

TITLE

A Study On Customer Perception and Usage Pattern of UPI Payment Systems in Daily Financial Transactions

AUTHOR DETAILS

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ABSTRACT

This empirical research study evaluates consumer awareness, adoption rates, operational efficiency, and user perception regarding UPI platforms such as Google Pay, PhonePe, and Paytm. Based on a primary sample of 50 respondents in Nagpur, the study examines behavioral shifts from cash-based transactions to digital payment alternatives. The findings indicate an 84% preference for market-leading platforms (PhonePe and Google Pay), driven by transaction speed and user-friendly interfaces. However, technical friction remains a critical bottleneck, with 70% of users experiencing bank server downtime, payment delays, or pending debit statuses. To overcome core banking latencies, this paper offers strategic recommendations including promoting UPI Lite adoption for micro-transactions under ₹500.

Keywords — Unified Payments Interface (UPI), Financial Technology, Customer Perception, Digital Wallet, Cashless Economy, NPCI.

I. INTRODUCTION

The integration of Financial Technology (FinTech) into daily retail commerce has revolutionized the economic landscape of developing economies. In India, the implementation of the Unified Payments Interface (UPI) by the National Payments Corporation of India (NPCI) in 2016 marked a paradigm shift toward a structured cashless economy. UPI standardizes instant funds transfers using Virtual Payment Addresses (VPA) and QR code technologies.

A. Evolutionary Background

The 2016 Demonetization Drive and the COVID-19 pandemic accelerated the adoption of contactless payment mechanisms. Unlike closed-loop wallets, UPI established an open-loop system that transfers money directly between issuing and acquiring bank accounts, democratizing micro-transactions across urban and semi-urban hubs like Nagpur.

B. Statement of the Problem

Despite widespread adoption, high request volumes during peak commercial hours routinely trigger bank server timeouts. Users frequently encounter issues such as pending transactions, debited amounts without immediate credit, and server latency.

II. LITERATURE REVIEW

Sharma (2024): Concluded that transactional execution speed and interface simplicity are the foundational drivers of UPI preference among youth and working professionals.

Gupta & Verma (2023): Revealed that market dominance (PhonePe and Google Pay) is maintained through application stability and low gateway latency rather than promotional cashbacks.

Mehta et al. (2022): Highlighted that the shift toward cashless mechanisms was further driven by peer-effects and localized merchant acceptance.

III. RESEARCH METHODOLOGY

Research Design: Empirical and descriptive research design.

Data Sources: Primary data collected via structured questionnaires from 50 active UPI users in Nagpur. Secondary data gathered from RBI, NPCI, and journal publications.

Sampling Plan: Convenience and non-probability snowball sampling.

Demographics: Male (60%), Female (40%). Age group 18-25 years represents 50% of respondents. Students account for 44% and salaried professionals 40%.

IV. DATA ANALYSIS & FINDINGS

Platform Preference: PhonePe leads with 44% adoption, followed closely by Google Pay at 40%, creating an 84% duopoly. Paytm and BHIM account for 16%.

Usage Frequency: 70% of respondents perform 4 or more transactions daily, showing a strong shift toward cashless micro-retail payments (P2M).

Technical Constraints: 70% of users experience server timeouts, pending payment debits, or downtime during peak hours.

V. STRATEGIC RECOMMENDATIONS

For PSPs (PhonePe/GPay): Deploy predictive load-balancing and regional failover servers during peak retail hours.

For Banks: Modernize legacy Core Banking Systems (CBS) and implement Automated Dispute Resolution (ADR) for pending debits within T+1 hours.

For NPCI: Promote UPI Lite campaigns for micro-transactions under ₹500 to de-clog core banking routing switches.

V. CONCLUSION

UPI has transformed India's retail landscape by democratizing digital transactions. High adoption is driven by speed and UI simplicity. Addressing operational bottlenecks and server timeouts through UPI Lite integration and core banking upgrades will be vital to sustaining long-term digital trust.

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