

A Study on Preferred Payment Systems: Pre and Post The 2016 Demonetization Exercise In India

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Abstract: *The survey sought to identify the preferred payment system during the pre and post 2016 Indian demonetization exercise. In all, 100 respondents, with fifty (50) from Delhi and the remaining fifty (50) respondents from Varanasi used to analyse the object of the study. The research study is analytical in nature and was based on convenience sampling method. The study indicated that indeed there was a significant change in the preferred mode of payment before and after the Indian 2016 demonetization exercise. Again from the study it was observed that prior to the demonetization exercise generally the preferred mode of payment was cash however the post-demonetization preferred mode of payment was mainly Net banking.*

KEY WORDS: *Demonetization, Currency, Net banking, Credit card, Cash, Cashless transaction.*

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I. Introduction

Demonetization is the process where governments declare in public the currently running currency notes illegal to be tender after the declaration is made. There are multiple reasons why nations demonetize their local units of currency. Some reasons include combating inflation, to combat corruption, and to discourage a cash system. The process of demonetization involves either introducing new notes or coins of the same currency or completely replacing the old currency with new currency.

In the case of India's demonetization in 2016, it is said to have led to a decrease in economic growth though the fiscal cost of demonetization exercise somewhat exceeded the benefits. For instance, Reserve Bank of India's dividends paid to the Central Government for the year 2016-17 reduced to Rs. 30,659, which is less than half of what was paid in 2015-16 and much of it because of the cost of demonetization including increased cost of printing notes and interest payment to account holders for deposition of additional money in their accounts.

Thus India's demonetization exercise in November 2016 was meted with lots of reactions from the general public. The exercise seems to have had a major influence on its informal economy. While one of government's shifted goal was to change informal economy to formal economy, the demonetization exercise rather increased informalization of the Indian economy causing various sectors that relied much on cash to feel the heat. Thus the demonetisation move appeared very painful for the Indian people as they were suddenly met with severe cash shortage with server detrimental effect across the nation, the public stand in length queues morning to evening for the money exchange in front of ATMs in large number. During that time ATMs had no cash and all ATMs were close all time. People faced big problems with cash. The demonetisation move has also been criticised as unplanned, unfair, and had a lot of protest and litigation, which were unfair to the country. Opposition parties were also debating in both houses of parliament.

1.1 SELECTED PAYMENT SYSTEMS

Mode of payments: - The Best five cashless payment options in India are as follows:

- 1) **E Wallets** – E-wallets became very much popular nowadays. These e wallets make use of phone number or the QR code and the transactions will be done in matter of minutes.
- 2) **UPI** – Unified Payments Interface is another great way for cashless transactions... Through UPI we can transfer the amount very easily all that we need are two important things, Smartphone and Bank account. The recent app developed by National Payment Corporation of India, based on UPI, is BHIM.
- 3) **Plastic Money** – The Debit and Credit cards which are used for transactions in ATM and in Point of Sales are known as the Plastic money. This plastic money reduces the security issues of carrying the liquid cash.

4) **Net Banking** – Almost all banks provide the Net Banking facility to its customers. All that the customers need to do is to enable the e-banking facility for their bank account to go cashless. By this most convenient way, the customers can do all their transactions without visiting the branch. We can make payment, transfer and receive amount by ourselves through this e-banking facility.

5) **Aadhaar Card** – By linking the Aadhaar card to our bank account we can make use of Aadhaar card enabled payment system. After linking our Aadhaar card to our bank account, we can do our transactions by means of our finger prints.

1.2 OBJECTIVE OF THE STUDY

To compare the payment mode before and after the demonetization exercise

1.3 HYPOTHESIS

H₀: There is no significant difference in the preferred mode of payment before and after demonetization.

H₁: There is a significant difference in the preferred mode of payment before and after demonetization.

II. Review Of Literature

According to **Brijesh Singh and N. Babitha Thimmaish (2017)**, the impact of India's 2016 demonetization is likely to have a positive effect in the long run though in the interim majority of industries are likely to suffer huge losses. The study further shows that the introduction of cashless economy in India can be seen as a step in the right direction. It is expected that its impact will be felt in modernization of Indian payment system, reduction in the cost of banking services as well as reduction in high security and safety risk.

Kaushibas (2016) studied India's dramatic move to scrap Rs.500 & Rs.1000 bank notes. Both notes ban at overnight. According to the study Indian low income traders and ordinary saver who totally relied on the cash economy were dishearten with horde thronging banks to deposit expired money and withdraw lower demonetisations. Kaushibas study seem to be supported by another survey by **Dash (2017)**, which indicated that the impact of demonetization was felt more in the social sector and the worst affected was also the poor and the common people. The salaried class was not able to withdraw their salaries from the banks and ATM's as a result of cash deficit. Also **D. Mounika and R. Kadhivel (2017)** asserts that, the public turned to cash less transaction which was mainly internet banking. It led to increase in internet users for transacting business. **CMA Jai Bansal (2017)** on the other hand viewed the Indian demonetization exercise in 2016 as a 'surgical strike' on black money, terrorism, fake currency, unorganized trading, real estate, share market etc. Again he categorized the impact in three parts, namely manufacturing sector, service sector and agriculture sector. From his study all this three areas showed some positive improvement although they were initial challenges right after the demonetization exercise.

In a study conducted by **Abhani Dhara K and N.J.Sonecha Mgt & technical Inst (2017)**, 55% of selected employees agreed to the view of positive impact of demonetization while 51% employees said customers moved towards online banking after the 2016 demonetization. Again their study asserted that the 2016 demonetization exercise was more successful compared to the previous two conducted in the 1990's.

Again according to **Sharif Mohd (2016)**, the timing for the 2016 demonetization is also curious for other reasons. The UPI (unified payment interface) system is likely to be fully operationalised only by Jan 2017. The study argues that it will have been better to wait until then, if this move was to also spur India's shift towards a cashless economy which is real solution. On the other hand, if it had been announced in advance it could have also been self-defeating in purpose, allowing holders of black money to convert their cash for gold or other forms of wealth instead. Apart from disrupting the daily life of common citizen, there are even bigger implications for the economy a whole. The rural areas in particular, which do not have formal sources of banking, also deal largely in cash. Unorganized labour, including in urban households, such as domestic workers and divers, one paid in cash and most in this demonetization. It is too early to even imagine the impact on all sections of society and parts of the economy, its advantages, though will be felt only the long term. While formal modes of payment such as debit and credit cards, net banking and digital wallets should get a boost, this will take a long time to be felt simply because the proliferations of these products is still low among the middle classes and the poor for whom cash is still the predominant mode of transaction.

Parekh, N (2016) has enlisted industries top executives mixed response towards the impact of demonetisation. Bansal, the co-founder of virtual Marketplace for pre-owned cars, Truebil" says "The used car industry is set to experience a positive turnaround by the currency withdrawal move. Considering the current state of the industry-being organized the move will help to curb a lot of unaccounted cash transactions.

Balachandar, (2016) briefs that 35 - 40% of the prices of SUV's and premium vehicles are paid through cash, black economy gets heavily invested SUV's and premium vehicles. Hence, these categories will also face the heat in the short-term.

Singh (2016) assets that the demonetization of rupees 500 and rupees 1000 notes was quite a surprise for the entire nation and the immediate ripple effect of this on the automotive industry was a DIP in the BSE auto index of 2.5 % on December 10, 2016. This was due to the fact that a number of potential buyers offer down payment in cash or sometimes, purchase a two wheeler with the complete cash payment.

Ashish Das, and Rakhi Agarwal, (2010) in their article “Cashless Payment System in India- A Roadmap” Cash as a mode of payment is an expensive proposition for the Government. The country needs to move away from cash-based towards a cashless (electronic) payment system. This will help reduce currency management cost, track transactions, check tax avoidance / fraud etc., enhance financial inclusion and integrate the parallel economy with main stream.

Jain, P.M (2006) in the article “E-payments and e-banking” opined that e- payments will be able to check black “An Analysis of Growth Pattern of Cashless Transaction System. Taking fullest advantage of technology, quick payments and remittances will ensure optimal use of available funds for banks, financial institutions, business houses and common citizen of India. He also pointed out the need for e-payments and modes of e-payments and communication networks.

Cashless economy is not the complete absence of cash, it is an economic setting in which goods and services are bought and paid for through electronic media.

According to **Woodford (2003)**, Cashless economy is defined as one in which there are assumed to be no transactions frictions that can be reduced through the use of money balances, and that accordingly provide a reason for holding such balances even when they earn rate of return.

III. Research Methodology

Data for the study was collected from Primary and Secondary sources. In all there were 100 respondents, with fifty (50) from Delhi and the remaining fifty (50) respondents from Varanasi. The research study is analytical in nature and was based on convenience sampling method; questionnaire survey was collected from different places in Delhi and Varanasi cities. Correlation analysis, mean comparisons and student Z-test was employed in analysing responses of respondents.

IV. Data Analyses And Discussion Of Results

This section presents and discusses the results of the study.

Table 1 Correction coefficient between selected preferred payment system before and after Demonetization

Payment Mechanism	Cash B	Cheque B	Creditcard B	Debit card B	Store Value B	NetBanking B	DigitalWallet B
CashB	1						
ChequeB	-0.128422429	1					
CreditB	-0.500830665	0.503492285	1				
DebitB	-0.448563221	0.216053388	0.505192876	1			
Store Value							
CardB	0.414564386	-0.145481105	-0.45604501	-0.512402047	1		
Net BankingB	-0.554728982	0.488197928	0.575781112	0.346695188	-0.418668738	1	
Digital walletB	-0.157705261	-0.031133329	0.039550465	0.120347631	-0.23061574	0.272658087	1
CashA	-1	0.128422429	0.500830665	0.448563221	-0.414564386	0.554728982	0.157705261
ChequeA	0.090517273	-0.914405411	-0.462250874	-0.16958126	0.145879387	-0.467756981	-0.048888503
Credit cardA	0.500830665	-0.503492285	-1	-0.505192876	0.45604501	-0.575781112	-0.039550465
Debit cardA	0.416677382	-0.190293772	-0.453886631	-0.944902447	0.473754254	-0.339484843	-0.138672388
Store valueA	-0.419987782	0.121787114	0.441676863	0.508500112	-0.994139709	0.411730244	0.23061574
Net BankingA	0.544765734	-0.47574198	-0.560396588	-0.336030373	0.409586808	-0.995926961	-0.276836971
Digital wallet	0.135342819	0.018729503	-0.046492099	-0.114842747	0.215082465	-0.2515788	-0.978419044

*CashA means: Cash after demonetization. *CashB means: Cash before demonetization.

Table 1 shows the correlation coefficient between some selected preferred payment modes before and after the 2016 Indian demonetization exercise. As seen from Table 1 above customers who preferred the use of cash prior to the 2016 demonetization exercise tended to prefer less usage of cash after the demonetization exercise as the correlation coefficient was (-1) indicate an inverse relationship on the usage of cash pre and post the demonetization exercise. The situation could be as result of government’s directive to deposit all

demonetized notes (Rs. 500 and Rs. 1000) in the banks as the old currencies ceases to be legal tender post November 8th, 2016. However it is interesting to note that the situation with regards to other preferred mode of payments, notably; Cheque, Credit card, Debit card, Store value card, Net banking and Digital banking as they also showed a strong negative correlation as per the results of this study. Again, customers preferred the use of Credit cards and Net banking as payment mode after the demonetization exercise. This is revealed by the relatively stronger correlation coefficients between CashA and Credit cards (0.500830665) and, CashA and Net banking (0.554728982) as seen in Table 1. Also the Net bankingA as correlated with CashB scored a coefficient of (0.544765734) which shows a positive strong association. This means an increase in cash before demonetization simultaneously increases Net Banking after demonetization. Whereas net bankingA and Net bankingB has a strong negative correlation with a coefficient value of (-0.9959) this explains an inverse relationship on the usage of Net Banking pre and post the demonetization exercise.

Table 2. Mean values for preferred payment system before and after Demonetization

Preferred Payment Mode	Mean Value for Before Nov 2016	Mean Value for After Nov 2016
Cash	5.74	2.26
Cheque	4.11	3.87
Credit card	3.09	4.91
Debit card	4.53	3.57
Store value card	2.44	4.55
Net Banking	3.47	6.52
Digital Wallet	1.46	5.56

Table 2 displays the mean values stemming from a rating scale of one to seven (1-7) where seven was rated highest and one was rated lowest in terms of preferred payments for pre and post the demonetization exercise in 2016. From the table above before the demonetization exercise cash was the most preferred mode of payment followed by debit card and cheque respectively with high mean values of 5.74, 4.53 and 4.11. It can be inferred that in the case of cash as preferred mode of payment prior to the demonetization exercise, the rural majority and perhaps the small scale enterprise owners as well as the average Indian national who forms a relatively large base in terms of reliance on cash as a medium of exchange and/or for transacting business could have attributed to the reason for cash being the most preferred payment mode before the demonetization exercise. On the other hand in the case of preferred mode of payment after the Indian demonetization exercise in November 2016, as per the findings of this study it is observed apparently that the most preferred payment mode was Net banking and it was followed respectively by the use of digital wallet and credit cards with mean values of 6.52, 5.56 and 4.91. Thus prior to the demonetization exercise generally the preferred mode of payment was cash however the post-demonetization preferred mode of payment was Net banking as per the findings of this study.

Table 3. Z-Test: Two Sample for Means

	<i>Preferred Mode of Payment After Nov 2016</i>	<i>Preferred Mode of Payment Before Nov 2016</i>
Mean	2.54	2.17
Known Variance	1.108431251	0.55184498
Observations	100	100
Hypothesized Mean Difference	0	
Z	2.871518039	

P(Z<=z) one-tail	0.002042527
z Critical one-tail	1.644853627
P(Z<=z) two-tail	0.004085055
z Critical two-tail	1.959963985

Table above shows a Z test on the hypothesis “there was no significant change in the preferred mode of payment before and after India’s 2016 demonetization”. The results indicated that, Calculated Z (2.871518039) is > than the table value of Z (1.959963985), so we reject the null hypothesis and accept the alternate hypothesis which indicates that indeed there was a significant change in the preferred mode of payment before and after the Indian 2016 demonetization exercise.

4.1 Gap analysis between before and after demonetization.

Table 3

Thematic	Before (100%)	After (100%)	Higher	Lowest	No. of respondents
Net banking	9.2%	20.2%	-11%		100
Cash	60.5%	21.8%	38.7%		100
Credit & debit card	22.2%	45.0%	-22.8%		100
E-wallet mobile app	1%	6.8%	-5.8%		100
Cheque	7.0%	6.2	0.8%		100

The table above indicated that demonetization preferred modes of payment for net banking before and after demonetization were 9.2% and 20.2% respectively. This gap analysis between before and after for net banking was (-11%) which means there was huge gap between before and after demonetization. Thus consumers preferred net banking mode of payment after demonetization.

Also before and after demonetization the preferred mode of payment for cash were 60.5% and 21.8% respectively. Therefore the gap analysis between before and after demonetization for cash was (38.7%) which means there was huge gap between before and after demonetization. Consumers did not preferred cash mode of payment after demonetization.

Whilst before and after demonetization, the preferred mode of payment for credit and debit card were 22.2% and 45.0% respectively. Therefore gap analysis between before and after for credit and debit card was (-22.8%) which means there was huge gap between before and after demonetization. Therefore consumers preferred credit and debit card mode of payment after demonetization. In addition, before and after demonetization, the preferred modes of payment E-wallet mobile app were 1% and 6.8% respectively. Therefore the gap analysis before and after for E-wallet mobile app was (-5.8%) which means consumers preferred the E-wallet mobile app after the demonetization exercise. Lastly before and after demonetization, the preferred modes of payment for cheque were 7% and 6.2% respectively. Therefore gap analysis before and after for cheque was (0.8%) which means there is small gap between before and after demonetization. Thus consumers did not preferred cheque payment mode after demonetization.

V. Conclusion

The study revealed that prior to the demonetization exercise generally the preferred mode of payment was cash however the post-demonetization preferred mode of payment was mainly Net banking. The finding of the study is in line with the analysis of Reserve Bank of India, which indicated that the mobile banking transaction had grown by 175% and the amount transacted has grown by 369% in the past one year. Thus consumers preferred net banking mode of payment after demonetization. In this view consumers did not preferred cash mode of payment after demonetization. Therefore consumers preferred credit and debit card mode of payment after demonetization. The in a systematic state the consumers preferred the E-wallet mobile app after the demonetization exercise whereas consumers did not preferred cheque payment mode after demonetization. The demonization exercise was a great move.

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