

Impact of demonetization on agriculture: a case study

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Abstract

Objectives: This preliminary study has been undertaken to access the impact of demonetization on agriculture and related activities of different economic agents.

Methods/Statistical analysis: The study is based on primary data collected from farmers (40), traders (30) and consumers (40) and also reviews the impact of demonetization on agriculture from different sources. Percentage and tabular analysis have been used to analyze the data.

Findings: The results show that, in the sample small and marginal farmers were most affected in contrast to large farmers in case of sowing, purchase of inputs and sale of agricultural commodities. Among commodities, farmers dealing with perishables were more affected than who dealt with grains. However, wholesalers were most affected in grain markets & retailers in fruits and vegetable markets. Consumers have used more than one mode of payment to deal with cash crunch situation but, the lower income class people and those who did not use alternative payment methods (e-payment) were affected most. Moreover, all the economic agents have responded in favor of normalization of situation at the end of February, 2017.

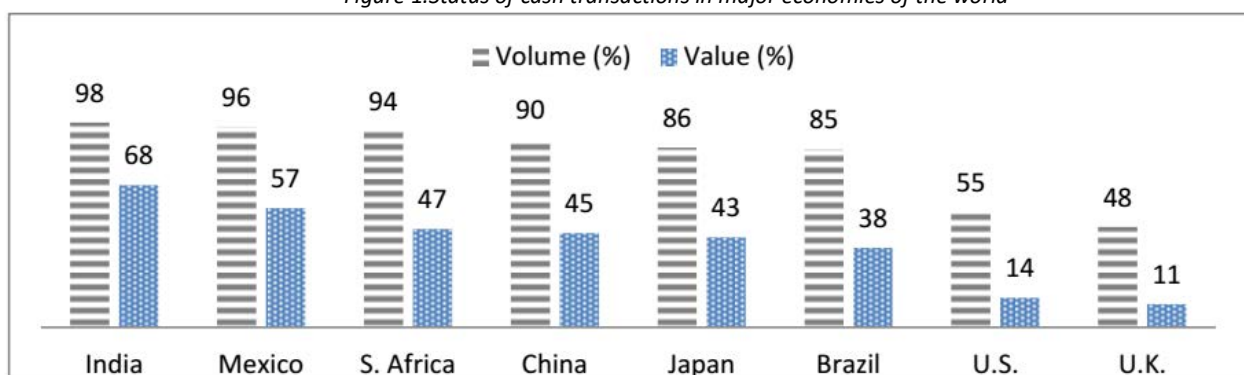
Improvements: However, there are scopes in future to replicate this type of study at larger scale and computation of cost and benefits of such policy shocks to know the exact economic impact.

Keywords: Agriculture, Demonetization, Economic Agents, e-Payment Methods, Fruits & Vegetables and Grains.

1. Introduction

Money is sometimes regarded as the blood of the economy that circulates among its various sectors and helps in the smooth conduct of economic activities. But, if any cardiac arrest occurs in the economy and the supply of money stand still for a while it would create large turmoil in the economy and hamper the normal functioning of the economy. The similar cardiac arrest happened to Indian economy on November 8th, 2016. The recent demonetization was not only a war against the social evils but was the decelerator for the economic activities for a while which has left the significant impact on various sectors of the economy. India being the cash dependent economy with around 68% of the transactions in cash is shown in Figure 1 and the predominance of unorganised sector in the economy is the major reason for its helplessness to go unaffected by this demon.

Figure 1. Status of cash transactions in major economies of the world



Source: [https://www.bloombergquint.com/business/2016/11/09/the-beginning-of-the-end-of-the-parallel-economy-in-india\[1\]](https://www.bloombergquint.com/business/2016/11/09/the-beginning-of-the-end-of-the-parallel-economy-in-india[1])

However, it was neither a new experience for India nor the world, but the intensity of impact was a major concern among different incidences of demonetizations in India. There is plenty of literature available on newspapers, magazines, the internet and other platforms of social media about the impact of demonetization on

various sectors of the economy and in particular to agriculture, but hardly any empirical evidence that justifies the impact of demonetization on farming and related activities. Therefore a preliminary study has been conducted to analyse the impact of demonetization on various stakeholders such as farmers, traders and consumers. The primary survey was conducted among producers (40) who visited IARI (9th Nov. 2016 to 20th Feb. 2017) and Azadpur market, traders (30) from APMC Azadpur and Narela and Inderpuri market and urban consumers (40). This study does not include a survey of farmers at their place of residence in their villages. Therefore, the study mainly represents the result of an urban setting. The secondary data were also compiled from different sources to cross check the authenticity of the findings. Section 5 of the study discusses the impact of demonetization on farming activities of farmers; wholesaling and retailing activities of traders in fruits & vegetable, and grain markets of Delhi; and on the consumption activities of different income classes of consumers. However, the findings of present study can't be generalised for the whole economy due to small sample size.

Before discussing the actual impact on various stakeholders, it is imperative to have a general understanding of the concept of demonetization and its history.

2. Concept of demonetization

Demonetization is the act of “stripping off the currency unit of its status as legal tender” i.e. withdrawal of some denominations as the official mode of payment, in other words, the demonetized currency could no more perform any of the function of money as a medium of exchange, the standard of payment, storage value etc.

3. Experience of demonetization

Demonetization is not a new phenomenon for either the world or India. There are several pieces of evidence of demonetization in the world and some of them in India. It can be rolled out in the economy to address several socio-economic problems present in the country like black money, counterfeiting, inflation, corruption and so on. However, the recent incidence of demonetization in India has added a new dimension to the arena of problem for which demonetization can be used as a tool i.e. terrorism.

3.1. Global experience

The evidence on nature of demonetization in the world revealed that it can be rolled out either suddenly or gradually in the economy based on the problems to be addressed. The demonetization experiment had been conducted across many countries in the world with the objectives of – controlling inflation; curbing black money and black marketing; fight against organised crime; preventing counterfeiting; fighting corruption; managing fiscal and banking crisis; financing fiscal deficit and so on. Table 1. the countries have been grouped according to the objectives for which the demonetization plan has been rolled out in the countries after 1982. The sudden roll out of the demonetization has created chaos among public and brought discomfort to the economic activities in almost all the countries as experienced in India in recent past. However, this politico-economical experiment is associated with both the positive as well as negative effects which are shown in Table 1.

Table 1. Global experience on Demonetization

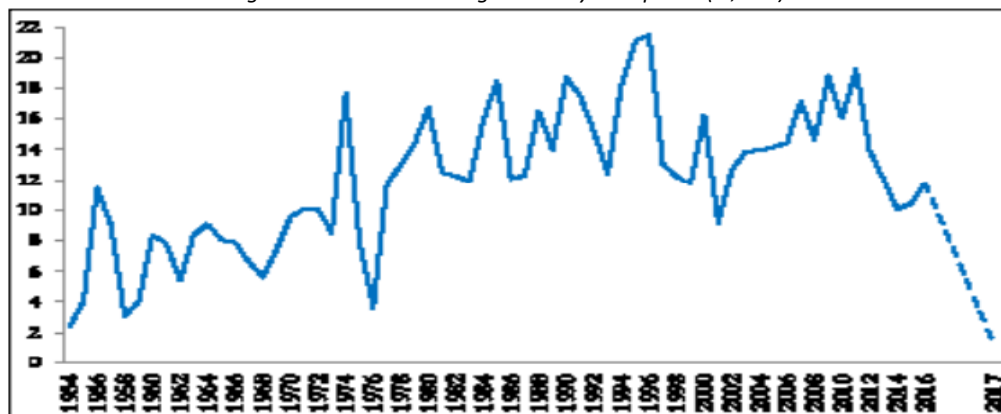
COUNTRIES	OBJECTIVES	EFFECT
Brazil (1990 & 93), Ghana (1982), Myanmar (1985 & 87), Russia (1993), Venezuela (2016), Zimbabwe (2015)	To control hyperinflation	<p>POSITIVE EFFECTS</p> <ul style="list-style-type: none"> ✓ Banking system regained its strength, ✓ Gradual control over inflation, ✓ Stabilisation of consumer prices, ✓ Gradual stabilisation of economy, ✓ The inception of counterfeit-resistant polymer notes in Australia. <p>NEGATIVE EFFECTS</p> <ul style="list-style-type: none"> ✓ Loss of confidence in the banking system, ✓ Public unrest, ✓ Public protest, ✓ Contraction of output, ✓ Drying of liquidity, ✓ Loss of jobs,
North Korea (2009)	To curb black marketing	
Soviet Union (1991)	To fight against organised crime	
Iraq (1993)	To finance fiscal deficit	
Greece (2013) and Cyprus (2015)	To manage fiscal and banking crisis	
Australia (1988 & 2015) & Denmark (2012)	To prevent counterfeiting	
Euro Region (2016)	To create common currency for the European Union	
Singapore (1967,1999 & 2014)	To mitigate high money laundering risk	
Pakistan (2015)	To fight corruption and black money	

Source: Economic Survey, 2016-17, Chapter 4, pp 79-81.

3.2. Indian experience

India's demonetization is unprecedented in international economic history, in that it combined secrecy and suddenness amidst normal economic and political conditions. All other sudden demonetizations have occurred in the context of hyperinflation, wars, political upheavals, or other extreme circumstances. But the Indian economy had been growing at the fastest clip in the world on the back of stable macroeconomics and an impressive set of reforms. However, India's action is not unprecedented in its own economic history: there were two previous instances of demonetization, in 1946 and 1978, the latter not having any significant effect on cash as Figure 2. But the recent action had large, albeit temporary, currency consequences. Figure 2 shows annual percentage changes in currency since 1953. (Economic Survey, 2016-17).

Figure 2. Growth in average currency with public (% YoY)



Source: Economic Survey, 2016-17.

In both, the earlier cases of demonetizations in India some high denomination currency (Rs. 500, 1000 & 10000 in 1946 and Rs. 1000, 5000 & 10000 in 1978) were demonetized with the major objective of curbing black money and black transactions. However, both these attempt to curb black money were failed in achieving its objective of curbing black money. In the instance of demonetization of 1946, out of a total issue of Rs. 143.97 crores of the high denomination notes, notes of the value of Rs. 134.9 crores were exchanged by the end of 1947. Thus, notes worth only Rs. 9.07 crores were probably demonetized. Similarly, in 1977-78 out of Rs. 9170.1 crore in circulation only Rs. 73.1 crore of high denomination currencies has been demonetized.[2].The other interesting feature of both of the earlier incidences is that in both of these cases high denomination currencies were barely used by the common public. In 1977-78, high denomination constituted only 0.8 per cent of the total currency in circulation. There are both parallels and differences with 2016 episode.

- Similarities are all three were aimed at curbing black money. Though this time security is an added challenge.
- In the earlier editions, RBI was mostly against the exercise and was proven right. This time it seems RBI has welcomed the idea (though there could be initial differences which will emerge only later).
- The big difference obviously is the size this time. Previous ones barely impacted common people but this one is huge with 86% of currency out of the system.
- The first demonetization was a case of conversion, second was the case of cumulation and the third was projected as a demon but was more of a conversion.

4. Impact on Indian economy

The recent politico-economic experiment of demonetization has left a deep impression on socio-economic activities of all the economic agents in the economy as well as sectors. Understanding the cost and benefits of demonetization requires spelling out the analytics of demonetization, which is rich and complicated. Broadly, there are number of effects which are sketched out systematically in Table 2.

Table 2. Impact of demonetization

Sectors	Effect through end December	Likely long term effect
Money/ Interest Rate	Cash declined sharply; Bank deposits increased	Cash will recover but settle at a lower level. Deposits will decline but will settle at a higher level.
	Interest rate on deposits/loans & Govt. securities declined	Loan rate could fall further if deposit increase in long run
Financial System Savings	Increased	Increase to the extent that the cash deposit ratio fall permanently
Corruption	--	Could decrease if incentives for compliance will increase
Black Money	Stock fell Some holders came into tax net	Formalisation would decrease the flow of unaccounted income
Private wealth	Declined	Could fall further if real estate price will fall further
Public Sector Wealth	No effect	Will increase when unreturned cash is extinguished, reducing liabilities
Formalization/ Digitalization	Digital transaction among new users increased sharply. Existing users transactions increased in line with historical trend	Some returned to cash as supply normalises. But the digital revolution will continue.
GDP	Growth slowed down as demonetization decreased demand; supply and increased uncertainty.	Could increase in the long run if formalisation increases in long run and corruption fall.
Broader Economy	The lossof the job; decrease in farm income; social disruption especially in cash intensive sectors.	Would gradually stabilise as the economy is remonetized.
Tax Collection	Increased due to increased disclosure; as demonetized currency remain legal tender for tax payment/ clearance of arrears.	Indirect and corporation tax could fall. Tax collection will increase as formalisation expands and compliance improves.

Source: Economic Survey, 2016-17, Chapter 4, pp 59-61[3].

5. Impact on agriculture

For the present study data from three different classes of farmers (i.e. large farmers, medium farmers and small farmers); two different class of traders from fruits and vegetables and grain markets (Wholesalers and retailers); and four different income class of consumers were collected. The results of the study are categorised into three groups i.e. impact on activities farmers; impact on activities of traders and impact on the consumption activities of the consumers.

5.1. Impact on activities of farmers

The decision to demonetize the high currencies came in such a time when the farming fraternity of the country was either engaged in the post-harvest operation of Kharif crops and sowing of Rabi crops. Both these operations require a huge amount of cash for its conduct. Thus, the decision to demonetize at this time has affected the farming community worst as compared to the two earlier instances of demonetization which occurred in the month of January when most the major agricultural operations are generally completed. Apart from these, the farmers faced problems in receipt against the sale of their Kharif produce. This section highlights the impact on the sowing of Rabi crops; availability of casual labour; access to agricultural inputs and on the sale of Kharif crops by the farmers.

5.1.1. On sowing of Rabi crops

Out of the total farmer respondents, 65 percent of the farmers in the sample reported for the delay in sowing of the Rabi crop due to demonetization. Out of different categories of the farmers, small farmers were most affected

followed by medium and large farmers table 3. The further analysis of data suggest that out of 65 percent affected farmers, small farmers constituted 54% followed by medium farmers (38%) and large farmers (8%).

Table 3. Percentage of farmers affected in each category

Farmers Category	Sampled Respondents	Affected (%)
Large Farmers	7	28.57
Medium Farmers	18	55.55
Small Farmers	15	93.33

However, the secondary data for all India also suggested the marginal decline in Rabi sowing by 0.68 percent as compared to last year in the month of November which later exceeded the net sown area by 7.85 percent in December as compared to last year Table 4. The data on the progress of sowing of Rabi crops clearly indicate that, at the country level, there is absolutely no adverse effect of demonetization as for as sowing of major crops is concerned. 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 percent area by 30th December. This year it has been completed on more than 91 per cent area.

Table 4. Comparison of all India net sown area in months of November and December

Major Crops	Area sown in November (Lakh ha)		Area sown in December (Lakh ha)	
	2015-16	2016-17	2015-16	2016-17
Wheat	78.83	79.40	202.28	225.63
Rice	-	-	10.98	8.00
Pulses	69.98	74.55	110.80	121.74
Coarse Cereals	37.86	25.98	49.13	44.83
Oilseeds	48.74	56.16	65.71	72.23
Total	243.38	241.73	438.90	472.43

Source: [http://pib.nic.in/newsite/erelease.aspx?relid=0\[4\]](http://pib.nic.in/newsite/erelease.aspx?relid=0[4])

Among major Rabi crops growing states, the 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, J&K and Himachal Pradesh also show a major deficit in Rabi sowing. Largest shortfall is seen in Kerala. All other major states indicate small to a large increase in crop sown area this year over the normal area. [5]

The major reasons for the delay in sowing of Rabi crops as perceived by the farmers were – delay in input procurement; difficulties in labour hiring; unavailability of formal or informal credit in cash; provision of currency for household purpose and general distress in the economy. However, the farmers have also adopted different mechanisms to cope up with the cash crunch situation and to minimise the impact on farming in the spell of demonetization. The common management strategies which worked well to mitigate the severity of the adverse effects of demonetization are - use of own seeds, fertilizers and stock of agrochemicals; use of more family labour; co-operative farming practices to deal with labour scarcity during sowing; borrowing the agro-inputs from the friend or purchased the inputs on credit from private traders.

5.1.2. On farmers access to inputs

The government of India has announced the provision of using high denomination demonetized currencies for the procurement of the agricultural inputs (seeds, fertilizers and agrochemical) to farmers from the government agencies. However even then only 70 percent farmers in our sample were aware of using this provision. It was also found that out of 70 percent aware farmers, only 43 percent could utilise it. The major reason for lesser utilisation was – uneven and distant location of government agro-input agencies. Contrary to this, Chand and Singh (2017) has reported that as the most of the Rabi crops are self-pollinated, farmers need not buy fresh seeds every year and due to which the sale of seed this year by public institutions is reported to be much lower than normal sales. However, the farmers in our study were affected as far as access to the inputs is concerned Table 5. Out of sampled farmers none of them have used either cheque or any of the digital payment gateway for procurement of inputs; however, the usage of a cheque for input procurement was in news in many parts of the country.

Table 5. Percentage of farmers who could not use the provision

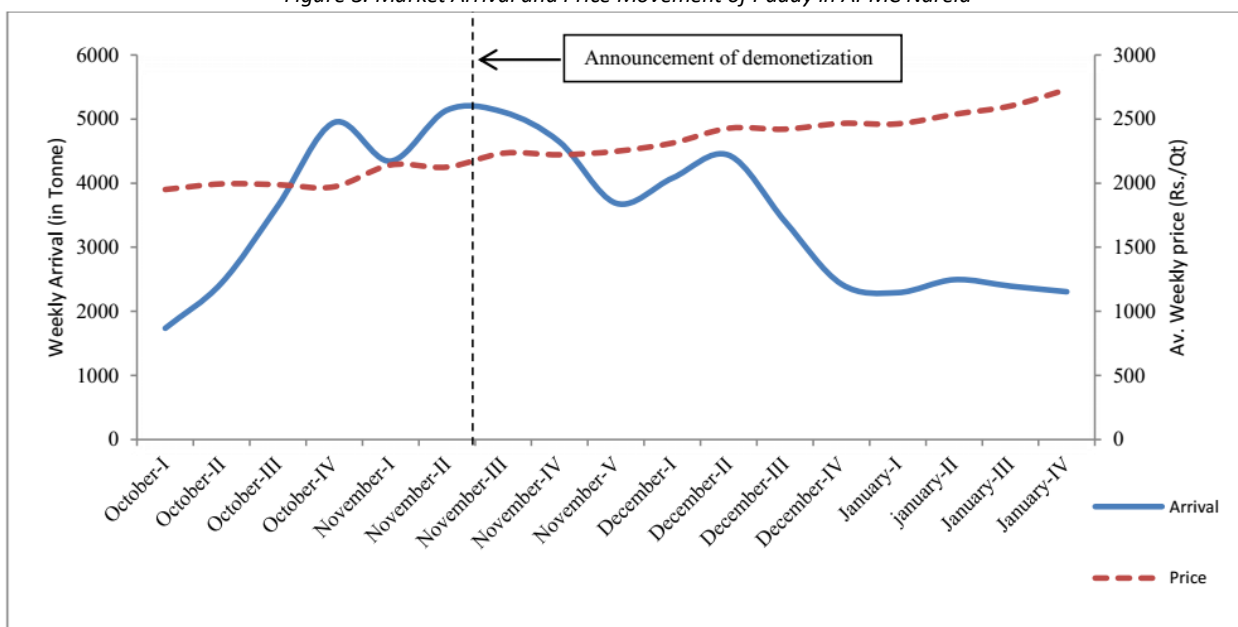
Farmers Category	Sampled Respondents	Affected (%)
Large Farmers	7	0
Medium Farmer	18	27.77
Small Farmer	15	46.66

According to Fertilizer Monitoring System (FMS) in Department of Fertilizers under Ministry of Chemicals, Petrochemicals and Fertilizer, fertilizer sale during the current Rabi season was lower than the fertilizer sale in the corresponding period during 2014-15 and 2015-16 by 7.47 per cent and 7.0 per cent. It was also found in the survey that the unavailability of new denomination currencies in rural areas, non-acceptance of old high denomination currency by private input dealers, distant location of government agro-input agencies were some of the hindrances which farmers have faced in the procurement of inputs. However, use of own seeds and stock of fertilizers, borrowing from the fellow farmers, purchasing on credit from the private traders, purchase of inputs on credit from cooperatives, & credit from the traders for purchase of inputs were some of the commonly followed strategies that helped farmers to manage farming activities in the cash crunch situation. Inability of farmers to use cell phones as a medium of connecting in to the market was one of the major impediment to facilitate farmers.[9]

5.1.3. On sale of agricultural produce

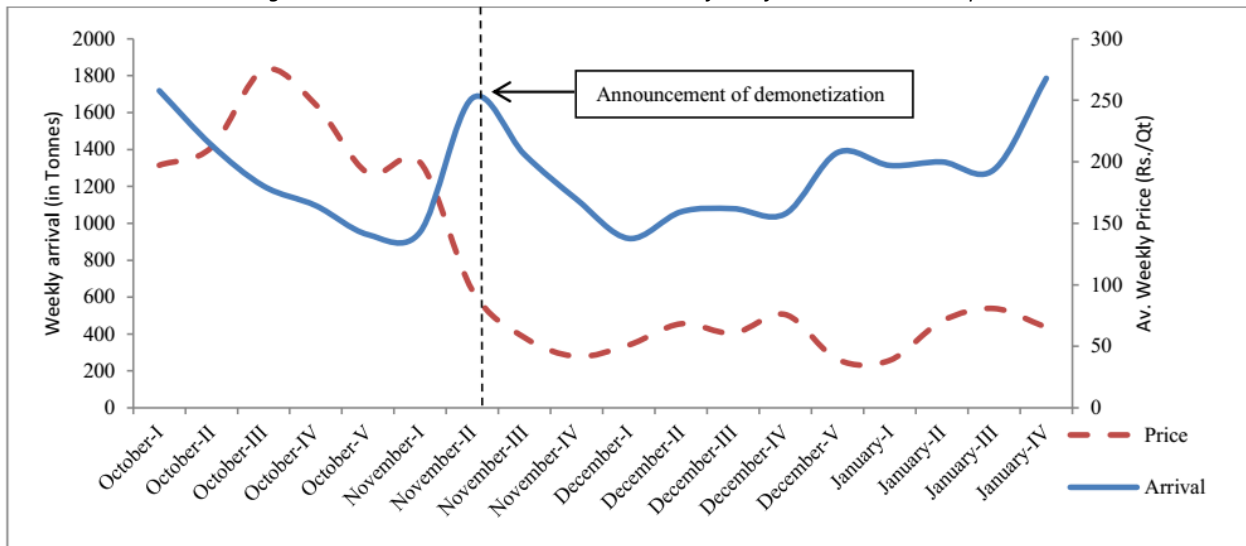
The present study has compiled the data from agmarknet website on arrival and price of cereals (Paddy), vegetables (cauliflower) and fruits (apple and oranges) in APMC Narela & Azadpur, New Delhi to analyse the effect on the trading activities of farmers and traders in the major markets of Delhi. The result shows that there was no effect of demonetization on the price of paddy. The price of paddy has followed an increasing trend even after the demonetization. The similar results were also reported in their study. However, the arrival in the market has slumped down after the second week of November i.e. with the announcement of demonetization in the country Figure 3. However, the perishables like fruits and vegetable’s price and arrival have dropped post demonetization. The wholesale price of vegetable (cauliflower) and fruits (apple & oranges) has declined is shown in Figure 4, 5 & 6 resulted in the loss of income to the cultivators. But the demonetization alone can’t be blamed for declining prices of the perishables as the good monsoon this year has pushed up supply this year which is also an important reason for declining price. It is difficult to ascertain how much fall in prices of perishables during the month of November & December 2016 was due to a glut in arrival and how much could be due to any disruption due to demonetization.

Figure 3. Market Arrival and Price Movement of Paddy in APMC Narela



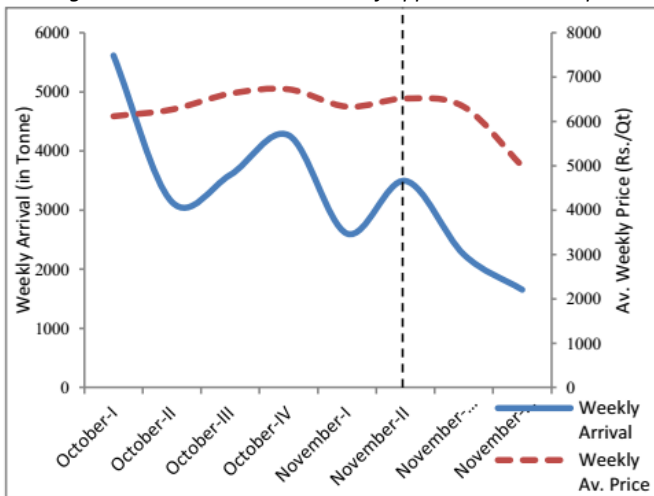
Source: agmarknet.nic.in[6]

Figure 4. Market Arrival and Price Movement of cauliflower in APMC Azadpur



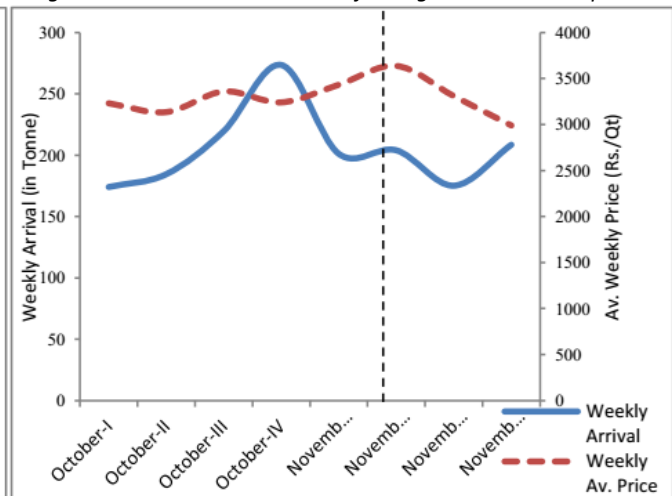
Source: agmarknet.nic.in [7]

Figure 5. Market Arrival & Price of Apple in APMC Azadpur



Source: agmarknet.nic.in[8]

Figure 6. Market Arrival & Price of Oranges in APMC Azadpur



Source: agmarknet.nic.in

The response of farmers shows that the small and marginal farmers were most affected again as far as the sale of agricultural produce is concerned and the large farmers were least affected in our study Table 6.

Table 6. Percentage of farmers whose sale of agricultural produce affected post demonetization

Farmers Category	Sampled Respondents	Affected (%)
Large Farmers	7	71.42
Medium Farmer	18	100
Small Farmer	15	100

The farmers have reported that they have faced the problems like delayed payment for produce, payment in parts, absence of aggregators in the village for a while, the absence of transportation, bumper harvest and unavailability of adequate storage infrastructure. The prices in consumer markets are higher, but in villages there are no buyers for the harvested crop. Inventories of commodities are piling up due to lack of buyers in the village market^[3]. Incidence of delay in payment to the producers in the market was also reported^[4]. However, they have managed the situation by retaining the non-perishable produce and delayed sale, sold perishables at a lower price, accepted payment in cheque, and sold perishables at debit, accepted half payment on the spot and remaining later to minimise their losses in the cash crunch period due to demonetization.

6. Impact of activities of traders

The wholesalers and retailer constitute the indispensable part of most of the agricultural supply chain. They act as the connecting link between producers and consumers and are closely interwoven with both the ends of the supply chain. Even a minute changes in the activities at any of the extreme of the supply chain are transmitted to another end by the help of them. And on the other side, they have the potential to affect both the extremes by their activities. The recent economic big bang has affected all the class of economic agents in the economy and none of them remains intact from its effect. To analyse the effect on trading activities of traders (wholesalers & retailers) in agricultural markets (APMC Azadpur, APMC Narela & local retail markets) a convenient sample of 40 traders have been drawn. The processors are excluded from the study because of the fact that they possess the liberty to escape from the effect of demonetization in terms of stalling their trading activities due to the maintenance of inventories in their warehouses. The study shows that trading activity of 80 percent of the wholesalers in the sample was affected which is 6.66 per cent higher than the retailers. However, further analysis of data suggested that traders dealing in perishables like fruits and vegetables were more affected than the traders in grain market Table 7.

Table 7. Percentage of traders affected in Fruits &Vegetable and grain markets

	Wholesaler	Retailer	Total
Fruits &Vegetables	70	100	85
Grain	100	20	60
Total	80	73.33	76.66

Further analysis shows that almost all the wholesalers in grain markets were affected while 70 percent of the wholesalers affected in the fruits and vegetable market. Contrary to this, almost all the retailers dealing in perishables were affected while only 20 percent of the retailers in the grain markets were affected due to the decision of the government on demonetization. Enquiry on the nature of problems of traders indicate that lesser supplies in market as compare to pre demonetization week, payment of labors in cash in the market, limited weekly withdrawal limits from the bank and delay in arrival of produce in the market were few of the major reasons which have hampered the trade in agricultural commodities for short time post demonetization. It not only slowed down the trade in agriculture for a short time but also forcefully reduced the scale of operations. It was also reported that the limited cash in circulation, post demonetization was the major reason for payment in part, delayed payment and payment in a cheque to the farmers for their produce. Even if the producers received the cheque for the produce sold, they were unable to encash it easily.

7. Impact on consumption activities

To understand the impact of demonetization on consumption activities, four different income groups per month were selected from the vicinity. These income groups were classified into four classes namely A (Rs. 5000-10000), B (Rs. 10001-20000), C (Rs. 20001-40000) and D (Rs. 40001 and above per month). The study shows that the consumption of lower income class (i.e. A, B & C) was severely affected post demonetization as compared to the high-income class (D) Table 8.

Table 8. Percentage of affected consumers under each class post demonetization

INCOME GROUPS	Sampled Respondents	Affected (%)
A (Rs. 5000-10000)	10	100
B (Rs.10001-20000)	5	100
C (Rs. 20001-40000)	5	100
D (\geq Rs. 40001)	20	20

Total 60 percent of the consumers have reported that they have cut some of the luxury items (fish, chicken, fruits etc.) from their consumption initially after the announcement of decision Figure 7. While out of the affected consumers 41, 21, 21 and 17 percent belongs to class A, B, C & D respectively Figure 8. However, 25 percent of unaffected consumers reported that they were using e-payment gateways to purchase the groceries even before the

advent of demonetization. The study also reveals that consumers have followed one or other mode of payment to smoothen their consumption to deal with the liquidity problem. 16 per cent consumers used cash and 12 percent have delayed payment to the vendors. These include mostly A, B and C income class of consumers. While, 36 percent consumers in our sample followed e-payment gateway or more than any of the two methods of payment for each Figure 9.

Figure 7. Effect of demonetization on consumption

Figure 8. Percentage of affected in each income class

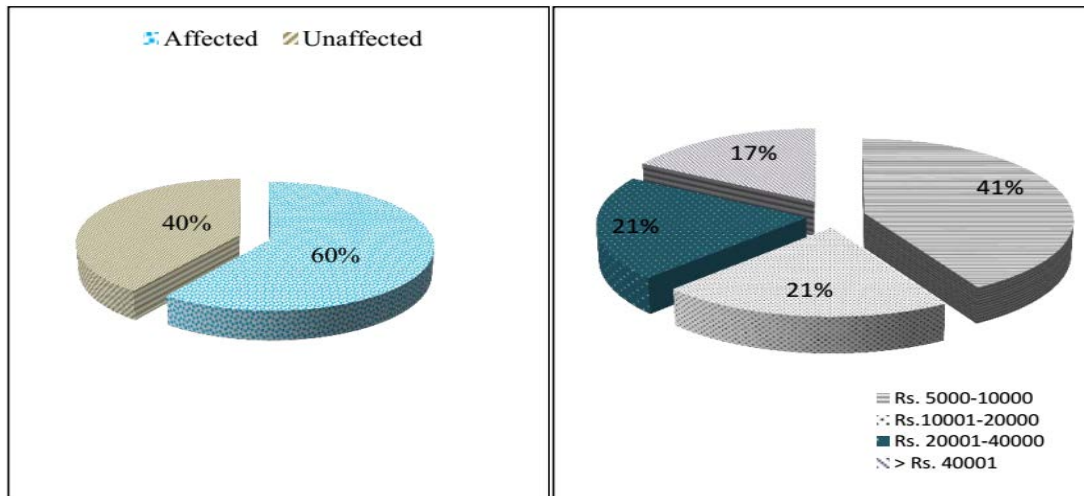
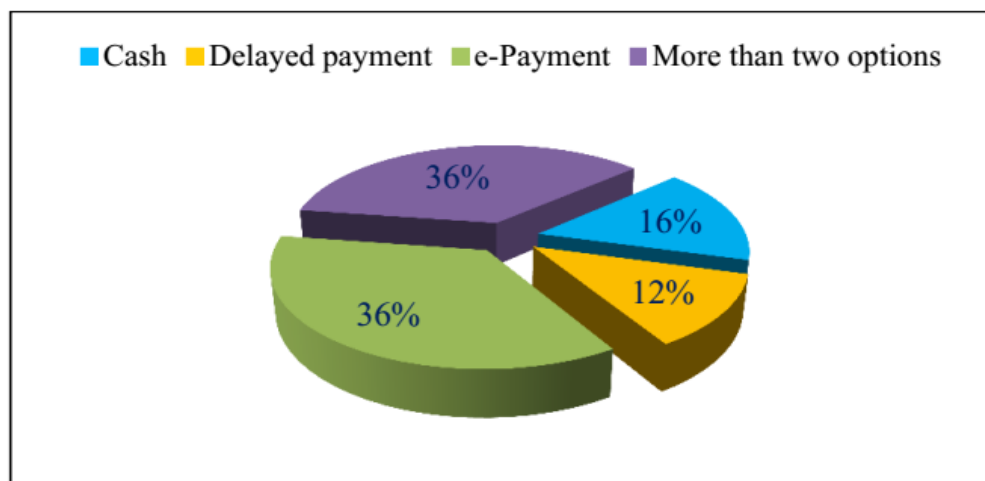


Figure 9. Mode of payment by consumers in demonetization spell



8. Provisions of government to reduce adverse impact on farming

The central authority was aware of the consequences of its decision to demonetize the higher denomination currencies on farming as the timing of decision coincided with active agricultural operations of sowing and selling. Thus, to prevent all the impediments on the way to impact farmers adversely it has taken a soft decision by providing certain provisions exclusively for the farmers. Those provisions were-

- Use of old denomination high currency for purchase of agricultural inputs from government agencies,
- All APMCs and Milk Cooperatives were directed to transfer the payment in accounts of the farmer
- All Milk Cooperatives were also directed to open the bank account of all the farmers who doesn't have bank account
- Consumer affair ministry also went all out to procure pulses from farmers and govt. also assured farmers to buy any quantity of pulses at minimum point.
- NABARD was directed to disburse Rs. 21,000 crore to cash-starved farmers, helping them to sow winter crops like Wheat.
- Traders were allowed to withdraw Rs. 50000 per week from their KYC linked current account.

All the provisions would have helped the farming communities to reduce the impact on farming. However, distant location of government input agencies like SAU's, Dept. of Agriculture, KVK etc., insufficient penetration of formal credit institutions and inadequacy of cash in most of the rural bank branches were a major impediment for the farmers in our study to avail these provisions.

9. Limitations of the study

Though the present study highlights some of the important issues regarding agriculture during the demonetization, it is not free from some of its inherent limitations which are-

- a) Limited sample size,
- b) Data from processors is excluded,
- c) Other sectors of economy like industries and service sectors were not included despite the fact that they have greater share in GDP than agriculture,
- d) Valuation of cost and benefits of demonetization is missing,
- e) The present study is only of preliminary in nature and can't be generalised for the overall agricultural sector.

10. Conclusion

The action of the Indian government to eradicate the four social problems- black money, corruption, counterfeiting and terrorist funding was a very bold move but it definitely affected the many parts of the economy and in particular the agriculture. Among the farmers, small farmers were worst hit by this big bang experiment while in grain markets wholesalers and in fruits and vegetable markets retailers were most affected categories. The low-income strata of society and those who did not use any online purchase options were most affected by demonetization. Despite the fact that the demonetization has affected almost all economic agent in one or other way but they feel that the situation is returning to normal now. However, the government has provided support to the farmers to use the old denomination currency for purchase of agricultural inputs so that their operation may not get affected but inadequate spread and small network of government input agencies and insufficient penetration of formal credit institutions and inadequacy of cash in most of the rural bank branches were some of the pitfalls of the government that has affected the agriculture.

However, the level of production and productivity and monsoon in 2016-17 was recorded higher than 2015-16. At the end of February, the markets have shown the sign of revival and most of the stakeholders in our study (i.e. farmers, traders and consumers) have also felt that the system has shown resilient capacity and regaining its normalcy. Though many of the operations linked to agriculture have affected in short term, but the macroeconomic picture of agriculture doesn't show any slump in growth. But, it would be too early to say about the long-term impact of demonetization on agriculture as the production and yield data on Rabi crops is yet to appear. However, in short run, there is no significant impact of demonetization on farming as the markets and farming operations showing the sign of recovery.

11. Acknowledgement

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