data was that IBM came to a new understanding of what makes a sales person successful. Traditionally an outgoing personality has been seen as a key trait, but IBM compared worker surveys and tests with manager assessments. It found that the most important characteristic for sales success was emotional courage. Successful sales people may or may not be outgoing, but they do need to be persistent, and not take no for an answer.

People analytics helps in measuring people behaviour (new candidates, employees at different levels) and analyse them to improve people and business performance. This is done with use statistical methods. These strategies help make better hiring decisions by predicting candidate success, they prevent talent from quitting their job by predicting employee turnover, test which employee policies are effective and which ones are not, identify and quantify work accident risk, analyse future workforce requirement, and optimise the employee experience.

Not only businesses benefit from such an approach; employees are also happy as it helps make a better fit between their wishes and needs and the organisational demands. It helps them effectively utilise their potential. They grow as better individuals.