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The Indian FinTech Revolution: A Dual Analysis of Enhanced Access and Evolving Usage of Financial Services

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ABSTRACT:

This study examines India's FinTech-driven financial inclusion journey through two interconnected dimensions: the expansion of access to formal financial services and the deepening of the usage of those services. Using a descriptive-analytical approach based on secondary data from the World Bank Global Findex, RBI, NPCI, SEBI and PMJDY dashboards, the paper demonstrates that infrastructure initiatives such as the JAM Trinity (Jan Dhan Aadhaar–Mobile) and interoperable systems like UPI have significantly expanded account ownership. Simultaneously, usage has intensified across digital payments, investments, lending and rural banking, exemplified by exponential growth in UPI transactions, demat accounts, SIP participation and AePS transactions. While access has grown dramatically, challenges remain in activating dormant accounts, promoting equitable usage and ensuring digital literacy, privacy and financial security. The findings underscore that India's financial inclusion journey must evolve from expanding access to fostering purposeful and inclusive usage.

Keywords: Financial Inclusion, FinTech, UPI, Digital Payments, JAM Trinity

INTRODUCTION:

Over the past decade, India has undergone an extensive transformation of its financial landscape, driven by a powerful confluence of technology, policy and market innovation. The foundational JAM Trinity (Jan Dhan–Aadhaar–Mobile) established a framework for identity-based access and banking inclusion, which fintech firms subsequently leveraged to deploy scalable, affordable and user-centric financial services. The collective outcome has been a decisive shift from a predominantly cash-based economy to one of the world's most vibrant digital payment ecosystems.

However, true financial inclusion transcends mere account ownership. It necessitates the sustained and meaningful usage of a full suite of financial services, including payments, credit, savings, insurance and investments. While a majority of Indian adults now hold a formal account, substantial disparities persist in how actively and diversely these accounts are used. This paper, therefore, conducts a dual analysis- first, examining the growth in access and second, investigating the evolution of usage to comprehensively understand the contours, achievements and limitations of India's fintech-enabled inclusion model.

REVIEW OF LITERATURE:

The scholarly discourse on financial inclusion and fintech typically outlines three progressive layers: access, adoption and usage. Ozili (2024) underscores that socioeconomic determinants like income, education, gender and digital literacy are critical drivers of inclusion outcomes. In the Indian context, this is reflected in the rural–urban divides documented by Singh & Choudhury (2023), who attribute these gaps to disparities in connectivity and literacy.

A significant thread in the literature focuses on the transition from access to usage. Sharma & Choudhury (2023) argue that digital literacy and trust are pivotal in converting inert account ownership into active financial engagement. The quantitative impact is highlighted by Kushwaha & Malpani (2025), who find a strong positive correlation between digital payment adoption and financial inclusion index scores, particularly in rural zones. The role of specific technological innovations is widely acknowledged. Gupta & Lahiri (2025) emphasize how UPI's interoperability and low-cost structure have democratized payments, while Rout & Ray (2024) demonstrate that platforms like AePS and mobile wallets have enhanced reach and affordability in underserved areas a claim corroborated by NPCI's empirical data.

External shocks have also acted as catalysts. Jakhar (2022) and others observed a significant surge in digital payment adoption during the COVID-19 lockdowns, even among previously inactive user segments. However, the literature also sounds notes of caution. Barriers such as trust deficits, social norms and perceived risk persist (Khanna & Mehta, 2023 and Arora, Mehta & Sharma (2024) provide evidence that digital financial literacy is a strong predictor of transaction frequency and diversification. Furthermore, scholars warn that algorithmic opacity, data privacy risks and the potential exclusion of vulnerable groups could paradoxically deepen existing inequalities (Ramesh, Singh & Kaur, 2022–23).

Emerging trends like Artificial Intelligence (AI) in payments, Central Bank Digital Currency (CBDC) pilots and embedded finance present new frontiers, though scholars concur that their governance, fairness and inclusivity must be rigorously safeguarded (Economic Times, 2025; Reuters, 2025). A review of the extant literature reveals a gap in holistically analysing the twin dimensions of access and usage within India's unique fintech transformation, a gap this paper aims to fill.

Objectives of the study:

This study seeks to explore the dual dimensions of financial inclusion-access and usage in the context of India's FinTech transformation. Specifically, the objectives are:

1. To examine how digital payments and FinTech platforms have influenced access to basic financial services in India.
2. To assess the extent to which FinTech innovations have enhanced the usage and engagement with financial services.

Significance of the study:

This research holds substantial significance for a wide range of stakeholders by providing a critical, dualperspective analysis of India's FinTech revolution. For policymakers and regulators, it offers a data-driven evaluation of flagship initiatives like PMJDY and the JAM Trinity, delivering actionable insights to reduce account dormancy, bridge usage gaps and strengthen data privacy frameworks. For the academic community, it addresses a literature gap by consolidating disparate data into a coherent narrative on the evolution from access to usage, serving as a foundational reference for future research. For industry practitioners (Banks, FinTechs, NBFCs), the analysis provides strategic intelligence on high-growth areas like UPI, digital lending and retail investing, while highlighting the untapped potential of "included but inactive" users to inform product design and market strategies. For the global community, the study serves as a vital case study on the real-world impact of India's digital public infrastructure, offering valuable lessons on interoperability and biometric authentication for other emerging economies. Ultimately, by moving beyond quantitative account ownership to a nuanced analysis of qualitative engagement, this study provides an essential assessment for sustaining and deepening truly inclusive financial inclusion.

Methodology and data sources:

This study adopts a descriptive-analytical research design relying exclusively on secondary data covering the period 2018 to 2024. The analysis focuses on two dimensions of financial inclusion- access and usage within the context of India’s FinTech transformation.

Data Sources: Data have been compiled from the following authoritative sources:

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue XI November 2025

1. World Bank Global Findex Database (2011, 2014, 2017, 2021): Indicators on account ownership, digital payments usage and financial inclusion.

2. Reserve Bank of India (RBI): Payment system statistics, Report on Trend and Progress of Banking in India and other periodic publications.

3. National Payments Corporation of India (NPCI): UPI, AePS and related ecosystem dashboards.

4. Ministry of Finance, Government of India: PMJDY dashboards, financial inclusion metrics and Direct Benefit Transfer (DBT) data.

5. Securities and Exchange Board of India (SEBI) and Association of Mutual Funds in India (AMFI): Data on demat accounts and mutual fund Systematic Investment Plans (SIPs).

6. Industry Reports and Scholarly Articles: Publications by BCG, PwC and EY, as well as peer-reviewed research papers, were used for contextual and comparative analysis.

The study employs trend analysis, percentage and absolute growth rate computation and percentage point change to assess temporal progress. A comparative evaluation was conducted across different time periods and between the two focal dimensions- access and usage *to* capture both breadth and depth of financial inclusion outcomes

Data analysis and interpretation:

Growth in Basic Financial Access

Table 1: Growth of Basic Financial Account Ownership in India (2018–2024)
(As measured by Pradhan Mantri Jan Dhan Yojana (PMJDY) Statistics)

Year	PMJDY Accounts (in Crore)	Total Balance (₹ in Crore)	Key Developments
2018	31.20	75,572.09	JAM/DBT expansion
2019	35.27	~96,107.00	Continued digital onboarding
2020	38.33	1,18,434.00	Growth continued despite COVID
2021	43.04	1,46,230.00	Accounts used for pandemic relief
2022	46.30	1,73,954.00	Recovery & deeper usage
2023	50.09	2,03,505.00	8th anniversary deepening rural reach
2024	53.13	2,31,236.00	Continued scale-up

Source: PIB, Government of India, Department of Financial Services.

Supplementary PMJDY Metrics (as of mid-2023-24)

- Accounts belonging to Women: 55.6% (29.37 Crore)
- Accounts in Rural/Semi-Urban Areas: 66.6% (35.15 Crore)
- Inoperative/Dormant Accounts: 23% (Approx.)

(Source: Ministry of Finance.)

The data presented in Table 1 highlights a steady and significant expansion in basic financial account ownership in India from 2018 to 2024. During this period, the number of Pradhan Mantri Jan Dhan Yojana (PMJDY) accounts increased from 31.20 crore to 53.13 crore, bringing over 20 crore additional individuals into the ambit of the formal banking system. Correspondingly, the total balance in these accounts rose sharply from ₹75,572.09 crore in 2018 to ₹2,31,236 crore in 2024, representing more than a threefold increase.

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue IX September 2025

This upward trend indicates not only enhanced financial access but also greater utilisation of these accounts, reflecting improved public trust and engagement with formal financial institutions. The increase in deposit volumes suggests that PMJDY accounts are increasingly being used for savings and direct benefit transfer (DBT) transactions, rather than remaining merely symbolic of account ownership.

The demographic composition further reinforces the inclusive nature of this growth. As of mid-2023– 24, women account for 55.6% of total PMJDY holders, while 66.6% of accounts are situated in rural and semiurban areas—underscoring the scheme's success in empowering traditionally underserved segments. However, the persistence of around 23% inoperative or dormant accounts signals a continuing challenge in achieving sustained account activity. Addressing this issue through enhanced financial literacy, digital awareness and incentive-based engagement could further strengthen the depth and sustainability of India's financial inclusion efforts.

UPI-Led Acceleration in Usage

Table 2: UPI Transaction Growth (FY2018 – FY2024)

Financial Year	Volume (in Billions)	Value (₹ in Lakh Crore)	YoY Volume Growth (%)
FY2018	1.18	1.66	—
FY2019	5.40	8.76	357.6
FY2020	12.50	21.31	131.5
FY2021	22.28	41.03	78.2
FY2022	45.64	84.33	104.8
FY2023	83.75	139.10	83.5
FY2024	131.16	200.00	56.6

Source: National Payments Corporation of India (NPCI).

Table 2 captures the core of India's digital payments revolution. UPI transaction volume exploded from 1.18 billion in FY2018 to 131.16 billion in FY2024, representing a compound annual growth rate of over 115%. While the year-on-year growth rates are tapering as the base expands, the absolute numbers tell a story of mass adoption and deep behavioural change. The transaction value reaching ₹200 lakh crore in FY2024 underscores UPI's penetration into both micro-payments and high-value transactions. This exponential growth is a direct indicator of deepening usage, demonstrating a fundamental shift from cash to digital channels, driven by UPI's interoperability, simplicity and cost-effectiveness.

Deepening Financial Usage beyond Payments

Table 3: Indicators of Deepening Financial Service Usage (2015–2024)

Sl. no	Indicator	Baseline (2015-16)	Recent (2023-24)	Approx. Growth
1	Demat Accounts	2.33 Crore	15.13 Crore	650%
2	SIP Accounts (MF)	0.73 Crore	8.40 Crore	1050%
3	AePS Transactions (Monthly)	20 Million	541.74 Million	2600%
4	Digital Lending Market	$75 Billion (2018)	$350 Billion (2023)	365%

Sources: NPCI, SEBI, AMFI, BCG, RBI, PwC Reports.

Table 3 provides compelling evidence that India's financial inclusion journey is maturing from basic access and payments to sophisticated engagement with a full spectrum of financial services.

1. **Investment Culture:** The surge in demat accounts (650% growth) and SIP accounts (over 1050% growth) signals a structural shift from passive saving to active investing. This retail revolution, fueled by FinTech platforms, indicates improved financial literacy and a growing appetite for wealth creation.

2. **Credit Democratization:** The 365% expansion of the digital lending market to $350 billion underscores FinTech's role in serving credit-invisible segments, such as MSMEs and new-to-credit individuals, through data-driven underwriting.

3. **Assisted Rural Inclusion:** The astronomical rise in AePS transactions highlights a critical facet of inclusion: serving the non-smartphone population. AePS has enabled biometric-based, assisted banking, ensuring the digital revolution does not leave behind the last mile.

DISCUSSION AND FINDINGS:

The analysis reveals that India's FinTech revolution has fundamentally reshaped its financial ecosystem along two critical dimensions- dramatically enhanced access and significantly deepened usage.

Enhanced Access to Financial Services: The sustained growth of PMJDY accounts to over 53 crore, coupled with rising deposit balances, confirms the success of policy-driven initiatives in expanding the base of financial inclusion. The scheme has effectively broadened access, particularly for women and rural populations, creating a foundational infrastructure for direct benefit transfers and formal savings.

The UPI-Led Transformation in Usage: UPI has been the cornerstone of India's behavioural shift from cash to digital. Its journey from a nascent platform to processing over 131 billion transactions annually underscores its mass adoption. This was accelerated by the COVID-19 pandemic, which acted as a catalyst, embedding digital payment habits across user segments. The platform's interoperability and integration with private apps have been key to its success.

Deepening Financial Engagement: The data indicates a maturation of financial behaviour. The explosion in demat and SIP accounts reflects a move towards investment-oriented financial activity. Concurrently, the digital lending boom demonstrates FinTech's capacity to fill critical credit gaps. The parallel growth of AePS confirms that the ecosystem is evolving to provide multiple, context-specific pathways for engagement, catering to both smartphone-enabled users and those reliant on assisted banking.

Synergistic Role of Policy and Innovation: The Indian model showcases a unique synergy between public infrastructure and private innovation. Government initiatives like Aadhaar, PMJDY and UPI provided the foundational layers (identity, accounts and pipes), upon which private FinTech firms built user-friendly applications for payments, investing and lending. This symbiotic relationship has been instrumental in driving both access and usage.

Persistent Challenges and Vulnerabilities: Despite the progress, the analysis identifies several challenges:

1. **The Usage Gap:** The 23% dormancy rate in PMJDY accounts and persistent usage inequalities across gender, geography and education levels remain a primary concern.

2. **Digital Divides:** Constraints related to internet connectivity and smartphone access in rural areas continue to hinder universal participation.

3. **Consumer Protection:** Issues of algorithmic bias in credit scoring, data privacy risks and the need for robust grievance redressal mechanisms are emerging as critical areas requiring vigilant oversight.

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Policy implications and recommendations:

Based on the findings, the following policy recommendations are proposed:

1. **Strategies to Activate Dormant Accounts:** Implement targeted nudges, bundled services (e.g., microinsurance) and literacy campaigns to convert inactive PMJDY accounts into active financial tools.
2. **Intensified Financial and Digital Literacy:** Launch focused, vernacular and interactive training programs for vulnerable groups, including women, rural populations and senior citizens.
3. **Robust Data Governance and Fairness:** Ensure stringent enforcement of the Digital Personal Data Protection Act and promote transparency and explainability in AI-driven credit models to build trust and prevent exclusion.
4. **Support for Sustainable FinTech Models:** Encourage the development of hybrid revenue models and provide incentives for FinTechs to expand services in underserved rural markets.
5. **Infrastructure Enhancement:** Accelerate public-private partnerships to improve rural digital infrastructure, including broadband connectivity and affordable data plans.
6. **Forward-Looking Regulation:** Expand regulatory sandboxes to safely test innovations in AI-based finance, micro-insurance and CBDCs, while simultaneously strengthening consumer protection frameworks.

CONCLUSION:

India's FinTech revolution has successfully redefined the paradigm of financial inclusion, achieving a dramatic, broad-based expansion in access and fostering a significant deepening of usage across payments, savings, credit and investments. The journey from merely owning an account to becoming an active participant in the formal financial economy is firmly underway. Yet, the analysis confirms that this journey remains incomplete. The next phase must pivot from a quantitative to a qualitative focus, ensuring that every individual becomes an informed, active and secure participant in the digital economy. India’s experience demonstrates that while access is the foundational step, the true goal of financial inclusion is purposeful, equitable and sustainable usage.

The data strongly reinforces this narrative. PMJDY account ownership increased from 31.20 crore in 2018 to 53.13 crore in 2024, with balances rising from ₹75,572 crore to ₹2,31,236 crore, highlighting a remarkable expansion of basic financial access. Usage indicators show even deeper transformation: UPI transactions surged from 1.18 billion (FY2018) to 131.16 billion (FY2024), with transaction values reaching ₹200 lakh crore, signalling widespread digital payment adoption. Financial engagement has also matured, with Demat accounts growing 650%, SIP accounts 1050% and AePS transactions 2600%, reflecting increased participation in investments, digital credit and rural-assisted banking.

However, these gains are accompanied by gaps such as 23% dormant PMJDY accounts, regional and digital divides and uneven levels of financial literacy. Thus, while India has achieved exceptional progress in expanding access, the next stage of inclusion must focus on converting this access into active, meaningful and inclusive usage to ensure long-term, sustainable financial empowerment for all.

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ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue IX September 2025

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