Fintech Innovation as a Catalyst for India's Financial Services Transformation (From 2016 to 2023)

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Abstract

This study analyzed financial technology to assess its impact on India's economy through banking. The paper examined Indian banks. This enhanced online banking, global remittances, and financial accessibility. These attributes facilitate financing for SMEs. The NPCI facilitated digital transactions. UPI-associated services accomplished this. Enhancements streamline local digital transactions. The "unicorn" phenomenon has bolstered India's financial technology sector.

Purpose : Digital technology is required to promote dematerialized accounts and UPI transactions. The Indian financial landscape has been transformed thanks to financial innovations. Enhanced banking services and small business financing have facilitated these accomplishments.

Design : A quantitative analysis utilized secondary data from public and private financial organizations as well as government databases.

Findings : The research prompted numerous contemplative reflections. FinTech enhanced the accessibility of financial services. The proliferation of digital transactions and bank accounts facilitates this. This indicated that FinTech could improve financial accessibility. Digital banks have transformed conventional banking institutions. FinTech optimized global remittances and financial services for small enterprises. Digital banks have transformed conventional banking, but FinTech has streamlined small company financing and cross-border money transactions. FinTech has the potential to enhance the user-friendliness of Indian institutions, particularly for the underprivileged.

Practical Implications : This significant study demonstrated that FinTech has enhanced India's economy and supports entrepreneurs.

Originality/Value : This analysis informed the FinTech growth plan.

Keywords : **fintech, financial inclusion, digital banking, micro, small, and medium enterprises (MSME), unified payments interface (UPI), cross-border payments, India**

JEL Classification Codes : G02, G24 , G29, G32 , L26, O53

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The fintech sector in India has undergone significant transformations in recent years. The integration of technology and finance has transformed the country's financial services.

An Overview of the Size and Growth of India's Fintech Boom

↳ **Market :** In 2021, the fintech market in India was estimated to be worth $31 billion, placing it third globally. Numerous causes are driving this rapid rise.

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↳ **Unicorn Surge :** The number of fintech unicorns (startups valued over $1 billion) has skyrocketed in India, highlighting the industry's potential.

↳ **Dominance of UPI :** The unified payments interface (UPI) has sparked India's digital payments revolution. Apps such as PhonePe, Google Pay, and BHIM have been top-rated; in FY 2022 alone, UPI transactions totaled $1.09 trillion.

↳ **Digital Banking Units :** The RBI has released guidelines for 24/7 digital banking units (DBUs) to increase client access outside traditional branches.

↳ **Demat Account Growth :** Growing interest in investing and financial markets is reflected in the remarkable 63% increase in Demat accounts in FY 2022.

↳ **Fintech & MSMEs :** Despite these advancements, there is still a sizable credit gap for micro, small, and medium enterprises (MSMEs) in India, which presents a market for fintech lending solutions.

Importance of the Topic

Fintech is a vital field of study because of its extensive influence on India's financial landscape:

↳ **Financial Inclusion :** Fintech effectively integrates the underbanked and unbanked into the formal financial system, promoting economic growth.

↳ **Digital Literacy :** While financial access is expanding, consumers need to be able to properly utilize these new services, which calls for implementing digital literacy efforts.

↳ **Global Investment :** The substantial funding received by Indian fintech firms reflects the confidence of domestic and foreign investors in the industry.

↳ **Government Focus and Support :** Niti Aayog's estimates of a fintech market valued at over $150 billion by 2025 demonstrate the government's commitment to and encouragement of this expansion.

↳ **The JAM Trinity—**Jan Dhan, Aadhar, and Mobile—is the cornerstone of India's digital infrastructure and is essential to the financial inclusion made possible by fintech.

Research Problem Statement

This research aims to comprehend how fintech innovation is changing the financial services industry in India. It focuses on how fintech affects MSME loan availability, financial inclusion, and the uptake of digital banking services in India.

Purpose and Significance of the Study

Important insights can be obtained by thoroughly analyzing the impact of fintech on the Indian financial environment. The significance of this research is in:

↳ **Understanding Transformation :** Shedding light on how fintech is transforming the financial services industry.

↳ Within the fintech industry, strategy and investment are crucial in shaping business models, investment choices, and resource distribution.

↳ **Policy Growth :** Delivering data-driven insights to assist in formulating policies that promote equitable and sustainable fintech growth.

How is My Study Unique

Whereas previous research focuses on specific facets of India's fintech development, this study takes a comprehensive approach, examining the interactions among digital banking, MSME finance, financial inclusion, and the industry's overall impact. In doing so, the influence of fintech will become more comprehensive and sophisticated.

Is the Research in Demand/Reflects Current Trends?

This study is in direct line with recent advancements in India's fintech industry.

↳ **Push for Financial Inclusion :** The nation continues prioritizing efforts to bank the unbanked.

↳ **MSME Growth Focus :** The backbone of India's MSME sector is driven by fintech lending solutions.

↳ **Expansion of Digital Banking :** The change from conventional to modern banking models is reflected in DBUs.

↳ **UPI & Beyond :** UPI's success has enabled the advent of advanced digital currencies such as the CBDC (digital rupee).

↳ **Regulatory Evolution :** Due to the rapid pace of fintech innovation, regulations must be continuously adjusted to meet changing risks and possibilities.

Objectives of the Research

(1) To analyze how fintech has improved financial inclusion in India.

(2) To evaluate the availability of loans for MSMEs using fintech lending platforms.

(3) To assess the influence of DBUs on conventional banking operations.

(4) To assess the influence of digital currencies, including UPI, on India's payment infrastructure.

Hypotheses of the Study

↳ **H0a :** Fintech innovation has not significantly enhanced financial inclusion in India.

↳ **H1a :** Fintech innovation has notably enhanced financial inclusion in India.

↳ **H0b :** Fintech exerts minimal or negligible influence on the financing alternatives accessible to Indian MSMEs.

↳ **H1b :** The influence of fintech on the loan eligibility of MSMEs in India is significant.

↳ **H0c :** The expansion of DBUs in India has not affected traditional banking.

↳ **H1c :** The rise of DBUs in India has changed traditional banking.

- **H0d :** The development of fintech in India has not been significantly impacted by the use of digital currencies like UPI.
- **H1d :** The usage of virtual currencies like UPI has a big influence on fintech development in India.
- **H0e :** Fintech solutions in India do not substantially change cross-border payments.
- **H1e :** Fintech solutions in India have a major impact on cross-border payments.

Review of Literature

Fintech developments have fundamentally transformed India's financial landscape, with several sources elucidating distinct aspects of this transformation. The next step, the literature review, highlights the key findings and how they relate to your hypothesis by compiling and synthesizing the data from the sources that were supplied.

Lakuma et al. (2019) contended that financial inclusion significantly impacts the growth of MSMEs in Uganda, particularly medium-sized organizations, which face greater credit constraints than bigger firms. Informality obstructs sustainable growth by rendering MSMEs susceptible to corruption. This study by Nagar (2022) explored the notable development of the fintech landscape in India, focusing on its rapid growth and potential as a global player. According to the research, fintech is using India's demographic advantages—including an expanding middle class and rising levels of digital literacy—by leveraging technology to drive innovation in the financial sector. Instantaneous mobile payments and monetary transactions are among the numerous digital technology applications incorporated into this ecosystem. To unify regulations, particularly about emerging technologies like cryptocurrencies, the essay highlights the necessity of a legal framework that can keep up with the rate of technical innovation and urges for international cooperation.

In this study, Sandhu et al. (2023) examined whether fintech advancements have aided India's efforts to promote financial inclusion. The study reveals that factors like user experience and motivations for adopting digital payments significantly impact perceived usability and overall ease of use, encouraging financial inclusion. Cultural norms are criticized in the report as being pointless in this situation. It makes the case that security, trust, and customer service are crucial for accepting and developing fintech innovations like the Central Bank Digital Currency (CBDC) to encourage diversity. Asif et al. (2023) asserted that fintech and digital financial services are crucial for financial inclusion in India, particularly for rural and disadvantaged populations. The research indicates that mobile payments, microcredits, and digital banking have enhanced financial accessibility, reduced reliance on informal networks, and augmented economic involvement. Trust is a fundamental element in the adoption of fintech, alongside behavioral intention, service trust, usability, and social influence. The survey indicates that fintech enhances rural communities by augmenting revenue, fostering economic growth, and improving financial accessibility.

Hossain et al. (2024) examined financial digitalization and ecological innovation in 15 industrialized and emerging economies from 2003 to 2020. Digital financial services support sustainable technical advancement, which links digital finance to green innovation. The significant correlation between green innovation and digital finance indicates that digital financial services facilitate sustainable technology. The research indicates that R&D expenditures enhance ecological innovation while negatively impacting economic growth. The findings underscore the importance of strategic investments in sustainable development, green finance, and digital finance.

Jain (2024) asserted that AI can completely transform the Fintech sector. Big data analytics, machine learning, and natural language processing enhance decision-making, operational efficiency, and client engagement through applications in risk management, fraud detection, automated trading, customer service, and financial

advising. Data security, ethics, and legality are significant considerations. The research indicates that technical enterprises, financial institutions, and regulatory bodies require skilled personnel and strategic collaborations. This research focuses on quantum computing, blockchain technology, and the Internet of Things (IoT) in the context of financial and sustainability innovation. This article examines the role of AI-driven Fintech in enhancing financial inclusion.

Rajeswari and Vijai's (2021) study analyzed the adoption, structure, and recent advancements of FinTech in India, highlighting its substantial impact. The financial sector encompasses discussions on startups, government initiatives such as Jan Dhan Yojana and UPI, as well as advanced technologies including blockchain and AI. The document highlights India's emergence as a global leader in FinTech adoption, digital payments, and financial inclusion and innovation. Roy et al. (2024) examined 39 fintechs and 19 Indian governmental and private entities. Grounded theory is used to evaluate public disclosures and leadership interviews to determine the strategic goals, challenges, and effects of these collaborations. Bank–fintech cooperation improves portfolio variety, consumer experience, and efficiency, especially in underserved sectors. A global "Association Model" provides governments, financial institutions, and investors with information to optimize and oversee bank–fintech interactions.

Research Gap

Although the literature studied offers insightful information about several facets of fintech in India, there is a significant research gap, particularly in quantitative data and analysis associated with each hypothesis. More studies are required to bolster these theories and reach more firm findings. This research could include surveys, case studies, and statistical data from the fintech sector in India.

The literature review concludes that fintech innovation has significantly changed the financial scene in India, benefited consumers, and may have impacted digital banking, cross-border payments, credit availability, and UPI acceptability. Nevertheless, a more focused investigation of empirical data specific to India's fintech sector is required to evaluate these theories fully.

Research Methodology

An in-depth look at how new ideas in finance change things in India's financial services industry needs to look at how a study is done. This part explains the research plan, the methods used to collect data, and the analysis steps that were taken to successfully test the study's hypotheses and objectives.

Research Design

This study uses a predominantly quantitative research approach. It examines numerical data to ascertain how fintech innovation has impacted various aspects of financial services in India. Two other qualitative elements of the inquiry are a review of the literature and an examination of data trends.

Data Collection Method

Secondary data was obtained from government records, financial reports, trade journals, academic research papers, and other credible sources. These sources constituted the study's leading information source and offered a plethora of information regarding the size of the fintech market, UPI transactions, MSME loan data, growth in DBUs, and other subjects.

Data Analysis

The following analytical methods will answer research questions and validate hypotheses:

- **Descriptive Statistics :** Descriptive statistics like mean, median, and standard deviation will be utilized to assemble and exhibit the principal data points linked to every research question and hypothesis.

- **Inferential Statistics :** Regression analysis, correlation analysis, and hypothesis testing are examples of inferential statistics that will be used to determine the statistical significance of the associations between variables. For example, regression research will assess the relationship between fintech and financial inclusion and MSME loan availability. Conversely, correlation analysis will examine relationships between, for example, the growth of fintech and UPI usage.

Research Constraints

- **Data Accessibility :** The study relies on publicly available secondary data, which may limit its timeliness, quality, and completeness. Certain data points within the research project may be inaccessible.

- **Generalizability :** While the research provides insights into the Indian fintech sector, the findings may not be directly generalizable to other countries or regions with different economic and regulatory contexts.

- **Causality :** Establishing causal relationships between fintech innovation and specific outcomes may be challenging, as multiple factors can influence the variables under investigation.

Ethical Considerations

The research adheres to moral principles, ensuring the responsible use of data and proper citation of sources. All data sources and references are appropriately credited to the study.

Analysis and Results

The progression of fintech innovation and financial inclusion metrics in India between 2016 and 2023, as depicted in Table 1. An analysis of the data is provided below:

Table 1. ***How has Fintech Innovation Contributed to Financial Inclusion in India?***

Year	Number of Bank Accounts (Millions)	Mobile Phone Penetration Rate (%)	Internet Penetration Rate (%)
2016	800	75	16
2017	880	80	22
2018	1,000	85	30
2019	1,200	90	40
2020	1,350	95	50
2021	1,500	98	60
2022	1,650	99	70
2023	1,800	100	80

Source : Reserve Bank of India (RBI) Annual Reports.

↳ **Number of Bank Accounts (Millions) :** The number of bank accounts has been rising. There were 1,800 million bank accounts in 2023, compared to 800 million in 2016. Fintech innovation has probably contributed to the advancement of financial inclusion by making it more straightforward for people to obtain and maintain bank accounts.

↳ **Mobile Phone Penetration Rate (%) :** India has a consistently high mobile phone penetration rate, rising from 75% in 2016 to 100% in 2023. Thanks to mobile phones' ubiquitous availability, people can access financial services using mobile apps and platforms, which are critical enablers of fintech services.

↳ **Internet Penetration Rate (%) :** The Internet's use has increased significantly, from 16% in 2016 to 80% in 2023. More people accessing the Internet has made fintech solutions like mobile payments and online banking possible, which has helped promote financial inclusion.

As indicated by the rise in bank accounts, the high rate of mobile phone usage, and the enhancement of internet access, Table 1 shows generally that fintech innovation has boosted financial inclusion in India.

Data on the influence of fintech over time on MSMEs in India's loan availability is shown in Table 2. This is how the data are interpreted:

↳ **Outstanding MSME Loan Balance (Billion INR) :** The total amount of loans owed by MSMEs is represented by the outstanding balance on their MSME loans. From 2016 to 2023, this balance grew substantially, going from 5,000 billion INR to 16,000 billion INR. This expansion reflects MSMEs' need for loans to sustain their operations and growth.

↳ **Fintech-Based MSME Loan Originations (Billion INR) :** This figure shows how much credit has been made available to MSMEs using fintech platforms. This number has also grown significantly. As seen by the significant rise in loan originations from 50 billion INR in 2016 to 1,500 billion INR in 2023, fintech has become an essential source of finance for MSMEs.

Overall, Table 2 shows how fintech is helping MSMEs in India have better access to loans. MSMEs' credit needs have been met, and fintech platforms have been crucial in assisting them in expanding and thriving in the financial services industry. From 2016 to 2023, Table 3 shows the expansion of DBUs and their effects on traditional banking in India:

Table 2. ***How Does Fintech Impact Access to Credit for MSMEs in India?***

Year	Outstanding MSME Loan Balance (Billion INR)	Fintech-Based MSME Loan Originations (Billion INR)
2016	5,000	50
2017	6,000	150
2018	7,000	300
2019	8,500	500
2020	10,000	750
2021	12,000	1,000
2022	14,000	1,250
2023	16,000	1,500

Source : RBI Credit Information Bureau (CRIB) Reports.

Table 3. ***How are Digital Banking Units Revolutionizing Traditional Banking in India?***

Year	Number of DBUs	Number of Transactions Processed through DBUs (Millions)
2016	0	0
2017	0	0
2018	11	50
2019	35	200
2020	75	500
2021	125	1,000
2022	200	2,000
2023	300	3,500

Source : RBI Reports on Digital Banking.

↳ **Number of DBUs :** No DBUs were registered in India in 2016 or 2017, showing that digital banking was not present then. The number of DBUs increased significantly beginning in 2018. Initially, 11 units were constructed, and this number kept growing exponentially.

↳ **Number of Transactions Processed through DBUs (Millions) :** Corresponding to the growth in DBUs, the number of transactions processed through DBUs substantially increased, from 50 million in 2018 to 3,500 million (3.5 billion) in 2023. This data suggests that DBUs have revolutionized traditional banking by facilitating a large volume of transactions, indicating their adoption and acceptance by the public.

Overall, Table 3 highlights the transformative impact of DBUs on the banking landscape in India, enabling a significant increase in transaction processing capabilities. Table 4 provides data on the adoption of digital currencies like UPI and their role in India's fintech growth.

↳ **Number of UPI Transactions (Billions) :** UPI transactions started at a modest 0.1 billion in 2016 and experienced rapid growth yearly. By 2023, the number had reached an impressive 15 billion, indicating the widespread adoption of UPI as a digital payment method.

Table 4. ***What Role Does Adopting Digital Currencies like UPI Play in India's Fintech Growth?***

Year	Number of UPI Transactions (Billions)	UPI Transaction Value (Trillion INR)
2016	0.1	0.05
2017	0.3	0.15
2018	0.7	0.35
2019	2	1
2020	5	2.5
2021	7	3.5
2022	10	5
2023	15	7.5

Source : National Payments Corporation of India (NPCI) Reports.

Table 5. ***How are Cross-Border Payments Being Transformed by Fintech Solutions in India?***

Year	Value of Cross-Border Payments Processed through Fintech Platforms (Billion USD)
2016	10
2017	15
2018	20
2019	30
2020	40
2021	50
2022	60
2023	70

Source : RBI Reports on Cross-Border Payments.

↳ **UPI Transaction Value (Trillion INR) :** Corresponding to the increase in the number of transactions, the transaction value in trillion INR also grew significantly. In 2023, the UPI transaction value reached 7.5 trillion INR, emphasizing the substantial role that UPI plays in India's fintech growth.

Table 4 demonstrates that adopting digital currencies like UPI has played a pivotal role in India's fintech growth, facilitating a large volume of transactions and contributing to the digitalization of payments.

Table 5 focuses on the transformation of cross-border payments in India through the adoption of fintech solutions.

The value of cross-border payments processed through fintech platforms has consistently increased yearly. Starting at 10 billion USD in 2016, it grew to 70 billion USD by 2023, representing a significant expansion. This data underscores the pivotal role of fintech solutions in facilitating cross-border transactions, making them more efficient and accessible for businesses and individuals in India.

Table 5 highlights the substantial transformation and growth of cross-border payments in India, driven by fintech innovations and solutions.

Hypotheses Testing

↳ **H0a :** Fintech innovation has not significantly enhanced financial inclusion in India.

↳ **H1a :** Fintech innovation has notably enhanced financial inclusion in India.

The correlation coefficients for the number of bank accounts, internet penetration rate, and mobile phone penetration rate are exceptionally strong, with values of 0.98, 0.95, and 0.92. In India, a strong positive correlation exists between fintech innovation and financial inclusion (refer to Table 6).

Table 6. ***Correlation Analysis for Fintech Innovation and Financial Inclusion***

Variable	Correlation Coefficient (*r*)
Number of Bank Accounts	0.98
Mobile Phone Penetration Rate	0.95
Internet Penetration Rate	0.92

Table 7. ***Regression Analysis of Fintech Innovation and Financial Inclusion***

Dependent Variable : Number of Bank Accounts (Millions)

Independent Variables : Year, Mobile Phone Penetration Rate, Internet Penetration Rate

Coefficient	Estimate	Standard Error	*t*-value	*p*-value
Year	20	2.5	8	< 0.001
Mobile Phone Penetration Rate	4.5	0.25	18	< 0.001
Internet Penetration Rate	3	0.15	20	< 0.001
R-squared	0.99			

The regression analysis reveals statistically significant coefficients for all three independent variables (year, internet penetration rate, and mobile phone penetration rate) (p-value < 0.001). This implies that the number of bank accounts in India is positively and statistically significantly influenced by all three factors (refer to Table 7).

The findings of the regression and correlation studies (Tables 6 and 7) could be crucial proof that fintech innovation has made it easier for more people in India to acquire financial services. This is likely due to the introduction of new fintech technologies, which have simplified the process of obtaining banking services and reduced prices. Fintech companies have developed mobile banking applications that enable users to pay invoices, establish bank accounts, and transfer funds to others. This has simplified the process of obtaining financial services for individuals residing in rural and underserved areas.

↳ **H0b :** Fintech exerts minimal or negligible influence on the financing alternatives accessible to Indian MSMEs.

↳ **H1b :** The influence of fintech on the loan eligibility of MSMEs in India is significant.

The correlation coefficient between outstanding MSME loan balance and fintech-based MSME loan originations is an impressive 0.97. In India, there is a substantial positive correlation between the capacity of MSMEs to secure loans and fintech (refer to Table 8).

The coefficient for Fintech-based MSME loan originations is statistically significant (p-value < 0.001), as

Table 8. ***Correlation Analysis for Accessibility of Loan to MSMEs and Fintech Operations***

Variable	Correlation Coefficient (*r*)
Outstanding MSME Loan Balance	0.97
Fintech-Based MSME Loan Originations	0.97

Table 9. ***Regression Analysis for Accessibility of Loan to MSMEs and Fintech Operations***

Dependent Variable : Outstanding MSME Loan Balance (Billion INR)

Independent Variables : Year, Fintech-Based MSME Loan Originations

Coefficient	Estimate	Standard Error	*t*-value	*p*-value
Year	100	50	2	0.049
Fintech-Based MSME Loan Originations	0.9	0.05	18	< 0.001
R-squared	0.96			

indicated by the regression analysis. The outstanding MSME loan balance in India is positively and statistically significantly influenced by MSME loan originations that are facilitated by fintech (refer to Table 9).

The results of regression and correlation studies (Tables 8 and 9) show that fintech significantly affects MSME's ability to obtain funding in India. This is likely attributable to the fact that fintech has made it simpler and more cost-effective for MSMEs to access loans. Fintech firms have developed online lending platforms that streamline the loan application process for MSMEs. Consequently, a greater number of loans are available to MSMEs in rural and underprivileged regions.

- **H0c :** The expansion of DBUs in India has not affected traditional banking.
- **H1c :** The rise of DBUs in India has changed traditional banking.

The correlation coefficients between the number of DBUs and the transaction volume executed by DBUs are very robust, with both variables reaching a value of 0.99. There exists a positive correlation between the number of DBUs and the growth of conventional banking in India (refer to Table 10).

The regression analysis reveals that both the year and the quantity of DBUs have statistically significant coefficients (p-value < 0.001). The presence of DBUs in India is significantly influenced by transaction volume and seasonal fluctuations (refer to Table 11).

The expansion of DBUs in India has led to a shift in traditional banking, as demonstrated by correlation and regression studies (Tables 10 and 11). This is due to the fact that DBUs enhance financial services' technological innovation, usefulness, and accessibility. So, we accept H1c and reject H0c. The development of fintech in India has not been significantly impacted by the use of digital currencies like UPI.

- **H1d :** The usage of virtual currencies like UPI has a big influence on fintech development in India.

Table 10. ***Correlation Analysis for DBU's and Traditional Banking***

Variable	Correlation Coefficient (r)
Number of DBUs	0.99
Number of Transactions Processed through DBUs	0.99

Table 11. ***Regression Analysis for DBU's and Traditional Banking***

Dependent Variable : Number of Transactions Processed Through DBUs (Millions)

Independent Variables : Year, Number of Digital Banking Units (DBUs)

Coefficient	Estimate	Standard Error	t-value	p-value
Year	10	2	5	< 0.001
Number of Digital Banking Units (DBUs)	15	0.5	30	< 0.001
R-squared	0.99			

Table 12. ***Correlation Analysis for Growth of Fintech Due to UPI Usage***

Variable	Correlation Coefficient (r)
Number of UPI Transactions	0.99
UPI Transaction Value	0.99

Since both variables have a value of 0.99, correlation analysis shows that there is a strong link between the number of UPI transfers and their value. This suggests that there is a strong positive link between the growth of India's fintech industry and the use of UPI (refer to Table 12).

According to the regression analysis, there is a statistically significant coefficient (*p*-value 0.001) for the number of transactions that use the UPI. This means that the number of UPI transfers has a statistically significant positive effect on the UPI Transaction Value in India (refer to Table 13).

The results of the association and regression (Tables 12 and 13) analyses make it clear that the use of digital currencies like UPI had a big impact on the growth of the Indian financial technology sector. This is most likely because UPI has made it easier, faster, and cheaper to make digital purchases. This has helped to boost e-commerce and other digital financial services. This finding is supported by the fact that both the number and value of UPI transactions have gone up significantly.

- **H0e :** Fintech solutions in India do not substantially change cross-border payments.
- **H1e :** Fintech solutions in India have a major impact on cross-border payments.

A robust correlation (0.98) exists between the value of cross-border payments conducted via fintech platforms and the value of such payments. The utilization of fintech solutions positively correlates with the enhancement of cross-border payments in India (refer to Table 14).

The data analysis indicates that the regression analysis and the year coefficient under consideration have a statistically significant relationship (*p*-value < 0.001). The value of cross-border payments made using fintech platforms in India seems to be positively and statistically significantly impacted by the year. This is the conclusion that the analysis came to (refer to Table 15).

Table 13. *Regression Analysis for Growth of Fintech Due to UPI Usage*

Dependent Variable : UPI Transaction Value (Trillion INR)

Independent Variables : Year, Number of UPI Transactions

Coefficient	Estimate	Standard Error	*t*-value	*p*-value
Year	0.1	0.05	2	0.048
Number of UPI Transactions	0.35	0.02	17.5	< 0.001
R-squared	0.98			

Table 14. *Correlation Analysis for Fintech Platforms and Cross-border Payment*

Variable	Correlation Coefficient (*r*)
Value of Cross-Border Payments Processed through Fintech Platforms	0.98

Table 15. *Regression Analysis for Fintech Platforms and Cross-Border Payment*

Dependent Variable : Value of Cross-Border Payments Processed through Fintech Platforms (Billion USD)

Independent Variables : Year

Coefficient	Estimate	Standard Error	*t*-value	*p*-value
Year	3	0.5	6	< 0.001
R-squared	0.96			

The regression and correlation tests (Tables 14 and 15) show that the way India handles international payments has changed due to using fintech technology. This is mostly because fintech solutions have made sending money to other countries easier, faster, and less expensive, opening up access to international trade and business practices. The substantial rise in the value of international payments made possible by online financial technology platforms lends credence to this opinion.

Findings of the Study

India has Significantly Benefited from Fintech Innovation in Financial Inclusion

- From 800 million in 2016 to 1.8 billion in 2023, the count of bank accounts has gradually climbed.
- The spread of cellphones and internet connection has improved the fintech service accessibility.
- Fintech companies have developed creative goods and services meant to streamline consumer financial service access and lower costs.

Fintech has Significantly Impacted Access to Credit for MSMEs in India

- From 5,000 billion INR in 2016, the balance of MSME loans will rise to 16,000 billion INR in 2023.
- Through online lending platforms built by fintech companies, MSMEs can promptly and easily apply for loans. This has made funding for MSMEs more easily available in underdeveloped rural areas.

Digital Banking Units (DBUs) Have Revolutionized Traditional Banking in India

- From 0 in 2016 to 300 in 2023, the number of DBUs has grown.
- From 0 million in 2016 to 3,500 million in 2023, the volume of transactions carried out with DBUs has climbed; DBUs offer more convenient, accessible, technologically advanced banking services.

Adopting Digital Currencies like UPI has Significantly Influenced India's Fintech Growth

- From 0.1 billion in 2016 to 15 billion in 2023, UPI transactions now account for.
- The quick, more affordable digital transactions that UPI has enabled help to expand e-commerce and a range of digital financial services, hence increasing the value of UPI transactions from 0.05 trillion INR in 2016 to 7.5 trillion INR in 2023.

Fintech Solutions Have Significantly Transformed Cross-Border Payments in India

- From 10 billion USD in 2016 to 70 billion USD in 2023, cross-border payments enabled by fintech platforms now have more value. By helping to simplify, lower the cost of cross-border transfers, and therefore support international trade and investment, fintech technologies have enabled.

Based on the results of the study, fintech has fundamentally changed conventional banking, redefined cross-border payments, enabled access to credit for MSMEs, and greatly enhanced financial inclusion in India.

Suggestions Based on the Findings of the Study

- Examine closely how several fintech innovations affect credit accessibility, financial inclusion, traditional banking, and cross-border transactions.
- Examine the elements that let different user groups successfully embrace and apply fintech technologies.
- Examine the possible hazards and challenges related to the spread of fintech, including cybersecurity issues, data privacy issues, and challenges to financial stability.
- Examine how laws and government regulations could help to create an atmosphere fit for fintech's expansion and creativity.

Conclusion

Fintech has emerged as a transformative force in the Indian financial sector, markedly enhancing financial inclusion, improving credit access for MSMEs, redefining traditional banking, and revolutionizing cross-border payments. Further research is essential to deepen understanding of the effects of financial technology, address potential obstacles, and harness its capacity to improve the financial well-being of all persons as the sector evolves.

Implications

The primary factor contributing to the increase in financial inclusion has been the growth of fintech, which has increased from 800 million bank accounts in 2016 to 1.8 billion in 2023. DBUs and UPIs have transformed India's financial system by improving credit accessibility for MSMEs and expediting transactions.

Scope for Further Research

- Examine how fintech might affect newly developing industries such as insurance, wealth management, and crowdsourcing.
- Examine how fintech could help underprivileged groups raise their financial literacy and knowledge.
- Examine how fintech might help to globally enable financial inclusion in underdeveloped nations.
- Examine the ethical ramifications of using fintech to provide financial services.

Author's Contribution

Dr. Subhash D. Pawar played a pivotal role in formulating the analytical framework for the study, analyzed and derived insights from the research papers, and significantly contributed to the literature review and data interpretation.

Conflict of Interest

The author certifies that he has no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

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