

Digital India and Financial Inclusion: A Comparative Analysis of National Progress and Jharkhand's Regional Reality

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ABSTRACT

As India strives to become a developed nation by 2047, the Digital India initiative has emerged as a cornerstone for fostering economic growth and financial inclusion. While the proliferation of digital payment systems has increased national transaction volumes, a critical examination of the "last-mile" reach—particularly in resource-rich but economically diverse states like Jharkhand—is essential to ensure that progress is inclusive. This paper investigates the impact of Digital India on financial inclusion from 2015 to 2025, specifically exploring whether digital adoption has successfully bridged the gap for marginalized populations at both national and regional levels. The methodology is entirely secondary-data-driven, utilizing a longitudinal analysis of datasets from the Reserve Bank of India (RBI), Ministry of Finance, and the Economic Survey of Jharkhand. The research employs a comparative framework to analyze the penetration of digital financial services, contrasting national averages with state-level trends in Jharkhand. By tracking indicators such as account ownership, UPI adoption, and micro-transaction growth, the study maps the trajectory of financial integration. The findings reveal a dual reality: while digital infrastructure has expanded market access, a persistent "digital divide" remains, particularly in rural Jharkhand, where infrastructural and literacy barriers often impede deep financial inclusion. The analysis highlights that financial integration is not merely about access to accounts, but about the capability of the user to navigate the digital ecosystem securely. The paper contributes a comparative evaluation of India's and Jharkhand's digital-financial nexus; a critical assessment of the digital divide that impedes inclusive growth; and a future-oriented policy roadmap, including vernacular-based digital literacy and localized infrastructure support, essential for achieving the inclusive vision of Viksit Bharat @ 2047. By documenting these regional specificities, the study offers actionable strategies for fostering state-wide economic empowerment.

Keywords: Digital India, Financial Inclusion, Jharkhand, Viksit Bharat @ 2047, Digital Divide, Secondary Data Analysis.

INTRODUCTION

Over the last decade, India's financial inclusion agenda has moved from physical expansion of banking access to a more complex shift toward digital participation. Programs such as Digital India, Pradhan Mantri Jan Dhan Yojana, Aadhaar-enabled services, mobile banking, and UPI have together transformed the delivery of financial services, reduced transaction frictions, and widened the reach of formal finance. Yet the central question is no longer whether digital channels have expanded, but whether this expansion has produced meaningful inclusion across regions and social groups. The present study argues that digital financial inclusion in India is not a uniform national outcome; rather, it is shaped by uneven infrastructure, digital literacy, economic capacity, and institutional trust. This distinction between access and effective use is critical. Opening a bank account, owning a smartphone, or registering a digital payment platform does not automatically imply financial empowerment. In many cases, individuals remain weakly connected to the digital financial ecosystem because they face unstable internet access, low awareness, limited transaction confidence, language barriers, and dependence on intermediaries. As a result, digital finance may expand rapidly at the aggregate level while continuing to exclude households and communities at the margins. This creates a new form of inequality: not

simply exclusion from banking, but exclusion from the skills, confidence, and conditions required to use digital finance effectively.

Jharkhand provides a particularly important setting for examining this problem. Despite policy efforts under Digital India, the state continues to face structural constraints in banking penetration, connectivity, literacy, income stability, and rural service delivery. Its demographic and socioeconomic profile makes it an important test case for understanding how national digital reforms operate in a resource-constrained and socially diverse environment. The contrast between India's digital finance success story and Jharkhand's uneven ground reality reveals a wider policy challenge: national digital platforms can scale quickly, but their developmental impact depends on local capability and institutional readiness.

This study therefore takes a comparative and analytical approach to digital financial inclusion in India and Jharkhand during 2015–2025. It examines how far the country's digital finance expansion has translated into real financial inclusion at the state level, and why the benefits have remained uneven across rural and urban areas. By focusing on the gap between infrastructure and adoption, between formal access and substantive use, the study moves beyond descriptive growth narratives to explain the deeper determinants of inclusion. In doing so, it contributes to the literature on digital inequality, financial capability, and regional development by showing that digital transformation becomes socially meaningful only when it is accompanied by literacy, trust, affordability, and local ecosystem support.

The study's contribution lies in linking national policy evolution with subnational experience in a single analytical frame. While existing discussions often highlight India's digital achievements, fewer studies explain how these achievements are filtered through regional disparities, especially in states like Jharkhand where rural dependence, infrastructural weakness, and lower digital readiness remain significant. By identifying the socio-economic and institutional barriers that limit effective participation, this research offers evidence for more context-sensitive policy design. Its broader implication is clear: financial inclusion in the digital age cannot be measured only by account creation or transaction volume, but by the extent to which people can use digital systems confidently, regularly, and independently.

Statement of the Problem

Even as India's Digital India push has accelerated the uptake of digital financial services, the benefits remain unevenly distributed. States such as Jharkhand lag behind in meaningful digital financial development: low literacy, patchy infrastructure, unreliable internet, and a persistent rural–urban divide severely restrict people's ability not just to access, but to use digital finance confidently and autonomously. National success on metrics such as account openings and transaction volumes masks these subnational shortfalls. Without a granular assessment of whether digital rollout has translated into substantive and inclusive financial participation at the regional level, policy claims of widespread inclusion risk being premature—if not misleading. This study addresses that gap by asking whether India's digital financial growth has generated real, usable financial capability in underdeveloped states, and what structural and socio-technical barriers continue to exclude large segments of the population.

Research Objectives

1. To analyze the growth of digital financial infrastructure and digital financial services in India during 2015–2025.
2. To compare digital financial inclusion indicators between India and Jharkhand.
3. To examine the rural–urban digital divide in Jharkhand with reference to digital accessibility, connectivity, literacy, and banking infrastructure.
4. To identify the major challenges affecting effective digital financial inclusion in Jharkhand.
5. To suggest measures for strengthening inclusive digital financial inclusion in Jharkhand.

Research Gap

Despite abundant research on the effects of Digital India, PMJDY, UPI, and digital banking on financial inclusion, important blind spots remain. Existing studies tend to emphasize national aggregates, banking performance, or broad trends in inclusion, and they often treat digital rollout as a homogeneous process. Far fewer analyses interrogate how this rollout is filtered through subnational conditions—especially in digitally underdeveloped states such as Jharkhand. There is a notable paucity of comparative work that links India’s overall digital-financial trajectory to on-the-ground outcomes in lagging regions, explicitly accounting for rural–urban disparities, local internet quality, and patterns of digital engagement. In short, we lack rigorous, empirically grounded studies that explain why national-level gains in accounts and transactions do not necessarily translate into sustained, autonomous financial participation at the state or district level.

This study fills that gap by offering a comparative analysis of India’s national progress and Jharkhand’s regional experience over 2015–2025, combining administrative indicators with subnational and household-level evidence to identify the structural, institutional, and sociotechnical constraints that block meaningful inclusion.

Contribution of the Study

The study advances the literature on Digital India and financial inclusion by shifting the analytical lens from national aggregates to regional realities. Unlike most existing work that emphasizes account counts, transaction growth, or bank performance, this research interrogates how India’s digital-financial expansion has translated (or failed to translate) into meaningful financial participation in Jharkhand. It foregrounds three interrelated contributions. First, it documents and explains subnational heterogeneity—showing how infrastructure shortfalls, low digital literacy, and socio-economic constraints produce divergent outcomes within a single policy environment. Second, it reframes measurement of inclusion by moving beyond access and volumes to emphasize digital accessibility, user capability, and regular, independent use as core outcomes. Third, it supplies actionable, region-specific evidence for policy: by diagnosing the socio-technical and institutional bottlenecks that impede effective use, the study identifies targeted interventions—training design, language- and culture-sensitive interfaces, offline support mechanisms, and incentive structures—that can make digital finance more inclusive. In doing so, the research not only fills a comparative empirical gap for 2015–2026 but also contributes conceptual clarity about what meaningful digital financial inclusion should look like in heterogeneous, resourceconstrained settings.

LITERATURE REVIEW

Digital India and financial inclusion

A growing body of work documents how Digital India-era reforms—PMJDY, Aadhaar-enabled services, UPI, and mobile banking—have expanded formal financial access across India. Recent empirical studies (Singhania et al., 2024; Mahesh et al., 2023; Kumar, 2025) attribute measurable gains in account ownership and digital transactions to these technologies and policy interventions. These contributions establish that digital platforms lower transaction frictions and broaden outreach. Yet they also highlight important constraints: aggregate gains in access do not automatically translate into effective usage, because structural issues such as low digital literacy, inconsistent internet access, and affordability continue to limit substantive participation.

Regional inequality and the digital divide

Several authors have demonstrated that benefits from digital financial reforms are unevenly distributed across states and districts. Research by Gupta et al. (2025), Kumari and Anand (2025), and Kumar et al. (2026) shows that states with denser banking infrastructure, higher urbanization, and stronger literacy profiles register better financial inclusion outcomes. Conversely, rural and economically lagging regions remain under-served. Complementary analyses (Raichoudhury, 2020; Mammen et al., 2023) link inclusion to household-level factors—income, education, and employment—and point to the pandemic’s role in widening rural–urban

digital gaps. Together, these studies suggest that national-level indicators mask significant subnational heterogeneity, underscoring the need for place-sensitive analysis.

Rural financial inclusion and digital barriers

Field and household-level studies emphasize that access alone is insufficient for meaningful inclusion. Rajput (2026), Chavan and Kamra (2022), and Kumar (2024) identify persistent obstacles in rural contexts—low financial and digital literacy, documentation barriers, irregular incomes, and limited trust in digital interfaces—that inhibit sustained adoption. Region-specific work (Suresh & Sriwastaw, 2024) in rural Karnataka shows that even where digital payments increase, uptake is constrained by poor internet access, gendered access gaps, and perceptions of platform unreliability. These findings point to the socio-technical nature of exclusion: infrastructure must be complemented by education, trust-building, and contextualized service design.

Banking efficiency and PMJDY evaluations

A separate strand examines institutional performance and the efficiency of bank-led inclusion. DEA-based studies (Yadav et al., 2022; Agarwala et al., 2023; Maity & Sahu, 2020) assess how public and private banks deliver inclusionary services, noting that PMJDY expanded outreach but also produced many inactive or underused accounts. Investigations into self-help groups and rural formalization (Singha & Neogi, 2025; Bhanu Pratap Singh et al., 2021) further reveal that account ownership often coexists with limited transaction activity—suggesting weak financial meaningfulness despite formal coverage.

Gap in the literature: Jharkhand and comparative subnational analysis

Despite this rich literature, research specifically focused on Jharkhand's digital-financial dynamics remains sparse. Recent state-level work (Ghosh & Pandey, 2026) flags connectivity shortfalls, socio-economic inequalities, and low digital literacy as constraints, but comprehensive comparative studies that situate Jharkhand within India's 2015–2025 digital trajectory are largely missing. In particular, few studies systematically link digital accessibility (connectivity, device access, interface design) with measures of meaningful financial participation at the district and household levels in underdeveloped states. Existing literature thus tends to stop at either national aggregates or isolated institutional metrics, without fully integrating subnational empirical evidence, user capability, and socio-technical barriers.

Conceptual Framework

The study is grounded in Amartya Sen's Capability Approach and Jan van Dijk's Digital Divide Theory, both of which offer a strong analytical base for examining digital financial inclusion beyond simple measures of access. Sen's framework is especially useful because it shifts attention from the mere availability of resources to the real freedoms people have to use them meaningfully. Applied to digital finance, this means that the possession of a bank account, smartphone, or payment app cannot by itself be taken as evidence of inclusion unless individuals also have the literacy, confidence, connectivity, and institutional support needed to use these services independently and effectively.

Jan van Dijk's Digital Divide Theory complements this perspective by explaining how inequalities in access, skills, and usage produce uneven outcomes in the adoption of digital technologies. In the context of financial services, the divide is not limited to whether people are connected to digital platforms; it also appears in who can navigate them, who uses them regularly, and who benefits from them in a sustained way. This makes the theory particularly relevant for understanding why digital expansion at the national level can coexist with weak participation in regions where infrastructure is poor, digital skills are limited, and socio-economic disadvantages remain entrenched.

Taken together, these frameworks allow the study to move beyond a narrow infrastructural view of digital inclusion and instead assess the conditions under which digital finance becomes genuinely empowering. They help explain why India's rapid digital-financial expansion has produced uneven outcomes across regions, and why states such as Jharkhand continue to experience a gap between formal access and meaningful

participation. In this sense, the conceptual framework does not only describe disparity; it also provides a way to analyze the social, technical, and institutional factors that shape whether digital financial services translate into real capability and inclusive development.

RESEARCH METHODOLOGY

The study employs a descriptive, comparative, and analytical design to assess how Digital India initiatives have influenced financial inclusion, using Jharkhand as a focused subnational case. Covering 2015–2025, the research assumes that national aggregates alone are insufficient and examines regional disparities in infrastructure, literacy, connectivity, and digital engagement to evaluate whether digital expansion has yielded meaningful financial participation. The analysis primarily uses secondary, authoritative sources: RBI, TRAI, NPCI, the PMJDY portal, NFHS, Jharkhand Economic Survey, government publications, policy documents, and peer-reviewed literature. Key indicators include PMJDY account counts and activity, internet/broadband penetration, UPI and mobile-banking transaction volumes, literacy levels, and rural–urban differentials. Wherever available, state- and district-level disaggregation is used to surface subnational heterogeneity. Analytically, the study combines descriptive statistics, trend analysis, and comparative interpretation. Data are presented through tables, graphs, and cross-regional comparisons to identify structural patterns, socio-technical barriers, and rural–urban divides. Importantly, inclusion is conceptualized beyond account ownership or transaction volumes to encompass effective accessibility, user capability, regular participation, and independent engagement with digital financial systems. While reliance on secondary data constrains causal claims and the availability of granular regional series, triangulation across official sources and industry reports strengthens validity. This methodological approach is suited to mapping long-term trends and subnational disparities, and to informing policy that aligns digital rollout with the local conditions needed for genuine, inclusive financial participation.

Data Analysis and Interpretation

Growth of Digital Financial Inclusion in India (2015-2025)

Growth of PMJDY Accounts

Year	PMJDY accounts (Crore)		Growth in %
2015		14.72	
2016		21.51	46.13
2017		28.23	31.24
2018		31.42	11.30
2019		35.39	12.64
2020		38.07	7.57
2021		42.22	10.90
2022	45.11		6.85
2023	48.69		7.94
2024	51.94		6.67
2025	55.22		6.31

(Source: PMJDY Reports)

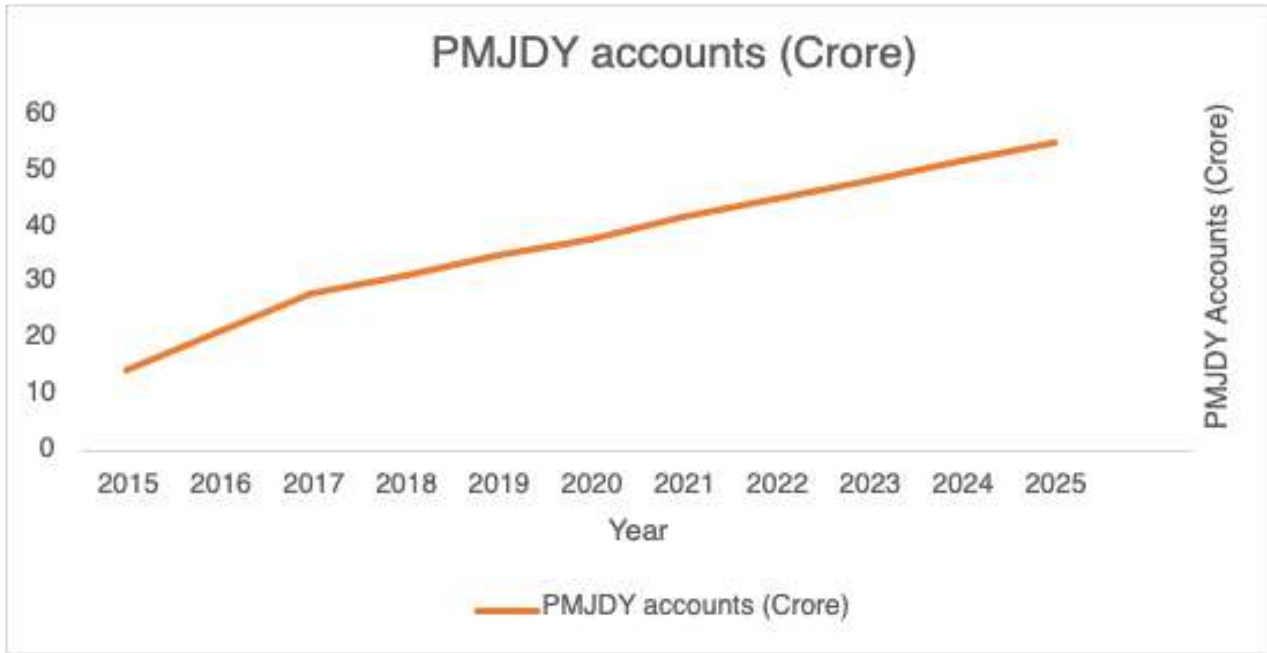


Figure 1: Growth of Digital Financial Inclusion in India (2015-2025)

PMJDY accounts expanded sharply in India between 2015 and 2025, rising from 14.72 crore to 55.22 crore. This nearly 275 percent increase reflects the scale of India's financial inclusion drive and the success of efforts to bring the unbanked into the formal banking system. The trend, however, shows two phases: rapid early growth in 2015–2017, followed by slower expansion from 2018 onward. This suggests that basic account penetration has largely matured, and future progress depends less on opening new accounts and more on improving account usage and financial activity. Analytically, the growth of PMJDY shows strong outreach but also reveals the limits of counting account ownership as inclusion. In states like Jharkhand, where low literacy, weak infrastructure, and poor digital access remain major barriers, the real challenge is converting access into active and meaningful financial participation.

Growth of Broadband Subscribers in India (2015–2025)

Year	Internet penetration (Broadband subscribers in million)	Growth in %
2015	999.71	5.96
2016	1059.29	13.18
2017	1,198.89	-4.27
2018	1147.71	3.14
2019	1183.77	-1.21
2020	1169.44	2.91
2021	1203.47	-2.96
2022	1167.82	-27.13
2023	850.94	9.10

2024	928.41	1.58
2025	943.09	

(Source: Telecom Regulatory Authority of India)

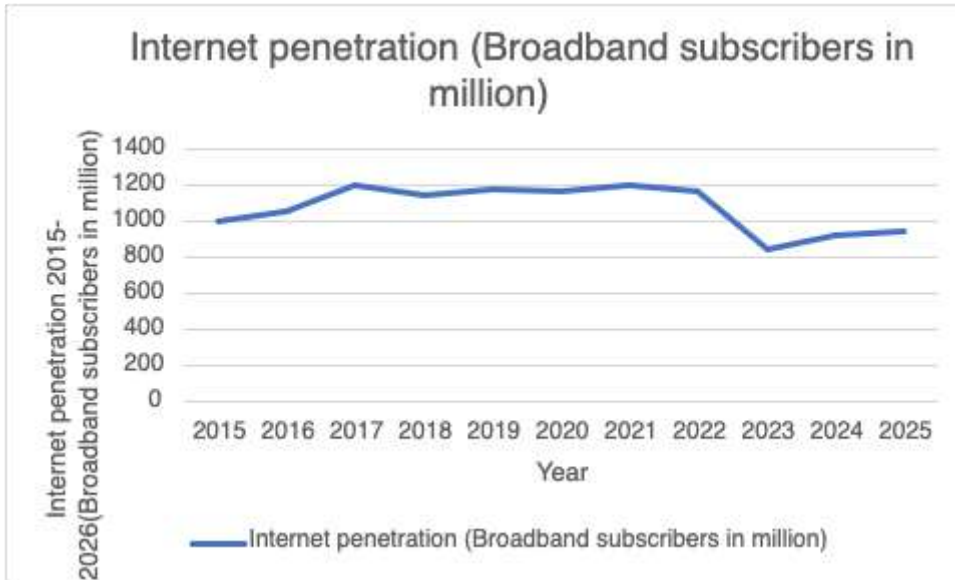


Figure 2: Growth of Broadband Subscribers in India (2015–2025)

The growth trajectory of broadband subscribers in India from 2015 to 2025 reveals a pattern of early expansion followed by prolonged stagnation and sharp contraction, challenging optimistic narratives of seamless digital diffusion. According to TRAI data, subscriber numbers rose from 999.71 million in 2015 to a peak of 1,203.47 million in 2021, driven initially by affordable data services. However, growth turned volatile after 2017, turning negative in several years and culminating in a dramatic 27.13% collapse in 2023 (to 850.94 million). Modest recoveries in 2024

(9.10%) and 2025 (1.58%) have failed to restore previous levels. This volatility underscores the limitations of supply-side metrics as indicators of genuine inclusion. In states like Jharkhand, where low literacy, weak infrastructure, and poor digital access persist, the gap between nominal subscriber counts and active, meaningful financial participation remains wide. The data highlight the need to move beyond aggregate access figures toward demand-side interventions that address barriers to sustained usage.

Growth of UPI Transactions in India (2015–2025)

Year	UPI transactions (Mn)		Growth in %
2015		0	
2016		0	
2017		7.2	
2018		190.08	2540
2019		781.79	311.30
2020		999.57	27.86

2021		2,641.06	164.22
2022		5,583.05	111.39
2023		8,863.26	58.75
2024		13,303.99	50.10
2025		17,893.42	34.50

(Source: National Payments Corporation of India)

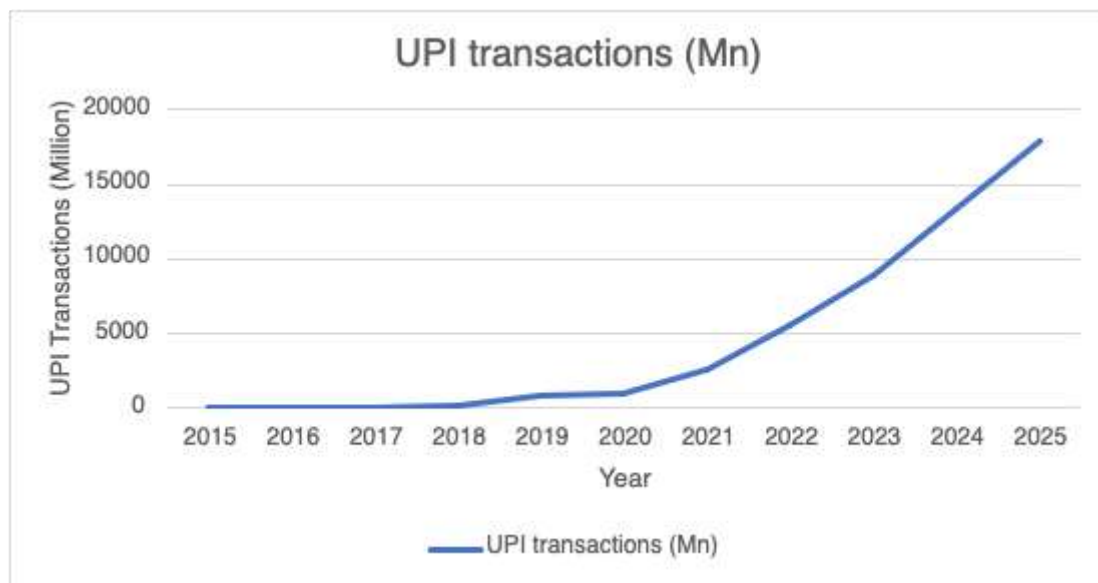


Figure 3: Growth of UPI Transactions in India (2015–2025)

The growth of Unified Payments Interface (UPI) transactions represents one of the most significant achievements of India's digital financial infrastructure. According to NPCI data, UPI transaction volumes rose from a negligible base of 7.2 million in 2017 to 17,893.42 million in 2025. This reflects extraordinary and sustained growth, with early expansion rates of 2,540 percent in 2018 and 311 percent in 2019, followed by continued double-digit growth even as the system matured. This trajectory highlights UPI's scalability, convenience, and widespread acceptance as a lowfriction payment platform. At the same time, however, a more critical reading suggests the need to examine the depth and distribution of usage. In regions such as Jharkhand, where literacy levels remain low and infrastructural constraints persist, national-level transaction volumes may obscure limited participation and shallow integration of digital payments into everyday financial behaviour among marginalized groups. Consequently, while UPI has transformed the landscape of digital payments, its rapid growth should not be interpreted automatically as evidence of inclusive financial deepening.

Growth of Mobile Banking Transactions in India (2015–2025)

Year	Mobile banking transactions (in million)	Growth in %
2015	19.78	
2016	48.67	146.06
2017	106.27	118.35

2018	250.62	135.83
2019	881.23	251.62
2020	1127.604	27.96
2021	3249.5	188.18
2022	5399.27	66.16
2023	8335.72	54.39
2024	12730.23	52.72
2025	16582.62	30.26

(Source: Reserve Bank of India – Database on Indian Economy)

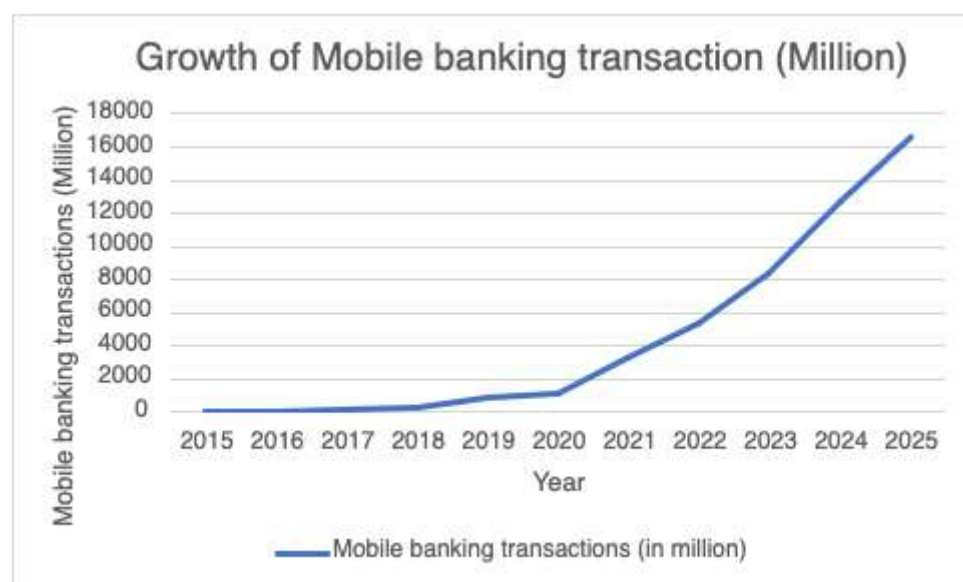


Figure 4: Growth of Mobile Banking Transactions in India (2015–2025)

The sharp rise in India’s mobile banking transactions from about 20 million in 2015 to 16.58 billion in 2025, with a very high estimated CAGR, reflects a major structural shift in the country’s financial system toward digitally mediated payments. The growth pattern shows an early hyperexpansion phase, supported by policy interventions such as Jan Dhan, Aadhaar, NPCI, and the spread of low-cost mobile data, followed by continued momentum in the post-pandemic period. The strong semi-log fit suggests that the expansion has not been random but has followed a clear network-driven adoption pattern. At the same time, this growth should be read critically: while it demonstrates the success of digital public infrastructure in scaling access, it does not by itself guarantee uniform inclusion. In states with weak connectivity, low digital literacy, and persistent rural–urban gaps, the depth of adoption may remain limited even when national transaction volumes rise sharply.

Jharkhand’s Digital Financial Inclusion in the National Context (2025)

Jharkhand’s Digital Financial Inclusion Indicators in the National Context (2025)

Indicator	India	Jharkhand
PMJDY Accounts (in crore)	55.22	2.02

Digital Connectivity (Wireless/broadband Subscriber in million)	943.09	26.04
UPI Transaction(in million)	17893.42	168
Literacy rate	72.98%	66.41%

(Source: RBI, NPCI, TRAI, PMJDY Reports Census/NFHS data compiled by researcher.)

While India's digital public infrastructure has achieved impressive national-scale expansion— 55.22 crore PMJDY accounts, over 1,065 million digital subscribers, nearly 17893.42 million UPI transactions, and 72.98% literacy—Jharkhand's substantially lower indicators (2.02 crore PMJDY accounts, 26.04 million subscribers, 168 million UPI transactions, and 66.41% literacy) reveal the limitations of a volume-driven model. These disparities suggest that headline national success can conceal shallow adoption and persistent structural barriers in lagging regions, particularly weak last-mile connectivity, low functional digital literacy, difficult terrain, and rural-tribal socioeconomic constraints that sustain dormancy and restrict everyday usage. As the accompanying discussion indicates, rapid growth in aggregate transaction volumes does not automatically produce uniform inclusion; instead, it can create a digital illusion in which extensive account ownership does not translate into intensive, equitable financial participation. For states such as Jharkhand, closing this gap requires spatially targeted investment in infrastructure, human capital, and livelihood-linked digital usage beyond national aggregates.

Rural–Urban Digital Divide in Jharkhand (2025)

Indicator	Rural Jharkhand	Urban Jharkhand
Wireless/Internet connectivity (Mn)	14.49	12.13
Literacy Rate	61.11%	82.26%
Banking Access (ATM/Branches availability)		
Branches	1580	1869
ATM	530	2808

(Source: NFHS-5 Jharkhand Report, Jharkhand Economic Survey, RBI and secondary sources compiled by researcher.)

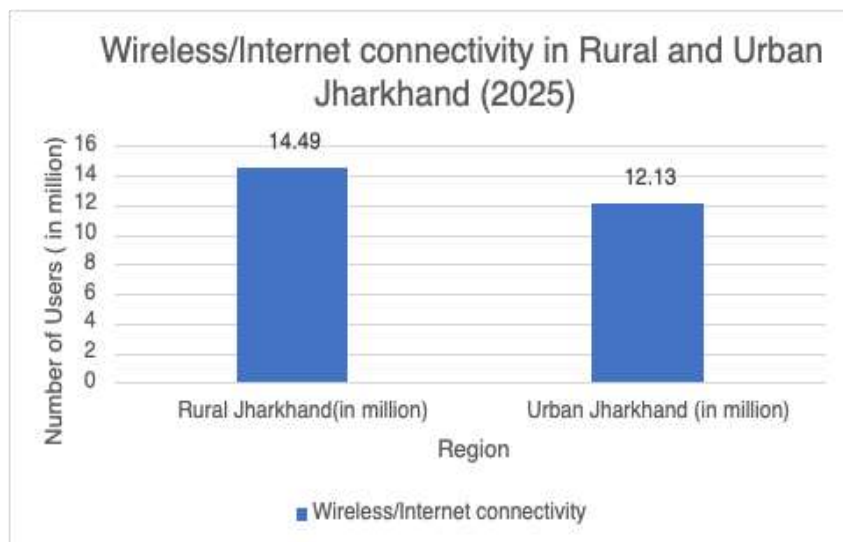


Figure 5: Wireless/Internet connectivity in Rural and Urban Jharkhand (2025)

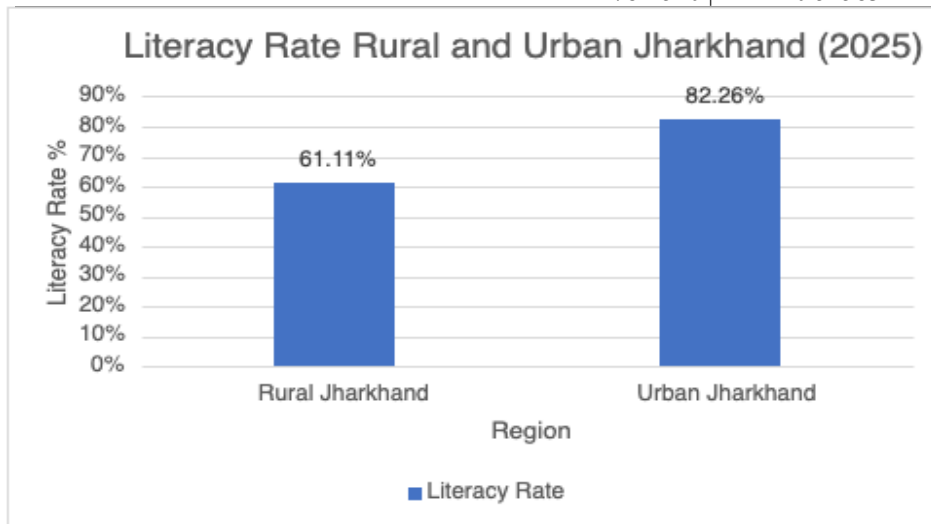


Figure 6 : Literacy Rate in Rural and Urban Jharkhand 2025

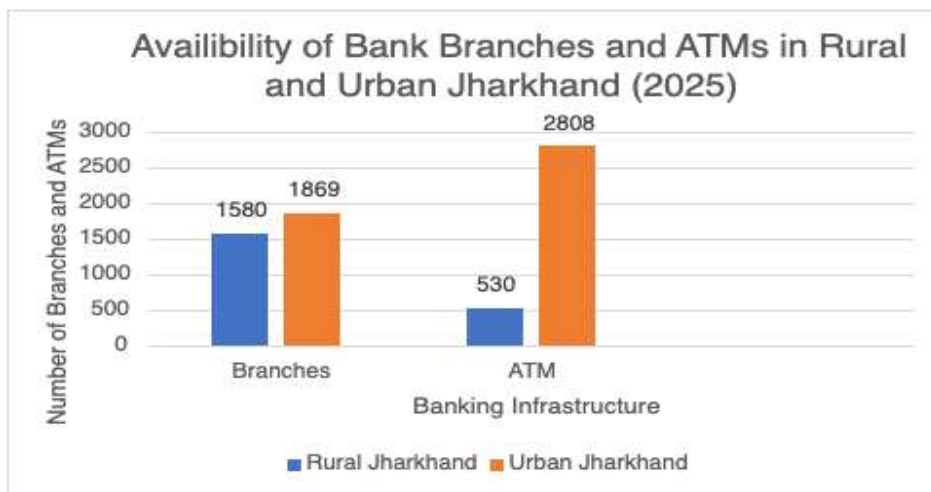


Figure 7 : Availability of Bank Branches and ATMs in Rural and Urban Jharkhand 2025

The rural–urban digital divide in Jharkhand highlights the limitations of India’s digital public infrastructure in reaching peripheral and underserved regions. Although rural areas report slightly higher absolute wireless and internet subscribers (14.49 million) than urban centres (12.13 million), the quality and outcomes of connectivity remain deeply unequal. Rural literacy stands at 61.11 percent, compared with 82.26 percent in urban Jharkhand, while banking infrastructure shows even sharper exclusion, with only 530 ATMs in rural areas against 2,808 in urban locations and a much thinner branch network relative to need. These differences are not merely statistical; they reflect persistent socio-economic constraints such as difficult terrain, limited livelihood opportunities, low digital literacy, and weak last-mile infrastructure. As a result, nominal connectivity in rural areas does not necessarily translate into meaningful financial inclusion or economic participation. Rather than reflecting equitable digital expansion, the data point to a continuing digital illusion in which aggregate indicators conceal deep intra-state inequalities, especially for tribal, women, and agrarian populations. Evidence from NFHS-5, RBI, and Jharkhand Economic Survey reports suggests that these disparities will persist unless policy moves beyond supply-side expansion and adopts targeted interventions that address both infrastructure deficits and human-capital constraints.

FINDINGS, CONCLUSION AND POLICY SUGGESTIONS

Major findings

The study finds that India experienced substantial expansion in digital financial access during 2015–2025, reflected in the growth of PMJDY accounts, UPI transactions, mobile banking and digital connectivity. These

trends indicate a significant expansion of the formal digital financial ecosystem during the study period. However, the India–Jharkhand comparison reveals persistent regional disparities across selected indicators, particularly connectivity, literacy, PMJDY coverage and digital-payment participation. Jharkhand therefore does not reflect the same level of digital financial development observed at the national level. ❖

The rural–urban comparison within Jharkhand further indicates disparities in the conditions supporting digital financial inclusion. Urban areas have higher literacy and substantially greater ATM availability, while rural areas have weaker physical banking infrastructure. Although the available connectivity figures are not sufficient to establish a rural connectivity deficit without population-adjusted measures, the differences in literacy and banking infrastructure indicate that digital financial access remains uneven within the state. ❖

Overall, the findings indicate that growth in accounts and digital transactions represents substantial progress in financial access, but these aggregate indicators alone cannot establish the extent of meaningful or sustained financial participation. In line with the study’s conceptual framework, the findings suggest that digital financial inclusion also depends on enabling conditions such as literacy, connectivity and access to supporting banking infrastructure. Thus, Jharkhand demonstrates that national-level digital financial expansion can coexist with persistent subnational disparities, highlighting the need to assess financial inclusion beyond aggregate account ownership and transaction volumes. ❖

Conclusion

This study set out to examine the impact of Digital India initiatives on financial inclusion in India, with particular attention to Jharkhand during the period 2015–2025. The findings confirm that India has made substantial progress in expanding financial access through PMJDY, UPI, mobile banking, and broader internet penetration. These developments have clearly strengthened the country’s digital financial ecosystem and widened the formal reach of banking and payment services. In that sense, Digital India has played a transformative role in reshaping the architecture of financial inclusion at the national level. At the same time, the study demonstrates that this transformation has been uneven and territorially differentiated. Jharkhand continues to lag behind national averages on key indicators of digital connectivity, literacy, and digital financial participation. The rural–urban gap within the state further exposes the limitations of a uniformly scaled digital policy in a socially and geographically unequal setting. Despite the expansion of digital infrastructure and formal banking access, a large section of the population—particularly in rural and marginalised areas—remains unable to engage with digital financial services in a regular, confident, and meaningful way. The central implication of the study is that financial inclusion cannot be assessed solely through the growth of account ownership or transaction volumes. Such measures capture access, but not necessarily capability, usage, or empowerment. Meaningful financial inclusion requires digital literacy, affordability, trust, connectivity, and the practical ability to navigate digital systems independently. Where these conditions are weak, digital expansion may produce formal inclusion without substantive participation.

The study therefore argues that the success of Digital India must be evaluated not only by national aggregate gains but also by the extent to which its benefits reach historically disadvantaged and digitally vulnerable regions. Jharkhand illustrates that persistent infrastructural gaps, low awareness, and socio-economic inequality continue to limit the inclusive potential of digital finance. If digital financial inclusion is to become genuinely equitable, policy must move beyond broad national expansion and adopt region-specific, socially grounded, and infrastructure-sensitive interventions. Only then can digital finance serve as a tool of inclusive development rather than a mechanism that reproduces existing disparities in a new form.

Suggestions and Recommendation

The findings indicate that reducing the digital financial inclusion gap in Jharkhand requires more than the expansion of formal banking and digital platforms. The first priority must be strengthening rural digital infrastructure through more reliable internet connectivity, wider mobile network coverage, and uninterrupted electricity supply in remote areas. Without these basic enabling conditions, digital financial services will remain unevenly accessible and the benefits of digitalisation will continue to accrue disproportionately to

urban and better-connected populations. Equally important is the need to shift policy attention from access alone to capability. Digital and financial literacy programmes should be expanded and made more targeted, particularly for rural residents, women, and economically weaker communities. Such programmes should go beyond general awareness and focus on practical understanding of mobile banking, UPI, cyber security, digital payments, and safe transaction practices. In a context where trust remains fragile, literacy is not only an educational tool but also a prerequisite for confidence and sustained usage. The study also suggests that digital financial systems must be designed with the realities of first-time users and low-literate populations in mind. Banks and financial institutions should simplify user interfaces, reduce transaction complexity, and provide multilingual and intuitive platforms that lower the entry barriers to digital use. The more accessible these systems are in design, the more likely they are to move from formal availability to actual usability, especially in rural settings where digital familiarity remains limited.

Further, last-mile financial connectivity requires a stronger institutional presence in underserved areas. Expanding the number and effectiveness of ATMs, banking correspondents, and digital banking touchpoints can improve service reach in regions where physical and digital access remain thin. In many parts of rural Jharkhand, the issue is not only one of technology but also of proximity and support. Strengthening this local financial ecosystem is essential if digital inclusion is to become operational rather than merely statistical. A related concern is trust. Fear of cyber fraud, online scams, and failed transactions continues to discourage many users from adopting digital payment systems regularly. This makes cyber security awareness and grievance redressal central to any serious inclusion strategy. Public confidence will not grow simply because digital platforms are available; it must be built through visible safeguards, responsive support systems, and repeated user reassurance.

Overall, the study shows that meaningful digital financial inclusion cannot be achieved through infrastructural expansion alone. It requires a more integrated and region-sensitive policy approach that combines connectivity, literacy, design simplicity, institutional presence, and trust-building. For states like Jharkhand, the goal should not merely be to increase the number of accounts or transactions, but to ensure that marginalised and rural populations are able to use digital financial services independently, safely, and effectively. In that sense, digital inclusion policy must move beyond quantitative expansion and focus on substantive empowerment.

Suggestions and Recommendation

The findings indicate that reducing the digital financial inclusion gap in Jharkhand requires more than the expansion of formal banking and digital platforms. The first priority must be strengthening rural digital infrastructure through more reliable internet connectivity, wider mobile network coverage, and uninterrupted electricity supply in remote areas. Without these basic enabling conditions, digital financial services will remain unevenly accessible and the benefits of digitalisation will continue to accrue disproportionately to urban and better-connected populations. Equally important is the need to shift policy attention from access alone to capability. Digital and financial literacy programmes should be expanded and made more targeted, particularly for rural residents, women, and economically weaker communities. Such programmes should go beyond general awareness and focus on practical understanding of mobile banking, UPI, cyber security, digital payments, and safe transaction practices. In a context where trust remains fragile, literacy is not only an educational tool but also a prerequisite for confidence and sustained usage. The study also suggests that digital financial systems must be designed with the realities of first-time users and low-literate populations in mind. Banks and financial institutions should simplify user interfaces, reduce transaction complexity, and provide multilingual and intuitive platforms that lower the entry barriers to digital use. The more accessible these systems are in design, the more likely they are to move from formal availability to actual usability, especially in rural settings where digital familiarity remains limited.

Further, last-mile financial connectivity requires a stronger institutional presence in underserved areas. Expanding the number and effectiveness of ATMs, banking correspondents, and digital banking touchpoints can improve service reach in regions where physical and digital access remain thin. In many parts of rural Jharkhand, the issue is not only one of technology but also of proximity and support. Strengthening this local financial ecosystem is essential if digital inclusion is to become operational rather than merely statistical. A

related concern is trust. Fear of cyber fraud, online scams, and failed transactions continues to discourage many users from adopting digital payment systems regularly. This makes cyber security awareness and grievance redressal central to any serious inclusion strategy. Public confidence will not grow simply because digital platforms are available; it must be built through visible safeguards, responsive support systems, and repeated user reassurance.

Overall, the study shows that meaningful digital financial inclusion cannot be achieved through infrastructural expansion alone. It requires a more integrated and region-sensitive policy approach that combines connectivity, literacy, design simplicity, institutional presence, and trust-building. For states like Jharkhand, the goal should not merely be to increase the number of accounts or transactions, but to ensure that marginalised and rural populations are able to use digital financial services independently, safely, and effectively. In that sense, digital inclusion policy must move beyond quantitative expansion and focus on substantive empowerment.

Limitation of the study

The present study is based primarily on secondary data obtained from official reports, government publications, institutional databases, research articles, and survey-based sources related to Digital India and digital financial inclusion. While this approach enables a broad comparative analysis, it also imposes certain constraints. In particular, year-wise and region-specific data on internet penetration, UPI transactions, and digital payment participation for Jharkhand are not consistently available across the entire study period, which limits the depth of longitudinal analysis at the subnational level. Another important limitation is that the study relies mainly on descriptive and comparative methods. In the absence of comprehensive regional datasets, more advanced statistical or econometric analysis could not be meaningfully applied. As a result, the study is better suited to identifying broad patterns, gaps, and disparities than to establishing precise causal relationships. The analysis is also constrained by the limited availability of primary data on digital literacy, financial awareness, and actual user behaviour. These dimensions are critical for understanding meaningful digital financial participation, yet they could not be examined in greater detail at the regional level. In addition, the use of multiple institutional sources introduces some variation in definitions, reporting periods, and measurement approaches, which may affect strict comparability across indicators.

Finally, the study focuses on a selected set of indicators that capture important dimensions of digital financial inclusion, but not its full complexity. Factors such as socio-cultural norms, behavioural preferences, trust, and informal exclusion mechanisms may also shape digital financial participation in Jharkhand, but these could not be fully incorporated within the present design. Despite these limitations, the study remains valuable in highlighting the gap between national level digital financial progress and the uneven regional realities of Jharkhand, particularly with respect to inequality, the rural–urban divide, and the broader challenge of inclusive digital development.

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