

Role of Fintech in Financial Inclusion

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ABSTRACT

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Financial technology (fintech) has emerged as a transformative force in promoting financial inclusion

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by enhancing access, affordability, and literacy in financial services. This study investigates the role

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of fintech in bridging financial gaps, particularly for underserved and rural populations. Using a

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quantitative research design with survey responses from 65 participants, the analysis applies

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descriptive statistics, correlation, and regression techniques to evaluate how fintech platforms

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influence financial literacy, cost reduction, and accessibility of digital banking services. Findings

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indicate that fintech significantly improves financial literacy ($M = 3.97$) and affordability of services

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($M = 3.94$), with a moderate positive correlation ($r = .400$) between financial literacy gains and

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accessibility of digital banking. Regression results further reveal that fintech-driven cost reduction has

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a statistically significant effect on improving financial service accessibility ($p < .001$). These results

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underscore fintech's capacity to lower barriers for disadvantaged groups, promote equitable economic

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participation, and support sustainable development goals. However, challenges such as cybersecurity

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risks, limited digital literacy, and regulatory inconsistencies remain critical barriers. The study

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concludes that collaboration between policymakers, financial institutions, and fintech companies is

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essential to strengthen digital infrastructure, enhance financial education, and ensure safe, inclusive

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access to financial services.

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Keywords: fintech, financial inclusion, financial literacy, digital banking, cost reduction, accessibility

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INTRODUCTION

¹¹ In the financial services sector, financial technology, or fintech, has become a disruptive force, especially in promoting financial inclusion. The conventional reaching of impoverished and rural communities has proven difficult for the banking industry because of things like poor infrastructure, expensive transaction fees, and little financial knowledge. By utilizing digital platforms, mobile technology, and artificial intelligence to deliver financial services more effectively and economically, fintech has brought forward cutting-edge solutions that aid in closing this gap. Fintech adoption is mostly driven by changing customer behavior, technology breakthroughs, and supportive regulatory frameworks. Underprivileged groups can now access banking, credit, insurance, and investment options without having to physically visit traditional banks, thanks to the ecosystem that fintech companies have built by digitizing financial services. In order to ensure that all facets of society, especially low-income and rural people, have access to basic financial services, ¹ financial inclusion is a crucial objective ¹⁸ for sustainable economic development. By making financial goods easier to obtain through online lending platforms, mobile banking, and digital payment systems, fintech plays ¹⁸ a critical role in advancing financial inclusion. Globally, governments and financial authorities have put laws in place ¹ to promote the use of digital financial services because they understand how crucial fintech is to financial inclusion. For instance, programs ¹² like the Unified Payments Interface (UPI) and the Pradhan Mantri Jan Dhan Yojana have ²⁶ greatly aided in the expansion of financial access in India. United Nations Sustainable Development Goals (SDGs), especially ²⁶ the objective of encouraging economic engagement in order to reduce inequality. Similarly, by offering mobile-based financial solutions that serve underbanked and unbanked communities, fintech has ¹ been instrumental in raising financial inclusion rates in nations like Indonesia. These programs support the Sustainable ²² Development Goals (SDGs) of the UN, especially the objective of encouraging economic participation to reduce inequality. The creation of digital payment systems, which have

48 completely changed how financial transactions are carried out, is one of fintech's most
49 important contributions to financial inclusion. Peer-to-peer (P2P) lending services, e-wallets,
50 and mobile payment platforms have increased access to financial services, particularly in
51 underserved and distant locations. Fintech companies improve the security, effectiveness, and
52 transparency of financial transactions by utilizing cutting-edge technology like blockchain,
53 artificial intelligence, and machine learning. In addition to lowering leakages and
54 guaranteeing that financial aid reaches those in need, governments can now disburse social
55 welfare benefits, pensions, and subsidies directly to recipients thanks to the use of digital
56 payment systems. Fintech is crucial for bringing digital financial services to underserved
57 populations, giving them the chance to engage in economic activity and enhance their
58 financial well-being, according to the World Bank and other international organizations.
59 Fintech has improved financial inclusion, but there are still a number of obstacles to
60 overcome. The digital gap is one of the main challenges since many low-income people do
61 not have access to smartphones, dependable internet connections, or digital literacy.
62 Significant obstacles to the broad use of fintech solutions are also presented by worries about
63 cybersecurity, problems with regulatory compliance, and the possibility of financial fraud. To
64 ensure that people can use digital financial services efficiently and avoid becoming victims of
65 fraud or false information, financial literacy is essential. To raise knowledge and foster
66 confidence in digital financial solutions, governments and financial institutions must fund
67 financial education initiatives. To overcome these obstacles and build a more equitable
68 financial ecosystem, cooperation between fintech companies, regulatory agencies, and
69 conventional financial institutions is crucial. Due to lockdowns and social distancing
70 measures, the COVID-19 pandemic has further expedited the adoption of fintech solutions as
71 businesses and consumers depend more on digital financial services. Policymakers were
72 prompted to improve digital payment infrastructure and foster fintech innovation as a result

73 of the crisis, which highlighted the significance of financial resilience and digital financial
74 inclusion. The fintech sector will play a bigger part in financial inclusion as it develops
75 further, providing fresh chances for economic empowerment. The capacity of fintech
76 companies to create accessible, safe, and reasonably priced financial products that meet the
77 many demands of the world's population will determine the direction of financial inclusion in
78 the future. To sum up, fintech has transformed the financial services industry by facilitating
79 increased financial inclusion via technological advancements. Fintech has enabled ²millions of
80 people who were previously shut out of the official financial system by lowering transaction
81 costs, expanding accessibility, and enhancing the effectiveness of financial services. To
82 overcome the obstacles to digital financial inclusion and guarantee that financial technology
83 keeps promoting inclusive economic growth, governments, regulators, and fintech companies
84 must collaborate. ⁸The impact of digital financial services on financial inclusion will only
85 increase with their wider use, helping to create a more just and sustainable global economy.
86 Through the use of digital tools, software, and mobile platforms, financial technology, or
87 fintech, has completely transformed the financial industry and increased ¹access to financial
88 services, especially for marginalized groups. By offering affordable and effective solutions
89 that let people, households, and small enterprises access savings, credit, payments, insurance,
90 and investment services, fintech plays a critical role in ³financial inclusion. Fintech
91 innovations have fueled the digital revolution of financial services, enabling financial
92 institutions to lower operating costs, enhance customer satisfaction, and customize financial
93 products to meet a range of customer needs. By addressing rural and unbanked people,
94 fintech has enabled digital financial inclusion by making financial services more accessible
95 than before, thanks to the widespread use of mobile phones and internet connectivity. People
96 without official banking records can now engage in the financial system thanks to peer-to-
97 peer lending, digital wallets, mobile banking, and alternative credit scoring algorithms. There

are still issues with making sure fintech helps all facets of society, particularly low-income groups, women, and rural communities, who may encounter obstacles like a lack of digital literacy, poor infrastructure, and regulatory restrictions. Despite fintech's revolutionary potential, data inconsistencies and regional differences in fintech adoption have made it challenging to quantify its contribution to financial inclusion. To evaluate the impact of fintech, studies have developed new indices, such as the World Bank's Digital Adoption Index (DAI) and the Digital Financial Inclusion Index (DFII). Research indicates that by increasing access to financial services, fintech has considerably decreased income inequality, especially in higher-income nations. Disparities still exist in low-income areas, nevertheless, because of restricted financial policies, unequal digital access, and inadequate financial knowledge. The growth of fintech has been especially noticeable in underdeveloped countries where traditional banking infrastructure is either nonexistent or very inadequate. Using digital identity verification and mobile money platforms, nations like India have effectively introduced digital financial services to close the financial gap and reach marginalized groups. Furthermore, fintech lending has expanded significantly, with digital lenders and non-bank financial institutions lending to individuals and small enterprises that find it difficult to obtain loans from conventional banks. Financial inclusion has been further expedited by the rise of "BigTech" companies, which are major technology corporations that provide financial services. These companies use data analytics and large customer bases to offer tailored financial solutions. It is commonly acknowledged that financial inclusion is a major force behind economic growth and the fight against poverty. Fintech promotes long-term financial stability by allowing people to participate in healthcare, education, and business endeavors through its digital savings tools, alternative lending models, and real-time payment options. By encouraging economic participation and lowering financial inequality, fintech can help achieve the Sustainable Development Goals (SDGs), according to governments and

international organizations like the UN. Consumer protection issues and regulatory obstacles, however, continue to be crucial. Fintech's explosive expansion has sparked worries about cybersecurity threats, data privacy, and regulatory control. After initially being concerned about the disruptive potential of fintech, traditional financial institutions have increasingly teamed up with fintech companies to integrate digital financial products while maintaining compliance with current financial regulations. Global regulatory organizations are attempting to create frameworks that strike a balance between consumer safety and innovation, guaranteeing that fintech-driven financial inclusion continues to be safe and accessible. As fintech develops further, overcoming important obstacles, including digital literacy, internet accessibility, and regulatory consistency, will be essential to its future contribution to financial inclusion. By improving the efficiency, security, and transparency of financial transactions, the growth of open banking, blockchain, and artificial intelligence platforms could further improve financial inclusion. Governments, financial institutions, and technology companies must work together to make sure fintech reaches the most disadvantaged groups. To fully realize fintech's promise to close financial disparities, inclusive policies, public-private collaborations, and investments in digital infrastructure are necessary. Even while fintech has already significantly advanced financial inclusion, sustained innovation, prudent regulation, and initiatives to alleviate socioeconomic inequalities will be necessary for its long-term effects

LITERATURE REVIEW

Using Nigeria as a case study, Ediagbonya and Tioluwani (2021) investigated how FinTech affects financial inclusion in developing and emerging nations. They examined primary and secondary data, such as laws, journal articles, and policy documents, using doctrinal and comparative research approaches. According to their findings, financial inclusion is still

147 hampered by problems including illiteracy, inadequate infrastructure, and data privacy
148 concerns, even in the face of initiatives to broaden financial services. In 2022, Tok and Heng
149 carried out an empirical study. Using Global Findex data and digital financial inclusion
150 metrics ⁸ to investigate the relationship between FinTech and financial inclusion. Panel
151 regression models were used in their study to evaluate how FinTech might help bridge the
152 gaps in rural, class, and gender. They discovered that FinTech had no discernible effect on
153 gender differences, but it greatly enhanced financial inclusion for low-income and rural
154 communities. Mehrotra (2022) examined how well FinTech works to combat financial
155 exclusion, highlighting the necessity of striking a regulatory balance between consumer
156 protection and innovation. The study examined industrial case studies, banking reports, and
157 policy papers using a qualitative methodology. The results indicated that although FinTech
158 improves service accessibility, issues like digital.

159 Addressing cybersecurity threats and illiteracy is necessary to guarantee long-term inclusion.
160 ⁴ The potential of FinTech to increase financial inclusion in India, specifically for micro, small,
161 and medium-sized businesses (MSMEs), was examined by Raj and Upadhyay (2020). They
162 carried out a case study analysis that was backed up by secondary data from business and
163 governmental publications. According to their research, FinTech companies help MSMEs
164 obtain funding even when they have little official credit record by facilitating alternative
165 credit assessment techniques. The effect of governmental policies on FinTech adoption and
166 financial inclusion in Pakistan was examined by Noreen et al. in 2022. Using secondary
167 sources such as journal articles, State Bank of Pakistan reports, and World Bank financial
168 inclusion data, they conducted a literature study.

169 Although issues like gender inequality still exist, their findings showed that state-led
170 measures like digital banking and financial literacy programs have greatly expanded financial

access. In Makassar, Indonesia, Rosyadah et al. (2021) investigated how FinTech affected MSMEs' financial inclusion. They surveyed 335 MSME owners using a quantitative methodology, and they analyzed the results using linear regression. With a significant effect of 0.259, the study found that FinTech had a favorable impact on financial inclusion, indicating its potential to increase access to financial services.

⁴ The relationship between green finance, FinTech, and financial inclusion was examined by Liu et al. (2021), with a focus on energy efficiency in E7 economies. They discovered that although green finance is essential for advancing energy efficiency, FinTech by itself might not be enough to handle more significant issues with financial inclusion. They did this by using an econometric model and panel data analysis. In 2019, Kandpal and Mehrotra¹ analyzed how digital financial services contribute to the advancement of financial inclusion in India. Financial transaction records, surveys, and other quantitative and qualitative data were employed in their study. Although digital banking and mobile payments have made money more accessible, their study showed that in order to maintain long-term viability, cybersecurity issues and regulatory obstacles must be resolved.

In what ways do fintech companies tackle financial inclusion? Senyo & Karanasios (2020). This study looks at how fintech companies deal with financial inclusion, with a particular emphasis on Ghanaian fintech startups. The authors employed a qualitative case study methodology to conduct semi-structured interviews with six fintech companies that provide services like utility payments, microloans, and mobile money. According to the survey, fintech companies execute collaborative tactics with banks while acting as innovators and aggregators, utilizing the infrastructure of conventional financial institutions. The results produced a model of financial inclusion driven by fintech, emphasizing the contribution of

194 fintech to increasing financial access for marginalized groups. Badruddin (2017): An
195 Analysis of Fintech's Efficiency in Financial Inclusion.

196 Using a conceptual framework based on secondary data sources like books, journals, and
197 papers, this study investigates how fintech affects financial inclusion. The report highlights
198 the importance that major fintech breakthroughs, including mobile banking, Point of Sale
199 (POS) technologies, ATMs, and Management Information Systems (MIS), play in cutting
200 costs and expanding reach. Although obstacles like infrastructural limitations and a lack of
201 digital literacy still exist, the results indicate that fintech ⁹has a revolutionary impact on
202 financial inclusion. Financial Inclusion, Digital Divide, and Fintech Use (Odei-Appiah,
203 Wiredu, & Adjei, 2021).

204 This study examines how ⁴fintech use affects financial inclusion while taking the digital
205 divide's moderating effects into account. The authors used structural equation modeling on
206 survey data from 282 respondents in Ghana, applying the ³Unified Theory of Acceptance and
207 Use of Technology (UTAUT2) and the model of digital inequality. The results show that
208 while digital inequality (access, resources, and force) moderates fintech use, performance
209 expectancy and enabling conditions have a major impact on fintech uptake. In order to
210 improve fintech-driven financial inclusion, the report emphasizes the necessity of closing the
211 digital divide.

212 Agrawal (2022): Fintech Companies' Contribution to Greater Financial Inclusion. ²The
213 purpose of this exploratory study is to find out how fintech companies improve financial
214 inclusion, especially in developing countries. It emphasizes how fintech companies use
215 technology to make financial services more accessible, especially to the general public.
216 According to the study, fintech businesses that provide digital payment methods, microloans,
217 and mobile banking act as accelerators for financial inclusion. It also shows that the adoption

218 of fintech and economic growth are positively correlated, highlighting the technology's
219 contribution to the reduction of financial exclusion.

220 LendingClub Study: Fintech's Effect on Credit Access (Multiple Authors). This study
221 evaluates the impact of fintech lenders on loan availability, especially in underprivileged
222 areas. The study examines the availability, cost, and borrower profiles of fintech and
223 traditional bank loans using exclusive data from LendingClub. According to the findings,
224 fintech lenders cover the credit voids created by conventional banks, especially in places
225 where bank branches are closing. Fintech companies can more efficiently evaluate
226 creditworthiness thanks to alternative data sources, including digital transactions and mobile
227 payment histories, which enhances financial inclusion for underbanked groups. Yang (2023):
228 Fintech as a Financial Inclusion Approach in the Digital Age.

229 The function of fintech as a tactical instrument for financial inclusion in the economies of the
230 Asia Pacific Economic Cooperation (APEC) is investigated in this paper. The paper
231 emphasizes how fintech improves financial accessibility, especially for SMEs, using a policy-
232 analysis methodology. The results imply that the quick growth of fintech, which is fueled by
233 digital platforms and mobile technologies, is essential to changing financial markets and
234 resolving financial inequities.

235 ¹⁷ Al-Slehat (2023): **The Mediating Function of Digital Marketing in Fintech and Financial**
236 **Inclusion**. This study investigates the role that digital marketing plays in mediating the
237 connection between financial inclusion and fintech. The study uses structural equation
238 modeling with SmartPLS software and is based on a survey of 375 banking industry workers
239 in Jordan. According to the findings, digital marketing improves financial inclusion by
240 fostering the adoption of fintech. For improved outreach, the report suggests methods for
241 fusing finance technologies with digital marketing. Ozili (2023): The Significance of

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Financial Inclusion and Financial Development in Determining Fintech and Bigtech Lending.

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This study uses difference-GMM and 2SLS regression techniques to examine the factors that

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influence fintech and BigTech lending in 18 countries between 2013 and 2019.

The results show that fintech lending is heavily influenced by financial development and inclusiveness. Fintech lending increases financial stability, but there are hazards associated with it as well, such as an increase in nonperforming loans. The analysis sheds light on how financial regulations might support fintech lending while reducing related risks. Fintech-Based Financial Inclusion and Microfinance Institutions' (MFIs') Risk-Taking (Banna et al., 2022). This study looks at how microfinance institutions' (MFIs') risk-taking practices in Sub-Saharan Africa are affected by fintech-driven financial inclusion. The study concludes that fintech adoption lowers excessive risk-taking by MFIs using econometric modeling and a recently created fintech inclusion index. According to the report, fintech improves service delivery and reduces operating expenses, which increases financial stability.

Al-Slehat (2023): Digital Marketing's Contribution to Fintech Adoption. This study looks into the relationship between digital marketing and Jordan's embrace of fintech and financial inclusion. The study uses structural equation modeling with survey data and a descriptive-analytical technique. According to the findings, digital marketing has a significant role in mediating the uptake of fintech, and fintech companies should incorporate digital marketing tactics to improve financial inclusion.

RESEARCH METHODOLOGY

Using descriptive statistics, regression analysis, and correlation analysis with Microsoft Excel, this study uses a quantitative research approach to examine the influence of fintech on financial inclusion. Evaluating how fintech platforms affect financial literacy, accessibility, cost reduction, and income development is the main goal. The study assesses the correlation between important fintech characteristics using survey-based primary data gathered from 65 respondents. Descriptive statistics, correlation analysis, and regression analysis are the three main parts of the analysis.

The descriptive statistical analysis is conducted to summarize the dataset by calculating the mean, median, mode, and standard deviation of key variables, which include fintech platforms improving financial literacy, digital banking improving financial transactions, fintech solutions reducing financial service costs, and fintech enhancing business or personal income growth. These descriptive measures give a clear statistical overview of the data distribution and aid in understanding the central tendency and variability of responses.

The Pearson correlation coefficient is used in a correlation analysis to look at the relationship between fintech platforms enhancing financial literacy and digital banking enhancing financial transactions. In Microsoft Excel, the formula =CORREL(range1, range2) is used to determine this. This analysis assists in determining whether enhanced accessibility and convenience in financial transactions are correlated with advances in financial literacy brought about by fintech solutions.

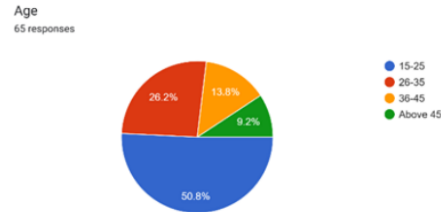
Additionally, a regression study is performed to assess how the decrease in fintech costs affects the growth of personal or business income. The Regression Tool in the Data Analysis tab of Microsoft Excel is used for this. In this model, using fintech services to increase revenue or business growth is the dependent variable (Y), while using fintech solutions to lower financial service expenses is the independent variable (X). Whether fintech-driven cost

savings lead to greater financial stability and business expansion for people and small businesses is revealed by the regression equation that was developed from this investigation. This research offers a thorough statistical framework for evaluating fintech's contribution to financial inclusion by combining regression analysis, correlation, and descriptive statistics.

DATA ANALYSIS

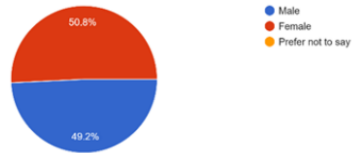
It is essential to analyze the data gathered from different responders before drawing any conclusions. Consequently, this chapter has attempted to evaluate and collect data using a "ROLE OF FINTECH IN FINANCIAL INCLUSION " questionnaire. First, the data was gathered, and then it was analyzed.

DEMOGRAPHIC PROFILES OF RESPONDENTS



Distribution of Ages- A young population is indicated by the fact that the majority of responders (50.8%) are between the ages of 15 and 25. A sizable percentage of young professionals—26.2%—are between the ages of 26 and 35. 13.8% of the population is between the ages of 36 and 45, indicating a moderate number of middle-aged people. There are fewer senior respondents (9.2%), as the number of those over 45 is lower.

Gender
65 responses

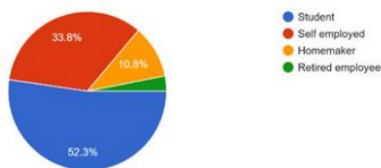


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306 Distribution of Gender -Male respondents make up 49.2% of the sample, while female

307 respondents make up 50.8%. The responses show no discernible gender bias.

Occupation
65 responses



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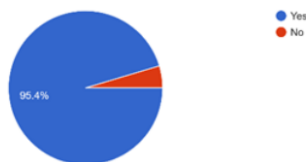
309 Profession -Students make up the majority (52.3%), which is consistent with the

310 predominantly 15–25 age group. 33.8% work for themselves, indicating a sizable portion of

311 entrepreneurs. 10.8% of people are homemakers, showing that there are people who do not

312 work. The remainder is made up of a tiny percentage (retired employees).

Do you have a bank account ?
65 responses



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314 Access to Banking -95.4 percent of people have a bank account. The fact that only 4.6% of
 315 respondents lack a bank account shows how financially included they are.

316 **Important Takeaways**

317 Young people who are predominantly students are represented in the dataset. A sizable
 318 percentage are self-employed, which may be pertinent to research on entrepreneurship. The
 319 distribution of genders is equal. The majority of respondents have access to banking services,
 320 demonstrating the high level of financial inclusion.

321 **DESCRIPTIVE ANALYSIS**

		Statistics			
		Fintech platforms have improved financial literacy among low-income and rural populations.	Fintech solutions have reduced the cost of financial services compared to traditional banks.	Fintech solutions have reduced the cost of financial services compared to traditional banks.	Digital banking and mobile payments have made financial transactions more convenient and accessible.
N	Valid	65	65	65	65
	Missing	1	1	1	1
Mean		3.97	3.94	3.91	3.82
Median		4.00	4.00	4.00	4.00
Mode		5	5	5	5
Std. Deviation		.968	1.059	1.086	1.088

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 323 Missing Values and Sample Size (N) -A consistent sample size was indicated by the 65 valid
 324 responses for each of the four questions. Each question has one missing response, which is
 325 quite small and unlikely to have a big effect on the analysis as a whole.

326 Interpretation of Mean (Average Response) -The average response on the Likert scale, which
 327 normally ranges from 1 (strongly disagree) to 5 (strongly agree), is represented by the mean.

328 Declarative Average Interpretation: Financial literacy is enhanced by fintech. 3.97 With a

score near 4 (Agree), most respondents concur that fintech improves financial literacy. Fintech lowers the cost of financial services. 3.94 There is a broad consensus that fintech services are more affordable than traditional banking. Fintech cost reduction statement duplicate 3.95. The question is probably repeated, but the outcome is always the same. Convenience is increased with digital banking. 3.82 Consensus that online banking improves

Important Takeaways from Mean Values: Highest agreement (3.97) on the influence of fintech on financial literacy ↑ . Fintech is viewed as a tool to improve financial literacy, especially in low-income and rural areas. Fintech services' cost-effectiveness is likewise highly rated (3.94, 3.95). Indicates a strong trust in the advantages of affordability. A little lower agreement (3.82) for the convenience of digital banking → Though it indicates various obstacles (such as usability problems and trust challenges), it is still favorable.

The Mode and Median: Meaning. For all statements, the median (middle value) was 4. This indicates that the majority of responses were "Agree" (4) as opposed to neutral or Disagree. All statements have a mode (most frequent response) of 5. Indicating that many respondents had very favorable opinions on fintech, "Strongly Agree" was the most often given response.

Important Takeaways from Median and Mode: The mode of 5 shows that many consumers firmly believe in the benefits of fintech, despite the mean suggesting agreement (~3.9). According to this, there appears to be a favorable tilt, with many respondents believing fintech is very advantageous, particularly in terms of cost and literacy gains.

Standard Deviation (Variability of Responses)

350 ü Fintech Literacy (0.968): Least variation, meaning most respondents agree fintech improves
351 financial literacy.

352 ü Cost Reduction (1.059 & 1.086): Slightly higher variation, but still a strong agreement.

353 ii Digital Banking Convenience (1.088): Highest variability, suggesting mixed experiences—
354 some may have faced accessibility issues.

355 Key Insights from Standard Deviation:

356 ii Lower standard deviation (<1.1) across all responses $\rightarrow$ Responses are fairly consistent,
357 meaning most participants share similar views on fintech's benefits.

358 ii Slightly higher variation in digital banking (1.088) suggests some users may not find it as
359 accessible as others—possible reasons could include internet connectivity issues, tech literacy
360 gaps, or trust concerns.

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CORRELATION

Correlations			
		Fintech platforms have improved financial literacy among low-income and rural populations.	Digital banking and mobile payments have made financial transactions more convenient and accessible
Fintech platforms have improved financial literacy among low-income and rural populations.	Pearson Correlation	1	0.400
	N	65	65
Digital banking and mobile payments have made financial transactions more convenient and accessible	Pearson Correlation	0.400	1
	N	65	65

The **Pearson correlation** between two financial technology and digital banking-related variables is shown in the table:

Fintech platforms raise financial literacy among rural and low-income communities.

Financial transactions are becoming more accessible and convenient thanks to digital banking and mobile payments.

How to Interpret the Correlation: A Pearson correlation coefficient (**r**) of **0.400** is found between the two variables. This suggests that there is a somewhat positive correlation between the two variables. A result of 0.400 indicates that, although the correlation is weak, the use of digital banking and mobile payments rises as fintech platforms raise financial literacy. A diagonal correlation of 1.0 indicates that every variable has a perfect correlation with itself, which is always the case. A statistically significant connection can be established with a sample size (N) of 65 for both variables.

Considerations for Statistical Significance: Better financial literacy through fintech platforms may be linked to increased accessibility and convenience of digital banking and mobile

payments, according to a positive association ($r = 0.400$). Correlation does not, however, indicate causality. External variables like governmental regulations, social standing, or technology developments may have an impact on the relationship.

Research Implications:

Moderate Association: The correlation shows a moderate association, which means that although there is a relationship, access to digital banking and financial inclusion are also influenced by other factors.

Additional Research Is Required: To ascertain the degree to which fintech literacy directly influences outcomes, a more thorough investigation is necessary, such as regression modeling or causal investigations.

REGRESSION

Regression Statistics	
Multiple R	0.443492385
R Square	0.196685495
Adjusted R Square	0.183934471
Standard Error	0.980823995
Observations	65

The results of the regression analysis shed light on the connection between the influence of fintech solutions on a dependent variable and their ability to lower financial service costs. Let's take a closer look at each section.

Statistics of Regression -Interpretation of Metric Values. Several $R = 0.443$ show a somewhat favorable relationship between the dependent variable and the cost-cutting fintech solutions. $R^2 = 0.197$ suggests that the cost-cutting effects of fintech solutions account for 19.67% of the variance in the dependent variable. Although the effect is not very large, it

does demonstrate how fintech contributes to the affordability of financial services. R Squared Adjusted: 0.184

After controlling for sample size and predictor count, there was a modest decrease in R², indicating that while fintech cost reduction does play a role, it is not the only one. It calculates the average difference between the regression line and the observed data. A better fit would be indicated by a lower value.

Observations 65 -There is enough data in the sample to draw valid conclusions.

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	14.83916414	14.83916414	15.42507465	0.000215542
Residual	63	60.60698971	0.96201571		
Total	64	75.44615385			

ANOVA Table (Variance Analysis)

Source: df SS MS F Importance 0.0002 F Regression 1 14.84 14.84 15.42 64 75.45 - - -

Residual 63 60.61 0.96 - - Total Meaning: F-Statistic = 15.42: A high F-value indicates a substantial relationship between the independent and dependent variables.

Significance F = 0.0002 (p-value): Given that this is significantly below 0.05, the model is statistically significant, indicating that the affordability of financial services is significantly impacted by fintech cost reduction.

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	2.116638079	0.471980101	4.484591775	3.15958E-05	1.173461108	3.05981505	1.173461108	3.05981505
Fintech solutions have reduced the cost of financial services compared to traditional banks.	0.454759863	0.115789316	3.927476881	0.000215542	0.223373378	0.686146348	0.223373378	0.686146348

Coefficients and Testing Hypotheses

420 Changeable Coefficients P-value for Standard Error t-Stat 95% Intercept of Confidence
421 Interval 0.00032 2.117 0.472 4.48 [1.17, 3.06] Fintech solutions lower expenses. 0.116
422 3.93 0.0002 0.455[0.22, 0.69]

423 Meaning: Intercept (2.117, $p < 0.05$): The dependent variable's expected value is 2.117,
424 which represents a baseline level of financial service accessibility, when fintech cost
425 reduction is zero.

426 Fintech Cost Reduction Coefficient (0.455, $p = 0.0002$): This indicates that the dependent
427 variable rises by 0.455 units for every unit increase in the cost-cutting fintech solutions.
428 Fintech enhances financial accessibility, as indicated by the positive coefficient.

429 P-values (< 0.05): The statistical significance of both predictors indicates that fintech's
430 influence is not random.

431 Confidence Interval [0.22, 0.69]: We can state with confidence that fintech solutions have a
432 positive impact on financial service costs because both the lower and upper bounds are
433 positive.

434 **FINDINGS**

435 Demographic Insights: The population is youthful and tech-savvy, with the majority of
436 respondents (50.8%) falling into the 15–25 age range and 26.2% falling into the 26–35 range.
437 With 50.8% of respondents being female and 49.2% being male, the gender split is almost
438 equal. Strong levels of financial inclusion are demonstrated by the large percentage of
439 respondents (95.4%) who hold bank accounts. Students make up the largest occupation
440 (52.3%), followed by independent contractors (33.8%).

The function of fintech in promoting financial inclusion- Improving Financial Literacy:
According to the survey, there is a broad consensus (mean = 3.97) that fintech platforms raise financial literacy, especially in low-income and rural areas. Cost Reduction: According to respondents, fintech solutions lower the cost of traditional banking by making financial services more accessible (mean = 3.94). Convenience and Accessibility: Despite significant usability issues, digital banking is thought to enhance financial transactions. Demographic Insights:

The majority of respondents (50.8%) belong to the 15–25 age group, followed by 26.2% in the 26–35 range, indicating a young and tech-savvy population.

ü Gender distribution is nearly equal, with 50.8% female and 49.2% male respondents.

ü A high percentage (95.4%) of respondents have bank accounts, reflecting strong financial inclusion levels.

ü The predominant profession is students (52.3%), followed by self-employed individuals (33.8%).

Role of Fintech in Financial Inclusion:

ü Financial Literacy Enhancement: The study reveals strong agreement (mean = 3.97) that fintech platforms improve financial literacy, particularly in rural and low-income communities.

ü Cost Reduction: Respondents believe fintech solutions make financial services more affordable (mean = 3.94), reducing traditional banking costs.

ü Convenience and Accessibility: Digital banking is seen as improving financial transactions, though it faces some usability and trust challenges (mean = 3.82).

Statistical Analysis:

Correlation Analysis: A moderate positive correlation ($r = 0.400$) exists between fintech-enhanced financial literacy and improved accessibility to digital banking and mobile payments.

Regression Analysis: Fintech cost reduction has a statistically significant impact on financial service affordability ($p = 0.0002$), with a positive coefficient (0.455), indicating a direct relationship between fintech-driven cost savings and financial accessibility.

CONCLUSION

According to the study, fintech is essential to the advancement of financial inclusion since it increases financial literacy, lowers prices, and makes financial services more accessible. The findings show that fintech adoption is widespread, especially among younger populations and independent contractors. The results demonstrate the significant benefits of fintech in reducing transaction costs and providing impoverished areas with access to finance.

To fully realize fintech's promise, however, issues like cybersecurity, digital literacy, and regulatory compliance must be resolved. To enhance digital education, grow fintech infrastructure, and guarantee safe financial transactions, policymakers and financial institutions should work together.

All things considered, fintech shows itself to be a revolutionary instrument for closing financial disparities, encouraging equitable economic development, and supporting the more general objectives of sustainable financial inclusion. In order to guarantee long-term financial stability for all societal groups, future research should concentrate on removing obstacles and improving fintech adoption tactics.

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