

Digital Financial Inclusion and Women Economic Empowerment: A Review of Emerging trends, Challenges and Research Gaps

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Abstract—This review article examines the existing body of literature on financial inclusion, digital financial inclusion, and women's economic empowerment across diverse national and international contexts. The study synthesizes findings from empirical and conceptual research conducted in India, Sri Lanka, Pakistan, China, Nigeria, Ethiopia, Iraq, Cameroon, and other developing economies. The review highlights that financial inclusion contributes significantly to women's empowerment by improving access to credit, savings, investment opportunities, income generation, asset ownership, and financial decision-making capabilities. Furthermore, digital financial inclusion has demonstrated substantial potential in overcoming geographical and institutional barriers that traditionally restricted women's participation in formal financial systems.

The analysis reveals that financial literacy and digital literacy play a crucial mediating role in determining the effectiveness of financial inclusion initiatives. The literature also identifies persistent challenges such as inadequate technological infrastructure, limited digital competence, cybersecurity concerns, low awareness levels, cultural constraints, and gender-based inequalities. Despite extensive research on financial inclusion and women's empowerment, significant gaps remain regarding the integrated examination of digital financial inclusion, financial literacy, and multidimensional empowerment outcomes, particularly in developing regions.

Index Terms—Digital Financial Inclusion, Financial Inclusion, Women's Economic Empowerment, Financial Literacy, Digital Literacy, FinTech, Gender Equality, Sustainable Development.

I. INTRODUCTION

Women's economic empowerment has emerged as a critical development agenda across the globe, particularly in developing economies where gender disparities continue to limit access to financial resources, economic opportunities, and decision-making power. The concept of economic empowerment extends beyond income generation and encompasses women's ability to control financial resources, participate in economic activities, make independent financial decisions, and improve their overall quality of life. In this context, financial inclusion has gained significant attention as a mechanism for integrating marginalized populations into the formal financial system.

Financial inclusion refers to the provision of affordable, accessible, and appropriate financial products and services to all segments of society. With the rapid advancement of digital technologies, the traditional concept of financial inclusion has evolved into digital financial inclusion, which utilizes digital platforms such as mobile banking, internet banking, digital wallets, Unified Payments Interface (UPI), and FinTech applications to deliver financial services efficiently and cost-effectively.

Digital financial inclusion has the potential to transform women's economic participation by reducing geographical barriers, lowering transaction costs, increasing access to credit, facilitating savings and investment, and enhancing financial autonomy. Governments, international organizations, and financial institutions have increasingly recognized digital finance as a powerful tool for achieving gender

equality and sustainable development goals. Despite considerable progress, substantial disparities persist in women's access to and utilization of digital financial services, particularly among rural and economically disadvantaged populations.

The growing body of literature on financial inclusion and women's empowerment provides valuable insights into the opportunities and challenges associated with digital finance. However, findings remain fragmented across geographical contexts, socio-economic conditions, and methodological approaches. Therefore, a systematic review of existing research is necessary to understand the current state of knowledge and identify areas requiring further investigation.

II. OBJECTIVE OF THE STUDY

The present review article seeks to:

1. Examine the existing literature on financial inclusion, digital financial inclusion, and women's economic empowerment.
2. Analyse the role of financial literacy and digital literacy in enhancing women's participation in financial systems.
3. Identify the major determinants and barriers influencing women's access to digital financial services.
4. Evaluate the contribution of digital financial inclusion toward women's economic empowerment.
5. Explore existing research gaps and suggest future directions for scholarly inquiry.

III. REVIEW OF LITERATURE

The literature demonstrates a strong association between financial inclusion and women's empowerment across various socio-economic contexts.

Vinoth Kumar and Vasuki (2023) examined the attitudes of working women toward digital financial inclusion in Tamil Nadu. Their findings indicated that although digital literacy contributes to financial inclusion, the relationship is moderated by socio-cultural factors such as gender norms and patriarchal structures. This study highlights that access to digital financial services alone may not automatically

translate into empowerment unless social barriers are simultaneously addressed.

Aiswarya Satheesh and Sangeetha Subramaniam (2023) investigated fintech adoption among rural women in Kerala and found that digital platforms significantly improve accessibility to financial services. The study observed that women were highly aware of mobile payment systems such as Google Pay and Paytm, suggesting increasing acceptance of digital finance among rural populations.

The international evidence further reinforces the transformative role of digital finance. Guang Liu et al. (2021), using panel data from 1,607 counties in China, demonstrated that digital financial inclusion promotes equitable access to financial services across urban and rural regions. Their findings emphasize the role of technological innovation in reducing financial exclusion.

Similarly, Ahmad Sulaiman and Nasiru Alhaji Ya'u (2022) identified educational attainment, cultural factors, and financial status as important determinants of women's financial inclusion participation in Nigeria. Their study revealed that socio-cultural structures continue to shape women's engagement with financial services.

The review by Riha Parvin and Panakaje (2022) highlighted that digital financial inclusion contributes to socio-economic development by improving efficiency, reducing transaction costs, and expanding access to financial services. However, challenges such as low financial literacy, lack of trust, technological barriers, and privacy concerns continue to impede adoption.

A significant contribution to the literature comes from Kumari et al. (2019), who examined the mediating role of financial inclusion between financial literacy and women's economic empowerment in Sri Lanka. Their findings established that financial inclusion acts as a crucial intermediary through which financial literacy translates into empowerment outcomes.

Maimoona Sadiq et al. (2023) further demonstrated that financial literacy strengthens the relationship between financial inclusion and women's economic empowerment among women entrepreneurs in Pakistan. The study emphasized that women who possess adequate financial knowledge are better equipped to utilize financial services effectively.

Jamuna (2023) observed that women's financial inclusion is frequently constrained by cultural

traditions, religious norms, and societal expectations. The study argued that enhancing financial literacy and awareness can substantially improve women's participation in formal financial systems.

The work of Firas Farhan Jedi (2022) in Iraq provided empirical evidence that financial inclusion facilitates women's empowerment by improving market participation, increasing income opportunities, and strengthening financial independence. Similar findings were reported by Betgilu Oshora et al. (2022), who identified access to finance as a significant contributor to women's entrepreneurial growth and economic empowerment in Ethiopia.

Research conducted in India also supports these conclusions. Chinna Muthu and Anitharaj (2019) examined financial inclusion in rural Tamil Nadu and found that digital financial inclusion could significantly enhance social inclusion and women's empowerment. However, inadequate technological infrastructure and limited digital access remain significant barriers.

Anitharaj and Chinna Muthu (2021) further demonstrated that strengthening women's financial profiles through access to banking services, savings mechanisms, and credit facilities contributes substantially to income generation and poverty reduction.

Angel Priya (2022) highlighted the role of government schemes and policies in promoting women's financial inclusion in Tamil Nadu. The study emphasized that awareness creation and financial education are essential for maximizing the benefits of these initiatives.

Studies focusing on microfinance interventions also reveal positive empowerment outcomes. Krishnan et al. (2017) found that financial inclusion through microfinance significantly increased asset ownership and diversified investment behavior among women beneficiaries. Likewise, Anyanwu et al. (2018) observed that microfinance products enhance women's economic participation and contribute to poverty reduction.

The role of social inclusion was emphasized by Sajuyigbe (2017), who found that financial inclusion and social inclusion jointly improve the performance of women-owned businesses. Similarly, Maichanou Ahamadou and Dan Baky Agada (2023) demonstrated that FinTech innovations significantly enhance

financial service delivery and promote broader financial inclusion across developing economies.

Claude Bernard Lontchi et al. (2022) introduced a multidimensional perspective by examining the mediating role of financial literacy and the moderating influence of social capital. Their findings suggest that financial inclusion contributes to sustainable development when accompanied by adequate financial knowledge and strong social networks.

Overall, the reviewed literature consistently indicates that financial inclusion, particularly digital financial inclusion, has emerged as a critical driver of women's economic empowerment. Nevertheless, the effectiveness of financial inclusion initiatives depends heavily on financial literacy, digital literacy, socio-cultural acceptance, and institutional support mechanisms.

IV. RESEARCH GAP

Despite substantial scholarly contributions, several important gaps remain in the existing body of knowledge.

First, much of the literature focuses on financial inclusion in general, while limited attention has been given to digital financial inclusion as a distinct construct. As digital financial ecosystems continue to evolve, understanding their specific impact on women's empowerment becomes increasingly important.

Second, most studies examine financial literacy, digital literacy, financial inclusion, and women's empowerment independently. There is a lack of integrated frameworks that simultaneously investigate the interrelationships among these variables.

Third, existing studies predominantly employ cross-sectional research designs, limiting understanding of the long-term effects of digital financial inclusion on women's economic outcomes. Longitudinal investigations remain scarce.

Fourth, the majority of empirical evidence originates from national-level datasets or international contexts. District-level and community-level studies, particularly within Tamil Nadu and other regions of India, remain limited.

Fifth, psychological and behavioural dimensions such as trust in digital systems, perceived technological competence, cybersecurity concerns, and digital confidence have received inadequate scholarly

attention despite their importance in shaping adoption behaviour.

Sixth, many studies measure empowerment using narrow economic indicators such as income, savings, or employment status. Comprehensive multidimensional approaches encompassing decision-making power, social participation, self-confidence, and economic autonomy are relatively rare.

Finally, the literature reveals insufficient exploration of how emerging FinTech innovations, digital payment ecosystems, mobile banking applications, and digital credit platforms influence women's empowerment outcomes in developing economies.

These gaps indicate the necessity for future research that adopts integrated conceptual frameworks, multidimensional empowerment indicators, and context-specific empirical analyses to understand the complex relationship between digital financial inclusion and women's economic empowerment.

V. CONCLUSION

The review of literature clearly demonstrates that financial inclusion and digital financial inclusion serve as powerful instruments for enhancing women's economic empowerment. Access to formal financial services enables women to participate more actively in economic activities, improve household welfare, accumulate assets, increase savings, and strengthen their financial independence. The emergence of digital technologies has further expanded opportunities for women by reducing barriers related to geography, mobility, and transaction costs.

However, the effectiveness of digital financial inclusion is contingent upon several complementary factors, including financial literacy, digital literacy, supportive policy frameworks, technological infrastructure, and socio-cultural acceptance. While considerable progress has been achieved, significant disparities continue to exist, particularly among rural women and economically marginalized populations.

The reviewed studies collectively suggest that digital financial inclusion should not be viewed merely as access to financial technology but as a broader developmental mechanism capable of transforming women's economic and social status. To realize its full potential, policymakers, financial institutions, and development agencies must focus on improving financial capability, strengthening digital

competencies, addressing gender-based barriers, and promoting inclusive digital ecosystems.

Future research should move beyond traditional financial inclusion metrics and adopt comprehensive multidimensional approaches that capture the broader empowerment outcomes generated through digital financial inclusion. Such efforts will contribute significantly to achieving sustainable development, gender equality, and inclusive economic growth.

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