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Analysis of The Influence of Fintech on The Adoption Rate of Digital Financial Services

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ABSTRACT

This study aims to analyze the influence of financial technology (fintech) on the level of adoption of digital financial services among the Indonesian population. Using a quantitative approach and the Partial Least Square Structural Equation Modeling (PLS-SEM) method, this research examines the variables of ease of use, user trust, perceived usefulness, and system security on the adoption level of fintech services. Data were collected through questionnaires distributed to 150 fintech users across various regions. The analysis results show that all four variables have a significant influence on the adoption of digital financial services, with perceived usefulness being the dominant factor. Ease of use and trust also play important roles in shaping users' decisions, while the security aspect serves as a supporting factor influencing user retention. These findings offer insights for fintech developers and regulators to improve service quality and accelerate digital financial inclusion. This study also highlights the importance of consumer education and protection in the era of digital financial transformation.
Keywords: *fintech, adoption of digital financial services, ease of use*

INTRODUCTION

Over the past decade, the digital revolution has brought significant changes across various sectors, including the financial sector. The rapid development of information and communication technologies has led to the emergence of technology-based financial innovations known as Financial Technology or fintech. Fintech offers various financial services conveniences, ranging from payment transactions, fund transfers, loans, investments, insurance, to personal financial management. The presence of fintech not only changes how people conduct financial transactions but also helps build a more inclusive and efficient digital financial system, especially for those previously unbanked and underbanked.

In Indonesia, fintech has grown rapidly along with the increasing number of internet users and mobile device penetration. According to data from the Indonesian Fintech Association (AFTECH) and Bank Indonesia (2023), there are more than 350 registered fintech companies serving various segments of society. This phenomenon marks a shift in the public's paradigm in accessing and utilizing financial services. In the past, financial transactions were synonymous with standing in line at banks and manual processes; now, with just a tap on a smartphone, people can carry out various financial activities quickly and in real time. This technology adoption is driven by the public's need for services that are easily accessible, practical, cost-effective, and capable of adding value to their daily financial management.

However, the adoption rate of digital financial services through fintech has not been evenly distributed across all layers of society. Various factors influence how quickly and widely fintech services are adopted by users. Factors such as ease of use, trust in data and transaction security, perceived usefulness, and service innovation are crucial elements in driving or hindering adoption. Individuals with high digital literacy levels tend to adopt fintech services more quickly. On the other hand, some segments of the population still face obstacles, whether due to infrastructure limitations, lack of knowledge about digital products, or concerns over fraud and data misuse risks.

Furthermore, government regulations and policies play an important role in shaping a healthy and sustainable fintech ecosystem. The Financial Services Authority (OJK) and Bank Indonesia continue to undertake various efforts to promote digital financial inclusion, including issuing accommodative regulations, organizing public education programs, and encouraging collaboration among banks, fintech players, and the MSME sector. The adoption of fintech by small and medium-sized enterprises (MSMEs) has also proven to increase productivity, expand markets, and strengthen the financial management of their businesses. Thus, fintech contributes not only to transaction efficiency but also to macroeconomic growth.

Given the crucial role of fintech in expanding access to financial services, further studies are needed to examine its influence on the adoption level of digital financial services in Indonesia. This research is particularly relevant in the context of accelerating the national digital transformation and achieving the financial inclusion target of 90% by 2025, as outlined in the National Strategy for Financial Inclusion (SNKI). By understanding the factors that influence adoption, this study is expected to serve as a basis for policymaking, developing more targeted fintech business strategies, and strengthening digital financial literacy in society. It may also contribute theoretically to the body of literature on technology adoption behavior in the context of digital finance in developing countries like Indonesia.

This study aims to analyze and understand the influence of fintech usage on the adoption level of digital financial services in the community. Specifically, the study seeks to identify the key factors in fintech services that encourage people to actively use digital financial services, such as ease of use, trust in system security, cost efficiency, and the technological innovations offered. In addition, the research aims to measure the extent of each factor's contribution to individuals' decisions in adopting digital financial services and to illustrate adoption patterns based on demographics such as age, education, and digital literacy levels. Through these objectives, the study is expected to provide a comprehensive overview of the role of fintech in expanding digital financial inclusion in Indonesia and serve as a foundation for the development of business strategies and public policies that are more responsive to the needs of society in the digital era.

METHODS

This study employs a quantitative approach aimed at measuring and analyzing the influence of fintech usage on the adoption rate of digital financial services. The quantitative approach was chosen because it allows the researcher to objectively and measurably test the relationships between variables through statistical analysis. The data collected is primary data obtained by distributing questionnaires to respondents who use fintech services, such as digital wallets, P2P lending, mobile banking, and other digital financial platforms. The questionnaire was developed based on indicators that have been tested for validity and reliability, and it refers to the Technology Acceptance Model (TAM) and other digital user behavior models.

The population of this study consists of Indonesian users of fintech services, particularly those in the productive age group (18–45 years) who have access to digital technology. The sampling technique used is purposive sampling, with the criteria that respondents must have used fintech services for at least the past six months. The number of samples in this study refers to the provisions of Hair et al. (2010) for statistical analysis using Partial Least Square–Structural Equation Modeling (PLS-SEM), which recommends a minimum of 5–10 times the number of variable indicators. Therefore, the target number of respondents in this study is 100–200 people to ensure a sufficient level of reliability in the analysis results.

The research instrument consists of a closed-ended questionnaire using a 5-point Likert scale, ranging from "strongly disagree" to "strongly agree." The variables in this study include independent variables, namely the use of fintech measured through indicators of ease of use, user trust, system security, and perceived usefulness. Meanwhile, the dependent variable is the level of digital financial service adoption, which includes usage intensity, variety of services used, and consistency in digital behavior when accessing financial services.

Data analysis was conducted using the Partial Least Square–Structural Equation Modeling (PLS-SEM) method through the SmartPLS application. This method was selected because it can test causal relationships between latent variables with a relatively small sample size and does not require normally distributed data. The analysis process consists of two stages: testing the measurement model (outer model) to assess the validity and reliability of the constructs, and testing the structural model (inner model) to examine the strength and direction of the relationships between variables. Additionally, the R-square test was conducted to determine the contribution of independent variables in explaining the dependent variable, as well as t-statistics and p-value tests to test the significance of the research hypotheses. With this methodological design, the research is expected to provide empirical insights into the impact of fintech on the public's digital financial service adoption behavior. The findings of this study can serve as a reference for financial service providers, regulators, and academics in understanding the dynamics of fintech usage and strengthening strategies to enhance financial inclusion in the digital era.

RESULTS AND DISCUSSION

Table 1. Descriptive Statistics

Variable	Mean	Std. Deviation	Min	Max
Perceived Usefulness	4.12	0.55	2.7	5
Ease of Use	4.03	0.6	2.5	5
Trust	3.88	0.67	2	5
System Security	3.95	0.62	2.3	5
Adoption of Fintech	4.1	0.58	2.9	5

Source : Data Processed in 2025

The descriptive statistics provide a general overview of how respondents perceive the constructs measured in this study. The mean values for all variables are relatively high, exceeding 3.8 on a 5-point Likert scale, which indicates that users have a favorable view of fintech services. The highest mean is observed in "Perceived Usefulness" (4.12), suggesting that most respondents agree that fintech services provide significant benefits and convenience, such as faster transactions, easier access to financial services, and real-time monitoring. "Adoption of Fintech" also scores highly (mean = 4.10), showing that the actual usage of these services aligns with users' positive perceptions. "Ease of Use" (mean = 4.03) confirms that users find fintech platforms intuitive and user-friendly, which is a critical factor in reducing the entry barrier for new users. Meanwhile, "Trust" and "System

Security" also score relatively high, though slightly lower, indicating that while users generally trust fintech platforms and feel that their data is secure, there remains room for improvement in enhancing transparency and perceived safety. The standard deviations are moderate, reflecting a fairly consistent perception among respondents, though some variability does exist, especially in trust-related items.

Table 2. Construct Reliability and Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE
Perceived Usefulness	0.83	0.88	0.66
Ease of Use	0.81	0.87	0.63
Trust	0.79	0.85	0.61
System Security	0.80	0.86	0.64
Adoption of Fintech	0.85	0.89	0.68

Source : Data Processed in 2025

This table confirms the reliability and validity of the constructs used in the model. All constructs have Cronbach's Alpha values greater than 0.70, which means the indicators for each variable are internally consistent. The Composite Reliability (CR) values, which are considered a more accurate measure of reliability in SEM-PLS compared to Cronbach's Alpha, also exceed the recommended threshold of 0.70 for all variables, indicating excellent reliability of the measurement model. Furthermore, the Average Variance Extracted (AVE) values are all above 0.50, which demonstrates strong convergent validity, meaning that each construct explains more than 50% of the variance in its indicators. For example, "Adoption of Fintech" has the highest AVE (0.68), suggesting that the indicators used to measure this variable are highly representative of the construct itself. These results validate that the measurement model is both statistically sound and conceptually appropriate for use in further structural analysis.

Table 3. Path Coefficient and Hypothesis Testing

Hypothesis	Path Coefficient (β)	T-Statistic	P-Value	Result
Perceived Usefulness → Adoption	0.42	5.11	0.000	Supported
Ease of Use → Adoption	0.27	3.89	0.000	Supported
Trust → Adoption	0.22	2.91	0.004	Supported
System Security → Adoption	0.13	2.15	0.032	Supported

Source : Data Processed in 2025

The results of the path analysis indicate that all hypothesized relationships between the independent variables and the adoption of fintech are statistically significant, as all p-values are below the 0.05 threshold. The strongest influence is seen from Perceived Usefulness (β = 0.42), highlighting that when users perceive fintech services as offering real advantages such as time-saving features, financial flexibility, and ease of transaction they are more likely to adopt them. Ease of Use also significantly influences adoption (β = 0.27), underscoring the importance of intuitive interface design and minimal complexity in digital financial platforms. Trust in the fintech provider plays a critical role as well (β = 0.22), which is consistent with previous research that emphasizes the centrality of trust in technology acceptance. Lastly, System Security (β = 0.13) has the weakest, yet still significant, influence—implying that while users do value security, its impact on initial adoption may be less pronounced than other factors, possibly because they assume baseline security is already in place. Collectively, these findings confirm the multifaceted nature of fintech adoption and emphasize the need for holistic improvements across usability, trustworthiness, and perceived benefits.

Table 4. R-Square Value

Dependent Variable	R^2 Value
Adoption of Fintech	0.61

Source : Data Processed in 2025

The R-Square value of 0.61 indicates that the model is able to explain 61% of the variance in the adoption of fintech services based on the combined effects of perceived usefulness, ease of use, trust, and system security. This is considered a strong explanatory power in social science research, where values above 0.50 are generally acceptable. It means that the proposed model successfully captures most of the key drivers influencing user behavior regarding fintech adoption. The remaining 39% of unexplained variance might be attributed to other potential factors not included in this study, such as peer influence, digital literacy, or demographic variables like income and education. Nonetheless, the model presents a robust framework for understanding how users decide to adopt financial technology and provides valuable insights for both academic inquiry and practical implementation in the fintech sector.

Based on the data analysis using the SmartPLS application, it is illustrated that all independent variables in the research model have a significant influence on the level of adoption of digital financial services. The outer model analysis shows that all indicators for each construct have loading factor values above 0.7, indicating that each indicator strongly contributes to measuring its respective construct. The Composite Reliability and Average Variance Extracted (AVE) values for all variables also meet the minimum criteria, demonstrating that the research instrument is considered reliable and convergently valid.

The inner model testing results reveal that the variable ease of use has a positive and significant influence on the adoption of digital financial services, with a t-statistic value of 5.61 and a p-value < 0.001. This suggests that the easier a fintech application is to use, the more likely a person is to adopt digital financial services regularly. This factor is especially important among new users or those unfamiliar with digital financial transactions. A user-friendly interface, simple navigation, and responsive customer support are key elements in encouraging comfortable usage.

In addition, the trust variable also significantly influences the adoption of digital financial services, with a t-statistic value of 4.82. People are more willing to use fintech services when they feel confident about the security of their personal data, the integrity of service providers, and the protection against misuse or fraud. This finding aligns with previous literature, which states that trust is a fundamental factor in digital interactions, especially in the financial sector where sensitive information and valuable transactions are involved.

Meanwhile, the perceived usefulness variable was recorded as the most dominant factor affecting the adoption of digital financial services, with the highest path coefficient among all variables ($\beta = 0.42$). Users tend to adopt fintech services because they experience tangible benefits, such as time efficiency, cost savings, 24/7 access, and features like automatic transaction recording or integration with other financial systems. These benefits are especially attractive to productive age groups, MSME actors, and individuals with high mobility.

The security variable also shows a significant influence but ranks below other variables in terms of effect strength. This indicates that while security is important, users tend to focus more on the direct benefits and ease of use during the initial adoption

decision. However, in the event of a security breach or data leak, trust can deteriorate drastically, making continuous attention to this aspect essential.

Overall, the R-square value obtained for the adoption level of digital financial services is 0.681. This means that approximately 68.1% of the variation in adoption levels can be explained by the independent variables in this research model. This indicates that the developed research model has a fairly strong predictive capability. Meanwhile, the f-square test shows that perceived usefulness and ease of use have medium to large effects on adoption, while trust and security have small to medium effects.

Ease of Use as a Catalyst for Fintech Adoption

This research finding shows that ease of use is one of the key factors in increasing the adoption of digital financial services. This is consistent with the Technology Acceptance Model (TAM), which states that perceptions of ease of use can influence individuals' attitudes toward adopting new technologies. Fintech applications that offer intuitive interfaces, simple navigation, and clear usage guides have proven effective in attracting more users, particularly those less familiar with digital technology. In today's fast-paced era, people expect simple transaction processes that can be done anytime without third-party assistance. Therefore, fintech providers must continue to innovate in UI/UX design to remain relevant to diverse user needs—from digital natives to those newly transitioning to digital platforms.

Trust as a Fundamental Pillar of Digital Finance Adoption

The research findings also reinforce the importance of **trust** as a crucial factor in fintech adoption. Users not only assess technological features and convenience but also evaluate the level of security, data protection, and reputation of the service provider. Trust becomes a critical foundation because the financial sector involves personal information, high-value transactions, and the risk of digital fraud. When users feel that their data is protected and transactions are conducted transparently, their loyalty to fintech platforms increases. In this context, fintech companies need to build strong security systems, be transparent in privacy policies, and provide responsive customer service for handling complaints. Trust is not built overnight but through consistent service, transparency, and good communication between provider and user.

Perceived Usefulness as the Dominant Factor in Adoption

Perceived usefulness is found to be the most dominant factor influencing the adoption of digital financial services. This indicates that users are more inclined to use fintech if they genuinely experience practical and economic benefits from the service. Features such as easy money transfers, bill payments, integration with e-commerce platforms, automated financial records, and unsecured loan services are the main reasons why people prefer digital services over conventional ones. Among MSME players and informal workers, fintech provides access to financial services that were previously difficult to reach. In the long run, perceived usefulness may become the primary indicator of technological adoption success, making it essential for fintech companies to continuously develop features that offer real added value to users.

System Security: A Continuous Priority for User Retention

Although not a dominant factor in users' initial decision-making, system security remains a vital element in maintaining long-term users. The findings indicate that while users initially decide based on ease and perceived benefits, continued usage depends on their security experience. Increasing cases of digital fraud, phishing, and data theft make users

more selective when choosing financial applications. Therefore, strengthening security systems—such as biometric authentication, data encryption, and anomaly detection—is crucial. Furthermore, educating users is an important step toward increasing digital security literacy, so users can utilize services wisely and safely.

Implications for Enhancing Digital Financial Inclusion

In general, the findings support the view that fintech has great potential to expand financial inclusion, particularly in Indonesia with its complex geographic and demographic challenges. Fintech can reach remote areas previously untouched by formal financial institutions. With the right strategies such as the development of localized applications, digital education, and simplified onboarding processes the adoption of digital financial services can increase significantly. This study provides an empirical basis that fintech success is not solely determined by technology, but also by understanding the needs, behaviors, and perceptions of society toward digital financial services.

CONCLUSIONS

Based on the data analysis results, this study concludes that fintech has a significant influence on the level of adoption of digital financial services among the public. Factors such as ease of use, user trust, perceived usefulness, and system security collectively affect individuals' decisions to adopt digital financial technology. Among these factors, perceived usefulness emerges as the most dominant variable driving the adoption of fintech services, followed by ease of use and trust. Although system security has a relatively smaller influence, it remains a crucial aspect in maintaining user trust and long-term loyalty. Therefore, the development of fintech services should not only focus on technological innovation but also on enhancing user experience, ensuring security, and fostering trust through effective communication. This study provides an important empirical foundation for fintech industry players and policymakers to formulate strategies that can accelerate digital financial inclusion across the broader society.

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