

UNIFIED PAYMENT INTERFACE (UPI): A STUDY OF PUBLIC PERCEPTION AND ITS IMPACT

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ABSTRACT

India is passing through a window of demographic transition, not only is it converting to a cashless economy but it is also witnessing a drastic makeover in the paradigm of banking sector. With a purpose to transform India into a digitally empowered society and knowledge economy, the “The Digital India Programme” was launched by Government of India, “Faceless, paperless, cashless” is one of the professed roles of digital India. Digitalization without financial inclusion was incomplete hence RBI, in August, 2015, issued banking licenses to, 11 payment banks, 2 universal banks and 10 small finance banks. Therefore, the present study determine how mobile payments options are associated with demographic factors thereby providing us with the sections of our society that have adopted cashless payments or have failed to do so. There should be a great impact of the new immersing payment system UPI. The primary data collected through online mode in odisha and used destructive statistics.

Keyword: UPI, Digital, Bank, Economy

1. INTRODUCTION

India is embarking on a tremendous digital transformation. In the era of the cashless future economy, digitalization of the payment method will be seen as a watershed moment. India's digital transformation as a favorable legislative condition, that rise of future generation payment service providers, and improved customer service. As a digital country like India, the mobile wallet is a new mobile payment application for banks. The majority of online payment is mobile through the Unified Payment Interference (UPI). The world largest banks declared IT plans continue to be focused on mobile financial services including payments and online banking.

With the era of digitalization one of the latest developed Specialized divisions of Reserve Bank of India is the: - ‘National Payment Corporation of India’ which is under the justification of ministry of finance government of India. It was created by RBI for Managing and tracking of all type of online transaction through different medium in India. It was founded in 2008 it's headquarter established in Mumbai, Maharashtra, India. The NPCI is a non-profit organization which is registered under section 8 of the companies act 2013, established by the reserve bank of India and Indian banks

association. The organization is owned by a consortium of major banks and has been promoted by country central bank, the reserve bank of India. The NPCI was incorporated in December 2008 and the certificate of commencement of business was issued in April 2009. The authorized capital has been pegged at ₹3 billion (US \$39 million) and paid-up capital in ₹1 billion (US \$ 13 million).

Initially there were 10 promotor banks which is the State Bank of India, PNB, Canara Bank, Bank of Baroda, Union Bank of India, Bank of India, ICICI bank, HDFC bank, Citi bank and HSBC bank. In 2016, the shareholding was dilated to included 13 additional public sector banks, One additional foreign bank, 10 multi-state corporative banks and 7 regional rural banks.

2. REVIEW OF LITERATURE

Mukhopadhyay (2016) studied cashless payments in India. He developed a theoretical model of payment decisions made by consumers and sellers. He found that the convenience of cashless transactions weighed against the temptation to evade taxes.

Gochhwal (2017) has done research on the advancement in payment systems through Unified

Payment Interface and found that UPI is the most advanced payment system in the world as it includes low transaction cost and instant settlement as there are no intermediaries involved. UPI has allowed different banks to communicate with each other and has enabled interoperability between disparate bank payment systems.

Thomas & Chatterjee (2017) assumes UPI as the catalyst tool supporting digitalization and through his research he found the utility, prospects and issues of UPI payments. According to him, major challenge for UPI adoption is financial inclusion where most of the rural population don't have access to the banking sector and other challenge is mobile services as services provided by the service operators are still out of the reach of lot many people. In order to overcome these situations wallets were not allowed to provide the UPI services as it is in communication with the banks with whom the customer can link their UPI.

Mohapatra (2017) analysed e-transaction process through UPI where he defines the various features of UPI and its app BHIM-UPI. The full payment mechanism and security features are described in this paper and comparison has been done between different online payment apps. The UPI seeks to make money transfers easy, quick and hassle free.

Manda and Margana (2019) stated that banks and financial institutions must make it easy to access payment processing equipment and to improve the amount of acceptance marks. The recommendations were Internet banking and credit applications user interface designs should be easier and in local languages accessible

Meher, (2017) For security reasons, many people cannot easily use electronic payment methods. Many people believe electronic techniques are not secure because there is a greater likelihood of being hacked. There are many instances of hacking in India, and there are no qualified staffs on the state level to verify hacking.

Gujrati, (2017) The cashless economy offers many advantages, such as faster transactions, enhanced sales, speedy transaction payment, convenience and lower risk, transparency and governance, and lower maintenance costs

Anjali R and Suresh A, (2019) tried to know the customer satisfaction of Bharat Interface for

Money (BHIM) analysed using percentage and frequency analysis. It had found that all the independent variables selected (Security, Perceived ease of use, Customer service, Speed of transaction) had a positive relationship with the dependent variable customer satisfaction.

Usha M and Ramesh KumarK, (2019) tried to know the customer perception towards Paytm apps and factors influencing customers to use Paytm in Karur district using statistical tools like percentage analysis, correlation analysis and chi-square. It has been observed that convenience, ease of use, security, multi-utility and fast service were satisfactory. These factors significantly affect the satisfaction level and use of Paytm application.

Pappu Rajan and Saranya G, (2018) tried to know the customer perspective of digital banking services using univariate and bi variate techniques. The researcher had observed that the accessibility of digital banking is undertaken while considering only persons that are deemed physically fit in the society.

Kamatchi Easwaran K, (2019) tried to find out the customer perception and impact of demographic factors on adoption of digital mode of payment using ANOVA and percentage analysis and found that that it had resulted in ease of transfer of money in rural areas which was not touched earlier by the digital payment method.

3. HISTORY OF UPI

India has been cash driven economy, primarily due to lack of infrastructure to make digital payments. India has enough debit and credit card users which have been steadily increasing over the years from 304 million cards in 2012 to 910 million cards in 2017 but digital payment acceptance infrastructure is grossly inadequate. The number of POS machines installed at merchant locations across India is only 2.7 million (1.5 million prior to demonetization) for a merchant base of over 20 million compared to 12.7 million POS machines in the USA. The low number of POS machines in India can be attributable to the high cost of POS machines which typically cost \$120 - 150 per machine. This low penetration of acceptance infrastructure (POS machines) for digital payments has made ATM machines as the focal point for dispensing cash which is then used for transactions. An interesting data point in this regard is that value of transactions using a debit card at ATM Machines

is about Rs. 26,000 billion per annum versus Rs. 4,140 billion at POS machines i.e., consumers withdraw 6.2 times more money at ATMs and then pay cash to the merchants to transact. This is primarily due to lack of POS machines with Merchants.

Thus, UPI was conceptualized to enable a universal, low-cost digital payment system both for consumer to make digital payments with ease and merchants and businesses to collect digital payments in a cost-effective manner without the need for any POS machines.

4. WORK IN FRONTEND

Initially the customer has to install a UPI supporting application from the Play Store and getting ready to use to it then the application needs the required permission from the user and takes please. From the beginning the application required phone number which is the initial process to login to the application, then the user required to accept the term and condition of that application which is installed. Then after accepting the term and condition you can directly Went home interface of that application, now you have to add a bank account in the application software to initiate the UPI registration process.

For adding a bank account, you have to choose the phone number which is associated with your bank account Then the application which is installed make a flash message to the server which is associated to the bank server after that you have to choose the bank which you want to add in the UPI process then the customer requires to set up the UPI PIN which is in the initial security for the process of payment. For the setup of UPI PIN, the customer required the several things such as account number, ATM card and ATM pin the such things are associated to the bank which is the customer wants to registration for the UPI Transaction.

After doing that process the application is ready to use the UPI transaction, as compared to other transaction process the UPI process of the registration is very much easy and it is cost less. Initially the customer has to install a UPI supporting application from the Play Store and getting ready to use to it then the application needs the required permission from the user and takes place. From the beginning the application required phone number which is the initial process to login to the application, then the user

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Figure-2.3.1

5. GROWTH OF UPI

The UPI service was launched by NPCI in 2016 with the participation of 21 banks. During the financial year 2016–17, the contribution of UPI in digital payment services was only about 63 lakh transactions. At present, more than 500 crore transactions were performed on the UPI platform in a month, representing a staggering rise of nearly 1000 crore transactions, which is showing 50% growth annually. According to NPCI data, UPI railroad registered 3 billion transactions in March 2022, the most ever in a single month since it began operations in August 2016. RBI reported,

due to the requirement of social distancing during the corona pandemic, contactless payments were preferred over cash payments, even though the value and volume of the latter were considerably down due to the slowdown in economic activity

before the outbreak. The number of transactions on the UPI platform, as well as overall retail digital payment transactions, has risen exponentially, in value and size of transactions. The growth of UPI payments is shown in table 3.5.

FINANCIAL YEAR	No, OF MEMBER BANK	TRANSACTION	
		VOLUME (IN MILION)	AMOUNT (IN CRORE)
2021-22	216	45967.53	8417572.48
2020-21	148	22330.65	4103653.58
2019-20	142	12558.61	2131730.14
2018-19	91	5355.52	876970.72
2017-18	44	915.22	109832.03
2016-17	21	20.29	6952.14

Source: <https://www.npci.org.in/what-we-do/upi/product-statistics>

TABLE-3.5

After that the table contained that in the initial phase the UPI was started with a very a smaller number of banks that is 21 only than after it is gradually increases and in the financial year 2021-22 the number of the member bank is 216. They're after the growth of the UPI was directly shown at here.

5.1. Result and Discussion

The study is mainly based upon the primary data. Primary data was collected through online survey method. Questionnaire was used for collecting data. Questionnaire was developed based on past experience of the researchers and review of literature on the topic done by the researchers. Questionnaire consists of total twenty-seven questions out of which four questions related to profile of respondents. Random sampling technique is used for selecting respondents for the sample. Sample size is 98. Total data was collected over Odisha whereas the respondent is from twenty-four district of Odisha. Collected data is analysed by calculating percentages and mean.

6. ANALYSIS OF THE COLLECTED DATA

Hence it is collected is from the online questionnaire that is obvious that it is very much clear that the analysis is become very much easier to develop that understanding very much as usual to all the figures and diagram are available over here.

7. GENDER WISE ANALYSIS

1.GENDER:
98 responses

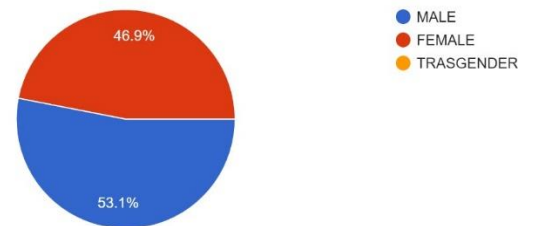


Figure-3.1

As it is observed that the data collected which is unbiased in nature and it represents that there are a total of 98 responds from which the population of male responds are 53.1% whereas the female responds are in 46.9% which represents that in the society the user of the UPI is high of the male.

8. AGE WISE ANALYSIS

2.AGE:
98 responses

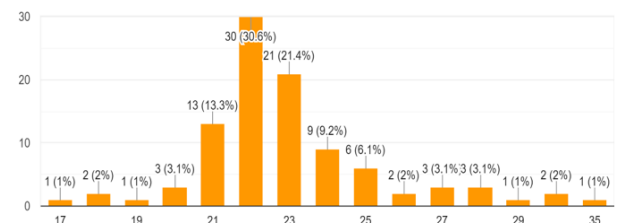


Figure-3.2

In the above figure we can see that the age is varies from the of 17 to 35 where the most of the population belongs to the age group 21 to 25 and the in the age 24 the most of the respondents are available. It means the number of the UPI user available in the age group of 20 to 25 whereas the new generation people are mostly attracted towards the Unified Payment Interface.

9. PROFESSION WISE ANALYSIS

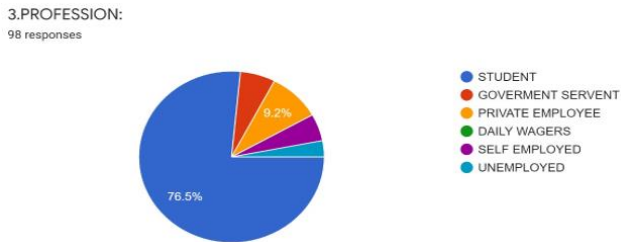


Figure-3.3

From the above figure it is shows that around 75 percent of the respondent are student and the private employees covers 9.2 percent of the total respondents above government servants which covers around 8 percent with daily wagers, self-employed and unemployed respectively collective's 100 percent of the figure.

10. RESIDENT TYPE WISE ANALYSIS

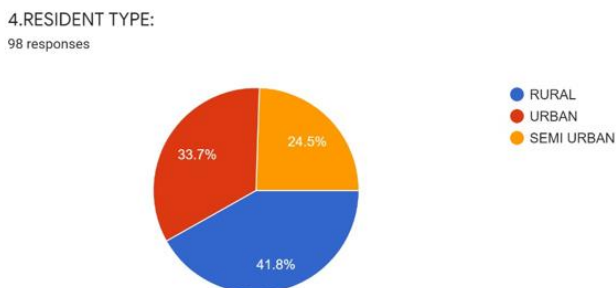


Figure-3.4

In the above figure it is shows that there are most of the respondents are belongs to the rural are than from the urban are and rest are from semi urban area where as the percentage of the rural, urban, semi urban respondent are 41.8 percent, 33.7 percent, 24.5 percent respectively.

11. MAJOR FINDINGS

UPI requires Mobile number which is connected to Bank account but most of the times still in rural areas there is no link between mobile and bank account.

- If you are sending money from UPI application, then receiver should have to register to UPI application at another end. Otherwise, you cannot able to send money by mobile number, than you can send money by entering account number and IfSC code.
- Till now UPI supports only for Android users so other users should wait for NPCI for developing software for other platforms.
- UPI is still in starting stage and common problems like server issues are more.
- There is no separate customer care line if any problem in payments like payment in pending and payment is failed but money is not refunded.
- UPI is in initial stage, so most of the Banks are adopting this technology and this leads to problem in maintaining servers 24 hours.
- UPI mainly targets the smart phone users and the number of smart phones is increasing day by day but the Digital literacy is too less. This will affect the UPI.
- Till now, there is no transaction charge but for maintaining servers and for other infrastructure facility Banks may start applying charges.
- UPI mainly requires Internet connection but in India Data connection is not available everywhere.

12. SUGGESTION

It needs to be developed a better technology for which the NPCI has draw a better program that is the 123PAY where there is no need of internet and the development of this things brings change to the money transfer system. Then we know about the process in which the 123PAY works.

UPI 123PAY is an instant payment system for feature phone users who can use Unified Payments Interface (UPI) payment service in a safe and secure manner. Through UPI 123PAY, feature phone users will now be able to undertake a host of transactions based on four technology alternatives. They include calling an IVR (interactive voice response) number, app functionality in feature phones, missed call-based approach and also proximity sound-based payments. Under this payment method, there are 4 solutions going live

12.1. UPI payment through pre-defined IVR number

UPI payment through pre-defined IVR numbers (080 4516 3666 & 080 4516 3581 & 6366 200 200) would require users to initiate a secured call from their feature phones to a predetermined number and complete UPI on-boarding formalities to be able to start making financial transactions without internet connection. With the IVR providing multiple language options, customers can avail this service in their preferred languages. IDFC First Bank, City Union Bank & NSDL Payments bank have gone live on IVR payments. Solutions are supported by Ultracash & Tonetag.

12.2. Missed Call Pay

Missed call-based approach will allow feature phone users to access their bank account and perform routine transactions such as receiving or transferring funds, regular purchases, bill payments, etc., by giving a missed call on the number displayed at the merchant's place. At the time of billing, the merchant will create a token with the customer's mobile number and the bill amount of his purchase. Customer can then give a missed call on the number prescribed by the merchant and immediately the customer will receive an incoming call from 08071 800 800 asking to authenticate the transaction by entering UPI PIN. This solution is developed by MissCallPay with Bank of India as the supporting bank.

12.3. Feature phone where payment functionality implemented by OEM

Digital solution is the UPI app on feature phone which is developed by Gupshup with Airtel Payments Bank. In this type, the interested solution providers will need to partner with the feature phone mobile manufacturers (OEM) to enable a native payment app developed in embedded C language (or as supported). This UPI app look and feel is similar to smart phone-based app, however with certain limitations of the feature phone. Currently it can offer majority UPI functionality except Scan and Pay, which work in progress.

12.4. Proximity sound-based technology and Voice Based Payments

This solution is the proximity sound-based payments which has been created in collaboration with Tonetag and supported by NSDL Payments Bank. The technology uses sound waves to enable contactless, offline, and proximity data communication on any device. User can tap any

phone and make UPI payments to merchants using ToneTag's VoiceSe payment solution. User calls the IVR number 6366 200 200 and chooses Pay to Merchant option. They tap their mobile phone on merchant device (POD), and press # once the POD emits the unique tone. The user then enters the amount to pay, followed by their UPI PIN to complete the transaction. The POD acknowledges the transaction status and the user receives a confirmation through the IVR call.

13. CONCLUSION

UPI has allowed smartphone to be used as a major payment device for sending and receiving payments. UPI influences high tele density in India to allow every bank account holder to make online transactions using a mobile phone. India, which has a bad merchant payment recognition infrastructure UPI, allows even the smallest merchant to start accepting online payments without the need for any external machine. UPI has completed the need to distinguish the complicated payment details of the transacting parties, which makes expenditures easy and unified for transact parties.

Associated to all other payment systems it would not be inappropriate to say that UPI is the most progressive payment system in the world. With its normal set of APIs, UPI has permitted different banks to interconnect with each other and has allowed interoperability between dissimilar bank payment systems. In UPI there are no mediators like in card networks, which permit for low transaction costs and Immediate settlement.

While all other online modes of payments like cards etc. take times to ample the transaction and settlement procedure, UPI permits payment to be completed in seconds. UPI works on a safe, secure and healthy platform with ample safety features to make it more secure than any existing payment systems. Introduction of biometric verification in UPI will not only make payments more protected but will also take a massive leap towards integrating advanced generation technology with existing payments system. UPI can be a great technology for financial institutions in India and enable a huge set of population to be a contributor of digital economy.

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