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Impact of Demonetization on Financial Inclusion in Rural Locals in India

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Abstract: The paper studies the impact of a major policy announcement of demonetization of 2016 banning the Rs. 500 and Rs. 1000 currency notes on the rural population in the Lucknow district of Uttar Pradesh state, which is also Asia's largest district. The study argues that although the demonetization has led to a reduction in the cash on hand for people but the segment of the population who could easily access the banking facilities and could shift to cash less transaction might have to bear lesser cost of demonetization than those who did not have access to formal banking system. The study examines and compares the impact of demonetization between two different segments of rural population, one who is financially inclusive and the other not inclusive. Both supply and demand side of the status of financial inclusion is considered for creating the population segments. The impact of demonetization is measured in the form of cost of exchanges and loss of income and consumption variables. The study did not find any significant differences in the impact of demonetization on the two different segment of the population.

Keywords: Demonetization, Digital Economy, Financial Inclusion.

I. INTRODUCTION

On 8th November 2016, India witnessed a major policy announcement of demonetization of Rs.500 and Rs.1000 currency notes. Such measures, while quite attractive from the political- economic perspective, raise an important question regarding their efficacy as far as the real economic activity is concerned. Many quick estimates and analysis were made available at that time discussing the impact of demonetization on various sectors and sections of the society. These currency denominations comprised of 86 percent of all the cash in circulation (a significant component of narrow money M1) in the economy. Withdrawal of such high amount of cash obviously led to shortage of cash in hand, but not the supply of broad money. Those who can exchange the old notes without much of the monetary and non-monetary cost due to access of wider banking facility and shift to cash-less transaction without much of a hassle would have to bear less cost of demonetization than the one who could not.

According to the Reserve Bank of India (RBI) data, about 38 percent of bank branches were located in rural areas in August 2016. This is certainly a matter of greater concern in the context of demonetization, since more than two-thirds of the population lives or earns livelihood from the rural sector. Moreover, people of India also have high preference for cash transaction. Data suggest that cash transactions account for 98 per cent of the total volume and 68 per cent of the total value of consumer payments in India (PWC, 2015). The rural population predominantly engaged in agriculture and informal sector would have even higher preference of cash transaction. These critical points might have made the rural people more vulnerable to the policy announcement of demonetization.

It is in this context, after around a year of the decision, when the initial euphoria got over, we felt the need to examine how this rural population would have been affected due to demonetization. The following questions emerge: Did banking infrastructure provide enough facility to rural people at the time of demonetization? Did people of rural India avail the benefits of this infrastructure for their monetary transactions? What was the monetary and non- monetary impact on the lives of these people? Was there any significant difference in the impact across the group of people who had benefited and not benefited from the process of financial inclusion?

The paper is divided in four sections. Section I discusses the theoretical framework in the context of India's demonetization, section II provides details on the methodology, section III discusses the status of financial inclusion in Lucknow district, section IV provides the analysis of impact of demonetization in context of financial inclusion and section V gives policy recommendations and conclusion.

Section I Theoretical framework

Studying the impact of demonetization on the rural economy is particularly of interest because of the issue of financial inclusion of this large population that lives and works in the rural areas. The Pradhan Mantri Jan Dhan Yojana (PMJDY), initiated in 2014, achieved the target of opening of around 15.75 crores new bank account by November 2016 in the rural and semi- urban regions to provide financial services at an affordable cost to the large section of the poor and low income groups (Govt of India, Ministry of Finance, PMJDY, 2016). This was accompanied with strong supply side measures by the RBI to promote banking facilities in the rural area as a part of its 'Rationalization of Branch Authorization Policy 2016'. These two strategic policy measures should have provided an easy access to cash-less transactions to the rural population at the time of demonetization. However, the other side of the coin is that about 91 per cent of the banking outlets in villages were covered through banking correspondents and only 8.5 percent of the villages had real brick-and-mortar bank branches. (RBI, 2017). As per the report of the Committee on Medium-term Path on Financial Inclusion 2015, the number of branches per 100,000 of population in the rural and semi-urban areas is still less than half of that in urban and metropolitan areas.

The 2016 demonetization attempt was not for the first time in India. Similar decisions were taken on two occasions earlier – in 1946 and 1978. The 1978 demonetization involved withdrawal of currency notes of Rs 1000, 5000 and 10,000. The total value of such currency only accounted for ten per cent of the total currency in circulation, against Rs. 500 and Rs. 1000 which consisted of 86 percent in 2016. According to the RBI, back in 1978, there were Rs. 8,800 crore worth of notes in circulation and this figure stood at Rs. 16.4 lakh crore few month before the demonetization of 2016 (Nair Smita, 2016). This is an indicator of how complex and intense can be the impact of demonetization particularly when not much alternative mode of payments are prevalent in rural economy. Not much literature is available on the impact of demonetization of 1978, may be due to the fact that the possibility of common man holding such high denomination currency notes was almost nil unlike the case of 2016. On the other hand, the demonetization of 2016 became highly debated issue due to two reasons (i) it came as a sudden shock and (ii) citizens were not given sufficient time to exchange the old notes. Many researchers and policy makers immediately reacted with their thoughts on the possible impact of demonetization in the forms of blogs, articles, commentaries etc. Many national and international agencies, including the IMF and the RBI studied the economic impact of demonetization, estimated the GDP growth rate in the short run and long run after demonetization. However, these studies were largely carried out at the macro level.

There are few studies that provide the theoretical framework for analyzing the impact of demonetization on a specific segment of the society or on specific economic variables. These studies revolve around basic argument of change in the specific component of M1, i.e.cash, in circulation and its impact on economic transactions. According to Ajay Shah (2016), "Money is the lubricant of the market economy. It is how payments are made. When money is disrupted, the working of the market economy is disrupted." He argues that people focusing more on the real economic variables usually underrate the role of money and finance. Further, he also argues that the group of people who can adopt cash-less transaction would not be affected much but the section of the society that relies mainly on the cash for their transactions would suffer from lack of cash and would not be able to carry out transactions smoothly. Firms suffer from lack of demand and lack of credit facility and thus the production would suffer. Based on this argument he concludes that "money is a veil, but when the veil flutters, real output sputters". Arun Kumar (2017) discusses the possible consequences of demonetization in the context of economic structure of organized versus unorganized sectors and black money versus white money. He rewrites the classical economists' quantity theory of money equation segregating the variables as organized and unorganized sectors: Mu.Vu + Mo.Vo = Pu.Tu + Po.To. (u stands for the unorganized sectors and o for the organized sectors). According to him, the implication of a decline in both M and V is that P and T also has to fall. In case of demonetization, since P has not fallen (wholesale and retail prices were still rising during that time), it is T that has contracted. T translates into incomes so there is a corresponding fall in production and incomes. Assuming that organized sector would have access to formal banking facilities can make cashless transactions feasible. However, the unorganized sector, the one that could not shift from a cash to alternative modes of payment, i.e. cheque or debit/credit card or a digital money, would have suffered higher reduction in T. A similar argument is made by Waknis (2017) using the macroeconomic theory of essentiality of money and the segmented markets model. The paper explains how the policy decision of demonetization affects the organized and unorganized sectors of the Indian economy. It is a theoretical perspective and provides derivations for the possible impact of demonetization on two different sets of market, one with excess to formal financial market facilities; and the other not connected with the formal financial markets, but managing the financial transactions through cash. The paper concludes that the segment of the economy which is well connected with banking sector is not affected much, but the segment without the access to financial institutions had a greater impact on consumption, expenditure, income and employment.

A major lacuna among all the articles published immediately post demonization was that they could not incorporate empirical analysis due to the insufficient evidence in this direction. The current research work attempts to fill this gap, with the help of empirical data collected after one year of the event. The aim is to measure the impact of demonetization in the rural areas, in the backdrop of financial inclusion in terms of both demand and supply side.

Section II Methodology

The study selected the largest district of India, Lucknow, for surveying the household. It is located in Uttar Pradesh state and covers 23.27 percent of total geographical area of the state and has

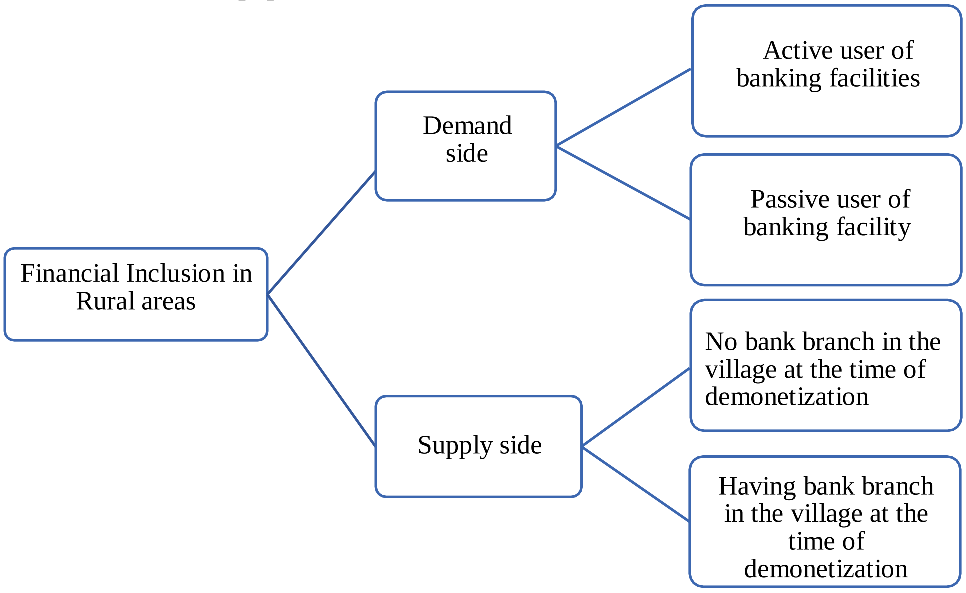
65.18 percent of total district population living in rural areas. (Census 2011). There are total 10 taluks/block and 949 villages in the district. The density of population is significantly low at 46 persons per sq.km. as against the state average of 308 persons per sq.km.

For the current study, two taluks namely, Rapar and Mundra were selected considering the diversity among them in terms of their economic activities, geographical location and banking penetration. From the supply side of financial inclusion, as per 2011 census, 12.7 per cent and 6.27 per cent of the villages had banking facilities in Mundra and Rapar respectively. Only five villages in Mundra and Rapar taluka (with one village – Chitrod, having only bank counter in Rapar taluka) had bank branch at the time of demonetization. Five banked villages and five unbanked villages were selected for the sample survey (unbanked villages were selected based on the size of the population more than 3000 population as per census 2011). The analysis is based on a sample of 449 households, as well as the information regarding impact of demonetization, status of financial inclusion, and availability of financial services in the villages gathered from the office of village panchayat, the head of APMC market, village dairy co-operative societies, etc.

Financial inclusion is a process of ensuring access to financial services, including timely and adequate credit where needed by the vulnerable groups such as weaker sections and low income groups at an affordable cost. (C Rangarajan, 2008)

In addition to ensuring availability and accessibility of financial services experts have also emphasized on effective use of such services, referring to the demand side of financial inclusion. The Rangarajan Committee notes that financial exclusion is also caused by demand side issues. Unless some initiatives are taken on the demand side, or in the "real sectors", mere supply side solutions from the financial sector cannot work. Financial Inclusion is also about greater financial literacy and consumer protection so that those who are offered the products can make appropriate choices" (Raghuram Rajan, 2016) . Merely giving access to financial services does not always result in the use of such services (Beck et. al. 2007). It is equally important to emphasize the effective use of banking facilities along with providing access to such facilities. Thus, both demand and supply side of financial inclusion is considered important.

Chart 1 Classification of rural population based on status of financial inclusion



For our study the two segments of the sample have been created: one, which is inclusive, and the other, which is exclusive of formal banking facility. The impact of demonetization has been examined for both these segments. (Chart 1) For creating these segments, both supply side and demand side approaches have been adopted. Supply side refers to the presence or the absence of bank branches – brick and mortar – in the village, while demand side refers to the active or the passive use of banking facility.

The active and passive users are classified based on the number of banking facilities used by the household from the list provided[1]. The households who frequently use at least three services from the list are classified as active users, otherwise as passive users. The logic followed here is that merely using one or two facilities out of those listed would not have provided enough ease of managing cashless transactions particularly in the hustle and bustle of cash shortage at the time of demonetization.

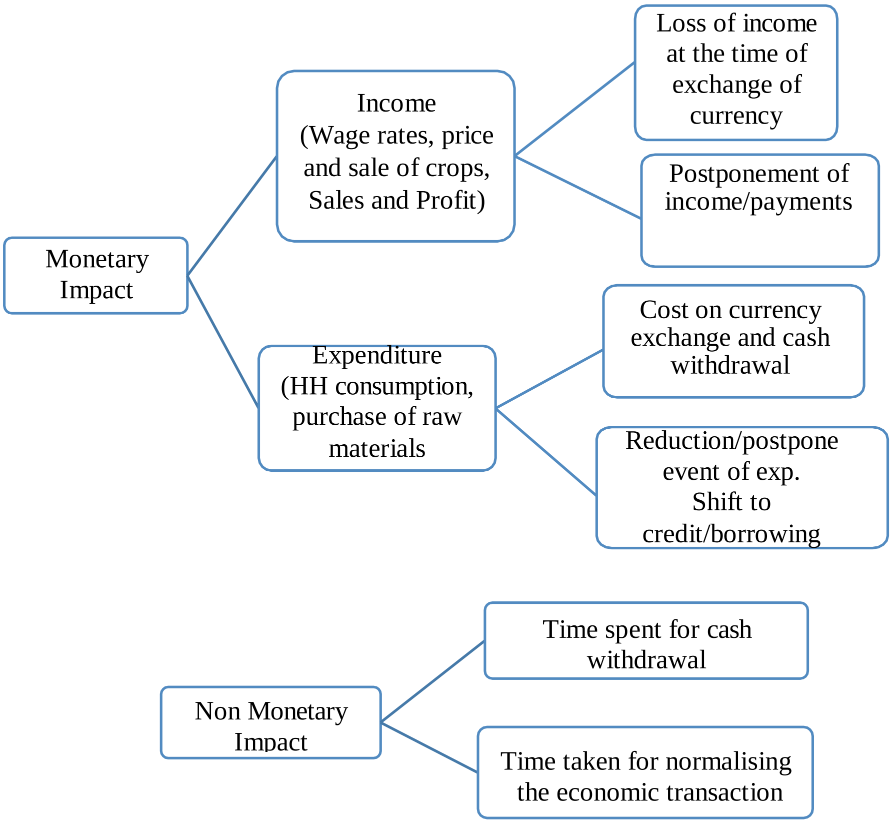
Measuring the impact of demonetization

The impact of demonetization is measured in terms of both monetary and non-monetary (mainly time). The monetary impact is captured by two obvious economic variables of economic transaction - consumption and income. The non-monetary costs mainly include the time value. The details of the variables studied for monetary and non-monetary impact are provided below.

[1] The list includes ten banking facilities that any bank account holder can use. These are (i) to avail the benefits of govt schemes under direct benefit transfer, (ii) Receiving and making payments, (iii) saving and depositing money, (iv) borrowing,

(v) use of cheque, (vi) ATM, (vii) Debit Card, (viii) Credit Card, (ix) Mobile Banking and (x) Online Banking.

Chart 2 Monetary and Non-monetary Variables



The diversity and complexities of economic activities in rural areas make it difficult to measure the impact of demonetization directly for all monetary variables through an empirical study. Hence, the three point rating scale is used to capture the responses ranging from no impact at all, moderate impact and extremely high impact for some relevant information.

Hypothesis: The impact of demonetization on the group of people who had access to formal banking system is lower as compared to the one who did not have access to banking facility.

Section III Status of financial inclusion in Lucknow district

Mundra is a relatively more industrialized area and has witnessed growth in terms of investment, infrastructure development and port related activities. It has 77.4 percent literacy rate which was higher than the district average of 70.6 percent while Rapar is a backward taluka with the lowest literacy rate of 54.8 percent. There are total 97 villages in Rapar and 62 villages in Mundra. As per the 2011 census, in Lucknow, 61.51 percent of rural households were availing banking facilities. While in Rapar taluka, 27.46 percent and in Mundra taluk 61.51 percent of the rural households were availing banking facility. The credit to deposit ratio of Lucknow district remained below 40 percent (150th SLBC, Gujarat, June 2016).

As per our survey, 55.7 percent households reported having bank branch in the village while 44.3 percent households did not have. Although the branch penetration of the banks is poor, around 91 percent of the households reported at least one family member holding a bank account. Out of this, 86.5 percent households opened bank account before demonetization while only 13.5 percent opened bank account after demonetization. So exchanging the old currency notes and shifting from cash to cash-less transaction particularly at the time of demonetization should not be extremely painful at least for these 86.5 percent households. However it is also important to note that 42 percent of these bank account holders reside in unbanked villages and the average distance from home to the bank branch for these households is 23 km. Such a long distance is certainly a matter of concern for those who did not have bank branch in their own village as they have to travel and spend a lot of time as well as money for the exchange of notes and managing cash-less transactions. As per the RBI efforts towards financial inclusion, the unbanked villages have been provided with banking correspondents (Bank Mitra) to carry out banking transactions. However, during our study it was found that only 20 percent of the households were aware of the banking correspondent in the village and merely 8.5 percentages have ever availed banking correspondent services in any form.

It is being increasingly recognized that addressing financial inclusion requires a holistic approach addressing both supply and demand side aspects (Dev, Mahendra S 2006). So far we only looked at the profile of the rural household from the supply side of banking facilities. But having banking facility and holding bank account do not ensure active and frequent use of banking facilities. This is also evident from the fact that there is an increase in the number of bank accounts while there is a slow increase in bank deposits (Nair, 2014). Our survey revealed that many of the respondents were unaware of the names of their bank and the branch despite of having a bank account. Someone who holds the bank account but not using it regularly might also suffer more than the one who is actively using banking faculties. Based on the responses of the surveyed households, it was found that although 91 percentages of the households had bank accounts, only 43 percent used it for saving and depositing money. 65 percentages of these respondents were either employees or businessmen and entrepreneurs. Most of the households were not aware of facilities like demand draft, mobile banking or online banking. Although, 66 percent households possessed a smart phone, very few households were comfortable using mobile banking.

Table 1: Responses for banking facilities Usage (%)

Banking Facility and Instrument	Frequency Respondents* (%)
Avail benefits of govt. schemes	17
Receiving and making payment	36
Saving and depositing money	43.2
Borrowing	20
Cheque	35.1
ATM	32.7
Demand Draft	3.9
Debit card	15.7
Credit card	7.6
Mobile Banking	8.1
Online Banking	6.9

Source: Calculation based on the survey data (September-October 2017)

Note: *The responses are considered out of the number of household having bank account

As discussed in the methodology the respondents have been classified as active and passive users of banking facilities. Only 30 percent of the respondents have been using minimum three of the above listed (in table 1) services whereas 70 percent of the respondents are using only two or even less than that. Out of these 70 percent, 11 percent do not have bank account whereas other 89 percent have bank account but not using it effectively. Out of total respondents, almost 32 percent are such that they do hold bank account but have not availed even single banking facilities before demonetization.

Table 2: Test of Independence Income and Type of Banking Facility User

Type of user	Percentage of household (%)	Average monthly income (in Rs.)
Active	30	30290*
Passive	70	17559*

* Significant at 1 %

A significant difference in the average monthly income across active and passive banking facilities users was also observed, which indicated existence of a strong association between income levels and the use of banking facilities (T statistics 4.062, SE 31231.150). The literature has been suggesting that one of the prime reasons for demand side of financial exclusion is low income level. The results support this argument that low financial literacy, low income level and inadequate awareness have significant association with usage of financial facilities (Chithra and Selvam 2013, Christabell and Vimal Raj, 2012, NSS 59th Round, All India Debt and Investment Survey). We also found a strong association between the availability of bank branch and the type of user of banking facilities. This is examined through the Chi-square test between the two variables (table 3)

Table 3: Test of Association Banking Facility – Availability and Usage

	Active Users	Passive Users
No Banking Facility	17 %	83 %
Banking Facility	26 %	74 %
Chi-square = 4.7		P value = .03

Source: Calculation based on the survey data

In each taluka, only five villages had banking facility at the time of demonetization and only 30 percent of the households were actively using various banking facilities. In this environment it is imperative to observe whether there is any significant difference in the impact of demonetization among the people who had banking facility in the village and the people who did not have.

Section IV Impact of demonetization Cost of exchange

In this section we examine the monetary and non-monetary impact of demonetization. It was observed from the collected data that almost 62 percent of the respondents exchanged and 16.5 percent deposited old currency notes in banks with the average value being approximately Rs. 30000 and Rs. 61000 respectively. Those who did not exchange/deposit reported not possessing Rs. 500 and Rs. 1000 currency notes as a prime reason (60 percent) for not exchanging the old notes. Interestingly, there are around 4 percent of the respondents who did not have a bank account and still managed to exchange or deposit old currency notes in the bank. Around 29 per cent of those who deposited old currency reported the amount Rs. 100,000 and above, whereas merely seven per cent of those who exchanged the notes reported the amount Rs. 100,000 or more. 50 per cent of those who participated in exchanging/depositing the currency notes reported the amount below Rs. 15,000. Although the underreporting of the actual amount exchanged/deposited may certainly not be denied.

A skewed distribution in case of income loss while standing in the queue at the time of demonization was also observed. More than half of the households who stood in the queue for exchange or depositing the currency reported that they suffered loss of income. The average income loss is estimated around Rs. 9669, but only 15 households reported the loss of income more than Rs. 20,000 which is equivalent to the monthly income of the household from primary occupation.

Table 4: Demonetization Experience: Exchange of Old Notes

Particular	**Responses (%)**
Percentage of household exchanged notes	62
Percentage of household deposited old notes	16.5
Average amount exchanged during demonetization	Rs. 34680
An average days spent in the queue for exchange of notes	7.2
An average hours spent per day while standing in the queue	4.9
Percentage of household reported loss of income while exchanging notes (52 % of those who exchanged/deposited old notes)	37
Amount of income lost while standing in the queue	Rs. 9669

Source: Based on the survey data (September-October 2017)

As suggested by the past literature, the access to formal banking system would possibly have the lower impact of demonetization on the group of people compared to the one who would not have access to banking facility. Availability of a bank branch in the village and actively using the banking facilities are the two important indicators that were included in the survey to identify financial inclusivity of the population. The test of independence is run for four variables, (i) the number of days' employment lost for exchange of notes, (ii) number of hours lost per day and (iii) income loss and (iv) number of months taken to normalize the economic activities. This is viewed against the amount of money exchanged or deposited.

The results provided in table 4 indicate that the amount of currency notes exchanged is higher for the financially included group as compared to the excluded group, although it is statistically different only in case of demand side classification i.e. active and passive users of banking facilities. The income lost on account of waiting in the queue for currency exchange is also higher for the group that is financially inclusive as compared to the group that is not financially inclusive. Both these variables would obviously be strongly linked with the income of these groups, however, that is not the issue this study is trying to address. What is important to observe here is that although the amount of money exchanged and the income lost is less for the excluded group, there is no difference in the number of days lost while standing in the queue and more importantly the number of hours spent in the queue is higher for the financially non-inclusive group for both demand and supply side. Also it is observed that the proportion of respondents reported the loss of income, is significantly higher for the households without banking facility than the household with banking facilities although the amount is lower. Out of those who did not have banking facilities almost 62 percent of the respondents reported loss of income vis-a-vis 44 percent who reported loss with banking facility in the village. This association is also found statistically significant through the Chi-squired test ($\chi2$ (1) = 3.24, P< 0.10).

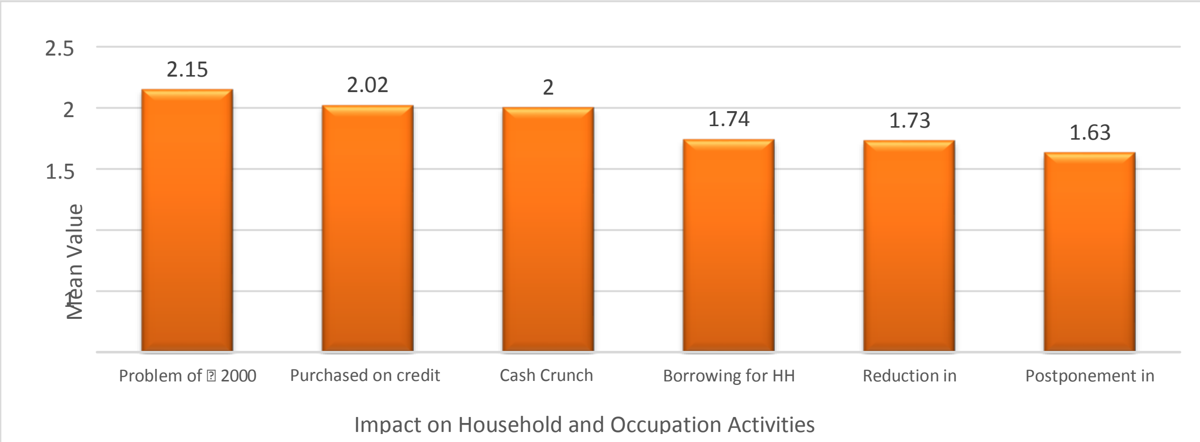
Table 5: Test of Independence Cost of Demonetization and Financial Inclusion (supply & demand)

Particular	Mean Values			
	Financial Inclusion Supply Side		**Financial Inclusion Demand Side**	
	Banked Village	Unbanked Village	Active User	Passive User
Amount of currency exchanged	Rs. 37,012	Rs. 31,732	Rs. $44,569^{**}$	Rs. $31,774^{**}$
No. of days lost while standing in queue	7	7.23	7.27	7
Hours spent per day	4.18^{*}	5.9^{*}	3.95^{*}	5.2^{*}
Amount of income lost while standing in queue	Rs. 11,000	Rs. 8321	Rs. 13712	Rs. 8581
No. of months taken for normalizing the economic activities	3.3^{**}	3.7^{**}	3.82	3.43

Source: Calculation based on the survey data

* Significant at 5 %, ** Significant at 10 %Graph 1 provides the responses that measure the extent to which demonetization had an impact on the household consumption. The mean value is estimated by the three point rating scales, mentioned above. The graph clearly indicates that the impact of demonetization was felt in three areas (i) getting the change of □ 2000 notes (ii) the households had to shift to credit for making their purchase and (iii) the households experienced shortage of cash for the routine transactions. Social set up and relationship based trust is very strong in rural area and hence although people faced severe shortage of cash, they managed their household purchases through credit system. 65 percent shifted to credit purchases due to which the postponement of consumption was minimal, around 46 percent of the respondents reported that they did not experience reduction in consumption and around 51 percent of the respondents said they did not face any issue of postponement of consumption. While asking for the details of the nature of postponement / decrease in consumption, the list consisted of mostly daily household commodities such as milk, ghee, oil, sugar, and other two prominent items include clothes and mobile recharge. Postponement of consumption also happened in case of commodities like, vehicle, television, and mobile handsets.

Graph 1 Impact of Demonetization on Consumption (Mean Value)



Source: Calculation based on the Survey data

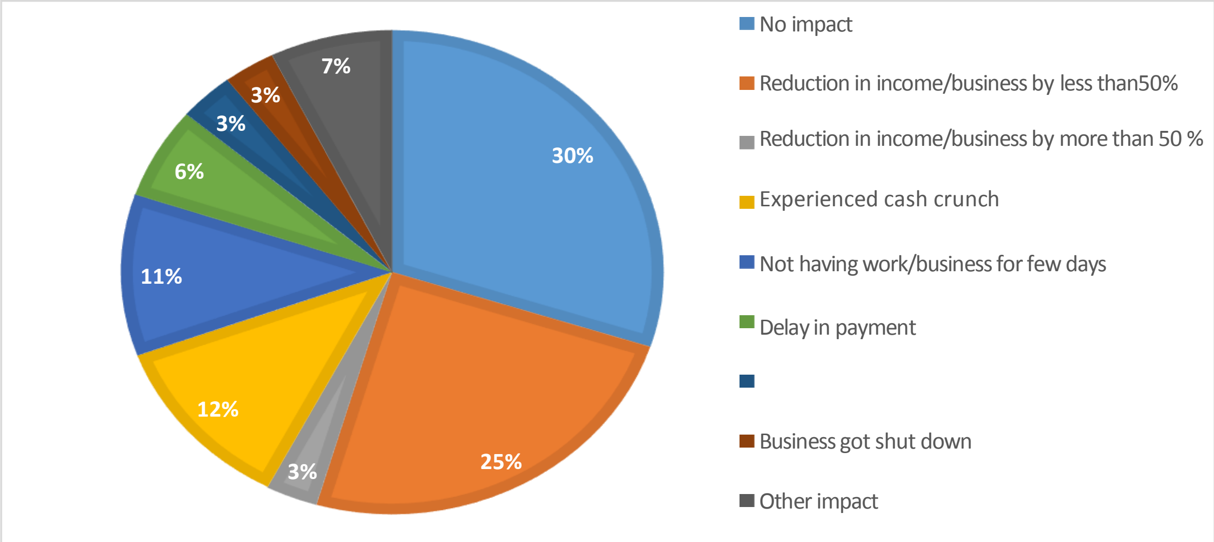
Table 6 provides results of the t-test for examining whether the supply side and demand side of financial exclusion has resulted in higher impact on the household consumption as reported by the respondents in the rural area. Shortage of cash on hand, availing borrowing for managing household expenses and reduction in consumption are the variables that indicate statistically significant difference across the group of people with and without the banking facilities in the village. Whereas considering the demand side factor, the impact in terms of managing household expenses by shifting on credit, postponement of consumption, reduction in consumption and also borrowing money for managing household expenses are significantly higher for passive banking facilities users.

Table 6: Test of independence Impact of Demonetization on Consumption & Financial Inclusion (supply & demand)

Particular	Mean Rating			
	Financial Inclusion Supply Side		Financial Inclusion Demand Side	
	Banked Village	Unbanked Village	Active	Passive
Problem of □ 2000 change	2.13	2.17	2.18	2.14
Make purchases on credit	1.98	2.06	1.9**	2.05**
Cash Crunch	1.91*	2.12*	1.95	2.01
Borrowing for household expenditure	1.66*	1.84*	1.48*	1.81*
Postponement in consumption	1.64	1.62	1.51*	1.66*
Reduction in consumption	1.67*	1.79*	1.56*	1.77*

Source: Calculation based on the Survey data
* Significant at 5 %, ** significant at 10 %

Graph 2: Impact of Demonetization on Occupational Activities Percentage Responses



Source: Calculation based on the survey data (September-October 2017)

Table 7: Impact on Occupational Activities – Test of Association

Impact	Percentage Responses			
	Financial Inclusion Supply Side		Financial Inclusion Demand Side	
	Banked Village	Unbanked Village	Active	Passive
No impact on economic activities	62.2	37.8	25	74.8
Reduction in the income/business by less than 50%	56.7	43.3	23	77
Reduction in income/business by more than 50 %	38.5	61.5	30	70
Experienced cash crunch	56	44	18	82
Not having work/business for few days	34.8	65.2	13	87
Delay in payments	61.5	38.5	31	69
Made purchases on credits	50	50	28.6	71.4
Business got shut down	23	77	15.4	84.6
	χ^2 = 15.503, (df 8) P = 0.05		χ^2 = 7.385, (df 8) P = 0.496	

Source: Calculation based on the survey data (September-October 2017)

It is found that 30 percent of the respondents have realized no impact of demonetization on their occupation and income. 35 percent of these respondents are employees. In fact 66 percent of the total employees reported no impact of demonetization at all. Around 11 percent reported of not getting the work for few days, 50 percent of whom were the agriculture labourers. This set of people actually earned through an activity of standing in the queue for exchange of notes for others but they were shying away from reporting the same. When asked about was there any support available from various organizations with which they were associated, 93 percent responded that the institutions such as banks, APMC, fertilizers trading company, employer organizations, etc. did not provide any kind of support at the time of demonization. Whereas when asked to the APMC officials or bank officials and village Sarpanch they all narrated of how various support system such as bank queues arrangements, help for filling up bank forms, service of online transaction for APMC members, etc. were set up to deal with the problems of exchange of notes or facing cash crunch. Probably these services would have selection bias.

The occupation wise impact of demonetization are provided in the tables 8 below. Each of the segments had different set of experiences and impacts of demonetization due to the nature of their financial transactions. 90 percent of the daily wage earners reported delay in the payment, while 70 percent reported loss of work. However, wage rate reduction was reported only by 27 percent. This may be because of a shift of labour supply from agriculture or construction to standing in the queue to exchange old notes for others. This became an alternative source of income for the daily wage earners. 66 percent of the daily wage earners reported that they were engaged in standing in the queue and earned through that. The rate of exchange was □ 100 for exchange of □ 500 to earning □ 300 for standing in the queue for the entire day. While conducting the test of independence, loss of work and delay in the payment show significant relationship with the banking facility in the village. The test of independence for Demand side could not be conducted as only 3 percent of the daily wage earners are active users.

Table 8: Impact of Demonetization on Daily Wager Earners

Impact	Responses		Test of Independence	
	Percentage Responses	Mean Values	Banked Village	Unbanked Village
Loss of work	70	46 days	28*	61*
Delay in payment	90	33 days	25**	44**
Reduction in wage rates	27	Rs 100	105	100
Had to look for the work elsewhere	22	76	46	99
Advancement of payment	6.8	45	60	38.5
Earned through exchange of notes	66	Not reported		

Source: Calculation based on survey data

* Significant at 5 % ** Significant at 10 %

Table 9: Impact of Demonetization on Farmers

Impact	Percentage Responses	Mean Value			
		Financial Inclusion Supply Side		Financial Inclusion Demand Side	
		Banked Village	Unbanked Village	Active User	Passive User
Crop perished as it could not be sold	51	1.69	1.65	1.72	1.65
Reduction in the crop prices	60	1.93	1.88	1.69**	1.96**
Had to reduce purchase of seeds and fertilizers	64	1.98	2.1	1.79**	2.1**

Source: Calculation based on survey data.

* Significant at 5 % ** Significant at 10 %

Table 10: Impact of Demonetization on Self Employed

Impact	Percentage Responses	Mean Value			
		Financial Inclusion Supply Side		Financial Inclusion Demand Side	
		Banked Village	Unbanked Village	Active User	Passive User
Reduction in the sales turnover	86	2.26	2.3	2.21	2.30
Reduction in the prices of your goods/services	22	1.25	1.38	1.24	1.32
Loss of products	10	1.17	1.11	1.12	1.16
Problems of procurement	3.4	1.06	1.03	1.0	1.07

Source: Calculation based on survey data

* Significant at 5 % ** Significant at 10 %

At the time of demonetization, farmers were engaged in sowing of rabi crop and selling of the kharif crop. In Lucknow, rabi crops mainly include jiru (cumin), chickpea, castor and groundnut, while major Kharif crops include cotton, oilseeds, pulses and millet. A difference in farmers' responses was observed when it came to reporting procurement prices and the reduction therein. The price reduction was dependent upon the market in which the farmers sold their produce. Farmers selling the produce in Rapar APMC did not suffer price reduction as the APMC provided RTGS facility to farmers and also helped them to open a bank account if they did not have one. Farmers cultivating cotton mostly sold it directly to the ginning mill near Rapar, which offered □ 500 less (while the price was around □ 1500 for 40 kg) to those farmers who could not accept the payment though cheque. Farmers who were actively using bank account managed to get the full payment. Oil seeds and guvar gum are other products where farmers experienced reduction in the prices. Around 35 percent of the farmers sold their crops in the local market or outside APMC. They suffered more than the ones who sold their crops in the APMC.

The major problem that farmers faced was in purchase of seeds and fertilizers. Almost 77 percent of the farmers bought seeds and fertilizers from private shops rather than the agro-samiti. Very few shops provided the seeds and fertilizers on credit. It is observed that, reduction in the prices of crops and reduction in the purchase of the seeds and fertilizers for rabi crops was significantly dependent upon the demand side of financial inclusion.

While 60 percent of the farmers reported the price reduction, only 22 percent of the self- employed reported price reduction. Where 64 percent of the farmers reported reduction in the purchase of seeds and fertilizers, only 3.4 percent self-employed reported the problem of procurement. The impact on self-employed and business man is observed to be less severe than that of farmers and daily wage earners. Farmers who could use RTGS and cheque payments were the only one who could buy fertilizers and seeds. Others had to almost wait for two months for the cash crunch to get over. Although 86 percent of the business had an impact in terms of reduction in the sales turnover but the sales got postponed rather than selling the products at a lower price. Most of the shop owners and small businessmen shifted to selling goods and services on credits. Few businessmen/shop owners made use of urban banking facilities while making a business trip to cities like Rajkot, Ahmedabad and Mehsana, instead of exchanging old notes in Rapar itself. Surprisingly there is no significant difference in the impact of demonetization on the business activities across the two segment of financially included and excluded groups.

Section IV Conclusion

The adverse impact of demonetization was not on an extreme. Probably this is so because in rural areas people have lower income levels and mostly have a hand-to-mouth life. Also, they are a more close-knit community as compared to the urban areas. So when it came to maintaining standard of living, they could shift to credit and borrowing to satisfy their daily absolute needs, and the postponable demand was pushed back to the times when the cash crunch was reduced.

It appears that longer-term economic activity, such as agriculture, suffered greater negative impact as compared to shorter-term and organized sector economic activities, such as dairy and businesses – either because such people are entirely outside the banking network or they have cash-less modes of transactions available to them.

Availability of physical infrastructure to support monetary transactions is the single most crucial factor that can lead to success or failure of such policy measures as demonetization and a shift to cash-less economy. Once this is ensured, it is equally important that people start using these facilities actively for all types of transactions. This requires a conscious effort on part of the authorities to reduce cost of using such facilities – both in monetary terms as well as the time involved in carrying out cash-less transaction.

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