Library Progress International *Print version ISSN 0970 1052*
Vol.44 No.3, Jul-Dec 2024: P. 22898-22904 *Online version ISSN 2320 317X*

Original Article *Available online at www.bpasjournals.com*

Role of Fintech in Financial Inclusion Among Working Women in India: An Empirical Study

[1]Dr. Pooja Gupta,[2]Dr. Bishnu Prasad Kar ,[3]Dr. Madhusmita Tripathy,[4]Dr. Meera K L

1Associate Professor BSSS Institute of Advanced Studies, Bhopal
2Assistant Professor, Finance Astha School of Management, Bhubaneswar
3Assistant Professor, Dept. of Statistics Rama Devi Women's University, Bhubaneswar
4Associate Professor Management Dayananda Sagar Business Academy Bengaluru Karnataka
meera.seshanna@gmail.com

How to cite this article: Pooja Gupta,Bishnu Prasad Kar ,Madhusmita Tripathy,Meera K L (2024) Role of Fintech in Financial Inclusion Among Working Women in India: An Empirical Study. *Library Progress International,* 44(3), 22898-22904.

ABSTRACT
Fintech plays a vital part in promotion of financial inclusion among working women in India by providing accessible and affordable financial services. Through mobile banking, digital wallets, and micro-lending platforms, fintech enables women to manage their finances, save money, and access credit without the barriers of traditional banking. These technologies often offer user-friendly interfaces and services tailored to women's needs, fostering financial literacy and empowering them to participate in economic activities. By bridging the gap between formal financial institutions and underserved populations, fintech contributes to enhancing the economic independence and overall well-being of working women in India. This empirical study investigates the role of fintech in enhancing financial inclusion among working women in India. The findings reveal that fintech not only increases accessibility to financial products but also promotes financial literacy, savings, and investment among women. the role of Fintech in Financial Inclusion Among Working Women in India A sample of 223 working women from different working sectors were surveyed to examine the role of Fintech in Financial Inclusion Among Working Women in India and found that Enhanced Access to Financial Services, Savings and Investment, Overcoming Cultural and Geographical Barriers and Credit and Microloans are the factors that determines different role of Fintech in Financial Inclusion Among Working Women.

Keywords: *Fintech, Financial Inclusion, Working Women, Financial services, Finance.*

Introduction

The rapid development of Fintech in recent years has introduced a transformative opportunity to address the persistent issue of gender inequality in financial inclusion. This study aims to explore how Fintech can help narrow the gender pay gap by delivering innovative solutions that empower women within the financial sector. Despite significant advancements in global financial inclusion, women continue to face unequal barriers to accessing formal financial services. These challenges, from limited access to credit and financial knowledge to technological gaps and cultural biases, have perpetuated economic inequality. By integrating women into the financial system, we can unlock their potential as economic agents. Financial inclusion opens opportunities for women to participate in the economy, which can lead to enhanced productivity and innovation. Ultimately, Fintech could be pivotal in fostering global economic growth and equality (Agarwal, et al., 2024). Fintech enables them to build savings, secure loans for entrepreneurship, and access essential services like healthcare and education, thus creating a ripple effect that benefits entire communities. By leveraging digital platforms, advanced data analytics, and innovative software, Fintech seeks to bridge gaps in traditional financial services and reach underserved or unbanked communities worldwide. By addressing the systemic issues that limit women's financial participation, we can unlock their potential and contribute to more equitable economic growth and improved welfare for communities as a whole (Srivastav & Mittal, 2016). Access to these resources can dramatically improve economic resilience and create more equitable opportunities for growth. Fintech plays a crucial role in overcoming the barriers that have historically limited financial inclusion. Challenges such as geographical isolation, high transaction fees, inadequate banking infrastructure, and complex regulatory requirements can make conventional financial services inaccessible to many. Fintech addresses these obstacles through technology-driven solutions that are often more affordable, user-friendly, and customizable (Dwibedi, et al., 2023). In line with India's push toward a cashless economy, the widespread use of smartphones has made Fintech services more accessible and user-friendly, allowing individuals across socio-economic backgrounds to participate in the financial system more easily. The Indian government has launched numerous initiatives aimed at promoting financial inclusion, especially for people from minority communities and economically disadvantaged regions (Paul et al., 2016). These programs, often in partnership with Fintech providers, have accelerated financial access, enabling more people to utilize essential services such as savings accounts, credit, and insurance. As a result, Fintech adoption has brought millions into the financial fold, supporting economic empowerment, security, and growth. For women, Fintech has opened new pathways to financial independence and empowerment. In urban areas, many women now benefit from digital financial services that support savings, investments, and even small business ventures. However, the inclusion of women in rural areas lags behind their urban counterparts (Aiswarya & Sangeetha, 2023). FinTech innovations allow people to securely and efficiently manage transactions, access credit, and participate in the digital economy, bridging gaps in financial accessibility for communities that have historically been underserved. Financial inclusion supports the development of sustainable livelihoods, as women often reinvest their earnings back into their families and communities. This investment in social infrastructure is vital for breaking the cycle of poverty and creating a more equitable society.t involves delivering a comprehensive suite of financial services—such as payments, secure transactions, credit, insurance, and wealth management—that are affordable, convenient, and relevant to the needs of individuals (Srivastav and Mittal, 2021). By fostering accessible and low-cost financial services for underserved populations, financial inclusion can drive economic empowerment, reduce poverty, and promote greater economic stability (Dwivedi & Srivastav, 2024). Financial inclusion plays a critical role in empowering women, creating positive ripple effects across various dimensions of their lives. When women gain access to formal banking services, credit, and financial education, they are equipped with essential tools to manage and grow their financial resources. This access enables women to make informed financial decisions, improve their economic stability, and pursue income-generating opportunities. Financial inclusion initiatives not only enhance women's economic prospects but also contribute to their independence and self-reliance. Incorporating women into the financial system has a profound impact on their social empowerment as well. With access to financial services, women can participate more actively in community-based savings and lending groups, which foster support networks and provide a foundation for shared economic goals (Gupta and Mittal, 2012). Ultimately, financial inclusion for women is more than a matter of economic access; it is a catalyst for social transformation. As women gain control over financial resources and decisions, they are empowered to shape their futures, support their families, and contribute to community development (Singh & Singh, 2023).

Literature Review

Yuvaraj, et al., (2023) studied that by disrupting traditional financial systems, Fintech makes financial services more accessible, enhances customer satisfaction, simplifies complex processes, and reduces costs. Promoting financial literacy and awareness is vital to empower women to take full advantage of available financial services. Educational programs that address the barriers women face, including societal expectations and financial illiteracy, can help build their confidence in managing finances and pursuing business opportunities. In India, Fintech's impact is especially notable for advancing financial inclusion, addressing the unique challenges posed by the largely informal economy. Increased access to Fintech and digital services from financial institutions like banks has enhanced accountability across the financial system, making it easier to monitor transactions and promote transparency. However, as reliance on these technologies grows, so do associated risks. One major risk dimension involves safeguarding customer data, where cybersecurity and privacy concerns must be rigorously managed. Another potential risk is the economic impact of a large Fintech company's failure, which could disrupt financial stability. Thus, while Fintech offers transformative benefits, careful management and robust regulatory frameworks are essential to mitigate these risks and protect both consumers and the broader economy.

Rana (2020) highlighted that Fintech companies are uniquely positioned to drive financial inclusion by leveraging advanced technology and low-cost automation, which provide them with a significant competitive advantage. Unlike traditional financial institutions, fintech firms can simplify access to financial services, reaching even the financially underserved and illiterate populations. This innovation-led approach not only aims to expand financial inclusion but also recognizes the importance of understanding and supporting the financial well-being of diverse communities. The global landscape of financial inclusion has seen substantial improvements due to fintech's rise, bridging gaps in financial accessibility and literacy. In India, for instance, fintech companies are actively reaching out to potential clients across urban and rural regions by offering streamlined, cost-effective financial solutions. By reducing the complexity and expense traditionally associated with financial services, fintech providers make these services accessible to a broader audience, empowering people to participate in the formal economy. By breaking down barriers, enhancing accessibility, and fostering trust in digital transactions, fintech firms are key players in driving sustainable economic growth and contributing to the vision of a resilient, self-sufficient, and economically powerful nation. To make financial inclusion a transformative tool for women's empowerment, it is essential to embed social norms change into the design and implementation of financial products and services (Mittal et al., 2024).

Ratnavalli, et al., (2024) revealed that Fintech innovations play a transformative role in advancing financial inclusion by delivering financial solutions that are convenient, affordable, and accessible to a wide array of users. In India, these advancements are not only bridging longstanding accessibility gaps in the banking sector but also democratizing financial services, bringing them within reach of traditionally underserved populations. Through the use of advanced technology, fintech companies reduce barriers to entry, lower transaction and operational costs, and provide tailored financial services that meet the specific needs of diverse communities. By lowering the costs associated with banking—such as minimum balances, transaction fees, and administrative costs—fintech companies enable more people to access services like savings accounts, credit, insurance, and digital payments. Additionally, fintech solutions often come with user-friendly interfaces and simplified processes, which help individuals who may lack formal financial literacy to confidently manage their finances.

Shukla & Srivastava (2023) found that in recent years, financial inclusion has been a prominent focus for the government, recognizing its essential role in fostering equitable economic growth and development. By expanding access to these critical financial resources, financial inclusion enables people to improve their economic resilience, pursue opportunities, and contribute more effectively to national growth. When individuals and small businesses have access to financial services, they are better equipped to manage daily expenses, save for future needs, invest in education or business, and protect themselves against unforeseen financial emergencies. Financial inclusion empowers communities by improving individual financial security and creating avenues for small-scale entrepreneurship, which collectively drives employment, increases productivity, and uplifts marginalized populations (Mittal et al., 2023).

Karangara (2023) stated that fintech serves as a catalyst for transformation, significantly impacting unbanked populations by providing innovative, accessible financial solutions that were previously out of reach. This transformation is especially compelling in India, a country characterized by a diverse socioeconomic landscape, where disparities in income, education, and digital literacy have historically limited access to financial services. India's rapidly evolving fintech ecosystem offers a promising solution to bridge these gaps, enabling millions of people especially those in rural and underserved areas to access affordable, user-friendly financial products. Digital payment platforms, for example, allow people to conduct transactions without the need for a physical bank account, which has been instrumental in areas with limited banking infrastructure.

Kumari (2022) highlights that achieving financial inclusion for women requires the creation of gender-inclusive financial system. It is crucial to recognize the broader social constraints that influence women's financial access, particularly issues related to intra-household power dynamics and the overall impact of financial inclusion on women's economic empowerment. Enhancing women's economic participation is a key consideration in advancing financial inclusion. By increasing women's access to financial resources, we can foster a shift in their behaviour toward seeking and utilizing business funding, which can lead to greater entrepreneurial activity and independence. This change not only benefits individual women but also strengthens local economies by diversifying and expanding the business landscape.

Bhatia & Singh (2019) revealed that the G-20 nations have underscored vital part of financial inclusion in advancing gender equality. This includes unbanked and underbanked individuals, who often lack access to basic banking services, credit, and insurance. Empowering women is a transformative approach aimed at shifting power dynamics in favour of the female gender, and it is considered essential for fostering global progress. When women have access to financial services, they can manage their finances more effectively, start and grow businesses, and invest in their families and communities. This financial autonomy not only improves their own well-being but also contributes to broader economic growth and development.

Mustafa, et al., (2023) In recent years, by disrupting traditional banking methods, fintech has created a more integrated financial system that caters to the needs of a broader audience. Additionally, payment cards have simplified the process of purchasing goods and services, making financial transactions more convenient for users. However, it is important to note that individuals in emerging markets often remain hesitant to fully engage with financial services.

Igamo, et. al., (2024) stated that understanding the factors that influence women's adoption and utilization of financial technology (fintech) services is crucial for reducing the gender gap in financial access and accelerating overall financial inclusion. By identifying these factors, stakeholders can develop targeted strategies that empower women to engage with fintech, thereby unlocking their potential for economic participation and growth. Fintech adoption provides a unique opportunity for women to innovate and express their creativity.

Objective

To know the role of Fintech in Financial Inclusion Among Working Women in India

Methodology

A sample of 223 working women from different working sectors were surveyed to examine the role of Fintech in Financial Inclusion Among Working Women in India. This study is based on a survey conducted using a structured questionnaire specifically designed for this research. The primary data was collected using a "random sampling method," and "Factor Analysis" was employed to derive the results.

Findings

The table below presents the general details of the respondents. 31.8% are below 38 years of age, 37.7% are between 38 and 48 years old, and the remaining 30.5% are above 48 years of age. 26.5% are graduate, 28.2% are post graduate, 31.4% are having professional degrees and rest 13.9% are having other educational qualification. 35.4% women are earning 1 lakh and below, 38.6% are having a monthly income of 1lakh-5lakh and rest 26.0% are earning above 5 lakhs every month. 49.3% women are married and rest 50.7% are unmarried.

"Table 1 Demographic details"

"Variable"	"Respondents"	"Percentage"
Age		
Below 38 yrs	71	31.8
38-48 yrs	84	37.7
Above 48 yrs	68	30.5
Total	**223**	**100**
Qualification		
Graduate	59	26.5
Post graduate	63	28.2
Professional degree	70	31.4
Others	31	13.9
Total	**223**	**100**
Monthly Income		
1 Lakh and below	79	35.4
1 lakh-5 lakh	86	38.6
Above 5 lakhs	58	26.0
Total	**223**	**100**
Marital status		
Married	110	49.3
Unmarried	113	50.7
Total	**223**	**100**

"Table 2 KMO and Bartlett's Test"

“Kaiser-Meyer-Olkin Measure of Sampling Adequacy”		.864
“Bartlett's Test of Sphericity”	“Approx. Chi-Square”	3557.610
	“df”	120
	“Sig.”	.000

KMO value in table 2 is 0.864 and the “Barlett’s Test of Sphericity” is significant.

“Table 3 Total Variance Explained”

“Component”	“Initial Eigen values”			“Rotation Sums of Squared Loadings”		
	“Total”	“% of Variance”	“Cumulative %”	“Total”	“% of Variance”	“Cumulative %”
1	7.350	45.940	45.940	3.458	21.612	21.612
2	2.552	15.950	61.890	3.336	20.852	42.464
3	1.900	11.877	73.767	3.333	20.829	63.293
4	1.629	10.184	83.952	3.305	20.658	83.952
5	.516	3.226	87.178			
6	.348	2.172	89.350			
7	.306	1.911	91.261			
8	.267	1.668	92.929			
9	.258	1.614	94.543			
10	.210	1.310	95.853			
11	.164	1.025	96.878			
12	.127	.795	97.673			
13	.109	.679	98.352			
14	.101	.628	98.980			
15	.088	.548	99.528			
16	.076	.472	100.000			

“Principal component analysis” shows 16 variables from 4 Factors. The factors explained the variance of 21.612%, 20.852%, 20.829% and 20.658% respectively. The total variance explained is 83.952%.

“Table 4 Rotated Component Matrix”

“S. No.”	“Statements”	“Factor Loading”	“Factor Reliability”
	Enhanced Access to Financial Services		**.946**
1	Fintech platforms allow women to open accounts digitally		
2	Mobile wallets offer an accessible, secure way for women to manage their finances and make transactions		
3	Fintech platforms provide low or zero-cost transactions, reducing fees associated with traditional banking		
4	Fintech apps are available in multiple languages, which is especially beneficial in rural or underserved areas		
	Savings and Investment		**.933**
5	Fintech apps allow women to save small amounts regularly		
6	Provide goal-setting options that motivate women to save for specific purpose		
7	Guide women through investment basics and opportunities		
8	Makes investment more accessible and less intimidating		
	Overcoming Cultural and Geographical Barriers		**.929**
9	Allow women in remote or rural areas to open accounts, save, and transact		
10	Allow them to maintain control over their finances without family or community oversight		

11	Offers private, self-managed financial accounts		
12	Empower women in conservative regions where traditional banking may feel restrictive		
	Credit and Microloans		**.926**
13	Fintech platforms offer streamlined, digital application processes		
14	Provides access to small loans tailored for women entrepreneurs		
15	Allows women without traditional credit scores to qualify for loans		
16	Offer flexible repayment terms, allowing women to repay loans in manageable instalments		

Table 4 shows the factors that shows different role of Fintech in Financial Inclusion Among Working Women where first factor "Enhanced Access to Financial Services" includes the variables like Fintech platforms allow women to open accounts digitally, Mobile wallets offer an accessible, secure way for women to manage their finances and make transactions, Fintech platforms provide low or zero-cost transactions, reducing fees associated with traditional banking and Fintech apps are available in multiple languages, which is especially beneficial in rural or underserved areas. Factor "Savings and Investment" consists of variables like Fintech apps allow women to save small amounts regularly, provide goal-setting options that motivate women to save for specific purpose, Guide women through investment basics and opportunities and Makes investment more accessible and less intimidating. Factor "Overcoming Cultural and Geographical Barriers" includes the variables like Allow women in remote or rural areas to open accounts, save, and transact, allow them to maintain control over their finances without family or community oversight, offers private, self-managed financial accounts and Empower women in conservative regions where traditional banking may feel restrictive. Factor "Credit and Microloans" includes the variables like Fintech platforms offer streamlined, digital application processes, provides access to small loans tailored for women entrepreneurs, allows women without traditional credit scores to qualify for loans and offer flexible repayment terms, allowing women to repay loans in manageable instalments.

"Table 5 Reliability Statistics"

"Cronbach's Alpha"	"N of Items"
.920	16

The value of "Cronbach's Alpha" should be more than 0.07. Total reliability is 0.920 for 4 constructs including sixteen, hence it is sufficient.

Conclusion

Fintech serves a vital function in advancing financial inclusion for working women in India by offering accessible and cost-effective financial services. Utilizing mobile banking, digital wallets, and micro-lending platforms, fintech empowers women to oversee their finances, save funds, and obtain credit without the obstacles posed by conventional banking. As a result, working women are better equipped to manage their finances, save for the future, and invest in their personal and professional development. The findings suggest that continued support for fintech initiatives is crucial for driving economic empowerment and inclusivity. Ultimately, the integration of fintech into the financial landscape can lead to transformative changes, contributing to a more equitable economy where women can thrive and achieve their full potential. The study was conducted to examine the role of Fintech in Financial Inclusion Among Working Women in India and found that Enhanced Access to Financial Services, Savings and Investment, Overcoming Cultural and Geographical Barriers and Credit and Microloans are the factors that determines different role of Fintech in Financial Inclusion Among Working Women.

References

1. Agarwal, S., Jain, D.R., Agarwal, G., Tanishq, M., Hrishikesh, & Siddharth (2024). Fintech On Women's Financial Inclusion: Bringing the Gender Gap Through Innovative Solutions, *International Research Journal of Engineering and Technology*, 11(2), 247-254.
2. Aiswarya, S., & Sangeetha, S. (2023). Financial Inclusion of Rural women through Fintech, *Emperor International Journal of Finance and Management Research*, 9(9), 50-58.
3. Bhatia, S., & Singh, S. (2019). Empowering Women Through Financial Inclusion: A Study of Urban Slum, *VIKALPA The Journal for Decision Makers*, 44(4) 182–197.

4. Dwibedi, P.K., Sahoo, M.K. & Mohapatra, P.R. (2023). Assessing the Role of Fintech in Promoting Financial Inclusion in India: A Comprehensive Study, *International Journal of Research and Analytical Reviews*, 10(4), 781-794.
5. Dwivedi, A., & Srivastav, A. (2024). Role of Fintech in Promoting Financial Inclusion in India, *International Journal for Multidisciplinary Research*, 6(3), 1-4.
6. Gupta, S., & Mittal, A. (2012). Paired Comparison of Promotional Methods in Context of Banking Services: An Application of Multidimensional Scaling. IIMS Journal of Management Science, 3(2), 131. doi: 10.5958/j.0976-030x.3.2.002
7. Igamo, A.M., Rachmat, R.A., Siregar, M.I., Gariba, M.I., Cherono, V.I., Wahyuni, A.S. & Setiawan, B. (2024). Factors influencing Fintech adoption for women in the post-Covid-19 pandemic, *Journal of Open Innovation: Technology, Market, and Complexity*, 10, 1-12.
8. Karangara, R. (2023). Examining the Role of Fintech in Financial Inclusion and its Impact on Financial Services to Underbanked Population in India, *International Journal for Multidisciplinary Research,* 5(5), 1-13.
9. Kumari, S. (2022). Financial inclusion and women empowerment: A case study in India, *Economics, Business, Accounting & Society Review*, 1-2, 88-95.
10. Mittal, A., Chaturvedi, D. D., Chaturvedi, S. & Singh, P. K. (2024). Impact of Negative Aspects of Artificial Intelligence on Customer Purchase Intention: An Empirical Study of Online Retail Customers Towards AI Enabled E-Retail Platforms. In, S. Dadwal, S. Goyal, P. Kumar, R. Verma (Eds), Demystifying the Dark Side of AI in Business (pp. 159-173). IGI Global
11. Mittal, A., Singh, S., & George, S. R. (2023). Role of artificial intelligence in knowledge management: An empirical study of industry experts using stepwise multiple regression. International Journal of Electronic Finance, 12(1), 403-422. doi:10.1504/ijef.2023.10053587
12. Mustafa, J.A., Marei, A. & Al-Abbadi, A. (2023). The Role of Fintech Payment Instruments in Improving Financial Inclusion, *Information Sciences Letters an International Journal,* 12(6), 2659-2670.
13. Paul, J., Mittal, A., & Srivastav, G. (2016). Impact of service quality on customer satisfaction in private and public sector banks. *International Journal of Bank Marketing*, *34*(5), 606-622. doi: 10.1108/ijbm-03-2015-0030
14. Rana, K.S. (2020). Role of FINTECH in Financial Inclusion, *International Journal for Research in Engineering Application & Management,* 6(4), 59-66.
15. Ratnavalli, B., Gowrabhathini, J., Harika, B., Mounika, B., Mohitha, D., & Sharon, P. (2024). Investigating the Role of Fintech in Inclusive Banking in India: A Quantitative Approach, *International Research Journal of Multidisciplinary Scope*, 5(3), 226-237.
16. Shukla, A.P., & Srivastava, S. (2023). A Study of Financial Inclusion Efforts among Women and Its Impact on the Women Empowerment, *International Journal of Innovative Research in Engineering and Management*, 10(4), 86-90.
17. Srivastav, G., & Mittal, A. (2016). Impact of Internet Banking on Customer Satisfaction in Private and Public Sector Banks. Indian Journal of Marketing, 46(2), 36-49. doi: 10.17010/ijom/2016/v46/i2/87252
18. Srivastav, G., & Mittal, A. (2021). Modelling value-based banking and customers' banking choices in the era of Marketing 3.0: an empirical study with logistic ordinal regression approach. *Global Business and Economics Review*, *25*(1), 51-67. doi: 10.1504/gber.2021.116644
19. Yuvaraj, Isthiyaq, M., Kala, S., Vanmathi, R. & Varalakshmi, S. (2023). Financial Inclusion: The Role of Fintech and Digital Financial Services in India, *Journal of the Oriental Institute*, 72(6), 80-88.