

Research Paper



ADAPTATION TO CASHLESS TRANSACTIONS IN INDIA DUE TO DEMONETISATION – A STUDY WITH SPECIAL REFERENCE TO TRADERS IN KANCHEEPURAM DISTRICT, TAMIL NADU

Dr. Hannah Frederick¹

¹Associate Professor, Department of Commerce, Madras Christian College (Autonomous), Tambaram, Chennai 600 059, Tamil Nadu, India

Nithya.V²

²Research Scholar, Department of Commerce, Madras Christian College (Autonomous), Tambaram, Chennai 600 059, Tamil Nadu, India

ABSTRACT

One of the main aims of demonetization of currency was to introduce a cashless society in India. But, adapting to cashless society was not an easy task for the Indian society especially the traders. As most of the traders were not used to cashless transactions, this move brought by the Government of India had a very great impact on the traders. A study was therefore made to analyze the ease/difficulty in adapting to cashless transactions by traders in Kancheepuram district, Tamil Nadu in their trading activities. The study reveals that though majority of the traders found it easy to adapt to cashless transactions yet there were differences concerning years in business, annual turnover and qualification among the traders.

KEYWORDS: Cashless Transactions, Traders, years in business, annual turnover

1. INTRODUCTION

On 8th November 2016 at 8.15 pm Prime Minister of India, Mr.Narendra Modi in an unscheduled television address to the Nation announced the demonetization of currency notes Rs.500 and Rs.1000 that it will not be a legal tender money from the midnight of 8th November 2016 (Sharmila, Kumar Nithin (2016)¹. The Government introduced new currency notes of Rs.500 and Rs.2000 denomination to be replace old currency notes of Rs.500 and Rs.1000 denominations. New currency note was to be issued to the public through commercial banks and post offices across India by depositing the demonetized old currency notes. The public were forced to deposit their liquid cash in old currency notes of Rs.500 and Rs.1000 into the bank. Thus majority of cash that was in circulation were deposited into the banks. As new currency notes were offered only to a limited extent, the public were forced to adapt cashless transactions for their survival.

Thus, demonetization has enabled the Government to introduce a cashless society in India. Cashless society means a society where cash is replaced by its digital modes of payment. It is one in which all the transactions are done using cards or digital modes. Cashless society means a society in which all bills are paid by electronic money media such as bank, debit cards, credit cards and online payments. The Government to introduce a cashless society must take steps to minimize the circulation of physical currency and make provision for digital payments in the country. The use of

smart phones and the development of 3G network, plus the creation of ATM services by banks has enabled to develop a cashless society at a very fast speed.

1.1 Reasons for implementing a Cashless Society.

There are various reasons for the Government to implement a cashless society.

- In India most of the transactions are done through cash and only less than 5% of all payments happen electronically. The cash to gross domestic product ratio is one of the highest in the world— 12.42% in 2014, compared with 9.47% in China or 4% in Brazil. The number of currency notes in circulation is also far higher than in other large economies; India had 76.47 billion currency notes in circulation in 2012-13 compared with 34.5 billion in the US (IASPOINT,2016)ⁱⁱ.
- A recent study commissioned by the NIA (National Investigation Agency) showed that 250 in every 10 lakhs notes in circulation in India are fake with FICN (Fake Indian Currency Notes) bearing a face value of Rs 400 crores in circulation at any given point in time. The study stated that FICN worth Rs 70 crores was being infused into the Indian market every year. The fake currency racketeers have been left with trash, and with high security features in the new Indian currency notes(IANS, 2016)ⁱⁱⁱ.



- Between 2011 and 2016, the circulation of all currency notes, from the lowest to the highest denomination, grew about 40%. But, the size of Indian economy during this period expanded by only 30%. So obviously there has been a disproportionately high usage of high denomination currency notes (Vaidyanathanlyer, 2016)^{iv}.
- Inflation becomes worse through the deployment of cash earned in corrupt ways. It has a direct effect on the purchasing power of the poor and the middle class. In the purchase of land or a house and also in education and healthcare apart from the cheque, a large amount of cash was demanded. Misuse of cash led to an artificial increase in the cost of houses, land, goods and services, higher education, and healthcare and so on (Hon. PM Modi, 2016)^v.
- Demonetization would impact the terror financing, particularly in Jammu and Kashmir. Terrorists collect donations in Pakistan and then route the money into the state through hawala operators. The terror funding module in place right now will be affected as the terrorist operatives always store money in the form of big currency notes that money has become a piece of paper now (The Hindu, 2016)^{vi}.
- if people disclose their income by depositing money in their bank accounts, it will enable the government to get a good amount of tax revenue which can be used by the government towards the betterment of society such as providing good infrastructure, hospitals, educational institutions, roads and many facilities for poor and needy sections of society (Vinish Parikh (2016)^{vii}.

1.2 Implementing Cashless Payments in India

Kumari Neetu (2017)^{viii} in his article titled "Cashless Payment: A Behaviourial Change to Economic Growth" has drawn attention about cashless payments. The various modes of cash less payments followed in India are identified as cheques, demand drafts, Automated Teller Machine (ATM), NEFT (National Electronic Fund Transfer), RTGS (Real Time Gross Settlements), Mobile money, E-transfers, Point of Sale (POS) terminal, Electronic Purses/Wallets, Mobile Wallets, Credit Cards, Debit Cards, Smart Cards, Personal Computer Banking (Home Banking), Electronic Cheques and Digitized 'E-cash' systems, UPI apps. Cashless methods of payments enables transparency of transactions, easy identification of transactions, security, reduction of risk in handling transactions, reduction of tax evasion, reduced the chance of theft, enables record of spending, avoidance of carrying cash, avoidance of hoarding, prevention of corruption, enables banks to discharge their duties efficiently and finally results in the economic development of the nation which will on the whole benefit to Government. Many people in India have therefore started to adopt cashless payment options. But, adopting cashless transactions is not that easy in India. There are numerous hurdles in making the country cashless, as large part of population are still lying outside the banking net.

1.3 Steps Taken by the Government for a Cashless Society:

The Government of India has however taken steps to enable the public to adopt to cashless transactions. This

has been done by increasing the number of mobile, ATM's, especially in rural areas, giving incentives to people to redeposit excess currency, making POS (Point Of Sale) terminals mandatory for shops, improving payment handling society (Kanishka Singh, 2016)^{ix}. Kumar Ashok Kaithal (2017)^x is of the view that condition will improve in near future with the gradual transformation of Indian economy from cash transaction to cashless transaction. According to Rani Geeta (2016)^{xi}, demonetisation has become a tool to eliminate the currency, so the customers have to shift to cashless means such as Paytm, Internet banking etc.

2. THEORETICAL FRAMEWORKS

Since demonetization, our country has been aiming towards a cashless society and its impact is felt more among the traders than any other people.

The Confederation of All India Traders (CAIT) - one of the largest trade associations in India, said 'businesses in markets across the country has reduced to 25 per cent' since the government announced the surprise move on November 8 night (IANS, 2016)^{xii}.

According to Mitra Abhishek, (2016)^{xiii} Small traders and vendors have been affected the most as they are facing a huge slump in sale. Many of these **small retailers** are not equipped enough to make provisions of digital payments for their customers, and for this reason are having to go through a lot of hardships. Organized, large retailers and malls too are facing a drop in sales and decreasing amount of **store footfalls**, but in the long run can expect normalcy to be restored as customers increasingly adopt to making payments digitally.

Bhattacharyya & Mehta, (2016)^{xiv} states that Consumer footfall in the markets is very low, business men are sitting idle. Small and rural retailers, who generally visit wholesale markets for procurement of goods, couldn't do so for want of sufficient funds of acceptable denomination.

Sagar Ananand (2016)^{xv} findings reveal that the Textile Industry is facing the heat of centre's decision to demonetize the Rs 500 and Rs 1,000 currency notes. Companies are not able to pay wages to workers and not able to procure raw materials. Many of the employees don't have either the bank accounts or the proper address proof and despite the units are ready to give letter, banks are not willing to open accounts for them. The positive side of the story, however, is that many of the units in the traditional clusters were not recording PF and other employee benefits properly, since most of the transactions has been in cash, they will either pay less or won't show them on records.

Vineeth & Merina, (2017)^{xvi} felt that the decision of demonetization was widely accepted by the traders but its planning and implementation was not at all satisfactory. People who operate on small scale were hit the most because their sales faced huge fall suddenly.

A study has therefore been made about impact of demonetization among traders in Kancheepuram district, Tamil Nadu, South India. The study thus helps in identifying the trader's opinion about adopting to cashless transactions in their trading activity.

3. OBJECTIVES OF THE STUDY

1. To identify the ease / difficulty in adjusting to various methods of cashless transactions by traders in Kancheepuram district.
2. To categorize the customers based on their ease/ difficulty in adjusting to various methods of cashless transactions by traders in Kancheepuram district.

3. To assess the ease/difficulty in adjusting to various methods of cashless transactions by traders in Kancheepuram district based on their socio economic variables.
4. To study the relationship between number of years in business, annual turnover of the business and ease/difficulty in adjusting to various methods of cashless transactions by traders in Kancheepuram district.

4. HYPOTHESIS

1. There is association between age and ease/difficulty in adapting to cashless transactions in trading activity.
2. There is association between gender and ease/difficulty in adapting to cashless transactions in trading activity.
3. There is association between qualification and ease/difficulty in adapting to cashless transactions in trading activity.
4. There is significant difference between years in business and ease/difficulty in adapting to cashless transactions in trading activity.
5. There is significant difference between annual turnover and ease/difficulty in adapting to cashless transactions in trading activity.

5. RESEARCH METHODOLOGY

Kancheepuram district is taken for research as this district consists of traders involved mainly in silk business. A sample of 240 respondents was chosen from Kancheepuram district. Out of the 240 the study focuses only on 216 valid

responses were received. Others were eliminated from the sample domain. The data relating to the research is collected through a structured questionnaire distributed to the various traders in Kancheepuram District. Statistical tests such as descriptive statistics, cluster analysis, discriminant analysis, chi square test and logistic regression has been applied to interpret the results for the study. The obvious limitation in this study is that the respondents represent those of a sample picked from a small geographical region.

6. ANALYSIS AND INTERPRETATION

6.1 Ease/ Difficulty in adopting to different methods of cashless transaction.

In the current scenario, after demonetization (2016), traders were forced to adopt cashless transactions in their trading activities. Questions relating to the ease/difficulty in adopting various methods of cashless transactions in trading activities were asked on a 7 point scale ranging from very easy (7) to very difficult (1).

6.2 Cashless transactions methods adopted in trading activities based on ease/difficulty.

As various methods of Cashless transactions were adopted by traders in their trading activities, the ease in adopting to the different method of cashless transactions were analyzed and ranked and shown below.

Table 1: Cashless transactions methods adopted in trading activities by Traders

Table 1 Descriptive Statistics on Cashless transactions methods adopted in Trading activities by Traders			
	N	Sum	Mean
Cheque Facilities	216	1116	5.17
ATM Facilities	216	1098	5.08
Swiping Machine	216	1088	5.04
Net Banking Facilities	216	1068	4.94
Mobile Phones	216	1056	4.89
Computer Technology	216	1054	4.88
Debit Card Purchase	216	1053	4.88
Credit Card Purchase	216	1032	4.78
Barcode System	216	815	3.77

Source: Computed

Inference

The above table reveals that cheque facility was the most common method adopted towards cashless transactions followed by ATM facilities followed by Swiping machine. Barcode system was not adopted by most traders.

6.3 Categorizing the traders into Clusters based on the ease/ difficulty to adapt to Cashless transactions in their Trading activities by Traders

As the ease/difficulty in adapting to cashless transactions in trading activity varies from trader to trader, the researcher found it compelling to apply cluster analysis, whereby K means cluster analysis was used to classify the traders based on their ease/difficulty to adapt to cashless transactions.

Table 2 Final Cluster Centers

Methods to adapt to cashless transactions in trading activities	Cluster	
	1 (Difficult)	2 (Easy)
• Introducing Swiping Machine	3	6
• Using debit card to purchase stock	3	6
• Using credit card to purchase stock	3	6
• Introducing computer technology	3	6
• Using mobile phones for sales/purchases	3	6
• Using ATM facilities to withdraw cash	3	6
• Using cheque facilities for transactions	3	6
• Using net banking facilities	2	6
• Introducing barcode system	3	5

Source: Computed

From the above Table 2 based on the rating scale, the traders were classified into 2 categories- Traders who found it difficult to adapt to cashless transactions and traders who found it easy to adapt to cashless transactions.

Table3: Table of number in each clusters

Cluster	
1 (Difficult)	80.000
2 (Easy)	136.000
Valid	216.000
Missing	.000

Source: Computed

To check if the groups determined by cluster analysis are statistically significant and if the variables significantly discriminate between the groups discriminant analysis was applied. Predictor variables were the various methods of cashless transactions and the dependent variables were the two groups (difficult/easy) determined by K-means algorithm in cluster analysis.

Table 4:Summary of Canonical Discriminant Functions

Eigen values				
Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	4.779 ^a	100.0	100.0	.909

a. First 1 canonical discriminant functions were used in the analysis.

The Summary of Canonical Discriminant Functions shows the canonical relation which is the correlation between the discriminant scores and the levels of the dependent variable. The present correlation of 0.909 which shows a high correlation which indicates that the function discriminates well.

Table 5:Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.173	367.501	9	.000

The Wilks' lambda indicates the significance of the discriminant function. The above table indicates a highly significant function (p < .000) and provides the proportion of total variability not explained, i.e. it is the converse of the squared canonical correlation. So we have 17.3% unexplained. It suggests that model explains 82.7% of the variation in the grouping variable, i.e. whether the traders found it easy or difficult to adapt to various methods of cashless transactions.

Table 6: Classification Results^{a,c}

Cluster Number of Case		Predicted Group Membership		Total	
		1 (Difficult)	2 (Easy)		
Original	Count	1(Difficult)	80	80	
		2(Easy)	1	135	
	%	1(Difficult)	100.0	.0	100.0
		2(Easy)	.7	99.3	100.0
Cross-validated ^b	Count	1(Difficult)	80	80	
		2(Easy)	2	134	
	%	1(Difficult)	100.0	.0	100.0
		2(Easy)	1.5	98.5	100.0

a. 99.5% of original grouped cases correctly classified.
b. Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.
c. 99.1% of cross-validated grouped cases correctly classified.

The classification results reveal that 99.5% of respondents were classified correctly as those traders who found difficult to adapt to cashless transactions and those traders who found it easy to adapt to cashless transactions. The cross validated classification showed that overall 99.1%

were correctly classified. From the above table it can be concluded that 100% is classified accurately for those who found difficult to adapt to cashless transactions and 98.5% were classified accurately in those who found easy to adapt to cashless transactions. Thus, the final classification is shown in Table 7.

Table 7: Classification of Traders based on Ease/ Difficulty to adapt to Cashless transactions.

	Frequency	Percent	Valid Percent	Cumulative Percent
1 (Difficult)	81	37.5	37.5	37.5
2 (Easy)	135	62.5	62.5	100.0
Total	216	100.0	100.0	

Source: Computed

Inference:

Form the above table 7 it is clear that 62.5% of the traders found it easy to adapt to cashless transactions while 37.5% of the traders found it difficult to adapt to cashless transactions in their business.

6.4 Association between Socio demographic variables of the Traders and ease/difficulty in adapting to cashless transactions in trading activity.

To find the association between Socio demographic variables of the traders and ease/difficulty in adapting to cashless transactions in trading activity, Chi square test was applied for age, gender and qualification of the traders.

The following table shows the association between Socio demographic variables and ease/difficulty in adapting to cashless transactions in trading activity.

Table 8: Chi Square Tests for age, gender and qualification of Traders and Ease/difficulty in adapting to cashless transactions in trading activity.

Socio demographic variable	Pearson Chi Square Value	df	Asymp. Sig. (2-sided)
Age	.521	3	.914
Gender	.184	1	.668
Qualification	10.414	3	.015
N of Valid Cases	216		

Source: Computed

As the p value is > 0.05 for age and gender, there is found to be no association between age, gender and ease/difficulty in adapting to cashless transactions in trading activity. Thus hypothesis (H2): "There is association between age and ease/difficulty in adapting to cashless transactions in trading activity" is rejected. Similarly the hypothesis (H3): "There is association between gender and ease/difficulty in adapting to cashless transactions in trading activity" is also rejected. Hence, it can be concluded that age and gender does not have an impact among traders in adapting to cashless transactions in their trading activity.

However as the p value is < 0.05 for qualification, there is a significant difference in the ease/difficulty in adapting to cashless transactions in trading activity among traders from different educational background. The hypothesis (H3): "There is association between qualification and ease/difficulty in adapting to cashless transactions in trading activity" is therefore accepted. Hence, it can be concluded that there is a significant difference in the ease/difficulty in adapting to cashless transactions in trading activity among the traders from different educational background. Table 9 shows the reason for the difference.

Table 9: Qualification of Traders and ease/difficulty in adapting to cashless transactions in trading activity.

Qualification	1 (Difficult)		2 (Easy)		Total	
	No.	%	No.	%	No.	%
<Under Graduate	18	62.1%	11	37.9%	29	100.0%
Under graduate	51	36.4%	89	63.6%	140	100.0%
Post graduate	7	25.9%	20	74.1%	27	100.0%
Professional	5	25.0%	15	75.0%	20	100.0%

Source: Computed

Inference:

From the above Table 9 it is seen that majority of the traders who had qualification less than under graduate level found it difficult to adapt to cashless transactions in their trading activity. Those traders with undergraduate, post graduate and professional qualification found it easy to adapt to cashless transactions in their trading activity.

6.5 Relationship between Number of years in business, Annual turnover of the business and ease/difficulty in adapting to cashless transactions in Trading activities.

A logistic regression was performed to ascertain the relationship between the Number of years in business, Annual turnover of the business and ease/difficulty in adapting to cashless transactions in trading activity. Ease/difficulty in adapting to cashless transactions in trading activity based on the categorization done after applying discriminant analysis as shown in Table 7, with ‘difficult’ taking the value 1 and ‘easy’ taking the value 2 was taken as the dependent variable.

Table 10: Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	13.854	2	.001
	Block	13.854	2	.001
	Model	13.854	2	.001

Table 11: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	271.942 ^a	.062	.085

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Table 12: Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	5.806	8	.669

Table 13: Classification Table^a

	Observed	Predicted			
		Adapting cashless transactions in trading activities		Percentage Correct	
		Difficult	Easy		
Step 1	Adapting to cashless transactions in trading activities	Difficult	11	70	13.6
		Easy	08	127	94.1
Overall Percentage					63.9

a. The cut value is .500

The model used the default 0.500 cut off value to classify each subject's outcome. This means that if the probability of a case being classified into the 'difficult' category is greater than .500, then that particular case is classified into the 'difficult' category. Otherwise, the case is classified as in the 'easy' category. The logistic regression

model was statistically significant, $\chi^2(2)=13.854$, Sig. <.05. The model explained 8.5% (Nagelkerke R^2) of the variance in adapting to cashless transactions in trading activity and correctly classified 63.9% of cases. The Hosmer & Lemeshow test of goodness of fit suggests the model is a good fit to the data as Sig. = 0.669 (>.05).

Table 14: Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	Years in business	-.039	.019	4.278	1	.039	.961
	Annual Turnover	.000	.000	4.130	1	.042	1.000
	Constant	.654	.280	5.461	1	.019	1.922

a. Variable(s) entered on step 1: Years in business, Annual Turnover. Significance <.05

This table provides the regression coefficient (**B**), S.E, the Wald statistic (to test the statistical significance) and Odds Ratio (**Exp (B)**) for each variable category. The Wald test ("Wald" column) is used to determine statistical significance for each of the independent variables. The statistical significance of the test is found in the "Sig." column. From the results above, both Years in business ($p = .039$) and Annual turnover ($p = .042$) added significantly to the model/prediction.

Looking at the result for Years in business, there is a significant overall effect ($Wald=4.278, df=1, p<.05$) for Years in business ease/ difficulty in adapting to cashless transactions in trading activity. Hence, the hypothesis (H4) "There is significant difference between Years in business and ease/ difficulty in adapting to cashless transactions in trading activity" is accepted. The B coefficient are significant but negative, indicating that for every one unit increase in Years in business, the log odds of 'difficult to adapt to cashless transactions in trading activity' (versus 'easy to adapt to cashless transactions in trading activity') decreases. Thus, increasing Years in business is associated with likelihood of decrease in difficulty in adapting to cashless transactions in trading activity. Hence, difficulty in adapting to cashless transactions in trading activity was found to decrease, as number of years of business of the trader increased or rather as the number of years of business of the trader increased, the traders found it easy to adapt to cashless transactions in trading activity.

The results for annual turnover in the above table, indicate that there is a highly significant overall effect ($Wald=4.130, df=1, p<.05$). Hence the hypothesis (H5) "There is significant difference between annual turnover and adapting to cashless transactions in trading activity is accepted. The B coefficients are significant and positive, indicating that for every one unit increase annual turnover, the log odds of 'difficult to adapt to cashless transactions in trading activity' (versus 'easy to adapt to cashless transactions in trading activity') increases. Thus, increasing annual turnover is associated with likelihood of increase in difficulty in adapting to cashless transactions in trading activity. Hence, difficulty in adapting to cashless transactions in trading activity also increased, as annual turnover of the trader increased.

7. FINDINGS

The study reveals the following findings.

- Cheque facility was the most common method adopted towards cashless transactions followed by ATM facilities followed by Swiping machine. Barcode system was not adopted by most traders.

- 62.5% of the traders found it easy to adapt to cashless transactions while 37.5% of the traders found it difficult to adapt to cashless transactions in their business.
- Traders who had qualification less than under graduate level found it difficult to adapt to cashless transactions in their trading activity. Those traders with undergraduate, post graduate and professional qualification found it easy to adapt to cashless transactions in their trading activity.
- Difficulty in adapting to cashless transactions in trading activity was found to decrease, as number of years of business of the trader increased or rather as the number of years of business increased, the traders found it easy to adapt to cashless transactions in trading activity.
- Increasing annual turnover is associated with likelihood of increase in difficulty in adapting to cashless transactions in trading activity. Hence, difficulty in adapting to cashless transactions in trading activity also increased, as annual turnover of the trader increased.

8. CONCLUSIONS

The study reveals that demonetisation has led India towards a Cashless society, but this transition was found to be difficult especially among traders. The traders whose annual turnover was high, found it difficult to adapt to cashless transaction when compared with traders whose annual turnover was low. This could be because of hoarding of cash and unaccounted money prevalent among those traders with high annual turnover. Thus the very purpose of the Government to introduce a cashless society through demonetisation was fulfilled among the traders in Kancheepuram district. Further those traders with less number of years in business found it difficult to adapt to cashless transactions. This could be because of low capital and difficulty to compete with well-established business among traders.

Traders whose qualifications were less than undergraduate level, too found it difficult to adapt to cashless transaction. This implies that to adapt to cashless transactions the traders need to have qualification at least above undergraduate level. This will enable them to use Swiping Machine, ATM, Paytm, Mobile phones, Net banking, Cheque facility, computer technology etc. as the traders need to have minimum knowledge to operate these systems which is essential for cashless transactions in their trading activities.

The study shows that overall traders found it easy to adapt to cashless transaction. This could be because of the

positive attitude of traders who are basically entrepreneurs, willing to face any challenge that comes on their way and ability to adapt themselves to any situation for their survival and success.

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