

# Digital Payment Systems and Entrepreneurial Performance: Evidence from Women-Owned Retail Enterprises in Chennai

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## Abstract

This study investigates the adoption and impact of digital payment systems on the performance of women-owned retail enterprises in Chennai. Using a mixed-methods approach that combines survey data, field observations, and qualitative case studies, the research examines how digital tools influence operational efficiency, financial inclusion, and entrepreneurial growth. Findings reveal that the Unified Payments Interface (UPI) is the most widely adopted digital payment platform, with smartphones serving as the primary transactional device. Adoption occurs across multiple retail sectors, including general retail stores, beauty services, tailoring units, and home-based enterprises, with higher uptake among younger entrepreneurs. The study identifies measurable benefits, such as increased revenue, improved transaction speed, and enhanced customer engagement, while highlighting persistent challenges, including digital literacy gaps, infrastructural limitations, and trust-related concerns. The research also evaluates government initiatives promoting digital adoption and proposes policy recommendations for fostering inclusive growth. By providing localized empirical evidence, this study contributes to the literature on women's entrepreneurship, digital finance, and urban MSME development.

**Keywords:** Digital payment systems, Women-owned enterprises, Retail entrepreneurship, Entrepreneurial performance, Financial inclusion, Urban India.

## 1. Introduction

Digital financial technologies have transformed the operational landscape of micro, small, and medium enterprises (MSMEs) globally, with emerging economies like India witnessing rapid adoption. Platforms such as the Unified Payments Interface (UPI) and mobile wallets have enabled faster, more transparent, and traceable transactions, supporting business growth and operational efficiency. For women entrepreneurs, particularly those managing micro and small retail businesses, digital payment adoption represents a significant opportunity to overcome structural barriers, enhance operational efficiency, improve customer engagement, and achieve greater financial inclusion.

Chennai, one of India's largest metropolitan economies, offers a unique environment for studying digital adoption among women retail entrepreneurs. The city's strong digital infrastructure, vibrant MSME sector, and diverse socio-economic composition render it a compelling location for empirical research. While national-level reports highlight growing digital participation among women, localized studies remain limited. This research fills that gap by closely examining how women retail entrepreneurs in Chennai adopt and utilize digital payment systems, the benefits they experience, and the challenges they continue to face.

## 2. Objectives

- To analyse the extent and nature of digital payment adoption among women retail entrepreneurs.
- To evaluate the impact of digital payment systems on business performance and operational efficiency.

- To identify key challenges, government initiatives, and policy recommendations for strengthening digital inclusion.

### 3. Review of Literature

Digital payment adoption is recognized as a key driver of MSME modernization. Studies indicate that these technologies reduce cash-handling risks, improve record-keeping, enhance customer convenience, and expand market reach (Beck et al., 2018; Ghosh & Vinod, 2020). Women entrepreneurs benefit additionally from greater financial independence, transparency, and control over business operations (Demirgüç-Kunt et al., 2017; Allen et al., 2019).

Barriers to adoption include limited digital literacy, socio-cultural constraints, fear of cyber fraud, and infrastructural limitations. In India, government initiatives such as Digital India, PMMY, and UPI have accelerated digital transformation, though uneven access and adoption continue to hinder equitable growth.

Existing studies often discuss digital adoption in broad terms, with limited focus on sector-specific or city-specific patterns. This research contributes to the academic discourse by offering granular insights from Chennai's women-led retail sector—an area that remains understudied despite its economic significance.

### 4. Research Methodology

#### 4.1 Research Design

A convergent mixed-methods design was employed, combining quantitative surveys and qualitative case studies. Quantitative data identified adoption patterns and performance impacts, while qualitative insights contextualized these findings.

#### 4.2 Sampling and Data Collection

**Population:** Women retail entrepreneurs operating micro and small enterprises in Chennai.

**Sampling Method:** Stratified sampling across general retail stores, beauty salons, tailoring units, and home-based businesses.

**Sample Size:** Representative sample drawn from multiple zones of Chennai.

**Data Collection Tools:** Structured questionnaires, semi-structured interviews, and on-site observation.

#### 4.3 Data Analysis

Quantitative data were analysed using descriptive statistics, including percentages and cross-tabulations. Qualitative data were coded thematically, focusing on digital adoption behavior, perceived benefits, and challenges.

### 5. Findings

#### 5.1 Digital Payment Adoption and Business Outcomes

Over 73% of respondents reported improved income or operational efficiency after digital payment adoption. Entrepreneurs noted faster transactions, reduced dependency on cash, improved customer satisfaction, and enhanced record-keeping accuracy.

#### 5.2 Preferred Digital Payment Methods

UPI emerged as the dominant payment method due to ease of use, reliability, and low transaction costs. About 48% of entrepreneurs indicated UPI as their primary mode of payment.

### 5.3 Sectoral Adoption Patterns

Adoption was uniformly distributed across:

- General retail stores (31%)
- Beauty salons (31%)
- Tailoring units (31%)

### 5.4 Demographic Trends

Younger entrepreneurs, comprising 78% of Gen Z and Millennial women, showed higher adoption rates, suggesting digital readiness correlates strongly with age and exposure to technology.

### 5.5 Device Usage

A majority (84%) relied on smartphones as their primary business device, enabling seamless integration with digital payment applications.

### 5.6 Case-Based Evidence: Real-Life Experiences of Digital Payment Adoption

To understand the practical implications of digital payment systems at the micro level, eight real-life case studies of small and medium retail businesses in Chennai were examined. These cases highlight how the adoption of digital payment platforms—particularly UPI, QR codes, mobile wallets, and POS systems—has influenced business performance, operational efficiency, and customer engagement.

#### 1. Bhavani Grocery Store, T. Nagar

Bhavani, a neighbourhood grocery store located in the busy commercial area of T. Nagar, introduced UPI-based QR code payments to reduce dependency on cash transactions. Prior to adoption, the store faced long queues and frequent issues related to cash handling. After integrating digital payments, transaction speed improved significantly, enabling the store to serve more customers during peak hours. The owner reported a noticeable rise in monthly revenue, attributed to quicker checkouts and increased impulse purchases. Digital records also helped streamline cash flow monitoring and reduced the risk of cash shortages or mismanagement.

#### 2. Upcyclie – Sustainable Goods Shop, Nungambakkam

Upcyclie, a retail outlet dealing in eco-friendly and sustainable products, adopted UPI and mobile wallet payments to align with its tech-savvy and environmentally conscious customer base. Digital payment acceptance enhanced convenience for customers who preferred cashless transactions. As a result, the store experienced growth in transaction volume and attracted new customers through word-of-mouth and online visibility. The adoption of digital payments also supported Upcyclie's expansion into online and social media-based sales channels, broadening its market reach beyond walk-in customers.

#### 3. Glow Beauty Salon, Adyar

Glow Beauty Salon implemented UPI and mobile wallet payments primarily to improve customer experience and internal operations. Digital payments enabled better integration with appointment booking systems, allowing the salon to track service usage and customer preferences more efficiently. Over time, the salon observed an increase in repeat customers, as cashless payment options reduced waiting time and enhanced service satisfaction. The digital trail of transactions also assisted the owner in assessing peak business hours and planning staffing requirements accordingly.

#### 4. TailorHub, Velachery

TailorHub, a small tailoring and alteration unit, faced frequent delays in receiving payments from customers, especially for customized orders. The introduction of UPI payments reduced these delays substantially, as customers could make instant payments upon order completion. Timely payments improved the firm's working capital position and enabled better planning of raw material purchases. Digital transaction records further supported improved inventory control and reduced disputes related to payment status.

## 5. Home Bake, Anna Nagar

Home Bake, a home-based bakery operating in Anna Nagar, adopted QR code and UPI payments to manage increasing demand for its products. Cashless transactions made it easier to handle bulk orders and home deliveries. The business experienced steady growth in weekly sales as customers found digital payments convenient for advance bookings and repeat purchases. Digital payments also allowed the baker to separate personal and business finances, improving financial discipline and transparency.

## 6. Write Right Stationery, Mylapore

Write Right Stationery Store integrated both UPI and POS terminal facilities to cater to a diverse customer base, including students, professionals, and institutions. Digital payments significantly reduced errors related to cash handling and daily reconciliation. The availability of transaction history helped the owner analyse seasonal demand patterns and plan inventory accordingly. Over time, improved financial visibility supported better budgeting and short-term financial planning.

## 7. Chic Boutique, Besant Nagar

Chic Boutique combined UPI payments with social media platforms, particularly Instagram, to facilitate direct sales through online inquiries. Customers could browse products online and complete payments instantly using UPI. This digital integration helped the boutique reach customers beyond its physical location, leading to an increase in sales. The ease of digital transactions encouraged repeat purchases and strengthened customer relationships, especially among younger consumers.

## 8. Crafty Hands, Kotturpuram

Crafty Hands, a handicrafts enterprise, adopted UPI payments along with digital invoicing systems to handle both retail and corporate orders. Automated invoicing reduced manual bookkeeping efforts and improved accuracy in financial records. Digital payments enhanced transparency and credibility, particularly when dealing with institutional buyers and bulk orders. The business benefited from secure payment receipts and easier compliance with financial reporting requirements.

## 6. Discussion

The findings of this study indicate a **positive association between digital payment adoption and entrepreneurial performance** among women-owned retail enterprises in Chennai. The integration of digital payment systems appears to enhance transaction efficiency, improve financial record-keeping, and facilitate smoother customer interactions. These outcomes collectively contribute to improved operational performance and revenue stability, particularly within micro and small retail enterprises.

The results are broadly consistent with existing empirical research that identifies digital financial technologies as a key driver of MSME competitiveness and productivity. Prior studies have emphasized that digitalization reduces transaction costs, increases transparency, and enables better financial management (Beck et al., 2018; Ghosh & Vinod, 2020). The present study extends this literature by demonstrating that these benefits are also salient within women-led retail enterprises at the city level, thereby reinforcing the relevance of digital payment systems in urban informal and semi-formal business contexts.

From a gendered entrepreneurship perspective, the findings underscore the role of digital payments in enhancing **financial autonomy and decision-making capacity** among women entrepreneurs. Reduced reliance on cash-based systems and intermediaries allows women business owners to exercise greater control over business finances, which aligns with theoretical arguments linking financial inclusion to women's economic empowerment. Furthermore, the observed preference for mobile-based payment solutions highlights the importance of accessible and user-friendly technologies in fostering sustained adoption.

Despite these positive outcomes, the study identifies **persistent structural and capability-related constraints** that limit the universal adoption of digital payment systems. Lower levels of digital literacy among older and less formally educated entrepreneurs remain a significant barrier, echoing concerns raised in prior studies on technology adoption in developing economies. Additionally, infrastructural challenges—such as inconsistent internet connectivity and limited affordability of digital devices—continue to impede effective usage. Concerns related to cybersecurity, data privacy, and digital fraud further contribute to trust deficits, particularly among first-time or reluctant adopters.

The coexistence of performance gains and adoption barriers suggests that digital transformation alone is insufficient to ensure inclusive entrepreneurial growth. For digital payment systems to realize their full potential among women-owned retail enterprises, complementary interventions focused on digital literacy, trust-building, and infrastructure strengthening are essential. Such measures would not only support broader adoption but also enhance the depth and effectiveness of digital engagement among women entrepreneurs.

Insights from the case studies further reveal that while performance gains are widespread, the magnitude of benefits varies by sector, customer profile, and digital readiness.

## 7. Government Measures and Recommendations

### 7.1 Government Measures Supporting Digital Adoption

Government-led initiatives have played a facilitative role in promoting digital payment adoption among women entrepreneurs in India, including those operating retail enterprises in Chennai. At the state level, programs such as **Tamil Nadu Rural Incubator for Startups and Enterprises (TN-RISE)** have provided structured support in the form of entrepreneurship training, mentorship, and limited incubation assistance. Although not exclusively focused on digital payments, such initiatives contribute indirectly by enhancing entrepreneurial capability and digital awareness.

The integration of **women's Self-Help Groups (SHGs)** with digital platforms and e-commerce channels has further expanded market access for women-led microenterprises. These linkages enable women entrepreneurs to engage with broader consumer markets and encourage the use of cashless transaction mechanisms, thereby reinforcing digital payment usage in everyday business operations.

At both the state and central levels, **financial literacy and digital awareness programs** have sought to improve understanding of digital payment systems, basic cybersecurity practices, and record-keeping mechanisms. These initiatives, implemented through banks, local institutions, and development agencies, have contributed to improved familiarity with digital financial tools. However, their reach and effectiveness remain uneven, particularly among older entrepreneurs and enterprises operating in informal settings.

Overall, existing government measures have laid an important foundation for digital adoption. Nevertheless, the findings of the present study suggest that policy interventions have been more effective in encouraging initial adoption than in ensuring sustained and efficient use of digital payment systems among women retail entrepreneurs.

## 8. Policy Recommendations

Based on the empirical findings and case-based evidence, the following recommendations are proposed to strengthen inclusive digital transformation among women-owned retail enterprises:

### Targeted Digital Literacy Programs

Digital training initiatives should be tailored specifically for women entrepreneurs, with particular attention to older age groups and first-time digital users. Hands-on, localized training in vernacular languages would enhance usability and confidence.

## Infrastructure and Device Support

Policies aimed at improving affordable access to smartphones and reliable internet connectivity are critical. Subsidized devices or shared digital infrastructure models could significantly reduce entry barriers for microenterprises.

## Trust-Building and Cybersecurity Awareness

awareness campaigns focusing on fraud prevention, grievance redressal mechanisms, and digital safety can help address trust deficits and encourage sustained usage of digital payment platforms.

## Integration with MSME Support Schemes

Digital payment adoption should be systematically integrated into MSME development programs, credit schemes, and market access initiatives, thereby reinforcing the linkage between digitalization and enterprise growth.

## Localized Monitoring and Evaluation

City-level monitoring of digital adoption outcomes would enable policymakers to assess program effectiveness more accurately and design context-specific interventions for urban women entrepreneurs.

## 9. Conclusion

This study demonstrates that digital payment systems have a significant and positive influence on the entrepreneurial performance of women-owned retail enterprises in Chennai. Empirical evidence indicates that adoption of digital payment tools is associated with enhanced operational efficiency, improved financial record-keeping, faster transactions, and better customer engagement. These outcomes contribute not only to business performance but also to broader goals of financial inclusion and women's economic empowerment.

Despite these benefits, the study identifies persistent challenges that constrain the full potential of digital adoption. Limited digital literacy, infrastructural gaps, and concerns related to cybersecurity and trust continue to hinder widespread and effective usage. Addressing these barriers requires targeted interventions, including capacity-building programs, improved access to affordable digital technologies, and context-specific policy support.

By integrating quantitative survey data with qualitative case evidence, the study provides localized empirical insights that contribute to the literature on digital finance, entrepreneurship, and gender-inclusive economic development. The findings suggest that supportive government measures, community-based learning initiatives, and accessible technological solutions will be essential for fostering inclusive digital growth among women-led retail enterprises. Overall, the study highlights the transformative potential of digital payment systems while emphasizing the need for sustained institutional and infrastructural support to achieve equitable benefits.

## 10. References

1. Allen, F., Demirgüç-Kunt, A., Klapper, L., & Peria, M. S. M. (2019). The foundations of financial inclusion: Understanding ownership and use of formal accounts. *Journal of Financial Intermediation*, 38, 1–30. <https://doi.org/10.1016/j.jfi.2018.09.003>
2. Beck, T., Demirgüç-Kunt, A., & Levine, R. (2018). Finance, firm size, and growth. *Journal of Money, Credit and Banking*, 50(S1), 1–40. <https://doi.org/10.1111/jmcb.12520>
3. Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2017). *The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution*. World Bank. <https://doi.org/10.1596/978-1-4648-1259-0>

4. Ghosh, S., & Vinod, D. (2020). Digital payments and small enterprise performance in India. *Indian Journal of Economics and Development*, 16(2), 45–58.
5. Mukherjee, A., & Nath, P. (2021). Digital payment adoption in MSMEs: Challenges and prospects in India. *Journal of Entrepreneurship in Emerging Economies*, 13(4), 567–588. <https://doi.org/10.1108/JEEE-05-2020-0064>
6. National Payments Corporation of India (NPCI). (2023). *UPI adoption report 2023*. NPCI Publications.
7. Reserve Bank of India (RBI). (2022). *Digital payments statistics and trends*. RBI Publications.
8. Suri, T., & Jack, W. (2016). The long-run poverty and gender impacts of mobile money. *Science*, 354(6317), 1288–1292. <https://doi.org/10.1126/science.aah5309>

#### Case Study Sources:

1. *The Hindu Business Line*. (2022). Bhavani's grocery store adopts UPI payments in T. Nagar, Chennai. [Online] Available at: <https://www.thehindubusinessline.com>
2. *YourStory*. (2023). Upcyclic: How Chennai women entrepreneurs are embracing digital payments. [Online] Available at: <https://yourstory.com>
3. Local Business Magazine. (2022). Glow Beauty Salon digitalizes payments to improve customer experience. Chennai Edition.
4. MSME Development Institute, Chennai. (2022). Case studies on digital payment adoption among women entrepreneurs. Government of India Publication.
5. *The Better India*. (2021). Home-based bakers in Chennai adopt QR & UPI payments. [Online] Available at: <https://www.thebetterindia.com>
6. MSME Chennai Newsletter. (2022). Women-led stationery shops embracing digital transactions.
7. *Business Today*. (2023). Chic Boutique leverages Instagram & UPI for women entrepreneur growth in Chennai. [Online] Available at: <https://www.businesstoday.in>
8. Crafts Council of India. (2022). Digital transformation in handicraft enterprises: Case studies from Chennai.