

Empowering Loan Awareness: The Role of Shari'ah Financial Literacy, Blockchain, and Fintech Trust

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ABSTRACT

Research Originality: This study contributes original insights by examining the interplay of Shari'ah financial literacy, blockchain understanding, and fintech trust in protecting against illegal online loans and predatory lending.

Research Objectives: It examines the effect of Shari'ah financial literacy on illegal loan awareness, with blockchain technology understanding and Shari'ah fintech trust as mediating variables.

Research Methods: An associative quantitative approach was employed, utilizing a survey of 519 Indonesian millennial Muslims selected through simple random sampling. Data were analyzed using structural equation modeling (SEM) to explore the variable relationships.

Empirical Results: The findings revealed that Shari'ah financial literacy significantly influenced the studied variables. Blockchain understanding enhanced fintech trust but did not directly impact loan awareness, whereas Shari'ah fintech trust positively affected awareness of illegal lending risks.

Implications: This study emphasizes the Shari'ah financial literacy and blockchain understanding to strengthen consumer trust in Shari'ah fintech and raise their awareness of illegal loans.

Keywords:

loan awareness; financial literacy; ilegal online loans; understanding blockchain; shari'ah fintech

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INTRODUCTION

Technological advancements have profoundly transformed various aspects of life, particularly the financial industry. They introduce financial technology (fintech), revolutionizing transaction services by offering greater efficiency, flexibility, and convenience (Hakim & Irawan, 2019; Murinde et al., 2022). However, this advancement has also brought challenges, including rising consumerism and modern loan sharks with overly high interest rates (Indrianti, 2022). Consequently, digital financial service users face significant financial and legal risks, particularly from illegal online loan platforms that exploit regulatory loopholes.

In Indonesia, illegal online loans have become a critical issue. Numerous lending services operate without proper licensing from the Financial Services Authority (OJK), employing peer-to-peer (P2P) lending technologies that violate legal regulations (Subagiyo et al., 2022). These illicit practices often result in substantial financial losses, psychological distress, threats, and intimidation, categorizing them as cybercrime (Brands & Doorn, 2022). Angkasa et al. (2023) even highlight that victims of illegal loans frequently suffer substantial financial and emotional harm.

Despite existing regulations, legal protection for victims remains insufficient. Current laws do not protect users' data, which is frequently misused to harass and coerce borrowers (Rindiantika et al., 2023). Moreover, law enforcement efforts often result in soft sentences that fail to deter perpetrators (Angkasa et al., 2023). Addressing this issue is further complicated by limited resources and expertise in handling electronic evidence in cases of illegal online loans (Broadhurst, 2006; Xu et al., 2019).

In Islamic finance, a similar issue also occurs. While technological innovations have some benefits, they also pose challenges. For example, adopting QRIS digitization has shown the potential to moderate the relationship between Islamic financial literacy and interest in online transactions. These advancements directly influence consumer decisions, outlining the importance of understanding technology's role in Islamic finance (Mahrizal et al., 2023; Shaikh et al., 2020). Enhanced Islamic financial literacy enables individuals to make informed financial decisions aligned with Shari'ah principles (Dewi & Ferdian, 2021).

On the other hand, the increasing adoption of Shari'ah-based financial technology (fintech) in Muslim-majority countries raises several issues, for example, regarding public awareness of illegal online lending risks (Huang, 2018; Subagiyo et al., 2022). Thus, good Islamic financial literacy is essential for mitigating these risks. This condition can be achieved by increasing public understanding of blockchain technology and trust in Islamic fintech. Unfortunately, Islamic financial literacy is relatively low in many countries, including Indonesia (Apriantoro et al., 2023; Zevender et al., 2022). Consequently, individuals are not fully protected from illegal lending despite the potential of technology to offer safer financial solutions (Alaeddin et al., 2021).

This study aims to bridge the gap by examining the combined effects of Islamic financial literacy, blockchain technology understanding, and trust in Islamic fintech on raising public awareness of illegal online loans. Unlike previous research that analyzed

these factors independently, this study explores these variables' interplay to provide a comprehensive understanding of how financial literacy and technology adoption can empower individuals to make informed decisions and avoid illegal lending practices. This novel perspective highlights the protective role of Islamic financial literacy and fintech trust in mitigating financial risks and promoting safer financial behavior, contributing to the broader discourse on ethical financial practices in the digital era.

While many studies have investigated this topic, they are still limited in several ways. For example, previous studies primarily focused on financial literacy without adequately addressing its connection to the risks posed by the digital ecosystem (Chen et al., 2024; Kabir et al., 2021; Rahim et al., 2023). Additionally, most research relies on traditional quantitative methods that assess Islamic financial literacy independently from key factors like blockchain understanding and trust in fintech. For instance, Hassan et al. (2023) examined Islamic financial literacy without exploring its interaction with blockchain technology. Similarly, Chen et al. (2024) analyzed fintech trust without involving financial literacy or addressing illegal lending risks. Further, Javaid et al. (2021) investigated digital financial behavior but did not apply mixed methodologies or consider the combined long-term effects of financial literacy and technological trust. Consequently, there remains a critical gap in the literature regarding comprehensive methodological approaches integrating these factors to assess their collective impact on public awareness of illegal online lending.

To fill this gap, this study aims to integrate Islamic financial literacy, blockchain technology understanding, and trust in Islamic Fintech within a single analytical framework. The research seeks to analyze the effect of Islamic financial literacy on public awareness of illegal online loans, with blockchain understanding and fintech trust acting as mediating variables. In particular, the study objectives are threefold. First, it assesses the direct influence of Islamic financial literacy on awareness of illegal online loans. Second, it examines the mediating role of blockchain technology understanding. Finally, this study investigates how trust in Islamic fintech contributes to reducing the risks of illegal loans. The study contributes to the literature by providing empirical evidence on the interplay of these three factors to enhance financial awareness, offering a novel perspective that combines financial literacy and technological trust. This integrated approach is expected to inform more effective educational strategies and policy interventions to mitigate the negative impacts of illegal online lending in the digital era.

METHODS

This research used a quantitative approach with an associative design. Quantitative methods rely on collecting and analyzing numerical data to understand the relationship between variables, while the correlational design allows researchers to identify and measure the relationship between Islamic or *Shari'ah* financial literacy, *Shari'ah* fintech trust, illegal online loan awareness, and blockchain understanding without manipulating these variables.

This research was conducted in 2024, involving the millennial Muslim community across Indonesia as the population. The respondents were specifically chosen based on three key criteria. First, they belonged to the millennial generation, defined as individuals born between 1984 and 2004 and aged between 20 and 40 in 2024. Second, all respondents identify as members of the Muslim community in Indonesia, reflecting diverse cultural and social backgrounds from various regions across the country. Third, eligibility for participation was determined by the random sampling method. Thus, this study performed a simple random sampling technique, and 519 respondents from this population were randomly selected. This technique ensures that each member has an equal chance of being selected, thus enhancing the representativeness of the research results.

This study gathered primary data directly from respondents through online survey techniques. In so doing, an online questionnaire facilitated by Google Forms was distributed. The questionnaire was designed to measure Islamic financial literacy, trust in Islamic fintech, awareness of illegal online loans, and understanding of blockchain technology, using a 4-point Likert scale, ranging from "Disagree" to "Strongly Agree." The Likert scale in this study is based on its ability to capture respondents' degree of agreement or disagreement with the given statements, making it easier to measure attitudes, perceptions, and beliefs.

Furthermore, latent variables were used in this study. Latent variables are theoretical constructs that cannot be measured directly but are represented by several observable indicators. According to Hair et al. (2017), latent variables are often used in social research to measure abstract concepts, such as attitudes, perceptions, or beliefs, which are then operationalized through a questionnaire series of statements or questions. This study grouped these variables into three main categories: exogenous, mediating, and endogenous. The exogenous latent variable was *Shari'ah* financial literacy, which affected other variables without being influenced by other variables in the model. *Shari'ah* financial literacy is defined as an individual's knowledge and understanding of Islamic financial principles, including *usury*, *maysir*, and *gharar* (Alam et al., 2017). It is typically measured through a questionnaire with indicators such as the knowledge of *usury*, *maysir*, *gharar*, and Islamic financial products.

Meanwhile, blockchain understanding and trust in *Shari'ah* fintech mediate latent variables. Blockchain understanding mediated the relationship between *Shari'ah* financial literacy, trust in *Shari'ah* fintech, and illegal online loan awareness. Meanwhile, trust in *Shari'ah* fintech mediated the relationship between blockchain understanding and illegal online loan awareness. Blockchain understanding is an individual's knowledge and understanding of blockchain technology and its application in digital finance (Mahrizal et al., 2023). This variable is measured through a questionnaire that includes indicators such as basic knowledge of blockchain, its applications in finance, and perceptions of blockchain security and transparency. Trust in *Shari'ah* Fintech, also a mediating variable, reflects individual confidence in the security, transparency, and reliability of *Shari'ah*-based financial services (Hermantoro, 2023). The indicators include data security and privacy, transaction transparency, and the reputation and reliability of Islamic fintech service providers.

Finally, the endogenous latent variables in this study were *Shari'ah* fintech trust and illegal online loan awareness, which were influenced by other latent variables in the model. Illegal online loan awareness is the knowledge and ability of individuals to identify and understand the risks associated with illegal online loans (Rindiantika et al., 2023). This variable is measured through a questionnaire with indicators such as knowledge of the risks of illegal loans, the ability to identify legal vs illegal loan services, and attitudes toward illegal loans.

This study used Partial Least Squares Structural Equation Modeling (PLS-SEM) as a data analysis tool facilitated by the SmartPLS 4 software. The analysis stage began with evaluating the measurement model (outer model) to ensure indicator validity and reliability. Following that, indicator validity was assessed through the loading factor value, where indicators above 0.7 were considered valid in reflecting the latent construct being measured. Subsequently, construct reliability was tested using Composite Reliability (CR) and Cronbach's Alpha, with threshold values above 0.7 indicating good internal consistency. Convergent validity was evaluated through Average Variance Extracted (AVE), where an AVE value above 0.5 indicates that the latent construct can explain more than half of the Variance of its indicators. Lastly, discriminant validity was assessed using the Fornell-Larcker criterion, where the root AVE for each construct should be greater than the correlation between constructs to ensure that each construct is more powerful in measuring itself than other constructs.

RESULTS AND DISCUSSION

Table 1 displays respondents' characteristics, including gender, age, and educational level. The demographic characteristics of the respondents are categorized based on gender, age, and education level. Regarding gender, most respondents were male, comprising 56.64% ($n = 294$) of the total sample, while females accounted for 43.36% ($n = 225$). Interestingly, the difference is small, indicating a relatively balanced gender representation. Regarding age, respondents were divided into four age groups: 21-25, 26-30, 31-35, and 36-40 years old. The largest age group was 31-35 years, representing 29.91% ($n = 155$) of the total sample, followed by the 26-30 age group with 27.55% ($n = 143$). The 36-40 years group comprised 24.08% ($n = 125$), while the youngest group, 21-25 years, accounted for 18.49% ($n = 96$). This distribution suggests that the sample predominantly consisted of individuals in their early to mid-thirties, reflecting the age range typically associated with active workforce participation and financial decision-making.

In terms of educational attainment, respondents exhibited diverse educational backgrounds. The largest proportion held a bachelor's degree (S1), representing 44.90% ($n = 233$) of the sample. This data was approximately twice the proportion of diploma holders, who constituted 22.54% ($n = 117$), significantly higher than individuals with a senior high school education or equivalent, accounting for 17.53% ($n = 91$). Additionally, 13.29% ($n = 69$) of the respondents had obtained a master's degree (S2), while a small minority, 1.75% ($n = 9$), held a doctorate (S3). This distribution indicates that most

respondents possess higher education qualifications, which may contribute to a better understanding of financial literacy, technological advancements, and the implications of illegal online lending. The relatively high proportion of individuals with tertiary education highlights the relevance of this study's focus on financial awareness and technological trust within a well-educated population.

Table 1. Respondent Data

Criteria	Description	Frequency	Percent (%)
Gender	Male	294	56.64 %
	Female	225	43.36 %
Age	21-25 years old	96	18.49
	26-30 years old	143	27.55
	31-35 years old	155	29.91
	36-40 years old	125	24.08
Educational Level	Senior high school or equivalent	91	17.53
	Diploma	117	22.54
	Bachelor (S1)	233	44.90
	Master (S2)	69	13.29
	Doctorate (S3)	9	1.75

Source: Data processing

While the descriptive analysis above is significant in illustrating the demographic of the respondents in this study, further analysis is required to examine the relationship between variables. The results of the PLS-SEM analysis on the measurement model showed that most indicators had a loading factor value above 0.7, which means that these indicators are reliable in measuring latent constructs. However, several indicators have a loading factor value of less than 0.7, such as AIOL06 (the awareness of illegal online loans construct), SFL01, and SFL02 (the *Shari'ah* financial literacy construct). These indicators have a weaker contribution in reflecting their latent constructs. Thus, indicators with a loading factor value of less than 0.7 should be removed from the measurement model to improve its validity and reliability. After removing indicators that did not meet the criteria, a re-analysis was performed by rerunning the PLS-SEM software. This step aims to ensure that the measurement model used only consists of questionnaire items that are truly strong in measuring their respective latent constructs. After this re-analysis, a loading factor of >0.7 was obtained for all items in each variable, meaning each questionnaire item contributes significantly to the latent variable it measures. Hence, the measurement model evaluation can proceed to the validity proof and construct reliability estimation stages.

Table 2 provides the results of the construct reliability estimation, with all latent variables, *awareness of illegal online loans*, *Shari'ah financial literacy*, *trust in Shari'ah fintech*, and *understanding of blockchain technology* having good Cronbach's Alpha (α) and Composite Reliability (ω) values, ranging from 0.850 to 0.928. These values are above the 0.7 threshold, indicating high internal consistency and reliability across all measured

constructs. These results support the reliability of the measurement model in the study and enable further analysis of the structural model using the Fornell-Larcker criterion and Average Variance Extracted (AVE).

Table 2. Construct Reliability Estimation

Latent Variables	α	ω
Awareness of Illegal Online Loans	.882	.885
Shari'ah Financial Literacy	.850	.853
Trust in Shari'ah Fintech	.920	.923
Understanding of Blockchain Technology	.926	.928

Table 3 presents the results of evaluating convergent and discriminant validity using the Fornell-Larcker criterion and Average Variance Extracted (AVE). The results revealed that all constructs had AVE values above 0.5, indicating good convergent validity. The AVE values ranged from 0.626 to 0.695, indicating that their respective latent constructs explain more than 50% of the Variance of the indicators. On the Fornell-Larcker criterion, each construct's diagonal value (the root of AVE) was greater than the correlation with other constructs, indicating adequate discriminant validity.

Table 3. Fornell-Larcker criterion and Average Variance Extracted (AVE)

Latent Variables	Awareness of Illegal Online Loans	Shari'ah Financial Literacy	Trust in Shari'ah Fintech	Understanding of Blockchain Technology
Awareness of Illegal Online Loans	.794			
Shari'ah Financial Literacy	.479	.791		
Trust in Shari'ah Fintech	.484	.606	.823	
Understanding of Blockchain Technology	.400	.547	.558	.834
AVE	.630	.626	.677	.695

Source: Processed data, 2024

Further analysis was inner model evaluation in PLS-SEM analysis. This analysis assessed the strength and quality of the relationship between hypothesized latent variables. This stage included assessing the coefficient of determination (R^2), effect size (f^2), and fit indices to evaluate the model's fit. After that, hypothesis testing was conducted to measure direct, indirect, and total effects to ensure that the model has sufficient predictive power and fits the analyzed data. The results are provided in Table 4.

The results of the inner model evaluation showed several important metrics related to predictive power and model fit. The coefficient of determination (R^2) for the latent variable *Awareness of Illegal Online Loans* was 0.296, which means about 29.6% of the Variance in awareness of illegal online loans can be explained by the independent variables in the model. The research reported the R^2 value in *Shari'ah Fintech* and *Understanding of Blockchain Technology* by 0.441 and 0.299, respectively. Subsequently, the adjusted R^2 value

was slightly lower but close to the R^2 value, which indicates adjustment for the number of variables in the model. Then, the effect size (f^2) indicates the relative contribution of each independent variable to the dependent variable. The largest f^2 value was found in the *Shari'ah Financial Literacy* path to *Understanding of Blockchain Technology* with a value of 0.427, indicating a fairly strong influence. The effect of *Understanding Blockchain Technology* on *Trust in Shari'ah Fintech* was also significant, with an f^2 value of 0.131. The other f^2 values ranged from 0.011 to 0.231, indicating a variation in influence from weak to moderate.

Table 4. Effect Size and Coefficient of Determination

Latent Variables	R^2	R^2_{adjusted}	f^2
Awareness of Illegal Online Loans	.296	.292	-
Trust in Shari'ah Fintech	.441	.439	-
Understanding of Blockchain Technology	.299	.298	-
Shari'ah Financial Literacy -> Awareness of Illegal Online Loans			.054
Shari'ah Financial Literacy -> Trust in Shari'ah Fintech			.231
Shari'ah Financial Literacy -> Understanding of Blockchain Technology			.427
Trust in Shari'ah Fintech -> Awareness of Illegal Online Loans			.056
Understanding of Blockchain Technology -> Awareness of Illegal Online Loans			.011
Understanding of Blockchain Technology -> Trust in Shari'ah Fintech			.131

The model fit indices in Table 5 provide an overview of how well the hypothesized model fits the data. This study found that the SRMR (Standardized Root Mean Square Residual) value was 0.068, below the threshold of 0.08. This value indicates a good model fit. Other indices such as d_ULS, d_G, Chi-square, and NFI were also reported, with an NFI of 0.833 indicating a fairly good model fit. Meanwhile, the Chi-square value was 1487.168, indicating model fit based on the overall size, although Chi-square values are generally sensitive to large sample sizes.

Table 5. Fit Indices

Criteria	Indices
SRMR	.068
d_ULS	1.481
d_G	.484
Chi-square	1487.168
NFI	.838

Following the model fit results, Table 6 presents the path coefficients showing the relationships between key variables. The results revealed that six proposed hypotheses were accepted with sufficient significance values ($p < 0.05$). The first hypothesis (H1) showed that Shari'ah Financial Literacy significantly affected Understanding Blockchain Technology with a coefficient of 0.547 and a t value of 12.783. The second (H2) and third hypotheses (H3) were also accepted, meaning that Shari'ah Financial Literacy has a

significant effect on Trust in Shari'ah Fintech (coefficient 0.430) and Awareness of Illegal Online Loans (coefficient 0.258). The effect of Understanding Blockchain Technology on Trust in Shari'ah Fintech (H4) was also significant, with a coefficient of 0.323. Finally, the sixth hypothesis (H6) was accepted, indicating that Trust in Shari'ah Fintech significantly affects Awareness of Illegal Online Loans with a coefficient of 0.265. The only hypothesis that was rejected was the fifth hypothesis (H5) because the t-value of 1.857 did not reach the expected significance level ($p = 0.063$).

Table 6. Path Coefficients

Direct Effect	Parameter	T	P	Hypothesis
Shari'ah Financial Literacy -> Understanding of Blockchain Technology	.547	12.783	.000	H1: Accepted
Shari'ah Financial Literacy -> Trust in Shari'ah Fintech	.430	7.528	.000	H2: Accepted
Shari'ah Financial Literacy -> Awareness of Illegal Online Loans	.258	4.311	.000	H3: Accepted
Understanding of Blockchain Technology -> Trust in Shari'ah Fintech	.323	5.722	.000	H4: Accepted
Understanding of Blockchain Technology -> Awareness of Illegal Online Loans	.110	1.857	.063	H5: Rejected
Trust in Shari'ah Fintech -> Awareness of Illegal Online Loans	.265	4.227	.000	H6: Accepted

Table 7. Total Indirect Effects

Indirect Effect	Parameter	T	P	Hypothesis
Shari'ah Financial Literacy -> Understanding of Blockchain Technology -> Trust in Shari'ah Fintech	.177	4.912	.000	H7: Accepted
Shari'ah Financial Literacy -> Understanding of Blockchain Technology -> Awareness of Illegal Online Loans	.221	4.816	.000	H8: Accepted
Understanding of Blockchain Technology -> Trust in Shari'ah Fintech -> Awareness of Illegal Online Loans	.086	3.122	.002	H9: Accepted

Following that, the evaluation results for indirect effects are presented in Table 7. Based on the findings, all hypotheses related to indirect effects were accepted with sufficient significance values ($p < 0.05$). The seventh hypothesis (H7) showed that Shari'ah Financial Literacy affects Trust in Shari'ah Fintech through Understanding of Blockchain Technology with a coefficient of 0.177 and a t-value of 4.912, which is significant. The eighth hypothesis (H8) was also accepted, showing that Shari'ah Financial Literacy affects Awareness of Illegal Online Loans through Understanding of Blockchain Technology with a coefficient of 0.221 and a t value of 4.816. In addition, the ninth hypothesis (H9) showed the effect of Understanding Blockchain Technology on Awareness of Illegal Online Loans through Trust in Shari'ah Fintech with a coefficient of 0.086 and a t value of 3.122. This value is also classified as significant. These results indicate that the model's proposed mediation mechanism works well, supporting the indirect effect between the hypothesized latent variables.

Table 8 reveals the results of the total effect evaluation, with all paths in the model having a significant effect. Shari'ah Financial Literacy was reported to have the largest total effect on Trust in Shari'ah Fintech, with a coefficient of 0.606 and a t-value of 13.834, indicating a strong and significant influence. In addition, Shari'ah Financial Literacy also had a significant total effect on Awareness of Illegal Online Loans, with a coefficient of 0.479 and a t-value of 10.614. Similarly, Trust in Shari'ah Fintech significantly affected Awareness of Illegal Online Loans, with a coefficient of 0.265 and a t value of 4.227, while Understanding Blockchain Technology affected this variable with a coefficient of 0.196 and a t value of 3.405. Additionally, it significantly affected Trust in Shari'ah Fintech with a coefficient of 0.323 and a t value of 5.722. These results indicate that Shari'ah Financial Literacy has a dominant influence in the model, directly and indirectly, on other variables such as Awareness of Illegal Online Loans and Trust in Shari'ah Fintech. All hypothesized total effects are significant, supporting the model's strength in explaining the relationship between latent variables.

Table 8. Total Effects

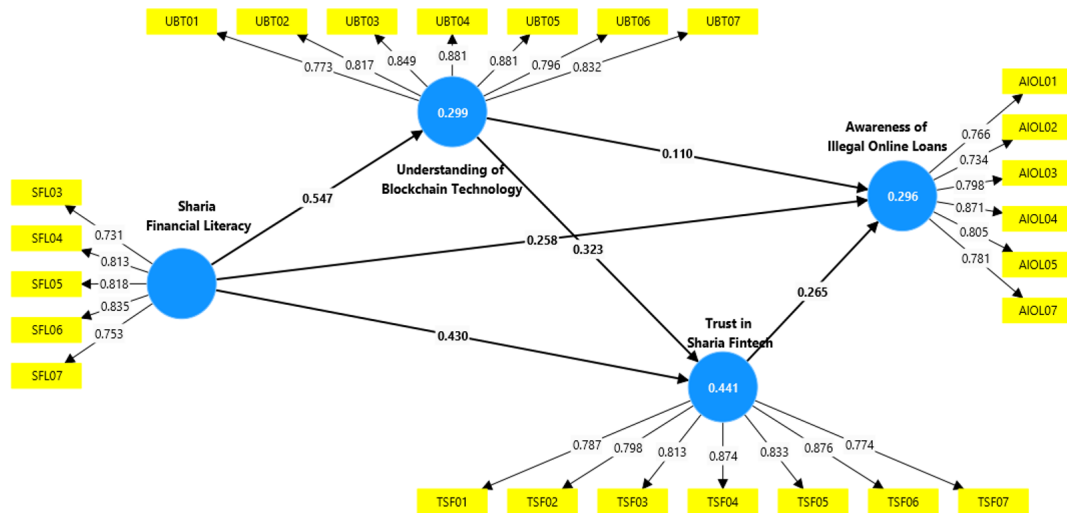
Total Effect	Parameters	T	P
Shari'ah _Financial Literacy -> Awareness of Illegal Online Loans	0.479	10.614	0.000
Shari'ah _Financial Literacy -> Trust in _Shari'ah Fintech	0.606	13.834	0.000
Shari'ah _Financial Literacy -> Understanding of _Blockchain Technology	0.547	12.783	0.000
Trust in Shari'ah Fintech -> Awareness of Illegal Online Loans	0.265	4.227	0.000
Understanding of Blockchain Technology -> Awareness of Illegal Online Loans	0.196	3.405	0.001
Understanding of Blockchain Technology -> Trust in Shari'ah Fintech	0.323	5.722	0.000

Finally, to complete the PLS-SEM model, a path diagram is presented to illustrate the measurement (outer) and structural (inner) models in the PLS-SEM analysis. The measurement model shows the relationship between latent constructs and their indicators, while the counterpart illustrates the relationship between the hypothesized latent constructs.

The results of this study provide in-depth insight into how Islamic financial literacy plays a role in influencing understanding of blockchain technology, trust in Islamic fintech, and awareness of illegal online loans. The accepted first hypothesis (H1) shows that Islamic financial literacy significantly influences understanding blockchain technology. This finding aligns with previous literature, which indicates that good financial literacy allows individuals to understand better new technologies, such as blockchain, which is often an important component in modern financial innovation. According to Andreou and Anyfantaki (2021), financial literacy is positively correlated with adopting new technologies in the financial sector, especially in emerging markets. Similarly, Alam et al. (2019) emphasized that strong financial literacy can facilitate a better understanding of blockchain technology, especially in Islamic finance supply chains. In the finance sector, a good

understanding of blockchain is essential, allowing individuals to have sufficient literacy to understand its benefits, such as enhancing financial transactions' security, transparency, and efficiency (Wati & Yazid, 2023).

Figure 1. Path Diagram of Final Model



Moreover, the relationship between Islamic financial literacy and blockchain comprehension aligns with broader trends observed in financial technology adoption. Islamic fintech, integrating blockchain technology, offers transparent and *Shari'ah*-compliant solutions, enhancing financial inclusion and economic development. These findings collectively indicate the importance of Islamic financial literacy in fostering an informed and resilient financial ecosystem where individuals are better equipped to navigate both opportunities and risks associated with modern financial technologies.

In the second hypothesis (H2), its acceptance demonstrates that Islamic financial literacy significantly influences trust in Islamic fintech. This study aligns with previous research that highlights the role of financial literacy in shaping users' confidence in digital financial services. For instance, Aji et al. (2020) found that individuals with higher financial literacy are more likely to trust Islamic digital financial services in Indonesia and Malaysia as they better understand the principles and mechanisms underpinning these services. Islamic fintech integrates technology with *Shari'ah* principles, offers transparent and ethical financial solutions, enhancing user trust. This correlation is particularly crucial in Islamic finance, where compliance with *Shari'ah* principles is paramount, and trust is a fundamental factor in the adoption of financial products and services.

The third hypothesis (H3) indicates that Islamic financial literacy significantly impacts awareness of illegal online loans. This finding is consistent with the study by Wati and Yazid (2023), which revealed that individuals with higher financial literacy are more aware of the risks associated with illegal online lending, enabling them to make more informed financial decisions. Similarly, Indrianti (2022) highlighted that Islamic financial literacy is crucial in mitigating the prevalence of illegal digital lending by promoting better financial behavior and

decision-making, particularly during the COVID-19 pandemic. This awareness is essential in protecting individuals from the financial and legal consequences of unregulated lending practices, which have become increasingly prevalent with the rise of digital financial services.

Moreover, these findings underline the broader significance of Islamic financial literacy in fostering a more resilient and informed financial ecosystem. By enhancing individuals' understanding of Islamic fintech and raising awareness of the risks associated with illegal online loans, financial literacy not only empowers individuals to make better financial decisions but also contributes to the overall stability and integrity of the financial sector. As Dinya Solihati et al. (2023) highlight, government initiatives to improve financial literacy are essential in combating illegal online lending and promoting the responsible use of digital financial services. Therefore, fostering Islamic financial literacy should be prioritized as a key strategy in enhancing both trust in Islamic fintech and awareness of financial risks, ultimately supporting the sustainable growth of the Islamic financial sector.

The acceptance of the fourth hypothesis (H4) indicates that understanding blockchain technology influences trust in Islamic fintech. This finding is supported by existing studies highlighting blockchain's transparent and secure nature, which plays a pivotal role in enhancing user trust in digital financial transactions. One study investigating this topic is Mougayar (2016), who emphasizes that blockchain fosters trust through transparency. Islamic finance highly values this principle, as it aligns with the ethical and accountability standards inherent in *Shari'ah*-compliant financial practices. Furthermore, Song et al. (2022) demonstrated that blockchain technology reduces operational risks in fintech, directly impacting user trust by ensuring the security and reliability of financial services. These findings suggest that integrating blockchain technology in Islamic fintech enhances the efficiency of financial transactions and reinforces user confidence by providing greater transparency and reducing the risk of fraud and manipulation.

One interesting finding in this study is rejecting the fifth hypothesis (H5). This rejection indicates that understanding blockchain technology does not significantly influence awareness of illegal online lending. This outcome suggests that while blockchain is crucial for enhancing trust in fintech, it may not directly improve individuals' ability to recognize and avoid illegal financial activities. Javaid et al. (2022) pointed out that blockchain technology's primary focus is improving transaction efficiency, security, and transparency rather than educating users about external risks such as illegal lending. Additionally, Wati and Yazid (2023) noted that while blockchain enhances the security and efficiency of financial transactions in Islamic banking, it does not inherently address issues related to identifying or preventing illegal online loans. This distinction requires complementary financial literacy initiatives that address the risks of illegal digital lending.

This finding suggests that blockchain's benefits should be complemented by targeted educational programs aimed at improving financial literacy, particularly in recognizing and avoiding fraudulent financial practices. By integrating technological advancements and comprehensive financial education, stakeholders can create a more resilient and informed financial ecosystem, ultimately supporting the sustainable growth of Islamic fintech. Additionally, regulatory bodies and financial institutions should collaborate to

develop guidelines that promote the secure use of blockchain technology and educate users on identifying and mitigating the risks associated with illegal online lending.

Finally, accepting the sixth hypothesis (H6) demonstrates that trust in Islamic fintech significantly influences awareness of illegal online loans. This finding aligns with current studies that emphasize the role of trust in financial institutions in protecting consumers from unauthorized and fraudulent financial products. For instance, Nuraini et al. (2024) found that higher trust in Islamic financial institutions enhances consumers' ability to identify and avoid unauthorized financial services, as trust often stems from institutions' commitment to ethical practices and regulatory compliance. This correlation is particularly significant in Islamic fintech, where adherence to *Shari'ah* principles reinforces consumer confidence and promotes awareness of financial risks.

Additionally, Noor et al. (2022) supported this finding by highlighting that trust in Islamic fintech can enhance consumers' awareness of illegal financial products through increased transparency and educational initiatives. By offering transparent and *Shari'ah*-compliant financial services, Islamic fintech platforms build trust and educate consumers about the risks associated with non-compliant financial products, including illegal online loans. Integrating technology within Islamic fintech enables greater access to financial information, empowering consumers to make more informed decisions and recognize potential financial threats.

Furthermore, these findings highlight the broader implications of trust in Islamic fintech for consumer protection and financial literacy. As emphasized by Dinya Solihati et al. (2023), government-led initiatives to improve financial literacy, coupled with the transparency and ethical practices of Islamic fintech, can create a more informed and financially resilient society. This synergy between trust, transparency, and consumer education is essential for mitigating the risks associated with illegal online loans, as consumers who trust and engage with Islamic fintech platforms are more likely to seek reliable financial information and avoid unauthorized financial products. Therefore, fostering trust in Islamic fintech supports the sector's growth and plays a critical role in promoting financial awareness and protecting consumers from the dangers of illegal online loans.

The results of testing the mediation hypotheses H7, H8, and H9 confirm that Islamic financial literacy through understanding blockchain technology and trust in Islamic fintech affects awareness of illegal online loans. This result indicates that the mediation approach proposed in this study successfully explains the complex relationship between these variables. Financial literacy, as expressed by Hua and Huang (2021), plays a crucial role in strengthening the adoption of new technologies and increasing trust in financial services. Similarly, Ismahani (2023) demonstrated that individuals with strong financial literacy are more likely to adopt safer Islamic fintech solutions, which helps them avoid the risks associated with illegal online loans. This result highlights the importance of integrating financial literacy into digital financial ecosystems to improve consumer awareness and decision-making.

Another key mediator in this relationship is understanding blockchain technology, as its transparent and secure nature fosters trust in Islamic fintech platforms. For

example, Zaka and Shaikh (2019) emphasized that blockchain enhances the traceability of financial transactions, ensuring compliance with *Shari'ah* principles and boosting investor confidence in Islamic financial instruments. Moreover, Supriadi et al. (2024) found that blockchain technology reduces the risks of corruption and fraud in Islamic financial systems, promoting transparency and accountability. This study aligns with the broader trend of integrating blockchain into Islamic finance to enhance trust and reduce operational risks, ultimately supporting greater consumer awareness of financial risks.

Trust in Islamic fintech also plays a critical role in raising awareness of illegal online loans. According to Unal and Aysan (2022), combining *Shari'ah*-compliant principles and advanced financial technologies in Islamic fintech fosters greater transparency and accountability, which helps consumers identify and avoid unauthorized financial products. Similarly, Indrianti (2022) found that Islamic financial literacy improves consumers' understanding of legal, and financial options and empowers them to recognize and reject illegal lending practices, thereby reducing their vulnerability to financial fraud. In other words, building consumer trust through transparent and ethical financial services is important, as trust catalyzes greater financial awareness and responsible decision-making.

These findings highlight the interconnected roles of financial literacy, blockchain technology, and trust in Islamic fintech in promoting awareness of illegal online loans. By enhancing consumers' understanding of blockchain technology and fostering trust in Islamic fintech, financial literacy empowers individuals to make informed financial decisions and avoid unauthorized financial products. As noted by Chong (2021), blockchain applications in Islamic finance increase transparency and accountability and support the delivery of *Shari'ah*-compliant products and services, reinforcing consumer trust and awareness. Therefore, developing comprehensive financial literacy programs emphasizing technological understanding and ethical financial practices is essential for promoting a more resilient and informed financial ecosystem.

The results of this study support the proposed theoretical model and provide significant practical implications for policy development and educational programs. Improving Islamic financial literacy and understanding of blockchain technology is crucial to increasing the adoption of Islamic fintech services and protecting consumers from the risks of illegal online loans. Therefore, an intensive effort is needed to educate the public on Islamic financial literacy and technology understanding to create a safer and more trusted Islamic financial ecosystem.

CONCLUSION

In conclusion, this study discovered several important findings. First, it underlines the significance of Islamic financial literacy in enhancing individuals' understanding of blockchain technology, fostering trust in Islamic fintech, and raising awareness of the risks associated with illegal online loans. While blockchain understanding positively influences trust in *Shari'ah*-compliant fintech services, it does not directly affect awareness of illegal loans. However, trust in *Shari'ah* fintech plays a crucial role in raising awareness of illegal

online lending risks, highlighting the need to strengthen financial literacy and consumer trust to mitigate such risks. These findings emphasize the importance of educational initiatives integrating Islamic financial principles with technological literacy to empower individuals to make informed financial decisions aligned with *Shari'ah* principles.

From a policy perspective, regulators should strengthen the legal framework governing digital financial services to provide stronger protection against illegal online lending. This includes stricter enforcement of regulations related to peer-to-peer lending platforms and ensuring that consumers have access to transparent, secure, and ethical financial services. Collaborative efforts among government agencies, financial institutions, and educational organizations are essential to develop comprehensive programs addressing financial literacy and technological awareness. While this study offers valuable insights, its findings may have limited generalizability due to the specific sample and context. Future research should explore these relationships across diverse demographic and cultural settings to validate the results and provide a broader understanding of the factors influencing financial behavior in the digital age.

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