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Digital Economy and Financial Inclusion: Leveraging Technology for Sustainable Economic Growth in Viksit Bharat

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Abstract

The vision of Viksit Bharat of India, which aims to become a developed country by 2047, is basically anchored in the utilization of digital technologies to build an inclusive society with respect to financial inclusion and sustainable economic growth. In this paper, the author explored how digital financial services can help close the economic gaps in India and speed up the process of reaching the goal of a 30-35 trillion economy. The study examines some of the major technological enablers, such as Unified Payments Interface (UPI), Pradhan Mantri Jan Dhan Yojana (PMJDY), and Aadhaar, which enable digital infrastructure. By analyzing the 2017-2025 empirical evidence, this paper shows that the Financial Inclusion Index in India has increased by 43.4-67, and digital payments have increased exponentially, reaching 83% of all transactions. The paper analyses how digital financial inclusion can be used as a driver to attain Sustainable Development Goals (SDGs), especially in poverty alleviation, gender equality, and economic empowerment. It has been analyzed that the digital economy in India currently represents 11.74 percent of the GDP and that it is expected to increase to 20 percent by 2029-30. However, significant challenges persist, including the digital divide, gender disparities, cybersecurity vulnerabilities, and the need for enhanced financial literacy. The research concludes that sustained focus on technological innovation, regulatory frameworks, infrastructure development, and inclusive policies will be essential for realizing the Viksit Bharat vision.

Keywords: *Digital economy; financial inclusion; Vikasit Bharat; sustainable development; UPI; digital payments; financial technology; inclusive growth; India*

1. Introduction

India stands at a pivotal juncture, aspiring to transform into Viksit Bharat by 2047, targeting a GDP of $30-35 trillion with sustained annual growth of 8-10% (Payik et al., 2024). Central to this transformation is the convergence of the digital economy and financial inclusion. As India emerges as the world's fifth-largest economy, technology's role in democratizing financial services has become critical.

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Table 1: Viksit Bharat 2047 Economic Targets

Indicator	Current (2024-25)	Target 2047	Required Growth
GDP (USD Trillion)	3.5-4.0	30-35	8-10% annually
Per Capita Income (USD)	2,500-2,600	15,000-18,000	7.3-10%
Financial Inclusion (%)	89%	100%	Universal coverage

Source: Viksit India (2025); TISS (2024); World Bank (2025)

Table 1: Explanation: This table outlines India's ambitious developmental targets for 2047. The GDP target of $30-35 trillion represents an 8-10-fold increase from current levels, requiring consistent annual growth of 8-10%. Per capita income must grow from approximately $2,500 to $15,000-18,000, indicating a shift from lower-middle-income to high-income status. Most significantly, financial inclusion must achieve universal coverage from the current 89%, ensuring every Indian has access to formal financial services. These targets are interconnected—achieving the GDP goal necessitates inclusive growth where all citizens can participate economically through financial access.

Financial inclusion—ensuring affordable access to financial products for all—has emerged as a key enabler for achieving seven of the seventeen UN Sustainable Development Goals (World Bank, 2024). India has pioneered UPI, Aadhaar-based digital identity, and PMJDY, forming the Digital Public Infrastructure (Khera et al., 2021). These innovations position India as a global leader, accounting for 49% of global real-time transactions (Vision IAS, 2025).

2. Digital Economy and Financial Inclusion Framework

Academic research demonstrates strong linkages between digital financial inclusion and sustainable development. Khera et al. (2021) found that digital financial inclusion positively impacts economic growth across 52 developing economies. McKinsey (2016) predicted digital finance could boost emerging economies' GDP by 6% by 2025. Studies confirm financial inclusion reduces poverty, supports women's empowerment, and fosters entrepreneurship (World Bank, 2024). In India, PMJDY combined with the JAM Trinity has revolutionized benefit transfers, reducing leakages and improving governance (Patnam& Yao, 2020).

3. India's Digital Economy: Current Landscape

India's digital economy has transformed from a nascent sector to contribute 11.74% to GDP (₹31.64 lakh crore) in FY 2022-23, projected to reach 20% by 2029-30 (Vision IAS, 2025). The Digital India initiative, launched in July 2015, created this foundation. Baronet has connected 2.18 lakh Gram Panchayats with 6.92 lakh kilometres of optical fibre (Government of India, 2024).

Table 2: Digital Economy Contribution to GDP

Parameter	FY 2022-23	Projected FY 2029-30	Growth Expected
Digital Economy Contribution (%)	11.74%	20%	70% increase
Digital Economy Value (₹ Lakh Crore)	31.64	65-70	105-121%
UPI Monthly Transactions (Billion)	8-9	18-20	100-122%

Source: Vision IAS (2025); ICRIER (2024)

Table 2 Explanation: This table captures the explosive growth trajectory of India's digital economy. The digital economy's contribution is increasing from 11.74% to a projected 20% of GDP,representing a 70% growth in relative terms, demonstrating how digital services are becoming central to economic activity. In absolute terms, the digital economy value is expected to more than double from ₹31.64 lakh crore to ₹65-70 lakh crore, reflecting both economic expansion and deepening digitalization. UPI transaction volumes doubling from 8-9 billion to 18-20 billion monthly transactions indicate that digital payments are becoming the primary mode of financial exchange. This transformation signifies India's transition from a cash-based economy to a digital-first financial ecosystem, with implications for financial inclusion, tax compliance, and economic formalization.

UPI stands as India's flagship achievement. In FY 2023-24, UPI processed 131 billion transactions, accounting for 83% of digital payments (Business Standard, 2025).

Table 3: UPI Transaction Growth (FY 2017-2025)

Fiscal Year	Volume (Billion)	Value (₹ Lakh Crore)	% of Digital Payments
2017-18	0.92	1.09	15%
2019-20	12.52	21.31	34%
2021-22	45.61	84.17	62%
2023-24	131.00	200.00+	83%

Source: Reserve Bank of India (2024); Business Standard (2025)

Table 3 Explanation: This table chronicles UPI's remarkable exponential growth from 0.92 billion transactions in 2017-18 to 131 billion in 2023-24—a 142-fold increase in just six years. The transaction value surged from ₹1.09 lakh crore to over ₹200 lakh crore, representing a 183-fold increase, demonstrating both wider adoption and growing trust for higher-value transactions. Most significantly, UPI's market share jumped from 15% to 83% of all digital payments, establishing it as the dominant payment infrastructure. This growth pattern shows classic network effects—as more users and merchants adopted UPI, it became increasingly valuable and indispensable. The consistent year-on-year acceleration indicates UPI has achieved critical mass and is now embedded in India's economic fabric, from street vendors accepting payments via QR codes to large e-commerce transactions.

Regional language support (26+ languages) has driven adoption, with 98% of users consuming regional content (Vision IAS, 2025). However, 47% of women rely on shared devices in rural areas, highlighting persistent digital divides.

4. Financial Inclusion: Policy Framework and Impact

PMJDY, launched August 28, 2014, represents India's National Mission for Financial Inclusion. The program has fundamentally transformed banking access for previously excluded populations.

Table 4: PMJDY Progress (March 2015 vs August 2025)

Metric	March 2015	August 2025	Growth
Total Accounts (Crore)	14.72	56.55	284%
Deposits (₹ Lakh Crore)	0.18	2.68	1,389%
Women Account Holders (%)	48%	56%	+8 percentage points
Bank Mitras (Lakh)	3.37	13.55	302%

Source: Government of India (2025); Vision IAS (2025)

Table 4 Explanation: This table reveals PMJDY's transformative impact over a decade. Account numbers grew 284% from 14.72 crore to 56.55 crore, bringing 41.83 crore previously unbanked individuals into the formal financial system. More remarkably, deposits surged 1,389% from ₹0.18 lakh crore to ₹2.68 lakh crore, indicating that accounts are not merely dormant but actively used for savings. The average deposit per account increased from approximately ₹122 to ₹474, demonstrating growing trust and financial capability among beneficiaries. Women's account ownership increased from 48% to 56%, representing over 31 crore female account holders, directly contributing to gender equality and women's economic empowerment. The expansion of Bank Mitras (banking correspondents) from 3.37 lakh to 13.55 lakh provides last-mile connectivity, enabling branchless banking in remote areas. This infrastructure development was crucial for achieving deep rural penetration, with 67% of accounts in rural/semi-urban areas.

The JAM Trinity—integrating bank accounts, Aadhaar (141.88 crore IDs), and mobile connectivity—has transferred ₹44 lakh crore directly to citizens via Direct Benefit Transfer, eliminating intermediaries and reducing corruption (Vision IAS, 2025).

Table 5: Financial Inclusion Index Progress

Year	FI-Index	Growth (%)	Key Parameters
March 2017	43.4	-	Access (35%), Usage (45%), Quality (20%)
March 2021	53.9	24.2%	Improved all parameters
March 2024	64.2	6.8%	Enhanced usage/quality
March 2025	67.0	4.3%	Deeper engagement

Source: Reserve Bank of India (2025); Drishti IAS (2025)

Table 5 Explanation: The RBI's Financial Inclusion Index provides a comprehensive, multidimensional assessment of financial inclusion progress. The index rising from 43.4 to 67 (54.8% improvement) over eight years demonstrates sustained, systematic advancement. The index construction across three weighted parameters—Access (35%), Usage (45%), and Quality (20%)—ensures that financial inclusion is measured not merely by account opening but by active utilization and service quality. The initial rapid growth of 24.2% (2017-2021) reflects the impact of PMJDY's mass account opening and digital infrastructure rollout. The subsequent moderation in growth rates (11.5%, 6.8%, 4.3%) is natural as the base expands and indicates a transition from extensive growth (reaching more people) to intensive growth (deepening engagement). The FY25 improvement, driven primarily by usage and quality dimensions, suggests that focus has shifted from basic access to ensuring meaningful financial participation. At 67, India has achieved substantial but incomplete financial inclusion, with significant scope for reaching the universal inclusion target of 100.

Complementary schemes reinforce inclusion: Pradhan Mantri Suraksha Bima Yojana (₹2 lakh accident insurance at ₹20 premium), Atal Pension Yojana (pension security), and Kisan Credit Card (outstanding loans rose from ₹4.26 to ₹10.05 lakh crore, benefiting 7.72 crore farmers) (Drishti IAS, 2025).

5. Technology Enablers and Innovation

UPI's architecture enables real-time transfers with two-factor authentication. The platform processed 12.1 billion transactions in March 2025, with average transaction value reaching ₹2,900 (Coin Law, 2025). UPI Lite handled ₹9,000 crore offline transactions in Q1 2025, addressing connectivity challenges in remote areas. UPI-linked credit lines reaching ₹30,000 have enabled 62% first-time borrowers to access formal credit, with pre-approved loans processed in under six minutes (Coin Law, 2025).

Aadhaar's biometric system enables the Aadhaar-enabled Payment System (AePS), crucial for populations with limited literacy. RuPay cards provide indigenous payment alternatives, with 85 million users linking RuPaycredit cards to UPI (Coin Law, 2025). However, cybercrimes surged from 11.58 lakh (2020) to 20.41 lakh (2024), necessitating AI-based fraud detection and multi-factor authentication (Vision IAS, 2025).

6. Impact on Sustainable Development Goals

Financial inclusion enables seven of the seventeen SDGs. Research shows digital payments stabilized rural incomes by improving risk-sharing and dampening rainfall shocks on consumption (Patnam& Yao, 2020). Direct benefit transfers ensure welfare reaches beneficiaries without leakages, directly contributing to poverty reduction (SDG 1).

Women holding 56% of PMJDY accounts demonstrates progress toward gender equality (SDG 5). However, while 69% of women use digital banking, only 44% transact regularly, highlighting digital literacy needs (EY India & CII, 2024). McKinsey (2016) predicted 6% GDP boost from digital finance. India's digital economy, contributing 11.74% to GDP, is projected to reach 20%, confirming this impact on economic growth (SDG 8).

Infrastructure investments—2.18 lakh Gram Panchayats connected, 13.55 lakh Bank Mitras, 107 Digital Banking Units—directly support SDG 9 (Industry, Innovation and Infrastructure). Rural/semi-urban areas accounting for 67% of PMJDY accounts demonstrate progress in reducing inequalities (SDG 10).

7. Challenges and Barriers to Universal Inclusion

Despite progress, persistent challenges require attention. The digital divide remains fundamental—11% of adults are unbanked, and women dominate 58% of shared device usage in rural areas, indicating economic constraints limiting individual access (Vision IAS, 2025; World Bank, 2025).

Table 6: Financial Inclusion Scheme Awareness

Scheme	Urban Awareness (%)	Rural Awareness (%)	Total Beneficiaries
PMJDY	86%	84%	56.55 crore
Atal Pension Yojana	78%	74%	Expanding coverage
Kisan Credit Card	65%	82%	7.72 crore farmers
Women's Awareness of Schemes	82%	78%	18% unaware

Source: EY India & CII (2024); Drishti IAS (2025)

Table 6: Explanation: This table reveals critical insights into awareness disparities across financial inclusion schemes and demographics. PMJDY shows high awareness (86% urban, 84% rural), reflecting successful outreach over its 11-year existence and its visibility as the flagship program. Notably, rural awareness nearly matches urban awareness, demonstrating effective grassroots communication. However, Atal Pension Yojana shows lower awareness (78% urban, 74% rural), suggesting pension products require more intensive education, given their long-term nature and complexity. Kisan Credit Card displays reverse awareness patterns (65% urban, 82% rural), logically reflecting that this agricultural credit product is more relevant and marketed in rural areas. Most concerning is that 18% of women remain completely unaware of any financial inclusion schemes, representing approximately 13-14 crore adult women excluded from even basic knowledge about available financial services. This gender awareness gap represents a critical barrier to women's financial empowerment, as awareness is the prerequisite for utilization. The table underscores that while schemes exist, awareness gaps—particularly among women—remain a significant obstacle to universal financial inclusion.

Financial literacy gaps are critical: 55% express interest in learning financial management (EY India & CII, 2024). Gender disparities persist—only 44% of women who use digital banking transact regularly, reflecting digital literacy issues and socio-cultural restrictions. Cybersecurity threats escalated dramatically, with cybercrimes rising 76% in four years.

Infrastructure limitations constrain remote areas with inconsistent connectivity. Behavioral barriers persist—86% of rural account holders prefer visiting branches, reflecting trust in traditional methods (EY India & CII, 2024). Credit access remains restrictive—40% still depend on informal sources at exploitative rates. Private banks show declining participation due to sustainability concerns.

8. Policy Recommendations for Accelerating Inclusion

Achieving universal financial inclusion requires strategic interventions. First, expand BharatNet for universal rural coverage with reliable connectivity. Promote affordable smartphones through public-private partnerships with targeted subsidies for disadvantaged populations, particularly women who currently rely on shared devices.

Second, scale financial literacy programs comprehensively. Embed financial literacy in school curricula and leverage Self-Help Groups, Panchayats, and NGOs for adult education in regional languages. It is important to pay special attention to the financial education of women, as 18% of them are absolutely unaware of schemes.

Third, combat gender inequalities by using specific interventions. Provide women with access to personal devices, tailor products to the needs of women, taking into account their earnings patterns and social restrictions, and increase the number of female banking correspondents as a way out of cultural obstacles.

Fourth, reinforce cybersecurity systems by using AI fraud detection, frequent awareness campaigns that inform users about phishing and identity theft, and explicit grievance redressal procedures with compensation systems for the victims of fraud.

Fifth, improve access to credit by MSMEs (through alternative data sources, e.g., digital payment histories or utility payments) to score credit, introduce credit guarantee schemes that lower the risk to lenders, and make it easier to access small loans.

Sixth, encourage the development of public-private collaboration to speed up development by combining infrastructure and regulatory sandbox techniques, which make innovation tests possible in a restricted setting. Lastly, enhance surveillance systems with disaggregated measures to monitor patterns of use, quality of services, and the real effect on the welfare of the households.

In the 2047 look ahead, look at emerging technologies: AI to create personalized products, blockchain to create transparency, quantum computing to ensure more security, and Central Bank Digital Currency efforts. Combine financial inclusion with skills, healthcare, and education synergistically. Connect with climate action by green financing environmentally sustainable growth.

9. Conclusion

The progress of Viksit Bharat in India is the evidence of the transformational possibilities of digital financial inclusion. An increase in the FI-Index 43.4 to 67, UPI processing 12+ billion monthly transactions, and 560+ million PMJDY accounts getting excluded populations into formal finance are impressive accomplishments. The digital economy, which will consume 11.74 percent of GDP, is expected to become 20 percent in 2029-30 and a complete transformation of the economy.

Data develops definite connection between digital financial inclusion and sustainable development. Access to finances has made it possible to reduce poverty, empower women, entrepreneurship and minimize inequalities. Direct benefit transfers via the JAM Trinity transformed the way of governance (without the middle men). Nonetheless, the ongoing challenges require holistic solutions- the digital divide at 11% yet to be banked, gender differences at 44% yet to transact on a regular basis, cybersecurity vulnerability with a rise in cybercrimes by 76 and literacy levels with 18% of the women being oblivious to any scheme.

A 2047 vision must integrate both the need to innovate fast and the need to make innovation accessible to everyone in order to make innovation a benefit to all segments. The regulatory systems should safeguard the consumers and encourage innovation. The experience of India as a global leader in digital payments- 49% of all real-time transactions in the world- has much to tell developing economies.

The vision of the $30-35 trillion economy cannot be achieved without financial inclusion to go beyond mere access to include active consumption of a variety of financial products, which can help individuals participate in productive economic activities throughout the society. The journey to universal 100 percent financial inclusion, the present income per capita of $2,500 to 15,000-18,000 would require long-term dedication to technological innovation, investing in infrastructure, financial literacy and designing policies that are inclusive.

Digital financial inclusion is not just a policy agenda, but it is a cornerstone of India development strategy. The continuum of response to challenges, capitalizing on opportunities, and ensuring sustainability despite prevailing challenges- AI, blockchain, digital currencies will be the key to achieving Viksit Bharat: a successful, inclusive, sustainable India that offers equality of opportunity and helps maximize the capabilities of all citizens.

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