



A Comprehensive Analysis of Customer Preference Towards Unified Payment Interface (UPI) Services

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Abstract

Over the past decade, India has seen rapid growth in mobile phone penetration and internet connectivity, substantially reshaping the country's digital economy. Supported by initiatives such as Digital India, digital payment modes have expanded across urban and semi-urban regions, with the Unified Payments Interface (UPI) playing a central role in promoting a cash-lite, smartphone-enabled payment environment. Increased accessibility via smartphones and social platforms has enabled continuous engagement with digital financial services. This study investigates customer preferences and perceptions that influence the adoption of UPI-based payment sources in Madurai District. A cross-sectional, descriptive research design was employed, using a structured questionnaire administered to 151 adult UPI users selected through non-probability (convenience) sampling across urban and peri-urban localities of Madurai. The instrument captured demographics, usage intensity, perceived usefulness, ease of use, trust, perceived risk, and satisfaction; data were analysed using descriptive statistics and inferential tests to assess associations between perceptions and adoption outcomes. The results indicate that favourable customer perceptions and preferences are positively and significantly associated with UPI adoption and usage intensity, underscoring their role in deepening digital payment use and informing local policy and provider strategies in the region.

Keywords: *Unified Payments Interface (UPI), digital payment systems, mobile banking, customer preference, customer perception, technology adoption, cashless economy, digital financial inclusion.*

1. Introduction

The National Payment Corporation of India recently launched a new innovation known as the Unified Payment Interface. Since its introduction, this payment method has undergone significant changes. It is therefore important to understand the benefits and drawbacks of UPI services, as well as the sentiments of customers regarding the latest innovations introduced by the National Payment Corporation. The purpose of this study is to identify which unified payment interfaces customers prefer and to explore the challenges they face. A smart program called UPI allows customers to transfer money between bank accounts. The National Payments Corporation of India developed the single window mobile payment system (NPCI). This system eliminates the need for customers to provide sensitive information, such as bank account details, for every transaction. Peer-to-peer interbank transactions can now be completed with just a two-step authentication

process. The payment system works in real time. The Reserve Bank of India oversees the interface. It functions by transferring funds through a mobile platform between two bank accounts [1].

1.1 Objective

- To present UPI payment system and sources available.
- To analyse the consumer perception towards UPI system.
- To identify the problems faced in UPI payment system.

1.2 Statement of The Problem

Banks introduced services such as ATMs, mobile banking, call centers, telebanking, and others to adapt to the evolving environment. With the rapid development of technology and the entry of both international and private banks, many new products and distribution methods have been introduced. The



Unified Payment Interface (UPI) is one of the major initiatives that has brought about the convenience that customers have long sought. The launch of UPI has created both new opportunities and challenges for banking institutions. However, several behavioral and psychological issues, such as resistance to change, trust in one's bank, concerns about security, a preference for human assistance, and similar obstacles, hinder the adoption of UPI. In this context, a study has been carried out on the UPI services provided by various banks and financial institutions in the Madurai district [2].

2. Review of Literature

Dr. Dhani Shanker Chaubey & Piyush Kumar (June 2017) In their study, "Demonetization and its impact on adoption of digital payment: opportunities, issues and challenges," analyze digital payments following the demonetization process and discuss how consumers view these transactions. According to the study, after demonetization, digital payments created a fresh incentive to understand how digital transactions operate. Although they were willing to use digital payment methods, people were not willing to pay more for these kinds of transactions. To gain a deeper understanding, the study also examined the ideas, models, and methodologies employed by earlier research.

Roshna Thomas, Dr. Abhijeet Chatterjee (2017) The study reported that it is challenging to ignore the difficulties, the study found that UPI is a tool with appropriate qualities that may make financial transactions simple and economical for the users. Strong Aadhaar (UID) platform combined with national statistics on increased financial inclusion, smartphone adoption, and telecom subscription point to promising futures for UPI. However, competition from mobile wallets and potential bank failures to overcome technical issues, particularly those related to the front-end platform they designed, could have a detrimental effect on the reach of this cutting-edge payment tool [3].

B., Shanmugapriya & Dr. A.S. Lakshmirani, (2021). "Impact of Digital Banking Among Consumers" The study analyse that the usage frequency may depends on their convenient, time saving, user friendly, and in expensive etc., Digital

banking is useful for the customers and use it very frequently for attaining the maximum of benefits. The researcher disclose that the digital banking services will make our country superpower in the year 2021.

3. UPI Sources

The origins of UPI applications are diverse. Based on the downloads and preferences of customers and account holders, seven programs were selected for this study. The UPI platforms that different users use to complete the highest number of bank transactions are outlined below [4]:

- Google Pay
- PhonePe
- BHIM App
- Paytm
- JioPay
- Amazon Pay

3.1 Google Pay

Google Pay (previously known as Tez) is a free application developed by Google LLC, available on Google Play. It is a simple and secure payment app for Android users, enabling quick, safe, and easy mobile payments. This app manages all your payment-related tasks and is linked to your bank account. It allows you to pay for coffee, buy locally and online, send money to friends, and even send money to people who don't use Google [5].

3.2 PhonePe

PhonePe was launched and acquired by Flipkart in 2016. It became the largest UPI transaction generator in the country, processing over one million app transactions daily. It has become operational in over 10 lakh outlets across 300 cities. PhonePe launched liquid funds, super funds, and seven other carefully selected mutual fund (MF) category products. With the sale of 5 lakh policies in just five months, it became India's fastest-growing insurance tech distributor. It offers travel insurance, motor insurance, coronavirus insurance, and other insurance options. With over 40% of UPI transactions, PhonePe has 250 million registered users, making it a market leader.

3.3 BHIM App

The BHIM app allows users to perform quick and straightforward transactions using the Unified Payments Interface (UPI). With the BHIM app or by

scanning a QR code, users can send direct bank payments to anyone on the UPI network. BHIM is an innovative, interest-free payment method. Customers can access the same BHIM services on their mobile device by dialing *99# from any phone. Additionally, they can use *99# to register for BHIM and use it to transfer and receive money, scan and pay, and conduct various banking activities [6].

3.4 PAYTM

Paytm Payments Bank is the largest digital bank in the nation, with over 58 million account users. Its goal is to integrate underserved and unserved Indians into the formal banking system. Its innovative use of technology has made banking convenient and accessible for people across the country. Paytm's fully owned subsidiary, Paytm Money, is one of the leading providers of new Systematic Investment Plans (SIPs) in the mutual fund sector. It has become the largest investing platform in India within its first year of operation. Paytm's objective is to integrate half a billion Indians into the financial system by offering financial services, banking, investments, and payment methods.

3.5 JIO PAY

Jio Payments Bank is an Indian payment bank owned by Reliance Industries Ltd., with its headquarters in Mumbai. It began operations in 2018. Payment banks in India are a unique type of bank that can take deposits and make payments, but they are not permitted to issue credit cards or offer loans. Jio Payments Bank Limited is jointly owned by Reliance Industries and the State Bank of India in a 70:30 ratio. The Reserve Bank of India (RBI) granted it permission to operate as a payments bank under section 22(1) of the Banking Regulation Act of 1949. To establish a payments bank, it registered as a public limited company. Jio Payments Bank is the sixth payments bank to start operations in India [7].

3.6 Amazon Pay

Amazon Pay is an online payment processing service. It connects external merchant websites to the Amazon account user base. It allows users to use the addresses and payment methods from their Amazon account, such as credit cards, direct debit bank accounts, or the Unified Payments Interface (UPI) in India, to make purchases of goods and services from

websites and mobile apps. Through the use of single, multiple, and unlimited-use payment tokens, it enables money transfers between two entities. Despite being a relatively new offering, Amazon Pay is the result of several strategic acquisitions and trial-and-error products. It also issued a security notice regarding a vulnerability in its payment system [8].

4. Analysis

Hypothesis: there is no significant association between UPI services and the problem faced Shown in Table 1.

Table 1 Problems Faced by Respondents and Their Statistical Significance

Problems faced	Value	.sig	Result
Lack of security	4.668	0.792	Not significant
Hacking problem	5.229	0.733	Not significant
Problem of internet connection	1.448	0.994	Not significant
Forget PIN	4.706	0.788	Not significant
Server Problem	10.478	0.233	Not significant

Source: Computed from primary data

There is no significant association between UPI services and factors lack of security, hacking problem, problem of internet connection, forget PIN and server problem. Hence p value is more than 0.05 null hypotheses accepted and it is concluded that the UPI services has significant association with the lack of security, hacking problem, problem of internet connection, forget PIN and server problem [9].

Hypothesis: There is no Association between purpose of using Digital Transaction and Perception

Source: Computed from primary data

From the above table it is observed that, highest mean score 3.69 is secured by the variable easy and time save, followed by Lower risk is secured 3.68 and third mean score is 3.66 secured by secure privacy, and the fourth mean score 3.48 is secured by convenient and finally 3.43 mean score is secured by



transparency. It is concluded that, easy and time saving the major perception for using UPI services Shown in Table 2 [10].

Table 2 Problems Faced by Respondents and Their Statistical Significance

Dimensions	Mean	Std deviation	Rank
Easy and time save	3.69	0.87	I
Lower risk	3.68	0.93	II
Secure privacy	3.66	0.96	III
Convenient	3.48	0.98	IV
Transparency	3.43	0.88	V

5. Results and Discussion

5.1 Findings

- A majority of respondents expressed a neutral agreement that UPI sources are easy to use.
- Most of the participants in the study consistently use UPI sources for recharging and other purposes such as ticket bookings, bill payments, fund transfers, and availing offers.
- The study reveals a significant link between age and issues such as a lack of security, problems with internet connections, and forgetting the PIN [11].
- There is a significant association between income and concerns like lack of security, hacking issues, and problems with internet connectivity.
- The type of bank is significantly related to problems with internet connectivity and server issues.
- Based on the study, server problems are identified as the primary issue faced by the respondents.
- The main perception driving the use of UPI services is that they are easy and time-saving.

5.2 Suggestions

- Addressing server and application issues could potentially increase the user base of UPI.
- Conducting awareness programs might help in attracting more customers.
- Enhancing rewards could encourage users to recommend UPI to others.
- UPI should introduce appealing offers such as cashbacks on bookings and other transactions [12 - 19].
- Some people are not aware of UPI.
- Hence, efforts should be made to create awareness through advertisements and awareness campaigns.
- UPI should focus on developing new methods that can help illiterate individuals understand how to use the platform.
- Internet connections should be strengthened in various regions to improve user experience.

Conclusion

From the analysis presented above, it can be concluded that a significant number of digital transactions may eventually replace UPI transactions. Since students in India are the country's young generation and use UPI for daily activities, it is likely that more people will start using it in the future. With proper awareness and education, UPI usage is expected to increase among women too. Offering additional rewards to the system can also help in growing the customer base. If server-related problems are not resolved promptly, UPI might lose its potential user base, leading to its decline. Therefore, it can be concluded that UPI is more practical compared to mobile wallets.

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