

IMPACT OF FINTECH SERVICES ON WOMEN'S FINANCIAL EMPOWERMENT AND INCLUSION IN INDIA

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ABSTRACT

This research paper investigates the impact of Fintech services on women's financial empowerment and inclusion in India. Using a comprehensive survey, we analyze various aspects of financial behaviors, including mobile payment app preferences, perceptions of Fintech services, UPI adoption, and daily financial service usage. Additionally, we examine the presence of Jan Dhan accounts and the motivations driving their adoption. The study assesses the overall impact of Fintech services on women's financial well-being across multiple dimensions, such as investment, privacy, gender discrimination, access to financial advice, awareness of investment options, and financial control. The findings reveal that Fintech services have played a crucial role in positively influencing women's financial lives, encouraging savings and investment, addressing privacy concerns, reducing discrimination, enhancing financial awareness, and empowering women to take control of their financial futures. These results highlight the transformative potential of Fintech services in promoting financial inclusion and empowerment among women in India.

Keywords: *Fintech Services, Women's Financial Empowerment, Financial Inclusion.*

Introduction

The rise of Financial Technology (Fintech) services has revolutionized the financial landscape, offering innovative solutions that transform traditional financial practices. Fintech's potential in promoting financial inclusion and empowerment has garnered significant attention, especially in emerging economies like India. Despite numerous advancements in the sector, a gender gap in financial inclusion persists. This gap has led to extensive research into the role of Fintech in bridging gender disparities in financial access and empowerment. Our research delves into the impact of Fintech services on women's financial empowerment and inclusion in India, offering a comprehensive analysis of their financial behaviors, adoption of digital payment solutions, presence of Jan Dhan accounts, and the motivations driving their financial decisions.

Financial empowerment, a crucial element of economic development, entails enabling individuals to take charge of their financial lives, make informed decisions, and access the necessary financial tools and services. Women's financial empowerment is of particular importance due to its profound socio-economic impact, as it often translates to improved livelihoods, reduced gender disparities, and enhanced economic stability.

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This research focuses on women's experiences with Fintech services, encompassing an array of aspects that shape their financial lives. It seeks to answer critical questions: How do women in India prefer to manage their finances using mobile payment applications? What are their perceptions of Fintech services? Are they adopting innovative digital payment methods like the Unified Payments Interface (UPI)? Do they hold Jan Dhan accounts, and if so, what motivates them to do so?

Furthermore, our study evaluates the overall impact of Fintech services on women's financial well-being. It examines various dimensions, such as their ability to invest, privacy concerns, experiences of gender discrimination, access to financial advisory services, awareness of investment options, and control over their financial futures. By analyzing these aspects, we gain insights into how Fintech services have affected women's lives, their financial decision-making, and their prospects for greater financial independence.

The Indian government's Jan Dhan Yojana (PMJDY) initiative, launched in 2014, aimed to promote financial inclusion by providing banking and financial services to all. Jan Dhan accounts, part of this initiative, have played a pivotal role in expanding financial access across the country. Understanding the presence and motivations behind these accounts is crucial for comprehending the broader landscape of women's financial inclusion.

Our research is based on a survey that captures the opinions and experiences of women regarding Fintech services, UPI usage, and Jan Dhan accounts. We present detailed statistical analyses of the survey data to unveil the patterns, trends, and variations in women's financial behaviors and perceptions.

In summary, this paper explores the transformative potential of Fintech services in promoting women's financial empowerment and inclusion in India. By shedding light on women's financial preferences, behaviors, and motivations, we aim to contribute to the ongoing discourse on achieving gender equity and financial inclusion through technological advancements in the financial sector.

Literature Review

These papers provide valuable insights into the intersection of Fintech, women's financial empowerment, and financial inclusion. They collectively contribute to the growing body of knowledge on how digital financial services can play a transformative role in enhancing women's access to and control over their finances in both emerging and developed economies.

"Fintech and Financial Inclusion: A Review" (2019) by Allen et al. This paper reviews the impact of Fintech on financial inclusion, emphasizing the positive role of digital financial services in reaching the unbanked and underbanked populations. It discusses various Fintech solutions and their potential in closing the financial inclusion gender gap.

"Gender and Fintech: A Comparative Analysis of Mobile Banking Adoption in Bangladesh" (2018) by Rahman et al. This study explores the gender differences in mobile banking adoption in Bangladesh and identifies the factors that influence women's use of mobile financial services. It highlights the importance of addressing gender-specific barriers in Fintech adoption.

"The Impact of Fintech on Financial Inclusion: A Systematic Review" (2020) by Li et al. This systematic review examines the existing literature on Fintech's impact on financial inclusion. It provides insights into how digital technologies can help women gain access to financial services, with a focus on emerging economies.

"Financial Inclusion in India: A Review of Fintech Initiatives" (2017) by Sharma and Khanna. This paper reviews various Fintech initiatives in India and their potential to enhance financial inclusion. It discusses the role of digital payment systems, including the Unified Payments Interface (UPI), in promoting financial access for women.

"Gender and Mobile Money in Africa: The Role of Fintech in Financial Inclusion" (2019) by Aker and Wilson. The study examines the gender disparities in mobile money adoption in Africa, emphasizing the transformative impact of Fintech on women's financial inclusion. It discusses the unique challenges and opportunities faced by women in the region.

"Empowering Women through Fintech: A Case Study of Microfinance in Pakistan" (2018) by Malik et al. This case study explores the empowerment of women in Pakistan through Fintech-enabled microfinance services. It highlights the positive outcomes and challenges faced by women in accessing and using digital financial tools.

"Fintech and Financial Inclusion: A Review of the Literature" (2018) by Arner et al. This review provides a comprehensive overview of the relationship between Fintech and financial inclusion. It discusses various aspects, including digital payment systems, microfinance, and gender-specific issues.

"Mobile Payments and Women's Empowerment: A Case Study of M-Pesa in Kenya" (2017) by Mas and Morris, This case study focuses on the impact of mobile payment services like M-Pesa on women's empowerment in Kenya. It highlights how digital financial services can enhance women's control over their finances and improve their economic well-being.

"Challenges of Fintech Adoption for Women in Developing Countries" (2020) by Ahmed et al.

This paper examines the challenges faced by women in developing countries when adopting Fintech solutions. It discusses issues related to digital literacy, access to smartphones, and social norms that may hinder women's participation in digital finance.

"Fintech for Financial Inclusion: A Systematic Literature Review" (2019) by Bouri et al. This systematic literature review explores the impact of Fintech on financial inclusion, emphasizing the potential benefits for marginalized populations, including women. It discusses the role of digital payment apps and the importance of tailoring financial services to women's needs.

Methodology

This study employs a quantitative research design to examine the impact of fintech services on women's financial empowerment and inclusion in India. A cross-sectional survey approach was utilized to collect data. The survey instrument was designed to gather data on various aspects of women's financial lives and their experiences with fintech services.

- **Participants**

The participants in this study consisted of women in India, primarily from urban and semi-urban areas. A total of 450 respondents were surveyed. The inclusion criteria were women who were at least 18 years old and had experience with fintech services, including mobile payment apps, digital banking, and online financial tools.

- **Data Collection**

Data collection was carried out through a structured questionnaire, which was administered electronically. The questionnaire was distributed to potential participants through various online platforms and social media groups, as well as through email invitations. Participants were informed about the research objectives, and informed consent was obtained before they completed the survey. The data collection period extended for three months to ensure a diverse and representative sample.

- **Survey Instrument**

The survey instrument was developed based on the research objectives and variables identified in the study. It included closed-ended questions related to various aspects of fintech services, financial behaviors, motivations for opening Jan Dhan accounts, and the impact of fintech services on women's financial empowerment and inclusion. A 5-point Likert scale was used for participants to rate their agreement or experiences.

- **Variables**

The survey instrument covered several key variables, including:

- Demographic information: Financial behaviors, such as mobile payment app preferences, use of UPI, and frequency of financial service usage. Motivations for opening Jan Dhan accounts, Impact of fintech services on women's financial empowerment and inclusion, assessed through individual variables

- **Data Analysis**

Data collected from the survey were analyzed using statistical software. Descriptive statistics, such as means and standard deviations, were calculated to summarize the responses for each variable. Inferential statistics, including t-tests, were employed to compare the responses against a predefined test value, such as the overall impact of fintech services. Regression analysis was conducted to identify factors that significantly contributed to women's financial empowerment and inclusion.

Discussion and Analysis

The data collected in this study provides valuable insights into the impact of fintech services on women's financial empowerment and inclusion in India. This section discusses the findings in relation to the research objectives and variables and offers an interpretation of the results.

- **Mobile Payment App Preferences**

Table 1: Application Frequency

		App			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	PhonePe	32	7.1	7.1	7.1
	Paytm	29	6.4	6.4	13.6
	GPay	40	8.9	8.9	22.4
	CRED	50	11.1	11.1	33.6
	Amazon Pay	73	16.2	16.2	49.8
	All	200	44.4	44.4	94.2
	None	26	5.8	5.8	100.0
	Total	450	100.0	100.0	

The data indicates that a significant majority of the respondents (94.2%) prefer using mobile payment applications. This preference aligns with the global trend of increasing mobile banking and digital payment adoption. The convenience, accessibility, and time-saving aspects of mobile payment apps likely contribute to their popularity among women in India.

- **Perception of Fintech Services Innovation**

Table 2: Fintech Services Innovation Frequency

		Fintech_Services_Innovations			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	330	73.3	73.3	73.3
	No	59	13.1	13.1	86.4
	Don't Know	61	13.6	13.6	100.0
	Total	450	100.0	100.0	

While fintech services have made significant strides, the data shows that respondents' opinions about fintech services innovation vary. A notable 34.7% expressed a neutral stance. This divergence in perception may be attributed to variations in the degree of exposure to fintech services, as well as differences in understanding and experiences among respondents. Further research is needed to explore the factors influencing these perceptions.

- **UPI for Making Payments or Receiving Money**

Table 3: UPI Frequency

		UPI			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	327	72.7	72.7	72.7
	No	60	13.3	13.3	86.0
	Don't Know	63	14.0	14.0	100.0
	Total	450	100.0	100.0	

The data suggests that UPI has gained substantial awareness and adoption, with 72.7% of respondents indicating they are aware of and use UPI for making payments or receiving money. This indicates the success of government initiatives like Pradhan Mantri Jan Dhan Yojana (PMJDY) and Digital India in promoting digital payment methods. The 13.3% who do not use UPI may represent a demographic that requires additional outreach and support.

- **Uses of Financial Services**

Table 4: Uses of Financial Services Frequency

		Uses_Fin			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	336	74.7	74.7	74.7
	Weekly	48	10.7	10.7	85.3
	Monthly	54	12.0	12.0	97.3
	Rarely	6	1.3	1.3	98.7
	Never	6	1.3	1.3	100.0
	Total	450	100.0	100.0	

The data reveals that a majority of respondents (74.7%) reported using financial services on a daily basis. This demonstrates active engagement with financial transactions and indicates a growing financial maturity among women in India.

- **Uses of UPI**

Table 5: Uses of UPI Frequency

Uses_UPI					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	328	72.9	72.9	72.9
	Weekly	50	11.1	11.1	84.0
	Monthly	54	12.0	12.0	96.0
	Rarely	9	2.0	2.0	98.0
	Never	9	2.0	2.0	100.0
	Total	450	100.0	100.0	

Regarding the use of UPI for making payments or receiving money, the data shows that the majority (72.9%) use UPI on a daily basis. This high daily usage rate highlights the growing preference for UPI as a secure and convenient digital payment method.

- **Presence of Jan Dhan Account and Motivations**

Table 6: Jan Dhan Account Frequency

Jan_Dhan_Account					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	388	86.2	86.2	86.2
	No	33	7.3	7.3	93.6
	Don't Know	29	6.4	6.4	100.0
	Total	450	100.0	100.0	

The presence of Jan Dhan accounts among respondents is substantial, with 86.2% reporting having such accounts. This indicates that these women are included in the formal financial system and have access to government financial schemes.

Motivations for opening Jan Dhan accounts were diverse. "Financial Inclusion" was the most common motivation, as reported by 41.3% of respondents. "Access to Government Schemes" was another significant motivation, with 27.1% of respondents indicating its importance. These motivations align with the objectives of the PMJDY and show that women value financial inclusion and accessibility to government initiatives.

"Savings" as a motivation for 20.4% of respondents is indicative of the increasing financial awareness and aspirations for financial security among women. "No fees" and "Don't Know" as motivating factors also provide insights into the importance of cost-effectiveness and a need for financial education and awareness programs.

- **Impact of Fintech Services**

The overarching variable, "Impact of Fintech Services," presents the overall influence of fintech on women's financial empowerment and inclusion. The mean value of 3.7745, on a scale of 1 to 5, suggests a moderate to high overall positive impact. The relatively low standard deviation of 1.27848 indicates some variability but suggests that responses tend to cluster around the mean.

Table 7: One Sample

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Women_Enc	450	3.6400	1.29903	.06124
Privacy	450	3.7867	1.30061	.06131
Discr	450	3.6956	1.28491	.06057
Easy_Access	450	3.8222	1.27314	.06002
Women_Awar	450	3.6844	1.29001	.06081
Fina_Future	450	3.8244	1.26907	.05982
Micro_Plan	450	3.7400	1.24734	.05880
Dig_Ins	450	3.8111	1.28980	.06080

Women_Ability	450	3.7356	1.25175	.05901
Online	450	3.8289	1.28537	.06059
Tools	450	3.6333	1.32182	.06231
Easier	450	3.8267	1.27375	.06005
Subsidies	450	3.6311	1.32036	.06224
Goals	450	3.7333	1.32813	.06261
Culture	450	3.6933	1.28870	.06075
Vulnera	450	3.8244	1.28477	.06056
Tool	450	3.7022	1.28734	.06069
Credit	450	3.8044	1.29311	.06096
Women_Access	450	3.6689	1.29214	.06091

This indicates that, on average, fintech services have positively impacted women's financial lives in various dimensions, including investments, privacy, gender discrimination, access to financial advice, awareness of investment options, financial control, access to microloans and credit, digital insurance, emergency financial management, online education, financial planning tools, ease of access, government subsidies, expense tracking, financial self-reliance, vulnerability during crises, digital budgeting tools, credit history, and digital payment methods.

- **Comparing the Variables**

Table 8: One-Sample Test

	Test Value = 3				
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference
	Lower				
Women_Enc	10.451	449	.000	.64000	.5197
Privacy	12.831	449	.000	.78667	.6662
Discr	11.483	449	.000	.69556	.5765
Easy_Access	13.700	449	.000	.82222	.7043
Women_Awar	11.255	449	.000	.68444	.5649
Fina_Future	13.781	449	.000	.82444	.7069
Micro_Plan	12.585	449	.000	.74000	.6244
Dig_Ins	13.340	449	.000	.81111	.6916
Women_Ability	12.465	449	.000	.73556	.6196
Online	13.680	449	.000	.82889	.7098
Tools	10.164	449	.000	.63333	.5109
Easier	13.767	449	.000	.82667	.7087
Subsidies	10.140	449	.000	.63111	.5088
Goals	11.713	449	.000	.73333	.6103
Culture	11.413	449	.000	.69333	.5739
Vulnera	13.613	449	.000	.82444	.7054
Tool	11.571	449	.000	.70222	.5830
Credit	13.197	449	.000	.80444	.6846
Women_Access	10.981	449	.000	.66889	.5492

To further understand the impact of fintech services, a series of one-sample t-tests were conducted to compare each variable against the test value of 3 (representing a neutral stance).

Findings indicate that in most dimensions, including privacy, reduction of gender discrimination, access to financial advisory services, increased awareness of financial options, and empowerment for taking control of financial futures, fintech services have made a significant positive impact.

The convenience and accessibility of online financial education and training, access to digital insurance products, ease of managing financial resources during emergencies, access to secure digital payment methods, and support for managing expenses and financial goals have been favourably impacted by fintech.

However, it is crucial to acknowledge that there is some variability in responses. While the mean values indicate an overall positive impact, individual experiences and perceptions vary.

Practical Implications

The findings highlight the transformative role of fintech services in women's financial empowerment and inclusion. Recognizing the impact of fintech, policymakers and financial institutions can leverage this technology to further enhance financial inclusion and awareness among women. Outreach and educational programs could target those who expressed neutrality or less positive opinions about fintech services to address their concerns and provide support.

Conclusion

In conclusion, the data demonstrates that fintech services have played a significant role in promoting women's financial empowerment and inclusion in India. Women in India are increasingly using mobile payment apps and digital banking, with a preference for UPI. These services have successfully reduced gender-based discrimination and provided easier access to financial advisory services.

Opening Jan Dhan accounts has been motivated by financial inclusion and access to government schemes. While these motivations are important, there is also an increasing focus on savings and financial security among women. Fintech services are positively impacting multiple dimensions of women's financial lives, demonstrating their potential to bridge the gender gap in financial inclusion.

These findings suggest that fintech can be a catalyst for women's financial empowerment, and by addressing its limitations and enhancing its reach, it can contribute to broader financial inclusion and economic growth in India.

Limitations

This research is subject to certain limitations. The data collected primarily rely on self-reported responses, which may be influenced by social desirability bias. The survey is based on convenience sampling, which might not fully represent the entire population of women in India. Additionally, the cross-sectional design does not capture the dynamics and changes over time.

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