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Digital Financial Literacy and Customer Protection on Customer Trust with the Use of Mobile Banking as a Moderating Variable

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ABSTRACT
This research examines the effect of digital financial literacy and customer protection on customer trust, with mobile banking serving as a mediating variable. A quantitative approach was employed using a field survey of individuals aged 17 to 44 in Sukabumi who use mobile banking services. From this population, 151 respondents were selected through non-probability sampling focusing on purposive sampling to qualify the mobile banking users. Data were collected via an online questionnaire and analyzed with Smart PLS software. The findings reveal that respondents' digital financial literacy is categorized as good and has a significant positive influence on both mobile banking usage and customer trust. Moreover, digital financial literacy positively affects customer protection. The results also show that mobile banking usage enhances customer trust, while customer protection contributes positively to mobile banking usage.In addition, the study identifies several mediated relationships: digital financial literacy affects customer trust through mobile banking usage; customer protection influences customer trust through mobile banking usage; and digital financial literacy impacts mobile banking usage through customer protection. Finally, digital financial literacy also shapes customer trust when mediated simultaneously by customer protection and mobile banking usage.

1. INTRODUCTION

The internet has revolutionized communication and work habits by making information and communication easily accessible (Suprayitno & Nasution, 2022). Therefore, it is very important to use internet technology wisely to improve the standard of living and production of society. Moreover, the 4th Industrial Revolution has transformed the way people live, think, and interact with one another. People around the world use internet technology (Safitri, 2022). The number of internet users in Indonesia has increased annually from 2018 to 2024, reaching 106 million users in 2018. In January 2024, the number of users is estimated to reach 185.3 million, an increase of 0.8% from the previous year. Although this trend in internet usage shows good growth, its growth is beginning to slow down (Goodstats, 2024).

Digital systems are crucial for global operations due to rapid technological advancements. During this transition phase, companies must adapt, and the rapid progress of information technology is impacting financial institutions. The establishment of digital banks is forcing traditional banks to adapt to this trend. The large market potential in Indonesia's tech-savvy demographic makes this particularly appealing (Kota & Kusumastuti, 2022). Therefore, the integration of technology in the banking sector is crucial to meet the needs of contemporary society (Styarini & Riptiono, 2020).

The increasing number of internet users in Indonesia indicates a growing dependence on modern technology (Irmawati et al., 2024). Therefore, it is crucial for customers to understand the safe use of these services to enjoy their convenience while ensuring transaction security. Online banking fraud, data breaches, and transaction failures are serious issues. Given that banks operate as public trust institutions, online banking customers in Indonesia require legal protection (Budiarto & Pujiyono, 2021).

Research from the Institute for Economic and Financial Development (INDEF) shows that Indonesia's digital literacy score in 2023 is the lowest in ASEAN, at 62%, indicating a significant lack of understanding of technology among the public. However, disparities persist between urban and rural areas regarding financial literacy and accessibility. Therefore, more effective strategies are needed to improve digital literacy and financial inclusion globally, particularly in underserved regions.

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Financial literacy includes attitudes, behavior, understanding of financial products and services, and resource management (Tony & Desai, 2020). Continuously, OECD (2016) defines financial literacy as an understanding of financial concepts and risks, along with the skills, motivation, and confidence needed to use that knowledge to make wise financial decisions, improve individual and collective financial well-being, and participate in the economy.

The OJK has launched various initiatives to improve digital literacy in society, with the aim of promoting innovation and digital financial literacy. These activities include the development and distribution of digital financial literacy modules for the public, the establishment of the OJK Fintech Innovation Center to encourage innovation in the financial sector, and the facilitation of industry consultations for Financial Technology Innovation in the Financial Sector (Simanjuntak, 2024). Digital literacy issues involve understanding the context of risks and benefits. Improving financial and digital literacy is crucial to reducing digital banking fraud and fake financial services (Tiffani, 2023).

The maintenance of customer security within the national banking system is still inadequate. In the banking industry, customers play a crucial role, and the industry's sustainability heavily depends on the community or customers. However, there remains uncertainty regarding legal protection for bank customers conducting mobile banking transactions (Kadari et al., 2023). Therefore, to prevent the loss of banking data, it is essential for all parties to understand digital financial literacy. Vinasti (2022) identified various critical issues faced by mobile banking customers in Sukabumi that hinder the adoption of mobile banking.

Previous research conducted by Almaiah (2023) and Mmari (2024) has examined various aspects of mobile banking, including security, convenience, ease of use, and financial literacy, although it has not yet addressed the importance of digital financial literacy. This study aims to investigate the importance of digital financial literacy in modern society, particularly in Sukabumi, where assessing the impact of digital financial literacy as a means to improve financial management in the digital era is crucial. Better access to quality financial services can drive local economic development and improve community well-being. This study will integrate various factors from previous research while incorporating the variable of digital financial literacy.

In Sukabumi, where digital infrastructure and financial inclusion are still developing compared to larger urban areas, this phenomenon underscores the critical role of mobile banking adoption as a bridge between financial literacy, perceived protection, and trust. Many residents, particularly in semi-urban and rural areas, may be new to digital financial services and rely heavily on trust to engage with them. Increasing digital financial literacy empowers customers to navigate mobile banking confidently, while strong customer protection measures reassure them about the safety of their transactions. When both factors are present, Sukabumi residents are more likely to adopt mobile banking, which becomes a gateway to greater financial engagement and trust in formal financial institutions. This is particularly significant in a region where physical banking access may be limited, and mobile banking offers a practical alternative for managing finances.

Literature Review

Almaiah (2023) highlights that perceptions of security and trust significantly influence the adoption of mobile banking services, but perceptions of risk have a negative impact on customer trust. This indicates that customer protection is a crucial factor in building trust, as reinforced by the findings (Madaniah & Suprayitno, 2022), which show that customer protection can enhance customer trust, although financial literacy has no significant effect on this relationship.

Additionally, Mmari (2024) found that digital financial literacy significantly increases the use of digital banking services. A deeper understanding of digital finance can enhance customer trust in mobile banking services. Pratiwi (2023) showed that mobile banking, risk, and financial literacy significantly influence customer trust; however, financial literacy alone is insufficient to address trust issues. This highlights the importance of a more holistic approach to understanding the factors influencing customer trust.

The Technology Acceptance Model (TAM) is a framework for evaluating the ease of use of a technology. Davis, developed the Technology Acceptance Model (TAM) in 1989 as an extension of the Theory of Reasoned Action (TRA) framework. The TAM model identifies two factors that influence technology usage behavior: perceived ease of use and perceived usefulness. Davis (1989) defines perceived usefulness as the subjective belief of potential users that an application system will improve their job performance or quality of life. Users' expectations regarding the minimal effort required to operate the target system underlie their perceptions of perceived ease of use. The Technology Acceptance Model (TAM) states that perceived ease of use is the primary factor determining system usage (Alagu et al., 2015). According to Fahlevi (2019), the Technology Acceptance Model (TAM) serves as a theoretical framework for predicting individuals' tendencies to adopt and use new technologies.

An individual's level of financial literacy reflects their understanding and management of personal finances, including basic financial principles, money management skills, and knowledge of financial risks associated with decision-making (Atkinson & Messy, 2012). Napitupulu (2021) emphasize that a deep understanding of financial management significantly improves logical and systematic financial decision-making. This aligns with the definition of financial literacy proposed by (Rapih, 2016), which includes an individual's ability to recognize financial needs, evaluate financial problems, develop long-term financial strategies, and make appropriate financial decisions in various situations. These abilities are crucial factors in achieving financial stability and reducing financial risks.

Digital financial literacy encompasses monetary and technological aspects. Financial literacy is defined as the ability to manage personal resources, along with an understanding and familiarity with various financial products and services (Tony & Desai, 2020). OECD (2016) defines financial literacy as the ability to understand and avoid financial risks, as well as the knowledge, motivation, and confidence to apply that understanding for personal and societal financial benefit, and to participate in economic activities.

In an increasingly digitalized world, the ability to adapt to digital financial services is crucial, as many internet developers and investors are developing and investing in digital products. These steps are a response to the growing market demand for digital products that improve personal operational efficiency. Therefore, having adequate digital financial literacy enables individuals to make more informed financial decisions and manage their resources effectively (Frimpong et al., 2022).

Most customers do not have a comprehensive understanding of the security and privacy threats associated with mobile banking. Customers assume that banks prioritize privacy and security; however, they are unaware of the actual effectiveness of e-banking security and confidentiality measures (Kholid & Soemarso, 2018).

Customer loyalty is the primary goal of bank management, as it enables the organization to survive and potentially increase profits. Banks undertake various efforts to acquire new customers and retain existing ones. The services provided enhance customer trust. Mobile banking requires trust due to the prevalence of cybercrime, including account hacking. Customers rely on the bank's ability to protect their assets, as demonstrated by this concept of trust (Utami, 2020) .

This hypothesis tests the impact of digital financial literacy on customer trust, indicating that better digital financial understanding can increase customer trust. The probability of someone trusting and using digital financial services provided by banks increases in line with their level of digital financial literacy. Customer trust can increase service utilization, thereby increasing digital financial literacy and forming a beneficial feedback loop. Research conducted Poher (2020) indicates that individuals' trust in banks and the financial system increases significantly through financial literacy, particularly with regard to investment. This indicates that those with high financial literacy typically exhibit higher levels of trust.

H1a: Digital financial literacy (X1) influences the use of mobile banking (M).
H1b: Digital financial literacy (X1) influences customer trust (Y).
H1c: Digital financial literacy (X1) influences customer protection (X2).

Customers who receive adequate security will demonstrate increased trust in mobile banking services, thereby encouraging more frequent use. Research by Almaiah (2023) indicates that factors such as privacy and security can influence customers' decisions to use mobile banking, including customer protection features. Additionally, the study Pranoto (2020) indicates that security significantly influences customers' tendency to use mobile banking services. Therefore, the statement below presents a hypothesis regarding the impact of customer protection on mobile banking usage:

H2: Customer protection (X_2) significantly influences the use of mobile banking (M).

Additionally, research by Pratiwi (2023) indicates that mobile banking usage has a positive and significant impact on customer trust, while research by Suprayitno (2022) shows that customer protection has a positive and significant influence on customer trust. In this scenario, mobile banking functions as a mediating variable that strengthens the relationship between customer protection and customer trust; when banks implement strong security measures and customers feel safe using mobile banking, trust in the bank will grow.

H3: The use of mobile banking (M) has a significant effect on customer trust (Y)

2. METHOD

This study examines the correlation between digital financial literacy and customer protection, using online banking usage as a mediating variable to evaluate its impact on customer trust. This study aims to explain

the importance of digital financial literacy as a relatively neglected factor in influencing customer trust in digital banking, particularly mobile banking. PLS-SEM (Partial Least Squares Structural Equation Modeling) is used as an effective research tool in this study, designed to analyze complex relationships between variables. This study analyzes the influence of digital financial literacy and customer protection on customer trust, using mobile banking as a mediating variable among users in Sukabumi, and provides recommendations for financial institutions to enhance financial literacy training.

This research is classified as direct or field study, where field research is the process of actually going out and looking for things to study. This research uses quantitative techniques because it involves the collection, analysis, and interpretation of numerical variables. Quantitative data analysis attempts to assess hypotheses through statistical techniques (Azkiyah, 2023). This study, conducted in Sukabumi, West Java, Indonesia, analyzes the behavior of bank customers in using mobile banking applications. Data collection began in December 2024. Population is a set of values that includes all potential observations for a particular quality of the objects being studied (Yusuf, 2014). This study focuses on individuals who use mobile banking services in Sukabumi. Their ages range from 17 to 44 years.

This study used questionnaires to collect information. The diverse conditions and data collection techniques required several types of questionnaires. These questionnaires consisted of a series of structured questions with multiple options, allowing respondents to select the most appropriate answer reflecting their ideas, emotions, experiences, or perspectives (E. Nugroho, 2018). A scale is a method for measuring data related to a research problem. The Likert scale is one such measurement tool. Rensis Likert developed the Likert scale (1-5), which consists of a series of items. This Likert scale is intended to measure individuals across similar dimensions, allowing respondents to position themselves on a continuum of items (Yusuf, 2014).

Primary data refers to information obtained directly from its original source, which the author collected by distributing questionnaires designed with Google Forms online (Azkiyah, 2023). Primary data was obtained from the responses provided by survey respondents regarding research variables, including the use of mobile banking, customer protection, customer trust, and digital financial literacy.

3. RESULT AND DISCUSSION

R This study examined questionnaire data from 25 statements covering four variables: digital financial literacy (X1), customer protection (X2), mobile banking usage (Z), and customer trust (Y). The study population consisted of Sukabumi residents aged 17 to 44 who used mobile banking. The sample comprised 151 respondents, recruited through a questionnaire distributed on social media, created using Google Forms. All questionnaires were analyzed and evaluated using Smart PLS software. A comprehensive discussion of the study findings will be presented in detail.

This section presents the characteristics of the respondents based on descriptive data. The demographic characteristics of the sample, including age, gender, educational level, and occupation, are presented in Table 1. These characteristics reflect the users of mobile banking services in Sukabumi.

Table 1. Respondent Identity

Respondent Identity	Characteristics	Frequency	
Gender	Male	43	28.5
	Female	108	71.5
	Total	151	100
Age	17 - 28 years	146	96.7
	29 - 44 years old	5	3.3
	Total	151	100
Education	Elementary School or Equivalent		
	Junior High School or Equivalent	1	0.7
	High School or Equivalent	71	47
	Diploma	5	3.3
	Bachelor's Degree	71	47
	Master	3	2
	Doctorate	-	-
	Total	151	100
Job	Student/University Student	82	54.3
	Civil Servant	-	-
	State-Owned Enterprise Employees	8	5.3

Respondent Identity	Characteristics	Frequency	
	Self-employed	9	6
	Military/Police	-	-
	Others	52	34.4
	Total	151	100

This section presents the digital financial literacy score. The purpose of this score is to assess the level of digital financial literacy among respondents. This study examines the knowledge and abilities of 151 respondents regarding financial management in the digital era. Figure 1 is a graph depicting the financial literacy score in Sukabumi.

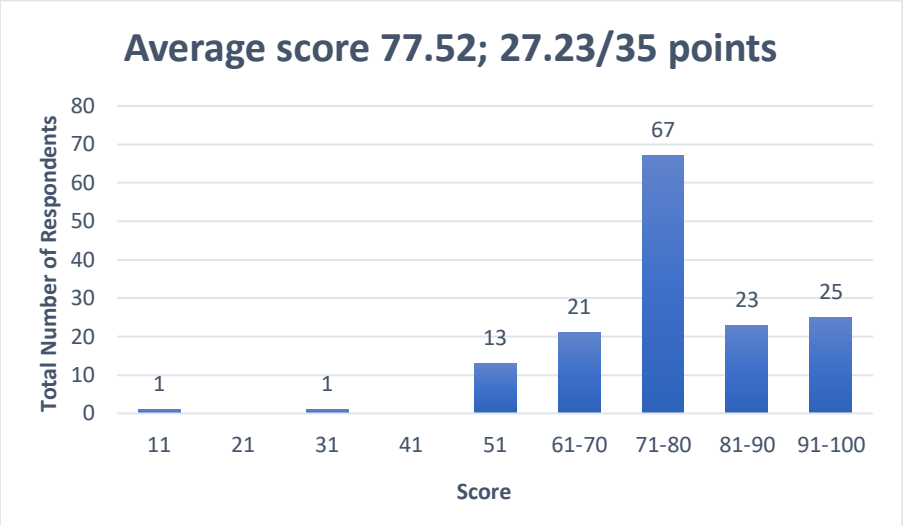

Figure 1. Total Digital Financial Literacy Score

According to Figure 1, there were 151 participants with an average score of 77.52, which relates to their understanding of digital financial literacy. The ability to absorb and apply the material is evident from the higher level of understanding and skills demonstrated by respondents who scored above average in digital financial literacy. The results indicate that most respondents performed well, but there is still room for improvement in terms of understanding for those who scored lower on the digital financial literacy scale.

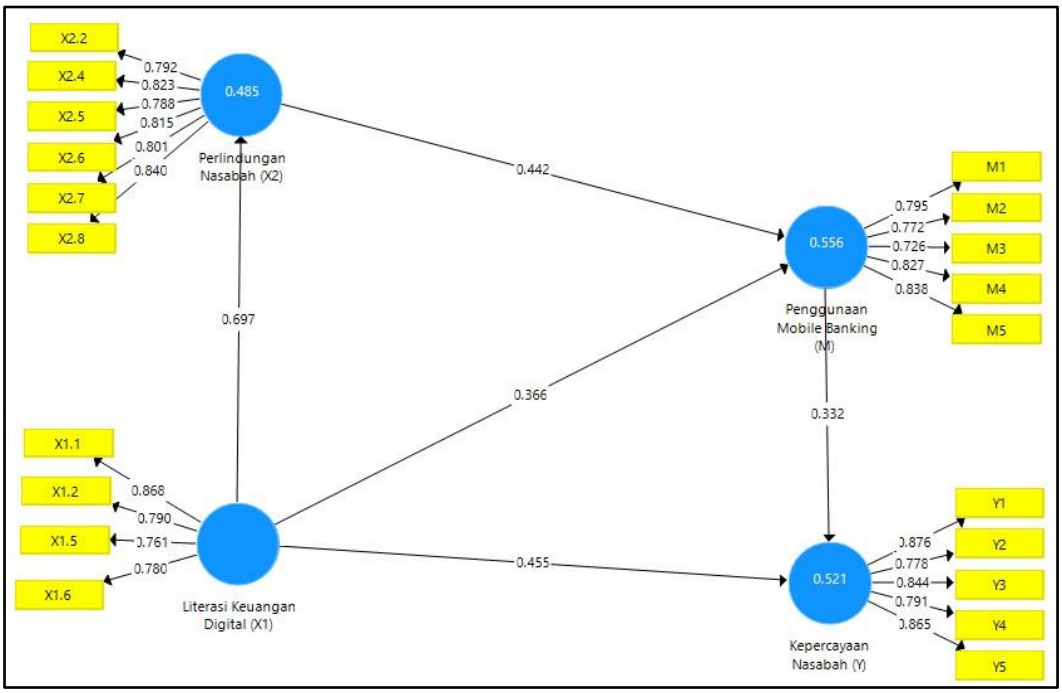

Figure 2. Research Model

When the loading value is 0.7, it means that the construction explains more than 50% of the indicator's volatility. For each indicator, evaluate its external loading value to ensure that the indicator depends on other indicators in measuring the latent variable; this is how to test the reliability of an indicator. The data is then cleaned of irrelevant and unsuitable latent variables for analysis.

Table 2. Factor Outer Loading Values

Variable	Item	Factor Loading	Cronbach's Alpha	AVE	VIF
Use of Mobile Banking (M)	M1	0.795	0.851	0.656	1.865
	M2	0.772			1.738
	M3	0.726			1.574
	M4	0.827			2.090
	M5	0.838			1.971
Digital Financial Literacy (X1)	X1.1	0.868	0.815	0.641	2.299
	X1.2	0.79			1.845
	X1.5	0.761			1.488
	X1.6	0.780			1.644
Customer Protection (X2)	X2.2	0.792	0.895	0.656	1.995
	X2.4	0.823			2.503
	X2.5	0.788			2.149
	X2.6	0.815			2.445
	X2.7	0.801			2.146
	X2.8	0.840			2.926
Customer Trust (Y)	Y1	0.876	0.888	0.690	2.876
	Y2	0.778			1.899
	Y3	0.844			2.493
	Y4	0.791			1.888
	Y5	0.865			2.408

Table 3 shows the VIF values for the indicator variables (outer model), indicating that all indicators have values <3. This indicates that there are no symptoms of multicollinearity in the analyzed model. In other words, the variables in the model are not significantly correlated with each other. The presence of multicollinearity can affect the results of the analysis, making this finding very important. Therefore, the model used can be considered valid in the context of this analysis. Cronbach's alpha is a method for measuring reliability. Cronbach's alpha are used to determine reliability values. According to Hardisman (2021), a variable is considered reliable if the Cronbach's alpha or composite reliability score is greater than 0.7 for confirmatory research and greater than 0.6 for explanatory research. Table 3 shows that all variables have Cronbach's alpha greater than 0.7. This means that the Cronbach's alpha requirements have been met by all variables.

When the Average Variance Extracted (AVE) value is greater than 0.5, it means that the construct explains 50% of the variance in the items, and is considered to have convergent validity for constructs with reflective indicators (Sarstedt et al., 2020). Table 4 shows the Average Variance Extracted (AVE) values. As shown in Table 3, all constructs are reliable because each variable has an Average Variance Extracted (AVE) value greater than 0.50. This indicates a strong assessment of discriminant validity in the configuration of each variable.

In assessing discriminant validity, in addition to the cross-loading model, the Fornell-Lacker Criterion can also be used. See Table 3 for the assessment of discriminant validity using the Fornell-Lacker Criterion.

Table 3. Fornell-Lacker Criterion

	Customer Trust (Y)	Digital Financial Literacy (X1)	Mobile Banking Usage (M)	Customer Protection (X2)
Customer Trust (Y)	0.832			
Digital Financial Literacy (X1)	0.679	0.801		
Mobile Banking Usage (M)	0.639	0.675	0.792	
Customer Protection (X2)	0.793	0.697	0.698	0.810

According to Table 4, the value of digital financial literacy on digital financial literacy (0.801) is greater than the value of digital financial literacy on customer trust (0.679), indicating that the predictors used to evaluate digital financial literacy are appropriate for measuring it and demonstrate strong discriminative validity.

The extent to which all exogenous variables contribute to the observed variance is measured by the coefficient of determination (R^2). The R^2 value ranges from zero to approximately one. Better estimation accuracy is indicated by values closer to 1. An R^2 value of 0.25 indicates a small effect, 0.50 indicates a moderate effect, and 0.75 indicates a significant effect (Santosa, 2024) .

Table 4. R-square value

	R Square	Adjusted R Square
Customer Trust (Y)	0	0.515
Mobile Banking Usage (M)	0.556	0.550
Customer Protection (X2)	0.485	0

According to Table 4, the R-square value for customer trust (Y) is 0.521, indicating a moderate effect. The R-square value for mobile banking usage (M) is 0.556, indicating a moderate influence. Meanwhile, the R-Square value for customer protection (X2) is 0.485, indicating a small influence.

The basis for testing the hypothesis directly is the visual output and values identified in the direct effect. Table 6 presents the hypothesis testing.

Table 5. Hypothesis Testing Path Coefficients (Direct Effects)

	Original Sample	Sample Mean	STDEV	T-Stats	P-Val
Digital Financial Literacy (X1)>> Customer Trust (Y)	0.455	0.470	0.116	3.940	0.000
Digital Financial Literacy (X1)>> Mobile Banking Usage (M)	0.366	0.367	0.081	4.503	0.000
Digital Financial Literacy (X1)>> Customer Protection (X2)	0.697	0.698	0.069	10,169	0.000
Use of Mobile Banking (M)>> Customer Trust (Y)	0.332	0.320	0.108	3.061	0.002
Customer Protection (X2)>> Mobile Banking Usage (M)	0.442	0.436	0.088	5.023	0.000

The results also confirm that digital financial literacy influences customer trust. With a T-statistic of 3.940 and a P-value of 0.000, the hypothesis is accepted, and the positive effect is reflected in the original sample value of 0.455. Moreover, customer protection is strongly shaped by digital financial literacy. This is evidenced by the T-statistic of 10.169, which is far above 1.96, the P-value of 0.000, and the high original sample value of 0.697. Customer protection also plays an important role in mobile banking usage, as indicated by a T-statistic of 5.023 and a P-value of 0.000, with a positive relationship shown in the sample value of 0.442.

Finally, mobile banking usage significantly contributes to customer trust. This is supported by the T-statistic of 3.061, the P-value of 0.002, and the positive sample value of 0.332. The inner model data, which includes digital financial literacy (X1), customer protection (X2), and mobile banking usage (M), is considered to influence customer trust (Y).

Table 6. Indirect Effect Hypothesis Test

	Original Sample	Sample Mean	STDEV	T-Stat	P-Val
Digital Financial Literacy (X1) >> Mobile Banking Usage (M) >> Customer Trust (Y)	0.122	0.115	0.042	2.906	0.004
Customer Protection (X2) >> Mobile Banking Usage (M) >> Customer Trust (Y)	0.147	0.145	0.066	2.221	0.027
Digital Financial Literacy (X1) >> Customer Protection (X2) >> Mobile Banking Usage (M) >> Customer Trust (Y)	0.102	0.100	0.045	2.266	0.024

Digital Financial Literacy (X1) > Customer Protection (X2) >> Mobile Banking Usage (M)	0.308	0.303	0.067	4.593	0.000

The indirect relationship hypothesis is supported since the T value (2.906) exceeds the critical T table value (1.96) and the P value (0.004) is below 0.05. This indicates that customer trust is significantly affected by digital financial literacy when mediated by mobile banking usage. A positive relationship is shown by the original sample value of 0.122. Similarly, customer trust is also significantly influenced by customer protection through mobile banking usage, as evidenced by the T value (2.221 > 1.96) and P value (0.027 < 0.05), with a positive effect reflected in the original sample value of 0.147.

Furthermore, mobile banking usage is strongly affected by digital financial literacy through the mediation of customer protection. This is supported by a T value of 4.593, which is greater than 1.96, and a P value of 0.000, which is less than 0.05. The positive correlation is shown in the original sample value of 0.308. Lastly, customer trust is significantly influenced by digital financial literacy when mediated by both customer protection and mobile banking usage. This is confirmed by the T value (2.266 > 1.96) and the P value (0.024 < 0.05), with the positive effect represented by the original sample value of 0.102.

The findings demonstrate that mobile banking usage serves as a significant mediator in the relationship between both digital financial literacy and customer trust, as well as customer protection and customer trust. Customers who are digitally financially literate and who perceive strong protection measures are more likely to adopt mobile banking services, and this adoption, in turn, plays a key role in building their trust. Mobile banking usage therefore acts as a bridge, translating higher levels of financial literacy and perceptions of protection into greater customer trust through increased engagement with mobile banking platforms. Notably, the strongest indirect pathway observed in this analysis is from digital literacy through protection perception and mobile banking usage to trust, underscoring the importance of fostering both literacy and protection to encourage mobile banking adoption and enhance trust in financial services.

Discussion

Mobile banking usage in Sukabumi is positively and significantly influenced by digital financial literacy, according to the findings of this study. Understanding the various products offered by digital banks, such as mobile banking, is an important element in this context. Customers' ability to utilize digital devices facilitates the management of their financial operations, thereby increasing the frequency of mobile banking usage.

Additionally, understanding loans, insurance, and digital asset management is crucial for raising public awareness about the benefits and risks associated with mobile banking services. By gaining comprehensive knowledge, residents of Sukabumi can make wise financial decisions, utilize technology for effective financial management, and enhance financial inclusion in the digital age. As a result, digital financial literacy not only increases the use of mobile banking but also fosters a more financially skilled community ready to tackle future financial challenges. Sabila (2024) support this, as their research shows that users with financial and digital literacy gain greater benefits and convenience from mobile banking apps, which significantly assist their daily activities. Additionally, the study by Deswita (2021) indicates that those with digital financial literacy have a much higher influence on the use of mobile banking services.

This study found that the trust of Sukabumi mobile banking customers increased significantly when they had good digital literacy. Customers' understanding of their rights and the protection offered by banks to mobile banking customers instills a sense of security and trust in using digital financial services such as mobile banking. The positive and significant impact of digital financial literacy among mobile banking customers in Sukabumi on their level of trust is clearly evident from the available data. Research by Poher & Letamendia (2020) shows that public trust in banks and the financial system increases significantly as financial literacy increases. This indicates that those with high financial literacy tend to show higher levels of trust.

That digital financial literacy has a positive and significant impact on customer protection levels is clearly evident from the available data. Research by Rutledge (2010) explains how financial literacy provides customers with the information, skills, and self-confidence they need to understand and evaluate the information provided to them, enabling them to purchase financial services and products that align with their needs. Since they can make better decisions, this directly protects customers.

The fact that customers are satisfied with the security offered by the bank in mobile banking transactions is evident from this. This aligns with the findings of the study (Almaiah, 2023), which highlights factors such as privacy and security that can influence customers' decisions to use mobile banking, including customer protection. Additionally, the study Pranoto (2020) shows that security significantly influences customers' tendency to adopt mobile banking services.

In addition, mobile banking provides customers with a great deal of flexibility, as they can use it anytime and anywhere they want. Customers tend to trust financial services more when they have easy and quick access to what they need. As a result, mobile banking has significantly increased public trust in Sukabumi and contributed to its growing popularity. Customers in Sukabumi are more likely to trust banks that offer convenient and easy-to-use mobile banking services. This is supported by research from Pratiwi (2023) which states that the use of mobile banking has a positive and significant impact on customer trust.

This is also supported by research studies Lusardi (2013), which shows that financial literacy is intrinsically related to an individual's ability to make good economic decisions. Additionally, users with a strong understanding of financial products and their functions can utilize mobile banking services more effectively, thereby increasing their trust in such services. Customers' perceptions of the benefits and drawbacks of mobile banking are influenced by their financial literacy, with higher financial literacy leading to greater trust in the system (Mayer & Davis, 1995).

Research conducted by Pratiwi (2023) confirms that the use of mobile banking positively and significantly influences customer trust. Additionally, a study by Suprayitno (2022) shows that customer protection positively and significantly influences customer trust. When banks provide strong security measures and customers feel safe using mobile banking, trust in the institution increases.

This study is also supported by Deswita (2021), which shows that those with digital financial literacy have a significantly higher influence on the use of mobile banking services. Additionally, research by Apau & Singh (2021) also highlights the important role of security in influencing mobile banking usage, with perceived security emerging as the most important factor predicting users' behavioral intentions and mobile banking app usage behavior.

High digital financial literacy improves individuals' understanding of financial products and services, thereby strengthening their trust in financial institutions (Lusardi, 2014). In addition, strong customer protection, as revealed by Khan (2016), also plays an important role in increasing customer trust in mobile banking, especially for those with good financial literacy. With adequate protection, customers feel safer, which in turn strengthens their trust in digital financial services. Therefore, this hypothesis emphasizes the interaction between digital financial literacy and customer protection in building customer trust.

In Sukabumi, the mediation model reveals that mobile banking adoption serves as a key pathway through which improved digital financial literacy and stronger perceptions of customer protection translate into greater trust in financial services. As a city with both urban and semi-rural areas, Sukabumi faces uneven access to traditional banking infrastructure, making mobile banking a vital tool for financial inclusion. The findings suggest that when residents are equipped with digital financial knowledge and reassured about the security of their transactions, they are more likely to adopt mobile banking, and this increased usage enhances their trust in financial institutions. This insight highlights the need for targeted interventions in Sukabumi that prioritize raising digital financial literacy, reinforcing customer protection messaging, and expanding access to mobile banking platforms, particularly in underserved areas. By combining education and trust-building initiatives, Sukabumi can strengthen financial participation, support economic development, and close gaps in access to formal financial services.

4. CONCLUSION

The research confirms that digital financial literacy has a positive and significant effect on both the use of mobile banking and the level of customer trust. Users with higher literacy are more inclined to adopt mobile banking services and feel more confident in their security. Furthermore, digital financial literacy contributes significantly to customer protection, suggesting that informed users are more capable of safeguarding themselves from digital financial risks. The use of mobile banking itself positively influences customer trust by offering ease of access and satisfactory user experiences. Additionally, customer protection has a positive impact on mobile banking usage and trust, reinforcing that when customers feel secure, their motivation to use and trust the platform increases. Mobile banking usage mediates the relationship between digital financial literacy, customer protection, and customer trust, indicating that strong understanding and sufficient protection jointly enhance user confidence in digital financial services.

In light of these findings, it is recommended that the government, educational institutions, and financial service providers enhance public digital financial literacy through seminars, workshops, and outreach campaigns. Banks should develop accessible and interactive learning modules within their mobile apps or websites, and collaborate with educational institutions to integrate digital financial literacy into the curriculum, especially targeting the tech-savvy productive age group in Sukabumi. Financial institutions must also strengthen their customer protection mechanisms by implementing advanced security technologies such as two-factor authentication, real-time transaction notifications, and strong encryption. Transparent communication about user rights and protection policies, along with accessible and responsive complaint channels, will further support customer confidence. Lastly, further research is needed to explore additional factors influencing customer trust in

mobile banking, such as user experience, service quality, and demographic characteristics. Future studies are encouraged to adopt mixed methods, combining quantitative surveys with qualitative techniques like in-depth interviews or focus group discussions, to gain deeper insights into the underlying drivers of trust in digital financial services.

Banks in Sukabumi can bring these recommendations to life by combining education, security, and customer engagement in a simple but strategic way. They can start by adding interactive learning features to their mobile apps and websites, such as short videos, quizzes, and tips that teach users how to manage money and use digital banking safely. At the same time, they can work with schools, universities, and community groups to hold workshops and outreach programs, ensuring that financial education reaches young and tech-savvy people as well as those who are less familiar with digital services. Strengthening security is also key, so banks should use tools like two-factor authentication, biometric logins, and real-time transaction alerts, while clearly explaining these features to customers to build their confidence. Offering fast and easy ways to get help, like 24/7 chat support or a simple complaint process, will also show customers that their safety and satisfaction matter. Finally, banks should regularly ask for feedback through surveys or focus groups to understand customer needs better and use these insights to improve their apps and services. By focusing on education, security, and communication, banks can encourage more people in Sukabumi to adopt mobile banking and feel confident using it.

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