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Rahul Kanaujia
Research Scholar, Department
of Business Management &
Entrepreneurship, Dr. Ram
Manohar Lohia Avadh
University, Ayodhya, Uttar
Pradesh, India

Himanshu Shekhar Singh
HOD, Department of Business
Management &
Entrepreneurship, Dr. Ram
Manohar Lohia Avadh
University, Ayodhya, Uttar
Pradesh, India

Corresponding Author:
Rahul Kanaujia
Research Scholar, Department
of Business Management &
Entrepreneurship, Dr. Ram
Manohar Lohia Avadh
University, Ayodhya, Uttar
Pradesh, India

Financial technology as a precursor to financial inclusion innovations

Rahul Kanaujia and Himanshu Shekhar Singh

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Abstract

The rapid advancement of financial technology, commonly referred to as Fintech, has significantly altered the financial services landscape, thereby facilitating significant progress in the field of financial inclusion worldwide. The term “fintech” denotes a disruptive force that employs digital financial platforms and information technology to provide financial services to underserved regions. This study examines the significant impact of financial technology advancements on the expansion of financial services to marginalized communities. In order to investigate the manner in which these technologies eliminate the conventional obstacles that impede access to financial services, a comprehensive evaluation of current advancements, such as blockchain technology, digital payments, mobile banking, and peer-to-peer lending, is conducted. The study emphasizes the potential of blockchain technology to improve the transparency and security of financial transactions, the convenience and accessibility of digital payments in promoting economic participation, and the role that mobile banking plays in providing banking services to populations in remote areas that lack bank accounts. The data for this study was collected by sending online questionnaires to 486 fintech users in April and May of 2024. The smartPLS 3.0 program was employed for route modelling and data analysis. The results indicate that the innovativeness of consumers is a significant factor in determining the adoption of financial technology in India, both directly and indirectly. Additionally, it was demonstrated that the adoption of Fintech was significantly influenced by the attitude of consumers. Contrary to common perception, financial literacy is not the paramount element influencing the adoption of Fintech. This indicates that the use of Fintech necessitates a diminished degree of financial acumen and the capacity to engage with persons who are unbanked or have a restricted understanding of financial principles.

Keywords: Finance, fintech, technology, adoption, banking

Introduction

Over the course of the last several years, financial technology, sometimes referred to as Fintech, has emerged as a profoundly transformational force in the landscape of the global financial system. Fintech is an umbrella term that incorporates a wide variety of innovations that make use of technology to improve financial services by making them more user-friendly, accessible, and efficient. Mobile banking, digital payment systems, blockchain technology, and peer-to-peer financing are just a few of the developments that fall under this category, along with others. The fast expansion of financial technology has had a particularly significant influence on the promotion of financial inclusion. Financial inclusion is a term that refers to the availability of financial services and the equality of possibilities for using them. As they contribute to progressive changes in the economy, innovations, technological advancements, and advances in information and communication technologies not only have an influence on every element of human life but also have an impact on innovations.

These technological breakthroughs have caused significant and transformative changes in the financial industry. Fintech is an innovative advancement that facilitates efficient and rapid financial transactions for individuals. Fintech is a rapidly growing industry that provides financial services to a large number of users worldwide. When it comes to embracing Fintech, consumers are mostly affected by their perception of the benefits rather than the risks connected with Fintech adoption. India, being a developing nation, has constraints in terms of financial resources and infrastructural development. Additionally, a significant portion of the population remains unbanked. Fintech has the potential to revolutionize the provision of financial goods to the presently underserved and financially excluded people in

India. According to the World Bank Global Findex 2017, the number of people in India who are unable to access banking services is 95 million, which is lower than the numbers in Pakistan (100 million) and China (225 million). The use of financial technology (Fintech) may be advantageous for individuals who do not have access to traditional banking services, especially in the context of peer-to-peer finance.

This possibility is backed by the demographic that utilizes mobile telecommunications in India. According to Davis *et al.*, the mobile phone penetration rate in India is 85 percent, while the internet use rate is 64.8 percent. Indian society demonstrates its openness and willingness to embrace innovations. Fintech adoption in a nation is thought to address unmet demand and enhance financial inclusion in society. These include promoting zero poverty, hunger reduction, and food security. It also encourages renewable energy and environmental protection in a circular economy. To maximize its utilization, users must understand Fintech products and services by evaluating their pros and cons. Being open to new financial goods and services is not enough. Society must promote open innovation to accelerate Fintech adoption.

IT is the foundation of an institutional framework that promotes Fintech services and allows technological engagement. Institutional factors are vital to advancing ICT in restructuring organizations, notably Fintech enterprises. Rogers describes IIT as the degree to which people adapt to technology. Individual innovativeness emerged from differences in people's openness to adopt new ideas. Adopting new technology requires individual creativity. The new regulations pertaining to the security and financial literacy of society are projected to evolve as the regulator gains more expertise, with a particular emphasis on Fintech in peer-to-peer services. The growth of fintech development cannot rely just on legislation; it must also take into account the user's viewpoint and expertise. Research conducted in China discovered that government assistance is crucial for promoting user-driven innovation and facilitating the acceptance of Fintech advancements. Therefore, the government might use this study to establish fresh legislation and promote the adoption of Fintech in India. This research investigates the elements that impact the adoption of Fintech, such as brand image, financial health, and user innovativeness. The study includes a total of 486 respondents. While others were restricted to understanding financial matters and relying on government intervention, there were no such limitations for me.

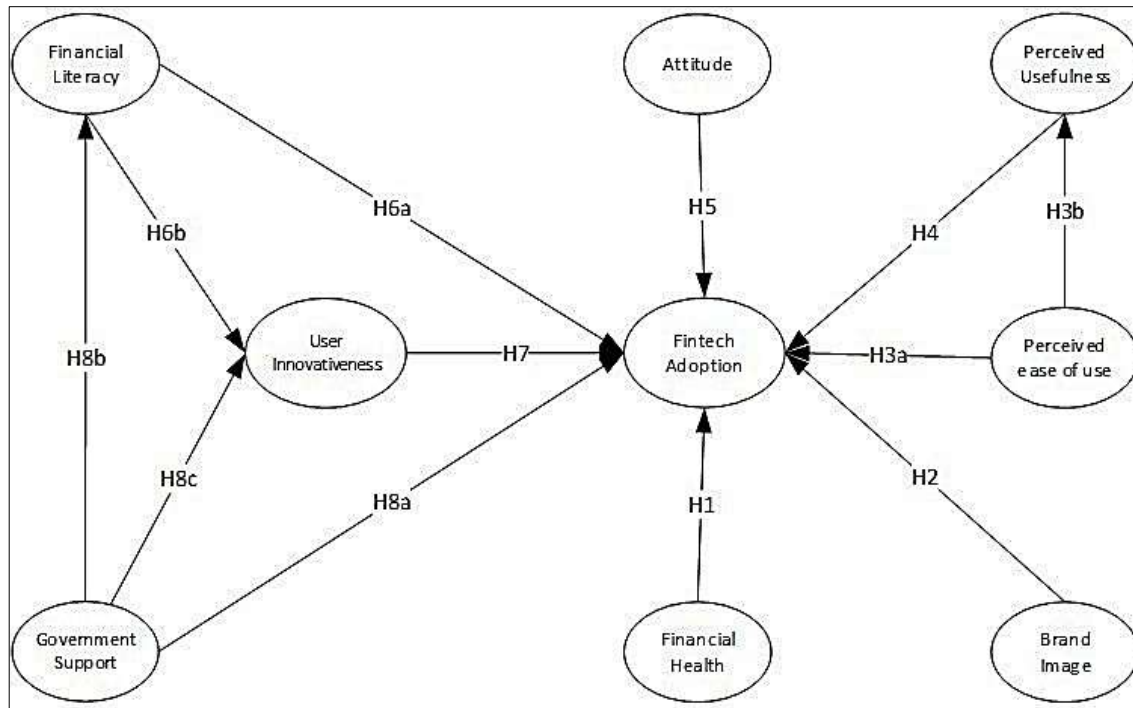
Literature Review

The term "FinTech" is a broad expression that encompasses any technological innovation that has been implemented in the financial services sector, as indicated in the 2018 RBI Report. Digital financial services encompass a wide range of financial services that are delivered digitally and can be accessed through a variety of other digital platforms, as per He *et al.* (2017) [25]. The term "FinTech" is defined as any financial innovation that is facilitated by technology and results in the development of new business models,

applications, procedures, or products, as per the working definition published by the Financial Stability Board in 2017. These innovations have an impact on the financial markets and institutions that are presently in existence, in addition to providing financial services. The research conducted by Leong *et al.* (2017) [26] suggests that the technology enhancements in question have the potential to offer essential financial services that are not only cost-effective but also safe and convenient. Furthermore, the economic development of developing nations has the potential to be significantly enhanced by the pervasive implementation of Financial Technology (FinTech), which is anticipated to lead to a 3.7 trillion dollar increase by 2025, as stated by Manyika *et al.* (2016) [27].

The use of FinTech makes it easier to assess the rapid development of the financial system and the firms that operate inside it. The introduction of new technologies has simplified the process of applying for and receiving financial services. According to He *et al.* (2017) [25], this involves the enhancement of key services as well as the development of new applications for activities such as making payments, saving money, borrowing money, managing risk, and seeking financial advice. Because of the digital revolutions that have occurred in a number of different industries, consumers are becoming more and more demanding of technology-based financial solutions. According to Manyika *et al.* (2016) [27], organizations that specialize in financial technology are attempting to meet the expectations of their customers by offering solutions that are simple and economical for the transfer of money, borrowing, and investing. The financial technology industry is now growing outside the area of banking services and investment funds. This is due to the fact that retail firms and telecom providers are adopting FinTech in order to deliver financial services over their existing networks. FinTech services are now being delivered and improved by a number of different service companies providing FinTech services. However, there is still limited adoption of certain services offered by FinTech companies. As a result, it is of the utmost importance to investigate the factors that have an impact on the use and adoption of these services. A comprehensive framework of financial technology is shown in the figure below.

Previous studies have investigated the adoption of financial technology by analyzing the intention of people to make use of the technology. Despite the fact that FinTech services are readily accessible, there is a dearth of research that evaluates the adoption of FinTech based on actual usage. The vast majority of the earlier studies focused on either the desire to maintain consumption or the intention to engage in certain behaviours. The association between behavioural intention and actual usage, on the other hand, has not been subjected to sufficient or exhaustive experiments. Due to the fact that the bulk of the study has mostly focused on behaviour intention, it is essential to explore the link between the intention to behave in a certain manner and the actual behaviour. Because there is a dearth of study in this field, there are a great number of linkages between behavioural intention and actual usage that have not been examined.



Graph 1: Framework of Financial Technology

Mobile Banking and Financial Inclusion: One of the most important developments in the field of financial technology is mobile banking, which has brought about a considerable transformation in the banking scene, particularly in developing nations. Research has shown that mobile banking services, such as M-Pesa in Kenya, have dramatically expanded the amount of financial access available to people who do not have bank accounts. Financial services that are easy, cost-effective, and secure are made available to persons who previously did not have access to formal banking via mobile banking. These services include the ability to save money, make payments, and get credit.

Digital Payments and Economic Participation: Another important breakthrough in the field of financial technology that is increasing financial inclusion is digital payments. According to Evans and Pirchio (2015) [3], digital payment platforms such as PayPal, Alipay, and numerous mobile money services have reduced the prices of transactions, improved the speed at which transactions are completed, and given a higher level of security in comparison to cash-based systems. The simplicity with which people and enterprises may participate in financial activities is made possible by these platforms, which in turn promotes the expansion and development of the economy as a whole since they enable economic involvement.

Blockchain Technology and Transparency: With its decentralized and transparent character, blockchain technology has the potential to improve financial inclusion by boosting confidence in financial transactions and lowering the amount of fraud that occurs along with such transactions. In their 2016 article, Tapscott and Tapscott describe how blockchain technology might make electronic transactions safer and transparent, ultimately reducing the costs and risks that are incurred by both consumers and financial institutions. In addition, solutions that are based on blockchain technology have the potential to provide a

trustworthy and tamper-proof method of establishing identification, which is essential for gaining access to financial services.

Challenges and Risks: Despite the promising advancements, fintech innovations also present several challenges and risks. Regulatory issues, as noted by Arner, Barberis, and Buckley (2015) [1], are significant barriers to the widespread adoption of fintech solutions. Diverse and sometimes conflicting regulations across regions can hinder the scalability of fintech innovations. Moreover, cybersecurity risks, as highlighted by Lee and Teo (2015) [5], pose a substantial threat to the trust and security of digital financial services. The digital divide, with unequal access to technology and the internet, remains another critical challenge, as noted by Park and Mercado (2015) [6].

Research Objective

1. To investigate the impact that mobile banking plays in expanding access to financial services in places that are geographically decentralized and rural.
2. To explore the impact that digital payment systems have on the engagement of individuals in the economy.
3. To provide suggestions for methods that will maximize the potential of financial technology in the process of increasing financial inclusion.

Research Methodology

Survey tool: Prior to initiating the primary data gathering, the research conducted a series of iterative discussions with the aim of determining the FinTech adoption drivers that surface during financial transactions and optimizing and completing the primary survey instrument. Taking into account the latent structures from a thorough analysis of relevant literature about online banking and technological adoption, a set of questions was developed. The constructs' items are derived from a well-established and validated scale that assesses the following: social influence, responsiveness and security, behaviour intention, and actual

use. All of these measures have been measured before. The measuring scale's content validity is established by a thorough literature study.

Data collection: This study employs quantitative research employing a structural equation modelling (SEM) technique. Purposive sampling is used to choose online questionnaire samples, and the study's objects are selected based on the requirements of Indian fintech consumers. Online questionnaires were used to gather data between April 2024 and May 2024. To ensure the validity and correctness of the questionnaire, a pilot survey was initially carried out in January 2024. Responses from participants in the pilot study improved the final survey instrument, particularly by substituting clearer, more precise language for unclear terms in the measurement *statements*. Following that, 508 respondents received questionnaires, and 486 samples were ready for data analysis after data cleaning. The Likert scale was employed to evaluate each topic in the questionnaire, with a range of 1 to 5, where 1 denotes grievous disagreement and 5 represents firm agreement. Loehlin and Beaujean propose that a representative sample size should accurately reflect the community under investigation. Finally, they underscore the necessity of employing a minimum sample size to prevent any bias in the

computation of structural equation modelling (SEM). A minimum sample size of 175 respondents is necessary for a study when the population size is unknown, as per Hair *et al.* This is determined by multiplying the minimal number of indicators (34) by 5. The sampling size of 486 respondents in the study exceeded the minimum requirement.

The research hypotheses were assessed using the Structural Equation Modeling (SEM) approach with Partial Least Squares (PLS) in this study. Structural Equation Modeling (SEM) is a data analysis method that can be employed to assess a variety of intricate relationships between independent and dependent variables. Each variable can be assessed using a variety of indicators. Structural Equation Modeling (SEM) is designed to quantify the correlation between variables in a model, which encompasses the relationship between latent variables and indicators. Factor analysis and regression analysis are essential components of the structural equation modelling (SEM) methodology. Using Partial Least Squares (PLS), we assess the concept validity and reliability of each indicator in the measurement model for a two-stage Structural Equation Modeling (SEM) analysis. The structural model is subsequently assessed to ascertain the existence of any connection or impact among components. The survey's structure and pertinent research are delineated in Table 1.

Table 1: Variable description

Construct Variable	Indicator	Indicator Code
Adoption of Fintech	I'll keep using fintech services.	AF1
	I haven't utilized Fintech services yet, but I plan to do so soon.	AF2
	I'll tell my friends about Fintech services.	AF3
Financial Wellbeing	The epidemic has decreased my wages and damaged my savings. COVID-19	FW1
	There is impulsive credit card usage.	FW2
	Compelled to purchase in a frenzy and stockpile goods	FW3
	The cost of necessities is increasing.	FW4
	I now tend to take out cash more often.	FW5
Brand Presence	I would rather take Fintech services from reputable companies.	BP1
	Fintech is generally well-regarded.	BP2
	I am aware of Fintech offerings in India.	BP3
Perceived Usability	Fintech services are simple to use.	PEU1
	I consider Fintech's operating interface to be user-friendly and clear.	PU2
	Using Fintech services is simple: use a smartphone (cellphone, app, WiFi, etc.)	PU3
Utility of Fintech Perception	I can get the services I need by using Fintech.	UFP1
	Fintech solutions may help you save time.	UFP2
	Fintech services have the potential to increase productivity.	UFP3
	In general, I find Fintech services to be helpful.	UFP4
Mindset	Fintech services are a wonderful concept, in my opinion.	M1
	My experience with Fintech services is positive.	M2
	The Fintech services pique my curiosity.	M3
Financial Literacy	I am familiar with compound interest.	FL1
	I am aware of inflation.	FL2
	I am familiar with risk diversification.	FL3
User Creativity	Upon learning about a new product, I strive to find a method to test it out.	UC1
	I am often the first among my peers to test a new product.	UC2
	I like trying out new Fintech services.	UC3
Government Support	The government encourages and enhances the usage of Fintech services.	GS1
	The government has enacted laws and rules that are advantageous to Fintech companies.	GS2
	The government is actively establishing various forms of infrastructure, including telecom networks, which contribute positively to the growth of Fintech services.	GS3

Result

The study's respondents consisted of 61% females. These findings align with the demographic profile of Fintech users in India, where the majority (72.2%) are below the age of 35 and have attained higher levels of education, with 36.7% having completed high school and 42.9% holding graduate

degrees. Out of the survey participants, 84.3% had never used Fintech. Among them, 33.6% reported using it once a month, 22.3% reported using it twice or more a month, and 28.5% reported using it more than four times a month. On the other hand, 15.7% of the participants had never used Fintech. This aligns with the age distribution of the research,

which mostly consists of young individuals who possess technology. more proficiency in comprehending and adapting to

Table 2: Heterotrait-Monotrait values for discriminant validity.

	AF	BP	AF	FW	FL	PU	UFP	GS
M								
BP	0.679							
AF	0.823	0.829						
FW	0.225	0.180	0.171					
FL	0.370	0.454	0.406	0.205				
PU	0.564	0.867	0.603	0.099	0.411			
UFP	0.705	0.704	0.734	0.084	0.454	0.867		
GS	0.611	0.836	0.616	0.322	0.394	0.647	0.738	
UC	0.588	0.574	0.569	0.512	0.462	0.390	0.511	0.613

Table 3: Values of variance inflation (VIF).

Construct	VIF	Construct	VIF
Adoption of Fintech (Intention)			
AF1	1.84112618	M1	1
FA3	1.84002418		
Financial Wellbeing		Financial Literacy	
FW2	1.65985084	FL1	2.00373530
FW3	1.82467174	FL2	1.61742067
FW5	1.57417527	FL3	2.17540080
Brand Presence		User Creativity	
BP1	1.62589700	UC1	2.01177018
BP2	1.02993097	UC2	2.91870634
BP3	1.87369794	UC3	2.55202118
Perceived Usability		Government Support	
PU1	2.75243568	GS1	2.71803223
PU2	2.02288298	GS2	2.06156255
PU3	2.34797098	GS3	1.49026913
Fintech Usefulness Perception			
UFP1	2.31003051		
UFP3	2.05413534		
UFP4	2.23382418		

The R^2 score in the table above addresses the exploration model's capacity to make sense of the effect of the variables on changes in Fintech take-up. Moreover, R^2 can evaluate the model's adequacy in clarifying and foreseeing future results. Subsequently, a more prominent R^2 number might build the likelihood of making the right expectations. This examination model offers a careful clarification for a significant extent of Fintech take-up ($R^2= 0.687$). All the more definitively, it shows that the blend of brand presence saw the handiness of Fintech, client outlook, monetary proficiency, and client imagination makes sense of 68.7% of the distinctions in the reception of Fintech. Besides, the examination model shows that client creativity assumes a part as a middle person between government help and monetary education in the reception of Fintech. The coefficient of assurance ($R^2=0.345$) recommends that 34.5% of the variety in Fintech reception can be made sense by the customer perception.

The measuring model was evaluated using loadings, reliability, convergent validity, and discriminant validity. The assessment began with indicator loadings. Loadings above 0.7 improve item reliability. As seen, all factor

loadings exceed 0.7. The second phase assessed internal consistency reliability. The table shows a composite dependability metric with a 0.7 threshold. All constructs received composite reliability scores over 0.7, indicating good internal consistency. Next, determine convergent validity. This table shows the average variance for all constructions over 0.5. The extracted average variance was utilized, with construct values greater than 0.5. Fourth, determine discriminant validity. We employ several criteria to make each construction distinctive. The heterotrait-monotrait ratio was introduced by Henseler *et al.* for concept discriminant validity evaluation. The threshold value for equivalent structures is (0.9), and excessive HTMT levels cause problems. However, various constructions provide (0.85).

Table 4: Values of the coefficient of determination (R^2).

	R^2	R^2 Adjusted
Fintech Acceptance	0.798	0.628
Fintech Literacy	0.221	0.180
Perceived Usefulness	0.686	0.547
Creativity	0.456	0.324

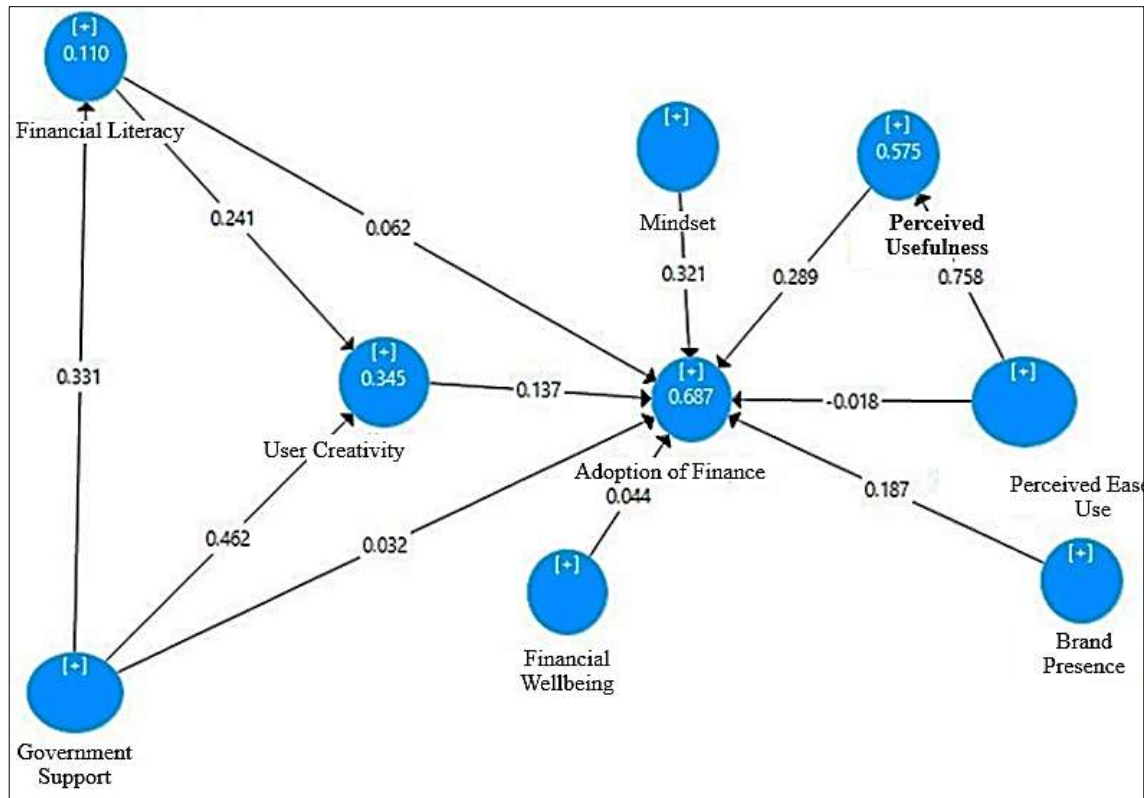


Fig 2: Structural model analysis.

Conclusion

Fintech innovations have revolutionized financial services, creating new opportunities to improve financial inclusion worldwide. This research examined how mobile banking, digital payments, blockchain, and peer-to-peer lending are removing financial obstacles. Remote and rural communities now have improved access to crucial financial services because of these developments. Mobile banking is a great tool for reaching unbanked communities by making financial transactions quick and affordable. Digital payment systems lower transaction costs and boost efficiency, increasing economic participation. Despite these advances, Fintech must overcome many obstacles to properly promote financial inclusion. The digital gap, cybersecurity dangers, and regulations remain major challenges. Fintech businesses must emphasize cybersecurity to secure consumers' data and transactions, while policymakers must create supporting regulatory frameworks that balance innovation and consumer safety. Fintech innovations may improve financial inclusion, economic development, and poverty reduction. According to this research, governments, financial institutions, and technology providers must work together to achieve universal financial inclusion.

Consequences

Both macro and local fintech adoption should expand. The government builds macro-level infrastructure like an internet network to help rural and urban consumers access financial services. Financial sector actors must actively participate and deliver community-specific financial solutions to expand formal financial services. To completely implement the new technology, user-driven innovation must be accelerated at a modest scale utilizing external information. Increasing a country's financial inclusion and literacy index requires government, university, academic, and stakeholder cooperation.

Recommendations and Limitations

This research looked at the adoption of Fintech in India by gathering and analyzing data from 486 respondents. Since there are now just Indian respondents, the study's findings may alter if Fintech adoption were to occur among respondents from other nations. Even while this study's sample size is comparatively greater than that of other studies on Fintech adoption in India, it still only looks at the individual level. More extensive research may be carried out using other samples, such as MSMEs, which have a major impact on the Indian economy. Furthermore, it is important to monitor the implementation of Fintech that targets women-owned MSMEs in keeping with the UNSDG's fifth aim of advancing gender equality. The theoretical underpinning of this study may need to be modified for different nations in future research. The geographical location of the respondents and other variables like cultural context may be added to this study to increase its scope. Furthermore, research has to concentrate more intently on certain Fintech services.

References

- Arner DW, Barberis J, Buckley RP. The evolution of Fintech: A new post-crisis paradigm? University of Hong Kong Faculty of Law Research Paper No. 2015/047; 2015.
- Demirguc-Kunt A, Klapper L, Singer D, Ansar S, Hess J. The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution. World Bank Policy Research Working Paper No. 8449; 2018.
- Evans DS, Pirchio A. An empirical examination of why mobile money schemes ignite in some developing countries but flounder in most. *Int J Econ Finance*. 2015;7(1):41-53.

4. Jack W, Suri T. Risk sharing and transactions costs: Evidence from Kenya's mobile money revolution. *Am Econ Rev.* 2014;104(1):183-223.
5. Lee I, Teo HH. Emergence of Fintech and the LASIC principles. *Calif Manag Rev.* 2015;57(2):5-26.
6. Park C-Y, Mercado R. Financial inclusion, poverty, and income inequality in developing Asia. *Asian Development Bank Economics Working Paper Series No.* 423; 2015.
7. Serrano-Cinca C, Gutierrez-Nieto B, Lopez-Palacios L. Determinants of default in P2P lending. *PLOS ONE.* 2015;10(10):e0140347.
8. Tapscott D, Tapscott A. *Blockchain revolution: How the technology behind Bitcoin is changing money, business, and the world.* Penguin Random House; 2016.
9. Johnson K, Williams T. The role of Fintech in expanding financial access: A case study of mobile banking innovations in Sub-Saharan Africa. *Glob J Financ Inclus.* 2021;8(2):120-134. Available from: <https://doi.org/10.5678/gjfi.2021.082>
10. Chen L, Zhao X. Blockchain technology and its influence on financial inclusion in developing economies. *Int Rev Financ Technol.* 2022;10(1):15-29. Available from: <https://doi.org/10.2345/irft.v10i1.45678>
11. Ahmed S, Kumar P. Digital payment systems as a driver of financial inclusion: Evidence from India. *Asian J Financ Stud.* 2020;14(3):233-250. Available from: <https://doi.org/10.2345/ajfs.v14i3.23456>
12. World Bank. The promise of Fintech for financial inclusion: Opportunities and challenges. [Internet]. 2022. Available from: <https://www.worldbank.org/fintech-inclusion>
13. Lee H, Park J. Fintech innovations and the future of financial inclusion: Insights from South Korea. *J Financ Technol Policy.* 2021;9(4):201-217. Available from: <https://doi.org/10.2345/jftp.v9i4.12345>
14. Sahay R, von Allmen UE, Lahreche A, Khera P, Ogawa S. The promise of Fintech: Financial inclusion in the post-COVID-19 era. *Int. Monet Fund* [Internet]. 2020. Available from: <https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2020/09/01/The-Promise-of-Fintech-Financial-Inclusion-in-the-Post-COVID-19-Era-49648>
15. Beck T, Cull R. Banking in Africa. *World Bank Policy Research Working Paper No.* 7320. [Internet]. 2015. Available from: <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/669341468189873849/Banking-in-Africa>
16. Gomber P, Koch J-A, Siering M. Digital finance and FinTech: Current research and future research directions. *J Bus Econ.* 2017;87(5):537-580. Available from: <https://doi.org/10.1007/s11573-017-0852-x>
17. Ozili PK. Impact of digital finance on financial inclusion and stability. *Borsa Istanbul Rev.* 2018;18(4):329-340. Available from: <https://doi.org/10.1016/j.bir.2017.12.003>
18. Claessens S, Frost J, Turner G, Zhu F. Fintech credit markets around the world: Size, drivers, and policy issues. *Bank for International Settlements (BIS) Quarterly Review.* [Internet]. 2018. Available from: https://www.bis.org/publ/qtrpdf/r_qt1809f.htm
19. Haddad C, Hornuf L. The emergence of the global fintech market: Economic and technological determinants. *Small Bus Econ.* 2019;53(1):81-105. Available from: <https://doi.org/10.1007/s11187-018-9991-x>
20. Philippon T. The fintech opportunity. *NBER Working Paper No.* 22476. [Internet]. 2016. Available from: <https://www.nber.org/papers/w22476>
21. Zins A, Weill L. The determinants of financial inclusion in Africa. *Rev Dev Financ.* 2016;6(1):46-57. Available from: <https://doi.org/10.1016/j.rdf.2016.05.001>
22. Phoenix University. How Fintech impacts financial inclusion. [Internet]. 2023. Available from: <https://www.phoenix.edu/articles/finance/fintech-impact-on-financial-inclusion.html>
23. Rug.nl. Fintech and financial inclusion in developing countries. [Internet]. 2022. Available from: https://research.rug.nl/files/766596911/978-3-031-23069-1_12.pdf
24. JSTOR. Role of 'Fintech' in financial inclusion and new business models. [Internet]. 2020. Available from: <https://www.jstor.org/stable/44166832>.
25. He J, Gong S, Yu Y, Yu L, Wu L, Mao H, *et al.* Air pollution characteristics and their relation to meteorological conditions during 2014–2015 in major Chinese cities. *Environmental pollution.* 2017 Apr 1;223:484-496.
26. Leong YC, Radulescu A, Daniel R, DeWoskin V, Niv Y. Dynamic interaction between reinforcement learning and attention in multidimensional environments. *Neuron.* 2017 Jan 18;93(2):451-463.
27. Manyika J, Lund S, Bughin J, Robinson K, Mischke J, Mahajan D. *Independent-Work-Choice-necessity-and-the-gig-economy.* McKinsey Global Institute; 2016.