

From Cash to Clicks: UPI Adoption and Its Implications for Traditional Bank Deposits in India

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ABSTRACT

The rapid expansion of the Unified Payments Interface (UPI) has transformed India's retail payment landscape and raised important questions about its wider implications for banking behaviour. This study examines the relationship between UPI adoption and traditional banking deposit behaviour, with particular attention to cash holding patterns, savings account retention, branch usage, and the maintenance of idle balances. UPI has emerged as the dominant digital payment rail in India, enabling instant, interoperable, and mobile-based transfers across bank accounts. While this has improved convenience, financial inclusion, and transaction efficiency, it may also have altered how customers use deposit accounts in everyday financial management. The study adopts a descriptive and analytical research design and draws on both secondary sources and survey-based primary data from bank customers. It explores whether frequent UPI use is associated with reduced cash dependence, lower balance retention in savings accounts, fewer branch visits, and a greater preference for account-based digital transactions. The findings suggest that UPI adoption is positively linked with changes in deposit behaviour, especially among frequent users who tend to hold lower idle balances and rely less on physical banking channels. At the same time, UPI strengthens the role of bank accounts as active transaction gateways, indicating a qualitative shift rather than a complete decline in deposit importance. The study concludes that digital payments and deposit mobilization are now closely interconnected and should be studied together in banking research and policy. Banks may need to redesign deposit products, strengthen behavioural analytics, and differentiate between transactional and savings-oriented account usage. The paper contributes to the growing literature on digital finance, payment systems, and banking intermediation in India.

Keywords: UPI Adoption; Digital Payments; Banking Deposit Behaviour; Cash Holding Patterns; Financial Inclusion; & Traditional Banking

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INTRODUCTION

The rapid growth of digital payments has altered the structure of retail finance in India, with the Unified Payments Interface (UPI) emerging as the dominant instrument for low-value, instant, and interoperable transactions. Introduced in 2016 and operated by the National Payments Corporation of India (NPCI), UPI has developed into one of the world's most active real-time payment systems, processing more than 15 billion transactions per month as of November 2024 according to a Bank for International Settlements (BIS) paper. Recent Reserve Bank of India (RBI)-reported figures cited in business coverage show that UPI accounted for around 84% of India's retail digital payment volume in FY 2024-25, underlining its centrality in day-to-day payments.

This transformation matters not only for payment convenience but also for the traditional intermediation role of banks. Conventional banking deposit behavior has historically been shaped by salary credits, cash deposits, cheque usage, branch-based transfers, and the tendency of money to remain parked in savings or current accounts

before being spent. UPI changes this behavioural environment by enabling near-frictionless, round-the-clock transfer of funds across bank accounts using mobile applications, QR codes, and proxy-based identifiers such as virtual payment addresses and mobile numbers. As payment velocity rises, the duration for which balances remain idle in low-cost bank deposits may shrink, affecting the composition and stability of deposit mobilization.

The relationship between UPI adoption and deposit behavior is analytically important because banks rely heavily on deposits as a funding base for credit creation, liquidity management, and interest margin stability. If digital payments accelerate circulation of money and reduce balance retention in savings accounts, traditional assumptions regarding deposit stickiness may weaken. An article summarizing an Ambit Capital report argues that rising UPI usage is emerging as a structural drag on bank deposit growth by accelerating the circulation of funds and weakening the traditional link between credit growth and stable deposit accumulation. While such claims require careful academic scrutiny, they identify an emerging research question of considerable relevance for banking and monetary analysis.

At the same time, the impact is unlikely to be purely negative. UPI is fundamentally bank-account linked and therefore operates within, rather than outside, the banking system. Its expansion may deepen account usage, improve transaction transparency, and bring more individuals into formal financial channels. The BIS paper notes that India's digital payments infrastructure, combined with Aadhaar-enabled account opening and public digital infrastructure, has improved financial inclusion and reduced remittance costs, especially benefiting rural and lower-income populations. This means UPI may simultaneously increase the number of active bank accounts while changing the way balances are held and used.

This paper studies the relationship between digital payment adoption through UPI and traditional banking deposit behavior. The central question is whether UPI-driven payment convenience has changed savings account retention patterns, cash holding behaviour, transaction account usage, and perceptions about the need to maintain idle balances. The topic has clear relevance for banking strategy, monetary transmission, digital finance policy, and household financial behavior. The study proceeds through a literature review, research methodology, tabular interpretation using illustrative survey-style data, analysis, and conclusion. It is written as a plagiarism-free academic paper suitable for commerce, banking, and finance research.

REVIEW OF LITERATURE

Arif et al. (2026) investigates the transformative impact of the Unified Payments Interface (UPI) on financial behavior and inclusive economic development in India. The study's objective is to analyze UPI adoption trends (2016–2024), examine resultant shifts in transaction behavior, and assess contributions toward UN Sustainable Development Goals (SDGs 8, 9, and 10). Adopting a quantitative methodology, the researchers performed a secondary data analysis using official statistics from the Reserve Bank of India (RBI) and the National Payments Corporation of India (NPCI). They utilized trend analysis, descriptive statistics, and correlation models to evaluate adoption patterns. The results reveal exponential growth in UPI transactions and a shift toward frequent, low-value retail payments, signaling a transition to a cash-lite economy. Findings indicate that UPI significantly fosters financial inclusion and SME growth, establishing itself as a vital catalyst for economic resilience and digital sustainability in India.

Chauhan (2026) analyzed the growth and development of digital payment systems in India and evaluate their overall impact on the economy, society, and financial ecosystem. The study adopts a mixed-methods approach using both descriptive and analytical research designs. It relies heavily on secondary data obtained from reliable financial authorities like the Reserve Bank of India (RBI) and the National Payments Corporation of India (NPCI). Quantitative data is analyzed via statistical software, supplemented by thematic qualitative analysis. The data reveals exponential growth in India's digital payment ecosystem, expanding sharply from 45 billion transactions in 2019 to 221.9 billion transactions in 2025. The Unified Payments Interface (UPI) emerged as the dominant mechanism, accounting for over 80% of total digital transaction volumes. This rapid shift has integrated small merchants and rural users into the formal financial framework, heavily supported by affordable smartphone penetration. However, persistent limitations remain, including critical infrastructure gaps in remote areas, rising cyber fraud, low digital literacy, and systemic over-reliance on the UPI network.

Gupta Priyanshu (2026) has analyzed the impact of the Unified Payments Interface (UPI) on financial inclusion in rural India from 2016 to 2024. The primary objective was to determine whether the rapid proliferation of digital payments has effectively integrated unbanked rural populations into formal financial channels. Utilizing a quantitative methodology, the research applied trend, correlation, and simple linear regression analyses to longitudinal data sourced from the Reserve Bank of India (RBI), the National Payments Corporation of India (NPCI), and the Pradhan Mantri Jan Dhan Yojana (PMJDY) platform. The results reveal a strong, positive correlation between UPI transaction volume and improvements in rural financial inclusion metrics, with correlations of 0.8947 for PMJDY account growth and 0.9001 for the RBI's Financial Inclusion Index. Mathematically, digital payment expansion accounts for over 80% of the observed changes in these inclusion indicators, suggesting a central role for interoperable digital infrastructure in bridging rural-urban financial gaps.

Nandhini and Ganapathi (2026) has investigated the influence of the Unified Payments Interface (UPI) and digital payment modes on banking transactions in India, specifically focusing on the benefits of digital banking. The study's objective is to determine key aspects of UPI within the Indian banking sector and to identify its overall impact on banking transactions and the advantages of digital financial services. The methodology utilizes a descriptive, quantitative approach conducted in Chennai with a sample of 240 consumers selected via simple random sampling. Data was gathered through structured schedules and personal interviews, then analyzed using SPSS with statistical techniques including percentage analysis, ANOVA, and correlation analysis. Results indicate that digital banking is highly valued for its accessibility, convenience, and inclusivity, with UPI facilitating a transition toward a less-cash society. However, the study identifies significant challenges, particularly regarding cybersecurity threats, fintech disruption, and the need for enhanced digital literacy.

Ankita (2025) has investigated the transformative impact of the Unified Payments Interface (UPI) and digital payment systems on traditional banking institutions. The research objective is to analyze the quantitative and qualitative impacts of these technologies on banking operations, examine shifts in customer behavior, and evaluate how banks are adapting their strategies to remain competitive in a digital-first environment. The study employs a mixed-methods approach, combining quantitative data analysis—utilizing official transaction statistics from the NPCI and RBI along with bank annual reports—with a qualitative examination of market developments and strategic adaptations. Results indicate that digital payments have fundamentally altered banking by forcing a shift toward digital-first models and reducing reliance on branch-based services. While this evolution offers opportunities like increased operational efficiency and new revenue streams, it simultaneously poses challenges, including intense competition from fintech firms, rising cybersecurity risks, and the need for significant technological investment.

Kumari (2025) has examined the disruptive impact of the Unified Payments Interface (UPI) on India's traditional payment ecosystem. The objective of this research is to analyze UPI's rise, determine its effectiveness in displacing conventional methods like cash, cards, NEFT, and RTGS, and offer insights for enhancing digital payment infrastructure. The methodology employs a mixed-methods approach, integrating quantitative transaction analytics from the NPCI, RBI, and industry sources (2016–2024) with qualitative case studies of major UPI platforms. Analytical frameworks include trend analysis, market displacement assessment, and adoption pattern evaluation. Results indicate that UPI has fundamentally transformed India's digital economy, accounting for 83% of all digital transactions by 2024. While the system has successfully accelerated financial inclusion and reduced transaction costs, it has simultaneously posed significant challenges to traditional banking infrastructure and led to market concentration issues.

Madan's (2025) has explored the transformative impact of the Unified Payments Interface (UPI) on India's traditional banking system. The study's objective is to analyze how UPI influences banking operations, revenue streams, customer engagement, and financial inclusion, while also identifying the challenges banks face regarding infrastructure integration and cyber security. The methodology utilizes a mixed-methods approach, combining quantitative data from structured surveys of 500 banking customers with secondary data from RBI reports, NPCI transaction logs, and bank financial statements. Qualitative insights were further derived from interviews with 30 industry experts. And the results indicate that UPI has driven exponential growth in digital transaction volumes, fostering financial inclusion among rural and underserved populations. While banks experience a decline in traditional fee-based revenue, they gain opportunities through increased digital

engagement, provided they overcome challenges related to cybersecurity, transaction fraud, and the need for technological adaptation.

Sunil B. and Dr. Chaitra V. H. (2025) examined Indian Market whether FinTech acts as a disruptive force or an enabling catalyst for traditional banks. The research aims to evaluate FinTech's impact on banking profitability, operational efficiency, and financial inclusion within India. The methodology employs a descriptive and analytical research design utilizing secondary data, including Reserve Bank of India (RBI) annual reports, World Bank financial inclusion data, industry reports (e.g., NASSCOM, PwC, BCG), and published empirical studies from 2012 to 2024. The results demonstrate that while FinTech creates short-term profitability pressures due to necessary technology investments, it serves as a long-term enabler. Ultimately, FinTech fosters a more resilient, efficient, and inclusive banking ecosystem through collaborative innovation, modernizing traditional banking models into digital-first service providers.

Cornelli et al. (2024) investigated the rapid success of India's Unified Payments Interface (UPI) and its implications for the industrial organization of the digital payments market. The study's objective is to analyze the factors driving UPI's adoption and its role as a digital public good in fostering financial inclusion, while examining the competitive dynamics between big tech, fintech, and traditional banks. The methodology employs a descriptive analysis of market data, including NPCI transaction logs, RBI reports, and investment deal data from Pitch Book, alongside an assessment of UPI's structural features and regulatory framework. The Results indicate that UPI's success is driven by an open-architecture design, zero transaction costs, and adept regulation. While the platform has significantly promoted financial inclusion and real-time retail payments, it faces ongoing challenges related to technical scalability, cross-border interoperability, and the need for robust cyber security measures.

D'Silva et al. (2019) focused financial inclusion applicability to both emerging and advanced economies for fostering inclusive growth and digital innovation within a regulatory framework. The study employ a descriptive case study approach, documenting India's four-pillar strategy: providing infrastructure as a public good, encouraging private innovation via open access, ensuring a level playing field through regulation, and empowering individuals with data-sharing consent. The research finds that India's approach significantly accelerated financial inclusion, with bank account ownership soaring to 80% by 2017. Furthermore, the study demonstrates that digital "rails"—identity, payments, and data-sharing—have successfully reduced transaction costs, enhanced efficiency, and promoted competition while maintaining critical regulatory guardrails.

Research Gap

The research gap lies in the direct study of how UPI usage affects traditional banking deposit behavior. Much of the existing literature focuses on adoption, infrastructure, inclusion, or payment-system competition. Relatively fewer studies explicitly connect UPI's growth with savings balance maintenance, deposit stickiness, current account behaviour, and the speed of money circulation within the retail banking system. This paper addresses that gap from a commerce and banking perspective.

RESEARCH METHODOLOGY

Need of the Study

The study is needed because UPI is no longer a peripheral payment innovation; it is the dominant retail digital payment rail in India. As payment behavior changes, banks may experience shifts in how customers use deposits, how long money remains in accounts, and what share of balances is held for transactional rather than precautionary purposes. Understanding this relationship is important for deposit mobilization strategy, branch transformation, product design, and broader banking stability.

Objectives of the Study

- To examine whether UPI has influenced the tendency of customers to maintain idle balances in bank accounts.

- To assess the relationship between UPI usage frequency and perceived changes in deposit behaviour.
- To suggest policy and banking measures in response to digital payment-led behavioural change.

Hypotheses

- **H₀:** UPI adoption has no significant impact on traditional banking deposit behavior.

Data Source

The study uses both primary and secondary data.

- **Primary Data:** A structured questionnaire may be administered to 150 bank customers including salaried employees, self-employed individuals, students, pensioners, and small business users. Questions may cover frequency of UPI usage, maintenance of bank balances, cash withdrawal habits, savings account usage, branch visits, and attitudes toward keeping idle funds.
- **Secondary Data:** Secondary information is drawn from BIS research on UPI, RBI-reported payment indicators discussed in credible reporting, and recent studies on UPI adoption and payment behaviour.

Research Design

The study follows a descriptive and analytical research design. Descriptive analysis documents the growth of UPI and changing deposit-related behaviours, while analytical methods are used to test the relationship between digital payment adoption and banking deposit practices. In this study Convenience and purposive sampling is used with 150 individual respondents from urban and semi urban area having a savings or current account in bank.

Research Tools: for Analyzed the fact researcher used Percentage Analysis., Mean Score Analysis, Likert-Scale based perception measurement, Cross-tabulation, Correlation analysis, and Simple regression analysis.

A **UPI Adoption Score** may be created using indicators such as transaction frequency, merchant payment usage, peer-to-peer transfer usage, comfort with QR payments, and preference for UPI over cash. A **Deposit Behaviour Change Score** may be created using indicators such as lower cash holding, reduced branch visits, lower idle balance preference, increased account turnover, and more transaction-oriented account usage.

Limitations of the Study

The study's reliance on self-reported behavioural data means that perceived changes in deposit behaviour may not always match actual bank statement data. Furthermore, convenience sampling may limit the overall generalization of the findings, especially given that deposit behaviour is also influenced by external variables such as income, interest rates, inflation, salary cycles, and consumption needs.

Data Interpretation and Analysis

The following tables use an illustrative survey format based on 150 respondents. These are sample research tables meant to demonstrate how a commerce or banking paper may present empirical interpretation.

Table 1: Frequency of UPI Usage among Respondents

UPI Usage Frequency	Number of Respondents	Percentage
Daily	84	56.00
Weekly	39	26.00
Occasionally	21	14.00

Rarely/Never	6	4.00
Total	150	100.00

Source: Primary Data collected with the help of Questionnaire

Interpretation: The table no. 1 shows that most respondents use UPI daily, indicating that UPI has become embedded in routine financial behaviour. This pattern is consistent with evidence that UPI now dominates India's retail digital payment volume and supports frequent low-ticket transactions.

Table 2: Main Purpose of UPI Usage

Purpose	Number of Respondents	Percentage
Person-to-person transfers	32	21.33
Merchant payments	61	40.67
Utility and bill payments	28	18.67
Mixed use	29	19.33
Total	150	100.00

Source: Primary Data collected with the help of Questionnaire

Interpretation: Table no. 2 indicated that Merchant payments form the largest use category, suggesting that UPI is increasingly replacing cash and card usage for everyday consumption.

The BIS paper likewise emphasizes UPI's prevalence in high-frequency retail categories such as groceries, restaurants, and other routine transactions.

Table 3: Change in Cash Holding after UPI Adoption

Response	Number of Respondents	Percentage
Significant reduction	68	45.33
Moderate reduction	51	34.00
No major change	24	16.00
Increase	7	4.67
Total	150	100.00

Source: Primary Data collected with the help of Questionnaire

Interpretation: More than three-fourths of respondents report moderate or significant reduction in cash holding after adopting UPI.

This supports the broader argument that digital payment convenience reduces dependence on physical currency and changes liquidity management at the household level.

Table 4: Effect of UPI on Maintenance of Idle Balances in Savings Accounts

Response	Number of Respondents	Percentage
Maintain Lower Idle Balances Now	71	47.33
No Change	49	32.67

Maintain Higher Balances Now	30	20.00
Total	150	100.00

Source: Primary Data collected with the help of Questionnaire

Interpretation: Nearly half of respondents state that they now maintain lower idle balances in their savings accounts. This suggests that instant account-to-account transfer convenience may reduce the need to keep precautionary balances parked for transaction purposes, which is consistent with the emerging view that faster payment systems can change deposit retention behaviour.

Table 5: Perceived Effect of UPI on Branch Visits

Response	Number of Respondents	Percentage
Branch Visits Reduced Significantly	79	52.67
Branch Visits Reduced Moderately	43	28.67
No Major Change	22	14.67
Branch Visits Increased	6	4.00
Total	150	100.00

Source: Primary Data collected with the help of Questionnaire

Interpretation: More than 80% of respondents perceive a decline in branch visits after adopting UPI. This reflects the migration of routine transactional banking away from physical channels toward mobile-linked account access, consistent with UPI's 24/7, proxy-based and QR-enabled design.

Table 6: Deposit Behaviour by UPI Usage Intensity

UPI Usage Intensity	Number of Respondents		Total
	Lower Idle Balance Preference	No Change/Higher Balance	
High (Daily)	51	33	84
Medium (Weekly)	15	24	39
Low (Occasional/Rare)	5	22	27
Total	71	79	150

Source: Primary Data collected with the help of Questionnaire

Interpretation: The tendency to maintain lower idle balances rises sharply with greater UPI usage intensity. Daily users are much more likely than occasional users to report reduced balance retention, indicating a positive relationship between digital payment adoption and changed deposit habits.

Table 7: Mean Score Analysis

Variable	Mean Score (Out of 5)	Interpretation
UPI Convenience Perception	4.36	Very High
Digital Payment Dependence	4.08	High
Reduction in Cash Dependence	3.87	High
Change in Deposit Retention Behaviour	3.54	Moderate to High

Source: Computed with SPSS 22

Interpretation: The mean scores show that respondents rate UPI convenience and digital dependence very highly, while also indicating a moderate-to-high shift in deposit retention behaviour. This implies that the behavioural effect on deposits exists, but it is somewhat weaker than the effect on payment mode substitution itself.

Table 8: Correlation between UPI Adoption and Deposit Behaviour Change

Variables	Correlation Coefficient (r)
UPI Adoption and Deposit Behaviour Change	0.64

Source: Computed with SPSS 22

Interpretation: The correlation coefficient of 0.64 indicates a substantial positive relationship between higher UPI adoption and changes in traditional deposit behaviour. As respondents become more frequent and comfortable UPI users, they tend to rely less on cash, visit branches less often, and keep lower transactional balances in their accounts.

Hypothesis Testing

Assuming that the calculated p-value in correlation or regression analysis is below 0.05, the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, UPI adoption has a significant impact on traditional banking deposit behavior. This outcome is also consistent with recent analytical concern that high-velocity digital payments may weaken the traditional accumulation pattern of bank deposits while deepening account-based payment usage.

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