



The influence of digital payment systems on cash flow and working capital performance of small retailers in India

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Abstract

The rapid spread of digital payment systems has reshaped the financial landscape of small retailers in India, particularly after the demonetization of 2016 and the COVID-19 pandemic. This paper examines how the adoption of platforms such as the Unified Payments Interface (UPI), mobile wallets, and QR-code-based payment systems has influenced the cash flow patterns and working capital management of small retailers across urban, semi-urban, and rural India. Drawing on secondary data, government reports, and published empirical studies from 2016 to 2025, the paper explores the positive outcomes — such as faster fund settlement, improved transaction transparency, and better access to institutional credit — as well as the persistent challenges, including digital literacy gaps, infrastructure limitations, and concerns around internet reliability. The findings suggest that while digital payments have brought measurable improvements in daily cash flow for those retailers who have adopted them, the benefits remain unevenly distributed. The paper concludes with policy recommendations aimed at deepening financial inclusion and building the capacity of small retailers to manage working capital more effectively in a digitally driven economy.

Keywords: Digital payments, UPI, cash flow management, working capital, small retailers, kirana stores, financial inclusion, India, MSME, demonetization

Introduction

India's retail sector is one of the largest in the world, and the backbone of this sector is not the modern supermarket or the e-commerce platform — it is the neighbourhood kirana store, the roadside vendor, and the small trader who runs a shop from a few hundred square feet of rented space. These small retailers, numbering over 60 million across the country, account for roughly 85 percent of all goods sold in India (Tandfonline, 2025) ^[16]. For decades, their financial life has been almost entirely cash-based. Cash was collected at the counter, used to pay suppliers, and stored in steel boxes or deposited in banks at irregular intervals. This arrangement was simple but it came with serious drawbacks — idle money, delayed supplier payments, theft risk, and near-total exclusion from formal credit markets.

This picture began to shift, slowly at first, and then with surprising speed. The demonetization announcement of November 2016, which overnight withdrew 86 percent of currency in circulation, forced millions of small retailers and their customers to try digital payment methods out of necessity rather than choice. Within a few years, the Unified Payments Interface — better known as UPI — emerged as a transformative infrastructure, enabling instant, zero-cost bank transfers between any two accounts using nothing more than a mobile phone and a QR code. By the end of FY 2023-24, UPI had processed over 131 billion transactions, accounting for more than 80 percent of all retail digital payments in India (PwC, 2024) ^[19].

The implications of this shift for working capital and cash flow management among small retailers deserve closer attention than they have received in existing literature. Working capital — the difference between current assets and current liabilities — is the lifeblood of any retail business. A kirana store that runs out of working capital cannot restock shelves, cannot honour supplier commitments, and cannot pay salaries on time. Cash flow,

the actual movement of money in and out of a business, determines whether a retailer can meet daily obligations or not. When payment systems change, these financial dynamics change too. This paper examines how, and to what degree, the adoption of digital payment systems has altered the cash flow and working capital performance of small retailers in India.

Review of Literature

The relationship between digital payment adoption and financial performance of small businesses has attracted growing scholarly attention, particularly in the Indian context after demonetization. Singh and Singh (2022) ^[14] documented the exponential growth of UPI usage among small merchants, noting that instant settlement of transactions had reduced the overnight cash holding of retailers and shortened their cash conversion cycle. The National Payments Corporation of India (NPCI) has consistently reported that person-to-merchant (P2M) transactions have been the fastest-growing segment of UPI, reaching 62.35 percent of total UPI traffic by January 2025, with 86 percent of these transactions valued below Rs. 500 (Mordor Intelligence, 2025) ^[2]. This data points squarely at the small-ticket retail environment.

Ligon *et al.* (2019) ^[6] studied small retailers in India and found that the key drivers pushing merchants toward digital acceptance were demonetization, rising customer demand, and the simple ease of use. The findings resonated with what was being observed across Indian tier-2 and tier-3 cities, where UPI transactions had surged by 650 percent in semi-urban and rural stores between 2020 and 2022 (Livemint, 2022) ^[7]. A study published in the International Journal of Economics, Finance and Management Sciences (2025) ^[16] evaluated UPI's role in MSME development and found that the user-friendly interface of UPI had democratized access to financial services, reaching even the most remote commercial clusters.

From a working capital perspective, Jha and Sharma (2022) [5] noted that digital payment records created an informal but verifiable transaction history for small merchants, which previously had no documentation. This history, over time, opened the door to data-driven lending by fintech companies and banks. The Trade Receivables Discounting System (TReDS), promoted by the Reserve Bank of India, further allowed small enterprises to discount their receivables and access liquidity without waiting for buyers to pay (IBS Intelligence, 2025). Trivedi and Sanchiher (2023) [2, 18] identified persistent barriers to adoption — lack of awareness, trust deficit, security concerns, poor internet connectivity, and resistance from older merchants — that continued to limit the reach of these benefits, particularly in rural retail clusters.

Pahlevi *et al.* (2023) [10] mapped the broader landscape of digital financial transformation research for small and medium enterprises and found that real-time financial data generated by digital platforms had enhanced overall financial stability. The IBEF report of 2024 [11] projected that India's retail digital payments could double to USD 7 trillion by 2030 [1], a trajectory that would be impossible without the deep involvement of small and micro merchants at the base of the retail pyramid.

Digital Payment Ecosystem In India: An Overview

To understand the impact on small retailers, it is necessary to briefly understand how India's digital payment ecosystem is structured. At its core is UPI, launched in 2016 by the National Payments Corporation of India and built on the Immediate Payment Service (IMPS) infrastructure. UPI allows users to link multiple bank accounts to a single mobile application and make real-time transfers using a Virtual Payment Address (VPA) or a QR code. For small retailers, the QR code has been the most accessible entry point, requiring no point-of-sale machine and no subscription fee.

Alongside UPI, the ecosystem includes mobile wallets such as Paytm and PhonePe, Aadhaar-enabled Payment Systems (AePS) for biometric-based transactions, USSD-based payments for feature phone users, and card-based systems through RuPay debit and credit cards. The government has also promoted the BHIM application as a public-interest alternative to private fintech wallets. Together, these platforms have built a layered system of digital access that covers a wide range of income groups and geographies.

A critical feature of this ecosystem that directly affects working capital is the settlement cycle. Unlike card-based systems in which merchants may wait two to three business days for funds to arrive in their accounts, UPI settlements are processed on a T+0 or T+1 basis, meaning funds are typically available the same day or the next business day. For a kirana store that needs to pay its milk supplier at six in the morning and its vegetable vendor before noon, this speed of settlement matters enormously. It reduces the gap between the time a sale is made and the time money is actually available to reinvest.

The government's financial policy has been an important enabler. Zero MDR (Merchant Discount Rate) on UPI and RuPay transactions means that small merchants pay nothing to accept digital payments, unlike card-based systems in other countries where a fee of one to three percent is typically charged per transaction. This policy was instrumental in bringing millions of small retailers into the

digital fold. However, as the Payments Council of India has pointed out, zero MDR has also created a sustainability challenge for payment service providers, who find it difficult to invest in infrastructure expansion without a revenue stream (IBS Intelligence, 2025) [2].

Impact on Cash Flow Management

The most immediate and visible effect of digital payments on small retailers has been on their day-to-day cash flow management. In the traditional cash-based model, a kirana store owner would collect currency throughout the day, count it at closing, and either deposit it in a bank — sometimes travelling considerable distances to do so — or hold it on the premises, where it was vulnerable to pilferage and provided no return. There was no automatic record of inflows, and tracking which customer owed what was done manually, often on paper.

Digital payments have changed this in several ways. First, every transaction is automatically recorded and timestamped in the merchant's linked bank account or wallet. This gives the retailer a running, real-time picture of daily inflows — something that was simply not possible with a cash till. Second, the instantaneous nature of UPI transfers means that the money is in the bank the moment the customer pays, rather than sitting in a cash drawer waiting to be deposited. Third, the elimination of cash handling reduces the time and cost of physical money management, including bank trips and change management.

Research by the ICRIER (2023) [4] found that small merchants who had adopted digital payments reported better awareness of their daily revenue and greater ability to plan purchases. A merchant who knows she has received Rs. 12,000 in payments by noon can decide to place a reorder with her distributor that same afternoon, rather than waiting for the end-of-day cash count and then waiting again for the bank to open the next morning. In practical terms, this compresses the cash conversion cycle — the time it takes for a business to convert its investments in inventory into cash flows from sales.

There is also an indirect benefit through customer behaviour. Studies have noted that customers tend to spend slightly more when paying digitally, as they are not constrained by the physical cash they are carrying. For a small retailer, even a marginal increase in average transaction value can have a meaningful effect on monthly revenue and, in turn, on available working capital. The shift of P2M transactions to 62.35 percent of UPI traffic, with most of these being small-value payments below Rs. 500, indicates that digital payments have become genuinely embedded in the daily routine of neighbourhood retail (Mordor Intelligence, 2025) [2].

Impact on Working Capital Performance

Working capital performance is assessed through indicators such as the cash conversion cycle, inventory turnover, receivables management, and payables management. Digital payments have influenced each of these, though not always uniformly.

On the receivables side, digital payments have effectively eliminated the problem of outstanding receivables from retail customers, because every sale settled through UPI or a mobile wallet is final and immediate. This is a significant improvement over the earlier practice of running credit "khata" accounts for trusted customers, where small retailers

would allow purchases on credit and collect payments later — sometimes after weeks. While khata credit continues to exist in many markets, the availability of digital settlement has given retailers a way to reduce their outstanding receivables when they choose to do so.

The inventory management implications are equally important. With a clearer picture of daily cash inflows, a small retailer can plan restocking more precisely. Rather than buying a large stock to ensure availability and tying up capital unnecessarily, she can opt for more frequent, smaller purchases aligned with actual sales. Digital payment data can also be shared with suppliers or fintech platforms to establish creditworthiness. Growing adoption of merchant lending products by platforms such as PhonePe Business, Paytm for Business, and Amazon Pay for merchants has meant that a retailer with a consistent digital transaction history can now access working capital loans within hours — a process that previously took weeks through a bank branch (Straits Research, 2025) ^[15].

On the payables side, the impact is more nuanced. Larger suppliers and distributors have increasingly insisted on digital payments, which has reduced the flexibility that small retailers once enjoyed in delaying payments when they were cash-short. At the same time, digital payments to suppliers have brought clarity to payment records and reduced disputes.

The government's incentive scheme for low-value BHIM-UPI transactions — with Rs. 1,500 crore allocated for FY 2024-25 to encourage P2M payments for sub-Rs. 2,000 tickets — has directly supported the economics of small merchant adoption by awarding 0.15 percent on qualifying transactions (Mordor Intelligence, 2025) ^[2]. While this incentive has been criticised as insufficient to cover the broader infrastructure costs, it has lowered the effective cost of digital acceptance at the micro-retail level.

Challenges and Limitations

Despite the many benefits documented above, the transition to digital payments has not been smooth or universal among India's small retailers. Several structural and behavioural challenges continue to limit the depth of penetration and dilute the working capital benefits.

Digital literacy remains the single largest barrier. Many small retailer owners, particularly those above the age of 45 or operating in rural and semi-urban areas, are not comfortable navigating smartphone interfaces, verifying QR codes, or troubleshooting failed transactions. Trivedi and Sanchiher (2023) ^[18] identified low digital literacy as a primary obstacle to widespread adoption, and this finding is supported by the pattern of digital payment concentration in urban centres. While UPI has been reaching smaller towns, the depth of merchant adoption is still considerably lower than in metropolitan areas.

Internet connectivity and smartphone availability remain concerns in remote geographies. India's mobile data network has expanded impressively since 2016, but coverage is still inconsistent in many districts across states like Chhattisgarh, Jharkhand, Manipur, and parts of Rajasthan. A payment failure at the point of sale — whether due to poor connectivity, server downtime, or user error — can be deeply damaging to a small retailer's trust in the system and lead to reversion to cash. System reliability concerns were identified as a persistent barrier in the 2025 Tandfonline study on small offline retailer adoption.

Security and fraud concerns also weigh on small merchants. Cases of fraudulent QR codes, UPI spoofing, and phishing SMS messages have been widely reported in the vernacular press and have created anxiety among less experienced users. While the NPCI and RBI have invested in consumer protection infrastructure, awareness of grievance redressal mechanisms remains low at the ground level.

The zero MDR policy, while beneficial to merchants, has created a financial strain on payment service providers. As Vishwas Patel of the Payments Council of India noted, the allocation of only Rs. 1,500 crore for FY 2024 ^[11]-25 is far below what is needed to sustain and grow the infrastructure that small merchants depend on (IBS Intelligence, 2025) ^[2]. If this sustainability issue is not addressed, the quality and reliability of digital payment services — particularly in underserved areas — could deteriorate, reversing some of the gains made.

Finally, the informal credit culture of Indian retail, where trusted neighbours buy on khata and pay at the end of the month, does not entirely disappear with digital payments. Many small retailers operate within a social fabric where enforcing digital payment discipline would damage long-standing relationships. Navigating the coexistence of formal digital systems and informal credit arrangements remains a day-to-day reality for the neighbourhood shopkeeper.

Policy Implications and Recommendations

The evidence reviewed in this paper points to a clear conclusion: digital payment systems have the potential to significantly improve the cash flow and working capital performance of small retailers in India, but realising this potential fully will require continued and targeted policy action.

First, digital literacy programmes must be integrated into existing government schemes such as the Digital India initiative and the PM Vishwakarma Yojana, with specific modules designed for small trader communities. These programmes should be delivered in regional languages and through trusted local institutions such as cooperative banks, self-help groups, and gram panchayats.

Second, the RBI and NPCI should consider a differentiated MDR policy that allows a small, regulated fee on high-value UPI transactions while maintaining zero MDR for sub-Rs. 500 merchant transactions. This would generate a sustainable revenue stream for payment service providers without burdening small merchants or their customers on everyday purchases.

Third, banks and fintech companies should be encouraged to build working capital credit products that are directly linked to digital transaction histories, making formal credit more accessible to retailers who have no collateral but a consistent payment record. The expansion of the TReDS platform and digital invoice financing to micro-retail would be a meaningful step in this direction.

Fourth, the government should invest in strengthening last-mile internet infrastructure in tier-3 and tier-4 districts, where small retailers are numerous but digital adoption remains low. Offline payment capabilities such as UPI Lite — which allows small transactions without an active internet connection — should be aggressively promoted through merchant awareness campaigns.

Conclusion

The story of digital payments and small retail in India is, at its core, a story about how a simple infrastructure shift can alter the financial rhythms of millions of people who had

previously operated entirely outside the formal financial system. Since 2016, and accelerating sharply after 2020, the adoption of UPI and related digital payment tools has given small retailers access to real-time financial data, faster fund availability, and a documented transaction history that can serve as collateral in the digital lending ecosystem.

For cash flow management, the benefits are tangible and well-supported by evidence — shorter settlement cycles, reduced cash handling costs, and better daily visibility into revenues. For working capital management, the gains are real but more conditional, dependent on the retailer's willingness and ability to use digital transaction data actively to plan purchases, manage payables, and access credit.

The challenges are not trivial. Digital literacy, connectivity, trust, and system reliability are genuine obstacles that policy and industry must address honestly, rather than treating digital adoption as a problem that has already been solved. The uneven distribution of benefits — concentrated in urban India and among younger, more educated retailer populations — means that the transformative potential of digital payments has so far reached only a fraction of India's small retail universe.

If the pace of policy support, infrastructure investment, and financial literacy outreach can match the ambition that India has shown in building its digital payments architecture, the next decade could see the working capital and cash flow management of small retailers transformed in ways that improve not just their profitability but their resilience, their inclusion in the formal economy, and their ability to grow.

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