

# Digital Financial Services for Enhanced Access and Inclusion of Marginalized Communities in India

Dr. Jeeja KS<sup>1</sup>, Dr. Mahija K<sup>2</sup>

<sup>1,2</sup> Associate Professor of Economics, Govt Victoria College, Palakkad, Kerala.

## Abstract

This paper investigates the transformative potential of digital financial services in fostering financial inclusion and socio-economic upliftment among marginalized populations in India. Specifically, it examines how innovations in Fintech, such as mobile payments and digital lending, address the historical deficiencies of traditional banking systems in reaching underserved demographics across India's diverse socioeconomic landscape. An exploratory research of Digital Financial Services (DFS) and how they can enhance access and inclusion for marginalised communities in India—covering current challenges, key solutions, and implementation levers was conducted. A case study approach of various digital financial services was also conducted. The study finds that, the Digital Financial Services in India, such as PMJDY, DBT, UPI, and BC Sakhi, etc., hold transformational potential to expand financial access, empower the financially excluded, and strengthen economic resilience among marginalised communities. However, the success depends on bridging infrastructure gaps, building trust through education, and designing inclusive, secure digital pathways that truly meet the needs of underserved populations.

**Keywords:** Digital Financial Services, financial inclusion, marginalized communities, digital infrastructure.

## 1. Introduction

Digital financial services have emerged as a pivotal mechanism for accelerating financial inclusion, particularly within rapidly digitizing economies such as India (Buteau et al., 2021). This is particularly significant given the Union Government's 'Digital India' initiative, which aims to transform the nation into a digitally empowered, cashless economy, thereby extending financial access to previously unserved and hard-to-reach populations (Thomas & T.S., 2020). Digital Financial Services (DFS) refers to financial services accessed and delivered through digital platforms—mobile phones, the internet, digital wallets, payment banks, ATMs, business correspondent devices, and more. In India, DFS has the potential to transform economic participation, especially for marginalized communities that historically face barriers to traditional banking—such as women, rural populations, informal sector workers, persons with disabilities, and scheduled caste/scheduled tribe groups. This study analyses the impact of these digital innovations on access to credit, savings, and insurance, thereby enhancing economic opportunities and

resilience for vulnerable communities. Furthermore, it explores the synergistic role of governmental initiatives, such as the Digital India campaign, in accelerating the adoption and efficacy of these services for broader societal development. The study employs an empirical analysis of adoption rates and impact assessments, to quantify the tangible benefits of digital financial inclusion on poverty reduction and economic empowerment, especially within rural and economically disadvantaged regions.

## Literature Review

A comprehensive review of existing literature reveals a concerted effort to understand the policy landscape governing digital finance in India, alongside analyses of digitization levels across various population segments ([Buteau et al., 2021](#)). Recognizing the huge potential of digital finance, numerous studies highlight how digital financial services can reduce the risks and costs associated with traditional cash-based transactions, while simultaneously broadening access to essential financial products like credit, savings, insurance, and pensions for vulnerable and marginalized groups ([Buteau et al., 2021](#)). This transformative potential is further amplified by the enabling policy environment regulating digital finance in India, which has been instrumental in fostering such advancements. The integration of a national biometric identity program with a robust digital financial transaction infrastructure has laid a foundational groundwork for both public and private sector initiatives aimed at digital financial inclusion ([Duvendack et al., 2023](#)). Despite these advancements, the socio-economic impact of digital financial technologies on marginalized communities, such as Scheduled Castes and Scheduled Tribes, remains an area warranting further comprehensive investigation ([Thomas & T.S., 2020](#)).

It further posits that improved financial literacy, often facilitated by digital platforms, is critical for enabling low-income households to make informed financial decisions and effectively utilize these services ([Kulshrestha, 2023](#)). This paper further explores how digital banking and fintech innovations, supported by advancements in technology and regulatory frameworks, are pivotal in overcoming the barriers to universal financial access in India's diverse population, particularly in rural and underserved areas ([Wandhe, 2025](#)). The rapid adoption of FinTech in India, driven by initiatives like the Digital India campaign, has positioned the country as a leader in leveraging digital ecosystems to bridge financial access gaps for marginalized communities ([Mahesh et al., 2023](#)) ([Kamal et al., 2025](#)). This digital transformation aligns with India's broader policy agenda aimed at improving economic conditions for its populace and has been facilitated by the widespread availability of common ICT tools like mobile phones ([PK et al., 2023](#)). This push towards a digital cashless system is envisioned to bring significant changes to the Indian economy, curbing corruption and accelerating socio-economic growth ([Janarthanan Pillai & Janarthanan, 2020](#)). The nation's impressive fintech adoption rate, standing at 87% globally, underscores its commitment to leveraging digital financial services as a critical tool for inclusive growth and expanded financial access ([Mahesh et al., 2023](#)).

The proliferation of digital innovations has profoundly impacted the lifestyles of Indian citizens, prompting governmental initiatives to encourage reliance on digital financial services as a means to overcome the inherent challenges of traditional financial systems ([Thomas & T.S., 2020](#)). This digital transformation is rapidly reshaping the Indian financial services landscape, presenting an opportunity for substantial socio-economic transformation, especially for marginalized communities ([Thomas & T.S., 2020](#)). The increasing digital footprint in India, evidenced by a projected expenditure of USD 350 billion

by FY 2023, underscores the government's commitment to promoting ICT integration across all sectors, including banking ([PK et al., 2023](#)). This commitment is crucial for leveraging digital financial innovations to integrate marginalized communities into the formal financial structure, thereby addressing issues of social discrimination and expanding access to vital financial products and services ([Thomas & T.S., 2020](#)). Moreover, the strategic deployment of Information and Communication Technologies has been identified as a significant enabler for women's empowerment, contributing cost-effectively to their financial independence and broader societal inclusion ([PK et al., 2023](#)). This integration of technology not only facilitates financial transactions but also educates marginalized populations on financial literacy, which is crucial for fostering saving habits and utilizing diverse banking products ([Janarthanan Pillai & Janarthanan, 2020](#)). Furthermore, the advancement of digital financial inclusion is crucial for achieving sustainable income, poverty reduction, and fostering an inclusive society by extending banking access to previously unbanked populations ([Malladi et al., 2021](#)). Empirical evidence supports this, with studies demonstrating that increased digital payment adoption significantly improves financial inclusion indices, particularly in rural and economically disadvantaged areas ([Kushwaha & Malpani, 2025](#)). This transformative impact is further evidenced by India's recognition as a global leader in fostering an enabling environment for digital financial inclusion, ranking third among 55 countries ([Thomas & T.S., 2020](#)). However, despite these strides, significant disparities persist in digital financial access and literacy, particularly concerning gender and regional divides within India ([Godly & K.C., 2022](#)). For instance, digital financial inclusion activities are poised to leverage India's status as a rapidly growing market for digital services, offering a transformative pathway for marginalized communities ([Duvendack et al., 2023](#)). This potential is particularly relevant given the consistent development of India's digital financial infrastructure and ongoing programs designed to enhance financial literacy nationwide ([Sinha & Nayak, 2024](#)). However, despite the advancements and policy initiatives, a significant portion of the population, particularly marginalized groups, remains excluded from the purview of proper financial inclusion due to factors such as lack of knowledge, accessibility, and affordability of financial services ([Thomas & T.S., 2020](#)). Addressing these persistent gaps necessitates a deeper examination of the socio-demographic factors that impede digital financial service adoption among vulnerable segments of society, irrespective of a state's economic development ([Kulkarni & Ghosh, 2021](#)). Therefore, tailored digital financial services addressing the unique profiles and needs of these vulnerable populations are recommended to ensure comprehensive financial integration ([Buteau et al., 2021](#)). This approach aligns with broader objectives of socio-economic transformation, where digital financial literacy and accessible services are crucial for empowering marginalized communities ([Thomas & T.S., 2020](#)). Such services, encompassing easy access to savings, credit, and insurance, are vital for uplifting marginalized groups, including tribal populations and women, facilitating their integration into the formal economy and enabling greater financial independence ([PK et al., 2023](#)). This is particularly relevant given India's position as the second-fastest adopter of digital tools globally, with 726 million digital users as of September 2020 ([Buteau et al., 2021](#)).

## Methodology

An exploratory research of Digital Financial Services (DFS) and how they can enhance access and inclusion for marginalized communities in India—covering current challenges, key solutions, and implementation levers was conducted. Furthermore, the methodology considers the effectiveness of various digital platforms and their integration into the daily lives of marginalized populations, alongside

policy recommendations for improving digital financial literacy and infrastructure in underserved regions. A case study approach of various digital financial services was also conducted.

## Results

The results section will delineate the findings from this comprehensive analysis, focusing on the quantifiable impacts of digital financial inclusion initiatives and identifying key determinants of successful adoption among marginalized segments. This will include a detailed discussion of how digital financial services can mitigate the risks and costs associated with traditional cash-based transactions, thereby expanding access to critical financial products like credit, savings, insurance, and pensions for vulnerable groups. India's financial inclusion journey has advanced considerably since reforms like Pradhan Mantri Jan Dhan Yojana (PMJDY), but significant gaps remain—particularly among: Rural and remote populations, Low-income households, Women and gender minorities, Informal sector workers, Persons with disabilities. DFS can help overcome structural barriers such as long distances to bank branches, High transaction costs, Documentation requirements (e.g., KYC), Limited financial literacy, Gender restrictions on economic autonomy. By leveraging digital infrastructure, India can bring financial services to the doorstep of the underserved.

**Case Study 1: Pradhan Mantri Jan Dhan Yojana (PMJDY)**- this program, launched in 2014, PMJDY aimed to provide universal access to banking facilities, especially targeting rural households, women, SC/ST communities, migrant labourers, and informal workers. Before 2014, nearly 53% of Indian adults lacked a bank account (World Bank Global Findex 2011) and rural women were disproportionately excluded from formal banking. PMJDY provided Zero-balance savings accounts, RuPay debit cards, Overdraft facility (up to ₹10,000), Accident and life insurance coverage, and Aadhaar-enabled KYC. This scheme leveraged, Banking Correspondents (BCs), Digital infrastructure (Aadhaar + mobile + bank accounts — “JAM Trinity”). As a result of PMJDY, by 2023, over 50 crore bank accounts were opened, nearly 55% accounts held by women, Majority accounts located in rural/semi-urban areas, and Deposits crossed ₹2 lakh crore. Consequently, there emerged improved participation in formal finance, Direct linkage with government schemes via DBT, and Women gained independent account ownership.

**Case Study 2: Direct Benefit Transfer (DBT)**- It is in the background of Leverages and corruption in subsidy delivery that historically reduced the efficiency of welfare spending, the Govt. introduced Direct Benefit Transfer. Through DBT, the LPG subsidies, MNREGA wages, Pensions and Scholarships were directly credited into beneficiaries' bank accounts using Aadhaar authentication. Consequently, between 2014–2023, Over ₹25 lakh crore transferred cumulatively, Leverages reduced significantly, and during COVID-19, ₹5+ lakh crore transferred rapidly to vulnerable populations. Subsequently, marginalised groups experienced reduced dependency on middlemen, Increased women's control over funds and encouraged digital account usage.

**Case Study 3 : Unified Payments Interface (UPI)**- UPI launched in 2016, in the background of a cash-dominated rural India's economy and small vendors lacked POS machines due to high costs. UPI enabled, Instant bank-to-bank transfers, QR code-based merchant payment and zero transaction fees for small merchants. As a result, by 2023, over 10+ billion transactions per month, Significant rural and small

merchant adoption and Digital footprint enabled access to microcredit. The Impact of UPI introduction include, Reduced cash handling, empowered micro-entrepreneurs, and enabled women SHGs to transact digitally.

**Case Study 4: BC Sakhi Yojana-** was introduced in the background, in which rural areas lacked easy bank access; women often depended on male family members for transactions. Under BC Sakhi Yojana, Rural women are trained as banking correspondents, equipped with micro-ATMs and biometric devices and provided with doorstep banking. The outcomes of this program are that Thousands of women are employed as BC Sakhis, Increased account usage among rural women and enhanced trust in digital finance. The economic impact is that women agents earned sustainable incomes, and Local financial literacy improved.

Table Number 1. Comparison of Digital Financial Services

<b>Dimension</b>	<b>PMJDY</b>	<b>DBT</b>	<b>UPI</b>	<b>BC Sakhi</b>
Access Creation	High	Medium	High	High
Women Empowerment	Strong	Strong	Moderate	Very Strong
Technology Use	Basic digital	Aadhaar-linked	Advanced fintech	Assisted digital
Inclusion Depth	Account ownership	Usage via transfers	Transaction ecosystem	Trust & local reach

The overarching goal is to present a holistic understanding of how digital financial inclusion can be systematically enhanced to address the specific needs and challenges faced by these diverse marginalized populations, ultimately contributing to broader sustainable development goals (Duvendack et al., 2023). Moreover, the findings will underscore the importance of targeted policy interventions and digital literacy programs in overcoming infrastructure limitations and gender disparities that continue to impede widespread digital financial inclusion (Rashid, 2024) (Sarker & Rahman, 2025). This analytical technique can illuminate how differing levels of digital payment system adoption influence the likelihood of these groups achieving full banking access (Gupta et al., 2024). Additionally, the findings will address the challenges of digital financial inclusion and propose innovative interventions for redress, contributing significantly to knowledge of policies and practices that drive it (Anakpo et al., 2023).

## Discussion

The discussion section will elaborate on the implications of these findings, contextualizing them within existing literature on financial inclusion and digital development, and proposing actionable strategies for policymakers and practitioners. This section will also critically evaluate how digital financial inclusion can be enhanced through a multifaceted approach, considering both the opportunities presented by Information and Communication Technology and the necessity of safeguarding beneficiaries from future exclusion (Malladi et al., 2021). This involves examining the nuanced interplay between technological advancements, regulatory frameworks, and societal structures to ensure that digital financial services

genuinely serve the needs of marginalized communities without inadvertently creating new forms of exclusion ([Aziz & Naima, 2021](#)). Further research is needed to identify effectively excluded populations and develop strategies that increase financial inclusion, especially for those at risk of digital exclusion ([Broekhoff et al., 2023](#)). Moreover, comprehensive financial literacy programs are vital to empower marginalized groups to effectively utilize digital financial services and integrate them into their economic lives, thereby ensuring sustained engagement rather than mere account dormancy ([K.B., 2023](#)). These efforts must also account for the fact that a large number of accounts opened under programs like PMJDY became dormant, indicating a need for strategies that ensure sustained engagement and active utilization of financial services rather than just initial access ([Rajan et al., 2020](#)). The integration of digital financial services, therefore, should be carefully calibrated to address existing gender disparities and enhance the agency of marginalized women, rather than simply expanding access ([Sinha & Nayak, 2024](#)) ([Kulkarni & Ghosh, 2021](#)). Such an approach acknowledges that financial inclusion alone cannot achieve gender equality; rather, it is one component within a broader framework that also addresses fundamental facets of freedom, dignity, and self-determination ([Sinha & Nayak, 2024](#)). This holistic perspective acknowledges that genuine empowerment stems from addressing systemic inequalities and ensuring equitable access to resources and opportunities ([Sinha & Nayak, 2024](#)) ([PK et al., 2023](#)). Therefore, future policy considerations must move beyond mere quantitative metrics of account ownership to qualitative assessments of active engagement and the transformative impact of these services on the lives of marginalized populations ([Sinha & Nayak, 2024](#)). This entails designing gender-sensitive financial products and services that cater to the specific needs and contexts of women, moving beyond generic offerings that often fail to account for their unique economic and social realities ([Kulkarni & Ghosh, 2021](#)). This may involve designing financial products such as micro-loans, savings accounts with flexible withdrawal options, and insurance schemes tailored to women's health risks, drawing inspiration from successful implementations in other developing nations ([Razzaq et al., 2024](#)). Furthermore, policymakers should consider how digital financial inclusion can be leveraged to address the significant gender disparity in financial access, where women remain underrepresented across all levels of financial services, from depositors to borrowers ([Setiawan et al., 2023](#)). Addressing this disparity requires concerted action from governments, the private sector, and development communities to design and implement mobile money services that consider women's unique needs from inception, ensuring that existing gender inequalities are not further entrenched ([Bonhoure, 2024](#)).

## Conclusion

Digital Financial Services in India hold transformational potential to expand financial access, empower the financially excluded, and strengthen economic resilience among marginalized communities. Success depends on bridging infrastructure gaps, building trust through education, and designing inclusive, secure digital pathways that truly meet the needs of underserved populations.

## References

1. Anakpo, G., Xhate, Z., & Mishi, S. (2023). The Policies, Practices, and Challenges of Digital Financial Inclusion for Sustainable Development: The Case of the Developing Economy. *FinTech*, 2(2), 327. <https://doi.org/10.3390/fintech2020019>

2. Aziz, A., & Naima, U. (2021). Rethinking digital financial inclusion: Evidence from Bangladesh. *Technology in Society*, 64, 101509. <https://doi.org/10.1016/j.techsoc.2020.101509>
3. Bonhoure, É. (2024). Indigenous knowledge and digital financial inclusion: a comparison between Europe and Sub-Saharan Africa. *Information Technology for Development*, 1. <https://doi.org/10.1080/02681102.2024.2384716>
4. Broekhoff, M.-C., Crujisen, C. van der, & Haan, J. de. (2023). Towards financial inclusion: trust in banks' payment services among groups at risk. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4627173>
5. Buteau, S., Rao, P., & Valenti, F. (2021). Emerging insights from digital solutions in financial inclusion. *CSI Transactions on ICT*, 9(2), 105. <https://doi.org/10.1007/s40012-021-00330-x>
6. Duvendack, M., Sonne, L., & Garikipati, S. (2023). Gender Inclusivity of India's Digital Financial Revolution for Attainment of SDGs: Macro Achievements and the Micro Experiences of Targeted Initiatives. *European Journal of Development Research*, 35(6), 1369. <https://doi.org/10.1057/s41287-023-00585-x>
7. Godly, G., & K.C., B. (2022). *GENDER DIGITAL DIVIDE IN KERALA, INDIA- AN EXPLORATORY ANALYSIS AT MICRO-LEVEL*.
8. Gupta, M., Gupta, D., & Rai, P. (2024). Digital Payment Systems and Financial Inclusion: Examine How Digital Payment Systems, Such as Mobile Wallets and Digital Currencies, Can Improve Financial Inclusion by Providing Access to Banking Services for the Unbanked and Underbanked Population. In *Lecture notes in networks and systems* (p. 725). Springer International Publishing. [https://doi.org/10.1007/978-981-97-0892-5\\_57](https://doi.org/10.1007/978-981-97-0892-5_57)
9. Janarthanan Pillai, M., & Janarthanan, K. A. (2020). *MANAGEMENT STRATEGIES TO COMBAT COVID19 AFTERMATH*.
10. Kamal, M., Rahmani, S., & Alam, M. R. (2025). Beyond Traditional Banking: How Fintech is Reshaping Financial Access in India. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.5122110>
11. K.B, S. (2023). *The Role Of Pradhan Mantri Jan Dhan Yojana In Financial Inclusion: A Pathway To Economic Empowerment*. 899. <https://doi.org/10.53555/jrtdd.v6i3s.3346>
12. Kulkarni, L., & Ghosh, A. (2021). Gender disparity in the digitalization of financial services: challenges and promises for women's financial inclusion in India. *Gender Technology and Development*, 25(2), 233. <https://doi.org/10.1080/09718524.2021.1911022>
13. Kulshrestha, S. (2023). The role of financial technology in enhancing financial literacy and inclusion among low-income households in India. *International Journal of Research in Marketing Management and Sales*, 5(1), 25. <https://doi.org/10.33545/26633329.2023.v5.i1a.118>
14. Kushwaha, D., & Malpani, D. D. (2025). The Impact of Fintech on Financial Inclusion in India: An Empirical Analysis of Digital Payment Adoption and Banking Access. *International Journal of Environmental Sciences*, 11, 218. <https://doi.org/10.64252/g845vb32>

15. Mahesh, K. M., Aithal, P. S., & Sharma, K. R. S. (2023). Impact of Digital Financial Inclusion (DFI) Initiatives on the Self-Help Group: For Sustainable Development. *International Journal of Management Technology and Social Sciences*, 20. <https://doi.org/10.47992/ijmts.2581.6012.0309>
16. Malladi, C. M., Soni, R. K., & Srinivasan, S. (2021). Digital financial inclusion: next frontiers—challenges and opportunities. *CSI Transactions on ICT*, 9(2), 127. <https://doi.org/10.1007/s40012-021-00328-5>
17. PK, M., Saju, L., Krishna, S., & Sebastian, R. (2023). *Women Empowerment In Digital India and the Kerala Knowledge Economy*.
18. Rajan, S. I., Sivakumar, P. T., & Srinivasan, A. (2020). The COVID-19 Pandemic and Internal Labour Migration in India: A ‘Crisis of Mobility.’ *Indian Journal of Labour Economics*, 63(4), 1021. <https://doi.org/10.1007/s41027-020-00293-8>
19. Rashid, A. (2024). *Untitled*. <https://doi.org/10.55277/researchhub.vq5dnd6h>
20. Razzaq, A., Qin, S., Zhou, Y., Mahmood, I., & Alnafissa, M. (2024). Determinants of financial inclusion gaps in Pakistan and implications for achieving SDGs. *Scientific Reports*, 14(1). <https://doi.org/10.1038/s41598-024-63445-6>
21. Sarker, S., & Rahman, I. (2025). Digital Financial Inclusion in Bangladesh: Unlocking Opportunities for Marginalized Populations. *Asian Journal of Economics Business and Accounting*, 25(3), 206. <https://doi.org/10.9734/ajeba/2025/v25i31704>
22. Setiawan, B., Phan, T. D., Medina, J., Wieriks, M., Nathan, R. J., & Fekete-Farkas, M. (2023). Quest for financial inclusion via digital financial services (Fintech) during COVID-19 pandemic: case study of women in Indonesia. *Journal of Financial Services Marketing*, 29(2), 459. <https://doi.org/10.1057/s41264-023-00217-9>
23. Sinha, G., & Nayak, B. S. (2024). Transforming Gender Relations through Digital Financial Inclusion in India. *Journal of Asian and African Studies*. <https://doi.org/10.1177/00219096241300439>
24. Thomas, T., & T.S., S. (2020). *Digital Financial Inclusion: A Catalyst for Socio-Economic Transformation of Scheduled Castes and Scheduled Tribes in Kerala*. <https://doi.org/10.9790/487X-2205021826>
25. Wandhe, P. (2025). The Role of Digital Banking and Fintech Innovations in Advancing Financial Inclusion in India. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.5088785>