

Financial And Digital Literacy, Community Behavior, And Illegal Online Loan Prevention in Bandar Lampung

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Abstract

This study examines whether financial literacy, digital literacy, and community behavior are associated with preventing illegal online loans among young adult residents of Bandar Lampung. A cross-sectional survey collected 100 usable questionnaires from residents aged 17–35 years through purposive, non-probability recruitment. Reflective constructs were measured on a five-point Likert scale and estimated using Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS 4. Financial ($\beta=0.394$, $t=4.067$, $p<0.001$) and digital ($\beta=0.293$, $t=3.086$, $p=0.001$) literacies and community behavior ($\beta=0.306$, $t=2.601$, $p=0.005$) were positively associated with self-reported prevention. The model explained 96.0% of outcome variance. Reliability and convergent validity statistics exceeded conventional thresholds after one digital-literacy item was removed. Preventive orientation is strongest when financial judgment and digital verification skills are accompanied by cautious borrowing norms. Cross-sectional self-report data, social-media recruitment, a small age-restricted sample, and substantial indicator overlap limit causal and population-level interpretations. HTMT, collinearity, predictive relevance, and common method diagnostics were unavailable. This study integrates financial capability, digital verification, and behavioral safeguards into a city-level illegal lending prevention model.

Keywords: Community Behavior, Digital Literacy, Financial Literacy, Illegal Online Lending, PLS-SEM

1. INTRODUCTION

The digitalization of financial services has changed how people access, select, and use financial products. Fintech brings together consumers, technology providers, financial institutions, and data sources in an ecosystem that operates rapidly across organizational boundaries ([Lee & Shin, 2018](#); [Puschmann, 2017](#); [Vives, 2019](#)). This transformation expands financing options for groups that previously faced difficulties in accessing formal services. Fintech can also strengthen financial inclusion when technology reduces transaction costs, broadens service coverage, and provides convenient payment facilities ([Gai et al. 2018](#); [Ozili 2018](#)). Simultaneously, the integration of data, automated processes, and platform interfaces creates new risk points whose management depends on regulation, infrastructure, and user capability ([Murinde et al., 2022](#)). Therefore, the same convenience and speed can be exploited by unlicensed providers to offer loans with opaque information, aggressive collection processes, and practices involving personal data that harm consumers.

Illegal online lending is a form of digital financing that operates outside the applicable supervisory and consumer protection frameworks. The problem lies not only in the licensing status but also in the information asymmetry between borrowers and providers. Borrowers often focus only on the speed of disbursement, while the consequences in the form of interest, service fees, data access, and collection risks are not adequately understood by them. [Hidajat \(2020\)](#) positions unethical practices in peer-to-peer lending as an issue that must be addressed through a combination of regulations, supervision, and increased user awareness. Evidence from online loan shark networks also shows that deception, exploitation of social contacts, and threats to disclose compromising information can be used to enforce repayment ([Wang et al., 2021](#)). In the Indonesian context, data misuse, offering patterns, and indicators of problematic applications have also become concerns in fintech research ([Suryono et al., 2021](#)).

Conceptually, digital lending is not always harmful to consumers. Technology-based financing services can help households address liquidity needs and expand financial access, as illustrated by the benefits of mobile money for inclusion and economic resilience ([Suri and Jack, 2016](#)). Problems arise when rapid access is not matched by the ability to evaluate the legality, costs, and repayment capacity. [Chatterjee \(2025\)](#) explains that innovation in fintech and payment systems brings efficiency benefits but also requires users to be prepared to understand innovation risks that develop faster than their

financial habits. Therefore, preventing illegal online lending should be positioned as a decision-making behavior rather than merely an enforcement issue after consumers become victims.

At the user level, prevention includes at least four actions. First, people must verify a provider's status through official sources rather than relying solely on advertisements, testimonials, or links shared on social media. Second, prospective borrowers need to read and compare the costs, terms, penalties, and consequences of late payments. Third, people should limit application access permissions to contacts, galleries, and other data that are irrelevant to the service. Fourth, information about suspicious applications must be reported so that they can be followed up collectively. These actions are consistent with the public information and consumer protection orientation of the *Otoritas Jasa Keuangan* (OJK) campaign against illegal online lending ([Otoritas Jasa Keuangan, 2021](#)). [Asti \(2020\)](#) demonstrates the importance of the authorities' role in addressing illegal services, while [Huang \(2018\)](#) shows that regulatory responses to peer-to-peer lending need to be accompanied by consumer protection mechanisms that are understandable and accessible.

The ability to carry out these actions is closely related to an individual's financial literacy. Financial literacy does not stop at knowledge of financial terms; it includes the ability to apply that knowledge when assessing choices, managing risks and planning obligations. [Lusardi \(2019\)](#) emphasizes that financial literacy is necessary because individuals increasingly bear financial decisions that were previously handled by institutions or families. [Lusardi and Mitchell \(2023\)](#) also show that financial literacy is an important field for explaining disparities in individuals' ability to make economic decisions. In the context of borrowing, the ability to calculate total costs and assess repayment capacity can serve as an initial barrier against offers that appear easy but are high-risk.

Empirical findings support the relationship between financial literacy and financial behavior. Through a meta-analysis, [Kaiser and Menkhoff \(2017\)](#) show that financial education can influence literacy and behavior, although its effect depends on the context and the timing of the intervention. [Potrich et al. \(2016\)](#) developed a financial literacy model that emphasizes the relationship between knowledge, attitudes, and behavior. [Stolper and Walter \(2017\)](#) add that financial advice and literacy can influence behavior through individuals' ability to process information. [Butar, Rachman, and Nurmala \(2024\)](#) likewise connect financial literacy with financial behavior in a digital payment context, while cautioning that financial decisions are also shaped by income and technology use. In the context of younger generations and users of digital services, studies by [Girsang and Purnama \(2025\)](#), [Mashud et al. \(2021\)](#), [Natan and Mahastanti \(2022\)](#), and [Restiyanti and Yadiati \(2024\)](#) show that literacy, self-control, experience, and financial-management behavior are interrelated.

In addition to financial literacy, prevention requires digital literacy as well. In this study, digital literacy is defined as the ability to access, understand, evaluate, and safely use digital information in financial decisions. [Lyons and Kass-Hanna \(2021\)](#) explain that digital financial literacy is multidimensional because it combines financial capability with digital competence, security, and the ability to evaluate information. Users who can access information but cannot assess its source may remain vulnerable to fake applications. Conversely, users who understand technological features but do not understand interest and fees may also make risky decisions. [Korry and Permana \(2025\)](#) demonstrate the importance of technology's fit with financial-management needs, while [Devi et al. \(2025\)](#) link the use of electronic money and self-control to financial management.

Fintech development also creates security and information asymmetry challenges. [Gai et al. \(2018\)](#) mapped fintech risks related to data, security, and ecosystem complexity. [Lee and Shin \(2018\)](#) identified trust, governance, and business models as important issues in the fintech ecosystem. [Murinde et al. \(2022\)](#) further show that the opportunities created by fintech are accompanied by risks that must be managed through regulations and institutional capabilities. [Li and Fisher \(2022\)](#) specifically connected digital financial literacy with students' online security behavior. Digital competence is evident in preventing illegal lending when individuals verify domains, read application permissions, compare information from different sources, recognize fraud patterns, and protect their

accounts and devices. Accordingly, digital literacy is expected to directly affect prevention capabilities.

The third variable is the community's behavior. Community behavior reflects actual decisions and social norms that guide individuals to choose formal services, reject unclear offers, use loans only for urgent needs, and report indications of violations. In the present model, it is not treated as a synonym for literacy. Financial literacy concerns the appraisal of costs and repayment capacity, digital literacy concerns the verification and protection of information, and community behavior concerns whether these capacities are translated into repeated choices, resistance to peer pressure, and reporting. The theory of planned behavior explains that behavior is influenced by attitudes, subjective norms, and perceived behavioral control, which shape intentions and actions ([Ajzen, 2020](#)). A person may understand the risks but still act differently when the social environment normalizes quick loans or when alternatives seem unavailable. Therefore, the three constructs are theoretically complementary because they address financial appraisal, digital control, and social enactment rather than the same decision point.

The relationship between behavior, supervision, and prevention also has a collective dimension that is often overlooked. [Prihanto and Usmar \(2024\)](#) found that supervision and community behavior positively affect the effectiveness of illegal online lending prevention. [Muticara, Ridwansyah, and Yuniarti \(2026\)](#) show that community participation and supervision can strengthen the effectiveness of public fund management. [Putra et al. \(2022\)](#) similarly place risk management and whistleblowing within a broader financial crime prevention system. These findings are conceptually relevant because social control mechanisms are more effective when citizens possess information, are willing to participate, and have reporting channels. To prevent illegal lending, reporting channels and the habit of reminding one another can reduce the opportunity for illegal providers to repeatedly reach prospective borrowers, provided that reports are made through official channels and do not spread unverified accusations.

Previous studies in Indonesia have discussed financial literacy, digital literacy, behavior, regulation, and supervision; however, there remains room to test the three factors simultaneously among urban communities. [Solihati et al. \(2023\)](#) emphasized the role of government efforts to improve financial literacy in preventing illegal online loans, while [Kartikaningrum and Urumsah \(2025\)](#) proposed a conceptual model involving financial literacy, digital literacy, and whistleblowing intention. [Afrizal et al. \(2025\)](#) demonstrate the benefits of improving financial literacy to prevent illegal lending and investment fraud, while [Prihanto and Usmar \(2024\)](#) emphasize the roles of supervision and behavior in preventing fraud. [Kanda and Mawarni \(2024\)](#) also show that young people can become trapped in online loan debt when financing decisions are intertwined with lifestyle. However, studies that simultaneously test financial literacy, digital literacy, and community behavior in relation to prevention in the context of Bandar Lampung City remain limited. The city has a productive-age population that actively uses digital channels, making it relevant to observe how individuals combine financial knowledge, digital skills, and social considerations in their everyday decisions.

This study aimed to analyze the effects of financial and digital literacies and community behavior on the prevention of illegal online lending among residents of Bandar Lampung City. This study makes a theoretical contribution by distinguishing three complementary control points within the Theory of Planned Behavior (TPB), such as financial literacy strengthens the appraisal of cost and repayment consequences, digital literacy strengthens information evaluation and data security control, and community behavior represents the translation of attitudes, norms, and perceived control into choices and reporting. Unlike studies that focus primarily on a single literacy dimension, government or supervisory intervention, or a conceptual model, this study estimates the incremental associations of the three capacities in an empirical model. Its contextual novelty lies in the evidence from residents aged 17–35 years in an urban Indonesian setting, where digital exposure and financing pressure coexist. This study also used prevention indicators that emphasized legality verification, risk understanding, digital security, and willingness to report. These contributions can inform

financial-education interventions and digital-security campaigns, while the cross-sectional design means that the findings are interpreted as associations rather than causal proof.

2. LITERATURE REVIEW

2.1 Theory of Planned Behavior

The Theory of Planned Behavior (TPB) explains that individual behavior is influenced by intentions, which are formed by attitudes toward the behavior, subjective norms, and perceived behavioral control. [Ajzen \(2020\)](#) emphasized that these three components are not merely independent psychological variables; rather, they constitute a chain of beliefs that influences evaluation, social pressure, and perceived ability to act. In this study, financial literacy primarily strengthens beliefs about cost consequences and repayment capacity, digital literacy strengthens the ability to seek, evaluate, and secure information, and community behavior represents action tendencies shaped by attitudes, norms, self-control, and perceived ability to choose an alternative. Therefore, the model links the independent variables to prevention through distinct but related mechanisms.

The TPB is appropriate for the issue of illegal online lending prevention because decisions to use or reject a service occur under time pressure and with limited information. A person may have a negative attitude toward illegal loans but still use them when they feel they have no alternatives. Conversely, social norms that support the use of formal services and the ability to verify legality can increase the intention to avoid using illegal services. In the proposed mechanism, financial literacy changes the evaluation of affordability and consequences, digital literacy increases perceived control over verification and data protection, and community behavior expresses the resulting intention in actual selection, rejection, or reporting of fake news. Thus, the TPB model helps explain why increased knowledge needs to be translated into observable abilities and habits of the teacher. Because this study is cross-sectional, the mechanism is theoretical and interpretive, and the estimated paths are not treated as proof of temporal causation.

2.2 Prevention of Illegal Online Lending

Illegal online lending prevention refers to a series of actions taken before and during a financing decision to reduce the likelihood that people will use unlicensed providers or become victims of harmful practices such as usury. Prevention indicators include understanding the dangers of intimidation, data misuse, and financial loss, knowledge of regulatory supervision, understanding the role of regulations, willingness to report suspicious offers, and prioritizing registered providers. These indicators are consistent with the prevention and financial literacy concerns discussed by [Solihati, Rizki, and Sari \(2023\)](#), [Kartikaningrum and Urumsah \(2025\)](#), and [Otoritas \(2021\)](#). This definition positions prevention as protective and participatory behavior, not merely knowledge of the term 'illegal'.

Studies on peer-to-peer lending practices show that risks may originate from business models, data management, collection practices, and weak supervision ([Hidajat, 2020](#); [Suryono, Budi, & Purwandari, 2021](#)). [Wang, Su, and Wang \(2021\)](#) documented how online loan-shark networks can use deception, social-contact information, and relational repression, demonstrating why prevention must include data protection and reporting. [Asti \(2020\)](#) discusses the authorities' legal efforts to address illegal online lending services, while [Huang \(2018\)](#) demonstrates the importance of regulatory responses that balance innovation and consumer protection in the financial industry. [Supeno \(2023\)](#) adds that personal legal capacity in online transactions is necessary for individuals to understand their responsibilities, rights, and the consequences of such agreements. Accordingly, prevention must be built through individual decisions and institutional support.

2.3 Financial Literacy and Prevention

Financial literacy indicates the ability to understand financial concepts and risks and use them in decision-making. In this study, financial literacy was operationalized through the ability to understand loan amounts and interest, assess repayment capacity, recognize the consequences of penalties, distinguish legal from illegal providers, and manage obligations in long-term planning. This measurement combines knowledge and application, consistent with the view that financial literacy is

not only a knowledge score but also the ability to use knowledge in real-world contexts ([Lusardi, 2019](#); [Lusardi and Mitchell, 2023](#)). This also reflects the financial behavior perspective of [Potrich et al. \(2016\)](#) and the digital payment context examined by [Butar et al. \(2024\)](#).

Financial literacy is expected to improve prevention because prospective borrowers who understand costs and risks are better able to assess the false attractiveness of rapid disbursement methods. Knowledge of interest and penalties encourages comparisons of total costs, knowledge of repayment capacity limits impulsive decisions, and understanding legality increases awareness of unreasonable contracts and collection practices. In TPB terms, these capabilities can strengthen perceived behavioral control and produce a more negative attitude toward opaque offers. [Potrich et al. \(2016\)](#) demonstrated the importance of the relationship between knowledge, attitudes, and behavior in the literacy model. [Kaiser and Menkhoff \(2017\)](#) also show that education can influence behavior, although the quality of the intervention and the user's context must be considered. Therefore, the expected relationship is a theoretically justified association, not an assumption that knowledge alone guarantees safe behavior.

This relationship is consistent with studies of financial behavior that include self-control, experience, and income as supporting factors. [Stolper and Walter \(2017\)](#) explained that the ability to process information and obtain advice can improve decision quality. [Girsang and Purnama \(2025\)](#) found a relationship between literacy, experience, self-efficacy, and consumption behavior through fintech. [Natan and Mahastanti \(2022\)](#) examined financial literacy and locus of control in financial management behavior, while [Restiyanti and Yadiati \(2024\)](#) showed that literacy and locus of control are associated with the financial management behavior of Generation Z users of online loans. Butar [Butar et al. \(2024\)](#) further show that literacy operates within a wider digital payment and income context. This evidence supports H_1 and indicates why financial literacy should be examined together with digital and social conditions.

H_1 : Financial literacy positively affects the prevention of illegal online lending

2.4 Digital Literacy and Prevention

Digital literacy is the ability to use technology and digital information effectively, critically, and safely in the workplace. For online lending decisions, this ability includes searching for information through official channels, verifying the identity and license of providers, comparing sources, recognizing fraudulent schemes, and securing devices and networks. [Lyons and Kass-Hanna \(2021\)](#) describe digital financial literacy as a construct that combines financial literacy and digital capability. This framework is important because a person may understand money but can still be deceived by digital interfaces, fake links, or information manipulation techniques. Digital literacy is expected to improve prevention through a sequence of source searches, authenticity checks, risk recognition, and data protection ([Poseng, Faggidae, & Tameno, 2026](#)).

Digital literacy also determines the quality of verification processes. [Puschmann \(2017\)](#) and [Lee and Shin \(2018\)](#) explain that fintech generates innovation through the integration of technology, data, and financial services, thereby exposing users to a complex ecosystem. [Gai et al. \(2018\)](#) emphasized security, privacy, and data governance issues in fintech, while [Murinde et al. \(2022\)](#) showed that the expansion of fintech creates opportunities and risks that require institutional and user-level responses. [Korry and Permana \(2025\)](#) highlighted the fit between technology and financial management needs, while [Devi et al. \(2025\)](#) showed that the use of financial technology needs to be balanced with self-control. [Li and Fisher \(2022\)](#) directly position digital financial literacy as a factor associated with online security behavior.

Based on this reasoning, better digital literacy should improve people's ability to stop a process before submitting data, identify unofficial services, and seek assistance through appropriate channels. The expected path is not simply technological familiarity, such as source evaluation can reduce reliance on deceptive messages, permission awareness can limit data exposure, and reporting skills can connect individual protection to institutional follow-up. [Chatterjee \(2025\)](#) emphasizes that

financial technology disruption requires user adaptation and protection infrastructure. Therefore, digital literacy does not simply mean being active on social media; it means being able to assess the reliability of messages, protect one's identity, and manage one's digital footprint. The second hypothesis is formulated as follows:

H₂: Digital literacy positively affects the prevention of illegal online lending

2.5 Community Behavior and Prevention

Community behavior represents individuals' tendencies to select, reject, and respond to digital lending services within their social environment ([Priyanti & Dewi, 2026](#)). Preventive behavior includes choosing formal institutions even when their procedures are more complex, using legal alternatives when facing urgent needs, being alert to unclear terms, using registered providers, and limiting loans to essential needs ([Oktarini, Wijaya, Premayani, Yoga, & Suputra, 2026](#)). This construct is not identical to the concept of literacy. Two people may possess the same knowledge but make different decisions because of differences in attitudes, subjective norms, self-control, experience, and economic pressure. Therefore, the construct captures the behavioral expression through which individual capability becomes a stable choice in a social setting.

From a TPB perspective, behavior is formed through evaluations of benefits and risks, the expectations of people considered important, and beliefs that preventive actions can be carried out. [Strömbäck et al. \(2017\)](#) show that self-control is associated with financial behavior and well-being, while [Dewi et al. \(2021\)](#), [Fariana et al. \(2021\)](#), and [Mashud et al. \(2021\)](#) demonstrate that self-control and literacy are relevant in explaining consumption or financial-management behavior. [Putra et al. \(2022\)](#) also show why reporting mechanisms and risk management practices are important in broader financial crime prevention. These findings support the mechanism that attitudes discourage risky borrowing, subjective norms support registered services and reporting, and perceived behavioral control makes it possible to delay a decision, check information, and choose a legal alternative.

The social dimension is also important in this regard. [Prihanto and Usmar \(2024\)](#) reported the effect of community behavior on the effectiveness of illegal online lending prevention. [Mutia et al. \(2026\)](#) showed that community participation and supervision can strengthen governance effectiveness. [Solihati et al. \(2023\)](#) likewise demonstrated that prevention depends on coordinated public education and institutional action. In this study, these findings provide conceptual support for the proposition that preventive behaviors can spread through social norms, reporting channels, and informal supervision. Findings on the behavior of younger generations and digital finance ([Girsang & Purnama, 2025](#); [Restiyanti & Yadiati, 2024](#)) further strengthen the relevance of testing this relationship among the productive age population. The third hypothesis is formulated as follows:

H₃: Community behavior positively affects the prevention of illegal online lending

3. RESEARCH METHODOLOGY

3.1 Design, Population, and Sample

This study used an explanatory quantitative design and a cross-sectional approach. The unit of analysis was individuals residing in Bandar Lampung City aged 17–35 years. This age range was selected because the productive-age group actively uses social media and digital services while also facing diverse financing decisions. The population framework used in this study recorded 1,226,210 residents of Bandar Lampung City and approximately 322,202 residents in the target age group, based on a regional statistical publication ([Badan Pusat Statistik Kota Bandar Lampung, 2026](#)).

The sample was determined using purposive sampling method. The respondent criteria were residing in Bandar Lampung City, aged 17–35 years, having received information about, seen promotions for, used, or known about online lending services, and being willing to complete the questionnaire voluntarily. The target population comprised 322,202 residents. A finite-population planning calculation with a 10% error tolerance gives $n = 322,202 / [1 + (322,202 \times 0.10^2)] \approx 99.97$, which was rounded to 100 respondents. Because purposive sampling is non-probability sampling, this

calculation is a planning benchmark and should not be interpreted as a formal probability-based margin of error. The sample size was also considered in relation to the objective of estimating a three-predictor PLS-SEM model and the principle that the sample size should be adjusted to model complexity rather than population size alone ([Kock & Hadaya, 2018](#)).

3.2 Data Collection Technique

Primary data were collected through an online Google Forms questionnaire in 2026. The source thesis reports the year of collection but does not preserve the exact start and end dates of the data collection. The questionnaire link was distributed via TikTok, WhatsApp, and Instagram. Of the 100 respondents, 90 learned about the questionnaire through TikTok, five through WhatsApp, and five through Instagram. Before completing the questionnaire, respondents received an explanation of the research objectives, the voluntary nature of participation, the aggregate use of data, and the option to withdraw without consequence. Proceeding to the questionnaire indicated the consent. No questions were asked regarding passwords, account numbers, or sensitive identification information. The supplied thesis does not document a formal institutional ethics approval number, therefore, no approval number is claimed in this article. This documentation should be verified by the authors and institutions before submission.

Each statement was measured using a five-point Likert scale, such as 1 = strongly disagree, 2 = disagree, 3 = uncertain, 4 = agree, and 5 = strongly agree. The questionnaire development procedure consisted of defining each construct from the TPB framework, mapping the construct to observable indicators, adapting the wording to online lending decisions, and applying the same response scale across constructs. Financial literacy indicators were informed by [Potrich et al. \(2016\)](#), [Lusardi \(2019\)](#), [Lusardi and Mitchell \(2023\)](#), and [Butar, Rachman, and Nurmala \(2024\)](#), digital-literacy indicators by [Lyons and Kass-Hanna \(2021\)](#), [Li and Fisher \(2022\)](#), and [Murinde et al. \(2022\)](#), community behavior indicators by [Ajzen \(2020\)](#), [Prihanto and Usmar \(2024\)](#), and [Strömbäck et al. \(2017\)](#), and prevention indicators by [Solihati et al. \(2023\)](#), [Kartikaningrum and Urumsah \(2025\)](#), and [Keuangan \(2021\)](#). The source thesis does not report a separate pilot test or expert validation statistic; therefore, that information is not claimed here. Responses were treated as subjective perceptions rather than evidence that respondents had performed each action.

Table 1. Operationalization of research variables

Variables	Code	Final Indicators
Financial literacy (X_1)	$X_{1.1}$ – $X_{1.6}$	Understanding the amount/interest, making timely payments, assessing repayment capacity, understanding penalties, distinguishing legal and illegal providers, managing loans and long-term plans.
Digital literacy (X_2)	$X_{2.1}$ – $X_{2.3}$, $X_{2.5}$ – $X_{2.6}$	Accessing information, verifying legality, comparing sources, recognizing fraud/spam/malware, and maintaining device and network security.
Community behavior (X_3)	$X_{3.1}$ – $X_{3.5}$	Choosing formal institutions, using legal alternatives, examining terms, choosing registered providers, and limiting loans to urgent needs.
Illegal online lending prevention (Y)	$Y_{1.1}$ – $Y_{1.5}$	Knowing the dangers, understanding supervision, understanding the role of regulations, willingness to report, and prioritizing registered services.

Note: Indicator $X_{2.4}$ in the initial instrument was eliminated after the measurement model evaluation because it did not meet discriminant validity criteria. The final analysis used five digital literacy indicators. The operationalization note above identifies the conceptual and empirical sources used to develop the measurement items, with particular attention to community behavior indicators that reflect attitudes, norms, self-control, supervision, and reporting.

Table 1 shows financial literacy refers to individuals' ability to understand financial concepts, evaluate loan costs and risks, assess repayment capacity, and make responsible financial decisions. Digital literacy represents the ability to access, evaluate, and safely use digital information, including verifying online loan providers, identifying fraud risks, and maintaining digital security. Community behavior and illegal online lending prevention reflect individuals' actions in selecting formal financial services, avoiding risky borrowing practices, understanding regulations, reporting suspicious services, and prioritizing registered providers.

3.3 Data Analysis Technique

The analysis was conducted in three stages: The first stage involved descriptive statistics to describe the respondents' characteristics and response tendencies. The second stage involved the evaluation of the reflective outer model through outer-loading values, Average Variance Extracted (AVE), composite reliability, Cronbach's Alpha, and discriminant validity assessment. The third stage involved evaluating the inner model using the coefficient of determination R^2 , path coefficients, t -statistics, and p -values. PLS-SEM was selected because this study focused on estimating predictive relationships and developing a model that combines psychological and behavioral constructs (Hair et al., 2019; Benitez et al., 2020).

The evaluation criteria followed the PLS-SEM reporting practices. Indicator loadings were expected to be greater than 0.70, AVE greater than 0.50, and reliability measures greater than 0.70. Discriminant validity was examined using cross-loading patterns and comparisons of indicators across constructs. In a complete measurement report, the Heterotrait–Monotrait Ratio (HTMT) should also be reported because it is a more direct diagnostic of discriminant validity (Henseler et al., 2015). The significance of the path coefficients was assessed at a 5% error level based on the SmartPLS 4.0 bootstrapping output. R^2 was used to assess explanatory power, while the interpretation continued to consider the cross-sectional nature and use of perceptual data. A complete structural report would additionally include the predictor VIF, effect size f^2 , predictive relevance Q^2 , PLSpredict, and a common-method-bias assessment. The supplied thesis and article do not contain respondent-level data or the corresponding SmartPLS output, therefore, these statistics cannot be reconstructed from the available loadings, path coefficients, and R^2 , they are reported as unavailable rather than estimated. These guidelines follow those of Hair et al. (2019), Benitez et al. (2020), Henseler et al. (2015), and Shmueli et al. (2016).

4. RESULTS AND DISCUSSION

4.1 Respondent Characteristics

Table 2. Respondent profile

Characteristic	Category	n	%
Age	17–20 years	14	14
	21–25 years	17	17
	26–30 years	34	34
	31–35 years	35	35
Education	Senior high school/vocational high school	32	32
	Diploma 3 (D3)	20	20
	Bachelor degree (S1)	48	48
Occupation	Students, civil servants/state-owned enterprise employees, National Police/Armed Forces personnel, teachers/lecturers, entrepreneurs, private-sector employees	20, 20, 8, 9, 17, 26	20, 20, 8, 9, 17, 26
Income	None	11, 24, 33, 24, 8	11, 24, 33, 24, 8
Online-lending knowledge	Little knowledge/do not use, adequate knowledge/have used, knowledgeable/actively use	41, 42, 17	41, 42, 17

Note: Occupation and income categories were summarized because the source table contained several categories with small frequencies.

Table 2 shows a total of 100 questionnaires were deemed usable for the analysis. All respondents met the specified domicile and age criteria. Respondents aged 31–35 years constituted the largest group at 35%, followed by those aged 26–30 years (34 %), 21–25 years (17 %), and 17–20 years (14 %). This composition indicates that the data primarily represent early adults who have encountered decisions concerning income, family needs and the use of digital financial services.

In terms of education, 48% of respondents held a bachelor's degree, 32% had completed senior high school/vocational high school, and 20% held a diploma 3 qualification. Respondents' occupations were diverse private-sector employees (26 %), students (20 %), civil servants/state-owned enterprise employees (20 %), entrepreneurs (17 %), teachers/lecturers (9 %), and National Police/Armed Forces personnel (8 %). Monthly income was most commonly in the Rp2.5–5 million range (33%), followed by less than Rp2.5 million (24%) and Rp5–10 million (24%). A total of 11% had no income, and 8% had incomes in the Rp10–15 million range. This variation helps capture the differences in financial capacity and digital experience within a single model.

4.2 Descriptive Statistics

Table 3. Summary of indicator descriptive statistics

Construct	Mean range	Construct mean*	SD range
Financial literacy (X_1)	4.08–4.26	4.17	0.986–1.248
Digital literacy (X_2)	4.07–4.20	4.13	1.058–1.205
Community behavior (X_3)	4.01–4.16	4.11	0.889–1.102
Prevention (Y)	3.98–4.16	4.09	1.046–1.184

Note: Construct mean is the simple average of the means of final indicators. $X_{2.4}$ was not included in the calculation because it was eliminated during the measurement model evaluation.

Table 3 shows the mean scores for the financial-literacy indicators ranged from 4.08 to 4.26. The highest score was recorded for the ability to make timely payments ($X_{1.2}$ =4.26), followed by understanding loan amounts and interest rates ($X_{1.1}$ =4.23). The lowest score remained above the midpoint of the scale, namely, the ability to manage loans and long-term planning ($X_{1.6}$ =4.08). Between 87% and 88% of the responses to the financial literacy indicators were in the agree or strongly agree categories. This pattern indicates that respondents reported possessing fairly good basic knowledge, although declarative knowledge does not automatically ensure risk-free behavior.

For digital literacy, the indicator means ranged from 4.07 to 4.20. Respondents most strongly agreed that they were able to access information ($X_{2.1}$ =4.20), whereas network and device security had the lowest mean score ($X_{2.6}$ =4.07). For community behavior, the means ranged from 4.01–4.16. Limiting loans to urgent needs only had the lowest score ($X_{3.5}$ =4.01), making it an important intervention. The prevention indicators had means ranging from 3.98 to 4.16, and understanding supervision received the lowest score ($Y.2$ =3.98).

4.3 Measurement Model Evaluation

The initial evaluation showed that indicator $X_{2.4}$ had a discriminant validity problem. Its cross-loading on the community behavior construct reached 0.918, higher than its loading on the digital-literacy construct of 0.915. Based on statistical considerations and construct interpretability, $X_{2.4}$ was eliminated, and the model was reestimated. The deletion was performed before interpreting the structural model so that the path coefficients were based on cleaner indicators.

Table 4. Results of final measurement model evaluation

Construct	Final Indicators	Loading Range	AVE	Cronbach α	Composite Reliability
Financial literacy (X_1)	6	0.890–0.945	0.828	0.958	0.966

Construct	Final Indicators	Loading Range	AVE	Cronbach α	Composite Reliability
Digital literacy (X_2)	5	0.905–0.940	0.847	0.955	0.965
Community behavior (X_3)	5	0.889–0.929	0.817	0.944	0.957
Prevention (Y)	5	0.907–0.921	0.839	0.952	0.963

Note: The final discriminant validity was also adequate because each indicator had the highest loading on the intended construct after $X_{2.4}$ was removed. This result provided the basis for the inner-model analysis. Nevertheless, the evidence is limited to cross-loadings, as HTMT values were not available in the supplied SmartPLS output. The high similarity among some construct indicators means that the final model should be treated as provisionally discriminant until the HTMT is calculated from the item-level data.

Table 4 shows the final model showed that the outer loadings of all indicators were above 0.889. The loadings for financial literacy ranged from 0.890 to 0.945, digital literacy from 0.905 to 0.940, community behavior from 0.889 to 0.929, and prevention from 0.907 to 0.921. The AVE values ranged from 0.817 to 0.847, indicating that each construct explained more than half of the variance in its indicators. Cronbach's alpha ranged from 0.944 to 0.958, and the composite reliability ranged from 0.957 to 0.966. These results met the reliability and convergent validity criteria used in PLS-SEM research (Hair et al., 2019; Benitez et al., 2020).

4.4 Structural Model Evaluation and Hypothesis Testing

The R^2 value for the illegal online lending prevention construct was 0.960, with an adjusted R^2 of 0.959. This means that, in this research model and sample, financial and digital literacies and community behavior jointly explained 96.0% of the variation in prevention. This value is unusually high and may partly reflect the conceptual proximity between the predictor and prevention indicators, the common five-point response format, data collection at the same time, and the self-reported nature of the data. This is a plausible explanation and not a demonstrated diagnosis. A defensible interpretation requires the HTMT and predictor VIF for construct redundancy and collinearity, f^2 for each predictor's incremental contribution, Q^2 and PLSpredict for out-of-sample relevance, and a common method bias assessment. None of these outputs can be recovered from the supplied summary tables; therefore, the R^2 value is interpreted as having strong in-sample explanatory power rather than proof that the three variables are the only causes of prevention. The results need to be confirmed using broader sample sizes and actual behavioral data.

Table 5. Hypothesis testing results

Hypothesis	Relationship	Path coefficient	t -statistic	p -value	Decision
H_1	$X_1 \rightarrow Y$	0.394	4.067	<0.001	Supported
H_2	$X_2 \rightarrow Y$	0.293	3.086	0.001	Supported
H_3	$X_3 \rightarrow Y$	0.306	2.601	0.005	Supported

Table 5 All three path coefficients were positive and statistically significant. The largest coefficient was for financial literacy (0.394), followed by community behavior (0.306), and digital literacy (0.293). The t -statistics for all paths exceeded 1.96, and the p -values were less than 0.05. Thus, H_1 , H_2 , and H_3 are supported. These findings indicate that financial literacy, community behavior, and digital literacy play important roles in strengthening the adoption of sustainable financial practices among the observed respondents.

4.5 Discussion

4.5.1 Effect of Financial Literacy on Prevention

The findings support H_1 , the better the financial literacy, the stronger the community's tendency to prevent illegal online lending activities. The coefficient of 0.394 was the largest among the three predictors, indicating that the ability to understand loan amounts and interest, assess repayment capacity, and recognize legal risks was the most prominent factor in this sample. Behaviorally, literacy enables individuals to look at the disbursed amount and calculate total obligations and consider

late-payment scenarios. This understanding reduces the attractiveness of loan offers that emphasize instant processing without explaining their costs. Within the TPB, the proposed mechanism is that financial knowledge changes risk evaluation and strengthens perceived control over the decision; however, the cross-sectional estimate does not establish a temporal causal chain.

This finding is consistent with [Lusardi \(2019\)](#), and [Lusardi and Mitchell \(2023\)](#), who view literacy as an important competence for financial decisions throughout one's life. This also supports [Potrich et al. \(2016\)](#), who argued that literacy consists of knowledge and application. [Kaiser and Menkhoff \(2017\)](#) show that financial education can influence behavior, but interventions must be designed around relevant moments. In the context of illegal lending, such moments arise when a person receives an advertisement, faces an urgent need, or is asked to provide data. Educational materials that only explain the definition of interest without practicing cost comparisons may be insufficient for this purpose. The findings of [Butar, Rachman, and Nurmala \(2024\)](#) similarly place financial literacy within a wider digital payment and income environment, supporting an intervention that connects financial appraisal with the actual digital context.

This consistency is also evident in financial behavior research in the fintech era. [Girsang and Purnama \(2025\)](#) position literacy, experience, and self-efficacy as behavioral factors in consumption when financial technology serves as an intermediary. [Natan and Mahastanti \(2022\)](#) and [Restiyanti and Yadiati \(2024\)](#) emphasize the relevance of literacy and self-control in the financial-management behavior of younger generations and digital-loan users. [Afrizal et al. \(2025\)](#) show that strengthening financial literacy is a practical strategy for preventing illegal online lending and investment fraud, while [Solihati et al. \(2023\)](#) underline the importance of sustained public education and government cooperation. This study differs in that literacy is tested together with digital literacy and community behavior in an urban context, therefore, financial education needs to be combined with digital verification practice and reporting channels.

The practical implication of H_1 is the need for an applied educational module. People need to practice calculating total payments, distinguish interest from service fees, assess the ratio of obligations to income, and recognize the risks of borrowing for consumptive needs. Outreach activities can use loan offer simulations and ask participants to explain their decisions. The material should also explain that repayment capacity is not the only criterion; provider legality, data protection, and collection procedures must also be part of the assessment.

4.5.2 Effect of Digital Literacy on Prevention

The test results support H_2 , digital literacy has a positive and significant effect on preventing illegal online lending. The coefficient of 0.293 indicates that the ability to search for, check, compare, and secure digital information makes an independent contribution after financial literacy and community behavior are included in the model. The theoretical mechanism is sequential: users first locate information, evaluate its credibility, verify the provider, protect their data, and report suspicious services. Respondents who understand financial risks still need these digital skills to find official sources, verify provider identities, and avoid links and applications that disguise their true status.

This finding supports the framework of [Lyons and Kass-Hanna \(2021\)](#), which states that digital financial literacy is multidimensional. Digital literacy is not merely the ability to open an application; it also includes the ability to evaluate information and maintain security. [Gai et al. \(2018\)](#) and [Lee and Shin \(2018\)](#) show that the fintech ecosystem requires data governance and user trust. [Murinde et al. \(2022\)](#) add that the expansion of finTech generates both opportunities and risks, making user capability and protection infrastructure complementary, rather than interchangeable. [Puschmann \(2017\)](#) explains that fintech development rapidly integrates technology with financial services, exposing users to automated processes and interfaces that can influence decisions. In this situation, verification habits are a form of behavioral control.

This result is consistent with [Korry and Permana \(2025\)](#), who emphasize technology fit with financial management, and [Devi et al. \(2025\)](#), who link payment technology with financial

management and self-control. [Li and Fisher \(2022\)](#) provided specific support for the relationship between digital financial literacy and online security behavior. [Chatterjee \(2025\)](#) adds that innovation in payment systems requires adaptation and protection to develop. Thus, a prevention campaign is not sufficiently conveyed through the slogan beware of illegal lending, it needs to teach technical steps, such as how to find provider lists, check website addresses, manage application permissions, and report suspicious messages.

The lowest score on the device and network security indicator ($X_{2.6}=4.07$) indicates that security needs to be strengthened. People may be sufficiently confident in accessing information but may not be consistent in using authentication, updating devices, or limiting application permissions. Digital-literacy interventions need to use a micro-level approach, such as a checklist before clicking links, source verification, password management, and procedures to follow when data have been disclosed. This approach can bridge the gap between knowledge and preventive action.

4.5.3 Effect of Community Behavior on Prevention

The test results support H_3 , community behavior has a positive and significant effect on the prevention of illegal online lending. The coefficient of 0.306 indicates that the habits of choosing formal services, seeking legal alternatives, reading terms, using registered providers, and limiting loans to urgent needs make a meaningful contribution. This variable connects knowledge and action because it reflects what people tend to do when they face actual needs. In TPB terms, the relationship is theoretically explained by the combined influence of attitudes, subjective norms, and perceived behavioral control, it is not evidence that social behavior temporarily causes prevention.

This finding is consistent with the TPB ([Ajzen, 2020](#)). Attitudes toward the dangers of illegal lending form negative evaluations, social norms can encourage people to choose registered services, and perceived behavioral control increases when information and financing alternatives are available. The lowest score for the indicator concerning the use of loans only for urgent needs shows that prevention is also related to controlling needs and lifestyle, not only to the ability to recognize illegal providers. [Strömbäck et al. \(2017\)](#) and [Dewi et al. \(2021\)](#) demonstrate the importance of self-control in financial behavior, while [Fariana et al. \(2021\)](#) and [Mashud et al. \(2021\)](#) link literacy and social factors to consumption and financial-management behavior.

In the context of illegal lending, preventive behaviors require institutional support. [Hidajat \(2020\)](#) highlights unethical practices in peer-to-peer lending, [Suryono et al. \(2021\)](#) map technological and misuse issues in the Indonesian context, and [Asti \(2020\)](#) emphasizes the authorities' role in addressing illegal services. [Wang et al. \(2021\)](#) show why data misuse and relational pressure make reporting and protection important, whereas [Putra et al. \(2022\)](#) position whistleblowing and risk management as components of broader financial crime prevention. [Supeno \(2023\)](#) broadens this perspective by demonstrating that personal legal capacity is important in online transactions. [Prihanto and Usmar \(2024\)](#) found that supervision and community behaviors positively affect prevention effectiveness. This means that individual behavior will be stronger when people understand where to submit complaints and trust that reports will be followed up on.

This idea of participation and supervision is consistent with [Mutiara et al. \(2026\)](#), who showed that community participation and the Village Consultative Body (*Badan Permusyawaratan Desa/BPD*) supervision can strengthen the effectiveness of village fund management. Although the context is different, the mechanism is relevant: governance effectiveness increases when citizens are not merely recipients of information but also participate in monitoring and reporting the findings. [Putra et al. \(2022\)](#) provide support for treating reporting systems as part of financial crime prevention. To prevent illegal lending, norms of reporting suspicious promotions and reminding one another can reduce the normalization of illegal services. Such efforts need to be maintained so that they do not turn into the dissemination of personal data or unverified accusations.

The practical implication of H_3 is the formation of communities that are aware of digital lending through campuses, workplaces, urban village offices, and online communities. These activities may

include decision-making simulations, question-and-answer channels, and reporting guides. The message conveyed should emphasize legal alternatives so that people are not merely prohibited from using illegal services but are also provided with solutions when facing urgent needs. The combination of financial literacy, digital literacy, and community behavior is more likely to keep decisions rational when individuals are under time pressure.

4.5.4 Synthesis of Findings and Implications

Overall, the findings show that preventing illegal online lending is a multidimensional construct. Financial literacy has the largest coefficient because the ability to assess costs and repayment capacity is the first filter in a financing decision. Community behavior follows because knowledge must be translated into habits of choosing formal services, delaying decisions, and reporting problems. Digital literacy has a slightly lower coefficient but remains significant because illegal providers operate through digital channels, interfaces and information. The three predictors should not be considered interchangeable, such as financial literacy addresses affordability, digital literacy addresses authenticity and data security, and community behavior addresses norms and enactment. Their simultaneous inclusion is the study's main theoretical contribution, although the high R^2 and unavailable supplementary diagnostics require a cautious interpretation.

The very high R^2 value should serve as a basis for further development, not as a reason to conclude that the model is complete. Future studies should test the roles of intention, attitude, subjective norms, perceived behavioral control, self-efficacy, and trust as mediators or moderators. Future research may also combine survey data with application-verification experiments, complaint data, or behavioral observations to narrow the gap between responses and actions. Before making strong claims, the model should be re-estimated using item-level diagnostics for HTMT, VIF, f^2 , Q^2 , PLSpredict, and common method bias. In addition, the sample size may be expanded through stratification by subdistrict, income group, and loan-user status to make the model more representative.

5. CONCLUSIONS

5.1 Conclusion

This study demonstrates that financial and digital literacies and community behavior are positively associated with the prevention of illegal online lending among residents of Bandar Lampung City. Financial literacy had the largest path coefficient (0.394, $t=4.067$, $p<0.001$), followed by community behavior (0.306, $t=2.601$, $p=0.005$) and digital literacy (0.293, $t=3.086$, $p=0.001$), and all three hypotheses were supported. The results extend the TPB by demonstrating how financial appraisal, digital control, and social enactment can be examined together as complementary prevention capacities. The R^2 value of 0.960 indicates strong explanatory power in the research data, but it is not evidence of absolute causality and may be inflated by construct proximity and common measurement conditions. Before submission, the model should be checked with the unavailable HTMT, VIF, f^2 , Q^2 , PLSpredict, and common method bias diagnostics.

The practical implication is that prevention programs should be designed as an integrated sequence rather than a single prohibition message. Financial education should teach the calculation of total costs, repayment capacity, penalty risks, and the differences between legal and illegal services to avoid such situations. Digital education should include source verification, domain and application checks, device security, permission restrictions, and reporting. Strengthening community behavior requires legal alternatives, norms for reminding one another, and accessible complaint channels. The central contribution is practical as well as theoretical: a person needs to understand whether a loan is affordable, verify whether the provider is legitimate, and feel able to reject or report a risky offer. This approach is more realistic than relying on a single outreach session or emphasizing prohibitions.

5.2 Research Limitations

This study had several limitations. A sample of 100 respondents was obtained through purposive sampling and online data collection, therefore, the representation of each subdistrict and social group was not balanced, and a formal probability-based margin of error could not be claimed. The data were

cross-sectional and self-reported, therefore, they did not capture changes in behavior over time or actual decisions when respondents received loan offers. The exact data collection dates and formal ethics approval documentation were not preserved in the source thesis, these should be verified before submission. The model also used a prevention construct that was conceptually close to literacy and behavior, consequently, common method bias and construct redundancy may have contributed to the high R^2 value. HTMT, VIF, f^2 , Q^2 , PLSpredict, and a formal common method bias test were not available because the respondent-level dataset and complete SmartPLS output were not supplied. In addition, indicator $X_{2.4}$ was removed because of discriminant validity problems, and the final results should be understood as an adjusted model.

5.3 Suggestions and Directions for Future Research

Future research should use probability sampling or quota sampling based on subdistrict and income, increase the number of respondents, and combine surveys with experiments or complaint data. Before interpreting a similarly high R^2 as robust, researchers should report the HTMT, predictor VIF, f^2 , Q^2 , PLSpredict, and a common-method-bias assessment from the full item-level dataset. The TPB model can be developed by testing intention as a mediator and social norms as moderators. Researchers may also compare people who have used online loans, those who have only received promotions, and those who have never used such services. Longitudinal testing would help assess whether literacy education actually produces behavioral changes rather than merely increasing perception scores. Future manuscripts should also report the exact data collection period, ethics approval or exemption, consent procedure, and source of every measurement item.

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AUTHOR CONTRIBUTIONS

LPN conducted the source thesis research and the empirical analysis. UK and ER served as contributing authors, participating in the drafting and critical review of the manuscript, supervising the research, and contributing to the review and finalization of the manuscript. All authors have reviewed and approved the final version of this manuscript.

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