

Digital Payment Adoption among Homemakers: A Study of FinTech's Role in Changing Economic Behaviors

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Abstract

The rapid expansion of digital payment technologies in India has significantly altered financial transaction patterns across diverse demographic groups. This study investigates the adoption of digital payment platforms among homemakers and evaluates the influence of FinTech innovations on their financial behavior and economic empowerment. Homemakers, traditionally less engaged in formal financial systems, constitute an important yet underexplored segment in the digital ecosystem. The research adopts a quantitative approach using primary data collected from 400 homemakers across urban, semi-urban, and rural regions through stratified random sampling. The findings indicate a high level of adoption, with UPI-based applications being the most preferred. The key determinants of adoption include smartphone access, education, and urban residence. Convenience, safety, and incentives act as major motivators, while trust issues, digital illiteracy, and connectivity challenges hinder adoption. The study also highlights improved financial participation, budgeting practices, and confidence among users, though disparities persist across age groups and rural populations.

Keywords: *Digital payments, FinTech, homemakers, financial inclusion, behavioral changes, UPI, women's empowerment*

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1. Introduction

The rapid advancement of financial technology (FinTech) has significantly transformed the landscape of financial transactions worldwide, with India emerging as one of the leading adopters of digital payment systems. Initiatives such as Digital India, increased smartphone penetration, and the widespread adoption of Unified Payments Interface (UPI) have accelerated the shift from cash-based to cashless transactions. Digital payment platforms, including mobile wallets, internet banking, and UPI-based applications, have enhanced accessibility, efficiency, and transparency in financial activities, thereby strengthening financial inclusion across diverse population segments (Kumar & Gupta, 2022). Limited access to financial literacy, digital tools, and formal banking services has historically restricted their engagement with structured financial systems. The emergence of user-friendly FinTech platforms has enabled homemakers to actively participate in financial decision-making, thereby enhancing their economic agency and empowerment (Sinha, 2021). Increased accessibility to digital tools has facilitated greater control over financial resources and improved participation in household economic activities. The integration of FinTech solutions into daily household transactions has begun to reshape the economic behavior of homemakers. Digital payments offer convenience, enable real-time transaction tracking, and support better budgeting practices, thereby improving financial discipline and transparency (RBI, 2023). Against this backdrop, the present study seeks to examine the extent of digital payment adoption among homemakers and analyze the role of FinTech in transforming their economic behaviors.

2. Background of study

Financial Technology (FinTech) represents the convergence of finance and technology, fundamentally transforming the delivery, accessibility, and consumption of financial services. Its evolution has progressed through distinct phases, beginning with the digitization of traditional banking between the 1950s and 1980s, followed by the emergence of internet banking in the 1990s, the expansion of mobile banking in the 2000s, and the current phase characterized by advanced digital ecosystems integrating artificial intelligence, blockchain, and seamless digital payment systems (Arner et al., 2016). The COVID-19 pandemic further accelerated this shift, making contactless payments a necessity and significantly altering financial behavior (McKinsey & Company, 2020). India's FinTech landscape has evolved rapidly, positioning the country as a global leader in digital payment innovation. The demonetization initiative of 2016 acted as a catalyst, accelerating the transition toward a less-cash economy supported by initiatives such as Digital India (National Payments Corporation of India, 2024). Key developments include the introduction of the Unified Payments Interface (UPI), expansion of banking access through the Pradhan Mantri Jan Dhan Yojana, and the JAM (Jan Dhan–Aadhaar–Mobile) trinity. These initiatives have significantly enhanced access to formal financial systems. India recorded over 113 billion digital transactions worth approximately ₹302 trillion in FY 2022–23, with UPI contributing a substantial share, demonstrating the scale and momentum of digital adoption (Reserve Bank of India, 2023). The structural barriers such as digital illiteracy, limited access to devices, and socio-cultural constraints influence their engagement with FinTech platforms (Government of India, 2011). The digital payment technologies offer transformative potential by enabling improved financial management, increased autonomy, and participation in formal economic systems. Features such as transaction tracking, digital savings, and access to financial services can enhance decision-making power and economic agency.

3. Scope and Significant of Study

The scope of the present study is centered on examining the adoption and usage patterns of digital payment systems among homemakers across urban, semi-urban, and rural regions, with a specific focus on understanding the role of FinTech in influencing their economic behavior, financial decision-making, and level of financial inclusion. The study covers key dimensions such as accessibility to digital infrastructure, awareness levels, frequency of usage, perceived benefits, and barriers to adoption, thereby providing a comprehensive assessment of how digital financial tools are integrated into household-level financial management. The significance of the study lies in its contribution to bridging the research gap related to gender-based digital financial inclusion, particularly among homemakers who remain underrepresented in formal financial systems (Demirgüç-Kunt et al., 2021). By highlighting the transformative potential of digital payments in enhancing financial autonomy, budgeting efficiency, and participation in the formal economy, the study offers valuable insights for policymakers, financial institutions, and FinTech developers to design inclusive and user-centric digital solutions.

4. Objective of Study

- To examine digital payment adoption patterns among homemakers
- To identify and analyze the key factors (motivators and barriers) influencing digital payment adoption among homemakers
- To examine the relationship between demographic variables and digital payment adoption among homemakers
- To evaluate the impact of digital payment adoption on homemakers' economic behaviors

- To investigate the challenges and barriers homemakers face in adopting and effectively utilizing digital payment technologies

5. Reviews of Literature

India's digital payment ecosystem has undergone a substantial transformation over the past decade, driven by strong policy initiatives, technological advancements, and evolving consumer preferences. Government interventions have significantly accelerated the transition toward a cashless economy by strengthening regulatory frameworks and promoting financial inclusion, thereby expanding access to digital payment systems across diverse population segments (Desai & Jain, 2019). These developments have also influenced the banking sector and improved transactional efficiency; however, challenges such as limited awareness, trust deficits, and infrastructural constraints continue to affect widespread adoption. Consumer behavior plays a crucial role in determining the adoption and usage of digital payment systems. Empirical studies suggest that convenience, speed, and safety are primary drivers encouraging users to shift from cash-based transactions to digital modes. However, concerns related to cybersecurity, network reliability, and digital literacy remains significant barriers, particularly among less technologically equipped populations. Research further indicates that demographic factors such as income, gender, and past experiences with online fraud shape payment preferences, with individuals exhibiting strong attachment to cash being less inclined to adopt digital platforms (Shree et al., 2021). The adoption of digital payments is particularly challenging in rural areas, where infrastructural and institutional barriers are more pronounced. Despite increased bank account penetration, the usage of digital payment systems remains limited due to factors such as inadequate internet access, financial illiteracy, and security concerns. Additionally, demographic variations indicate that younger and more educated individuals are more receptive to digital platforms, while traditional practices continue to dominate among other groups. Institutional challenges, including lack of skilled personnel and resistance to technological change, further hinder adoption. At the same time, the growing popularity of mobile wallets and UPI-based platforms highlights the importance of perceived usefulness, security, and service quality in influencing user acceptance (Routray et al., 2019).

6. Research Gap

While existing literature provides valuable insights into digital payment adoption patterns, challenges, and theoretical frameworks, significant gaps remain regarding specific demographic segments within rural contexts. Most studies adopt macro-level analyses or focus on urban populations, with limited research examining how traditionally excluded groups particularly homemakers in rural areas experience and benefit from digital payment technologies. The intersection of gender, rural location, and digital financial inclusion remains underexplored. Understanding homemakers' unique adoption patterns, motivations, and barriers could provide crucial insights for designing inclusive digital payment ecosystems and informing targeted policy interventions aligned with sustainable development goals.

7. Research Methodology

- **Type of Research Design:** This study employs a descriptive and explanatory research design.
- **Target Population:** The target population comprises homemakers (women primarily engaged in household management without formal employment) residing in urban, semi-urban, and rural areas of Solapur District.
- **Sample Size:** The present study is based on a total sample of 100 respondents. The respondents are distributed across different age groups and residential locations. Out of the total sample, 40 respondents belong to rural (village) areas, 23 respondents are from semi-urban (town) areas, and 37 respondents are from urban (city) areas.

- **Sampling Technique:** Stratified Random Sampling technique used to select respondents for the study. The population was first divided into strata based on area of residence, namely Rural (Village), Semi-Urban (Town), and Urban (City).
- **Data Collection**

Primary Data: The study relies primarily on primary data collected directly from homemakers through structured questionnaires.

Secondary Data: Supporting data from: Reserve Bank of India (RBI) reports; National Payments Corporation of India (NPCI) statistics; Academic research papers and industry reports

Data Collection Instrument: Primary Instrument: Structured Questionnaire. The questionnaire consists of multiple sections using various measurement scales

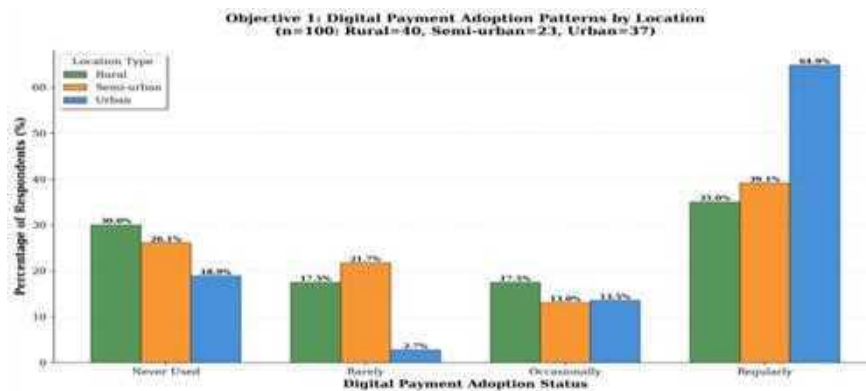
8. Hypothesis of the Study

Null Hypothesis (H₀): There is no significant association between adoption of digital payment systems and the economic behaviors of homemakers.

Alternative Hypothesis (H₁): There is a significant association between adoption of digital payment systems and the economic behaviors of homemakers.

9. Discussion and Data Analysis

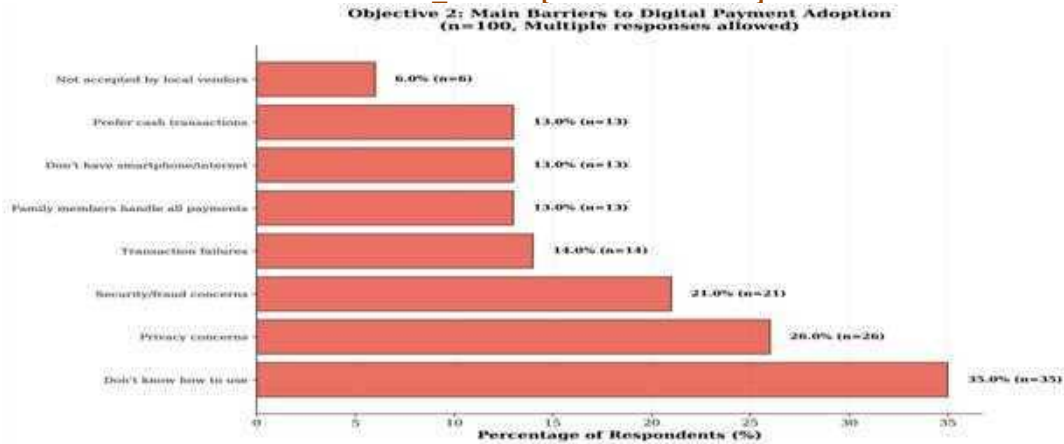
Fig.1 Digital Payment Adoption Patterns



Digital Payment Adoption Patterns

In rural areas, digital payment usage is divided between users and non-users. While 35% of respondents use digital payments regularly, a considerable 30% have never used them, and another 35% use them rarely or occasionally. This reflects a mixed situation where digital payment systems have reached a segment of the rural population, but a large proportion still remains excluded due to factors such as lack of awareness, limited access to digital infrastructure, or hesitation in using technology. In semi-urban areas, adoption shows a moderate yet mixed trend. Although 39.1% of respondents use digital payments regularly, nearly 47.8% fall under the categories of never used or rarely used. This suggests that semi-urban respondents are in a transitional phase digital payments are gaining acceptance, but consistent usage has not yet become universal. In contrast, urban areas display a relatively strong inclination toward digital payments; however, even here the pattern is not completely uniform. While a majority (64.9%) are regular users, about 35% of respondents still use digital payments either occasionally, rarely, or not at all. This indicates that despite better infrastructure and higher digital exposure, complete adoption has not been achieved.

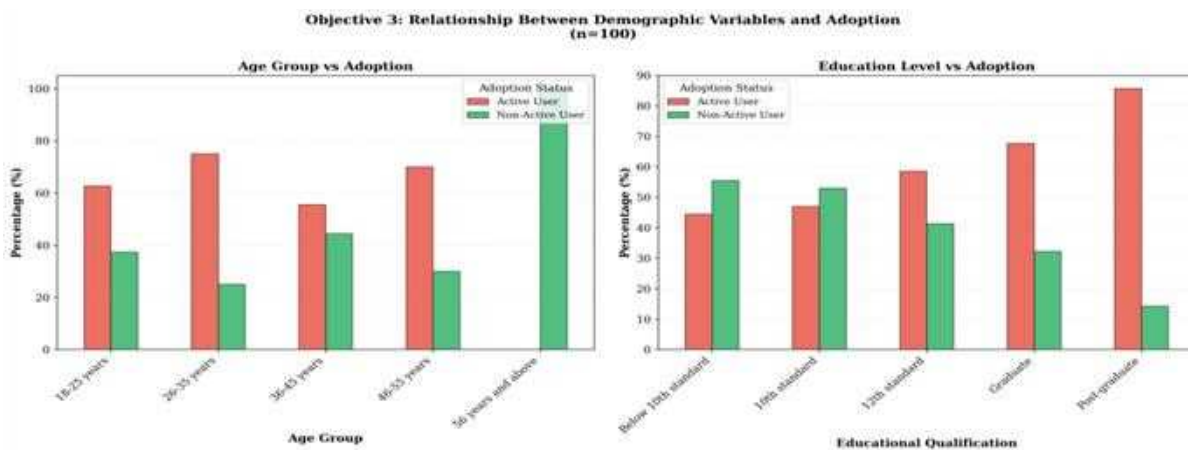
Fig.2 Barriers to Digital Payment Adoption



Barriers to Digital Payment Adoption

The most prominent barrier is the lack of knowledge on how to use digital payment systems, reported by 35% of respondents. This highlights a significant digital literacy gap, especially among users who may have access to technology but lack confidence or skills to use it effectively. Closely following this, privacy concerns (26%) and security or fraud concerns (21%) emerge as major deterrents. This mixed response suggests that even among potential users, fear of data misuse, hacking, and financial fraud discourages regular or continued use of digital payment platforms. A moderate level of barriers is observed in terms of transaction failures (14%), indicating operational and technical issues that reduce trust in digital systems. Similarly, behavioral and dependency-related factors such as preference for cash (13%), lack of smartphone or internet access (13%), and reliance on family members for handling payments (13%) show that adoption is influenced by both personal habits and household dynamics. The least cited barrier is non-acceptance by local vendors (6%), suggesting that merchant acceptance is improving, although it still remains an issue for a small section of respondents.

Fig.3 Demographic Variables and Adoption



Demographic Variables and Adoption

Age Group vs Digital Payment Adoption

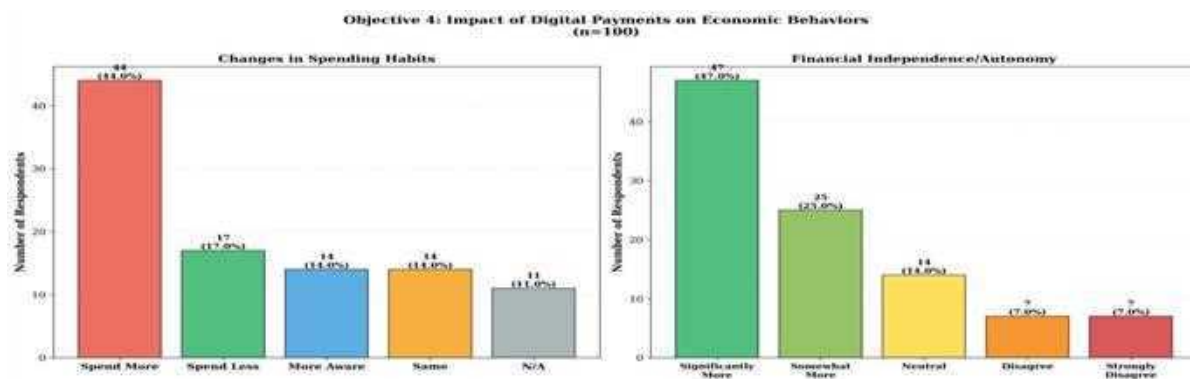
Younger respondents, particularly those in the 26–35 years and 18–25 years categories, record a higher proportion of active users, reflecting greater familiarity with digital technology and comfort with online transactions. Respondents in the 36–45 years and 46–55 years age groups also show a reasonably high level of active usage, suggesting that digital payment adoption is not limited only to the youth. Respondents aged 56 years and above exhibit very low active usage and extremely high non-active

usage, indicating significant resistance or inability to adopt digital payment methods. This highlights age-related barriers such as low digital literacy, fear of technology, and dependence on others for financial transactions.

Education Level vs Digital Payment Adoption

Respondents with lower levels of education (below 10th standard and 10th standard) have a higher proportion of non-active users, indicating limited adoption. As education level increases to 12th standard and graduate level, the share of active users rises steadily, reflecting better understanding, confidence, and awareness of digital financial tools. The highest adoption is observed among post-graduates, where active users overwhelmingly outnumber non-active users. However, even at higher education levels, a small proportion of non-active users still exists, indicating that factors beyond education such as trust and personal preference also influence adoption.

Fig.4 Impact on Economic Behaviors



Impact on Economic Behaviors

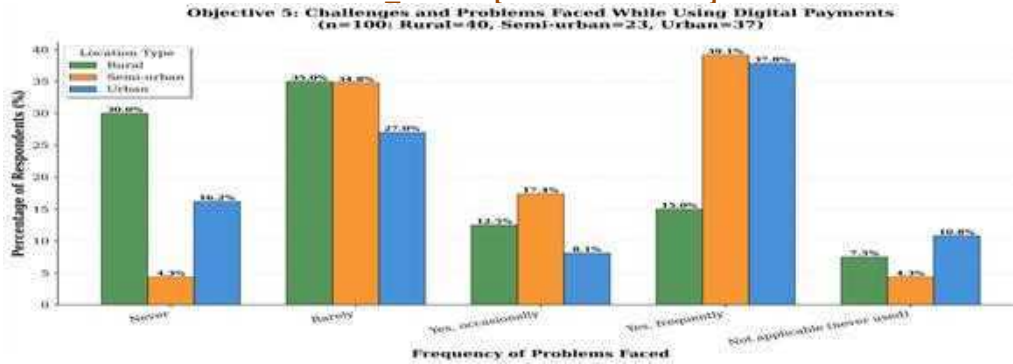
Changes in Spending Habits

The findings show a diverse pattern in spending behavior after adopting digital payments. A significant proportion of respondents (44%) report that they spend more, suggesting that ease of payment, cashless convenience, and impulsive buying may increase expenditure. At the same time, 17% indicate that they spend less, possibly due to better tracking of expenses through digital records. Additionally, 14% of respondents have become more aware of their spending, reflecting improved financial monitoring and budgeting. Another 14% report no change in spending habits, while 11% state that the question is not applicable, indicating limited or indirect use of digital payments. This mixed outcome suggests that while digital payments enhance convenience, their effect on spending varies based on individual financial discipline and awareness.

Financial Independence / Autonomy

The impact on financial independence also reveals a mixed but largely positive trend. Nearly 47% of respondents feel significantly more financially independent, and 25% feel somewhat more independent, indicating that digital payments empower users by giving them greater control over transactions. However, 14% remain neutral, suggesting that digital payments have not noticeably altered their autonomy. A smaller segment (14% combined) either disagree or strongly disagree, reflecting that digital payments have not contributed to financial independence for everyone, possibly due to reliance on others or lack of confidence in using digital tools.

Fig. 5 Challenges and Barriers Faced While Using Digital Payments



Challenges and Barriers Faced While Using Digital Payments

In rural areas, a substantial proportion of respondents (35%) report that they rarely face problems, while 30% state that they never face issues, suggesting that among users, digital payment systems function relatively smoothly. However, 15% report frequent problems, and 12.5% experience issues occasionally, indicating that infrastructure limitations, connectivity issues, or lack of technical support still affect a segment of rural users. Additionally, 7.5% fall under the not applicable category, reflecting non-usage. In semi-urban areas, challenges are more pronounced and frequent. The highest proportion (39.1%) report facing problems frequently, followed by 34.8% who face issues rarely, and 17.4% who experience problems occasionally. Only 4.3% report never facing problems, suggesting that while adoption exists, reliability and consistency of digital payment services remain a concern in semi-urban regions. In urban areas, a mixed but relatively balanced pattern is observed. While 37.8% report facing problems frequently, 27% encounter issues rarely, and 16.2% never face problems. A smaller share (8.1%) experience problems occasionally, and 10.8% indicate non-usage. This shows that even in urban settings with better infrastructure, users are not entirely free from technical or transactional challenges.

10. HYPOTHESIS TESTING

Table 1: Chi-Square Calculation

Sr. No.	Hypothesis	Variables Tested	Statistical Test Used	χ^2 Calculated Value	df	χ^2 Table Value (0.05)	Level of Significance	Decision	Result
1	H1(a)	Digital Payment Adoption vs Spending Patterns	Chi-square Test	23.16	12	21.03	5%	Reject Ho	Significant Association
2	H1(b)	Digital Payment Adoption vs Household Financial Management	Chi-square Test	28.92	12	21.03	5%	Reject Ho	Significant Association
3	H1(c)	Digital Payment Adoption vs Financial Independence	Chi-square Test	39.37	12	21.03	5%	Reject Ho	Significant Association
	Overall H1	Digital Payment Adoption vs	Chi-square Test	—	—	—	5%	Reject Ho	H1 Accepted

		Economic Behavior of Homemakers							
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Since the calculated Chi-square values for all sub-hypotheses exceed the table value at the 5% level of significance, the null hypotheses are rejected. Hence, digital payment adoption has a statistically significant impact on the economic behavior of homemakers.”

11. Finding of Study

- The study reveals that digital payment adoption among homemakers has increased significantly, indicating a gradual shift from traditional cash-based transactions to technology-enabled financial practices. UPI-based applications emerged as the most preferred mode of digital payment due to their ease of use, real-time transaction capability, and wide acceptance across merchants. The findings indicate that factors such as smartphone ownership, educational level, and urban residence have a strong positive influence on adoption levels.
- The study further identifies key motivational factors driving adoption, including convenience, time-saving benefits, safety from cash handling, and incentives such as cashback offers. At the same time, several barriers continue to limit widespread adoption, particularly among older and rural homemakers. These include lack of trust in digital systems, fear of fraud, technological anxiety, and inadequate digital infrastructure.
- The research demonstrates notable behavioral changes among homemakers who have adopted digital payments. These include increased participation in online shopping, improved budgeting practices through transaction tracking, and enhanced confidence in managing household finances. Digital payments have contributed to greater financial inclusion and empowerment by enabling homemakers to take a more active role in financial decision-making.

12. Conclusion

The study concludes that digital payment technologies have played a transformative role in reshaping the financial behavior of homemakers, contributing significantly to their financial inclusion and economic empowerment. The growing adoption of FinTech platforms, particularly UPI-based applications, indicates a clear shift from traditional cash-based practices toward more efficient, transparent, and convenient digital financial systems. The homemakers are increasingly utilizing digital payments for routine transactions, which has enhanced their participation in household financial decision-making and improved their ability to manage finances effectively. The study also highlights that the benefits of digital payment adoption are not uniformly distributed across all segments. Factors such as education, digital literacy, smartphone accessibility, and geographic location continue to influence adoption levels. Rural and elderly homemakers face greater challenges due to limited infrastructure, lack of awareness, and concerns related to security and trust. These barriers underscore the need for targeted interventions, including digital literacy programs, user-friendly technologies, and robust cybersecurity measures to build confidence among users.

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