



Role of FinTech in Enhancing Women's Financial Inclusion in India.

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Abstract-- The inclusion of women financially is significant towards empowering women as well as economic development. Access to formal financial services continues to be a problem for many women in India. Financial technology (FinTech) has emerged as a source of opportunities due to the provision of digital financial services like digital payments and mobile banking.

This paper will discuss how FinTech can contribute to the financial inclusion of women in India. Primary data presented in the study is related to 355 women respondents who were surveyed with the help of a structured questionnaire. Data were analyzed using statistical tools like the descriptive statistics, correlation and regression analysis.

The research results indicate that FinTech services have a positive effect on the financial inclusion of women. The use of digital devices and digital literacy is also significant in promoting the use of digital financial services by women. The article emphasizes the need to enhance digital awareness in order to empower women financially.

Keywords-- FinTech, Women financial inclusion, Digital literacy, financial services, India.

I. INTRODUCTION

It is a well-known fact that financial inclusion is an essential part of inclusive socioeconomic development and growth. It makes sure that individuals and businesses receive affordable financial services including savings, credit, insurance and payment systems. In India, there has been a considerable advancement in the increase of financial access by reforming the banking system and government programs. Nonetheless, a gender gap in the area of financial inclusion remains evident with several women experiencing barriers in the form of lack of financial literacy, restricted mobility, absence of collateral, and socio-cultural barriers which do not allow them to interact with formal financial institutions.

With the advent of financial technology (FinTech), the provision of financial services has undergone a complete revolution through the use of digital technologies, including mobile banking, digital payment systems, peer-to-peer lending, and online investment services. These are financial solutions of technological nature, which have enhanced the availability and access of financial services especially among the underserved groups.

The adoption of FinTech solutions has been fast-tracked in India because of the high rate of smartphone adoption and internet penetration and the development of digital infrastructure.

FinTech platforms can contribute to better financial inclusion of women by offering easily accessed and convenient in nature financial services which mitigate the traditional disadvantages that women might face in the banking industry. Financial services that can be accessed online enable women to send and receive money, save, borrow funds, and spend money using mobile devices without having to physically interact with the bank. This has been boosted by government efforts like financial inclusion programs and digital payment systems that have increased the digital financial ecosystem in the country.

Nevertheless, despite these opportunities, there are still such issues as the digital gender divide, a lack of technological awareness, and the issue of cybersecurity concerns that still influence the level of women involvement in digital financial services. Consequently, to appreciate how digital financial innovations can assist women to become economically empowered in India, it is necessary to analyze the impact of FinTech on enhancing women's financial inclusion. This paper will examine how FinTech has helped improve access of women to financial products and services and increase their financial inclusion.

II. REVIEW OF LITERATURE

As an aspect of inclusive economic growth and reduction of poverty, financial inclusion has been known to be a significant factor. In the article by Asli Demircuc-Kunt and Leora Klapper (2018), formal financial services, that is, savings accounts, credit facilities, and digital payment systems, allow individuals to engage more actively in the economic life and enhance financial security. Their investigation, based on the Global Findex Database, demonstrated that financial inclusion is one of the key factors in empowering economies, especially those in the developing economies.



Nevertheless, even though there has been an increased financial accessibility in much of the countries, gender differences still remain, and women still tend to experience more difficulty in using formal financial services than men.

Theoretically, financial inclusion is directly related to financial development theory that postulates that well-developed financial systems facilitate the growth of the economy through enhancing allocation of financial resources. The advent of financial technology has also changed the conventional financial system by contacting the digital technologies and the financial services. As Douglas W. Arner, Janos Nathan Barberis, and Ross P. Buckley (2016) described, FinTech is a technological innovation, which helps to be efficient, pay less, and have easy access to financial services. As the results of their study indicate, digital financial platforms, including mobile banking, digital wallets, and peer-to-peer lending, can widen the financial services to underserved groups of people who used to have no access to banking services.

A number of empirical reports have also looked into the role of FinTech in enhancing the financial inclusion. Thorsten Beck (2020) held that digital financial innovations are critical in ensuring that financial access is increased because they minimize geographical and operational obstacles that are entailed in the traditional banking systems. In the same way, Robert Cull, Asli Demircug-Kunt, and Jonathan Morduch (2018) discovered that digital financial services and microfinance institute play an important role in financial inclusions in offering low-income people low-cost financial products. According to their findings, financial services that are technologically driven can enhance access to credit, savings, and payment systems to the economically disadvantaged groups.

Financial inclusion has been given a lot of consideration in the Indian context, in the form of policies and the development of digital infrastructure. According to Raghuram G. Rajan (2018), including more people in the digital economy is one way to decrease financial inequality and enable inclusive economic growth. As mobile technology and internet penetration in India has been soaring at a high rate, there are new opportunities availed to people who have never been a part of the formal financial sector by FinTech companies and digital payment platforms. They are digital financial services that allow the users to carry out financial transactions at the comfort of their homes without visiting financial institutions.

Irrespective of these developments, the literature to date indicates that there are a number of challenges associated with the adoption of FinTech services by women.

Research indicates that reduced digital literacy, absence of access to smart phones, insufficient internet connectivity, and socio-cultural constraints in most cases restrict women to access digital financial services to full extent. Moreover, a woman might feel discouraged to use FinTech platforms because of the possible risks of cybersecurity and privacy. These obstacles imply that even though FinTech can help to increase financial inclusion, the inclusion rates among women can actually be affected by technological, social, and educational factors.

Critically, a lot of the current research is based on the overall effect of financial technology on financial inclusion as opposed to gender-based differences in access and usage. Numerous researches focus on the macrolevel of FinTech adoption, and not much empirical data has been conducted on the impact of digital financial services on women as financial participants at the personal scale. In addition, the connection between the use of FinTech, digital literacy and access to digital devices among women is under-researched in most developing economies.

Thus, it is possible to observe a gap in the research on the specific role of FinTech in improving financial inclusion of women in India. Even though the recognition of the significance of digital financial services is not a new development in past studies, there is a paucity of empirical research to determine how the adoption of FinTech has affected the access to financial services by women and their financial inclusion. This research is therefore expected to fill this gap by exploring the correlation among use of FinTech, digital literacy, access to digital devices and financial inclusion among Indian women.

III. RESEARCH GAP

As much as some studies have addressed the role of financial inclusion and the current fast rate of financial technology development (FinTech), little has been done to specifically address the role played by FinTech in improving the financial inclusion of women in India. The majority of the available literature discusses digital financial services and financial inclusion in general without referring to gender-specific issues of women accessing and adopting FinTech platforms. Moreover, the empirical literature examining the connection between FinTech adoption, digital literacy and access to financial services among women is still comparatively scarce. Thus, to understand the role played by FinTech solutions in enhancing the financial inclusion and financial participation of women in India, there is a necessity to conduct empirical studies.



IV. RESEARCH OBJECTIVES

1. To analyze how FinTech services can enhance the access to formal financial services by women in India.
2. To examine the degree of awareness and use of FinTech platforms by the female users.
3. To uncover the most important variables that may affect the adoption of FinTech by women in terms of financial transactions and services.
4. To assess how the adoption of FinTech influences the financial inclusion of women as well as their financial participation in India.

V. HYPOTHESIS DEVELOPMENT

Financial technology (FinTech) has greatly enhanced access to online based financial services like mobile banking, digital payment, and online credit services. Such services open up traditional financial access restrictions and women can be more engaged in financial activity. Nevertheless, digital literacy, the ability to access technology, and awareness of FinTech services are among the factors that affect the use of these platforms by women. Hence, it is significant to investigate the correlation between the use of FinTech and the financial inclusion of females.

On the basis of this discussion, the following hypothesis is as follows:

- H1:* The use of FinTech has a considerable impact on the financial inclusion of women.
- H2:* Digital literacy has a significant influence on the use of FinTech services by women.
- H3:* Availability of digital devices has a positive impact on the use of FinTech platforms by women.
- H4:* The use of FinTech helps women to have a better financial involvement.

VI. RESEARCH METHODOLOGY

The proposed research design is a quantitative research design; the author will review the importance of financial technology (FinTech) in improving the financial inclusion of women in India. The research is premised on primary data gathered through a questionnaire among the respondents who were women. The research population will include women who use or know about online financial services like mobile banking, online payment systems and other FinTech-based applications.

The respondents were picked using the convenience sampling method, and a total of 355 respondents were picked. The sample will consist of women of various age groups, education levels, and professions to receive various answers to the question about using FinTech services. The questionnaire includes two parts in the first part, the demographics of the respondents are collected and the second part will include the statements associated with FinTech usage, digital literacy, access to digital devices, and financial inclusion. The responses are measured using a five point Likert scale of strongly disagree (1) to mostly agree (5).

The statistical methods used in analyzing the data collected include descriptive statistics, reliability analysis (Cronbach's alpha), correlation analysis and the regression analysis. The methods will assist in investigating the connection between the acceptance of FinTech and women financial inclusion as well as testing the hypotheses.

VII. DATA ANALYSIS AND INTERPRETATION.

This part of the discussion is an analysis of the findings gathered on 355 women respondents concerning the role of FinTech in increasing the financial inclusion of women in India. The data were interpreted and analyzed with the help of statistical methods, including descriptive statistics, reliability analysis, correlation, and regression analysis, in order to test the hypotheses proposed.

Table-1
Descriptive Statistics

Variable	Mean	Standard Deviation
FinTech Usage	3.92	0.81
Digital Literacy	3.75	0.86
Access to Digital Devices	4.05	0.79
Financial Inclusion	3.88	0.83



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According to the descriptive statistics, the respondents display a rather high rate of FinTech use and access to digital gadgets.

The average score of over 3.5 indicates that a majority of the female respondents are conversant with online financial services and use FinTech sites to carry out financial transactions.

Table-2
Reliability Analysis

Variable	Cronbach's Alpha	Interpretation
FinTech Usage	0.842	Very Good
Digital Literacy	0.896	Excellent
Financial Inclusion	0.871	Very Good

The alpha values considered in the variable are greater than 0.70, which means that the measurement scale

employed in the questionnaire is reliable and internally consistent.

Table-3
Correlation Analysis

Variable	FinTech Usage	Digital Literacy	Financial Inclusion
FinTech Usage	1		
Digital Literacy	0.61	1	
Financial Inclusion	0.68	0.59	1

The findings of the correlation indicate that there is a positive association between the use of FinTech, digital literacy, and financial inclusion.

The moderate to strong correlation shows that an increase in using FinTech services is correlated with a higher level of financial inclusion among women.

Table-4
Regression Analysis

Variable	Beta Coefficient	Significance (p-value)
FinTech Usage	0.54	0.000
Digital Literacy	0.36	0.002

The regression analysis shows that the financial inclusion of women is significantly dependent on the use of FinTech and their digital literacy. The p-values are lower than 0.05, which proves that the variables influence financial inclusion significantly

Hypothesis Testing

Testing of the hypothesis was done to investigate the association between FinTech adoption and financial inclusion of women in India.



The findings also suggest that the adoption of FinTech contributes to the financial inclusion of women in a significant positive manner, which confirms H1. Equally, H2 was supported as digital literacy was significantly found to play a role in influencing women to adopt FinTech services. H3 was also proven right as access to digital devices and internet connectivity positively correlated with the use of FinTech platforms by women. Moreover, the results indicate that the financial participation and decision-making of women increase with the use of FinTech services and thus prove H4. Generally, the findings indicate that FinTech is a significant issue in enhancing access to the financial services of women and financial inclusion.

VIII. FINDINGS OF THE STUDY

According to the study results, financial technology (FinTech) is one of the key factors contributing to a more inclusive approach to the Indian female population concerning finances. The discussion indicates that most of the women respondents are not only knowledgeable of the FinTech services, including mobile banking, online payment, and online financial services, but are also actively engaged users. The findings also indicate that the digital literacy and the access to the digital devices have positive impacts on the uptake of the FinTech services by women. Moreover, the research discovers that FinTech platforms give women more comfort in carrying out financial tools, credit facilities, and saving. On the whole, the results indicate that the growing popularity of FinTech services can help to enhance access of women to formal finances and advance financial involvement.

IX. SUGGESTIONS

According to the results of the research, there is a number of steps which can be undertaken to include women in finance using FinTech. First, women need to be more digitally literate so that they can be able to utilize digital financial service. Awareness campaigns and training programs should be done to inform the women about the advantages and use of FinTech platforms. Second, the ease with which women can embrace digital financial services can be increased by creating more access to smartphones and internet connectivity, especially in the rural and semi-urban regions. Third, financial institutions and FinTech firms ought to create convenient and safe digital platforms, which will cater to the needs and concerns of women with respect to financial transactions. Lastly, government and policymakers need to keep up promoting digital financial inclusion efforts that would attract women to take part in the formal financial system.

X. CONCLUSION

The paper concludes that financial technology (FinTech) can be useful in promoting financial inclusion of women in India. The results show that online financial services like mobile banking and online payment systems have enhanced access of women to formal financial services. Such aspects as digital literacy and access to digital devices can greatly affect women using FinTech. The paper notes that the fact that more women are using FinTech services is a blessing that allows them to have a more active role in financial transactions and take charge of their finances. Thus, the awareness of digital technologies and better access to the technology can further empower women in terms of financial inclusion and economic empowerment.

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