

A Study on Customer Adoption of Digital Payment Specific to UPI Mode

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Abstract

Within just few decades, the applied technology has been developed dramatically, especially the advancement of usage of smart mobile phone. It leads to the tremendous growth of cashless transactions in mobile payment area. The remarkable change takes place most in developing countries like India with large economy scale. Along with the global trend, Indian government carried out the Digital India program in 2015. The initiative has made great contribution to the economy growth of the country. This paper aims at finding out the adoption level and users perception of mobile payment experience. The study was conducted in the region of kattankulathur, Kancheepuram District, Chennai. Primary data was collected from 60 respondents. Data analysis was based on statistical tool of SPSS 20.

Key words: Cashless transactions, mobile payment, customer adoption, UPI mode.

I. INTRODUCTION

We all have witnessed that the traditional payment modes have been replaced by various types of e-payments that are quick and efficient. In e-payment process both buyer and seller uses digital modes to send or receive money, it is an automatic process where

seller and the buyer can avoid visiting their bank. With the emergence of various financial technology product and services, the digital payment landscape in India is witnessing unprecedented growth. The Indian government 'Digital India' initiative has emerged as one of the key catalysts. It is expected to enable awareness, availability and adoption of digital financial product and services at an accelerated rate. [9]

The RBI Ombudsman scheme for digital transactions defines a 'Digital Transaction' as "Digital Transaction' means a payment transaction in a seamless system effect without the need for cash at least in one of the two legs, if not in both. This includes transactions made through digital / electronic modes wherein both the originator and the beneficiary use digital / electronic medium to send or receive money." [1]

As per the 'Vision 2018' document by RBI, a four pillar strategy has been devised for Indian digital payment industry. [2] It includes a special focus on public policies, building next generation infrastructure, supervisory mechanisms and development of products & services. Further it is to be augmented by replacing cash payments, reducing digital payment costs and laying national optical fiber network to improve connectivity. The RBI vision document entails working on areas such as coverage, convenience, confidence, convergence and cost, for successful growth of the digital payment space in India. The demonetization decision helped in changing the outlook of end citizen in India towards adoption of digital payments. It enabled users to adopt new methods of commerce in cyber space with agility, trust and confidence. Indian digital payment space looks promising with initiatives such as, but not limited to, Aadhaar based transactions, JAM trinity, direct benefit transfers, and rise of Fintech technologies and with introduction of prepaid payment instruments.

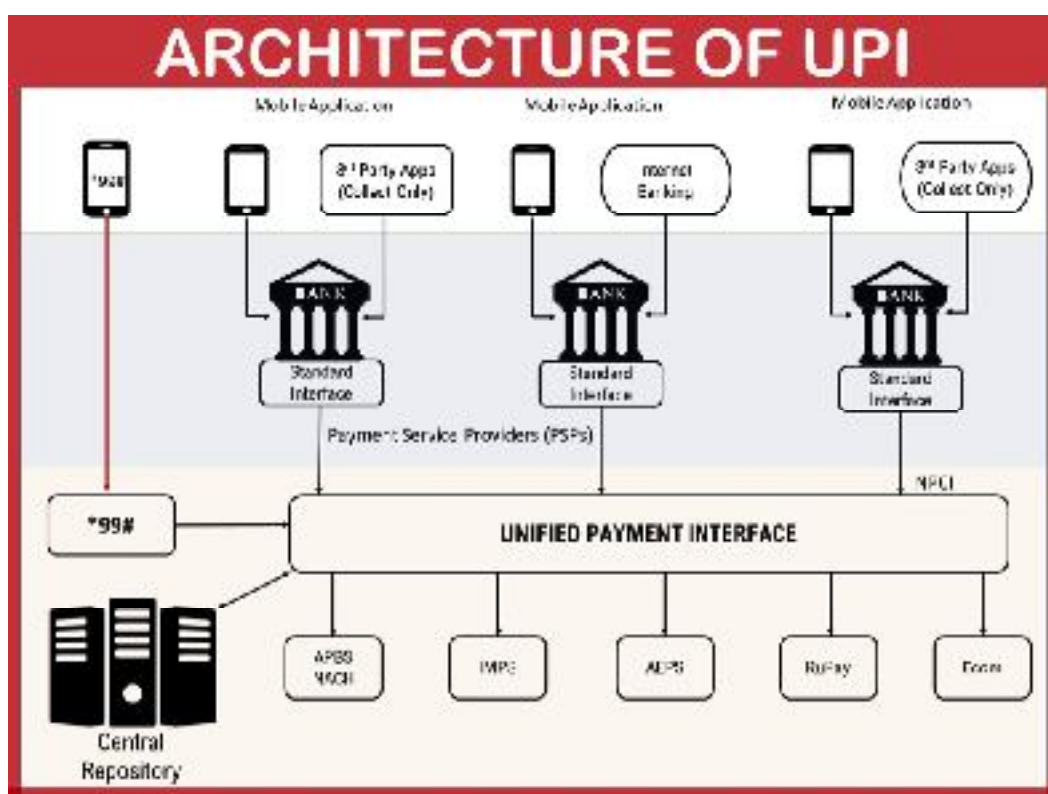
UPI – Unified Payment Interface

Unified Payments Interface (UPI) is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood. It also caters to the "Peer to Peer" collect request which can be scheduled and paid as per requirement and convenience.

UPI – available in Two Modes [7]	
Independent Mode – Bank developing a separate UPI app, and/or converting their existing mobile banking application to be extended to facilitate UPI services.	Embedded Mode – The UPI compliant app/module is embedded in other (merchant) apps by bank giving the binary/SDK to the merchant to integrate into their apps. Merchants may choose to include more than one UPI compliant app from different banks.

The Unified Payment Interface offers an architecture and a set of standard API specifications to facilitate online payments. It aims to simplify and provide a single interface across all NPCI systems besides creating interoperability and superior customer experience. [8]

How UPI works:



Source: NPCI

II. REVIEW OF LITERATURE

Dixit R in his research paper tried to find out the current status of adoption of mobile wallet. [3] He has found that mobile wallet became major payment channel for cashless transactions, and the satisfaction level for using mobile wallet to customers is sufficient. Throughout the study, he made survey with 170 respondents which is satisfied to support the hypothesis test.

Dr. Dhani Shanker Chaubey, Piyush Kumar in their study on “Demonetization and its impact on adoption of digital payment: opportunities, issues and challenges” speaks on the analysis of Digital payments after Demonetization, the way consumer perceives digital transaction after demonetization [4]. The study states that digital payment had given a new force to learn about the way digital transaction works after demonetization. People were ready to adopt the digital mode of payments but unwilling to pay extra for money transactions. Digital payments are being adopted very easily in many countries as it is easy as well as simplify transactions. The study is conducted on the light of the past studies on E-payment Digital money, Mobile money and payment available across the world. The study also analysed the theories and models adopted and methodology used by the previous studies in order to get a better understanding.

Mohd Forman and Waseem Khan in their study on ‘The Factors affecting adoption of mobile based internet banking in emerging market: A study of the Indian consumers observation’ states that age is one of the main factors that effects the evaluation of the service they use, how much they are satisfied using it and how prompt it is a matter of concern for the people. [5] This study showed no significance difference between the risk associated with the transactions failed and the inconvenience in using mobile based internet banking. It also found out that the young people of age group below 25 showed more trust on the new transaction channel than those people above 25.

In the paper ‘A Study on the Perception of Customers towards E-Commerce and E-Payments in Local Survey’ S. Kowsalya, Swetha Krishnan, Mridhula. R, and Sowmya.

A. M. mentioned that the trust in Ecommerce mainly depends upon the online payment system which allows a customer to make payment to the online merchant or

service provider. [6] Consumers are becoming more and more comfortable in making online transactions and are concerned about conducting electronic business transactions and the risks involved that have a vital impact on the transition of electronic business. Increasingly more consumers are migrating to e-commerce to make electronic bill payments, to pay for information online, to purchase products, services. According to the authors E-Payments refers to the technological breakthrough that enables us to perform financial transactions online, thus avoiding hindrances and other hassles. E-Payments provides greater freedom to individuals in paying their taxes, licenses, fees, fines and purchases at unconventional locations and at whichever time of the day, & 365 days of the year. The authors found that credit and debit cards will become obsolete, because they saw the increasing development of mobile technology and the internet industry.

III. OBJECTIVES

The study is to find out:

- a) The general knowledge of using digital payment when doing purchasing.
- b) Customer perception toward digital payment, especially the adoption level of UPI mode.
- c) The major concern form customers while doing cashless transactions. d)

Thus, in the pursuance of achieving above objectives, following hypotheses will be tested: **H₀₁**: There is no significant difference perceived for adoption of digital payment on the basis of income level.

H₀₂: There is no significant difference perceived for adoption of digital payment on the basis of education level.

IV. RESEARCH METHODOLOGY

Sampling Plan:

Both primary data and secondary were collected in the study, hence factor analysis all depends on primary factors. The primary data was collected from 60 respondents through a well designed questionnaire by means of online survey. In order to

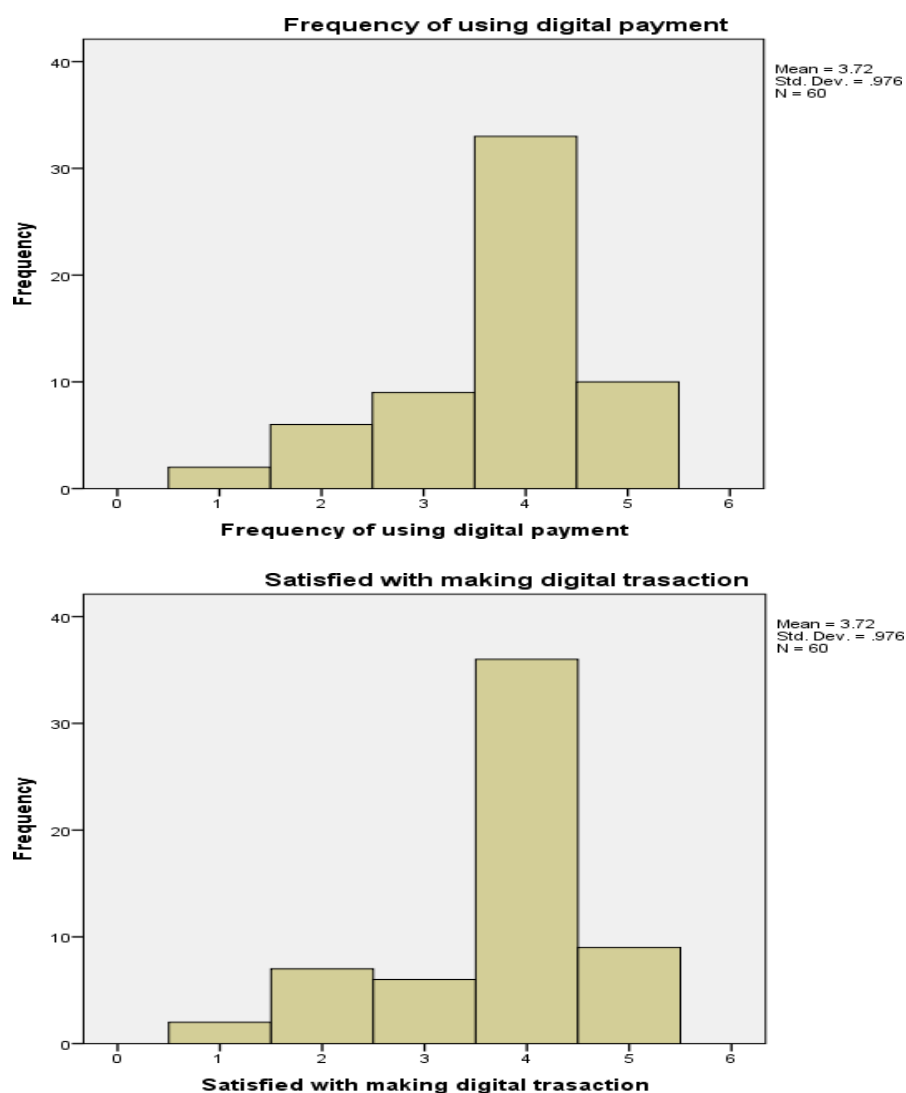
test above hypotheses, dependent variables as well as independent variables are included. Five point scale method was used for qualitative data collection.

Statistical tool: SPSS 20 was employed for coding, editing, transformation and analysis of data.

V. DISCUSSION AND INTERPRETATION

Frequency Analysis

Bar Chart 1&2: Frequencies of customer adoption and perception



Frequencies bar chart 1&2 indicate the overall spread map of customer adoption level of digital payment and the satisfaction level toward cashless transactions. Moderate to always option leads to high percentage of adoption level, and neutral to strongly agree leads to high positive opinion of digital payment mode.

Crosstabs Analysis

Table 3&4: Customer adoption and satisfaction cross tabulation

Frequency of using digital payment * Satisfied with making digital transaction Cross tabulation

Count		Satisfied with making digital trasaction					Total
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Frequency of using digital payment	Not at all	1	0	1	0	0	2
	Low level	1	4	1	0	0	6
	Moderate	0	3	1	5	0	9
	High level	0	0	2	24	7	33
	Always	0	0	1	7	2	10
Total		2	7	6	36	9	60

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	55.871 ^a	16	.000
Likelihood Ratio	47.950	16	.000
Linear-by-Linear Association	28.697	1	.000
N of Valid Cases	60		

a. 22 cells (88.0%) have expected count less than 5. The minimum expected count is .07.

Table 3&4 clearly shows that there is a positive relation between adoption level and satisfaction responses. In other words, customer perception towards digital transaction is mostly positive and satisfied with the result and experience. The procedure of doing digital transactions stays at fulfilled position. We can predict that once a

customer has done one time of digital transaction, he or she will adopt the life style with trust and reliability.

Correlation and ANOVA Analysis

Table 5,6 &7: T Test and One way ANOVA

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Education Level & Frequency of using digital payment	60	.600	.000
Pair 2	Monthly Income & Frequency of using digital payment	60	.576	.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Education Level - Frequency of using digital payment	-.917	.962	.124	-1.165	-.668	7.382	59	.000
Pair 2	Monthly Income - Frequency of using digital payment	1.000	.974	.126	-1.252	-.748	7.951	59	.000

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Age Group	Between Groups	31.113	4	7.778	8.001	.000
	Within Groups	53.471	55	.972		
	Total	84.583	59			
Education Level	Between Groups	31.758	4	7.939	9.525	.000
	Within Groups	45.842	55	.833		
	Total	77.600	59			
Access to Internet	Between Groups	32.814	4	8.203	13.521	.000
	Within Groups	33.370	55	.607		

Monthly Income	Total	66.183	59			
	Between Groups	40.750	4	10.188	16.759	.000
	Within Groups	33.433	55	.608		
Knowledge of UPI mode	Total	74.183	59			
	Between Groups	26.984	4	6.746	15.449	.000
	Within Groups	24.016	55	.437		
	Total	51.000	59			

The result of T Test and One way ANOVA computation indicate that there is significant difference perceived for adoption of digital payment on the basis of income level and education level. Hence we reject H_{01} and H_{02} . It means there is significant difference perceived for adoption of digital payment (UPI mode).

VI. CONCLUSION

The study identified that the independent variables selected, income level, education level, access to Internet have a positive relationship with the dependent variable customer adoption and satisfaction. The intensity of relation is strong for transaction cost and efficiency which shows a positive relationship. The study has made an attempt to understand customer perception towards digital transaction mode. It also found that age factor does not have much impact on the adoption of the digital payment but education, income and access to Internet. T test and ANOVA computation supported this finding as there was significant difference is perceived by the respondents on the basis of education level and monthly income. In a nut shell, we can understand that only the education and income aspect that impact one person to have the courage to try a new life style.

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