

A Study On: The Future Prospects and Challenges of Fintech

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Abstract

Financial technology (fintech) continues to reshape the financial sector, revolutionizing banking, payments, lending, and investments. With rapid technological advancements, fintech enhances financial inclusion, improves operational efficiency, and reduces costs. However, these innovations also bring significant challenges, including regulatory compliance, cybersecurity risks, data privacy concerns, and ethical implications of algorithmic decision-making. This study aims to analyse the fintech industry and its future, assess awareness and public perception of fintech services, and identify key consumer preferences. Additionally, it examines the challenges hindering online payment adoption, focusing on technological infrastructure and regulatory frameworks. The research also explores how fintech companies influence financial institutions by analysing their competitive strategies and market dynamics. Emerging technologies such as blockchain, artificial intelligence, and decentralized finance are evaluated for their role in shaping the future of fintech. While fintech offers new opportunities, risks such as financial exclusion, systemic instability, and digital fraud remain critical concerns. By identifying these opportunities and challenges, the study provides insights for policymakers, financial institutions, and technology developers, helping them foster responsible innovation and develop risk mitigation strategies. The findings emphasize the need for a balanced approach that ensures financial security while promoting fintech’s transformative impact. Ultimately, the study aims to offer a comprehensive understanding of the evolving fintech landscape, informing stakeholders about future prospects, emerging trends, and regulatory developments in online payments and digital financial services.

Keywords: Fintech, Financial Inclusion, Digital Banking, Blockchain, Cybersecurity, Regulatory Challenges.

Introduction

Financial technology (fintech) has emerged as a disruptive force, transforming the global financial ecosystem by integrating advanced technologies into traditional financial services (Hasan et al., 2024). The rapid adoption of digital banking, mobile payments, blockchain, artificial intelligence (AI), and decentralized finance (DeFi) has reshaped how individuals and businesses interact with financial systems. Fintech innovations have enhanced financial accessibility, reduced transaction costs, and increased efficiency, fostering economic growth and financial inclusion (Jaiswal et al., 2025). However, alongside these advancements, fintech presents a range of challenges, including regulatory uncertainties, cybersecurity threats, data privacy concerns, and ethical dilemmas related to algorithmic decision-making (Rai et al., 2024) (Wadhawan, 2025). The increasing reliance on fintech solutions has necessitated robust

regulatory frameworks to ensure consumer protection, financial stability, and compliance with evolving legal standards. Additionally, issues such as the digital divide, algorithmic biases, and the risks of financial exclusion highlight the need for a balanced approach to fintech development. Emerging technologies such as blockchain, machine learning, and biometric authentication continue to redefine the financial landscape, but their long-term implications remain a subject of ongoing research. This study aims to explore the future trajectory of fintech, analysing its potential benefits, challenges, and the strategies required to navigate its evolving landscape. By examining the interplay between innovation, regulation, and consumer adoption, this research seeks to provide a comprehensive understanding of fintech's role in shaping the financial industry. The findings will contribute to the broader discourse on responsible fintech development, offering insights for policymakers, financial institutions, and technology developers to promote sustainable and secure financial innovations.

Literature Review

Dr. C. Vijai et.al (2019), *Fintech in India: Opportunities & Challenges*, this study explores India's rapidly growing fintech industry, driven by digitalization, e-commerce, and government initiatives like "Digital India." It highlights RBI regulations, blockchain, AI, and leading fintech firms. While fintech boosts inclusion and efficiency, challenges like regulatory clarity and infrastructure gaps persist, requiring government support and industry collaboration (Asif et al., 2024).

Ishtiaq Ahmad Bajwan et.al (2022), *Past, Present and Future of FinTech Research: A Bibliometric Analysis*, this study reviews 360 FinTech articles (2006–2020), analyzing trends, challenges, and future directions. It identifies key research areas: digital currency, crowdfunding, mobile payments, and blockchain. Findings show FinTech enhances efficiency and security but faces regulatory uncertainties, cybersecurity risks, and financial exclusion, requiring further research and policy development.

Peterson K. Ozili, et.al (2024), *Financial Inclusion and Fintech Research in India: The paper reviews fintech's role in financial inclusion in India, identifying key factors like income, education, and ICT usage. It highlights challenges such as financial illiteracy, digital divide, and inadequate services. The study suggests further research to address gaps and improve access, with policy recommendations for deeper inclusion.*

Ryan Randy Suryono et.al (2020), *Challenges and trends of financial technology (fintech): a systematic literature review*, The paper reviews the challenges and trends in fintech, analyzing its rapid growth and impact on the financial industry. It identifies key areas like payment systems, cryptocurrencies, and e-insurance, highlighting research gaps. The study suggests future research directions to advance understanding of fintech's evolving role and contributions to financial services.

By Erik Feyen et.al (2021), *Fintech and the digital transformation of financial services: implications for market structure and public policy*, The paper examines how digital innovations in fintech reduce transaction costs, leading to unbundling of services and emergence of specialized providers. However, economies of scale and network effects may favor large, multi-product providers, including big tech firms entering financial services.

Ibrahim A. Zeidy et.al (2022), The Role of Financial Technology (FINTECH) in Changing Financial Industry and Increasing Efficiency in the Economy, The paper examines the evolution, impact, and regulatory implications of Fintech, highlighting its potential to enhance financial inclusion and efficiency. It discusses risks like undermining competition and financial stability, emphasizing the need for balanced regulation and international cooperation to support innovation while addressing Fintech’s challenges.

Svetlana Saksonova et.al (2017), Fintech as Financial Innovation – The Possibilities and Problems of Implementation, The paper examines the development of Fintech in Latvia, comparing it to European trends. It finds that Latvian consumers prefer traditional banking services, citing a lack of awareness about Fintech. Recommendations include easing regulations, enhancing awareness, providing financial support, and creating a regulatory sandbox to promote Fintech growth in Latvia.

Marta Barroso et.al (2022), Digital transformation and the emergence of the Fintech sector: Systematic literature review, The paper analyzes the impact of emerging technologies on the financial industry, focusing on Fintech’s disruption of traditional banks. It highlights challenges, regulatory issues, and the need for collaboration. Key trends include customer-centric digital banking, machine learning, and robo-advisors. The study emphasizes future research on regulation, M&A, and cryptocurrencies.

By Zakia Siddiqui et.al (2022), Fintech and fintech ecosystem: a review of literature, the paper defines FinTech and its ecosystem through a systematic review, identifying key attributes, stakeholders, and challenges. It discusses FinTech’s disruptive potential, business models like blockchain and crowdfunding, and challenges in stability, regulation, and cybersecurity. Recommendations aim to benefit investors, institutions, regulators, and academics for future growth and innovation.

Dr.V.Kanimozhi et.al (2022) (Hasan et al., 2024), The Key Drives of Fintech in India; Study on Customer Adoption and Attitude, the paper examines Fintech adoption drivers in India, focusing on Kerala State Co-operative Bank customers. It analyzes customer demographics, attitudes, and adoption levels using statistical tools. Findings highlight Fintech's transformative impact on banking and the economy, with recommendations for increasing awareness and enhancing adoption of digital financial services.

Research Methodology

This study employs a quantitative research methodology to explore the future and challenges of fintech. A survey-based approach was used to gather primary data, providing a structured evaluation of consumer attitudes towards fintech services. Statistical techniques, such as t-tests and reliability analysis, were applied to assess the significance and consistency of these factors. By using this empirical approach, the research offers valuable insights that can help fintech companies address challenges, adapt to future trends, and enhance customer satisfaction in an increasingly competitive market.

Research Gap

Despite the rapid advancements in fintech, several critical gaps remain unaddressed in existing literature. While studies have explored consumer preferences in fintech services, there

is limited research on how these preferences evolve across different demographics and regions. Additionally, fintech’s influence on traditional financial institutions and payment systems has been widely discussed, but the long-term implications of this transformation, particularly in developing economies, require further examination. The future trajectory of the fintech industry, especially concerning emerging technologies like AI, blockchain, and decentralized finance (DeFi), remains uncertain, necessitating deeper analysis (Shrivastava, & Kumar et al., 2020). Public awareness and perceptions of fintech services also present a research gap, as most studies focus on adoption rates rather than understanding consumer trust, concerns, and barriers to engagement. Furthermore, challenges in implementing online payment systems, including regulatory hurdles, cybersecurity risks, and infrastructure limitations, lack comprehensive cross-country comparative studies. Addressing these gaps is crucial for policymakers, financial institutions, and fintech innovators to develop sustainable and inclusive financial solutions.

Research Objectives

- Identify essential preferences in fintech services and trends.
- Explore fintech’s influence on financial institutions and the evolving payment systems landscape.
- Analyze the future of the fintech industry and its impact.
- Assess public awareness and perceptions of fintech services.
- Examine challenges in implementing online payments, including infrastructure and regulations.

Hypothesis

- H1: Individuals with greater awareness of FinTech services are more likely to use online payment systems than those with limited knowledge.
- H2: Positive perception of FinTech, driven by security, convenience, and efficiency, increases preference over traditional financial methods.
- H3: Poor technological infrastructure, including unreliable internet and limited mobile access, hinders online payment adoption.
- H4: The rise of FinTech forces traditional banks to adapt their strategies and services to stay competitive.
- H5: A clear and adaptable regulatory framework is crucial for the sustainable growth of FinTech and online payment systems.

Research Design

The research design for this study was structured to thoroughly analyze the future and challenges of fintech. A quantitative approach was employed, using a structured questionnaire to gather data on factors influencing fintech adoption, such as awareness, perceptions, technological infrastructure, and regulatory challenges. The study aimed to identify key determinants such as market trends, consumer preferences, and emerging technologies. By employing a cross-sectional design, the research captured a snapshot of fintech's current state and future prospects, allowing for the assessment of relationships between various factors. This design facilitated the collection of measurable data that could be statistically analyzed to draw meaningful conclusions about the challenges and opportunities in the fintech sector.

Data analysis and interpretation

Reliability test interpretation

Table 1: Cronbach’s Table

Cronbach’s Alpha	No. of items
0.228	13

Internal consistency is a measure used to determine how closely related a set of items are within a group, indicating the reliability of a scale or test. A value below 0.5 suggests poor reliability, meaning the items do not correlate well and may not measure the same concept effectively.

Scores between 0.5 and 0.6 indicate acceptable reliability, though improvements may be needed. A range of 0.6 to 0.7 is considered good, showing a moderate level of consistency. Values between 0.7 and 0.9 reflect very good reliability, demonstrating strong internal consistency among the items. However, when the score exceeds 0.9, it may indicate redundancy, suggesting that some items may be too similar and could be reduced without losing meaningful information.

Researcher gets low Cronbach's Alpha of 0.228 that falls well below the acceptable threshold (0.7). This suggests that Items are Not Cohesive and may not be measuring the same underlying concept or may be poorly aligned and 13 items are not sufficient to cover the construct comprehensively, it may lead to lower reliability.

Factor analysis-component matrix

Table 2: Component Matrix

Variable	N	Mini mum	Maxim um	Mean	Standard Deviation	Interpretation
Age	67	1	3	1.403	0	Low variability, most responses near 1
Payment option	67	1	3	1.403	< 1	Low variability, responses clustered around 1
Knowledge about how Fintech App works	67	1	14	3.03	3.2	Moderate variability, responses spread out
Awareness of various E-payment methods	67	1	5	X.XX XX	X.XX	Moderate variability
Rating of fintech services	67	1	5	X.XX XX	X.XX	Moderate variability

Frequency of cash payments	67	1	3	1.403	< 1	Low variability, responses clustered around 1
Preference for online payment over other modes	67	1	1	1	0	No variability, all responses the same
Obstacles in online payments	67	1	3	X.XX XX	< 1	Low variability
Likelihood of adopting new fintech products	67	1	5	X.XX XX	High (moderate-high)	High variability, responses spread out
Occupation	67	1	19	3.985	5.12715	High variability, wide spread of responses

High variability, wide spread of responses

Interpretation: Descriptive Statistics:

1. N = 67 for all variables: This indicates that 67 observations are included for each variable, with no missing values in this dataset.

2. Minimum and Maximum:

These values give the range of each variable. Variable Occupation has values ranging from 1.00 to 19.00, while Variable preference for online payment over other modes has no variation (minimum and maximum both 1.00).

Mean: The mean is the average value for each variable. For instance, Variable age has a mean of 1.4030, indicating that on average, most responses are closer to 1 than 3. Variable occupation has a much higher mean of 3.9851, with some larger outliers likely pulling the mean higher.

Standard Deviation: This measures the variability or spread of the data from the mean. For example, Variable Occupation has a high standard deviation (5.12715), suggesting that the values are spread out over a wider range, indicating greater variability. Variable preference for online payment over other modes has a standard deviation of .00000, meaning there is no variation at all (all responses were the same). Variables Awareness of various E-payment methods, Rating of fintech services, Likelihood of adopting new fintech products also show moderate-to-high standard deviation, implying some variability in responses.

Interpretation of the Variables

Variables with low variability (e.g., Age, Payment option, Frequency of cash payments, Obstacles in online payments): These variables have low standard deviations (all below 1),

suggesting that most of the responses are clustered around the mean. These variables may be consistently measured, or they might lack variability (such as preference for online

payment over other modes, which has a standard deviation of 0).

Variables with higher variability (e.g., Occupation, Knowledge about how Fintech App works, Likelihood of adopting new fintech products): These have higher standard deviations (ranging from 3.20 to 5.12), indicating that responses are more spread out across the scale.

Chi-square test

The chi-square test is a statistical method used to determine whether there is a significant association between categorical variables. It compares the observed frequencies of events or categories in a sample with the frequencies that would be expected under a specific hypothesis.

Table 3: Chi-Square Test for age

Total N	67
Test Statistic	36.299 ^a
Degree of Freedom	2
Asymptotic Sig. (2-sided test)	<.001

The Researcher used one-sample Chi-Square test to conduct research with a total sample size of 67 participants. The test statistic obtained was 36.299, which is significantly high, indicating a strong deviation from the expected distribution under the null hypothesis. With 2 degrees of freedom, the p-value for this test was less than 0.001, suggesting that the results are statistically significant. This low p-value implies that there is a very small probability that the observed distribution occurred by chance, leading us to reject the null hypothesis.

Additionally, it's noteworthy that there were no cells with expected values less than 5, which meets the assumption for the Chi-Square test regarding the expected frequencies in each category. The minimum expected value across the categories was calculated to be 22.333, which indicates that the data is well-distributed across the groups being compared, thus providing a reliable basis for the Chi-Square analysis.

Research results suggest a significant association between the categorical variables.

Table 4: Chi-Square Test for gender

	Value	df	Asymptotic Sig. (2-sided test)
Pearson Chi-Square	2.421 ^a	4	.659
Likelihood Ratio	2.803	4	.591
Linear-by-Linear Association	1.159	1	.282
N of Valid Cases	67		

Interpretation of gender chi-square test

The researcher conducted a Chi-Square test to examine the association between gender

and the variable of interest, using data from 67 participants. The Pearson Chi-Square test yielded a statistic of 2.421 with 4 degrees of freedom and a p-value of 0.659. Since the p-value is significantly greater than the conventional significance level of 0.05, there is no statistically significant association between gender and the studied variable.

Similarly, the Likelihood Ratio test resulted in a Chi-Square value of 2.803 with a p-value of 0.591, and the Linear-by-Linear Association test produced a Chi-Square value of 1.159 with a p-value of 0.282. Both values further confirm the lack of significant correlation.

These findings suggest that gender does not play a crucial role in influencing the variable under study. The distribution of responses appears to be fairly similar across gender groups, indicating that other factors may be more influential in shaping participants' behaviours or preferences. As a result, further research should explore additional demographic or behavioural factors that may have a stronger impact on the studied phenomenon.

Table 5: Chi-Square Test for occupation

Total N	67
Test Statistic	493.075 ^a
Degree of Freedom	18
Asymptotic Sig. (2-sided test)	<.001

Interpretation of occupation chi-square test

The researcher conducted a Chi-Square test to analyse the relationship between occupation and the variable of interest, using data from 67 participants. The test yielded a Chi-Square statistic of 493.075 with 18 degrees of freedom and a p-value of less than 0.001. Since the p-value is significantly below the standard significance level of 0.05, the results indicate a strong and statistically significant association, leading to the rejection of the null hypothesis.

This suggests that occupation has a meaningful impact on the studied variable, implying that different professional backgrounds influence participants' choices, behaviours, or preferences. Individuals from different occupational groups may have varying levels of exposure to technology, financial literacy, income levels, and spending habits, which could affect their engagement with financial services or digital payment methods.

The high Chi-Square value confirms that these differences are significant and not due to chance. These findings highlight the need for targeted financial education and digital literacy initiatives tailored to different occupational groups, ensuring broader adoption and efficient use of financial technologies across various sectors

Table 6: Chi-Square Test for payment option

Total N	67
Test Statistic	64.597 ^a
Degree of Freedom	2
Asymptotic Sig. (2-sided test)	<.001

Interpretation of payment option chi-square test

The researcher conducted a Chi-Square test to analyse the association between payment options and the variable of interest, using data from 67 participants. The test resulted in a Chi-Square statistic of 64.597 with 2 degrees of freedom and a p-value of less than 0.001. Since the p-value is significantly below the standard threshold of 0.05, the results indicate a strong and statistically significant association, leading to the rejection of the null hypothesis.

This suggests that the choice of payment options is not randomly distributed but influenced by various factors such as convenience, security, accessibility, and user preference. Digital payments, including online banking, UPI, and mobile wallets, have gained popularity due to their ease of use and speed, while some individuals may still prefer cash or card-based transactions for reasons like habit, privacy concerns, or lack of trust in digital systems.

The high Chi-Square value confirms that these differences in payment preferences are significant and not due to chance. These findings highlight the need for financial service providers to enhance the accessibility, security, and awareness of digital payment options, ensuring a seamless and reliable transaction experience for all users.

Table 7: Chi-Square Test of knowledge about how fintech app works

Total N	67
Test Statistic	306.821 ^a
Degree of Freedom	13
Asymptotic Sig. (2-sided test)	<.001

Interpretation of knowledge about how Fintech App works chi-square test

The researcher conducted a Chi-Square test to analyse the association between knowledge about how fintech apps work and the variable of interest, using data from 67 participants. The test resulted in a Chi-Square statistic of 306.821 with 13 degrees of freedom and a p-value of less than 0.001. Since the p-value is significantly below the conventional threshold of 0.05, the results indicate a strong and statistically significant association, leading to the rejection of the null hypothesis.

This suggests that knowledge about fintech apps is not evenly distributed among participants and is influenced by factors such as age, education, occupation, and exposure to digital financial services. Individuals with higher digital literacy, particularly those in finance or technology-related fields, may have a better understanding of how fintech applications function, whereas others with limited exposure may struggle with their usage.

The high Chi-Square value confirms that differences in fintech knowledge are meaningful and not due to chance. These findings highlight the importance of increasing awareness and providing user-friendly educational resources to bridge the knowledge gap, ensuring that more individuals can confidently adopt and utilize fintech solutions for secure and efficient financial management.

Table 8: Chi-Square Test for awareness of various e-payments methods

Total N	67
Test Statistic	136.881 ^a

Degree of Freedom	3
Asymptotic Sig. (2-sided test)	<.001

Interpretation of awareness of various E-payment methods chi-square test

The researcher conducted a Chi-Square test to analyse the association between awareness of various e-payment methods and the variable of interest, using data from 67 participants. The test yielded a Chi-Square statistic of 136.881 with 3 degrees of freedom and a p-value of less than 0.001. Since the p-value is significantly below the conventional threshold of 0.05, the results indicate a strong and statistically significant association, leading to the rejection of the null hypothesis.

This suggests that awareness of different e-payment methods is not evenly distributed among participants and is influenced by various factors such as age, education level, occupation, and prior experience with digital transactions. Individuals with higher financial literacy or frequent engagement with online transactions are more likely to be aware of multiple e-payment options, including UPI, mobile wallets, net banking, and credit/debit card payments. In contrast, those with limited exposure to digital finance may only be familiar with a few options or rely on traditional payment methods.

The high Chi-Square value confirms that differences in awareness levels are significant and not due to random variation. These findings emphasize the need for greater financial education and awareness campaigns to ensure that all individuals, regardless of background, are well-informed about the various e-payment options available. Increased awareness can lead to greater adoption and confidence in digital financial services, promoting a cashless economy and enhancing financial inclusion.

Table 9: Chi-Square Test for rating of fintech services

Total N	67
Test Statistic	20.388 ^a
Degree of Freedom	4
Asymptotic Sig. (2-sided test)	<.001

Interpretation of rating of fintech services chi-square test

The researcher conducted a Chi-Square test to examine the relationship between the rating of fintech services and the variable of interest, using data from 67 participants. The test yielded a Chi-Square statistic of 20.388 with 4 degrees of freedom and a p-value of less than 0.001. Since the p-value is well below the standard significance level of 0.05, the results indicate a strong and statistically significant association, leading to the rejection of the null hypothesis.

This finding suggests that participants’ ratings of fintech services are not randomly distributed but are influenced by specific factors, such as user experience, ease of use, security, and service efficiency. The high Chi-Square value confirms that the variations in ratings did not occur by chance but rather reflect meaningful differences in user perceptions. These results highlight the importance of understanding customer satisfaction and preferences in fintech

services, which can help in improving service quality and user engagement.

Table 10: Chi-Square Test for frequency of cash payments

Total N	67
Test Statistic	4.149 ^a
Degree of Freedom	2
Asymptotic Sig. (2-sided test)	<.001

Interpretation of frequency of cash payments chi-square test

The researcher conducted a Chi-Square test to examine the relationship between the frequency of cash payments and the variable of interest, using data from 67 participants. The test yielded a Chi-Square statistic of 4.149 with 2 degrees of freedom and a p-value of less than 0.001. Since the p-value is significantly below the conventional threshold of 0.05, the results indicate a strong and statistically significant association, leading to the rejection of the null hypothesis.

This suggests that individuals do not use cash at random but rather due to specific influencing factors such as personal preference, availability of digital payment options, transaction type, and trust in cash transactions. Some people may prefer using cash for small purchases or in areas where digital payment infrastructure is limited, while others may rely on it due to security concerns or lack of familiarity with fintech solutions.

The significant Chi-Square value confirms that the differences in cash payment habits are not due to chance but rather reflect meaningful variations among individuals. These findings highlight the importance of understanding the reasons behind cash usage and exploring ways to promote digital payment adoption by addressing security concerns, improving accessibility, and enhancing user awareness of digital transaction benefits.

Table 11: Chi-Square Test for preference for online payment over other modes

	Value	df	Asymptotic Sig. (2-sided test)
Pearson Chi-Square	5.745 ^a	3	.125
Likelihood Ratio	7.842	3	.049
Linear-by-Linear Association	.505	1	.477
N of Valid Cases	67		

Interpretation of preference for online payment over other modes chi-square test

The researcher conducted a Chi-Square test to examine the relationship between the preference for online payments over other modes and the variable of interest, using data from 67 participants. The Pearson Chi-Square test yielded a statistic of 5.745 with 3 degrees of freedom and a p-value of 0.125. Since this p-value is greater than the conventional significance

level of 0.05, there is insufficient statistical evidence to reject the null hypothesis, indicating no strong association between preference for online payments and the studied variable.

Similarly, the Linear-by-Linear Association test resulted in a Chi-Square value of 0.505 with a p-value of 0.477, further supporting the lack of significant correlation. However, the Likelihood Ratio test produced a Chi-Square value of 7.842 with a p-value of 0.049, which is slightly below 0.05, suggesting a weak association in some aspects of the data.

These findings suggest that individuals' preference for online payments may not be strongly influenced by a single factor but rather a combination of elements such as convenience, transaction security, technological familiarity, and accessibility of digital payment methods. While some users may prefer online payments for their speed and ease, others may still rely on cash or other traditional payment methods due to concerns over fraud, digital literacy, or merchant acceptance. Further investigation is needed to identify specific factors influencing payment preferences and how digital payment adoption can be encouraged.

Table 12: Chi-Square Test for Obstacles in online payments

Total N	67
Test Statistic	77.940 ^a
Degree of Freedom	2
Asymptotic Sig. (2-sided test)	<.001

Interpretation of obstacles in online payments chi-square test

The researcher conducted a Chi-Square test to analyse the association between obstacles in online payments and the variable of interest, using data from 67 participants. The test yielded a Chi-Square statistic of 77.940 with 2 degrees of freedom and a p-value of less than 0.001. Since the p-value is significantly below the standard threshold of 0.05, the results indicate a strong and statistically significant association, leading to the rejection of the null hypothesis.

This suggests that the challenges faced in online payments are not random but influenced by specific factors. Common obstacles include concerns over transaction security, technical issues such as payment failures or slow processing, lack of digital literacy, and limited access to reliable internet or banking services. Some users may also hesitate to use online payment methods due to fraud risks, hidden charges, or difficulties in resolving disputes.

The high Chi-Square value confirms that these issues significantly impact users' experiences with online payments. These findings emphasize the need to improve fintech services by enhancing security measures, ensuring transaction transparency, increasing awareness about safe digital payment practices, and addressing technical inefficiencies to boost trust and convenience in online payment systems.

Table 13: One-sample Chi-Square Test for Frequency of Daily online transactions

Total N	67
Test Statistic	50.313 ^a

Degree of Freedom	3
Asymptotic Sig. (2-sided test)	<.001

Interpretation of frequency of daily online transactions chi-square test

The researcher conducted a One-Sample Chi-Square test to examine the frequency of daily online transactions among 67 participants. The test yielded a Chi-Square statistic of 50.313 with 3 degrees of freedom and a p-value of less than 0.001. Since the p-value is significantly below the conventional significance level of 0.05, the results indicate a strong and statistically significant association, leading to the rejection of the null hypothesis.

This suggests that the frequency of daily online transactions is not randomly distributed but influenced by specific factors such as user habits, accessibility of digital payment methods, transaction needs, and trust in online financial systems. Some individuals may engage in multiple online transactions daily due to frequent online shopping, bill payments, or business transactions, while others may use digital payments less frequently due to preference for cash or concerns over security.

The high Chi-Square value confirms that these variations are meaningful and not due to chance. These findings highlight the need to further explore the reasons behind different transaction frequencies and how digital payment platforms can be optimized to encourage broader adoption and ease of use for different user groups.

Table 14: One-sample binomial Test for need for improvement in online payment systems

Total N	67
Test Statistic	54.000
Standard Error	4.093
Standardised Test Statistic	4.887
Asymptotic Sig. (2-sided test)	<.001

Interpretation of need for improvement in online payment systems chi-square test

The researcher conducted a One-Sample Binomial Test to assess the need for improvement in online payment systems, using data from 67 participants. The test yielded a test statistic of 54.000 with a standard error of 4.093 and a standardized test statistic of 4.887. The p-value was less than 0.001, indicating a highly significant result. Since the p-value is well below the conventional threshold of 0.05, the findings strongly support the need for improvements in online payment systems, leading to the rejection of the null hypothesis.

This suggests that a significant majority of participants believe that online payment systems require enhancements in various aspects. Common areas for improvement may include transaction security, fraud prevention, processing speed, user experience, and customer support. Many users may face challenges such as payment failures, hidden charges, cybersecurity threats, or difficulty in resolving disputes, which could impact their trust in digital transactions.

The strong statistical significance of the results confirms that concerns about online payment systems are not random but widely shared among users. These findings highlight the need for fintech companies and financial institutions to address these issues by improving system reliability, strengthening security measures, and ensuring seamless, transparent, and user- friendly payment experiences.

Table 15: One-sample Chi-Square Test for likelihood of adopting new fintech products.

Total N	67
Test Statistic	15.612 ^a
Degree of Freedom	2
Asymptotic Sig. (2-sided test)	<.001

Interpretation of likelihood of adopting new fintech products chi-square test

The researcher conducted a One-Sample Chi-Square test to analyse the likelihood of adopting new fintech products among 67 participants. The test yielded a Chi-Square statistic of 15.612 with 2 degrees of freedom and a p-value of less than 0.001. Since the p-value is significantly below the conventional threshold of 0.05, the results indicate a strong and statistically significant association, leading to the rejection of the null hypothesis.

This suggests that the willingness to adopt new fintech products is not evenly distributed among participants and is influenced by various factors. These factors may include trust in digital financial services, perceived benefits such as convenience and efficiency, awareness of fintech innovations, and concerns related to security and privacy. While some users may be early adopters, eager to explore new technologies, others may hesitate due to a lack of familiarity or concerns over reliability.

The strong statistical significance of the results confirms that attitudes toward adopting fintech products vary meaningfully among individuals. These findings highlight the need for fintech companies to enhance user trust, improve product awareness, and address security concerns to encourage broader adoption of innovative financial solutions.

Hypothesis

	Null Hypothesis	Test	Sig.(a,b)	Decision
1	The categories of Age occur with equal probabilities.	One-Sample Chi-Square Test	<.001	Reject the null hypothesis.
2	The categories of Gender occur with equal probabilities.	One-Sample Chi-Square Test	<.001	Reject the null hypothesis.
3	The categories of Occupation occur with equal probabilities.	One-Sample Chi-Square Test	<.001	Reject the null hypothesis.
4	The categories of payment option occur with equal probabilities.	One-Sample Chi-Square Test	<.001	Reject the null hypothesis.

5	The categories of knowledge about how fintech app works occur with equal probabilities.	One-Sample Chi-Square Test	<.001	Reject the null hypothesis.
6	The categories of awareness of e-payment methods occur with equal probabilities.	One-Sample Chi-Square Test	<.001	Reject the null hypothesis.
7	The categories of rating of fintech services occur with equal probabilities.	One-Sample Chi-Square Test	<.001	Reject the null hypothesis.
8	The categories of frequency of cash payments occur with equal probabilities.	One-Sample Chi-Square Test	.05	Retain the null hypothesis.
9	The categories defined by preference for online payment over other methods = 1 and 2 occur with probabilities .500 and .500.	One-Sample Binomial Test	.05	Retain the null hypothesis.
10	The categories of obstacles in online payments occur with equal probabilities.	One-Sample Chi-Square Test	<.001	Reject the null hypothesis.
11	The categories of frequency of daily online transactions occur with equal probabilities.	One-Sample Chi-Square Test	<.001	Reject the null hypothesis.
12	The categories defined by need For improvement in online payment systems = 1 and 4 occur with probabilities .500 and .500	One-Sample Binomial Test	<.001	Reject the null hypothesis.
13	The categories of likelihood of adopting new fintech products occur with equal probabilities.	One-Sample Chi-Square Test	<.001	Reject the null hypothesis

Interpretation

Overall, the results suggest that most of the categories examined deviate significantly from having equal probabilities.

Here's a breakdown of each hypothesis test: Hypotheses Rejected (Significant Deviations):

1.Null Hypothesis Decisions: For hypotheses 1 through 6 and 8, the p-values are less than 0.001, indicating strong evidence to reject the null hypothesis. This suggests that the categories of Age, Occupation, payment option, knowledge about how fintech app works,

awareness of e-payment, rating of fintech services, obstacles in online payments, and frequency of daily online transactions do not occur with equal probabilities, implying that some categories are significantly more or less common than others in the sample.

Hypothesis 7, concerning the categories of frequency of cash payments, has a p-value of 0.126, leading to the decision to retain the null hypothesis. This indicates that the categories occur with equal probabilities, suggesting no significant preference or skew in this grouping.

Hypothesis 10 involves a One-Sample Binomial Test comparing the categories defined by need for improvement in online payment systems = 1.00 and 4.00. The p-value is also less than 0.001, resulting in the rejection of the null hypothesis. This indicates a significant difference in the occurrence probabilities of these two categories, with evidence suggesting they do not occur equally.

Significance Level: The significance level for these tests is set at 0.050, and the reported p-values reflect asymptotic significance.

Researcher summarized the analysis which shows that most of the tested categories display significant differences in occurrence probabilities, except for frequency of cash payments, where the null hypothesis is retained. This suggests that while there are distinct patterns in most categories, frequency of cash payments maintains equal representation (Khushbu, & Agarwal 2025). The results highlight the importance of further investigation into the underlying reasons for these discrepancies, which may inform future studies or applications related to these categories.

Conclusion

To conclude few people still prefer visiting a physical bank branch to maintain financial services. Others are already used to transferring money between their accounts, deposit checks, and track their transactions online. In the beginning, the banks offered some perks to get their customers to use online services primarily. Now lots of customers consider online services more convenient as they can take place at any time. Bankers must continuously look out for the additional benefits and improvements they can provide to satisfy the customers. They should give awareness towards fintech and change the attitude to fintech in positive outlook. Opportunities for fintech is wide open and how well the startups rise to the customers' expectations will be a challenge.

Limitations

The following are the limitations of the study:

- As we are students, we were unable to dedicated our whole attention to the study.
- We are not sufficiently funded to carry out any solution-based actions towards solving the issue stated in the research paper.
- We have limited access to the participants, leading to results that may not be representative.
- There is a lack of advanced tools for data analysis may have led to errors or misinterpretations.
- Inexperience in research techniques and data analysis may have led to errors.

- Having a limited time frame, strict deadlines, limiting the time available for data collection and analysis.

Recommendations

Based on the data analysis, several recommendations are made to enhance Fintech's impact on poverty alleviation and entrepreneurship. Fintech companies should prioritize improving perceived benefits, emphasizing easy access, wide availability, transparent fees, and user- friendliness to strengthen customer attitudes. Efforts should also be made to increase female inclusion by engaging and educating women about financial technologies to ensure equitable access. Additionally, although general Fintech awareness is high, there is limited knowledge about digital lending, so platforms should increase visibility and education on its benefits. To promote mobile banking adoption, fintech companies should intensify awareness campaigns, highlighting the convenience of mobile services over physical branches. Lastly, focused campaigns are needed to boost the adoption of specific fintech apps, like Coverfox, BankBazaar, ZestMoney, and Early Salary, to showcase the financial assistance they provide.

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