

Users' Perceived Risks and Challenges of FinTech Adoption in India: An Empirical Investigation

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Abstract

Users' perceptions of the risks and challenges associated with Financial Technology (FinTech) are growing in India. People's primary worries are privacy and data security in the digital sphere. One major obstacle to the mainstream adoption of FinTech is people's concern of cyber risks and possible data breaches. Furthermore, consumers frequently feel overwhelmed by the complexity of FinTech services, which presents a barrier due to a lack of financial literacy. This makes it more difficult for them to decide on digital financial goods. In addition, there are people who are resistant to change, especially those who are used to old banking practices. Users' anxieties are compounded by regulatory uncertainties, as they struggle with understanding the laws governing FinTech transactions. To build more trust and promote widespread FinTech adoption in India, it is imperative that these gaps be filled with strong cybersecurity safeguards, improved financial education, and well-defined regulatory frameworks. A sample of 266 respondents was collected. The variables that identify Users' Perceived Risks and Challenges of FinTech Adoption in India are Security and Privacy Concerns, Lack of Awareness and Understanding, Regulatory Uncertainty, and Perceived Complexity.

Keywords: FinTech, Privacy, Data security, Cyber risks, Financial literacy, Regulatory uncertainties, Cybersecurity safeguards.

Introduction

The fast changing field of Financial Technology (FinTech) in India offers consumers a subtle yet revolutionary experience. Even if more people are using digital financial services, there are still unique obstacles and concerns that people have. Users are wary of potential data risks when navigating the digital landscape due to privacy concerns. Complicating matters further are gaps in financial awareness and a reluctance to change from established banking practices. Uncertainties around regulations exacerbate worries. This introduction explores the complex environment of FinTech adoption in India, illuminating the complex relationship between innovation, user concerns, and the need for a safe and knowledgeable financial future. Using the moderating influence of perceived risk as a focal point, Jangir et al. (2022) assessed the multifaceted dynamics of consumers' continuance intention for FinTech services in India. They assessed how user views, risk factors, and continued use of FinTech platforms are intricately related to one another. Examining these aspects helped illuminate the difficulties users faced and highlight how important perceived risk is in influencing people's choices about whether to keep using FinTech services or stop using them altogether. This realization greatly advanced the understanding of the multifaceted behavioral and psychological factors impacting FinTech adoption in India. This indicated that consumers were reluctant to adopt FinTech services to varied degrees due to perceived

dangers; this underscores the necessity of focused interventions to allay user fears and promote increased user trust in the changing financial environment.

In the context of the COVID-19 epidemic, Abdul-Rahim et al. (2022) examined the benefit-risk views of FinTech adoption for sustainability from the distinct viewpoint of bank consumers. They examined how users' views and decisions about FinTech services were influenced by external conditions, with the fear of COVID-19 acting as a moderating factor. This showed the difficulties brought about by outside events, complicating users' assessments of risk in the context of FinTech uptake in India. They observed that consumers' fear of the epidemic and sustainability concerns caused them to reassess their risk-benefit analysis, which helped to provide a more nuanced picture of how priorities and preferences changed after major world events. They highlighted the dynamic nature of customer views and the necessity for FinTech companies to modify their business plans to conform to changing socioeconomic environments.

The relationship between perceived risk, trust, and the uptake of mobile banking in India has been assessed by Kumar et al. (2023). They emphasized that customers' decisions to use mobile banking services were heavily influenced by their perceptions of risk and trust. The primary objective of India allowed it to identify unique potential and problems in that nation's FinTech sector. This showed that building trust was essential to reducing perceived risks and promoting more seamless adoption of mobile banking. The aforementioned highlights the paramount significance of fostering trust within the FinTech industry in order to surmount adoption barriers. Industry stakeholders and policymakers who aim to augment the overall user experience and promote sustainable expansion within India's FinTech domain.

Literature Review

Xie et al. (2021) revealed FinTech adoption by evaluating the impacts of "perceived value" and "perceived risk" on consumers' decisions. Their impact on the uptake of FinTech platforms and the complex interactions between these two variables are clarified. Users embraced financial technology in India by navigating an environment where "perceived value" and "risk" impacted their responses. The analysis highlights the fine balance that influenced their adoption decisions by weighing the possible advantages against the related hazards. In order to improve FinTech adoption in India, stakeholders needed to understand these dynamics and emphasize the need for tactics that increased "perceived value" while reducing "perceived risks" in order to improve user experience. Sakhare et al. (2023) examined user limitations, adoption patterns, and perceptions to get an understanding of the variety of variables influencing the adoption of FinTech. The intricate network of variables impacting users in India, providing a thorough understanding of the difficulties and driving forces behind their choices. The perceptual components of consumers' experiences, the analysis underlined the need to overcome certain constraints that may have hampered FinTech adoption. This might have involved elements like trust challenges, regulatory concerns, or technological limitations. Addressing these limitations was crucial in customizing FinTech offerings to the distinct requirements of the Indian market, hence cultivating an atmosphere that promoted extensive implementation.

The interplay of "perceived risk," "perceived benefit," and "generation cohort" in digital banking adoption in India, according to Jain and Raman (2023), explored into the generational subtleties that affected users' attitudes and behaviors towards FinTech. Knowing how different generations viewed and handled the advantages and disadvantages of digital money was crucial in a nation with a heterogeneous population. Adoption dynamics were influenced significantly by the age cohorts. Addressing the individual issues and preferences of each generation became vital for creating focused tactics that resonated with varied user segments, promoting a more inclusive and effective FinTech adoption environment in India. Using an updated Technology Acceptance Model (TAM), Singh et al. (2020) examined the factors influencing the adoption of FinTech. By using a variety of techniques, they sought to identify the factors that motivate the adoption of FinTech. India's users grappled with a range of "perceived risks," which included issues with technology adoption, usability, and trust. Many considerations, including security, usability, and general pleasure, influenced users' selections as they made their way through the FinTech landscape. To enable a more seamless FinTech adoption process for users in India, they emphasized how crucial it is to address these subtle concerns.

Rani (2021) revealed that by concentrating on the customer-centric elements of FinTech adoption—adoption, satisfaction, perception, behavior, and security—a comprehensive analysis of Indian consumers' experiences with financial technology services was made possible. Users faced a wide range of difficulties, from "security concerns" to figuring out the

behavioral nuances of adopting FinTech. This acknowledged the complex interactions between these components and highlighted the necessity for FinTech companies to not just strengthen "security measures" but also comprehend and adapt to the changing views and behaviors of their consumers.

Goswami et al. (2022) assessed how FinTech affected financial inclusion in rural India, providing a contextual framework that enhanced comprehension of users' "perceived risks" and difficulties. They explained the difficulties associated with adoption in rural areas while also acknowledging the revolutionary potential of FinTech in closing gaps in financial inclusion. India's rural users encountered particular difficulties, such as low awareness, access restrictions, and a cautious attitude towards adopting new technologies. The importance of customising FinTech projects to the rural environment was underlined, along with the need to identify and reduce any unique "risks" that would prevent acceptance. It was essential to comprehend the unique obstacles that India's rural consumers experience in order to develop inclusive FinTech strategies that truly attended to the demands and concerns of this heterogeneous user base.

Customers' "FinTech adoption," with an emphasis on the "Open Banking" example, has been described by Chan et al. (2022). In the Indian environment, where fintech is developing quickly, customers struggle with complex issues pertaining to "privacy," "data security," and the reliability of these cutting-edge financial services. They emphasised the complex terrain of Open Banking adoption, illuminating how users manoeuvre through the distinct obstacles presented by this specific FinTech sector. They emphasised the significance of resolving these particular issues in order to promote an atmosphere that is more conducive to Open Banking and, consequently, more widespread FinTech adoption in India. According to Vijai (2019), there are "opportunities and challenges" related to fintech in India. In the quickly developing fintech ecosystem, users had to overcome a variety of obstacles, such as adjusting to shifting financial landscapes, navigating technological disruptions, and getting over concerns about the "security" of their financial data. Because of the complex nature of users' "perceived risks," business stakeholders and legislators must approach these issues methodically. Nayak et al. (2021) examined the ways in which "trust" and "data security" interact to affect consumers' acceptance of FinTech services. They emphasized how crucial these elements were in influencing consumers' opinions and choices inside the Indian FinTech market. Concerns over "data security" and building "trust" become more pressing when consumers interact with digital financial services more frequently. They stressed the necessity for strong security protocols and efforts to establish trust in order to allay user anxieties and promote a more reliable and safe FinTech ecosystem in the nation.

The intricate environment of user attitudes and adoption patterns was highlighted by Mehta and Kumari (2021) on the "drivers of FinTech" adoption in India. Within the constantly evolving FinTech landscape, consumers struggled with subtle elements that affected their choices, such as "trust," "convenience," and apparent advantages. They influenced user's decisions and served as a basis for risk-reduction and improved FinTech adoption in India approaches. Sreekala et al. (2023) examined the "issues and challenges" related to FinTech in India, emphasizing the difficulties users had in this dynamic financial environment. By examining technological impediments, regulatory restrictions, and user concerns, they provide a comprehensive analysis of the issues preventing the mainstream adoption of FinTech. Since a diverse user base in India and their disparate degrees of technology proficiency, it became critical to address these issues in order to develop focused solutions that promoted a more accessible and inclusive FinTech sector in the nation.

Objective

To identify Users' Perceived Risks and Challenges of FinTech Adoption in India.

Study's Methodology

266 respondents are considered for this study which was collected from participants of different age group and educational level. For collection of data, Random sampling method, and examined by "Explanatory Factor Analysis" for outcome.

Study's findings

Below table is about general details of respondents which shows that 64.28%, and 35.72% are female participants. Regarding age of the respondents, 30.45% are between 23 to 26 years, 39.85% are 26 to 28 years, and 29.70% are above 28 years of age. About Education Level, Intermediate level are 34.58%, Graduation level are 37.97%, and Post-graduation level are 27.45%.

Details of Participants

Variable	Participants	% age
Gender		
Male	171	64.28
Female	95	35.72
Total	266	100
Age in years		
23 to 26	81	30.45
26 to 28	106	39.85
Above 28	79	29.70
Total	266	100
Educational Level		
Intermediate level	92	34.58
Graduation level	101	37.97
Post-graduation level	73	27.45
Total	266	100

“Factor Analysis”

“KMO and Bartlett's Test”

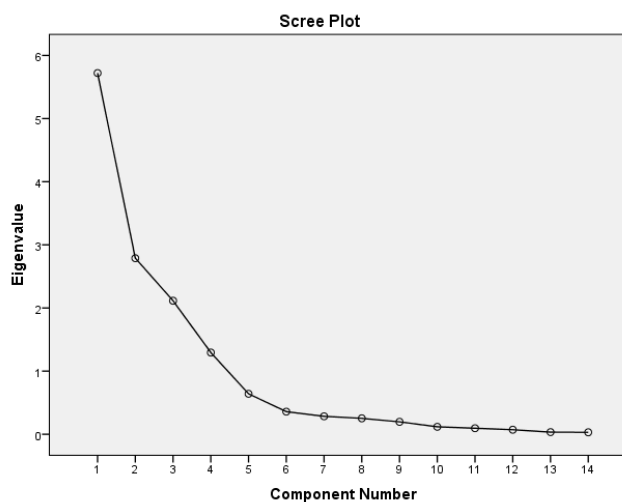
“Kaiser-Meyer-Olkin Measure of Sampling Adequacy”		.802
“Bartlett's Test of Sphericity”	“Approx. Chi-Square”	4136.434
	df	91
	Significance	.000

In above table “KMO and Bartlett's Test” above, KMO value found is .802

“Total Variance Explained”

“Component”	“Initial Eigenvalues”			“Rotation Sums of Squared Loadings”		
	“Total”	“% Of Variance”	Cumulative %	“Total”	“% Of Variance”	Cumulative %
1.	5.721	40.863	40.863	3.751	26.791	26.791
2.	2.788	19.917	60.780	3.614	25.817	52.608
3.	2.115	15.106	75.886	2.399	17.138	69.745
4.	1.294	9.243	85.129	2.154	15.384	85.129
5.	.641	4.577	89.706			
6.	.358	2.560	92.266			
7.	.284	2.029	94.295			
8.	.252	1.801	96.096			
9.	.197	1.407	97.503			
10.	.117	.838	98.341			
11.	.096	.684	99.026			
12.	.072	.511	99.537			
13.	.034	.242	99.779			
14.	.031	.221	100.000			

All the four factors are making contribution in explaining total 85.129% of variance. The variances explained Security and Privacy Concerns is 26.791%, Lack of Awareness and Understanding is 25.817%, Regulatory Uncertainty is 17.138%, and Perceived Complexity is 15.384%.



ScreePlot

“Rotated Component Matrix”

S. No.	Statements	Factor Loading	Factor Reliability
	Security and Privacy Concerns		.978
1.	Users might worry about the security of their financial information when adopting FinTech services	.961	
2.	Cases of data breaches or cyberattacks can reduce trust in the adoption of FinTech	.946	
3.	Concerns about the misuse of personal data for targeted marketing	.946	
4.	Users are suspicious of potential data risks when adopting FinTech due to privacy concerns	.935	
	Lack of Awareness and Understanding		.961
1.	Some users might be unaware with FinTech services, leading to a lack of trust to adopt new technologies	.969	
2.	Limited financial literacy can contribute to challenges in understanding the risks and benefits	.939	
3.	Understanding of Fintech technology will enable easy adoption of technology	.921	
4.	Lack of awareness and understanding of FinTech services is a challenge in its adoption	.883	
	Regulatory Uncertainty		.883
1.	Anxieties about regulatory uncertainties, as they struggle with understanding the laws	.882	
2.	Changes in regulations or the lack of clear guidelines can create uncertainty	.835	
3.	Misunderstanding of regulatory and laws can lead to lack of trust	.834	
	Perceived Complexity		.787
1.	Perceived complexity of FinTech, especially for older or less tech-savvy users, can be a barrier	.894	
2.	Simplifying user interfaces and enhancing user education can address this concern	.784	
3.	Users feel overwhelmed by the complexity of FinTech services, which is a barrier due to a lack of financial literacy	.767	

Factors and the associated variables

The first factor of the study is Security and Privacy Concerns, it includes variables like Users might worry about the security of their financial information when adopting FinTech services, Cases of data breaches or cyberattacks can reduce trust in the adoption of FinTech, Concerns about the misuse of personal data for targeted marketing, and Users are suspicious of potential data risks when adopting FinTech due to privacy concerns. The second factor is Lack of Awareness and Understanding, the variables it includes are Some users might be unaware with FinTech services, leading to a lack of trust to adopt new technologies, Limited financial literacy can contribute to challenges in understanding the risks and benefits, Understanding of Fintech technology will enable easy adoption of technology, and Lack of awareness and understanding of FinTech services is a challenge in its adoption. Regulatory Uncertainty is the third factor of the study, the variables under this factor are Anxieties about regulatory uncertainties, as they struggle with understanding the laws, Changes in regulations or the lack of clear guidelines can create uncertainty, and misunderstanding of regulatory and laws can lead to lack of trust. Last and fourth factor is Perceived Complexity, the variables under this factor are Perceived complexity of FinTech, especially for older or less tech-savvy users, can be a barrier, simplifying user interfaces and enhancing user education can address this concern, and Users feel overwhelmed by the complexity of FinTech services, which is a barrier due to a lack of financial literacy.

“Reliability Statistics”

“Cronbach's Alpha”	“Number of Items”
.882	14

Total reliability of 14 items including variables for Users' Perceived Risks and Challenges of FinTech Adoption in India is 0.882

Conclusion

In conclusion, the perceived risks and challenges related to FinTech adoption in India highlight how dynamic the financial sector is and how technology has the ability to completely change it. The advantages of FinTech are clearly greater than the drawbacks, notwithstanding user worries about data security, privacy, and the flexibility of traditional financial institutions. Financial inclusion, credit availability, and the simplification of laborious procedures could all be improved by the growing digitization of financial services. There's a chance that users' perceptions of the dangers will change as they become more accustomed to FinTech solutions, particularly in light of regulatory authorities' continued efforts to build strong frameworks for cybersecurity and data protection. FinTech's dynamic nature also makes it necessary to run constant awareness and education campaigns to provide users with the information they need to make wise decisions. Building trust and addressing issues with accountability, transparency, and consumer protection can be facilitated by cooperative efforts between FinTech companies, regulatory agencies, and traditional financial institutions. Essentially, innovation and risk management must be carefully balanced if FinTech growth is to continue in India. In order to create a robust and inclusive FinTech landscape that meets the changing requirements and expectations of Indian consumers, it will be essential to address user concerns and make use of regulatory frameworks as the ecosystem develops. The variables that identify Users' Perceived Risks and Challenges of FinTech Adoption in India are Security and Privacy Concerns, Lack of Awareness and Understanding, Regulatory Uncertainty, and Perceived Complexity.

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