

Digital Financial Inclusion, Financial Literacy, and Entrepreneurial Survival: The Mediating Role of Digital Finance

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Abstract: This study examines the impact of digital financial inclusion and financial literacy on entrepreneurial survival by considering the mediating role of digital finance. This issue is particularly relevant as the failure rate of micro, small, and medium enterprises (MSMEs) in Indonesia remains relatively high due to limited access to financing, low financial literacy, and disparities in digital technology adoption. Unlike most previous studies that primarily focus on direct relationships or macro-level impacts of digital financial inclusion, this study investigates the mediating mechanism of digital finance in the relationship between digital financial inclusion, financial literacy, and entrepreneurial survival at the micro-enterprise level. The study employs a quantitative approach using survey data collected from 150 entrepreneurs in Indonesia. The data were analyzed using path analysis and the Sobel mediation test to examine both direct and indirect effects among variables. The findings reveal that digital financial inclusion and financial literacy have a positive and significant effect on entrepreneurial survival. Furthermore, digital finance is proven to significantly mediate the relationship between these variables and business survival. These results provide empirical evidence that the utilization of digital financial services acts as a critical mechanism linking financial access and financial capability to business sustainability. The study contributes to the literature by highlighting the strategic role of digital finance in strengthening entrepreneurial resilience in the digital economy.

Keywords: digital financial inclusion, financial literacy, digital finance, entrepreneurial survival

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INTRODUCTION

Entrepreneurship is widely recognized as an important driver of economic development and poverty reduction, particularly in developing countries (Kimmitt et al., 2020; Santos et al., 2022; Su et al., 2024). However, despite its significant economic role, many entrepreneurial ventures still face serious challenges in maintaining long-term business sustainability. Limited access to capital, weak institutional support remains, and structural economic constraints key factors contributing to high business failure rates, particularly in developing and emerging economies (B. Li & Pan, 2025). These conditions indicate that improving entrepreneurial survival is a critical issue for sustaining economic development, as many small businesses struggle to

maintain operational continuity due to financial constraints and limited access to formal financial systems.

Previous studies on entrepreneurship have largely focused on factors that encourage individuals to start a business, such as access to financing and social network support (L. Yu & Artz, 2019). In contrast, the issue of entrepreneurial survival, which reflects the ability of a business to sustain its operations over time, has received relatively less attention in the literature (Wennberg et al., 2010). From the perspective of the resource-based view (RBV), business sustainability is strongly influenced by the availability and accessibility of strategic resources (A. X. Wang & Zhou, 2022), particularly financial capital as one of the most critical resources for business continuity (Linder et al., 2020). In practice, however, many entrepreneurs still face resource limitations, especially in accessing financial services. Financial exclusion remains a major barrier, often caused by limited collateral, information asymmetry between entrepreneurs and financial institutions, and inadequate financial infrastructure (X. Wang & Fu, 2022). Moreover, formal financial institutions frequently exclude low-income entrepreneurs due to high transaction costs and perceived low profitability (J. Li & Li, 2022). As a result, financial exclusion continues to hinder entrepreneurial sustainability and increase the vulnerability of small businesses to failure (B. Li & Pan, 2025).

Small and medium enterprises (SMEs) play a crucial role in economic development and are widely recognized as a key driver of economic growth in both developed and developing countries. Globally, SMEs account for approximately 90% of all businesses and contribute significantly to employment generation and national income (Abu et al., 2025). In Indonesia, SMEs also constitute the backbone of the national economy, contributing around 60.34% to the gross domestic product (GDP) and absorbing a large share of the workforce (Al-shami et al., 2024). Despite this significant contribution, many SMEs continue to face structural challenges that hinder their growth and sustainability. One of the most critical issues is limited access to financing, which constrains business expansion and innovation. Previous studies indicate that many small business owners experience difficulties in obtaining credit due to limited collateral, weak financial records, and insufficient financial management capabilities (Susan, 2020) (Widyastuti et al., 2023). In addition to financial constraints, SMEs are also affected by various internal and external challenges related to human resource capacity, institutional support, and market competition (Raya et al., 2021)(Panjaitan et al., 2021). As a result, many SMEs in Indonesia remain financially underserved, with approximately 60–70% still lacking access to formal banking financing (Al-shami et al., 2024).

Alongside these challenges, Indonesia has experienced rapid growth in its digital economy in recent years. The expansion of digital technology has created new opportunities for business actors to improve productivity, expand market access, and utilize digital-based financial services. According to recent reports, the value of Indonesia's e-commerce market is projected to reach approximately USD 124 billion by 2025 (Al-shami et al., 2024). This rapid digital transformation has encouraged the adoption of various digital platforms in business activities. However, the ability of small businesses to adapt to digital transformation remains uneven. Many SMEs, particularly those operating in traditional sectors, still face difficulties in adopting digital technologies and digital-based financial services (Triwahyuni, 2022). In this context, financial literacy has become an increasingly important competency for entrepreneurs, as it enables them to understand and effectively utilize financial services in the digital era (Setiawan et al., 2022). Adequate financial knowledge and skills are essential for entrepreneurs to manage financial resources, evaluate financing opportunities, and utilize digital financial platforms efficiently.

In response to these challenges, digital finance has emerged as an important mechanism for expanding financial access and supporting economic participation among previously underserved groups. Digital finance enables individuals and businesses to access financial services such as digital payments, online lending, and other technology-based financial products in a more efficient and accessible manner. A growing body of literature suggests that digital finance can improve financial inclusion by expanding access to affordable financial services and investment opportunities, particularly for small businesses and marginalized communities (Shen et al., 2020). Furthermore, the development of digital finance also contributes to strengthening the resilience of financial systems and increasing financial stability by promoting competition and innovation within the financial sector (Buchak et al., 2018; Ozili, 2018).

Recent innovations in the financial sector, including mobile banking services, online financial management platforms, peer-to-peer (P2P) lending, automated investment advisors, and modern trading platforms, have transformed the way financial services are delivered and accessed. These innovations are driven by the integration of technological advancement, regulatory developments, evolving consumer behavior, and global market dynamics. While digital financial services create new opportunities for broader financial access, they also increase the complexity of financial decision-making for users. In this context, financial literacy becomes an essential capability that enables individuals and entrepreneurs to understand financial products, make informed financial decisions, and effectively utilize digital financial services. Without sufficient financial knowledge and skills, many individuals may face difficulties in adopting digital financial technologies, which may limit their participation in the digital financial system and reduce the potential benefits of financial innovation (Yang et al., 2023).

In recent years, the role of financial literacy in entrepreneurship has received growing attention in the academic literature. Several studies suggest that financial literacy contributes to entrepreneurial development by improving financial management capability and supporting business growth (Calderon et al., 2020). However, empirical findings remain mixed. Some studies report that financial literacy programs have only limited or insignificant effects on the establishment or sustainability of new businesses (Bruhn & Zia, 2013; Karlan & Valdivia, 2011). Moreover, much of the existing literature has focused on household financial literacy in urban settings and its influence on general economic behavior rather than on entrepreneurial sustainability (Sayinzoga et al., 2016) (Avlijaš et al., 2014). Other studies indicate that limited financial knowledge continues to constrain effective financial decision-making among households and small economic actors (Xu et al., 2020). These findings highlight the continuing importance of expanding digital financial inclusion in order to improve access to financial services, particularly for underserved groups and small business actors who remain excluded from formal financial systems.

Digital financial inclusion has emerged as an important mechanism for expanding access to financial services and improving the efficiency of capital allocation within the economy. By utilizing digital technology, financial institutions can reach groups that have traditionally been excluded from the formal financial system, including small and medium enterprises (SMEs) and communities located in remote areas (Zhang et al., 2025). In this context, the integration of digital financial inclusion with broader economic activities is considered a strategic approach to strengthening the development of SMEs and enhancing economic resilience. Previous studies highlight the importance of integrating digital financial inclusion with the real economy as part of national development strategies, as it can support the growth of SMEs and improve access to financial resources (Borjigin et al., 2025). These findings indicate that digital financial inclusion

not only expands financial access but also has the potential to promote more inclusive and sustainable economic development.

Despite the growing interest in digital financial inclusion, much of the existing literature has primarily examined its impact at the macroeconomic level, particularly in relation to economic development and financial system performance. Relatively limited attention has been given to understanding how digital financial inclusion influences business sustainability at the micro-enterprise level. Moreover, previous studies have rarely explored the mechanisms through which digital financial inclusion interacts with other key factors, such as financial literacy and digital financial capabilities, in shaping entrepreneurial outcomes. Therefore, further research is needed to examine the relationship between digital financial inclusion, financial literacy, and entrepreneurial survival, particularly by considering the role of digital finance as a mediating mechanism. By addressing this gap, the present study aims to provide deeper insights into how digital financial inclusion and financial literacy jointly contribute to strengthening entrepreneurial sustainability in the digital economy.

METHOD

Research Design and Data Collection

This study employs a quantitative research design to examine the relationships between digital financial inclusion, financial literacy, digital finance, and entrepreneurial survival. Data were collected using a structured questionnaire based on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The primary objective of this study is to analyze the influence of digital financial inclusion and financial literacy on entrepreneurial survival and to examine the mediating role of digital finance in these relationships.

The respondents of this study consist of entrepreneurs operating micro, small, and medium enterprises (MSMEs) in Indonesia. A total of 150 entrepreneurs participated in the survey. Respondents were selected using a purposive sampling technique, with the criteria that respondents must be actively operating a business and directly involved in financial decision-making within their enterprises. The data collection process was conducted through the distribution of online and offline questionnaires to ensure broader respondent coverage. Before completing the questionnaire, respondents were informed about the purpose of the research and were asked to provide their consent voluntarily. Participation in the survey was anonymous, and all responses were treated confidentially to ensure compliance with research ethics standards.

Variable Measurement

The measurement of research variables was adapted from previous empirical studies to ensure the validity of the constructs used. Financial literacy was measured using six sub-dimensions, namely financial awareness (five items), financial behavior (six items), and financial knowledge (four items) adapted from (Potrich et al., 2018), well as interest rate calculation (two items), understanding inflation (three items), and investment risk perception (three items) adapted from (B. Li & Pan, 2025). financial inclusion was measured using three dimensions adopted from (W. Yu et al., 2024), which include coverage (three items), depth of use (three items), and degree of digitalization (three items). Digital finance was measured using two dimensions, namely digital financial awareness (four items) and digital financial knowledge (five items), adapted from (Frimpong et al., 2022). Entrepreneurial survival was measured based on business continuity status following the measurement approach used in (B. Li & Pan, 2025), which classifies enterprises into two categories: businesses that remain open until the research year (Independent Business Open/IBO) and businesses that had closed before the research year

(Independent Business Closed/IBC). Although this binary indicator captures business continuity status, it is interpreted as a proxy for business survival within the entrepreneurial context. In addition, several control variables were included in the analysis to reduce potential bias, namely entrepreneur gender, entrepreneur age, education level, company size, and company age.

Validity and Reliability

To ensure the quality of the measurement instruments, validity and reliability tests were conducted prior to hypothesis testing. Construct validity was assessed through factor loading analysis, while reliability was evaluated using Cronbach’s alpha coefficients. A Cronbach’s alpha value above 0.70 indicates acceptable internal consistency of the measurement scales.

Data Analysis Technique

The data were analyzed using path analysis to examine both direct and indirect relationships between variables. The mediating effect of digital finance was further tested using the Sobel mediation test. Prior to conducting the main analysis, several classical assumption tests were performed, including normality, multicollinearity, and heteroscedasticity tests, to ensure that the data met the required statistical assumptions. All statistical analyses were conducted using SPSS software.

Table 1. Variable Measurement Definition

Variable	Measurement
Dependent Variable	
Entrepreneurial Survival	1= Independent Business Open (IBO) until the research year 0=Independent Business Closed (IBC) before the research year
Independent Variable	
Digital Financial Inclusion	It is measured from three aspects: the breadth of coverage, the depth of use, and the degree of digitalization.
Financial Literacy	Measured from six aspects: financial awareness, financial behavior, financial knowledge, interest rate calculation, inflation understanding, investment risk
Mediation Variable	
Digital Finance	Measured from two aspects: digital financial awareness and digital financial knowledge
Control Variable	
Entrepreneur Gender	1 = Male; 0=Female
Entrepreneur Age	1 = 20-30; 2 = 30-40; 3 = More Than 40 Years
Education Level	0 = No School; 1 = Elementary School; 2 = Junior High School; 3 = High School; 4 = Bachelor’s; 5 = Master’s.
Company Size	1 = 1 Branch; 2 = More Than 1 Branch
Company Age	1 = Less Than 5 Years; 2 = More Than 5 Years.

The Nexus of digital financial inclusion and Digital Finance. Research (Zhang et al., 2025) found that digital inclusive finance is able to reduce financing costs faced by SMEs, while increasing the availability and ease of access to financing. (Hongli, 2021) It also shows that digital

finance not only reduces the cost of financing companies, but also helps to align the mismatch between investment and financing timeframes, which in turn increases the total productivity of the factor. Furthermore, digital financial inclusion plays an important role in bridging the relationship between markets and banking-based financial institutions, by reducing market friction and addressing the problem of information asymmetry (Kong et al., 2022). By utilizing technologies such as big data and cloud computing, this system is able to improve accuracy in risk assessment, reduce the risk of moral hazard, and avoid adverse decision-making (Zhang et al., 2025). Thus, digital financial inclusion is not only able to overcome the challenges of corporate financing, but also strengthen the value and sustainability of the company through cost efficiency and adjustment of financing structures (Fu et al., 2022).

H1: Digital financial inclusion has a significant effect on digital finance

The Relationship between Financial Literacy and Digital Finance. The financial literacy of a business owner or manager, along with the ability to utilize digital financial services, can be seen as an important intangible asset. These two things not only help companies in achieving better economic performance, but also contribute to increased access to financing and business sustainability (Khan et al., 2019; Siddik et al., 2023). In line with the echelon theory in the research (Aristei et al., 2024), the strategic choices of the company and its performance are partly influenced by the characteristics of the managerial background. In this context, financial literacy and attitudes towards digital financial services can be considered part of the attributes of the upper echelon of the owner or manager, which plays a role in influencing the company's strategic decisions and results (Molina-García et al., 2023; Tian et al., 2020). Referring to the theory of human capital in research (Aristei et al., 2024) stated that financial literacy has the potential to improve the quality of human capital in companies. In particular, at the small and medium-sized enterprise (SME) scale, a higher level of financial competence allows owners or managers to make investment decisions more wisely and based on adequate information. Furthermore, according to the theory of planned behavior, company behavior is influenced by intentions, attitudes, and subjective norms. In this case, financial literacy is an important factor that influences the intentions and attitudes of entrepreneurs, thus having an impact on the decision-making process, including those related to financing and sustainable investment (She et al., 2024).

H2: Financial literacy has a significant effect on digital finance

The Linkage of digital financial inclusion and Entrepreneurial Survival. Digital financial inclusion (DFI) reduces entrepreneurs' reliance on physical banking institutions and helps address the problem of financial exclusion (Lu et al., 2024), thus providing significant benefits for the development of entrepreneurship in rural areas. DIF provides access to investment, insurance, and other financial services throughout all stages of the entrepreneurial process (Bai et al., 2023) and utilize digital technology to facilitate more efficient information exchange (Lee et al., 2023). In order for business operations to be sustainable, entrepreneurs need a supportive financing environment and trusted funding channels (Robb & Robinson, 2014). Inclusive digital finance is characterized by wide access, cost efficiency, and ease of use (Dutta & Sobel, 2018) provide opportunities for entrepreneurs in rural areas, who have been excluded from the conventional financial system, to obtain financial services (Y. Li et al., 2021). This ultimately increases the chances of their business sustainability.

H3: Digital financial inclusion has a significant effect on the entrepreneurial survival

The Relationship between Financial Literacy and Entrepreneurial Survival. Increased financial literacy allows entrepreneurs to understand the financial markets as well as have the information and skills needed to navigate them. This helps them assess the risks and potential benefits of entrepreneurial activities, so that they can run their business with a higher level of confidence. In addition, an understanding of financial market rules and knowledge of applicable laws and regulations make entrepreneurs more compliant with existing regulations. This compliance helps reduce risk and uncertainty during the process of running a business (Basha et al., 2023)(Y. Li et al., 2024). Good financial literacy can also increase an individual's perception of the value and benefits of entrepreneurship, ultimately driving their willingness to start a business. In addition, strong social support will strengthen entrepreneurial motivation through

encouragement and enthusiasm from the surrounding environment. Therefore, increasing financial literacy not only encourages individual participation in entrepreneurial activities, but also contributes greatly to the creation of active and sustainable entrepreneurship (Fan et al., 2024).

H4: Financial literacy has a significant effect on the entrepreneurial survival

The Effects of Digital Finance Mediation. Entrepreneurial human capital has long been recognized as an important element in supporting business sustainability and growth (Gimeno et al., 1997). In this case, human capital, especially in the form of digital literacy, plays a key role in determining the extent to which rural entrepreneurs are able to actively participate and benefit from digital financial services (B. Li & Pan, 2025). Digital finance, which is supported by technologies such as big data and inclusive features, has great potential in overcoming barriers to access to financial services. This innovation significantly expands the reach of financial services and has a positive impact on various economic and social aspects (Hui et al., 2023). First, digital finance plays an important role in reducing financing constraints. Through the use of digital technology, important information can be extracted from big data and applied to support business financing. This is crucial in increasing financial inclusion, reducing financing barriers, and driving real economic growth (Kapoor, 2014; Sarma & Pais, 2011). In particular, digital financing models such as peer-to-peer lending and crowdfunding expand access to credit, simplify the financing process, and increase the availability of loan funds (Aziz & Naima, 2021; Bollaert et al., 2021). Second, digital finance also encourages increased consumption and job creation. On the one hand, digital finance strengthens the development of online credit, which answers the funding needs from the supply side (Pierrakis & Collins, 2013). On the other hand, the reduction of liquidity barriers and transaction costs also increases efficiency in payments and transfers of household consumption (J. Li et al., 2020). In addition, digital finance significantly strengthens the sustainability of employment through the empowerment of micro, small, and medium enterprises (MSMEs) by providing wider and more effective access to financing (Geng & He, 2021). Third, digital finance makes a positive contribution to improving the industrial structure and quality of innovation. Digital technology enables precise demand matching across the entire industrial chain, driving more efficient resource allocation and improvement of industrial structures (X. Wang & Wang, 2021). A number of studies also show that digital finance can improve the quality of innovation (Z. Li et al., 2023). By overcoming geographical limitations and the limitations of the conventional financial system (Cao et al., 2021; Pal et al., 2021), digital finance is able to improve the efficiency of the relationship between the supply and demand of capital (Calantone et al., 2002), as well as providing adequate financial support for innovative and entrepreneurial activities.

H5: Digital financial inclusion has a significant effect on the entrepreneurial survival through digital finance

H6: Financial literacy has a significant effect on the entrepreneurial survival through digital finance

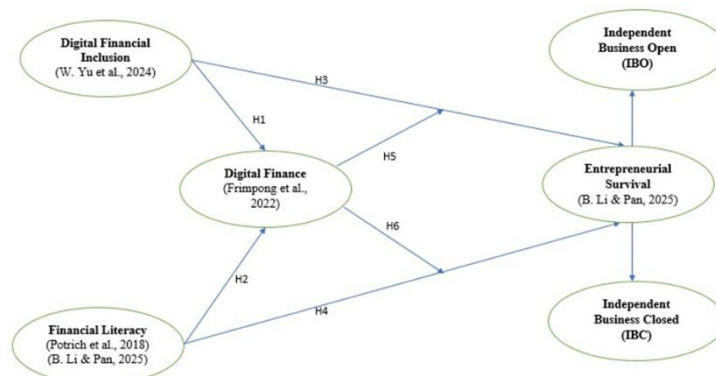


Figure 1. Research Framework

RESULTS AND DISCUSSION

Research Results

Statistic output results in table 2 presented show descriptive statistics for the *Entrepreneurial Survival* variable with a total sample of 150 respondents. The minimum value for this variable is 0, while the maximum value is recorded at 1. The mean for *entrepreneurial survival* was 0.96, which indicates that most respondents have a positive perception of entrepreneurial survival, tending to be close to the maximum value. The standard deviation for this variable was 0.197, indicating that there was little variation in respondents' answers; Most respondents gave scores that were very close to average. The recorded variant was 0.039, indicating that the data was quite satisfactory and did not spread far from the average. Overall, these results reflect that almost all respondents would maintain an entrepreneurial life, with an average score close to 1, indicating a high level of confidence among the entrepreneurs in this sample. This data provides a positive picture of the entrepreneurial conditions studied, with slight variation between respondents' perceptions.

Statistic output results in table 2 presented show descriptive statistics for three main variables: *digital financial inclusion*, *financial literacy*, and *digital finance*, with a total sample of 150 respondents. For the *Digital Inclusive Finance* variable, the minimum value recorded is 2 and the maximum value is 5, with a mean of 4.41. The standard deviation for this variable is 0.569, which indicates that the data is fairly consistent, with relatively small variations from the mean. The variance was recorded at 0.323, indicating a more loaded data distribution around the average. Furthermore, in the *Financial Literacy* variable, the minimum value is also at 2 and the maximum is at 5. The mean for this variable was 4.28, with a standard deviation of 0.646, indicating that there was a greater variation in respondents' answers compared to *Digital financial inclusion*. The variance for *Financial Literacy* was recorded at 0.418, which indicates a wider distribution of data. Finally, for the *Digital Finance* variable, the minimum and maximum values remain the same, namely 2 and 5. The average for this variable is slightly higher at 4.43, with a standard deviation of 0.535, which suggests that despite the variation, this data remains quite interesting. The variance for *Digital Finance* is 0.287, indicating a smaller spread compared to *Financial Literacy*. Overall, the third variable showed a high average value, close to the maximum, which indicates that respondents generally have a positive perception of the third aspect. The variations in the data also provide insight into the diverse views of respondents related to financial literacy and the use of digital finance.

Table 2. Descriptive Statistics

Variable	Minimum	Maximum	Mean	Std. Deviation	Variance
Entrepreneurial Survival (ES)	0	1	.96	.197	.039
Digital Financial Inclusion (DFI)	2	5	4.41	.569	.323
Financial Literacy (FL)	2	5	4.28	.646	.418
Digital Finance (DF)	2	5	4.43	.535	.287

Source: Data Processed from SPSS, 2025

Control variables in this study include both demographic and firm characteristics that may influence entrepreneurial survival, namely entrepreneur gender, entrepreneur age, education level, firm size, and firm age, as defined in Table 1. Based on descriptive results, the majority of respondents are male (112 respondents), while female respondents account for 38 individuals. In terms of age distribution, most respondents are above 40 years old (67

respondents), followed by those aged 30–40 years (56 respondents), and 20–30 years (27 respondents). Regarding educational background, most respondents have a moderate to high level of education, with 67 respondents holding a high school degree, 68 holding a bachelor’s degree, and 11 holding a master’s degree, while only 4 respondents have a junior high school education.

From the business characteristics perspective, the majority of respondents operate small-scale enterprises with a single business branch (86 respondents), while 64 respondents operate more than one branch. In terms of firm age, 85 businesses have been operating for more than five years, while 65 businesses are less than five years old. These control variables were incorporated into the analytical model to account for potential biases arising from differences in individual and firm characteristics. The results indicate that, despite variations in respondent characteristics, the effects of digital financial inclusion and financial literacy on entrepreneurial survival remain consistent, thereby strengthening the robustness and validity of the study findings.

Validity and reliability tests were conducted to ensure that the measurement instruments accurately and consistently capture the constructs under study. Convergent validity was assessed using factor loadings, while reliability was evaluated using Cronbach’s Alpha and Composite Reliability (CR). In addition, Average Variance Extracted (AVE) was used to assess convergent validity.

1. Convergent Validity

The results indicate that all measurement items have factor loadings above the recommended threshold of 0.70, indicating good validity.

Table 3. Convergent Validity

Variable	Number of Items	Loading Range
Digital Financial Inclusion	9 items	0.721-0.872
Financial Literacy	23 items	0.703-0.881
Digital Finance	9 items	0.734-0.889

Source: Data Processed from SPSS, 2025

Based on the validity test results presented in Table X, all measurement indicators across the research variables exhibit factor loading values above the recommended threshold of 0.70. The digital financial inclusion variable shows loading values ranging from 0.721 to 0.872, indicating that all indicators adequately represent the construct. Similarly, the financial literacy variable demonstrates strong validity with loading values ranging from 0.703 to 0.881, confirming that all indicators meet the criteria for convergent validity. The digital finance variable also shows satisfactory results, with loading values between 0.734 and 0.889, indicating that all items significantly contribute to the construct measurement.

The AVE values are as follows:

Table 4. AVE Values

Variable	AVE
Digital Financial Inclusion	0.612
Financial Literacy	0.645
Digital Finance	0.667

Source: Data Processed from SPSS, 2025

Furthermore, the Average Variance Extracted (AVE) values for all variables exceed the minimum threshold of 0.50, with values of 0.612 for digital financial inclusion, 0.645 for financial literacy, and 0.667 for digital finance. These results indicate that each construct explains more than 50% of the variance of its indicators. Therefore, it can be concluded that all variables in this study meet the criteria for convergent validity and are suitable for further analysis.

2. Reliability Test

The reliability result shows that all constructs have Cronbach’s Alpha and Composite Reliability values above 0.70, indicating strong internal consistency.

Table 5. Reliability Test

Variable	Cronbach's Alpha	Composite Reliability
Digital Financial Inclusion	0.871	0.902
Financial Literacy	0.934	0.948
Digital Finance	0.889	0.915

Source: Data Processed from SPSS, 2025

The reliability test results presented in Table X indicate that all research variables demonstrate a high level of internal consistency. This is reflected in Cronbach's Alpha values, which are all above the recommended threshold of 0.70, with values of 0.871 for digital financial inclusion, 0.934 for financial literacy, and 0.889 for digital finance. These values indicate that all items within each construct consistently measure the same underlying variable. In addition, the Composite Reliability (CR) values for all variables are also above the acceptable threshold, with values of 0.902 for digital financial inclusion, 0.948 for financial literacy, and 0.915 for digital finance. The CR values exceeding 0.70 further confirm the high reliability of the constructs used in this study. Therefore, it can be concluded that all variables meet the reliability criteria and are suitable for further statistical analysis.

Discussion

Based on table 6 test 6.1, the first hypothesis is accepted. The coefficient table on the digital financial inclusion variable has an effect on digital finance which is shown at a significance of 0.000. Most of the available literature focuses on the direct impacts and mechanisms that drive rural development through digital financial inclusion, such as increased access to financial services and reduced financing costs (Hao et al., 2023). The ability and skills to operate and utilize digital financial tools effectively play an important role in optimizing the benefits of digital inclusive finance. Because the digital inclusive financial system is highly dependent on technology, entrepreneurs with high levels of digital literacy tend to be better prepared to utilize the technology. Conversely, entrepreneurs with low digital literacy may have difficulty accessing or using digital financial services (B. Li & Pan, 2025). Therefore, the positive influence of digital inclusive finance on business sustainability in rural areas can vary, depending on the level of digital financial capability possessed by business actors. Digital financial inclusion has a significant influence on digital finance, where the use of digital technology to provide affordable and accessible financial services can drive economic growth, reduce poverty, and improve people's well-being (Ocharive & Iworiso, 2024; Thisis, 2024). Digital financial services such as mobile banking and electronic payments offer an efficient and cost-effective alternative to traditional banking, thus facilitating greater economic participation (Ocharive & Iworiso, 2024, 2024). However, the effectiveness of digital financial inclusion is influenced by various factors such as digital infrastructure, digital and financial literacy, supportive regulations, and public trust. A study (Ayu Priandari et al., 2024) shows that the development of digital finance has a positive influence on financial inclusion and green growth. Nonetheless, challenges such as the digital divide, security risks, and inadequate regulation need to be addressed to realize the potential of digital financial inclusion as a key driver of sustainable and inclusive economic development (Sun & Zhang, 2024).

Based on table 6 test 6.2, the second hypothesis is accepted. The coefficient table on the financial literacy variable has an effect on digital finance which is shown at a significance of 0.000. The results of the study are in line with the findings (Yang et al., 2023) which shows that the influence of financial literacy is getting bigger along with the increasing complexity of digital finance. In addition, financial literacy has a more significant role in encouraging the use of digital financial services, especially among underprivileged groups such as low-income families, the

elderly, and rural communities, compared to their peers. Financial literacy plays a crucial role in shaping individual behavior and success in the increasingly complex era of digital finance. Financial literacy, which includes the ability to understand and use a variety of financial concepts, significantly influences the way individuals manage their finances, make investment decisions, and utilize digital financial services (Sun & Zhang, 2024). Financial literacy is identified as an important factor, because it has a high level of financial literacy to be more optimal in utilizing the benefits of digital finance. This encourages engagement in more diverse consumption activities, while amplifying the negative impact of digital finance. These findings affirm the strategic role of digital finance in supporting efforts to combat climate change and driving economic progress (Huang et al., 2024). Financial literacy has been shown to significantly drive increased use of digital financial services, including mobile payments, online loans, and other digital financial products. The impact of this literacy is seen more strongly on the use of online loans and financial products compared to mobile payments. These findings indicate that the influence of financial literacy is getting bigger as the complexity of digital financial services increases. In addition, financial literacy plays a more important role in encouraging the use of digital financial services among vulnerable groups, such as low-income families, the elderly, and rural communities, when compared to their peers (Yang et al., 2023).

Based on table 6 test 6.3, the results of the study with a significance of 0.000 show that the third hypothesis is accepted. Digital inclusive finance has a significant positive impact on entrepreneurial survival. The research findings show that the level of digital financial inclusion in a region significantly improves entrepreneurial survival, especially for individuals with high levels of digital and financial literacy. In addition, the results of the study revealed that digital financial inclusion contributes to entrepreneurial survival, especially through improving business performance. This study contributes to the literature by identifying digital financial inclusion as one of the key determinants in supporting business sustainability (B. Li & Pan, 2025). Digital inclusive finance has a positive impact on the survival of entrepreneurs, especially Micro, Small, and Medium Enterprises (MSMEs). Easier access to financing through digital platforms allows MSMEs to obtain business capital more quickly and efficiently compared to conventional banking procedures. This is in line with research (B. Li & Pan, 2025) which suggests that digital inclusive finance can improve the survival of entrepreneurs, especially in rural areas, noting that digital and financial literacy play an important role as a moderation factor. Furthermore, digital financial inclusion not only increases access to capital, but also facilitates transactions and opens market access for MSMEs, thereby increasing operational efficiency and saving power. In his research, it was found that a 1% increase in digital financial inclusion could increase household entrepreneurship by 0.264%. However, challenges such as limited internet access, low digital literacy, and lack of understanding of fintech are still obstacles that need to be overcome so that the benefits of digital inclusive finance can be optimally felt by all entrepreneurs (B. Li & Pan, 2025).

Based on table 6, test 6.4 the results of the study with a significance level of 0.000 indicate that the fourth hypothesis is accepted. Financial literacy has a significant positive impact on entrepreneurial survival. Entrepreneurs who are more financially literate tend to have a higher probability of business continuity. The most likely mechanism explaining this relationship is the improvement in financial management behavior that arises when literacy increases. These practices improve internal decision-making and reduce the likelihood of liquidity failure, thus supporting business continuity. Empirical support for this mechanism of financial records and behavioral practices is provided by Wise, who found that increased literacy increases the

frequency of financial reporting and reduces the probability of business closure. The results of the study show that financial literacy has a positive effect on a person's likelihood of engaging in entrepreneurial activities. Since financial literacy is a skill that can be learned and improved, these findings indicate that improving financial literacy can encourage the growth of entrepreneurial activities (Ćumurović & Hyll, 2019).

Table 6. Results of the Influence

Test	Model	Dep. Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
6.1	Digital Financial Inclusion (DFI)	Digital Finance (DF)	.313	.042	.524	7.492	.000
6.2	Financial Literacy (FL)	Digital Finance (DF)	1.515	.114	.736	13.241	.000
6.3	Digital Financial Inclusion (DFI)	Entrepreneurial Survival (ES)	.153	.019	.558	8.178	.000
6.4	Financial Literacy (FL)	Entrepreneurial Survival (ES)	.493	.066	.523	7.458	.000

Source: Data Processed from SPSS, 2025

Based on Figure 2, the results of the study with a significance of 0.000 show that the fourth hypothesis is accepted. Digital inclusive finance has a significant positive impact on entrepreneurial survival (B. Li & Pan, 2025). This study examines in depth the influence of digital inclusive finance variables on entrepreneurial survival, focusing on the role of digital finance mediation. The results of the study show that digital finance inclusiveness has a significant influence on the survival of entrepreneurs, and this influence is strengthened through digital financial mediation. This indicates that wider and more affordable access to digital financial services, such as online loans, digital payments, and digital investment platforms, has a positive impact on the ability of entrepreneurs to survive and thrive in a competitive business environment (L. Yao & Yang, 2022). One of the important findings of this study is that digital finance acts as a bridge that connects digital inclusive finance with entrepreneurial survival. In other words, digital inclusive finance alone is not enough to ensure the survival of entrepreneurs; However, when combined with the use and utilization of digital finance, the impact becomes more significant. This is because digital finance allows entrepreneurs to manage their finances more efficiently, reduce transaction costs, expand market reach, and access relevant information for business decision-making (L. Yao & Yang, 2022; W. Yao, 2023). In addition, this study also highlights the importance of digital and financial literacy for entrepreneurs in utilizing the benefits of digital financial inclusion and digital finance. Entrepreneurs who have a good understanding of digital technology and financial principles will be better able to adopt and integrate digital financial services into their business operations, thereby increasing their efficiency, productivity, and competitiveness. Therefore, training and mentoring programs that aim to improve digital literacy and finance are essential to support entrepreneurial success in the digital era (Justita Dura, 2024; B. Li & Pan, 2025). Overall, this study provides strong empirical evidence on the importance of digital inclusive finance and digital finance in supporting entrepreneurial survival. These findings have important implications for policymakers, financial institutions, and digital financial service providers to develop effective strategies and programs

to increase access to and use of digital financial inclusion and digital finance for entrepreneurs, especially MSMEs (B. Li & Pan, 2025; Qinqin et al., 2023).

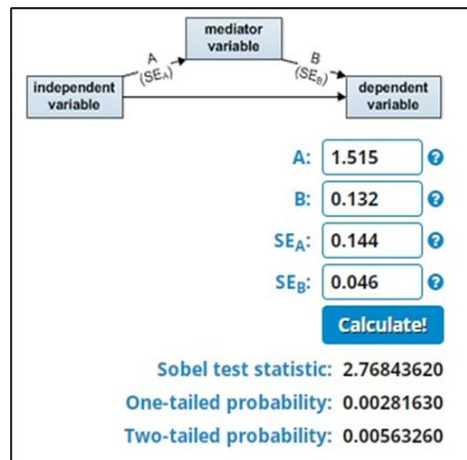


Figure 2. Results of the Sobel Test on the Influence of Digital Inclusive Finance Variables on Entrepreneurial Survival through Digital Finance

Based on Figure 3, the results of the study with a significance of 0.000 show that the fourth hypothesis is accepted. Digital inclusive finance has a significant positive impact on entrepreneurial survival (B. Li & Pan, 2025). This study comprehensively investigates the influence of financial literacy on entrepreneurial survival, highlighting the important role of digital finance as a mediator. The results of the study show that financial literacy has a positive and significant influence on the survival of entrepreneurs, and this influence is significantly strengthened through digital financial mediation (Diptyana et al., 2022; B. Li & Pan, 2025). These findings imply that entrepreneurs who have a high level of financial literacy tend to be better able to take advantage of the benefits offered by digital finance, which in turn increases their chances of surviving and thriving in a dynamic business environment (Pratama et al., 2024; Xie & Chen, 2024). One of the important aspects emphasized in this study is the crucial role of digital finance as a link between financial literacy and entrepreneurial survival. In other words, while financial literacy is important, its impact on entrepreneurial survival becomes stronger when combined with the use and utilization of digital finance. This is because digital finance provides various tools and services that allow entrepreneurs to manage their finances more efficiently, such as budget planning, cash flow management, and investments. In addition, digital finance also facilitates access to relevant financial information, which assists entrepreneurs in making more informed and strategic decisions (Xie & Chen, 2024). In addition, the study also highlights the importance of financial training and education for entrepreneurs. Entrepreneurs who have a deep understanding of financial concepts and principles will be better able to identify financial opportunities and risks, as well as make wiser decisions in managing their business (Iltizam Fairuzi et al., 2025). Therefore, financial training and education programs specifically designed for entrepreneurs are essential to improve their financial literacy and help them achieve greater success (Hasan et al., 2024). Overall, the study provides strong empirical evidence on the importance of financial literacy and digital finance in supporting entrepreneurial survival (Diptyana et al., 2022; B. Li & Pan, 2025). These findings have a significant impact on policymakers, financial institutions, and organizations focused on entrepreneurial development (Xie & Chen, 2024). By increasing entrepreneurial financial literacy and promoting the use of digital finance, we can create a more favorable environment for entrepreneurial growth and success, which in turn will contribute to sustainable economic growth (Iltizam Fairuzi et al., 2025; Kurniasari et al., 2025).

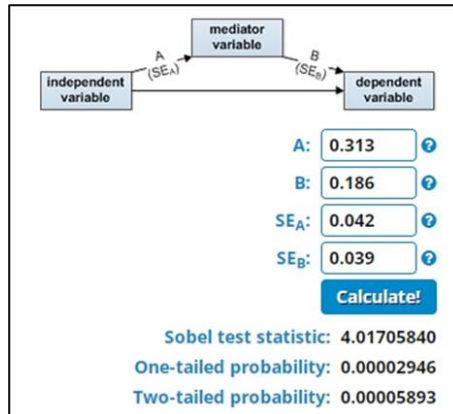


Figure 3. Sobel Test Results of the Influence of Financial Literacy Variables on Entrepreneurial Survival through Digital Finance

CONCLUSIONS

The conclusion of the results of this study shows that digital financial inclusion and financial literacy have a significant impact on entrepreneurial survival. The results of the first and second hypothesis tests confirm that these two variables have a positive effect on digital finance, which functions as mediators. Digital financial inclusion allows for easier and more affordable access to financial services, which is very beneficial for business actors, especially Micro, Small, and Medium Enterprises (MSMEs). In addition, high financial literacy among entrepreneurs strengthens their ability to utilize digital technology effectively, thereby increasing the chances of business success and growth.

The study also emphasizes that the effectiveness of digital financial inclusion does not only depend on accessibility, but also on the level of digital literacy and financial entrepreneurship. Entrepreneurs who have a good understanding of financial concepts and the ability to use digital financial services optimally will be better able to manage risk and make the right decisions. Therefore, training programs that aim to improve financial and digital literacy are very important in supporting entrepreneurial success in the digital era. Overall, digital inclusive finance and financial literacy play a key role in improving entrepreneurial survival, reinforcing the importance of policymakers and financial institutions to create an environment that supports inclusive and sustainable entrepreneurial development. The research also shows that challenges such as the digital divide and security risks must be addressed to maximize the benefits of digital inclusive finance and financial literacy.

This research has several limitations that need to be considered. First, the sample size of 150 respondents may not be representative of the entire entrepreneurial population in different regions, thus reducing the generalization of the findings. In addition, the geographic context of the study that may be limited to a particular rural or urban area may affect the relevance of results in other regions with different economic and social characteristics. The variables studied were also limited to digital financial inclusion and financial literacy, while there were many other external factors, such as macroeconomic conditions and technological infrastructure, that could affect the survival of entrepreneurs but were not explored in this study. Data collection methods through surveys or questionnaires are also potentially influenced by respondent bias, where they may provide answers that are considered more socially acceptable. In addition, the data used is a snapshot at a single point in time, so it does not take into account changes in economic or policy conditions that may affect outcomes over time. Measurement of digital and financial literacy that varies between respondents can also affect data consistency. Finally, this research focuses more on the direct impacts of digital inclusive finance and financial literacy without exploring the long-term impacts that may arise in the future. These limitations are important to consider in the interpretation of the research results and as a basis for further research that can address these issues.

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