

Hurdles in Metamorphosing India's Economy to a Cashless Economy

(A Case Study of Sagar City in Madhya Pradesh)

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Abstract

Demonetization is considered as a first biggest and successful step to transform India into a cashless economy. The premier object to transform India into a cashless economy is to curb the corruption and menace of black money from the country, to reduce the cost of making and handling paper money, terrorist activities and cutting of trees for printing notes, and also to bring more transparency in every sector of Indian economy. The prevalent Modi Government is making all possible efforts to transform India into cashless or digitalized economy. During demonetization the government even encouraged people to use many electronic payment methods rather than cash to reduce the use of physical cash and the people may be accustomed with the use of various electronic payments. Hence, this paper is an attempt to study the various problems faced by the people during demonetization and the need to transform India into a Cashless economy. It also discusses the various electronic payment methods used by the people, the frequency of using these methods during demonetization and after the expiration of it and also to examine the reasons of changing habits in using electronic modes of payments. Apart from that this paper also focuses on the various challenges or hurdles that India is facing in transforming itself into a Cashless Economy.

Keywords: *Cashless Economy, Demonetization, E-Wallets, Plastic Cards, Net Banking, Fisher's Exact Test*

I. Introduction

There were days when people were accumulating paper currencies in their treasuries. This tendency of people encouraged them to keep more and more cash in physical form rather than in keeping at banks in the form of deposits. Due to these paper currencies those people, who were used to earn and generate black money, were hiding the currency notes secretly for future purpose and as a result that currency notes were out from the money circulation in the economy. Again many transactions which took place in physical cash were unaccounted and ultimately encouraged tax evasion and tax avoidance. As per an estimate, about 50% of business transactions in India were out of tax net. This leads to creation of black money. "While there is no official estimate of quantum of black money in India or abroad, a 2010 World Bank Report on shadow economies estimated it at 31 per cent of GDP of 162 countries in 2007 with India's estimate pegged at 20.7 per cent of GDP comparing favourably with the world average." (Suri, 2016) But the recent step of demonetization of Rs. 500 and 1000 currency notes, taken by PM. Modi, has turned the face of India and lighted a spark among Indians to transform the cash economy into cashless economy. As per many experts this demonetization would help in curbing the menace of black money and corruption and would lead India to become a cashless economy. This step would bring more transparency in all businesses as most of the transactions would come into record. Moreover, after this recent demonetization, people are more interested in accumulating money in banks in the form of deposits.

This demonetization had created many hurdles and shaken the every sector of Indian economy. Even the people of India had to face a lot of difficulties like long queue at banks for deposits and exchange of old currency notes, lack of liquid cash in hand, inability to make payment to creditor on due date, incapable to purchase necessities, etc. Although, according to many Indians, "this demonetization decision has been

the biggest and most ambitious step ever to crack down on black money and fake currency and to move India towards a 'cashless' economy." (NC, 2016). A cashless economy refers to an economy where all transactions are made using plastic cards/money (ATM/Debit/Credit Cards) or digital devices, and the circulation of paper currency is minimal. There are many positive aspects of cashless economy like reduction in black money, cost of making and handling paper money, terrorist activities and cutting of trees for printing notes, and also to bring more transparency in every sector of economy. Apart from that cashless economy is also an appropriate solution for fake cash. Hence this study is based on the need to transform India into a cashless economy, the various methods used by the people instead of physical cash, the reasons for which the people of India are now using various methods of making and accepting payments other than cash, comparatively less than that of those two months after demonetization. In addition to that the paper is also an attempt to analyze the various challenges in transforming India into a complete cashless economy.

II. Review of Literature

Few researches have been done in the context of cashless economy of India, which are discussed below:-

(NC, 2016) According to author India is a high cash-usage economy and demonetization was the most ambitious step to reduce black money and fake currency and to move India towards a cashless economy. The author stated that during demonetization the number of online transactions has been increased through card payments but for small merchants card payments were expensive and in that case the e-wallets were useful. The author also provides a picture of future of mobile wallets by stating that India is one of the fastest-growing markets for smartphones in the world. Moreover, the e-wallets apps are more attractive for consumers as these apps are free of cost and can also provide discounts on products through cash back offers. The telecom infrastructure in India is also improving with the use of 4G services from 3G.

(Singh, Ajit, 2017) The author explained how Mobile will play a significant role not only in the Cashless India Initiative but also in Global Cashless Economies along with the pros and cons of cashless economy. The author also discussed the popular methods for conducting mobile cashless transactions like mobile wallets, mobile banking apps, card-based payments, carrier billing and near field communications. The security challenges for mobile cashless transactions are also discussed in detailed.

(Suri, 2016) According to author there is an association between black money, counterfeit currencies, crime and terrorism. The author provided few estimates on black money as a percentage of GDP, and also discussed the money circulation in Rs. 500 and Rs. 1000 denomination notes before and after demonetization. The paper mentioned few policies, enforced by the government to curb the menace of black money and few merits of recent demonetization like wiping out illegal cash, no longer fuel price rise, ceasing of counterfeit currency notes, improving the profitability position of banks by controlling NPAs, control over the unnecessary price rise of real estate, etc. The study considered demonetization as a first step towards cashless economy because after demonetization many new methods are being used by the people other than cash like Unified Payments Interface (UPI), Digital Wallets, Plastic Cards, ATMs, AEPS, and USSD.

(Bhattacharyya & Noria, 2017) The authors discussed how India is moving towards a digital and cashless economy. Mobile wallet players such as Mobikwik and Paytm played an important role when there were unending lines at ATM and Banks. Bar diagram was used to show the growth in use of plastic cards and e-wallets. According to author the first attempt had been made for tech savvy consumer in urban areas to use the plastic cards and ewallets instead of cash and now government is attempting to do the same in rural areas. Besides that government is also focusing on cyber security for safe digital transactions so that less cash dependent economy can be formed.

None of the researches has been done taking into consideration the challenges faced by the people from different occupation, the various reasons due to which the people are now using less plastic cards, e-wallets and net banking as compared to those first two months after the ban and the challenges in transforming into cashless. This study covers all these research gaps.

III. Objectives of the Study

1. To assess the need to transform India from a cash to cashless economy.
2. To determine the various challenges faced by India during recent demonetization.
3. To know the various methods other than cash used by the people in making payments during demonetization.
4. To determine the various reasons if the people are using those methods comparatively less after the expiration of first two months from the ban of old currency.
5. To assess the various challenges in transforming India from Cash to Cashless Economy

IV. Hypotheses

- H_{0A} : The problems faced by every individual during demonetization are identical irrespective of their occupation.
- H_{1A} : The problems faced by every individual during demonetization are not identical irrespective of their occupation.
- H_{0B} : The recent use of different methods of making and accepting payments is equal during the first two months from the ban of old currency notes.
- H_{1B} : The use of different methods of making and accepting payments is not equal during demonetization (i.e. first two months from the ban of 500 and 1000 Indian Currency)
- H_{0C} : There is no change in the frequencies of using different methods of making and accepting payments by the people during the first two months from the ban of Old Currency and after the expiration of first two months from the ban of old currency.
- H_{1C} : There is a significant change in the frequencies of using different methods of making and accepting payments by the people during the first two months from the ban of Old Currency and after the expiration of first two months from the ban of old currency.

V. Research Methodology

The study is Empirical in nature. The data used in this study are basically from primary source which have been collected with the help of questionnaire method. A questionnaire was designed and required information has been collected from 221 respondents. The respondents include Students, Businessmen, Professionals, Servicemen in both Private and Public Sector, and Unemployed persons in Sagar City. The data collected have been presented with the help of tables and pie-charts. The study is limited to the area of Sagar City. The period of study is confined to 9 months starting from 9th November, 2016 to 31st July, 2017 which is divided into two phase. The first phase is from 9th November, 2016 to 31st December, 2017 and second phase is from 1st January 2017 to 31st July, 2017. For hypothesis testing, 3 different tests have been used for each hypothesis i.e. Chi-Square test, Friedman Test and Wilcoxon Signed Ranks Test respectively.

VI. Significance of the Study

The study is totally based on the burning issue of making India a cashless economy. Government is making all types of efforts to make India a cashless economy so that all the boons can be derived. This study also depicts the scenario during demonetization where people were facing lot of problems and these problems should be highlighted so that the policy makers would consider such problems before taking any further step in future. The primary reason due to which the use of online transactions are decreasing day by day, must be properly communicated to banks, government and other interested parties who are making efforts to make India a cashless country. Apart from that the study also discusses the challenges in transforming India into cashless economy and Indian community, the government of India, policy makers, researchers pursuing research in the area of cashless economy should be aware about these challenges so necessary steps could be taken to remove it.

VII. Limitations of the Study

1. The study is limited to the city of Sagar only. All the respondents in this study are from Sagar City.
2. All efforts have been made to collect primary data from more respondents (the target was 250 from each occupation) but only 221 responses have been received and based on these responses, conclusion has been drawn.
3. The study considers only four methods of making and accepting payments other than cash namely E-Wallets, Cheque, Net Banking and Plastic Cards. The other methods like Unified Payments Interface (UPI), AEPS and USSD are not taken into study as only few people are known about these methods and their uses.

VIII. Analysis and Interpretation

India has made the first move to become a cashless or digital economy. "Larger amount of savings and cash will find a way into the mainstream economy and be deployed for physical and financial asset creation. Use of digital currency and payment systems driven by UPI, wallets and cards will create enormous transparency and paves way for faster evolution of Fintech companies in India especially in transactions and Online lending space."(Express Web Desk, Govt demonitises Rs 500, 1000 notes: Here is how India Inc reacted, 2016). To analyze the scenario of India regarding the problems and possibility of becoming a cashless economy a survey has been conducted with the help of questionnaire method. In this context 157 responses have been received. The primary data so collected have been fitted into SPSS software and analyzed the results of which are explained below:-

Table No.1
Table showing the number of respondents of different group from different Occupation

		Age			Total
		0-20	20-40	40-60	
Occupation	Students	31	39	0	70
	Businessman/Professionals	1	36	5	42
	Service in Private Sector	0	40	4	44
	Service in Public Sector	0	37	4	41
	Housewife or Unemployed	0	21	3	24
Total		32	173	16	221

Source : Researcher Computation through SPSS 23

The above table depicts the responses taken different occupation with different age group. In this study most responses are from the age group between 20 and 40. The total responses that have been taken into study are 221 out of which 32 are under the age of 20 years, 173 are between the age group of 20-40 and remaining 16 are under within the age group of 40-60. In this study respondents are from 5 different occupations i.e. 70 respondents are Students, 42 are Businessmen or Professionals, 44 are service holder in Private sector, 41 are service holder in public concern and the remaining 24 are under the category of housewife or Unemployed.

Table No. 2

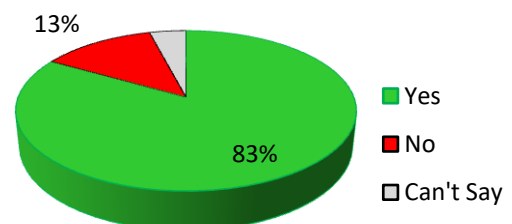
Need for Demonetization in India

Opinion	Frequency	Percent
Yes	184	83.3
No	28	12.7
Can't Say	9	4.1
Total	221	100.0

Source : Computation from SPSS

Fig. No. 3

4%
Pie Chart Representing opinion of 221 respondents on the Need for Demonetization in India



The above table and pie-chart reveal the opinion of 221 respondents regarding the need of recent demonetization (08-11-2017) in India. Out of 221 respondents 184 respondents i.e. 83% of the total respondents are favouring the need of recent demonetization while on the other hand only 28 respondents i.e. 12.7% of the total respondents are stating that demonetization was not required and remaining 9 respondents are unable to conclude.

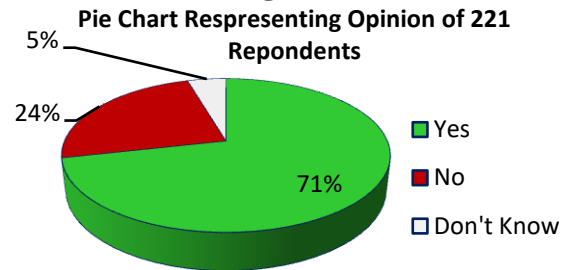
Was Demonetization the first and a successful step to transform India into Cashless Economy?

Table No. 4

Opinion	Frequency	Percent
Yes	158	71.5
No	53	24.0
Don't Know	10	4.5
Total	221	100.0

Source : Researcher Computation through SPSS

Fig.No. 5



The above table and pie-chart depict the opinion of 221 respondents regarding demonetization as a successful step to transform India into Cashless Economy. Out of 221 respondents 158 respondents i.e. 71.5% of the total respondents have admitted that demonetization is a successful step towards cashless economy while on the other hand 53 respondents i.e. 24% of the total respondents do not consider demonetization as a successful step towards cashless economy and 10 respondents can't answer about it.

8.1. Need to Transform India into Cashless Economy

Reducing the dependence on cash of Indian economy is desirable for a variety of reasons. "India has one of the highest cash to gross domestic product ratios in the world, and lubricating economic activity with paper has costs. According to a 2014 study by Tufts University, The Cost Of Cash In India, cash operations cost the Reserve Bank of India (RBI) and commercial banks about Rs21,000 crore annually."(Jayachandran, 2016) The other reasons to transform India into cashless are discussed below:-

1. Removal of Corruption and Black Money :Uprooting corruption and black money from India is quite a difficult task hence a bold step in the form of demonetization has been taken by Modi Government. This step has encouraged India to move towards cashless. Cashless economy leads to greater transparency in every transaction which leads to avoid tax evasion and also to discourage people to retain cash in physical form. "Prime Minister said that cashless transaction is the only way to curb corruption. Our country's economy was damaged for several years, and to make it strong, we will have to go cashless and will have to work towards bringing everyone under such a system."(PTI, 2016)

2. Stop counterfeiting of Indian Currency Notes :India has been facing the counterfeiting of currency notes since 1950. "Data collected by the Indian Statistical Institute revealed that as many as 250 out of every million notes in circulation were fake. This may seem a small percentage, but in absolute terms it translates into mind-boggling numbers."(Shapoo, 2016) Many steps had been taken earlier to eliminate the fake currency notes but of no veil. The cashless economy would be helpful to prevent in counterfeiting currency notes as there would be no physical existence of notes with high value i.e. Rs. 500, Rs. 1000 and the new Rs. 2000.

3. Elimination of Terror Funding :Cashless economy is also helpful to have a proper control on terrorists activities whether it is internal or external. Such economy would provide greater transparency in every sector which leads to record of each and every transactions of the economy. The person will neither able to

get any fund in physical cash nor they could counterfeit the currency notes which ultimately cutoff the supply line money, arm and ammunitions to terror funding. “According to reports, the recent upswing in stone-throwing in the Kashmir Valley owe to the ready availability of counterfeit Indian currency in the hands of the local ‘motivators’ of those violent protests, targeting the security agencies.” (Moorthy, 2016) “Thus, a cashless economy, where every transaction would be recorded, would pose serious, perhaps insurmountable, obstacles for criminals and terrorists.” (Ghosh, 2012)

4. Curbing of Unethical Business Activities :To curb illegal and unethical business activities such as the black marketing, food adulteration, marketing of spurious goods, human trafficking, smuggling of gold and drugs, cashless economy would be a perfect tool. Greater transparency compelled the businessmen to carry on business in an ethical way. They cannot even evade the taxes. All the goods transported from wholesaler to retailer would be recorded and tracked due to which black marketing can also be eliminated.

In this context an opinion has been taken from 221 respondents regarding the primary reason to transform India into cashless the result of which is mentioned below:-

Table No. 6
Table showing the Primary Reason to Transform India into Cashless

Reason to transform India from Cash to Cashless Economy	Frequency	Percent
To remove the corruption and Black money	128	57.9
To stop counterfeiting of Indian Currency notes	14	6.3
To cutoff the supply line money, arm and ammunitions to terror funding	10	4.5
To curb illegal & unethical business acts i.e. black marketing, marketing of fake goods, human trafficking, smuggling	69	31.2
Total	221	100.0

Source : Researcher Computation through SPSS 23

The above table represents the opinion of 221 respondents regarding the primary reason behind the transforming India into a Cashless. 128 respondents stated that cashless economy would remove the corruption and black money followed by 69 respondents who stated curbing illegal & unethical business activities as a primary reason behind the transformation of India into a cashless economy. About 4.5% of total respondents i.e. 10 mentioned that the purpose of cashless economy is cutting off supply line money, arm and ammunitions to terror funding whereas 14 respondents stated that the primary reason behind such transformation is to stop counterfeiting of Indian Currency Notes.

8.2. Problems faced by the People during Demonetization

During demonetization i.e. from 9th November, 2016 to 31st December, 2016, the people in India were facing lot of problems. It was not only a challenge for common people but was also a challenge for small retailers to sustain their business during demonetization. The problem of liquid cash in the economy has created a major problem. People were unable to purchase necessities for consumption. “People were frustrated as they faced major issues in paying hospital bills. Even after the rule of medical sector accepting the 500 & 1000 notes, this is not being the real scenario. They already have members of house to go to hospital, where do they get more member to stand in the long queues. Both priorities i.e. health and money are at stake.” (Kothari, 2016) Even many people were leaving their work to stand in the queue for a mere exchange of Rs. 4000 at banks, many people were not having money for wedding arrangements and few old people even lost their lives. “It's been in several news channels that some of the people who are not well or are very weak have lost their lives due to standing in queues for long hours. But sad part is no one is ready to take responsibility of such activities.” (Team Storytap, 2016) The retailers and shopkeepers were unable to make payment to their creditors and workers on due time but on the other hand they had to sell goods to their customers on credit.

In order to resolve these problems, the people were encouraged to use new electronic methods for making and accepting payments. E-Wallets like Paytm and Plastic cards were more in use those days.

Though it was a step towards making a cashless economy but the worst part of it was that there were many people who were neither having smart phone nor can use electronic methods for making and accepting payments. In this study the problems are classified into four parts i.e. Problem of Liquid cash, Problem of making payment to Shopkeeper to purchase necessities, Inability to make payment to creditor on due date and Problem of waiting at banks for deposits or exchange. With the help of Chi-Square test, it is to be tested that whether the problems faced by every individual during demonetization are identical irrespective of their occupation.

A. Hypothesis Testing

- H_{0A} : The problems faced by every individual during demonetization are identical irrespective of their occupation. (Test of Homogeneity with the help of Chi-Square)

Table No. 7
Application of Chi-Square Test

			Occupation					Total
			Student	Businessman / Professionals	Service in Private Sector	Service in Public Sector	Housewife or Unemployed	
Biggest problem faced during Demonetization	Problem of Liquid Cash in Hand	Count	20	16	15	8	0	59
		Expected Count	18.7	11.2	11.7	10.9	6.4	
	Problem of making payment to Shopkeeper to purchase necessities	Count	18	3	14	3	11	49
		Expected Count	15.5	9.3	9.8	9.1	5.3	
	Unable to make payment to creditor on due date	Count	7	6	2	0	4	19
		Expected Count	6.0	3.6	3.8	3.5	2.1	
	Problem of waiting at banks for deposits or exchange	Count	25	17	13	30	9	94
		Expected Count	29.8	17.9	18.7	17.4	10.2	
Total		Count	70	42	44	41	24	221

Source : Researcher Computation through SPSS 23

Note : As the few cells in the table are having values less than 5 hence **Fisher's Exact test** would provide more reliable result than Pearson's Chi-Square test.

Table No.8
Results of Pearson Chi-Square & Fisher's Exact Test

Chi-Square Tests&Fishers's Exact Test						
	Value	df	Asymptotic Significance (2-sided)	Monte Carlo Sig. (2-sided)		
				Significance	95% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	46.566 ^a	12	.000	.000 ^b	.000	.013
Fisher's Exact Test	49.186			.000^b	.000	.013
N of Valid Cases	221					

a. 4 cells (20.0%) have expected count less than 5. The minimum expected count is 2.06.
b. Based on 221 sampled tables with starting seed 2000000.
c. The standardized statistic is 2.316.

Source : Researcher Computation through SPSS 23

H_0 is rejected as the Significance Value of Fisher's Exact Test is less than 0.05. So, it can be concluded that the problems faced by every individual during demonetization are not identical irrespective of their occupation.

8.3. Various Cashless/Electronic Methods used by the people in Making & Accepting Payments

Soon after demonetization, the government of India encouraged the people to use various electronic payment methods instead of physical cash. Many electronic methods existed earlier like Net Banking which includes NEFT, RTGS and IMPS, E-Wallets like Paytm, Oxigen Wallet, Airtel Money, etc. and Plastic Cards that include ATM/Debit/Credit Cards and Cheque. But during demonetization the frequencies of their uses increased suddenly. Basically the Paytm gained more importance after 9th November, 2016 as many consumers, retailers whether its large or small, and even many institutions have been using it since the ban of old currency. Moreover many new methods have been evolved to accelerate the transformation of cash economy into cashless economy. The methods are like BHIM (Bharat Interface for Money) app based on UPI and AEPS (Aadhar Enabled Payment System). The study is confined to few electronic methods which are more popular within the Sagar city namely E-wallets, Net Banking, Cheque and Plastic Cards.

Table No. 9
Frequency of Using Electronic Methods by the People during Demonetization

Sl. No.	Electronic Methods	Frequently (7 or More times Per Week)	Sometimes (3 to 6 times Per Week)	Rarely (1 or 2 time Per Week)	Did not Use(0 time Per Week)	Total
1.	E-Wallets*	67	43	29	82	221
2.	Cheque	19	28	56	118	221
3.	Net Banking	59	54	35	73	221
4.	Plastic Cards**	96	64	51	10	221

Source : Researcher Computation through SPSS and Compiled in Excel

*(Paytm, Oxigen Wallet, Airtel Money, Jio Money, State Bank Buddy)

**ATM/Debit/Credit Cards

The above table shows the various methods of making payments instead of physical cash and the frequency of their uses by the people along with its degree during demonetization i.e. . In the table it is clear that the people were using Plastic Cards i.e. ATM/Debit/Credit Cards the most, followed by E-wallets and Net Banking. About 43% of the total respondents were frequently using the Plastic Cards, about 30% of the total respondents were frequently using the E-wallets, about 27% of the total respondents were frequently using Net Banking and only 8% of total respondents were frequently using Cheque i.e. 7 or more times per week.

Hypothesis Validation for Friedman Test & Wilcoxon Signed Ranks Test

For the purpose of testing Friedman test and Wilcoxon Signed Ranks test the degrees used in questionnaire have to give points (weightage) and on the basis of these points the ranks are supposed to be calculated. Hence 4 points have been allotted to "Frequently", 3 points to "Sometimes", 2 points to "Rarely" and 1 point to "Did not Use".

B. Hypothesis Testing

- H_{0B} : The use of different methods of making and accepting payments is equal during demonetization (i.e. first two months from the ban of 500 and 1000 Indian Currency)

Application of Friedman Test

Table No. 10
Mean Ranks

	Mean Rank
a. E-wallets (Paytm, Oxigen Wallet, Airtel Money, Jio Money, State Bank Buddy)	2.49
b. Cheque	1.77
c. Net Banking	2.51
d. ATM/Debit/Credit Cards	3.22

Source :ResearcherComputation through SPSS

Table No.11
Results of Friedman Test

Test Statistics ^a	
N	221
Chi-Square	188.847
Df	3
Asymp. Sig.	.000
a. Friedman Test	

Source : Researcher Computation through SPSS

H_0 is rejected as the value of Significance is less than 0.05 hence it can be concluded that the use of different methods by the people in making and accepting payments is not equal during demonetization.

Table No.12

Frequency of Using Electronic Methods by the People After Demonetization

	Frequently	Sometimes	Rarely	Did not Use	Total
E-Wallets*	35	42	34	46	221
Cheque	15	22	36	84	221
Net Banking	41	32	29	55	221
Plastic Cards**	68	48	33	8	221

Source : Researcher Computation through SPSS and Compiled in Excel

The above table shows the various methods of making payments instead of physical cash and the frequency of their uses by the people along with its degree after demonetization i.e. after 31st December, 2016. In the table it is clear that the people were using Plastic Cards i.e. ATM/Debit/Credit Cards the most followed by Net Banking and E-wallets. But after demonetization only a minimum of 22% of the total respondents were frequently using the Plastic Cards, E-wallets and Net Banking i.e. 7 or more times per week. The frequency of using electronic methods is comparatively less than the frequency of using those methods during demonetization and the reasons responsible for it are clearly indicated in the table no. 26.

Table No.13

Frequently Used E-Payment Methods by People belonging to different Occupation

	E-wallets	Cheque	Net Banking	Plastic Cards
1. Student	25	5	18	28
2. Businessmen/Professional	29	12	10	32
3. Service in Private Sector	12	2	13	10
4. Service in Public Sector	1	0	6	10
5. Housewife/Unemployed	0	0	12	16
Total	67	19	59	96

Source : Researcher Computation through SPSS 23 and Compiled in Excel

The above table depicts the degrees of frequency in using various electronic modes of payments by people belonging to different occupation in the recent period. 28 respondents who are students are frequently using Plastic Cards, 25 students are frequently using E-wallets, 18 students are frequently using Net Banking and 5 are using Cheque frequently. Similarly in case of businessmen and professionals, 32 are frequently using

Plastic Cards and 29 are using E-wallets. But in case of Service person from private sector and public sector, 13 respondents and 6 respondents respectively are frequently using Net Banking.

C. Hypothesis Testing

- H_{0C} : There is no change in the frequencies of using different methods of making and accepting payments by the people during the first two months from the ban of Old Currency and after the expiration of first two months from the ban of old currency.

Application of Wilcoxon Signed Ranks Test

a. Frequencies of using E-Wallets by the people during the first two months from the ban of Old Currency and after the expiration of first two months from the ban of old currency (i.e. after 31st Dec., 2016).

Table No.14
Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
a. E-wallets (Before)	221	2.43	1.265	1	4
a. E-wallets (After)	221	2.38	1.112	1	4

Source : Researcher Computation through SPSS 23

Table No.15
Ranks

	N	Mean Rank	Sum of Ranks
a. E-wallets (After) - a. E-wallets (Before)	Negative Ranks	51 ^a	2487.50
	Positive Ranks	44 ^b	2072.50
	Ties	126 ^c	
	Total	221	
a. a. E-wallets (After) < a. E-wallets (Before)			
b. a. E-wallets (After) > a. E-wallets (Before)			
c. a. E-wallets (After) = a. E-wallets (Before)			

Source : Researcher Computation through SPSS 23

Table No.16
Test Statistics^a

	a. E-wallets (After) - a. E-wallets (Before)
Z	-.816 ^b
Asymp. Sig. (2-tailed)	.414
a. Wilcoxon Signed Ranks Test	
b. Based on positive ranks.	

Source : Researcher Computation through SPSS 23

H_0 is accepted as the Significance value is more than 0.05 hence it can be concluded that is no significant change in the frequencies of using E-Wallets in making and accepting payments by the people during the first two months from the ban of Old Currency and after the expiration of first two months from the ban of old currency.

b. Frequencies of using Cheque by the people during the first two months from the ban of Old Currency and after the expiration of first two months from the ban of old currency.

Table No.17
Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
b. Cheque (Before)	221	1.76	.976	1	4
b. Cheque (After)	221	1.81	.972	1	4

Source : Researcher Computation through SPSS

Table No.18**Ranks**

		N	Mean Rank	Sum of Ranks
b. Cheque (After) - b. Cheque (Before)	Negative Ranks	32 ^a	40.75	1304.00
	Positive Ranks	45 ^b	37.76	1699.00
	Ties	144 ^c		
	Total	221		
a. b. Cheque (After) < b. Cheque (Before)				
b. b. Cheque (After) > b. Cheque (Before)				
c. b. Cheque (After) = b. Cheque (Before)				

Source : Researcher Computation through SPSS

Table No.19**Test Statistics^a**

	b. Cheque (After) - b. Cheque (Before)
Z	-1.078 ^b
Asymp. Sig. (2-tailed)	.281
a. Wilcoxon Signed Ranks Test	
b. Based on negative ranks.	

Source : Researcher Computation through SPSS

H_0 is accepted as the Significance value is more than 0.05 hence it can be concluded that is no significant change in the frequencies of using Cheque in making and accepting payments by the people during the first two months from the ban of Old Currency and after the expiration of first two months from the ban of old currency.

c. Frequencies of using Net Banking by the people during the first two months from the ban of Old Currency and after the expiration of first two months from the ban of old currency.

Table No.20**Descriptive Statistics**

	N	Mean	Std. Deviation	Minimum	Maximum
c. Net Banking (Before)	221	2.45	1.204	1	4
c. Net Banking (After)	221	2.44	1.244	1	4

Source : Researcher Computation through SPSS

Table No.21**Ranks**

		N	Mean Rank	Sum of Ranks
c. Net Banking (After) - c. Net Banking (Before)	Negative Ranks	29 ^a	32.28	936.00
	Positive Ranks	31 ^b	28.84	894.00
	Ties	161 ^c		
	Total	221		
a. c. Net Banking (After) < c. Net Banking (Before)				
b. c. Net Banking (After) > c. Net Banking (Before)				
c. c. Net Banking (After) = c. Net Banking (Before)				

Source : Researcher Computation through SPSS

Table No.22**Test Statistics^a**

	c. Net Banking (After) - c. Net Banking (Before)
Z	-.165 ^b
Asymp. Sig. (2-tailed)	.869
a. Wilcoxon Signed Ranks Test	
b. Based on positive ranks.	

Source : Researcher Computation through SPSS

H_0 is accepted as the Significance value is more than 0.05 hence it can be concluded that is no significant change in the frequencies of using Net Banking in making and accepting payments by the people during the

first two months from the ban of Old Currency and after the expiration of first two months from the ban of old currency.

d. Frequencies of using Plastic Cards (ATM/Debit/Credit) by the people during the first two months from the ban of Old Currency and after the expiration of first two months from the ban of old currency.

Table No.23
Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
d. ATM/Debit/Credit Cards (Before)	221	3.04	.922	1	4
d. ATM/Debit/Credit Cards (After)	221	3.12	.915	1	4

Source : Researcher Computation through SPSS

Table No.24
Ranks

		N	Mean Rank	Sum of Ranks
d. ATM/Debit/Credit Cards (After) - d. ATM/Debit/Credit Cards (Before)	Negative Ranks	15 ^a	20.60	309.00
	Positive Ranks	25 ^b	20.44	511.00
	Ties	117 ^c		
	Total	157		

a. d. ATM/Debit/Credit Cards (After) < d. ATM/Debit/Credit Cards (Before)
b. d. ATM/Debit/Credit Cards (After) > d. ATM/Debit/Credit Cards (Before)
c. d. ATM/Debit/Credit Cards (After) = d. ATM/Debit/Credit Cards (Before)

Source : Researcher Computation through SPSS

Table No.25
Test Statistics^a

	d. ATM/Debit/Credit Cards (After) - d. ATM/Debit/Credit Cards (Before)
Z	-1.483 ^b
Asymp. Sig. (2-tailed)	.138

a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.

Source : Researcher Computation through SPSS

H_0 is accepted as the Significance value is more than 0.05 hence it can be concluded that is no significant change in the frequencies of using Plastic Cards (ATM/Debit/Credit) in making and accepting payments by the people during the first two months from the ban of Old Currency and after the expiration of first two months from the ban of old currency.

Table No. 26

Reasons of using various electronic payment methods comparatively less after the expiration of first two months from the ban of old currency

	Reasons	Frequency	Percent
1.	Now you are having the Cash Option	34	15
2.	Don't know how to use E-Payment Methods efficiently	13	6
3.	Banking Charges are high on using those E-payments methods	91	41
4.	Using E-Payment Methods are more complex than using Cash	20	9.0
5.	Cannot be used in remote or rural areas	63	20
	Total	221	100.0

Source : Researcher Computation through SPSS

Reasons of less using of Electronic Payment

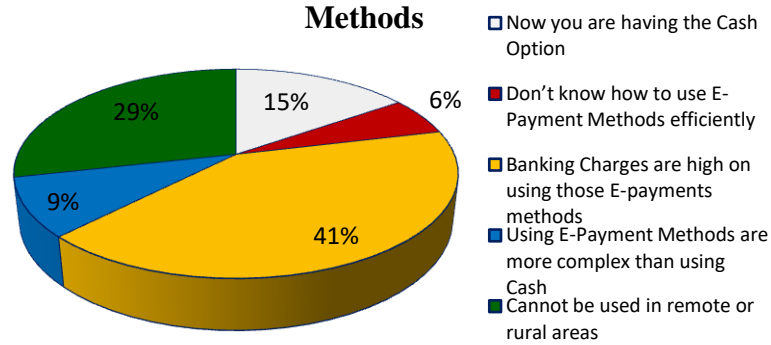
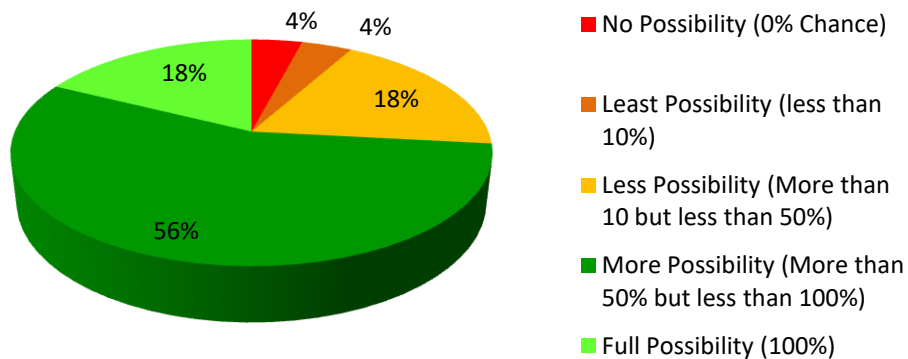


Table No. 27
Possibility of Transforming India into Cashless Economy in future

Possibility	Frequency	Percent
No Possibility (0% Chance)	9	4.1
Least Possibility (less than 10%)	9	4.1
Less Possibility (More than 10 but less than 50%)	41	18.6
More Possibility (More than 50% but less than 100%)	123	55.7
Full Possibility (100%)	39	17.6
Total	221	100.0

Source : Researcher Computation through SPSS

Possibility of Transforming India into Cashless Economy



IX. Challenges in Transforming India into a Cashless Economy

- Banking Charges are High in case of Online Transactions :** Consumers are stating that they have been charged with high transaction and banking charges for using the electronic modes in payment due to which they are avoiding the cashless methods now. It's a big challenge for the government to encourage these people to go cashless as they have to give charges in using their own money.
- No Proper Electrification and Net Connectivity in Rural Areas :** Unless and until there would be proper electrification and net connectivity in rural and remote areas, it is very difficult to dream for a Cashless Economy because lack of electrification and net connectivity create hindrances in using smartphones in making payments on due time.

3. **Lack of Awareness among people regarding the Advantages of Cashless Economy** : Only proper electrification and net connectivity in all places of the country is not only required but there must be some awareness programs that can explain to all the people of India regarding the benefits behind formation of a cashless economy along with the procedure of using electronic methods of making and accepting payments.
4. **Lack of Education** : It is quite difficult to dream for a cashless economy where a large proportion of the population is illiterate and the rural areas have inadequate infrastructure for digital transactions. Even there are many people who are totally uneducated and using of electronic modes of payment may be greek and latin for them.
5. **Problem of Security** : “One major cause for concern in the less cash economy has, however, been the danger of cybercrimes. While, the digital methods reduce the risks involved in carrying cash, they are prone to cyber security risks.”(Kachhal, 2017) It is not always the technology that fails but sometimes the carelessness on the part of the user that leads to cyber security hazards. India is also lacking in highly competent and skilled personnel in public sectors who can check the hackers.
6. **Opposed by Many Businessmen**: Many retailers are opposing cashless economy as there will be more transparency, all the transactions will be recorded and they may not get the opportunity to evade or avoid tax. On the other hand small retailers or vendors who are having less knowledge on using cashless methods may find it difficult to install electronic methods for receiving petty payments.

X. Conclusion

It is quite baseless to think for a cashless economy without overcoming all those shortcomings sighted above. The step taken in the name of demonetization had affected many common people negatively but still many of those reacted positively with the situation and co-operate with the Modi Government with a lot of expectations that this government could uproot the loopholes in the economy like corruption, black money, unethical business practices, terrorism, etc. It is not questionable that government is making all its efforts to encourage people to use electronic payment methods but bearing such banking charges or transaction costs is not a cup of tea for the people of India specifically for middle and lower income group on which it is the need for gross reflection. It will also be a primary measure on the part of the government to educate every person of India and also to develop all the villages. Moreover, many awareness programs are required in both urban and rural areas explaining the advantages and procedure of using cashless methods. A proper and secured infrastructure is also needed so that people of India would not hesitate to shift from cash to cashless.

XI. Findings and Suggestions

- ✓ Though there is no significant change in the frequency of using electronic payment methods but there is a possibility that the people would soon be shifted to cash again to avoid banking or transaction charges. The customers have to give 1% extra in the name of transaction cost if the payment is being made by plastic cards at many shops and showrooms. Hence, steps should be taken to either to reduce the banking charges to a minimal or eliminate those charges to encourage more people to go cashless.
- ✓ Many people are not comfortable in using electronic modes of payment due to security reasons. There are many persons who thought that electronic methods are not safe as there are more chances of being hacked. India is not having competent personnel at government level to check the hacking and there are many examples of hacking cases in India. Hence proper technical staff should be recruited and appointed at relevant levels so that the security level could be enhance to check hacking.
- ✓ As many respondents in this study had stated that going cashless in rural or remote areas is not beneficial as there is a lack of internet connectivity and electrification in most of the villages in India due to which the swapping machines and smartphones do not work. So, the important task of the

government is to develop those villages in such a way that the various electronic methods of accepting and making payments could be used properly at least possible cost. Then, only India can think for a Cashless Economy in future.

References

- Bhattacharyya, A., & Noria, Y. (2017, July 14). India paves its way to a cashless economy. *PwC India*, pp. 1-4.
- Chakraborty, S. (2016, November 16). *Demonetisation: Why a cashless economy alone is no guarantee of curbing terrorism*. Retrieved August 03, 2017, from [www.financialexpress.com: http://www.financialexpress.com/india-news/demonetisation-why-a-cashless-economy-alone-is-no-guarantee-of-curbing-terrorism/460304/](http://www.financialexpress.com/india-news/demonetisation-why-a-cashless-economy-alone-is-no-guarantee-of-curbing-terrorism/460304/)
- Express Web Desk. (2016, December 22). *From eradicating black money to cashless economy: PM Modi's changing narrative since demonetisation*. Retrieved June 24, 2017, from [indianexpress.com: indianexpress.com/article/india/demonetisation-modi-cashless-economy-black-money-narratives-4439843/](http://indianexpress.com/article/india/demonetisation-modi-cashless-economy-black-money-narratives-4439843/)
- Express Web Desk. (2016, November 8). *Govt demonitises Rs 500, 1000 notes: Here is how India Inc reacted*. Retrieved July 5, 2017, from [www.indianexpress.com: http://indianexpress.com/article/business/economy/narendra-modi-rs-500-1000-sbi-arundhati-bhattacharya-icici-chanda-kochhar-here-is-how-india-inc-reacted-4364818/](http://indianexpress.com/article/business/economy/narendra-modi-rs-500-1000-sbi-arundhati-bhattacharya-icici-chanda-kochhar-here-is-how-india-inc-reacted-4364818/)
- Ghosh, P. (2012, 10 22). *A cashless global economy might reduce organized crime and terrorism: Lipow*. Retrieved August 4, 2017, from [www.ibtimes.com: http://www.ibtimes.com/cashless-global-economy-might-reduce-organized-crime-terrorism-lipow-251501](http://www.ibtimes.com/cashless-global-economy-might-reduce-organized-crime-terrorism-lipow-251501)
- Jayachandran. (2016, November 29). *Making India a cashless economy*. Retrieved July 26, 2017, from [www.livemint.com: http://www.livemint.com/Opinion/XGbavEnoeP7dZITeh21MRM/Making-India-a-cashless-economy.html](http://www.livemint.com/Opinion/XGbavEnoeP7dZITeh21MRM/Making-India-a-cashless-economy.html)
- Kachhal, D. (2017, February). Economic Development through Digital Transactions. *Yojana*, p. 5.
- Kothari, S. (2016, November 15). *5 Top Most Problems Faced To Local Citizens On Demonetization Of 500 And 1000 Notes*. Retrieved August 10, 2017, from [www.theyouthmagazine.com: https://theyouthmagazine.com/5-top-most-problems-faced-to-local-citizens-on-demonetization-of-500-and-1000-notes/](https://theyouthmagazine.com/5-top-most-problems-faced-to-local-citizens-on-demonetization-of-500-and-1000-notes/)
- Moorthy, N. (2016, December 7). *Cashless transactions & cyber terrorism*. Retrieved April 16, 2017, from [www.orfonline.org: http://www.orfonline.org/expert-speaks/cashless-transactions-cyber-terrorism/](http://www.orfonline.org/expert-speaks/cashless-transactions-cyber-terrorism/)
- NC. (2016, November 18). *'Cashless Indian Economy' – Money Demonetization to Mobile Digitization*. Retrieved August 3, 2017, from [www.rctom.hbs.org: https://rctom.hbs.org/submission/cashless-indian-economy-money-demonetization-to-mobile-digitization/](https://rctom.hbs.org/submission/cashless-indian-economy-money-demonetization-to-mobile-digitization/)
- PTI. (2016, December 10). *Cashless transaction will curb corruption, PM Modi to party workers*. Retrieved June 28, 2017, from [www.indianexpress.com: http://indianexpress.com/article/india/cashless-transaction-will-curb-corruption-pm-modi-to-party-workers-4420678/](http://indianexpress.com/article/india/cashless-transaction-will-curb-corruption-pm-modi-to-party-workers-4420678/)
- Shapoo, S. F. (2016, November 20). *Counterfeit rupees are empowering India's enemies around the world*. Retrieved July 31, 2017, from [www.nationalinterest.org: http://nationalinterest.org/feature/how-india-can-stop-the-next-fake-money-crisis-18459](http://nationalinterest.org/feature/how-india-can-stop-the-next-fake-money-crisis-18459)

Singh, Ajit;. (2017). *Cashless India: Leveraging Possibilities and Facing Security Challenges in the Mobile Space*. Retrieved July 27, 2017, from www.globallogic.com: https://www.globallogic.com/gl_news/cashless-india-leveraging-possibilities-and-facing-security-challenges-in-the-mobile-space/

Suri, Y. (2016). *Demonetization – An Opportunity to Curtail Black Money*. Retrieved July 18, 2017, from niti.gov.in: <http://niti.gov.in/content/demonetization-%E2%80%93-opportunity-curtail-black-money-and-promote-digital-payments>

Team Storytap. (2016, December 28). *Challenges Faced by the Common Man due to Demonetisation*. Retrieved August 4, 2017, from www.storytap.in: <https://storytap.in/News/challenges-faced-by-a-common-man/>

