aesa Sharing, learning and networking for innovation Blog 71: June 2017

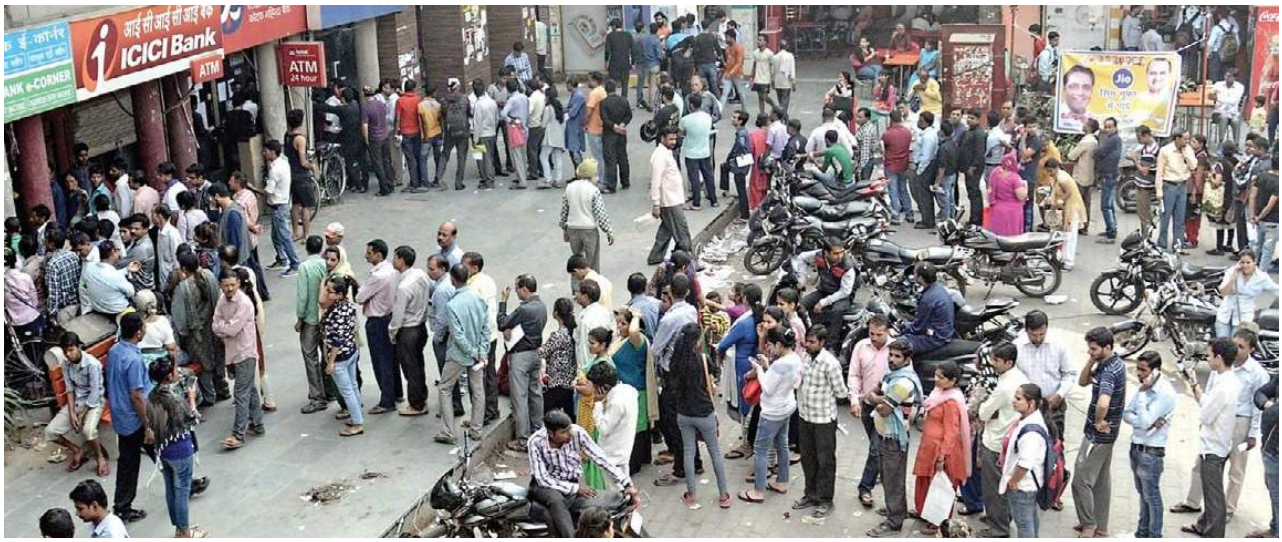
Agricultural Extension in South Asia

DEMONETISATION AND AGRICULTURE: LESSONS FOR EXTENSION AND ADVISORY SERVICES

The recent demonetization exercise by the Indian Government has impacted farmers adversely, at least in the 'short run'. At the same time, has it also opened up new possibilities of digitizing money handling in the agricultural value chain? Arun Balamatti explores these issues in this blog.

Introduction

In 2016, the Indian government decided to recall all 500 and 1000 rupee notes, the two biggest denominations in its currency system; these notes accounted for 86 per cent of the country's circulating cash. With little warning, India's Prime Minister Narendra Modi, announced to the citizenry on November 8, that those notes were worthless, effective immediately – and they had until the end of the year to deposit or exchange them for newly introduced 2000 rupee and 500 rupee bills. In his address, the Prime Minister cited multiple justifications, including (a) eliminating black money; (b) reducing the prevalence of counterfeit currency, which is allegedly used to fund terrorism against India itself; and (c) curbing corruption and criminal activity of various kinds that have been facilitated by the 500 and 1000 rupee notes. Although none of these reasons have much to do with agriculture, the sector seems to have been impacted rather harshly.



Effect of Demonetization on Agriculture

Transactions in the Indian agriculture sector are heavily dependent on cash and were adversely affected by the 'demo' of 500 and 1,000 rupee notes. Due to scarcity of the new banknotes, many

farmers had insufficient cash to purchase seeds, fertilisers and pesticides needed for Rabi crops usually sown around mid-November.

Box 1: Demonetisation
Demonetisation ('demo') is essentially a financial tool used by the government for specific reasons. 'Demonetization' is defined as the act of stripping a currency unit of its status as legal tender. It occurs whenever there is a change of national currency; the current form or forms of money is pulled from circulation and retired, often to be replaced with new notes or coins and sometimes, a country completely replaces the old currency with new currency. There are multiple reasons why nations demonetize their local units of currency and these include, combating inflation, corruption and crime (counterfeiting, tax evasion); discouraging a cash-dependent economy and facilitating trade.
Source: Investopedia (2017).

The demonetization came at a time that coincided with the end of the *Kharif* season (harvesting) and the beginning of *Rabi* (sowing). Therefore, the effect of demonetization hit all the farmers, those who were selling their produce and those who were about to buy seeds, fertilizers and other inputs.

The 'demo' led to unavailability of cash to pay for food products. The reduction in demand that arose in turn, led to a crash in the crop prices. Farmers were unable to recover even the transportation costs from their fields to the market, due to the low prices offered. The prices dropped as low as 50 paise per kilo for tomatoes and onions. This forced the farmers across the country to dump their products in desperation. Some farmers resorted to burying unsold vegetables. Agricultural produce such as vegetables, food grains, sugarcane, milk and eggs were dumped on roads. Some farmers dumped their produce in protest against the government. Farmers and their unions conducted protest rallies in Gujarat, Amritsar and Muzaffarnagar against the 'demo' as well as against restrictions imposed by the Reserve Bank of India on district cooperative central banks, which were ordered not to accept or exchange the demonetised banknotes.

The predictions, prophecies and volatile sentiments were laden with anxiety, caution, frustration as well as optimism with one common 'caveat'; demonetization would cause short term discomfort but bring benefits in the long term. The varied perceptions on 'demo' were largely in the form of informed as well as ill-informed opinions on what might happen rather than certainty of such effects.

Shepard (2017), writing for *Forbes*, describes the impact of demonetization thus far: Modi's demonetization initiative caused a sudden breakdown in India's commercial ecosystem. Trade across all facets of the economy was disrupted, and cash-centric sectors like agriculture, fishing, and the voluminous informal market were virtually shutdown, with many businesses and livelihoods going under completely — not to mention the economic impact of millions of people standing in line for hours to exchange or deposit cancelled banknotes rather than working or doing business.

Shaffer (2017) quoting Faraz Syed, an associate economist at Moody's Analytics, pointed to a reason that demonetization might lay less of a cold hand than expected on the economy. Syed said, "Because of demonetization, while lending rates have come down, bank deposits have

increased; if those lower lending rates can be translated into higher investment, then there's certainly going to be less risk from demonetization."

Bansal (2017) wrote, after demonetization, only the agriculture sector showed some positive improvement while the manufacturing and service sector both crashed down and these are likely to affect the whole Indian market in 2017 also. Discussing the impact of demonetization on agriculture sector, Bansal said, there are short-term and long-term impacts of demonetization on different sectors of economy. Agriculture sector typically sees high cash transactions and therefore near-term impact could be seen till liquidity is infused in the rural areas. As farmers face a temporary shortage of cash in hand, it could lead to a delay in payment, which in turn would hurt the related companies in the short term. As liquidity eases and cashless transactions gain acceptance, the fundamentals would be driven by the longer-term drivers of normal monsoons and positive traction in acreage. Presenting the findings of his study of impact of demonetization on agriculture, he noted the following -
Agricultural growth in India contracted by 0.2 per cent in 2014-15 and grew no more than 1.2 per cent in 2015-16, largely because of back-to-back droughts. It was expected to grow at 4 per cent this year, but due to demonetization, this forecast has not materialized as farmers are running out of cash to buy seeds, fertilizer, equipments and pay wages to workers, commission to agents, etc. Because of cash shortage, the daily supply from the transport system has also suffered, which has resulted in 25 to 50 per cent reduction in sales. The main reasons being,

- Farmers are not well educated and are not aware of how to make use of the E-Payment System; a recent study by RBI shows that 78 per cent of the population do not use internet of which almost 80 to 85 per cent are farmers.
- In most villages a proper banking system has not been developed and hence villagers needed to go to the cities for exchanging the old notes.

However, there is some light at the end of the tunnel if one were to believe what Srinivas (2016) says, "It is a myth that farmers refuse to accept cheque payment. Small dairy farmers in Andhra Pradesh accept cheques. Sugarcane farmers accept cheques from sugar factories. Moong farmers are accepting cheques from government procurement agencies. Apple farmers accept cheques from large buyers. Potato contract farmers accept cheques from food companies. Maize farmers in Nabrangpur, Odisha's poorest district and coconut farmers in Karnataka took cheques from state agencies. The list is growing."

In Karnataka and Andhra Pradesh, which have adopted the Rashtriya eMarket Services-run Unified Markets Platform, produce worth ₹39,000 crore has been sold with cheque payment in the last four years. The 250 *mandis* in 10 states that have adopted the electronic National Agricultural Market (eNAM) platform for sale of primary produce are designed for cheque payment. So far, 1.60 lakh farmers, 46,000 traders and 26,000 commission agents have been registered on the e-NAM platform.

Food Corporation of India tried but failed to pay Punjab and Haryana farmers by cheque for wheat, only because the powerful commission agents want to first deduct the loan repayment amounts. Direct benefit transfer for seeds has been a success even among the small and marginal farmers of Uttar Pradesh. Moreover, of the seven crore Kisan Credit Cards issued in India, more than one crore are ATM-enabled debit cards. Farmers accept insurance and disaster relief cheques. So to portray the farmer as a Luddite is both unfair and untrue.

Chand and Singh (2016) have looked into the possible effect of demonetization on agriculture in a more comprehensive way (Box 2).

Box 2: Potential impact of demonetisation on agriculture

Demonetization can affect agriculture directly in four ways. These include area sown, crop pattern, productivity and market.

Effect on Sown Area: According to the tentative estimate of area sown up to 11 November, at the start of demonetization, *Rabi* sowing was completed on 14.6 million ha area which was 5.7 per cent lower than the normal crop coverage. The gap between area sown this year and normal area steadily declined almost every week since the announcement of demonetization. During the week ending 30 December, 2016, net sown area under *Rabi* crops exceeded the normal area by 2.77 per cent and area sown last year by 6.86 per cent. There was a delay of 1-2 weeks in sowing this year in the beginning of Rabi season, but it picked up pace subsequently. Normally, *Rabi* sowing is completed on 88 per cent area by 30 December. This year (2016) it has been completed in more than 91 per cent area. The data on progress of sowing of *Rab*i crops clearly indicate that, at the country level, there is absolutely no adverse effect of demonetization as far as sowing of major crops is concerned.

Crop-wise effect: The progress in area sown remained uneven across regions and crops. Wheat, which accounts for 47 per cent of total area under the reported *Rabi* crops, showed a big shortfall of 41 per cent in area at the time of demonetization. The gap declined to less than 1per cent by mid-December, 2016 and crossed normal area by 2.12 per cent by the end of December. Compared to the corresponding period last year, wheat has been sown in 7.7 per cent greater area. Area under pulses and oilseeds is higher than normal for the corresponding period by 11.2 and 1.7 per cent, respectively. The shortfall in area is reported for *Rabi* rice and course cereals. This shortfall is much smaller (6.6 lakh ha) compared to the gain in area under wheat, pulses and oilseeds (22.3 lakh ha) resulting in net increase in area under *Rabi* by 15.7 lakh ha over normal area and 37.4 lakh ha over last year.

Among major Rabi crops growing states, overall shortfall in sown area is about 20 per cent in Tamil Nadu and Karnataka and 8 per cent in Gujarat and Andhra Pradesh. Similarly, Jammu & Kashmir and Himachal Pradesh also show major deficit in *Rabi* sowing. Largest shortfall is seen in Kerala. All other major states indicate small to large increase in crop sown area this year over normal area. Even Uttar Pradesh, which was persistently showing shortfall in area, has reached higher than normal figure.

Effect on Productivity: Farmers use cash to buy quality seed, fertilizers, chemicals, diesel and to hire labour and machinery. More than 7 per cent seed used for *Rabi* crops are self-produced while the rest is purchased from public sector agencies, research institutes and private sources. Sale of seed this year by public institutions is reported to be much lower than normal sales. This can have small impact on productivity.

The major impact on productivity is going to happen due to change in use of fertilizer. According to the Ministry of Agriculture source, fertilizer off-take during the current *Rabi* season (till 21 December 2016) was lower than the fertilizer off-take in the corresponding period, during 2014-15 and 2015-16 by 7.47 per cent and 7 per cent. If fertilizer use at farm level faces the similar shortfall as reported in fertilizer sales at first point, it will affect productivity. It is estimated that current shortfall in fertilizer consumption if it persists till the end of *Rabi* season, which constitutes half of annual agricultural output, can result in 1.05 per cent decline in crop output and 0.75 per cent decline in agricultural output.

Effect on Prices: No effect of demonetization was seen on prices of major crops like paddy, soybean, and maize in the month of November and their wholesale prices in Agricultural Produce Market Committee (APMC) *mandis* of the country were around 3 per cent higher in November as compared to the month of October. While the prices of maize and soybean fell in the month of December, paddy prices ruled higher than previous two months and also as compared to last year. There might be some delays in payment to the farmers due to cash crunch but that is a temporary phenomenon.

The perishables, vegetables and fruits, in most markets and states, showed a drop in market arrival as well as in prices, post demonetization. Wholesale prices of banana, apple, tomato and cabbage in the month of

November in the APMC *mandis* of the country, taken together, were 3.80, 3.86, 8.47 and 5.6 per cent lower, compared to the month of October, respectively. These changes indicate that income of producers of perishable commodities suffered due to fall in prices in the month of November. Seasonal glut and bumper crops seem to be the major reasons for crash in vegetable prices in the month of December 2016 in some states.

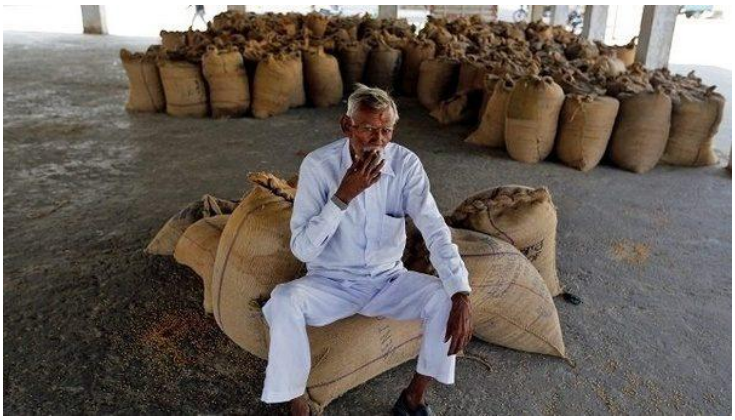
Effect on Output Growth: The situation prevailing at the end of December 2016 implies that *Rabi* crop output will increase by 6.02 per cent over last year, due to higher area sown. Lower use of fertilizer, as observed from the first point sale, can cause 1.06 per cent decline in output during *Rabi* season. These two factors put together, imply that *Rabi* output in 2016-17 could be 4.96 per cent higher than in 2015-16. Lower sale of quality seeds due to cash crunch can also affect growth but this impact is expected to be small.

The growth rate in farmers' income is projected to be slightly lower, due to drop in prices of perishables during the months of November and December. The net effect of fall in prices on the farmers' income, is estimated to be -0.26 per cent. Factoring this change, farmers' income in year 2016-17 is projected to witness increase of 5.8 per cent in real terms. The above discussion shows that growth story of agriculture is intact as demonetization is found to cause small and insignificant effect on growth of output, as well as on farmers' income. Agriculture, which is the largest informal sector in Indian economy, has shown strong resilience to the effects of demonetization.

Source: Chand and Singh (2016)

Renu Kohli (2016), an economist, predicts, "Production in 2016-17 could drop if sowed acreage (*Rabi*) reduces for want of enough seeds, on time to exploit the adequate soil moisture. Yields could fall from late sowing and subsequent exposure to rough spring weather, the lack of sufficient or timely application of fertilizers, pesticides, etc. Farm labour, vital for this period, is reported to be unpaid as farmers have no cash. Many of them are reported to be returning from some northern parts to homes in Uttar Pradesh and Bihar. Labour shortages and wage-spikes may follow with a lag.

In a complete contrast to the fears of economic slowdown, expressed by both critics as well as supporters of the demonetization idea, the government's demonetization program barely dented India's economic momentum in Q3 FY 2016, according to recently released data by the Ministry of Statistics and Programme Implementation (MOSPI). GDP expanded a healthy 7 per cent annually in the October to December period, below the 7.4 per cent expansion reported in the previous quarter, but nearly a full percentage point above market expectations (Bouzanis, 2017).



Here is the latest critique on 'demo' by Langa and Sriram (2017), who wrote in The Hindu, "In addition to low prices, what has aggravated the situation is the Central government's demonetisation move late last year that has adversely hit the rural and agrarian economy". They go on to add, "Note bandi has almost finished us in the rural areas. Even after selling our produce, we don't get money in our hands for at least two-three weeks and sometimes even a month," quoting Lalchand Mali, a farmer from Barkheda Panth. While the critics, during the early days of 'demo' were saying the cash crunch could lead to

reduced investments on seeds, fertilizers etc., and hence reduced production, the criticism is now directed at bumper crops, causing market gluts and price crash.

The delayed payments could be hurting farmers when they sell their produce, but the same authors, Langa and Sriram (2017), in the same article, seem to contradict themselves by saying, “From a persisting cash crunch due to demonetisation to a price free fall because of a bumper produce, it’s a big bag of woes for farmers in Madhya Pradesh and Maharashtra. Agricultural expert Devinder Sharma, on the other hand, doesn’t blame it on ‘demo’, but says, "Over the years, the government has deliberately impoverished the agriculture sector. Our economic policymakers are pushing people in agriculture to cities to get cheaper labor for industrial infrastructure and to keep food prices low so inflation does not increase (Firstpost, 2017)".

As it always happens with every ambitious policy, more so with a policy causing an impact of the magnitude that ‘demo’ has caused, there will be fierce criticism as well as appreciations, depending upon which side of the fence one wants to choose. But reality is that, there is a need for preparing the farmers to live in the ‘post demonetization era’.

Lessons for Extension and Advisory Services

Extension and Advisory Services (EAS) have a crucial role to play in helping farmers deal with challenges of all sorts, including those that have emerged due to demonetisation.

Discussing post ’demo’ ways of handling agricultural transactions in a workshop with the farmers, the author could experience the real and the perceived problems that could challenge the pace at which the digital economy starts rolling. It is not just the shortage of small currencies, power cuts and server breakdowns; rather, there is a huge psychological barrier and cultural baggage to deal with before the cash-dependent working class starts using banks, credit-debit cards, e-wallets and so on (Box 3). It is not a comfortable feeling at all, going to the bank in the first place, the farmers may not say it but it is no secret - the ignominy they face from the banking staff, more so if they happen to be illiterate, poor and ill-clad.

The farmers are now fearing handling large monies, when they are selling their produce in the wake of limits on daily/ weekly transactions; they do not understand it is legitimate money earned out of their farming, for they are clueless on making black money from white; they do not feel comfortable going to banks with wads of currency; they fear their privacy is compromised the moment they deposit the money into bank accounts; culturally, they are used to keeping out their financial transactions from their friends, neighbours and relatives.

Box 3: Behavioural change to adapt to demonetisation

As the demonetization campaign progressed, its narrative gradually transitioned from being a measure to fight corruption, to one to modernize a large swath of India's economy. Prior to this campaign, most of the country was firmly entrenched in the cash economy and there was very little incentive to break the generations-old habits, get bank accounts and go financially digital. But temporarily removing the society's access to cash, pushed millions of people onto India's formal economic grid by all out fiat, wrote Shepard (2017) and he quoted another author Monishankar Prasad, "The unbanked and informal economy is hard hit. The poor do not have the access to structural and cultural resources to adapt to shock doctrine economics. The poor were taken totally off guard and the banking infrastructure in the hinterland is rather limited. The tech class has poor exposure to critical social theory in order to understand the impact on the ground. There is an empathy deficit".

While farmers could benefit from the ICT tools like Loop Mobile App introduced by digital GREEN in Bihar, (digital GREEN 2017), wherein aggregators come in to help farmers sell their produce in markets that offer best price. Srinivas (2016) wrote, "To convince agri-input agents and other merchants, the government should make it easier and cheaper for them to adopt card payment and mobile wallets on a trial basis. Shopkeepers should be educated about how they can expand business by moving from 'cash only' to 'cash and card', because it attracts more customers. Those customers also spend more because they are not hampered by lack of cash. Once village retailers accept digital payments, rural customers will follow. Exactly the way mobile wallets picked up with Ola and Uber. Economists call it the network effect." Srinivas went on to write, "Once the agricultural value chain adopts electronic payments and cleans up its books to align itself with the financial supply chain, benefits will follow. The biggest will be the inflow of private and banking capital, which is waiting to power agricultural growth, and social impact capital to improve rural lives".

That underscores the need for improving farmers' financial literacy, which the EAS haven't addressed so far. EAS will have to target not only farmers, but all other actors in the agricultural value chain not only in terms of educating everyone on the information and skill requirements related to digital transactions but also on how each stakeholder forms a link in the chain, to help farmers adapt to the new situation.

The banking staff and the government machinery need to be taught to be empathetic and courteous and not merely work on simplification of procedures and reducing paperwork. Similarly the banking and government servants, should enhance the capacities of small traders, commission agents, whole set of operators at regulated markets etc., as this is of equal importance to complete at least one cycle of digital transactions. Rural infrastructure, especially power and internet services have to get far better than what they are at the moment before digital economy picks up trust from the cash-dependent communities. Without this, not only the banking services but also the delivery of information and technology through ICTs are likely to take the hit.

Conclusions

Results of the latest elections in 5 states, particularly Uttar Pradesh, seem to have silenced the critics of demonetization; ironically, the political triumph of the ruling government, more so in this state of Uttar Pradesh, has reinforced the positive economic indicators of Q3 of FY 2016-17.

It is true that the small and marginal farmers who sell off their produce in the village itself are hurt by the 'demo'. Similarly, value chains with minimal processing and direct consumer sales such as fruits and vegetables are hit. Most fresh produce are sold by small hawkers and vegetable mongers in the streets of India. Since they take payment in cash and buy their wares from the *mandi* in cash, their business is down.

Visible difference will come if the government uses 'demo' to persuade two intermediaries in the value chain — the traders and the village shopkeepers — to adopt electronic payments. All the APMC markets are regulated by the state governments and are used by larger traders. They should be made cash-free. Cash is an inefficient medium of exchange. The World Bank estimates that the Indian government can save one per cent of the GDP annually from digitising current cash-based subsidies alone. Farmers, traders, processors and retailers will never again blindly trust cash. That makes it the perfect opportunity to prise open closed minds and introduce new payment habits in this otherwise opaque part of the economy (Srinivas, 2016).

EAS have an urgent and important role to play in enhancing the capacities of farmers and other stakeholders in the agricultural value chain to adapt to digital transactions. But to do this effectively, the capacities of EAS providers need to be enhanced, especially on the implications as well as opportunities emerging on account of 'demo'. Apparently the agenda or the mandate of EAS should also be broadened to include this topic at the very top of the priority list.

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