

# FINANCIAL INCLUSION AND DIGITAL PAYMENTS GROWTH IN INDIA: A SECONDARY DATA ANALYSIS

**Mrs. Gurvinder**

Assistant Professor

Department of Commerce , Ch. Ishwar Singh Kanya Mahavidyalaya Fatepur-Pundri (Kaithal)

Email-id : [gkotia02@gmail.com](mailto:gkotia02@gmail.com)

---

**Abstract:** Financial inclusion and digital payments have emerged as two of the most transformative forces within India's financial ecosystem. With the expansion of banking networks, the rapid spread of mobile technology, and the government's push toward a less-cash economy, India has experienced a significant shift in how citizens access, use, and perceive financial services. This study examines not only the trends and patterns but also challenges associated with financial inclusion and digital payments in India, drawing exclusively on secondary data from reliable national and international sources. With the help of descriptive and analytical approach, the present paper explores transformation since the early 2010s, the acceleration after the 2016 demonetisation, the impact of regulatory reforms, and the role of fintech innovations. Findings show that while digital payments have grown up exponentially particularly through UPI financial inclusion continues to face structural obstacles related to infrastructure, literacy, gender gaps, and socio-economic disparity. The study argues that India's financial inclusion agenda is moving in the right direction but needs deeper behavioural change, improved digital safety, and region-specific financial infrastructure strengthening.

**Keywords :** Financial inclusion, digital payments, fintech, UPI, banking access, secondary data, India.

---

## 1.0 Introduction

Over the past fifteen years, India's financial landscape has witnessed a significant and multidimensional transformation. What began as a state-led initiative to expand basic banking access to underserved populations has gradually evolved into a technology-driven push toward universal financial inclusion and a digital-first economy. The shift from traditional to digital finance signifies not only an economic transition but also a social and behavioural change influencing the everyday lives of millions. This transformation has been powered by policy reforms, rapid technological innovation, and the widespread adoption of smartphones and affordable internet services.

Financial inclusion understood as access to useful, affordable financial products and services has long been viewed as a prerequisite for equitable economic development (Sarma, 2015). Digital payments, in turn, act as a practical tool to advance inclusion by enabling faster, easier, and more secure transactions. Since the introduction of the Unified Payments Interface (UPI) in 2016, India's digital payment ecosystem has expanded rapidly, positioning the country as a global leader in real-time digital transactions (NPCI, 2023).

Despite this progress, the reach of financial inclusion remains uneven. Rural communities, women, low-income households, and marginalised groups continue to face barriers. This paper analyses these disparities using secondary data and synthesises insights from government reports, RBI publications, global indices, and research studies to evaluate India's journey toward inclusive digital finance.

## 2.0 Evolving Perspectives on Digital Finance and Inclusive Growth

The scholarly discourse on financial inclusion and digital payments in India has undergone a significant transformation over the past two decades, shaped by policy reforms, technological innovation, and evolving developmental priorities. Early global research by Beck, Demirgüç-Kunt, and Levine framed financial inclusion primarily as access to banking services, emphasising its role in poverty reduction through consumption smoothing, investment, and risk mitigation. Indian scholars expanded on this foundation, documenting stark disparities across rural-urban areas, caste, class, and gender (Kant and Levine, 2007).

A major conceptual shift occurred with the Rangarajan Committee Report (2008), which broadened financial inclusion to encompass credit, insurance, pensions, remittances, and digital payments. This multidimensional

view aligned with Sen's capability approach, stressing that inclusion should enhance individuals' real freedoms rather than merely provide access. Empirical work by Sarma and Pais highlighted structural obstacles such as skewed bank distribution, inadequate infrastructure, and documentation challenges, reinforcing the need for systemic interventions (Sarma and Pais, 2008).

Subsequent research examined the economic constraints faced by formal institutions in serving low-income households. Scholars noted that high transaction costs and low profitability hindered outreach, pushing microfinance institutions to the forefront though their long-term impact remained contested. Studies by Burgess and Pande demonstrated that rural bank expansion reduced poverty, but also argued for stronger state intervention to ensure equitable access (Burgess and Pande, 2005).

The introduction of the Pradhan Mantri Jan Dhan Yojana (PMJDY) in 2014 marked a watershed moment. With over 170 million accounts opened within a year (RBI, 2022), PMJDY gained global attention. The Aadhaar-enabled e-KYC system significantly reduced onboarding costs, and scholars such as Bhatia and Singh argued that the Jan Dhan-Aadhaar-Mobile (JAM) architecture often termed the "India Stack" created a robust digital infrastructure that enabled scalable, low-cost financial services (Bhatia and Singh, 2019). However, critical scholarship cautioned that increased account ownership did not guarantee meaningful usage. Gupta and Sharma described this phenomenon as "statistical inclusion," noting widespread dormancy and persistent gender, caste, and class-based disparities (Gupta and Sharma, 2017; Chaudhry & Ghosh, 2020).

The acceleration of digital payments further expanded the academic landscape. The Unified Payments Interface (UPI), launched in 2016, was widely hailed as a global fin-tech innovation due to its real-time, interoperable design. UPI's exponential growth from 0.1 million transactions in 2016 to over 100 billion in 2023 led international institutions to identify India as a leader in digital payments (World Bank, 2021). Empirical studies found that digital payments increased transactional efficiency, improved transparency for small merchants, and supported financial identity formation (Mehra and Singh, 2021).

Despite these advancements, scholars emphasised persistent challenges. The digital divide reflected in gender gaps in smartphone ownership, rural connectivity barriers, and low digital literacy continues to constrain equitable adoption (GSMA, 2022). Rising cyber-security risks, including phishing and fraud, further undermine trust, particularly among first-time users (RBI, 2022). Kohli and Singh warned against equating digital transaction volume with substantive financial inclusion, noting that many users adopt digital payments for convenience rather than deeper financial engagement (Kohli and Singh, 2022).

Global comparative studies of China, Kenya, and Nordic countries contextualised India's unique model, which relies heavily on public digital infrastructure rather than private-sector dominance or telecom-led systems. These comparisons highlight India's strengths while underscoring the need for stronger consumer protection and regulatory oversight.

The literature reveals notable gaps: limited research on how digital payments contribute to long-term inclusion, insufficient analysis of state-level disparities, underexplored qualitative dimensions of gendered digital behaviour, and a lack of comprehensive national-level data-driven studies. These gaps form the basis for the present research.

### **3.0 Data Analysis and Interpretation**

An assessment of India's financial inclusion landscape reveals a multi-layered and evolving journey shaped by rapid digitalisation, targeted policy interventions, and long-standing socio-economic disparities. While aggregate indicators highlight significant progress, especially in account ownership and digital payment usage, a deeper analysis uncovers persistent gaps across gender, geography, income categories, and the types of financial services adopted. Using secondary data from the World Bank, RBI, NPCI, and national surveys, this section offers a comprehensive interpretation of how digital payments have influenced India's financial inclusion trajectory.

**3.1 Banking Access and Account Ownership :** India's most visible transformation emerged with the expansion of banking access, driven primarily by the Pradhan Mantri Jan Dhan Yojana (PMJDY). Prior to 2011, only about one-third of Indian adults possessed a bank account, leaving a large portion of the population outside

the formal financial ecosystem. The Global Findex Database indicates a steep rise in account ownership from about 35 percent in 2011 to 78 percent in 2017, and eventually reaching around 80 percent in 2021 (World Bank, 2021). This represents one of the fastest expansions of banking inclusion globally.

RBI data further shows that by 2023, nearly 470 million PMJDY accounts had been opened, far surpassing earlier expectations. This rapid increase in formal financial identity enabled millions to receive government benefits directly, engage in savings, and connect with the digital payment ecosystem. However, the success of account opening has also highlighted its own limitations. A significant share of accounts remains dormant due to inadequate awareness, low confidence in banking procedures, and limited digital literacy (RBI, 2022). This discrepancy between “ownership” and “usage” reflects the challenges of a supply-driven model of inclusion, where access does not automatically translate into meaningful engagement.

Consequently, the key challenge lies not merely in expanding the number of bank accounts but in ensuring their active and productive use.

**3.2 Growth of Digital Payments:** Simultaneously, India has witnessed an extraordinary expansion of digital payments, reshaping financial behaviour across social and economic groups. The launch of the Unified Payments Interface (UPI) in 2016 stands as the turning point in this transformation. Beginning with just 0.1 billion transactions, UPI surpassed 100 billion annual transactions by 2023, positioning India as the global leader in real-time digital payments (NPCI, 2023).

Several structural and technological factors underpin this explosive growth. The simplicity of UPI’s design, interoperability across banking platforms, zero-cost transactions, and widespread availability of QR-code systems significantly reduced barriers to digital finance. Affordable smartphones and declining mobile data costs further broadened access. Importantly, digital payments are no longer confined to formal businesses street vendors, small merchants, and daily-wage workers increasingly rely on QR-based payments. This diffusion suggests that digital financial behaviour is becoming embedded in both the formal and informal sectors.

Nevertheless, high transaction volumes do not automatically indicate deeper financial inclusion. Scholars note that digital transaction activity has grown faster than access to credit, insurance, or savings products, producing a gap between transactional inclusion and developmental inclusion (Agarwal and Jain, 2021). This distinction is crucial for understanding the limitations of India’s digital surge.

**3.3 Trends in the Financial Inclusion Index:** The RBI’s Financial Inclusion Index (FI-Index) provides a structured measure of progress across three dimensions access, usage, and quality. Between 2017 and 2022, the index improved from 43.4 to 56.4, reflecting moderate yet continuous enhancement (RBI, 2022). Indicators linked to access, such as bank branches, account openings, and digital transactions, have shown significant improvement.

However, the quality dimension which includes the regular use of financial services, financial literacy, and the diversity of services accessed lags behind. Many individuals who have opened accounts do not engage with savings schemes, insurance products, or formal credit channels. The FI-Index therefore highlights an important structural challenge: India’s financial inclusion progress has been more quantitative than qualitative. This imbalance demonstrates the need for long-term behavioural and educational interventions alongside technological expansion.

**3.4 Gender Divide in Digital and Financial Inclusion:** Gender disparities remain one of the most enduring challenges in India’s financial inclusion landscape. Although the PMJDY significantly narrowed the account ownership gap, women still trail behind in account usage, digital competencies, and access to formal credit. Cultural restrictions, limited mobility, and lower control over financial decisions constrain women’s ability to engage with digital finance. In many households, women hold bank accounts primarily for receiving government transfers, but male family members often control these accounts (Chaudhry and Ghosh, 2020).

Digital inequality amplifies these barriers. Women have lower rates of smartphone ownership and are less likely to access the internet independently. As Kohli and Singh (2022) emphasise, meaningful inclusion depends not only on access but also on personal agency and digital capability. Unless these structural barriers are addressed,

the gender divide will persist despite the overall growth of digital transactions (Kohli and Singh, 2022).

**3.5 Rural-Urban Disparities:** Geographical inequalities also significantly influence patterns of financial inclusion. Rural India has achieved high levels of account ownership due to PMJDY's outreach, yet digital payment usage remains considerably lower than in urban regions. Poor internet connectivity, unreliable network coverage, and limited smartphone access are major technological barriers. Additionally, lower levels of digital literacy reduce confidence in using digital platforms, making cash the preferred mode of transaction in rural areas.

Trust deficits are particularly pronounced. Rural users often fear financial loss due to digital errors or cyber fraud, concerns that are reinforced by rising reports of phishing and online scams. These factors create hesitation in adopting digital payments, underscoring the need for targeted awareness campaigns and simplified user interfaces suitable for low-literacy populations.

**3.6 Credit and Insurance Penetration:** Despite advancements in digital payments, India continues to face substantial gaps in access to formal credit and insurance. Many individuals especially farmers, micro-entrepreneurs, and informal workers continue to depend on informal lenders due to rigid institutional requirements and limited documentation. Digital payment histories have not yet been fully incorporated into credit assessments, limiting their potential to expand formal lending (Agarwal and Jain, 2021).

Insurance penetration remains similarly limited. Although government schemes such as PMJJBY and PMSBY have increased enrollment, awareness, understanding of benefits, and comfort with claim procedures remain low, particularly in rural and low-income populations. Digitalisation has eased enrolment and premium payments, but the deeper behavioural obstacles remain largely unaddressed.

#### **4.0 Discussion of Findings and Implications**

The findings present a nuanced and multi-layered picture of India's financial inclusion trajectory in the digital era. The rapid rise of digital payments has fundamentally changed the way citizens interact with money, enabling quicker, cheaper, and more transparent financial transactions. Platforms such as the Unified Payments Interface (UPI) have achieved deep penetration across both urban and rural regions, making digital payments a routine component of everyday life for millions. This reinforces the view that digital technologies can meaningfully reduce transaction costs, enhance convenience, and widen participation in economic exchanges (Agarwal and Jain, 2021). However, increased digital access does not necessarily lead to deeper or more holistic financial inclusion. Many users who actively make digital payments still lack access to formal credit, insurance products, and long-term savings mechanisms, resulting in what scholars call "shallow inclusion" or "transactional inclusion" (Kohli and Singh, 2022). This form of inclusion integrates individuals into the digital economy but does not equip them with tools to build economic resilience or attain upward mobility.

This difference between digital participation and comprehensive inclusion forms a central debate in current scholarship. While digital payment platforms have succeeded at bringing citizens into a modern financial ecosystem, significant structural barriers persist. High rates of dormant accounts, minimal credit usage, and extremely low insurance penetration reveal socio-economic and behavioural divides that digital adoption alone cannot bridge. Studies indicate that possessing a bank account or a digital interface does not guarantee active engagement; effective use requires skills, confidence, and trust in financial institutions (Sarma and Pais, 2008; World Bank, 2021). Therefore, equating digital transactions with genuine financial inclusion oversimplifies the problem.

The gender divide remains one of the most critical barriers to equitable inclusion. Although initiatives such as the Pradhan Mantri Jan Dhan Yojana (PMJDY) have increased account ownership, women continue to lag behind men in financial literacy, smartphone access, and autonomous decision-making. Research attributes this disparity to patriarchal norms, limited mobility, unequal access to technology, and restricted control over household finances (Chaudhry and Ghosh, 2020; GSMA, 2022). Even when women have bank accounts, their usage is often mediated by male family members, limiting agency and independent engagement. This highlights the need for gender-sensitive interventions that address cultural, educational, and structural constraints. Without such efforts, digitalisation risks replicating and reinforcing existing inequalities.

Rural-urban differences also remain stark. Although rural India has reached high levels of bank account ownership, digital payment adoption remains significantly lower than in urban centres. Inconsistent internet connectivity, inadequate smartphone penetration, low digital literacy, and distrust of digital systems contribute to this divide. These challenges demonstrate that building infrastructure alone is insufficient. Effective digital inclusion requires financial literacy drives, simplified user interfaces, and strong grievance-redressal mechanisms that build trust and encourage active usage.

Fin-tech's growing presence adds both opportunity and complexity. Fin-tech platforms have broadened access to credit and financial services, particularly through alternative data-based lending models (Mehra and Singh, 2021). However, concerns about data privacy, algorithmic bias, and predatory lending highlight the need for strong regulatory oversight. The Reserve Bank of India (RBI, 2022) stresses the importance of consumer protection, cyber-security, and ethical data governance to ensure sustainable growth.

Overall, the findings reveal that India's digital payment success does not automatically translate into full financial inclusion. The key challenge is transforming digital transactions into genuine, long-term engagement with formal financial services. Strengthening digital literacy, promoting trust, addressing gender and rural disparities, and regulating fin-tech responsibly are crucial steps. Meaningful financial inclusion will be achieved only when digital access is matched by financial capability, institutional trust, and equitable participation

## 5.0 Conclusion

India's financial inclusion landscape is undergoing a major transformation driven by the rapid rise of digital payments and expanding banking access. Digital platforms have eased everyday transactions, increased engagement with formal finance, and encouraged broader economic participation. Yet, this progress has not automatically translated into deep or equitable inclusion. Significant gaps persist across regions and social groups, particularly among rural populations, women, and the elderly, who continue to face barriers related to financial literacy, digital skills, and trust.

The rapid digital shift has also introduced new risks, including growing cyber fraud and data vulnerabilities, which threaten user confidence. While fin-tech innovations offer opportunities such as micro-savings, flexible credit, and personalised services, they also raise concerns regarding privacy, consumer protection, and ethical lending practices. High digital transaction volumes alongside low usage of credit, savings, and insurance highlight a persistent divide between access and meaningful financial capability. Achieving true inclusion requires more than expanding digital infrastructure; it demands policies that strengthen financial education, enhance consumer safeguards, and prioritise the needs of marginalised groups. With balanced regulation and human-centred strategies, India can ensure that digital finance becomes a tool for genuine economic empowerment.

## 6.0 References:

- i. Agarwal, R., & Jain, P. (2021). Digital payments and inclusive growth: An Indian perspective. *Journal of Financial Innovation*, 12(3), 45–62.
- ii. Bhatia, A., & Singh, M. (2019). Financial inclusion and digital infrastructure: The India Stack model. *Economic and Political Weekly*, 54(18), 22–29.
- iii. Beck, T., Demirgüç-Kunt, A., & Levine, R. (2007). Finance, inequality and poverty: Cross-country evidence. *Journal of Economic Growth*, 12(1), 27–49.
- iv. Burgess, R., & Pandey, R. (2005). Do rural banks matter? Evidence from the Indian social banking experiment. *American Economic Review*, 95(3), 780–795.
- v. Chaudhry, A., & Ghosh, S. (2020). Gender and digital finance: Barriers to women's financial inclusion in India. *Journal of Development Studies*, 56(7), 1231–1245.
- vi. GSMA. (2022). Mobile gender gap report: India insights. GSMA Intelligence.
- vii. Gupta, R., & Sharma, M. (2017). Reassessing the impact of PMJDY. *Indian Journal of Public Policy*, 5(2), 89–103.
- viii. Kohli, S., & Singh, R. (2022). Intersections of fintech and financial inclusion in emerging economies. *South Asian Journal of Business Research*, 11(2), 210–226.
- ix. Mehra, D., & Singh, P. (2021). Digital payments and changing consumer financial behaviour in India. *Indian Journal of Finance*, 15(3), 25–39.
- x. National Payments Corporation of India. (2023). UPI Statistics Report. NPCI Publications.
- xi. Rangarajan Committee. (2008). Report of the Committee on Financial Inclusion. Government of India.

- xii. Reserve Bank of India. (2022). Financial Inclusion Index Report 2021–22. RBI.
- xiii. Reserve Bank of India. (2022). Annual Report 2022. RBI Publications.
- xiv. Sarma, M. (2015). Measuring financial inclusion in developing countries. *Social and Economic Studies*, 64(3), 203–230.
- xv. Sarma, M., & Pais, J. (2008). Financial inclusion and development: A cross-country analysis. *Indian Journal of Human Development*, 2(1), 136–154.
- xvi. Sen, A. (1999). *Development as freedom*. Oxford University Press.
- xvii. World Bank. (2021). *Global Findex Database 2021*. World Bank Publications.