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A review of UPI helping move towards a cash-less economy in Bangalore

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Abstract

In India, the use of mobile phones and the internet has increased dramatically over the last ten years, which has sparked an exponential rise in digital payments. This tendency has gained additional momentum because of government programs like Digital India. Electronic digital payments, which may be made through several platforms such as smartphone apps, online banking, and mobile banking, are growing in popularity. The digitization of payment systems is crucial to the viability of cashless transactions as the nation transitions to a cashless economy. This study looks into how quickly digital payments are being adopted in Bangalore, emphasizing the Unified Payments Interface (UPI) as a major factor in the city's shift to a cashless economy. Through a structured questionnaire survey involving 156 respondents, this research evaluates consumer attitudes regarding digital payments and their utilization patterns.

Keywords: Payment platform, consumer adoption, technological literacy, data privacy

Introduction

The Unified Payments Interface (UPI) has become a crucial tool in India's efforts to move towards a cashless economy. In addition to completely changing the way that transactions are carried out, UPI's smooth and effective payment system has had a major impact on how urban areas like Bangalore are economically redeveloped. Analysing UPI's acceptance, use trends, and wider implications for the city's economic digitalization, this paper explores the revolutionary influence of UPI on Bangalore's transition to a cashless economy.

Digital payment options have rapidly proliferated in India over the last ten years, boosted by factors including rising smartphone usage, internet access, and government-led campaigns to encourage digital transactions. With its one platform for quick money transfers, bill payments, and merchant transactions, UPI has stood out as a game-changer. Its ability to work with a variety of banks and payment service providers has made financial services more accessible, enabling both individuals and companies to adopt digital transactions as their preferred method of doing business.

Bangalore, known as the Silicon Valley of India, is leading the way in the digital revolution with a populace well-versed in technology and a thriving startup and IT industry. The city has been a fertile environment for adopting novel technologies, including digital payment systems like UPI, because of its global culture and entrepreneurial spirit.

This analysis seeks to investigate how UPI has aided Bangalore's shift to a cashless economy in light of these developments. It aims to decipher the complex dynamics of UPI acceptance and its effects on different stakeholders within the city's economic ecosystem by synthesizing current research, empirical investigations, and industry reports.

Review of Literature

S Kowsalya, Swetha Krishnan, Mridhula R, Sowmya AM (2017) ^[10] explained in their research paper "A Study on the Perception of Customers Towards E-Commerce and E-Payments in Local Survey" that the online payment system, which enables a customer to make payment to the online merchant or service provider, is the primary factor influencing customers' trust in e-commerce.

Customers are growing increasingly at ease with conducting business online. They are worried about the hazards associated with doing so, which will significantly affect how business is conducted online in the future.

In a study by Sharma and Gupta (2020) ^[11], The Acceptance of UPI Among Bangalore's Customers Analysis, UPI-driven transactions are gaining traction fast due to several factors, including government-sponsored initiatives that facilitate digital payments and accessibility and ease. The findings emphasize how UPI helps to decrease dependency on cash transactions and foster a culture of digital financial inclusion.

Reddy and colleagues' research (2019) looks at how UPI affects small and retail businesses in Bangalore. Their analysis shows how UPI-enabled transactions have reduced transaction costs and boosted efficiency while also streamlining businesses' payment processes. Furthermore, UPI's flexibility with many payment systems has facilitated its greater acceptance among retailers and hastened Bangalore's retail landscape's shift to a cashless economy.

Gupta and Singh (2021) ^[12] investigate Bangalore consumers' attitudes and actions about the use of UPI. Their qualitative investigation indicates favorable opinions of UPI, which are fuelled by its ease of use, security features, and incentives provided by banks and retailers. However, problems like poor awareness and connectivity continue to exist, indicating the need for focused efforts to boost customer confidence and utilization.

Kumar and Rao's (2018) ^[13] policy-oriented research assesses how well government initiatives support UPI adoption and the development of a cashless economy in Bangalore. Their conclusions highlight the significance of infrastructure development, public awareness efforts, and legal frameworks in promoting the broad adoption of UPI-based transactions. The report also emphasizes how important it is for financial institutions, government organizations, and technology companies to work together to fully utilize UPI's potential as a driver of economic digitalization.

Pathak and Kaur (2015) ^[14] stated that The dependable and cashless payment system provides protection against paper and electronic money theft, and adopting e-payment solutions or systems for many reasons is discussed in their article, "E-Payment System on E-Commerce in India." A number of other benefits were mentioned in addition to cost savings, such as better working capital, increased operational and cycle time efficiencies, processing efficiencies, and improved adherence to organizational norms and procedures. Additionally, according to this survey, online e-payments give clients a wider reach. Customers can receive both individualized attention and high-quality service from the bank.

Tadse and Singh (2017) ^[15], in their article "A Study on Usage of PayTM," noted that mobile users can now use their smartphones to make financial transactions or payments by using installed applications, and that digital wallets are fast becoming a commonplace method of online payment. According to the authors' survey, 70% of respondents said they have experienced payment gateway issues, therefore PayTm has to strengthen this aspect of the business to increase transaction efficiency. Since just 5% of respondents say they have received help each time they have had a problem, the service may be enhanced to better meet the needs of as many users as possible.

Payment Platforms

Khan (2018) ^[16] in her paper "A Study on Usage of e-Payments for Sustainable Growth of Online Business"

conducted a poll with one hundred respondents. This was carried out to find out why people are drawn to purchase products online, as well as what categories of goods and services customers buy the most of, and which payment gateways are most frequently utilized. More security elements, such as artificial intelligence and biometric verification using a fingerprint or retinal scan, need to be included, it was determined. More and more customers will have greater faith and confidence in this business as a result of this.

Consumer Adoption

Kevin Foster, Scott Schuh, and Hanbing Zhang (2010) ^[17] looked into customer payment methods about cash withdrawals and holdings, which have been declining since 2010. 2010 saw a rise in the card payment system compared to 2009. This led to a decrease in the use of paper money. Since 2010, the use of credit and debit cards has increased relative to cash transactions, which gradually decreased and gave birth to prepaid payments.

Technological Literacy

Maripally and Bridwell (2017) ^[18] examined the influence of financial inclusion on poverty reduction in their article, The Future of Financial Inclusion. They concluded that The Indian government has made great progress towards financial inclusion over the last ten years. Recently, Brazil has invested in India because it can offer a worldwide primary income base, which will assist in considerably reducing India's total poverty.

Data Privacy

Simran Kaur, Himanshu Mishra, and Anuj Goyal (2023) ^[19] in their paper "Cyber Security in UPI" explored the hazards related to UPI. Through NPCL and e-RUPI, they enabled the use of UPI in their study. Additionally, they looked at the steps involved in responding in the event of a cyber-attack and offered consumer advice.

Objectives

To study the awareness of UPI among residents of Bangalore.

To understand why UPI is preferred instead of other modes of payment.

To understand consumer satisfaction and the challenges faced by UPI.

Methodology

To assess consumer attitudes towards digital payments and their usage patterns, 156 respondents in Bangalore were given a structured questionnaire survey as part of the study's methodology. The study focused on the Unified Payments Interface (UPI) as a key driver of the city's transition to a cashless economy. The survey sought to ascertain Bangalore people's understanding of UPI, the reasons it is chosen over alternative payment methods, customer happiness, and the difficulties UPI faces. The study analyzed the survey data using a variety of data interpretation techniques, such as pie charts and bar graphs.

Data Interpretation and Analysis

The Pie Chart shows the gender diversity among the respondents while the bar graph shows the age diversity among the respondents.

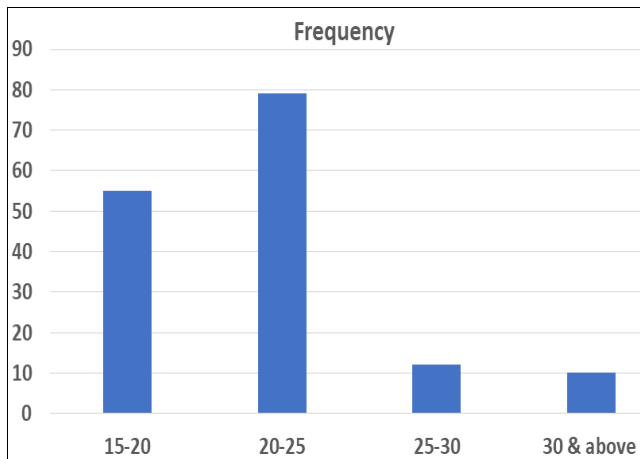


Fig 1: Show distribution of frequency

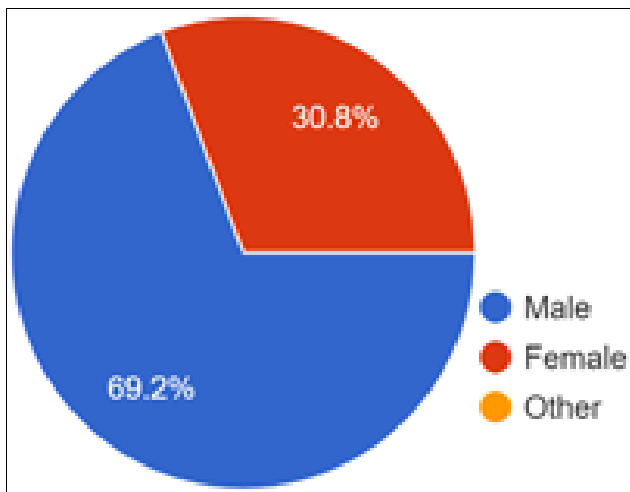


Fig 2: Show distribution of male, female and other

Of the 156 respondents in the study, 48 were female, 108 were male, and most of them were between the ages of 20 and 25. This age group provided insights into the attitudes and behaviors of young people regarding different digital payment systems and transaction activities since they comprised the study's primary group of participants. The following shows the frequency of usage of UPI on a scale of 1 to 5(1 being the lowest and 5 being the highest)

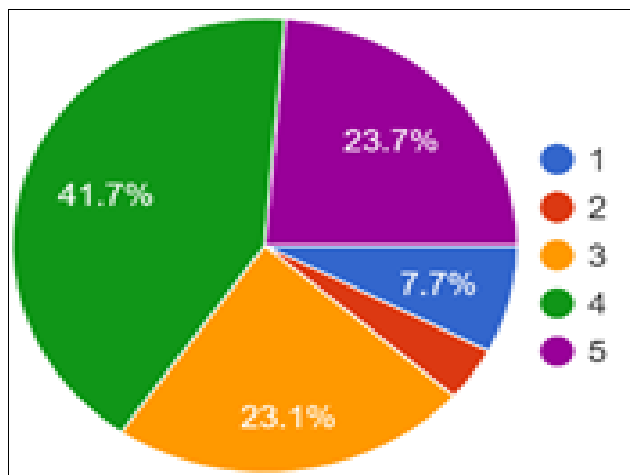


Fig 3: Show 1 being the lowest and 5 being the highest

A significant pattern was seen among the participants, as 65 out of 156 respondents, or a significant number of them, indicated a clear preference for UPI option 4. This tendency represents a strong preference for UPI as a method of payment, indicating that digital payment systems are widely used and accepted by the people who responded to the study.

Average number of transactions per week and average spending per transaction

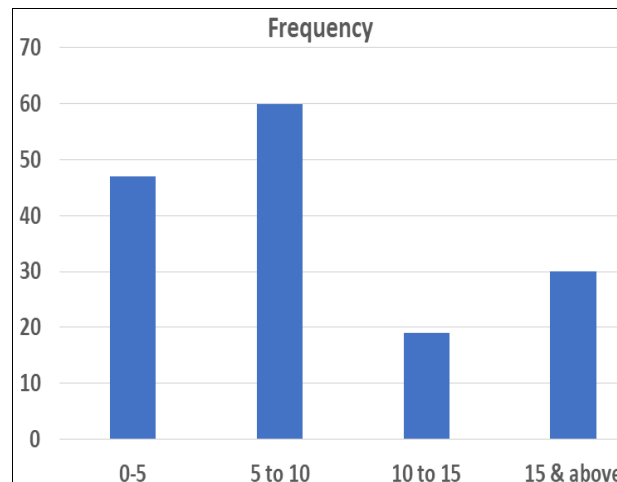


Fig 4: Show distribution of frequency

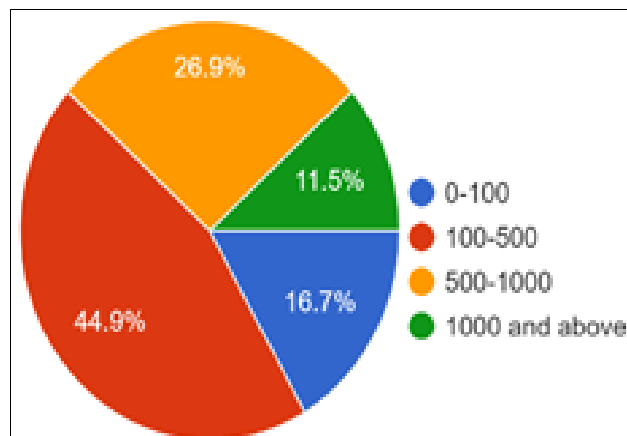
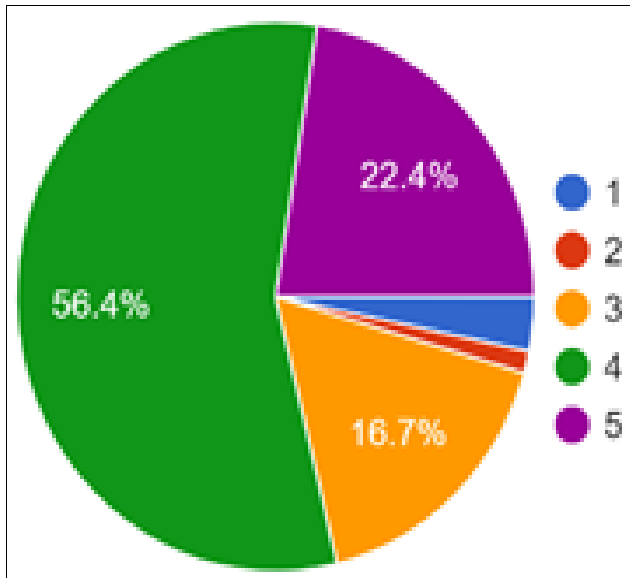


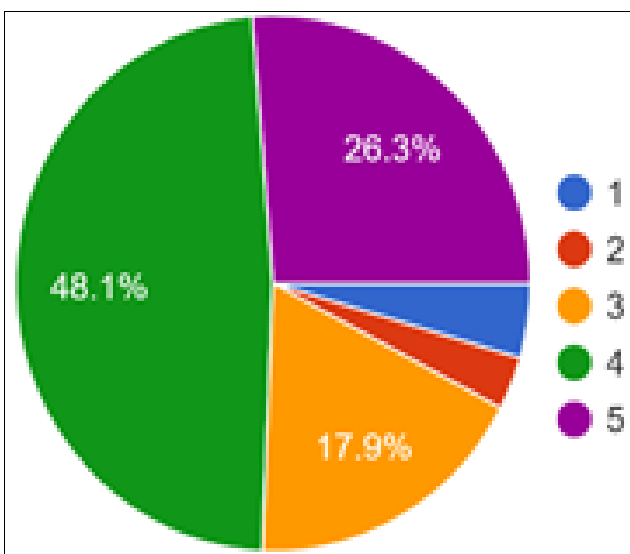
Fig 5: Show distribution of 0-100, 100-500, 500-100 and 1000 and above

A study of transactional patterns identified minor variations in user behaviour, with about 60 respondents doing five to 10 transactions every week. Moreover, a particular subset consisting of thirty individuals had an elevated degree of activity, completing more than fifteen transactions weekly. This segmentation highlights the fact that the sample includes both moderately and highly active users, indicating a range of usage patterns and intensities among the participants.

Pie Chart-1 Shows the satisfaction level with UPI on a scale of 1 to 5(1 being the lowest and 5 being the highest) and Pie Chart-2 shows the likeliness of a respondent recommending it to others on a scale of 1 to 5(1 being the lowest and 5 being the highest).



Pie Chart 1: Shows the satisfaction level with UPI on a scale of 1 to 5



Pie Chart 2: Shows the likeliness of a respondent recommending it to others on a scale of 1 to 5

Out of the 156 participants in the study, 88 respondents gave their UPI experience a score of 4 or 5, indicating that they were rather satisfied. This suggests that around 56.4% of the participants thought that UPI usage was either extremely acceptable or moderately satisfactory. Positive comments like this highlight the UPI platform's effectiveness and user-friendliness, which in turn speaks well of its overall performance and usefulness in enabling digital transactions. In the same way, 88 more respondents gave UPI a score of 4 or 5, which is consistent with the satisfaction ratings, when asked whether they would recommend the company to friends. The significant association between satisfaction levels and the propensity to recommend the platform to friends, family, or peers is indicated by this alignment. Such strong levels of support are encouraging for UPI's standing and its ability to develop naturally through word-of-mouth recommendations, further enhancing its standing as the go-to option for digital payment solutions. The following pie chart shows awareness among the respondents about the UPI transaction limit awareness.

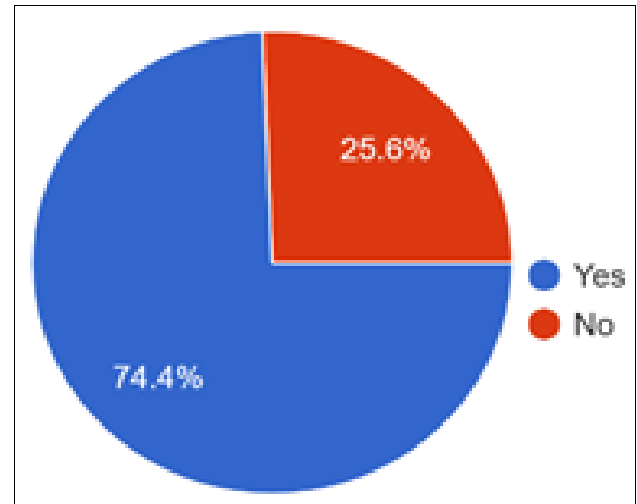


Fig 6: Show distribution of yes and no

An analysis of respondents' understanding of the UPI transaction limit showed that there was a considerable amount of information shared, with almost 74% of participants indicating that they were aware of this legal restriction. This finding suggests a widespread comprehension of the operational structure guiding UPI transactions, which is supported by 116 respondents who acknowledged knowing about the transaction limit. Nevertheless, it is significant that a small minority of respondents-roughly 26% of them, or 40 people-did not know about this cap, indicating possible gaps in knowledge or understanding among some polled groups. The following pie chart shows the most used payment method.

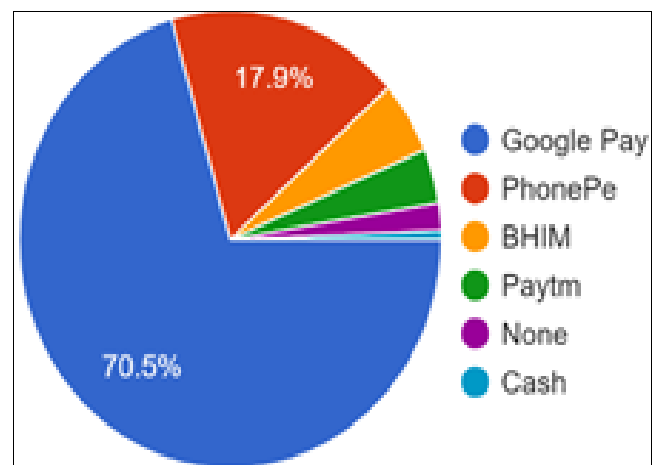


Fig 7: Shows the most used payment method Google Pay, PhonePe, BHIM, PayTM, None and cash

Google Pay is the most popular option among the various payment methods, with 110 respondents choosing it as their preferred option. On the other hand, 28 people preferred PhonePe, but not as much. This preference hierarchy for payment methods highlights the leading companies in the digital payment space and highlights Google Pay's broad acceptance and market domination among the respondents. Pie Chart 1 shows the concerns about the security features of UPI on a scale of 1 to 5(1 being the lowest and 5 being the highest).

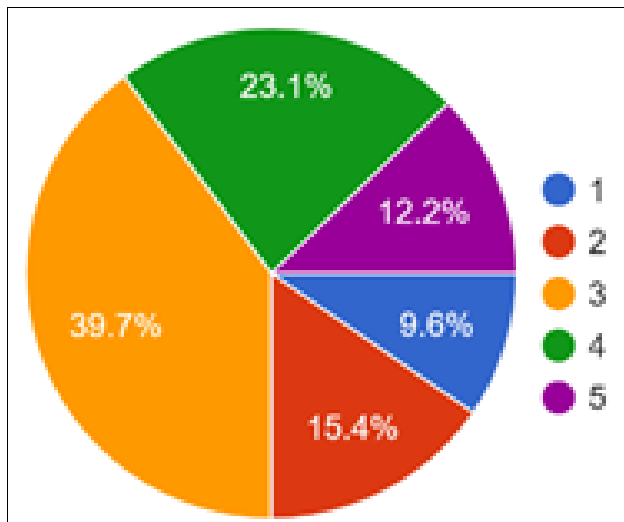


Fig 8: Shows the willingness of merchants to accept 1 to 5

The following Pie Chart shows the willingness of merchants to accept UPI as a payment method in Bangalore on a scale of 1 to 5(1 being the lowest and 5 being the highest).

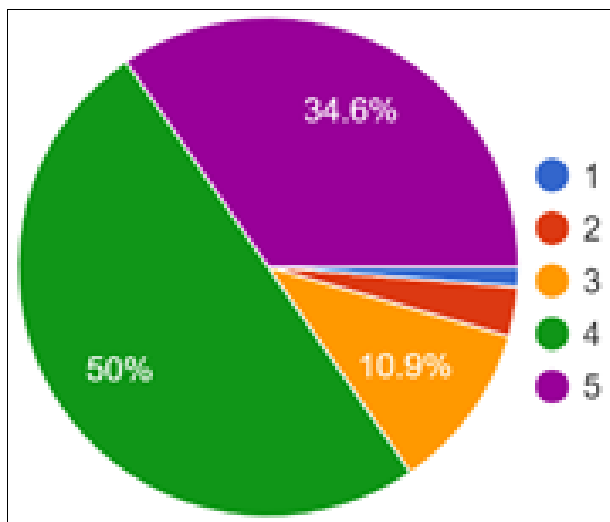


Fig 9: Show 1 being the lowest and 5 being the highest

The response rates varied widely, as seen by the pie chart showing merchants' readiness to implement UPI. This information provides important context for understanding how ready Bangalore's retailers are to accept UPI as a form of payment, which is a crucial component affecting the uptake and effectiveness of digital transactions in the city.

Discussion and Conclusion

Interface (UPI) in Bangalore, an Indian city at the forefront of innovation and technological growth. Among the study's main conclusions are:

Active Users

Approximately 30 out of 156 participants, or roughly 19%, are among the demographic that makes more than 15 transactions each week, indicating a committed and highly engaged group of users.

Prevalence of payment methods

The various payment methods, Google Pay is the most popular option, preferred by 110 out of 156 respondents

(About 70%), followed by PhonePe with 28 participants (Around 18%).

Awareness of Transaction limitations

Approximately 74% of the participants (116 out of 156) stated that they were aware of the UPI transaction restrictions, whereas 26% of them (40 out of 156) did not acknowledge their existence.

Levels of Satisfaction: On a scale of 1 to 5, 88 out of 156 respondents indicated that they were very satisfied with UPI. This indicates that most respondents had good opinions about the program. According to their experiences, 88 out of 156 respondents said they would suggest UPI to friends.

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