# Factor Influencing to Users' Acceptance of Digital Payment System

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*Abstract*— The worldwide proliferation of internet has propounded the new edge system of electronic payments which is one of the revolutions in economic system. This has replaced the cash economy to plastic card or cloud economy and then transformed to virtual payment system. Today one cannot imagine life without use of internet and mobiles which has virtually kept the banks in the pockets of the general public. The recent demonetization has proved to be a catalyst in increasing the online transactions; thereby the term financial inclusion has gained terrific momentum in recent past. The reforms in information technology along with economic revolution has paved the growth of online payment systems like plastic card, net banking which offer a variety of services to the customers. There have been upward trends in the entire e-payment mode than physical transaction for last two years. This paper studies the issues influencing the acceptance of digital payment system in general. The paper is based on primary sources i.e. questionnaire and data was collected by using judgmental sampling, multiple regression used to conclude the outcome of the data. The findings of the study depicts that four independent variables namely security system, government regulations, convenience, productivity & flexibility were significantly associated with consumer's intention towards using digital payment mode than technical know-how and internet access. Thus, it can be construed that these variables may pave the way for new age payment system.

Keywords— Net banking, digital payment, internet cloud, perceived usefulness.

## I. INTRODUCTION

Massive number of digital payment systems witnessed after the monetary reform demonetization. Simultaneously National Payments Corporation of India standardized and endorsed various digital payment transactions that have user friendly interface such as Unified Payments Interface (UPI), Bharat Interface for Money (BHIM), USSD, RuPay and other cash wallets option with different domain name. In November 2016, the number of digital transactions were 24.13 crore and after demonetization it augmented up to 43.64 crore till September 2017 that depicting an increase of 80.85 percent. The corpus of digital transactions surged by 52% to Rs 1, 47,624 crore in September 2017 from Rs 96,833 crore in November 2016. There was also stride progress in number of transactions through plastic cards at point-of-sale devices augmented 17.07% to 24 crore in September 2017 from 20.50 crore in November 2016 (statistical report of Reserve Banks of India). Simultaneously the data in terms of assessment rose by 35.69% to Rs 47,820 crore in September, 2017 from Rs 35,240 crore in November 2016. Further, the ministry is all set ready to take proactive measures in order to encourage the growth of digital mode of payment [5].

On the flipside, in India where majority of the population depend on unadventurous payment system i.e. physical cash and bankers' check rather than e-payment. Greater parts of population are still loath to deal with such payment system because of some technical issues, availability of internet, security and privacy concern etc. Most of the time, people do not have typical know how about internet and its utility, way to cope with system and usage except knowing and operating ATM. People abstain from all stride progress of information and communication technology which are taking place in every sphere not only in banking but also in their daily life. In metro cities majority of the people are still using conventional or traditional payment appliance. For gigantic payment mode such as sale and purchase of gold, furniture, building, land etc. people yet prefer physical cash rather than e-payment [7].

The worldwide propagation of virtual system has brought the momentum in electronic payment systems which provoke the mass to use more and more plastic cards/money to make routine payment for goods and services, payments of bill, transfer, investment etc. [6].

Due to reach of economic reforms in every sphere of human life during the last few decades, Indian banks have also

espoused global standards in order to strengthen their working and meet out the challenges which were earlier hard nut to crack. According to statistical report of Reserve Bank of India 2017, there has been tremendous growth in digital payments than cash base or conventional system. There are three major categories of contemporary payment system in India, namely bulky value payment system, retail payment system, and put up for sale electronic system. As per the statistical report published (RBI/2017-18/15), there is massive leap in all digital transaction right from RTGS, NEFT, CTS, UPI, USSD, SMART CARDS, PPIS and Mobile banking. The total volume increased from 671.5 million to 964.9 during 2016 to Oct. 2017 whereas the value of all the transaction rose from 94004.2 billion to 114527.8 during given period of time.

## II. REVIEW OF LITERATURE

There are many factors affecting e-payment along with approaches like people awareness, expectancy, social influence and adoption intention towards the system. They found that Nigerian banks are still unaware about mechanism or utility of electronic payment system, resulting they are not availing advantage of this new age information and communication system. Due to not using these instruments in full spectrum, their challenges still persisting and therefore they are unable to meet the requirement of global standards and demand of the customers as well [1]. Some study outlined the attitude of the customers who are using digital services and explore the problems and conclude some constructive suggestions to popularize the utility of internet base payment system [4].

The researchers analyzed some security related issues while using of real time virtual payment system and tried to establish common nexus among perceived risk, risk avoidance, lawful protection, current benefits and overall satisfaction. All these variables were significant at different level of satisfaction [3].

The analyst found some determinants for the espousal of digipayment instruments which have been using by the existing customers. They studied the inside of various types of risks and customer's perception towards these new age payment system. Similarly, they also emphasized the need to adopt and understand the system for both bank and customers [2].

The study analyzed expectation of user's mind in the direction of e-payment through extension synthesis model of acceptance. They also brought some meaning nexus among various variables like perceived worth, ease of use, velocity, existing benefits, outlook, perceived contentment, actual use and continuation of service factors [8].

## **III. OBJECTIVES OF THE STUDY**

- a. To study the technical and perceived security factors that influencing consumer's intention towards digital payment.
- b. To analyze performance expectancy factors that influence consumer's intention towards digital payment.

# **IV. HYPOTHESES OF THE STUDY**

 $H_1$ : There is significant relationship between influencing consumer's intention towards digital payment and technical factors. (TF-1 & TF-2)

H<sub>2</sub>: There is significant relationship between influencing consumer's intention towards digital payment and perceived security factors. (PSF-1 & PSF-2)

H<sub>3</sub>: There is significant relationship between influencing consumer's intention towards digital payment and performance expectancy factors. (PEF-1& PEF-2)

					-	-			(Volun	ne-Million:	Value- B	illion)
Data for the perio d	RTG S	NEF T	CTS *	IMPS *	NACH *	UPI *	USSD** volume (in thousands )	Debit and Credi t Cards at POS &	PPI #	Mobile Bankin g	Total	
	Vol.	Vol.	Vol.	Vol.	Vol.	Vol.	Vol.	Vol.	Vol	Vol.	Vol.	value
Nov- 16	7.9	123.0	87.1	36.2	152.5	0.3	7.0	205.5	59. 0	72.3	671. 5	94004.2
Dec- 16	8.8	166.3	130.0	52.8	198.7	2.0	102.2	311.0	87. 8	70.2	957. 5	104055. 3

Table 1Electronic Payment System as on Nov.2017

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Jan- 17	9.3	164.2	118.5	62.4	158.7	4.2	314.3	265.5	87. 3	64.9	870. 4	97011.4
Feb- 17	9.1	148.2	100.4	59.7	150.5	4.2	224.8	212.3	78. 4	56.2	763. 0	92594.5
Mar- 17	12.5	186.7	119.2	67.4	182.1	6.2	211.2	229.7	90. 0	60.8	893. 9	149589. 1
Apr- 17	9.5	143.2	95.3	65.1	212.6	6.9	188.9	231.1	89. 2	61.0	853. 1	109602. 2
May- 17	10.4	155.8	97.1	66.7	194.4	9.2	192.6	233.4	91. 3	64.9	858. 5	111109. 3
Jun- 17	9.8	152.3	91.9	65.8	197.3	10.2	198.9	232.4	84. 7	77.1	844. 7	113745. 2
Jul- 17	9.4	148.1	92.2	69.1	204.3	11.4	190.7	237.6	88. 7	69.5	861. 1	107378. 4
Aug- 17	9.5	151.6	92.1	75.7	205.2	16.6	191.8	243.0	89. 7	70.8	883. 4	109817. 9
Sep- 17	9.6	157.7	92.2	82.9	176.0	30.8	202.7	240.3	87. 5	86.3	877. 0	124706. 8
Oct- 17	10.0	158.8	94.4	88.1	184.7	76.8	184.6	255.7	96	96.2	964. 9	114527. 8

Source: www.rbi.org

### V. RESEARCH METHODOLOGY

**Collection of data:** This study delves both primary and secondary source of data. The relevant data collected through structured questionnaire and respondents were mainly from education and banking sector. The respondents were asked beforehand whether they had been with e-payment services. **Tools of analysis:** The collected data recorded, analyzed and interpreted in the significant manner with the help of SPSS. The statistical tools-regression and Likert five point scale were used.

**Sample size:** A total of 300 respondents were covered in the study but only 265 respondents have attempted all the statements and hence, the analysis was confined to these respondents only. The questionnaire consists of two sections. The first part consists of five questions about demographic profile of the respondents (table-1). Second part consists of six independent variables along with influencing consumer's intention to digital payment. The period of the study from April 2018 to June 2018.

Table 2 Demographical Description							
Factors	Classification	Frequency	Percent				
Gender	Male	155	58.50				
	Female	110	41.50				
	Total	265	100				
Age	Under 30	110	41.50				
	30-50	90	34.00				

# VI. DATA ANALYSIS AND INTERPRETATION

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	Above 50	65	24.50
	Total	265	100
Education	Less than secondary	25	09.40
	Graduate	86	32.40
	Postgraduate	154	58.20
	Total	265	100
Occupation	Service	52	19.50
	Business	118	44.50
	Professional	95	36.00
	Total	265	100
Income	Less than 20,000	28	10.60
	20,000-50,000	92	34.70
	Above 50,000	145	54.70
	Total	265	100

Table-2 shown 265 samples chosen for the study, 155 respondents were males and 110 respondents were females, 110 respondents belonged to the age group of fewer than 30, 90 respondents to 30-50, 65 respondents above 50. Education divided into less than secondary, graduate and post graduate with number of respondents 25, 86, 154. Occupation had three category service, business and professionals with number of respondents 52, 118 and 95. Income level categorized into less than 20,000, 20,000-50,000 and above 50,000 with number of respondents 28, 92 and 145.

In order to test the hypothesis, multiple regressions used to analyze the relationships between the predictors (independent variables) and the dependent variables. The hypothesis and results are as follows:

Table 3 Measures based on factors influencing consumer's
intention to use digital system

Factors	Measure	es
		Internet or system Access
Technical	TF-1	
factors		Level of education or know
	TF-2	how
		Security system
Perceived	PSF-1	
Security Factors		Government and central bank
	PSF-2	regulations
		Productivity and flexibility in
Performanc	PEF-	the transaction
e	1	
Expectancy		Convenient in the transaction
Factors	PEF-	
	2	

## Table 4 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.589 <sup>a</sup>	.346	.331	1.0424

a. Predictors: (Constant), Convenient, Internet access, Security system, Knowhow, Productivity, Regulations

Multiple regression depicted six major independent variables versus the customers' adoption of digital payment system is depicted in table 6. All variables indicate regression model i.e. R- 0.589 whereas inter correlation among all independent variable i.e. R square is 0.346. Thus, the model explains only 34.6 percent influence that six independent variables have on the dependent variable. The ANOVA, as shown in table 5 below implied that the F value of 22.793which is significant at the 0.00 level. This result reflects that the 34.6 percent of the variance (R square) in customers' adoption of digital payment services has been significantly explained by the independent variables.

Table 5 ANOVA<sup>a</sup>

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	148.607	6	24.768	22.793	.000 <sup>b</sup>
Residual	280.352	258	1.087		
Total	428.958	264			

Dependent Variable: Intention towards digital payment Predictors: (Constant), Convenient, Internet access, Security system. Knowhow. Productivity. Regulations

Table 6 Coefficients <sup>a</sup>									
Model	Unstar Coef	ndardized ficients	Standardized Coefficients	t	Sig.				
	В	Std. Error	Beta						
(Constant)	.429	.403		- 1.064	.288				
Internet access	.069	.058	.063	1.192	.234				
Security system	.523	.061	.465	8.519	.000				
Know-how	.037	.088	.036	.415	.678				
Regulations	.364	.090	.398	4.056	.000				
Productivity	158	.060	174	- 2.621	.009				
Convenient	.279	.063	.292	4.413	.000				

Table 6 also outlined that the coefficients which help us to see which of the independent variables are the most important or significant in explaining the variance in adoption of digital payment. From the table the highest number of beta is .465 for security system followed by government regulations is 0.398, convenient- 0.292 and productivity -.174 for continues improvement with a significant value of 0.009 and 0.000 levels respectively. Other two variables which are internet access and technical know-how are not significantly scored much (refer table 5, 6, 7).

#### VII. CONCLUSION

The stride augmenting of internet usages as well as the precise progress of information technology have revolutionized the way of exchanging everything around human circumference. This resulted into the gigantic growth in number of various digital payment modes. It will be a gruelling journey in the next couple of years to build a stout digital cloud system & security that can reach every corner of nation. The government is also all set ready to give flying edge to such digital platform that is why there is significant zoom in digital payment modes and same is also coined by the figure issued by Reserve bank of India. Outcomes of multiple regression depict four of the major independent variables namely security system, government regulations, convenient, productivity & flexibility are more significantly associated with consumer's intention towards digital payment than technical know-how and internet access. Indeed, these factors surely strengthen the virtual payment option in due course. The implication of the paper states that these four variables are not the only determinants for the adoption of digital/virtual payment option but definitely some other factors may also be studied further. Digital payment system in India has shown stupendous growth in recent past but still there has lot to be done to increase its usage along with security standards. Still most of the transactions are cash based so there is indeed a great need to widen the scope of electronic payment system in India.

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