# Consumers' and Retailers' Kinds of Awareness of Cashless Payment System

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**Abstract:** The core foundation of a country's fiscal system, including all institutions, information, technologies, rules and standards that enable financial intermediation is its "financial infrastructure." A lot of modernization on payment system is found in most of the developed and developing economies. The main implications of all these changes are that the physical cash is replaced with many other electronic and digital modes of payment.

This study focuses on determining the kinds of awareness of Cashless Payment Systems among consumers and retailers in India. A Survey research approach was adopted for the study with a sample size of 384 for both consumers and retailers. A structured questionnaire was the main instrument used for data collection. The results of the study indicate that cashless economy is the new future and India, sooner will transform towards a less-cash society.

Keywords: Cashless Payment Systems, Kinds of Awareness, Consumers, Retailers, Cashless Economy

### 1. INTRODUCTION

The core foundation of a nation's fiscal system, comprising all establishments, information, technologies, rules and standards that enable financial intermediation is its "financial infrastructure." A lot of modernization on payment system is found in most of the developed and developing economies. The main implications of all these changes are that the physical cash is replaced with many other electronic and digital modes of payment.

In an earlier time, countries used barter system as a medium of exchange. It then shifted to a standard currency system. Now the trend of cash base is pulling down as many other modes of payment is coming up like electronic payment, mobile payment, debit and credit cards, mobile wallet, internet payment, etc. All these on a long run, would concentrate on a new development called the cashless economy. As per statistics, there are a lot of countries like the US, which has restrictions on usage of cash and according to Federal Reserve Payments (2013), US accounts for 55% of noncash transactions.

Talking from the Indian perspective, one of the major challenges towards a less-cash society is that, dependency on cash is a entrenched habit here. From a user's perspective, cash is seen as a better mode of payment as against non-cash ways from several aspects such as awareness, acceptance, speed, cost, having a control of spending, anonymity, etc. When there are countries which have accepted the various non-cash payment modes and are trying their best in being a cashless economy, there are still a lot of countries who are very reluctant to change their habit of usage of cash. The reasons are plenty. To list a few, it starts with the awareness of the various modes of payment, acceptance, technological literacy, etc.

The change to a cashless economy will only bring growth and modernization to a country. But many are reluctant to this fact as a lot of things will have to be changed and it is always a challenge to make the customers' use non-cash payments.

### 2. REVIEW OF LITERATURE

Payment modes have evolved from the barter system to currencies, and now to various cashless modes like payment cards, NEFT, RTGS, ECS Transactions, mobile banking, smartphones, internet penetration, etc. The review is divided country-wise to gain an understanding of how cashless payment system is growing and influencing these countries. Few countries are evaluated based on studies from these countries.

Sweden, one among the European countries, who were pioneers in introducing bank notes in 1661, has gone a long way in becoming the most likely first country to declare the entire nation cashless shortly (Arvidsson, 2013). The pattern of cash usage by Germans is compatible with systematic economic decision making (Kalchkreuth, Schmidt & Stix, 2009). The consumers decide upon the adoption of payment cards and then use available payment media according to the transaction and personal characteristics. Older consumers use more cash significantly compared to younger consumers, the difference in payment behavior is not explained by age as such but to a large extent by the difference in the characteristics of these two groups.

To explain the factors of adoption of mobile banking as a means to go cashless, several models and techniques are proposed, such as Technology Acceptance Model (Venkatesh & Bala, 2008), Theory of Reasoned Action (Fishbein & Ajzen, 1967), Roger's

Diffusion of Innovation (Odumeru, 2013). Roger's Diffusion of Innovation Theory factors along with age and educational background (Odumeru, 2013) was used to investigate the determinants of the adoption of mobile banking. This proved that there existed positive effect on its adoption with these factors.

The users' awareness and their attitude ( Adeleye, Olukumoro & Asafe; 2014) of using cashless systems, are confident that they know that this would help fight corruption & money laundering and reduce the cost of using cash. In the case of employment options for the society, open source entrepreneurship (Osunade, 2012) can succeed if the entrepreneurs have computing and business skills. However, from the consumers' angle, overspending (Ochie, 2012) is an issue to tackle among the cashless payment users. In the consumer and merchant market, cash has a predominant role and that role is tough to be replaced. Even though the majority of the world has adopted towards a cashless society, the behavior towards cashless transactions is different due to factors like trust, security, frauds, risks and so on (Kumar, 2015). As a percent of GDP, the value of notes and coins in the economy is 12.2% which is higher than countries like Russia (11.9%), Brazil (4.1%), Mexico (5.7%) and so on (Joseph, Korenke, Mazzotta & Chakravorti, 2013).

Most Indians transact primarily in cash. The main reason being a lack of means to use non-cash payments even if they want to. The growth in value of ATM transactions has far outpaced growth in the value of card payment transactions. Despite its progress in IT and telecommunications, the country is left behind by its peers in mobile payments. Mobile payments have grown a lot and is still increasing in the country due to massive penetration of smartphones and internet. However, there does not exist a standardized, interconnected and widely accepted mobile payment procedures which are crucial for successful diffusion of mobile payments (Zhong, 2009). The RBI has very consciously chosen a bank led model over a business led or a telecom led one to achieve its financial inclusive goals. Aadhaar, India's unique ID project will reduce the cost of serving the unbanked population. With a difference in the demographical pattern of the population, even though the trend of becoming cashless has ignited in the country, there seems to be reluctance among the stakeholders to abolish cash due to various reasons, one among those being the emotional and sentimental value associated with cash.

There exists a lot of reasons why the stakeholders in the payment industry are concerned about, and measures are to be taken to minimize the risks due to growing use of electronic money and e-payment systems (Chelewat & Trivedi, 2014). Since there are a lot of private players in the payment ecosystem and because there is a lack of uniform infrastructure for payments, currency management becomes a concern. Different stakeholders have notions of cashless transactions and their behavioral intention towards adopting and accepting cashless payments vary.

#### 3. RESEARCH GAP

The above reviews and arguments indicate that cashless payment system is an emerging concept and is recognized globally. However, India being a cash rich country, has still a long way to attain this system and welcome it into the reality. Various noncash transactions have been encouraged and happening, but they still cannot be compared to the existence of cash payments and its dominance. The adoption and acceptance of cashless payments and the behavioral intentions of the several stakeholders related to payments industry are to be analyzed. The kinds of awareness of the users' of cashless payment system is to be analysed and evaluated. This research identifies the above as the gap among the various reviews conducted and proposes to examine the reasons for varied kinds of awareness related to cashless payments among consumers and retailers.

#### 4. RESEARCH OBJECTIVES

The resulting objectives are edged after an inclusive understanding into the various literature, and taking leads from the several studies conducted worldwide, for substantiating the present study.

- 1. To analyze the demographic characters of consumers and retailers with respect to usage of different types of cashless payments.
- 2. To determine the kinds of awareness of cashless payment system among consumers and retailers

### 5. RESEARCH HYPOTHESES

H1A: Demography (gender, Age, Education and Occupation) of consumers has a significant impact on usage of cashless payments.

H1B: Demography of retailers has a significant impact on usage of cashless payments.

H2A: Consumers' varied kinds of awareness has a positive relationship on the consumers' intention to use cashless payment system. H2B: Retailers' varied kinds of awareness has a positive relationship on the retailers' intention to use cashless payment system.

### 6. RESEARCH METHODOLOGY

#### 6.1 Data collection

Survey questionnaires were developed to gather information and were distributed to consumers and retailers selected randomly who use cashless modes of payment. The questions and statements were closed ended and choices were limited to fixed responses on specific points on nominal scales and Likert type scales. The questionnaires were distributed to the 500 respondents (consumers and retailers separately) out of which 384 for each were good to be taken for further research and analysis.

#### 6.2 Statistical tools

Reliability test was performed first to check the reliability of variables included in the study. Cross tabulation was done to analyze the demographic characteristics of respondents. Factor analysis was carried out to find out the major factors influencing consumers' and retailers' intentions to use cashless payment system. Kruskall Wallis test was done to check the statistical differences among the variables.

### 7. RESULTS AND DISCUSSIONS

#### 7.3.1 Reliability Test Results:

Reliability test was conducted using Cronbach's alpha. Srinivasan (1985) found that a reliability coefficient higher than 0.7 is acceptable. From the reliability statistics in the below table, the test score found to be good (0.861 for consumers and 0.832 for retailers).

	Table No: 7.3.1 Reliability Test Res	ults							
	Reliability Statistics								
	Cronbach's Alpha	No. of Items							
Consumers'	0.861	20							
Retailers'	0.832	4							

### 7.3.2 Demographic profile of the consumers'.

For the purpose of consumers' survey, 384 consumer responses were finally used for analysis. The consumers who responded were those who are aware and those who use cashless payments. The below table no: 7.3.2 represents the demographic characteristics of consumers and usage of cashless payment systems among them.

The usage of different modes of cashless payments based on gender, age, income, education and occupation are depicted in the table. Here majority of the respondents 197 (51.3%) are male who are using cashless payments. 42.4 % (163) of the respondents belongs to the category of age group of 15 - 25 years. 53.9 % (207) of the respondents are earning between 2 lakhs to 10 lakhs. 40.1 % (154) of the respondents are qualified as post graduates. 25.3 % of the respondents are students, followed by 20.6 % of the respondents are teachers/ lecturers/ professors.

Here we accept hypothesis 1 and results prove that demography of consumer respondents significantly impacts usage of cashless payments.

					Tab	le No: 7.	3.2				
			Den	ographic	Profile o	of the con	nsumer re	spondents	,		
					Intentio	n to use	various ca	ashless pay	ments		
			Mobile banking	Online payment system	Mobil e wallet	Debit card	Credit card	Cheques	Prepai d cards	Bank transfer s	Total
Gender	Male	Yes	131	142	76	158	74	112	28	112	197
		No	66	55	121	161	123	85	169	85	
	Female	Yes	125	159	65	39	72	103	35	104	187
		No	62	28	122	26	115	84	152	83	
Age	15 - 25	Yes	103	131	60	132	66	82	22	87	163
	13 - 23	No	60	32	103	31	97	81	141	76	
	26 - 35	Yes	90	103	49	108	36	71	30	65	137
	20 - 33	No	47	34	88	29	101	66	107	72	
	36 - 45	Yes	55	60	27	66	37	60	10	62	68
	30 - 43	No	13	8	41	2	31	8	58	6	
	16 55	Yes	8	7	5	13	7	2	1	2	15
	46 – 55	No	7	8	10	2	8	13	14	13	
	56 60	Yes	0	0	0	0	0	0	0	0	1
	56 - 60	No	1	1	1	1	1	1	1	1	

Income	Less than 2	Yes	65	91	44	77	48	51	12	55	105
	lkhs	No	40	14	61	28	57	54	93	50	
	2 lks – 10	Yes	141	153	71	180	65	123	38	116	207
	lks	No	66	54	136	27	142	84	169	91	
	10 lks - 20	Yes	24	24	12	29	17	18	8	23	33
	lks	No	9	9	21	4	16	15	25	10	
	20 lks - 30	Yes	25	28	13	29	16	22	4	21	34
	lks	No	9	6	21	5	18	12	30	13	
	Above 50	Yes	1	5	1	4	0	1	1	1	5
	lks	No	4	0	4	1	5	4	4	4	
Education	Primary	Yes	15	16	7	17	6	12	0	9	20
	Filliary	No	5	4	13	3	14	8	20	11	
	Higher	Yes	34	41	24	40	20	26	11	28	49
	secondary	No	15	8	25	9	29	23	38	21	
	Graduation	Yes	63	89	37	91	40	54	12	60	117
	Graduation	No	54	28	80	26	77	63	105	57	
	Post	Yes	113	122	60	132	66	104	25	105	154
	graduation	No	41	32	94	23	88	50	129	49	
	Professional	Yes	31	33	13	40	14	19	15	14	44
	qualification	No	13	11	31	4	30	25	29	30	
Occupation	Private	Yes	37	33	21	43	24	29	6	30	52
	sector	No	15	19	31	9	28	23	46	22	
	Public	Yes	23	26	15	28	11	19	6	21	39
	sector	No	16	13	24	11	28	20	33	18	
	Profession	Yes	135	161	67	175	71	122	41	114	195
	als	No	60	34	128	20	124	73	154	81	
	Others	Yes	61	81	38	73	40	45	10	51	98
	Others	No	37	17	60	25	58	53	88	47	

#### 7.3.3 Demographic profile of the retailers'.

For the purpose of retailers' survey, 391 retailer responses were finally used for analysis. The retailers who responded were those who are aware and those who use cashless payments.

The above table no: 6.3.3 represents the demographic characteristics of retailers and usage of various cashless payment systems among various retail sectors.

Here we accept hypothesis 1 and results prove that demography of retailers respondents significantly impacts usage of various cashless payments among different retail sector.

					Table No:							
			Demog	raphic Pro	ofile of the r	etailers' res	pondents'					
TYPES C	OF RETAIL	Use various cashless payments										
BUSI	NESSES	Mobile	Vouche	Online	Bank	Mobile	Cheque	Credit	Debit			
		Wallets	r/	paymen	transfers	banking	s	card	cards			
			coupon	t								
				system								
Grocery /	1 least	20	26	23	11	30	11	29	18			
Food &	2	0	5	6	1	1	6	1	1			
Beverage	3	0	0	1	17	0	12	1	11			
S	4	11	0	0	0	0	1	0	1			
	5 Highest	0	0	1	2	0	1	0	0			
Departm	1 least	21	24	20	14	15	14	26	0			
ental	2	6	4	3	2	3	6	4	0			
Stores	3	3	0	7	14	6	4	0	30			
	4	0	2	0	0	6	0	0	0			
	5 Highest	0	0	0	0	0	6	0	0			
Hyperma	1 least	18	6	3	21	6	18	6	0			
rket	2	13	12	16	10	10	13	17	0			
	3	0	13	12	0	15	0	8	8			
	4	0	0	0	0	0	0	0	23			

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		5 Highest	0	0			0		0	0

#### 7.3.4: Factor analysis for consumers' kinds of awareness of cashless payment system.

Table No.7.3.4: KMO and Bartlett's Test							
Kaiser-Meyer-Olkin Measure of Sampling Adequacy802							
	Approx. Chi-Square	4503.720					
Bartlett's Test of Sphericity	df	190					
	Sig.	.000					

This test was performed with variables used under level of awareness of cashless payments. The KMO value for the collected data on the variables was 0.802 which was higher than the recommended minimum of 0.5 with an approximate chi - square of 4503.720 significant at 1 % thereby shows the validity and suitability of the responses collected for level of awareness of cashless payments through the study, thus adequate for proceeding further with the research.

#### **Table No: 7.3.4** Factor Segregation on Consumers' Kinds of Awareness Cashless Payment System: Rotated Factor Loadings % Of Variance Factor Variables / Factors Items Factor Eigen Cumulative No. Loadings Value Explained % 1 Usability awareness AW10 0.762 6.827 34.134 34.134 0.760 AW12 AW11 0.753 AW14 0.733 AW13 0.709 AW19 0.700 2 0.881 2.721 Technology awareness AW8 13.603 47.737 AW7 0.732 0.705 AW6 AW9 0.667 AW20 0.603 AW5 0.566

1.820

1.284

1.125

9.100

6.421

5.626

56.836

63.258

68.884

0.844

0.809

0.750

0.763

0.657

0.532

0.733

0.690

AW16

AW15

AW17 AW18

AW3

AW4

AW5

AW1

AW2

#### 7.3.5: Kinds of awareness of cashless payment system among consumers

3

4

5

Policy awareness

basis of payment

Mindfulness / alertness

Understanding of different

H2A<sub>0</sub> : Kinds of awareness of cashless payment system among consumers has no influence on the cashless payment system usage H2A<sub>A</sub> : Kinds of awareness of cashless payment system among consumers has an influence on the cashless payment system usage Table No: 7.3.5

## Kruskal Wallis Test between Kinds of awareness of cashless payment system among consumers and cashless payment system usage

Ranks									
	OVERALL AWARENESS	Ν	Mean Rank						
INTENTION TO USE - DV	Strongly Agree	146	113.34						
	Agree	224	233.98						
	Neutral	12	350.88						
	Disagree	2	375.50						
	Total	384							

Test Statistics <sup>a,b</sup>						
INTENTION TO USE - DV						
Chi-Square	136.354					
df	3					
Asymp. Sig.	.000					

a.	Kruskal Wallis Test
b.	Grouping Variable: OVERALL AWARENESS

The above test showed that the Cashless Payment System usage is significantly influenced by the overall awareness of cashless payments among the respondents. The awareness of cashless payments is statistically significant with Cashless Payment System usage with a  $\chi^2 = 136.354$ ,  $\rho = 0.000 < 0.05$ ; with a mean rank of cashless payment system usage of 113.34 for strongly agree, 233.98 for agree, 350.88 for neutral and 375.50 for Disagree. Among the respondents, even though there are people who are aware of various cashless payment modes, there are many of them who lack adequate awareness of the mechanism and benefits of cashless payment system.

Therefore, the null hypothesis is rejected as the significance level is below the cut off of 0.05 and the alternative hypothesis which proposes that kinds of awareness of cashless payment system among consumers has an influence on the cashless payment system usage is accepted.

#### 6.3.6: Factor analysis for retailers' awareness of cashless payment system.

Table No. 7.3.6 : KMO and Bartlett's Test								
Kaiser-Meyer-Olkin Measure of	.770							
		701.494						
Bartlett's Test of Sphericity		6						
		.000						

This test was performed with variables used under awareness of cashless payments. The KMO value for the collected data on the variables was 0.770 which was higher than the recommended minimum of 0.7 with an approximate chi – square of 701.494 significant at 1 % thereby shows the validity and suitability of the responses collected for awareness of cashless payments through the study, thus adequate for proceeding further with the research.

 Table No: 7.3.6A:

 Factor Segregation on Retailers' Awareness Cashless Payment System:

 Rotated Factor Loadings

Factor No.	Variables / Factors	Items	Factor Loadings	Eigen Value	% Of Variance Explained	Cumulative %
1	Technology and	AW1	.61 <mark>0</mark>	2.672	66.804	66.804
	Usability	AW2	.904			
	awareness	AW3	.878			
		AW4	.843			

#### 7.3.7: Kinds of awareness of cashless payment system among retailers

Kruskal Wallis analysis of variance among level of awareness of cashless payment system among retailers with respect to the frequency of usage of cashless payment system.

Hypothesis 2B :

 $H2B_0$ : There is no significant difference on the cashless payment system usage among retailers due to different kinds of awareness  $H2B_A$ : There is a significant difference on the cashless payment system usage among retailers due to different kinds of awareness

**Table No: 7.3.7** 

#### Kruskal Wallis Test between Level of awareness of cashless payment system among retailers and cashless payment system usage

Ranks									
	DV INTENTION TO USE	N	Mean Rank						
TECHNOLOGY AND	2	13	152.08						
USABILITY AWARENESS	3	138	118.66						
	4	229	240.80						
	5	11	285.45						
	Total	391							

Test Statistics <sup>a,b</sup>		
	TECHNOLOGY AND USABILITY AWARENESS	
Chi-Square	113.208	
df	3	

Asymp. Sig.	.000	
a. Kruskal Wallis Test		
b. Grouping Variable: DV INTENTION TO USE		

The above test showed that the Cashless Payment System usage is significantly influenced by the overall awareness of cashless payments among the respondents. The awareness of cashless payments is statistically significant with Cashless Payment System usage with a  $\chi^2 = 113.208$ ,  $\rho = 0.000 < 0.05$ ; with a mean rank of cashless payment system usage of 152.08 for agree, 118.66 for neutral, 240.80 for disagree and 285.45 for strongly disagree. Among the respondents, even though there are people who are aware of various cashless payment modes, there are many of them who lack adequate awareness of the mechanism and benefits of cashless payment system.

Therefore, the null hypothesis is rejected as the significance level is below the cut off of 0.05 and the alternative hypothesis which proposes that there is a significant difference on the cashless payment system usage due to different kinds of awareness is accepted.

#### 8. IMPLICATION OF THE STUDY

Cashless payments have become one of the most important development in the payments industry. The biggest advantage of cashless payments is its ease of use and convenience. All the stakeholders of cashless payments are benefited from its usage. Correct knowledge and awareness about the system provides confidence to the consumers and retailers for using the cashless payments to the best capacity. The usage of cash is a deeply rooted habit among Indians. Even with the introduction of cashless payments, this habit remains among the public. With proper guidance and awareness of the cashless payments, different stakeholders can be redirected towards the best usage of cashless payments while making them move away from the usage of physical cash. The major barrier in the way of cashless payments is perception of consumers towards security related to payments. Due to innovations in technology of processing and payments, security of cashless payments has improved. Even though complete transition from cash to cashless payments takes time, the initiation and transformation among the different stakeholders has started due to technology upgradation and policy changes laid down by the government.

#### 9. CONCLUSION

Cashless payment users are spread throughout the length and breadth of the country though mainly concentrated in the urban areas. As it is not humanly possible to collect the acceptance and adoptions factors of billions of Indians, the scope of the study will cover Bangalore Cosmopolitan City. The sample for the study for the purpose of collecting first hand information is restricted to identified demand sides such as consumers and retailers.

Results from the data analysis considered hypotheses and fulfilled the key research objectives. Consumers' and retailers' demographic profile plays a significant role in cashless payments. Most of the youngsters who make payments frequently go for cashless payments. Ease of use, convenience and security are the basis for choosing payment system and also it produces trust among stakeholders. Among all the factors, usability awareness and transformation of regulations in the economy has been found as the most influential factors in framing consumer's intentions to use cashless payment system and technology and usability awareness has been found as the most influential factors in framing retailer's intention to use cashless payments.

This study will help consumers and retailers in developing positive perception towards cashless payment system. The change to a cashless economy will only bring growth and modernization to a country. But many are reluctant to this fact as a lot of things will have to be changed and it is always a challenge to make the consumers' use non-cash payments.

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