International Journal for Novel Research in Economics , Finance and Management
www.ijnrefm.com
ISSN:
3048-7722
Volume 4, Issue 2, Mar-Apr-Aug-2026, PP: 01-10

Adoption Of Upi And Digital Payments In India: A Study Across Various Age Groups

Apoorva Solanki[1], Dr. Sabeeha Fatima[2]
[1] MBA Scholar, Amity Business School,Amity University Uttar Pradesh, Lucknow Campus, India
[2]Assistant Professor, Amity Business School,Amity University Uttar Pradesh, Lucknow Campus, India

***Abstract* – The rapid growth of digital payment systems has changed the financial landscape in India. The Unified Payments Interface (UPI) has become a leading platform. Developed by the National Payments Corporation of India (NPCI), UPI has significantly improved accessibility, convenience, and efficiency in digital transactions. This study looks at the adoption of UPI and digital payment systems among different age groups in India using secondary data sources. The research reviews published reports, RBI data, NPCI statistics, research articles, and government publications to understand how different age groups adopt these technologies, the trends in growth, and the factors that influence this adoption. The study points out differences in digital payment usage between younger, middle-aged, and older populations. It also examines factors like technological awareness, smartphone use, internet access, , and ease of use that affect adoption behavior. The findings show that younger age groups have higher adoption rates due to their familiarity with technology, while older populations are gradually accepting these systems thanks to digital literacy programs and supportive policies. The study concludes that UPI has played a key role in promoting financial inclusion and decreasing reliance on cash transactions in India. However, challenges such as the digital divide, cybersecurity issues, and infrastructure limitations still impact consistent adoption among all age groups.**

***Keywords* – Digital payment systems, National Payments Corporation of India, Unified Payments Interface, financial inclusion, digital payment adoption, age group differences, smartphone usage, internet access, digital literacy, cybersecurity challenges, cashless economy, India.**

I. INTRODUCTION

Financial technology (FinTech) is an area of development that has undergone multiple changes on the payment ecosystem in India, notably through the launch of the Unified Payments Interface (UPI) by the National Payments Corporation of India (NPCI). UPI, a bank-to-bank digital payment system, is an easy, secure, and cost-efficient instant real-time payment that allows one to perform a bank-to-bank transaction using mobile apps. Since its release in 2016, UPI have become an influential digital transactional means in India and play an important role in fuelling the Indian vision of a cashless economy.

The high rate at which smartphone use has grown, low-cost internet connections and government programs like the Digital India has enhanced the pace at which digital payment is being adapted. Furthermore, the COVID-19 pandemic also promoted contactless payments, and the use of UPI dramatically increased in the country. Although this has blossomed, there is disparity in the rate of adoption among the various population groups and especially between the various age groups.

The age factor is a key determinant of adoption of technology whereby the young are more likely to be more digital and adaptable to the new technology unlike the older demographics. Age-wise adoption trends are vital to the identification of digital gaps and better strategies to enhance financial inclusion. Thus, the paper will assess the uptake of UPI and digital payments in India among different age groups based on the secondary data sources to understand the growth patterns, their use, and their driving forces.

II. REVIEW OF LITERATURE

The fast growth of digital payment systems in India has won the interest of many researchers, policymakers, and financial institutions. A number of articles have explored the development, adoption, and influence of the Unified Payments Interface (UPI) in the overall context of financial technology and the digital transformation.

Aathira S. Nair et al. (2023) also pointed to the change in the Indian digital payment ecosystem presented by UPI that improves the financial inclusion index, the efficiency of transactions, and technological advancement. The research found ease of use, interoperability and security features to be the main sources of adoption motivation. Equally, Mahesh A. and Ganesh Bhat (2021) talked about UPI as a significant development in digital payment infrastructure where real-time settlement and easy user interface were cited to be the most impactful factors on developing its rapid growth.

A study carried out by Manoj Kumar Goyal and Nikhil Monga (2022) studied consumer perception and attitude towards UPI and the results showed that convenience, cost-effectiveness, and accessibility have a positive impact on adoption. Nevertheless, the issues of financial security and data privacy were identified to influence the user confidence. Ritika Bhat and Shivank Singh Chauhan (2020) also divided the factors of adoption into trust and

International Journal for Novel Research in Economics , Finance and Management
www.ijnrefm.com
ISSN:
3048-7722
Volume 4, Issue 2, Mar-Apr-Aug-2026, PP: 01-10

usage determinants, indicating that perceived reliability and lower transaction risk also have a significant positive impact on user acceptance.

Researches on demographic factors suggest that age is a decisive factor in the use of digital payments. J. Elanchezhian et al. (2021) found that performance expectancy, social influence, and facilitating conditions have a notable influence on behavioral intention toward digital payments, that age is a moderating variable. The younger users may be more adaptable because of their higher levels of digital literacy whereas older groups of people may need more education and support systems.

The effects of COVID-19 pandemic on UPI adoption have also been well reported. D. A significant rise in the volume and value of UPI transactions was observed in the post-pandemic period, which was explained by Saratha and I. Anand Pawar (2023) as the tendency to prefer contactless payments. In the same way, Zaiba Khan (2023) also noted the global potential of UPI, stating its scalability and the ability to integrate with other international payment systems.

Although digital payments and UPI adoption have been thoroughly researched, there is little literature on the comparative age-based adoption patterns with the use of consolidated secondary data. The majority of the current studies are focused on behavioral intention, consumer perception or regional case-based studies. Thus, this paper aims to fill this gap by examining adoption dynamics and trends based on age, with the help of secondary data sources, and, thus, offer a more general demographic overview of the UPI adoption in India.

III. RESEARCH OBJECTIVES

The main aim of the proposed research is to investigate the use of UPI and digital payment system among different age groups in India, through secondary data. The study seeks to examine the general trends in the development of UPI transactions, as well as the way digital payments have changed the last few years in the Indian financial ecosystem.

Moreover, the research aims to measure the adoption rates by age and distinguish the disparity in the usage pattern among the younger, middle-aged, and older generations. It also tries to find the important variables that add to the UPI adoption which are technological awareness, ease of use, accessibility, perceived security, and digital infrastructure.

The study also seeks to determine the importance of UPI in enhancing financial inclusion and limiting the reliance on cash-based transactions. The challenges and barriers influencing the consistent implementation of digital payments in various age groups in India are also identified through the analysis of available reports and published data by the research.

IV. RESEARCH METHODOLOGY

The current research is founded on descriptive and analytical research design. The study is mainly based on secondary data to analyze how the UPI and digital payment systems are adopted by different age groups in India. The secondary information has been gotten through the authentic and reliable sources like reports released by the Reserve Bank of India (RBI), National Payments Corporation of India (NPCI), government publications, research journals, and related academic research.

The paper aims at examining the trends in digital payment transaction, especially the UPI transaction volume and value and demographic data that is accessible in published reports. The time taken into account in the study is the recent years whereby digital payment has experienced high growth.

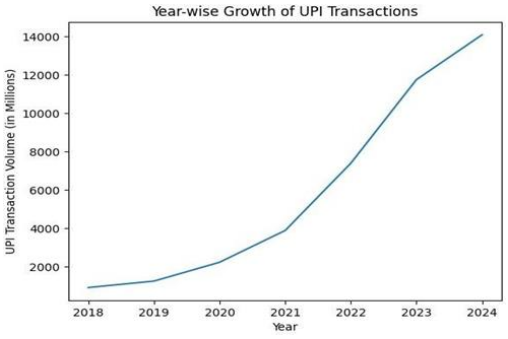
To analyze the adoption patterns, comparative and trend analysis techniques have been applied in analyzing the adoption patterns of various age groups. Tables and graphical representations have been used to organize and interpret the data to define its patterns, trends in growth and factors that have influenced it.

There is no primary data collection in the study since it will be conducted solely on secondary data; no questionnaires and interviews. The results are obtained through the systematic study of the current information and past studies.

V. ANALYSIS AND DISCUSSION

Growth Trend of UPI Transactions

Since 2018, the UPI transactions have been growing steadily and exponentially. Transaction volume, as well as transaction value, has grown substantially each year and this shows that there is an increase in the acceptance of digital payment. During the COVID-19 period, there was a large upward trend because of the preference of contactless transactions. The growth trend has also been enhanced by the increase in internet penetration and smartphone use.



International Journal for Novel Research in Economics , Finance and Management
www.ijnrefm.com
ISSN:
3048-7722
Volume 4, Issue 2, Mar-Apr-Aug-2026, PP: 01-10

Age-wise Adoption Patterns
Digital payment is not universal among age groups. The highest frequency is recorded in the group of people aged 1835 years because of the increased digital skills and smartphone knowledge. The 36 to 55 years group is moderately but increasingly adopted, primarily when it comes to utility payments and business payments. The demographic of the 55+s has a relatively reduced usage rate because of safety issues and lack of digital knowledge.

Factors Influencing Adoption
The use of UPI is mostly motivated by ease of use, convenience, and speed of transactions. Government initiatives and security features supporting the use of digital payments also affect its use in a positive way. Yet, the aspects of digital literacy disparities and cybersecurity influence the adoption among the older users.

VI. FINDINGS

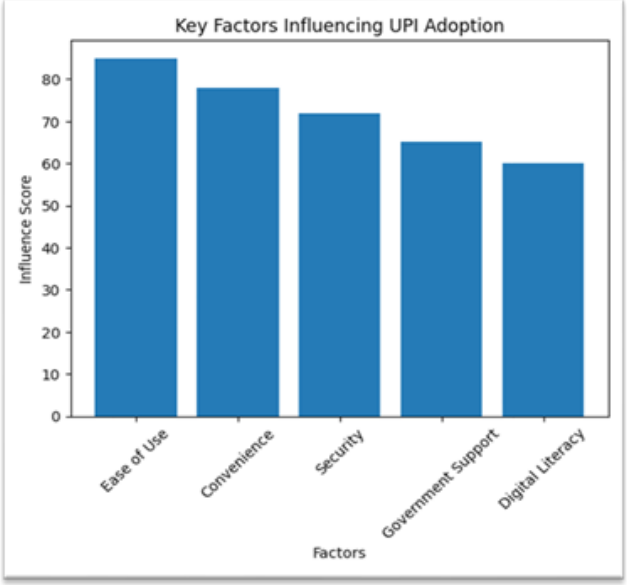
The secondary data analysis shows that the UPI transaction growth has a very high upward trend, which is consistent over the last years. Data on year-to-year basis indicates that the volume of transaction increased significantly as it was recorded that in 2018, there was a transaction volume of 915 million transactions which increased to an estimated 14,100 million transactions in 2024. This rate of growth is indicative of overgrowing public confidence, the availability of technology and the ubiquity of UPI throughout the sectors. The highest rate can be seen after2020, and it can be attributed to the effect of digital transformation and more favorable attitudes toward contactless transactions.The age analysis shows that the age group of 18–35 is the one that has the highest adoption rate at about 52, which shows excellent familiarity with digital or employs financial apps on smartphones more often. The 36–55 age segment represents 34 percent adoption based on the constant growth through the convenience and utility-based transactions. Conversely, the 55+ age bracket only contributes 14% to the use of digital payments, implying that the lack of digital literacy and the issue of security remains an obstacle to full engagement among elderly people.

More detailed analysis of influencing factors reveals that ease of use (85%), and convenience (78%) are the most influential factors that contribute to UPI adoption. The user confidence is also impacted heavily by security considerations (72%). Government efforts and support of digital infrastructure (65%) are part of the favorable adoption trends. Nonetheless, the aspect of digital literacy (60) is a relatively less critical element, which means that the process of awareness and education is still critical in the context of ensuring the consistency in the adoption rates across age groups.

In general, the results indicate that UPI has attained a broad level of acceptance in India especially among the younger generations. Although the growth rates
are still very impressive, it is crucial to close the digital divide between older age groups in order to ensure full financial inclusion.

VII. KEY FACTORS INFLUENCING UPI ADOPTION

The reasons why UPI has been adopted are mainly ease of use, speed of the transaction, convenience and perceived insecurity. Also, government efforts, user awareness, and digital infrastructure all have a strong impact on the acceptance by various age groups.



VIII. CONCLUSION

The paper concludes that the Unified Payments Interface (UPI) has revolutionized digital payment in India to a great extent. The volume and value of transactions are steadily increasing and it is evidence of increased confidence and acceptance of the digital payment systems by the population. UPI has risen to become a central force behind a cashless economy and the increase in financial inclusion.
The analysis reveals that the adoption rates differ depending on the age groups and the younger people use it more as they are more digital literate and familiar with the technologies. Middle-aged users are exhibiting stable adoption, but older groups are comparatively less involved, mainly because of the issue of security and low levels of digital literacy.

On the whole, the factors that affect adoption are convenience, security, and ease of use. Despite the fact that UPI has recorded impressive penetration, it will be necessary to deal with the problem of digital illiteracy and

enhance cybersecurity to make sure that all demographic groups adopt it equally.

The digital payment ecosystem in India will be reinforced further by policy support and development of infrastructure.

IX. LIMITATIONS OF THE STUDY

Although the current study offers valuable information on the usage of UPI and digital payments in India, it has some limitations. To start with, the study is completely grounded on secondary data, which implies that the results are reliant on the validity, dependability, and expanse of the already published accounts and official statistics. There will not be the primary data collection, which will restrict the opportunity to assess the actual behavioral perceptions, personal experiences and location-specific differences in digital payment use.

Second, the age-wisdom adoption analysis is informed based on aggregate demographic information being published. These data might not be entirely accurate in terms of micro-level distinctions in sub-groups in terms of income level, education background, or rural-urban classification. Also, the paper uses mostly trend-based analysis and graphical representation and does not use sophisticated statistical modelling methods which may offer greater empirical validation.

The other drawback is connected with the fast development of financial technologies (FinTech) and online payment systems. Given that UPI transaction data remains dynamically varying information, the results correspond to a time- limited analysis and may need to be updated on a regular basis. Moreover, the questions concerning cybersecurity risks, online frauds, and technological dysfunctions were only addressed in a conceptual form because of the lack of data.

In the future, the study can be expanded to include empirical surveys, behavioral modeling, and case studies at the regional level to give a more in- depth account of the digital payment uptake among various demographic groupings.

REFERENCES

1. Aathira, S. N., & Kannan, P. (2023). An all-encompassing study on how digital payments will be transformed in the future by harnessing the UPI's abilities and capabilities.
2. Bhat, R. & Chauhan, S. S. (2020). Uncovering unified payments interface's (UPI) adoption factors and trust variables using retail and consumer analytics from low- and middle-income communities.
3. Elanchezhian, J., Nelofar, R., & Riyasdeen. (2021). Researching customer behavior toward adopting digital payments with an emphasis on Thanjavur district specifically.
4. Goyal, M. K. & Monga, N. (2022). A study of customers' perceptions and attitudes regarding the Unified Payment Interface (UPI).
5. Khan, Z. (2023). A thorough investigation into the UPI payment system in India.
6. Mahesh, A., & Bhat, G. (2021). Study of Digital Payment Solutions in India: Case Study of Unified Payments Interface.
7. National Payments Corporation (NPCI). (Various years). Statistics for UPI products and Annual Reports from NPCI can be accessed at https://www.npci.org.in
8. Reserve Bank of India (RBI). (Various years). Annual Report on Digital Payment metrics through https://www.rbi.org.in.
9. Saritha, D., & Pawar, I. A. (2023). UPI Performance in India quantified before and after COVID-19 epidemic.
10. Sharma, K., Bajaj, N., Page, X., Monda, M. (2020). An environment for
11. illuminating Indian user decision-making process on Unified Payment Interface (UPI).