

Effect of UPI and Digital Payments Adoption on Small Retailer Sales and Cash Dependency in India

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Abstract—The rapid growth of digital payments has transformed the way Indian small retailers collect money, maintain transaction records and manage cash. The Unified Payments Interface (UPI) is especially significant because it provides real-time account-to-account payments through mobile applications. This paper examines whether UPI adoption affects small-retailer sales and cash dependency. Recent research by Rao and Upadhyaya (2026) specifically investigates UPI acceptance among small merchants in India and identifies perceived usefulness, ease of use, enabling conditions and behavioral intention as important factors. The paper proposes a primary-survey framework measuring digital-payment share, sales, transaction frequency, cash-handling time, customer demand and retailer perceptions. It argues that UPI adoption should not automatically be interpreted as a cause of higher sales: effects may depend on retailer category, customer profile, location and business maturity. From a Business AI perspective, digital payments also create transaction data that can support forecasting, inventory planning and business intelligence.

Index Terms—digital payments; small retailers; India; sales; cash dependency; fintech; analytics.

1. Introduction

Small retailers frequently operate with limited margins and simple administrative systems. Digital payments can reduce some cash-related friction, including change management, physical storage and reconciliation. UPI has made instant digital payments widely available.

The business question is not simply whether retailers accept UPI but whether adoption changes sales, transaction patterns and cash dependency. A customer may prefer UPI for convenience without increasing total spending. Alternatively, reduced payment friction could increase completed purchases.

2. Literature Review

Rao and Upadhyaya (2026) use a mixed-method design to examine UPI acceptance among small-scale merchants across socio-economic regions. Their work highlights the need to understand actual merchant behavior rather than relying only on consumer-level adoption statistics.

Small-merchant studies also suggest that customer demand can be a major reason retailers adopt UPI. Digital transactions can create records that support bookkeeping, while also introducing risks such as fraud, connectivity problems and privacy concerns.

3. Proposed Methodology

A primary survey of 150–250 retailers could cover grocery, food, apparel, pharmacy, stationery and service businesses. Questions should measure the percentage of transactions received through UPI, cash and other digital channels.

Sales indicators could include average daily sales, transaction count, average transaction value and customer footfall. Cash dependency could be measured by cash share of revenue, deposit frequency and time spent handling cash.

Where retailers can provide reliable records, before-and-after comparisons can be considered. Otherwise, self-reported changes should be described cautiously rather than treated as causal evidence.

4. Data Analysis

Descriptive statistics can compare high- and low-UPI-adoption retailers. Correlation and regression can test whether UPI share is associated with sales indicators after controlling for store category, location and business age.

AI can be applied to transaction histories for sales forecasting, anomaly detection and inventory recommendations. Such applications require accurate data and appropriate privacy controls.

5. Business Implications

UPI may reduce cash-handling friction and improve transaction records. Fintech providers can build dashboards that translate payment histories into simple business insights such as peak sales periods and inventory signals.

The larger opportunity is the transition from payment digitization to digital business intelligence. Retailers can potentially use transaction data to improve operational decisions rather than treating digital payments as merely a payment method.

6. Conclusion

UPI is an important part of India's digital business infrastructure, but its effect on retailer sales should be measured rather than assumed. A carefully designed primary survey can distinguish customer-driven adoption from measurable business outcomes. This creates a strong Management and Business AI research opportunity.

Research Figure

Conceptual framework; scores are illustrative.

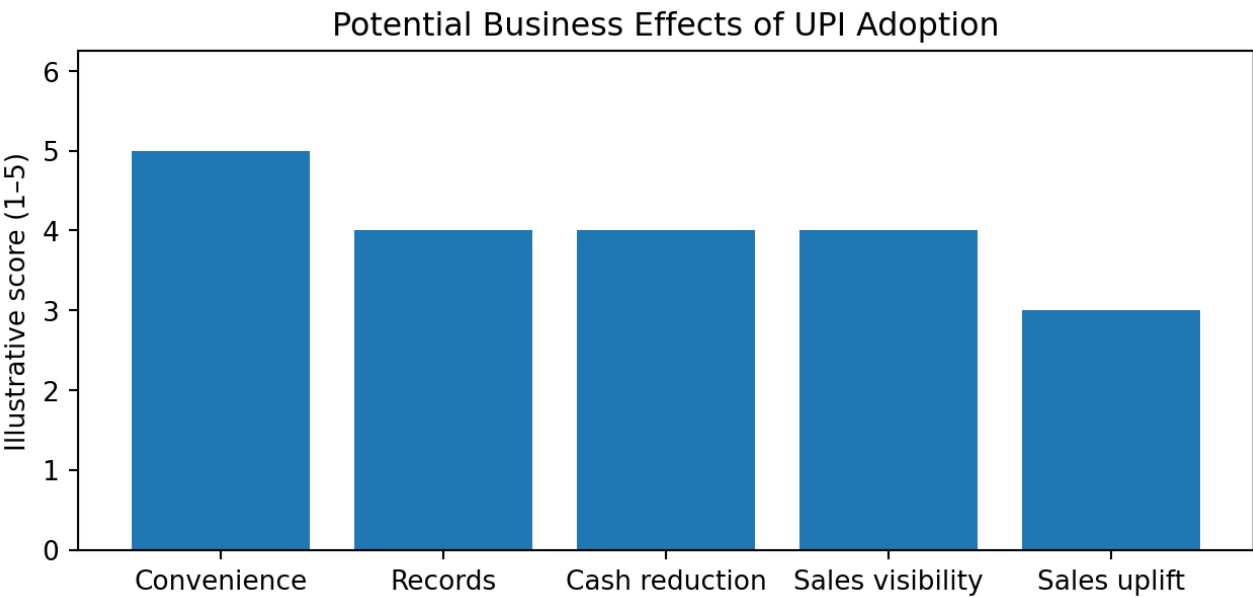
References

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Baradwaj, V. (2023). UPI adoption and usage patterns by small merchants: a study.

Adwani, D., & Khatri, S. (2026). A study on the adoption and impact of digital payments on small retailers in semi-urban areas.

Research Figure



Conceptual framework synthesized from small-merchant research; not survey results.

Figure note: This is the figure embedded in the original research-paper document. The source describes the figures as source-based/illustrative conceptual material rather than primary-survey results.