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Digital Financial Reforms and Inclusive Economic Growth in India: The Role of UPI and Financial Inclusion

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Abstract:
India's digital financial ecosystem has expanded rapidly through public digital infrastructure, bank-account expansion and mobile-based payment systems. The Unified Payments Interface (UPI), developed by the National Payments Corporation of India under the oversight of the Reserve Bank of India, has become a major channel for low-cost, interoperable, real-time payments. This article examines the relationship between digital financial reforms, UPI adoption and inclusive economic growth in India. It uses a descriptive and analytical approach based on secondary information from the Reserve Bank of India, the Government of India, the National Payments Corporation of India and the World Bank. The discussion finds that UPI can reduce payment frictions, support small merchants, improve the traceability of transactions and encourage the active use of bank accounts. Digital payments can also strengthen the delivery of public transfers and widen opportunities for women, rural households and micro-enterprises. However, access to a bank account or payment application does not automatically ensure meaningful financial inclusion. Digital literacy gaps, weak connectivity, fraud risks, limited smartphone access and inactive accounts remain important barriers. The article argues that inclusive growth requires a broader approach combining reliable digital infrastructure, consumer protection, accessible grievance redressal, financial education and affordable access to savings, credit, insurance and pensions. UPI is therefore an important enabler of inclusion, but not a substitute for comprehensive financial services and supportive institutions.

Keywords: Digital financial reforms; Unified Payments Interface (UPI); financial inclusion; digital payments; inclusive growth; India Stack; financial literacy.

1. Introduction:

Digital technology has transformed the delivery of financial services in India. Bank accounts, mobile connectivity, Aadhaar-enabled identification, digital payment infrastructure and technology-based public services have created new ways for individuals and enterprises to participate in the formal economy. Digital financial reforms are not limited to replacing cash with electronic payments; they also seek to reduce transaction costs, improve service delivery, strengthen transparency and connect underserved groups with formal financial institutions.

The Unified Payments Interface (UPI), launched in 2016 by the National Payments Corporation of India (NPCI), is a central part of this transformation. It enables instant transfers between bank accounts through

mobile applications and interoperable payment addresses or QR codes. Its 24-hour availability and broad acceptance have made digital payments practical for everyday purchases, person-to-person transfers and merchant transactions. Government-reported data indicate that UPI processed approximately 24,161.69 crore transactions worth about ₹314 lakh crore in financial year 2025–26. The same release reported that UPI accounted for about 85 per cent of India's digital payment transactions in that year (Ministry of Finance, 2026a).

The expansion of digital payments is closely connected with financial inclusion. Financial inclusion refers to affordable and responsible access to useful financial products and services, including payments, savings, credit, insurance and pensions. It is important for reducing vulnerability, supporting entrepreneurship and enabling households to manage income and unexpected expenses. The Reserve Bank of India's Financial Inclusion Index (FI-Index) reached 67.0 in March 2025, compared with 64.2 in March 2024, reflecting improvement in access, usage and quality dimensions (Reserve Bank of India [RBI], 2025).

Despite this progress, inclusion remains uneven. Some individuals have accounts but use them infrequently; others face barriers associated with connectivity, digital skills, language, disability, gender norms or lack of trust. The central question is therefore not simply whether digital payments are growing, but whether they are improving the quality and distribution of economic opportunities. This article analyses the role of UPI in promoting financial inclusion and inclusive economic growth in India.

2. Review of Literature

2.1 Digitalisation and financial inclusion

The RBI's Report on Currency and Finance 2023–24 explains that digitalisation has improved the reach and efficiency of payment services and has supported financial inclusion. It also notes that the digital transition creates policy challenges relating to cybersecurity, data privacy and market concentration (RBI, 2024a). This indicates that digital financial development must balance innovation with consumer protection and financial stability.

2.2 Account ownership and actual usage

The World Bank's Global Findex 2021 India brief reported that 78 per cent of adults had an account, while 35 per cent of adults used an account to make or receive a digital payment. It also identified differences in digital-payment use between men and women and between rural and urban residents (Klapper et al., 2023). These findings underline the distinction between access to an account and its active use. The World Bank's Global Findex 2025 provides updated cross-country evidence on account ownership, digital payments, connectivity and digital safety, reinforcing the importance of measuring both access and usage (World Bank, 2025).

2.3 UPI and rural economic participation

Recent empirical research has begun to examine UPI as part of India's digital public infrastructure. Balasundaram et al. (2026) study the relationship between UPI adoption, rural financial inclusion and economic activity using village-level and household evidence for the period 2019–2023. Such research points to the potential role of digital payments in supporting entrepreneurship and changes in household financial behaviour. However, the scale and distribution of benefits depend on local infrastructure, awareness and the ability to use formal financial services.

2.4 Research gap

The literature recognises the rapid growth of digital payments but also highlights continuing gaps in usage, service quality and digital safety. This article brings these issues together by examining UPI not merely as a payment technology but as an instrument within a wider financial inclusion and inclusive-growth framework.

3. Objectives of the Study:

- To examine the development of digital financial reforms and UPI in India.
- To analyse the contribution of UPI to access, usage and affordability of financial services.
- To assess the potential benefits of digital payments for households, women, rural communities and micro-enterprises.
- To identify the major challenges affecting inclusive digital finance.
- To suggest policy measures for strengthening the inclusive-growth impact of digital financial reforms.

4. Research Methodology:

The study follows a descriptive and analytical research design based on secondary data. Information has been drawn from publications and statistical releases of the RBI, NPCI, the Ministry of Finance, the Government of India and the World Bank, along with relevant academic research. The study reviews trends in digital payments and financial inclusion and interprets their likely economic implications. It does not use primary survey data or estimate a causal econometric model. Accordingly, the discussion identifies plausible channels and policy implications rather than claiming that UPI alone caused changes in income, employment or poverty.

5. Digital Financial Reforms in India:

India's digital financial architecture has developed through the interaction of banking reforms, digital identity, mobile connectivity and interoperable payment systems. The expansion of basic bank accounts created an institutional foundation, while digital identity and electronic know-your-customer processes helped simplify access to services. Government transfers into bank accounts have also strengthened the connection between households and the formal banking system.

UPI is especially significant because it allows customers to transfer money between participating bank accounts through a common interoperable system. Users can make payments through a virtual payment address, mobile number or QR code, depending on the application and service provider. It supports person-to-person and person-to-merchant transactions and reduces dependence on cash handling. Other elements of the ecosystem, including Aadhaar-enabled Payment System (AePS), Immediate Payment Service (IMPS), RuPay, Bharat Bill Payment System (BBPS) and digital banking channels, complement UPI.

Government data show that retail digital payments reached 22,167.90 crore transactions with a value of ₹849.12 lakh crore in FY 2024–25; UPI accounted for 81 per cent of retail digital payment volume in that year (Ministry of Finance, 2026b). These figures demonstrate the scale of adoption, although transaction volume should not be treated as a direct measure of the number of unique users or the extent of financial well-being.

6. UPI and Financial Inclusion:

6.1 Affordable and convenient payments

UPI enables users to make or receive payments without visiting a bank branch or handling cash. QR-based payments are particularly useful for small merchants, street vendors and service providers because they can accept digital payments without installing expensive point-of-sale equipment. Lower payment friction can save time, improve convenience and support participation in formal commercial networks.

6.2 Inclusion of rural households

For rural households, digital payments can reduce travel and transaction costs associated with accessing financial services. They can make it easier to receive remittances, pay bills and transact with merchants. However, the benefits depend on reliable mobile networks, electricity, access to devices and nearby assistance when transactions fail. Banking correspondents and local service centres remain important for people who cannot independently use smartphone applications.

6.3 Women's financial participation

Digital accounts and payment tools can strengthen women's control over personal funds, facilitate receipt of wages and public transfers, and reduce the need to depend on intermediaries. Yet access to a phone does not always mean independent control over it. Gender gaps in digital literacy, device ownership, privacy and confidence can limit use. Financial inclusion programmes should therefore combine account access with women-centred digital training and safe access to devices.

6.4 Support for micro, small and informal enterprises

UPI enables small businesses to accept payments from customers with limited infrastructure. Digital transaction records may help enterprises demonstrate cash flows, maintain accounts and build relationships with formal lenders. These records can potentially support credit assessment, although payment history alone is not a substitute for responsible lending evaluation. Micro-enterprises also need affordable connectivity, reliable settlement, simple accounting tools and protection against fraudulent transactions.

6.5 Transparency and public-service delivery

Digital transfers and payments can improve traceability and reduce some forms of leakage, delay and cash-handling costs. When beneficiaries receive funds directly into accounts, they may gain greater convenience and a clearer record of receipts. Nevertheless, effective delivery requires accurate beneficiary data, accessible grievance systems and alternatives for people facing authentication or connectivity failures.

7. Contribution to Inclusive Economic Growth

Digital financial reforms can support inclusive growth through several connected channels. First, lower transaction costs can improve the efficiency of household and business payments. Second, digital records can increase financial visibility and potentially help small firms access formal credit. Third, convenient payment systems can encourage the use of bank accounts and strengthen the link between formal financial institutions and underserved communities. Fourth, direct transfers can improve the speed and traceability of public support.

The RBI's FI-Index provides a broader measure than payment volume because it considers access, usage and quality. Its increase to 67.0 in March 2025 suggests continued progress in the overall financial inclusion environment (RBI, 2025). However, an index improvement does not mean that every household

has equal access to useful services. Inclusion must also be assessed through active account use, affordability, consumer outcomes, access to credit and insurance, and the ability to resolve complaints.
The economic benefits of UPI are therefore enabling rather than automatic. Digital payments can make transactions easier, but sustained improvements in income and productivity also require education, infrastructure, market access, employment opportunities and responsible financial intermediation.

8. Major Challenges and Limitations:

- Digital divide: Unequal access to smartphones, reliable internet, electricity and affordable data can exclude remote and low-income users.
- Digital and financial literacy: Users may not understand payment procedures, privacy settings, fraud warnings or complaint mechanisms.
- Cybersecurity and fraud: Phishing, fake customer-care numbers, screen-sharing scams, social engineering and mistaken transfers can cause financial loss.
- Inactive or low-use accounts: Account ownership does not guarantee regular use, savings, access to affordable credit or financial resilience.
- Gender and social barriers: Women, older persons, persons with disabilities and some marginalised communities may face additional barriers to independent use.
- System reliability and grievance redressal: Failed transactions, delayed reversals and difficulty reaching customer support can weaken trust.
- Over-reliance on transaction indicators: High transaction counts may reflect repeated use by existing users and do not necessarily show broader inclusion or improved welfare.

These limitations show why digital inclusion must be evaluated in terms of both technological access and the quality of financial outcomes. A safe and inclusive system must protect users who have limited digital experience as well as those who are highly connected.

9. Policy Suggestions:

- Strengthen last-mile connectivity: Improve mobile networks, electricity and affordable internet access in rural and remote areas.
- Expand practical digital financial education: Provide local-language training on UPI use, PIN safety, fraud prevention and complaint procedures through banks, schools, self-help groups and community institutions.
- Improve consumer protection: Ensure quick reporting channels, transparent transaction status, timely dispute resolution and clear responsibility for failed or fraudulent transactions.
- Promote women-centred access: Support women's independent access to phones, digital skills, bank accounts and financial decision-making.
- Support small merchants: Provide simple onboarding, accessible QR services, transparent charges and guidance on digital bookkeeping and cyber safety.
- Build assisted and offline options: Maintain banking correspondents, help desks and alternative procedures for users affected by network, device or authentication problems.
- Measure meaningful inclusion: Track active account use, user diversity, rural and gender gaps, failed transactions, complaint resolution, savings and responsible credit access—not only transaction volume.
- Strengthen data governance: Apply privacy, consent, security and responsible data-sharing principles when digital transaction records are used for financial services.

10. Findings and Discussion:

The review leads to five main observations. First, UPI has become a major component of India's retail digital payment infrastructure and has expanded the practical availability of real-time payments. Second, interoperable QR-based payments can benefit small merchants and reduce the cost and inconvenience of cash transactions. Third, digital payments can encourage the use of bank accounts and improve the traceability of transfers, but access and active usage remain different outcomes. Fourth, the benefits for women, rural households and micro-enterprises depend on device access, digital literacy, connectivity and consumer protection. Fifth, digital payment expansion contributes to inclusive growth most effectively when integrated with savings, credit, insurance, pensions and wider economic opportunities.

The evidence reviewed supports the view that UPI is an important enabling institution within India's digital public infrastructure. However, the descriptive nature of this study does not establish a direct causal relationship between UPI adoption and aggregate economic growth. Further research using household-level and enterprise-level data would help identify which groups benefit most, how benefits vary across states and whether digital payment use improves income, savings, productivity or resilience.

11. Conclusion:

Digital financial reforms have reshaped India's payment landscape, with UPI emerging as a widely used, interoperable and low-friction payment system. Its contribution to inclusive economic growth lies in making payments more accessible, supporting small merchants, improving transaction records and strengthening links between households and formal financial institutions. The rise in the RBI's Financial Inclusion Index also indicates progress across access, usage and quality dimensions.

Nevertheless, digital payments alone cannot guarantee financial inclusion. Persistent barriers involving connectivity, digital literacy, gender inequality, cybersecurity, inactive accounts and grievance redressal must be addressed. The next phase of reform should move beyond increasing transaction volumes towards ensuring safe, affordable and meaningful use of a complete range of financial services. UPI can serve as a powerful foundation for inclusive growth when supported by strong institutions, consumer protection and targeted measures for underserved communities.

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