THE EFFECT OF FINANCIAL LITERACY ON MSME PERFORMANCE THROUGH ACCESS TO FINANCING PRODUCTS AND FINANCIAL RISK ATTITUDE: A STUDY ON PADANG RESTAURANT MSMES IN BANDUNG CITY

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Abstract: *Micro, Small, and Medium Enterprises (MSMEs) in the culinary sector play an important role in the economy of Bandung City. However, they continue to face challenges related to financial management, access to financing products, and financial risk-related decision-making. This study aims to analyze the effect of Financial Literacy on MSME Performance through Access to Financing Products and Financial Risk Attitude as mediating variables. This study employed a quantitative approach with an explanatory research method. Primary data were collected by distributing questionnaires to 155 owners or managers of Padang restaurants in Bandung City selected using a purposive sampling technique. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0 software. The results indicate that Financial Literacy has a positive and significant effect on MSME Performance, Access to Financing Products, and Financial Risk Attitude. Access to Financing Products and Financial Risk Attitude also have positive and significant effects on MSME Performance. Furthermore, Access to Financing Products and Financial Risk Attitude significantly mediate the effect of Financial Literacy on MSME Performance, indicating partial mediation. These findings demonstrate that Financial Literacy can improve MSME Performance both directly and indirectly through enhanced access to financing products and a more measured attitude toward financial risk. The findings are expected to provide practical considerations for MSME owners, financial institutions, and the government in supporting the performance improvement of Padang restaurant MSMEs in Bandung City.*

Keywords: *Financial Literacy; Access to Financing Products; Financial Risk Attitude; MSME Performance; Padang Restaurant.*

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a fundamental role in sustaining Indonesia's national economy. Based on Bank Indonesia data (2024), MSMEs contribute more than 61% of the Gross Domestic Product (GDP) and absorb more than 97% of the national workforce, positioning them as the backbone of the Indonesian economy. However, a large proportion of MSME actors still face structural constraints, particularly in financial management, access to formal financing, and understanding of business risk (Bank Indonesia, 2024). These challenges are closely related to the still-low level of financial literacy among MSME actors. According to Graña-Alvarez et al. (2024), financial literacy is a managerial competency that functions as cognitive capital for improving financial decision-making and business performance. Prior studies show that financial literacy does not only affect business performance directly, but also indirectly through the ability of business actors to access financing and manage financial risk (Molina-García et al., 2023).

The literature identifies several core dimensions of financial literacy, namely financial knowledge, skills, attitudes, and behavior, which interact with one another in shaping the effectiveness of financial decision-making (Kristanto HC, 2022). Business actors with high financial literacy are better able to manage cash flow, plan investments, minimize unproductive debt, and develop sustainable financial strategies. Conversely, low financial literacy can lead to miscalculated capital needs, inefficient cash-flow management, and dependence on informal financing sources.

In Indonesia, financial literacy remains an important issue given the still-limited access of MSME actors to formal financial institutions. Bank Indonesia (2024) reports that around 49% of MSMEs do not yet have access to formal banking services due to limited financial documentation, lack of collateral, and limited understanding of credit procedures. Access to formal financing is one of the key factors in developing business capacity and sustainability (Kartini & Wijaya, 2024). Financial literacy and access to financing are therefore two complementary aspects that jointly influence the performance of small and medium enterprises. In addition, financial risk attitude plays an important role in shaping the financial behavior of MSME actors. Financial risk attitude reflects the degree of courage business actors show in making decisions under uncertainty; actors with a positive risk attitude tend to be more adaptive to market changes, more willing to innovate, and more likely to increase profitability (Fitria et al., 2021). A combination of sound financial literacy, adequate access to financing, and a rational risk attitude can therefore serve as an important foundation for improving MSME performance.

Nevertheless, prior studies show inconsistent findings regarding the relationship between financial literacy and MSME performance. Wati et al. (2025) found that improved financial literacy enhances capital efficiency and drives business profit growth. Sukaesih et al. (2025) similarly showed that financial-literacy training directly improves MSME actors' ability to manage capital, expand access to formal financing, and improve financial performance, a finding consistent with Amelia Sugangga et al. (2023), who emphasized financial literacy as a key component of competitive advantage and sustainability among Indonesian MSMEs. In contrast, Sariwulan et al. (2023) concluded that financial literacy does not have a significant effect on MSME performance, while Fitria (2024) found that although business actors possessed a moderate level of financial literacy, this had not translated into a measurable improvement in business performance.

This inconsistency may occur because not all MSME actors who possess financial knowledge are able to implement it in actual business practice, so that literacy does not automatically translate into performance. Business performance is also shaped by other factors, such as experience, external support, and the way business actors respond to and make financial decisions; in some cases, businesses continue to operate despite a low level of financial literacy. This inconsistency therefore suggests that the relationship between financial literacy and business performance may not be direct, but instead mediated by other factors such as access to financing products and financial risk attitude.

As a city known for its creative-economy potential, Bandung plays an important role within Indonesia's MSME ecosystem. Based on data from the Bandung City Office of Cooperatives and MSMEs (2025), the city has around 12,420 active

MSME units employing a total of 30,645 workers, spread across several main sectors including trade, culinary, fashion, services, and handicrafts. Among these, the culinary sector accounts for the largest number of MSME units in Bandung, with 5,597 business units recorded over the 2016–2025 period, followed by fashion with 1,948 units and other smaller sectors. Bandung is widely recognized as one of Indonesia's culinary-tourism centers, with a growing variety of cafés, restaurants, coffee shops, and local specialty foods driven by rising urban mobility and domestic tourism. However, data from Kompas Bandung (2023) indicate that around 50% of micro businesses in Bandung do not yet hold an official business license (NIB), signaling a still-low level of formalization and managerial capability among many culinary business actors. Many culinary MSMEs also do not yet maintain adequate financial records, tend to mix personal and business finances, and have not optimally managed business risk (Indah & Alfianto, 2025) even though sound financial management is a key indicator of financial literacy that directly affects business performance.

This condition is reinforced by Azis et al. (2025), who found that financial literacy and capital efficiency have a positive effect on the financial performance of MSMEs in Makassar. Sukaesih et al. (2025) likewise found that financial-literacy training improves culinary business actors' ability to manage capital and expand access to formal financing. Purnamawati & Rachmawati (2025) showed that culinary business actors who understand financial literacy are able to reduce their dependence on informal loans, while Sugangga et al. (2023) argued that financial literacy is a key foundation for building the competitive advantage of Indonesian MSMEs. Financial literacy therefore contributes not only to improved capital efficiency, but also to strengthening the competitiveness of small businesses.

A concrete example of financial-literacy strengthening is the mentoring program conducted by the Faculty of Administrative Science, Universitas Indonesia (FIA UI), in Banyumas. A post-program survey found that most MSME actors experienced a monthly profit increase of between 10% and 70% after adopting more disciplined financial record-keeping, with some participants recording additional monthly profits of between IDR 500,000 and IDR 10,000,000; more than half of the participants also reported increased discipline and confidence in managing their finances (FIA UI, 2024, as cited in Saptono, 2025). This confirms that financial literacy is not merely a theoretical concept, but has a real economic effect on business profitability and resilience.

This study specifically focuses on Padang restaurant MSMEs rather than culinary MSMEs in general, because Bandung's culinary sector is highly heterogeneous, encompassing cafés, restaurants, coffee shops, general eateries, and light-food businesses. This diversity may give rise to variation in business models, business scale, cost structures, and financial-management patterns that could confound the analysis of the relationship being studied. By focusing on a relatively homogeneous type of culinary business, the effect of financial literacy on MSME performance through access to financing products and financial risk attitude can be examined more precisely. Padang restaurants were selected for this study because of their wide distribution across Bandung, which provides an adequate population for the research, as well as their operational characteristics, which are strongly dependent on the management of working capital, cash flow, and continuous raw-material procurement characteristics that make this business type particularly relevant for examining the relationship between financial literacy and MSME performance.

In summary, although the number of culinary MSMEs in Bandung is relatively large and holds substantial potential for driving the local economy, fundamental problems remain in terms of financial literacy, limited access to financing, and weak financial-risk management. Studies specifically examining the relationship between financial literacy, access to financing products, and financial risk in relation to the performance of culinary MSMEs in Bandung remain relatively limited. Furthermore, prior findings on the effect of financial literacy on MSME performance remain inconsistent, with some studies finding a significant positive effect and others finding no significant effect. This inconsistency indicates the need for further study that incorporates mediating variables such as access to financing products and financial risk attitude in order to understand the relationships among these variables more comprehensively. This study therefore aims to analyze the effect of financial literacy on the performance of culinary MSMEs in Bandung City through access to financing products and financial risk as mediating variables, focusing specifically on Padang restaurant MSMEs.

From a theoretical perspective, this study is grounded in the Resource-Based View (RBV), which holds that an organization's competitive advantage and performance are strongly shaped by its ability to manage and utilize its internal resources optimally. These resources include tangible and intangible assets such as physical capital, managerial expertise, and the knowledge and capabilities of individuals within the organization (Wernerfelt, 1984). RBV assumes that a firm's success in achieving sustainable competitive advantage depends on the extent to which it possesses and manages resources that are valuable, rare, inimitable, and non-substitutable the VRIN framework (Barney, 1991). Within the context of MSMEs, financial literacy represents an intangible resource of strategic value for business continuity, enabling business actors to understand financial statements, manage cash flow, make investment decisions, and minimize financial risk (Eniola & Entebang, 2016). Because not all business actors possess this capability equally, financial literacy can also become a source of competitive advantage, meaning that MSME actors with high financial literacy have a greater chance of surviving and growing than those without adequate financial understanding.

The practical novelty of this study lies in identifying the behavioral mechanisms namely access to financing products and financial risk attitude that bridge the gap between financial literacy and the long-term performance of Padang restaurant MSMEs in Bandung City. The theoretical novelty lies in the development of an integrated framework that applies the Resource-Based View through a dual-mediation mechanism involving access to financing products and financial risk attitude to explain the formation of MSME performance, an approach that has not been widely applied specifically within the culinary sector. Meanwhile, the methodological novelty lies in the examination of an RBV-based structural model through a dual-mediation framework using SEM-PLS, applied specifically to Padang restaurant MSMEs in Bandung City. This approach is expected to provide more contextualized empirical insight into the determinants of MSME performance within the culinary industry.

RESOURCE-BASED VIEW, FINANCIAL LITERACY, AND THE PERFORMANCE OF CULINARY MSMES

Within the Resource-Based View, the relationship between financial literacy, access to financing products, financial risk attitude, and MSME performance can be viewed as an interrelated set of internal resource capabilities. Financial literacy functions as a form of intellectual asset that helps MSME actors capture external opportunities, such as access to financing, while also managing the uncertainty that arises from financial risk. When business actors are able to manage both aspects effectively, this directly contributes to improved business performance (Eniola & Entebang, 2016).

Financial literacy is defined as an individual's ability to understand and manage financial resources effectively in order to achieve financial well-being. It encompasses not only knowledge of financial products, but also the ability to make sound decisions regarding money management, savings, investment, and risk control. According to Chen and Volpe (1998), financial literacy comprises four main dimensions: general personal-finance knowledge, understanding of credit management, understanding of savings and investment, and knowledge of risk management. In Indonesia, financial literacy is understood as the public's capacity to understand and appropriately use financial products and services according to their needs and financial capability, encompassing the understanding, confidence, and skills required to manage financial resources for sustainable well-being (POJK No. 76/POJK.07/2016).

MSMEs are defined, under Law No. 20 of 2008 concerning Micro, Small, and Medium Enterprises, as independent productive economic activities that are not subsidiaries or branches of larger companies, and are classified into three categories based on net assets and annual sales: micro enterprises (net assets up to IDR 50 million or annual sales up to IDR 300 million), small enterprises (net assets from IDR 50 million up to IDR 500 million or annual sales from IDR 300 million up to IDR 2.5 billion), and medium enterprises (net assets from IDR 500 million up to IDR 10 billion or annual sales from IDR 2.5 billion up to IDR 50 billion).

MSME performance describes the extent to which business actors achieve business objectives through efficiency, growth, and sustainability, encompassing both financial performance (such as profitability and revenue growth) and non-financial performance (such as customer satisfaction, innovation, and operational efficiency) (Hudson et al., 2001). Access to financing products refers to the ability of individuals or business actors to obtain formal financial services such as loans, savings, and investment financing, and is considered a key determinant of small-business growth because it enables business actors to allocate resources efficiently and develop business innovation (Adomako et al., 2016). Financial risk attitude, meanwhile, refers to an individual's tendency in assessing and making decisions related to financial risk, ranging from risk-averse to risk-neutral to risk-seeking behavior (Ye, 2019); a moderate, well-calibrated risk attitude helps business actors make strategic and innovative decisions without compromising financial stability.

The Effect of Financial Literacy on MSME Performance

Financial literacy enables MSME actors to manage working capital, control cash flow, and design efficient investment strategies. Haikal et al. (2025) found that MSME actors with a high level of financial literacy tend to achieve better business performance because they are able to manage funds in a more directed manner. This finding is consistent with Masdupi et al. (2024), who showed that financial literacy has a positive effect on business sustainability through improved financial-planning ability and risk control. Accordingly, the higher an MSME actor's financial literacy, the better the resulting business performance is expected to be.

H1: Financial literacy has a positive effect on MSME performance.

The Effect of Financial Literacy on Access to Financing Products

Financial literacy does not only increase confidence in conducting transactions, but also encourages more proactive behavior in seeking sources of funding. Ferli (2023) found that financial literacy has a direct effect on improved financial access, as financially literate MSME actors are better able to assess risk, understand loan interest, and select financing products that match their business needs. This is reinforced by Rahayu (2022), who found that financial literacy is a key factor in increasing public participation in formal financial services.

H2: Financial literacy has a positive effect on access to financing products.

The Effect of Access to Financing Products on MSME Performance

Access to financing products provides business actors with the opportunity to obtain working capital, pursue expansion, and strengthen competitiveness, while also helping MSME actors overcome capital constraints, which are often a major obstacle to business development. Anthanasius Fomum & Opperman (2023) found that ease of obtaining financing has a positive effect on MSME performance, particularly among businesses that actively use digital financial services. Putra (2025) further noted that the broader an MSME actor's access to formal financing products, the higher the resulting business productivity and growth capacity.

H3: Access to financing products has a positive effect on MSME performance.

The Effect of Financial Literacy on Financial Risk Attitude

Financial risk attitude reflects how individuals view and respond to uncertainty in financial decisions. According to Ye (2019), individuals with a good level of financial literacy tend to hold a more rational risk attitude, as they are better able to weigh potential gains and losses objectively. Masdupi et al. (2024) explained that financial literacy affects risk attitude through a better understanding of risk concepts, debt management, and investment diversification, while Sukmana (2024) found that business actors with adequate financial knowledge are better able to manage fear of risk and make balanced business decisions.

H4: Financial literacy has a positive effect on financial risk attitude.

The Effect of Financial Risk Attitude on MSME Performance

Financial risk attitude plays an important role in shaping business decision-making behavior. A balanced risk attitude helps business actors assess uncertainty without avoiding profitable opportunities, and business actors who are willing to take calculated risks tend to be more innovative and responsive to market opportunities. Masdupi et al. (2024) found that a positive risk attitude can improve business performance through faster and more efficient decision-making, while Sukmana et al. (2024) showed that an adaptive risk attitude encourages MSME actors to innovate and expand their market reach, ultimately improving overall business performance.

H5: Financial risk attitude has a positive effect on MSME performance.

Based on the theoretical review and hypothesis development above, the research model employed in this study is presented in Figure 1.

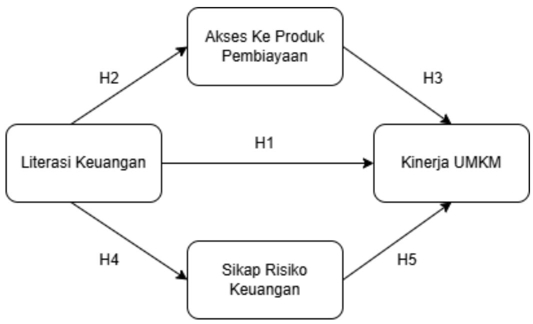

Figure 1 Research Model (Adapted from Susanti & Rediyanto Putra, 2025)

METHODOLOGY

This study employs a quantitative approach using an explanatory method. This approach was chosen because the study aims to test the relationships and effects among variables formulated in the hypotheses namely the effect of financial literacy on MSME performance, with access to financing products and financial risk attitude as mediating variables. According to Chaniago (2023), quantitative research is a research method aimed at systematically describing and analyzing phenomena using numerical, statistics-based data. An explanatory approach was used because this study does not merely describe a phenomenon, but also explains the causal relationships among variables through hypothesis testing.

The object of this research covers the variables of financial literacy as the independent variable; access to financing products and financial risk attitude as the mediating variables; and MSME performance as the dependent variable. The subjects of this research are the owners and managers of Padang restaurant MSMEs operating in Bandung City, who are directly responsible for financial decision-making within their businesses (Chaniago et al., 2023).

The population in this study consists of all culinary-sector MSME actors registered with the Bandung City Office of Cooperatives and MSMEs (2025), amounting to approximately 5,840 actively operating culinary MSMEs in the city. The sample was determined using a non-probability sampling technique with a purposive-sampling approach, selected because the researcher set specific criteria in line with the objectives of the study (Chaniago, 2023). The sample criteria used in this study are as follows:

1. Owning or managing a Padang restaurant MSME.
2. Operating the business for at least one (1) year.
3. Employing at least one (1) employee.

Sample Size Determination

The sample size in this study was determined using the rule-of-thumb approach in SEM-PLS, based on the number of research indicators, as proposed by Hair et al. (2022). Under this approach, the recommended sample size in SEM-PLS is 5 to 10 times the total number of indicators used in the study, expressed as n = k × number of indicators, where n is the sample size and k is a constant ranging from 5 to 10. This study uses 31 indicators; applying a constant of 5 yields a minimum required sample size of 31 × 5 = 155 respondents. Accordingly, the sample used in this study consists of 155 respondents.

Types and Techniques of Data Collection

This study uses both primary and secondary data. Primary data were obtained directly through the distribution of a questionnaire to respondents namely culinary-sector MSME actors in Bandung City containing statements developed from the indicators of each research variable. Secondary data were obtained from relevant documents and publications, such as reports from the Bandung City Office of Cooperatives and MSMEs, academic journals, and official institutional publications. Data collection was carried out through a survey method, in which the questionnaire was distributed to respondents either directly or through online media. Each response was scored according to whether it reflected a positive or negative statement, using a five-point Likert scale ranging from a minimum score of 1 to a maximum score of 5, as shown in Table 1.

Table 1 Likert Scale Scores

No	Response	Score
1	Strongly Disagree (SD)	1
2	Disagree (D)	2
3	Neutral (N)	3
4	Agree (A)	4
5	Strongly Agree (SA)	5

According to Chaniago et al. (2023), the Likert scale is a measurement instrument that asks respondents to rate statements on a continuum from agreement to disagreement; scores are assigned to each response option and summed to produce a quantitative measure of attitude or perception.

Operational Variables

The operational variables used in this study are presented in Table 2.

Table 2 Operational Variables

Variable	Indicator	Indicator
Financial Literacy	LK01	I am able to prepare my business's monthly income statement.
	LK02	I have attended training on financial bookkeeping.
	LK03	I have sufficient knowledge to prepare basic financial records.
	LK04	I know the documents required to apply for a bank loan.
	LK05	I am able to calculate loan costs.
	LK06	I understand the costs and benefits of using credit.
	LK07	I am able to calculate loan interest and installment payments correctly
	LK08	My business has a business savings account.
	LK09	I have the ability to minimize losses resulting from non-performing loans.
	LK10	I regularly conduct financial analysis of my business.
	LK11	I am able to evaluate the future prospects of my business.
Access to Financing Products	APP1	The loan products offered meet my business needs.
	APP2	The bank's loan terms and conditions are beneficial for my business.
	APP3	The savings products offered by banks are secure for my business.
	APP4	Banking financial services help improve my business
	APP5	The bank account opening fee is affordable for my business.
	APP6	My business has formal insurance coverage.
	APP7	I prefer borrowing from a cooperative rather than from a bank.
inancial Risk Attitude	SRK1	I set aside part of my income for business development.
	SRK2	I allocate part of my income to invest in stocks or mutual funds.
	SRK3	I set aside part of my income each month as an emergency fund for my business.
	SRK4	High-risk financial activities involve a greater possibility of financial loss.
MSME erformance	KU1	My business has reached its break-even point (BEP).
	KU2	My business has experienced an increase in profit.
	KU3	My business has experienced an increase in profit
	KU4	My business's operating costs have decreased.
	KU5	My business responds quickly to customer requests.
	KU6	Customer satisfaction with my business has improved.
	KU7	Customer orders are confirmed promptly.
	KU8	Employees feel comfortable working in my business.
	KU9	Employees share the same vision and mission in developing the business.

DATA ANALYSIS METHODS

Data in this study were analyzed using Structural Equation Modeling based on Partial Least Squares (SEM-PLS) with the assistance of SmartPLS 4.0 software. This method was chosen for its ability to analyze complex relationships among latent variables and to test both direct and indirect effects, including mediation effects, simultaneously. According to Ghozali and Latan (2023), SEM-PLS is a multivariate analysis technique used to test theoretical models and the pattern of relationships between observed and latent variables simultaneously.

Structural Equation Modeling – Partial Least Squares (SEM-PLS)

Structural Equation Modeling (SEM) is a statistical method used to test causal relationships among latent variables within a research model. In this study, SEM is used to test the conceptual model of the effect of financial literacy on MSME performance, with access to financing products and financial risk attitude as mediating variables, an approach well suited to research examining both direct and indirect relationships among variables. Partial Least Squares (PLS) is a variance-based approach to SEM developed for prediction purposes and for testing complex models. According to Ghozali and Latan (2023), PLS is used to estimate the relationships among latent variables (inner model) as well as the relationships between latent variables and their indicators (outer model).

Measurement Model Evaluation (Outer Model)

The outer model describes the relationship between a latent construct and the indicators that measure it. Outer-model evaluation aims to assess the validity and reliability of each research indicator. According to Ghozali and Latan (2023), outer-model evaluation consists of three main tests:

1. **Convergent Validity** used to measure the extent to which the indicators of a construct are strongly correlated with one another. An indicator is considered valid if its loading factor exceeds 0.70 and the construct's Average Variance Extracted (AVE) exceeds 0.50.
2. **Discriminant Validity** used to assess the extent to which different constructs are empirically distinct from one another. Discriminant validity is achieved when the square root of a construct's AVE exceeds its correlations with other constructs.
3. **Composite Reliability and Cronbach's Alpha** used to measure the internal consistency of a construct. Composite Reliability and Cronbach's Alpha values exceeding 0.70 indicate good reliability. A construct is deemed valid and reliable once all of the above criteria are satisfied.

Structural Model Evaluation (Inner Model)

The inner model explains the relationships among latent variables based on the theory underlying the research. Inner-model evaluation is conducted to determine the strength and significance of the relationships among latent variables. According to Ghozali and Latan (2023), inner-model evaluation involves several stages:

1. **Coefficient of Determination (R^2)** indicates the extent to which the independent variables explain the dependent variable.
2. **Effect Size (f^2)** measures the magnitude of the effect between variables (0.02 = small, 0.15 = medium, 0.35 = large).
3. **Predictive Relevance (Q^2)** indicates the model's predictive capability; a Q^2 value

greater than 0 signals good predictive relevance.

Hypothesis Testing (Bootstrapping)

Significance testing is used to determine whether the relationships among variables in the research model are statistically significant. In PLS, significance testing is conducted using the bootstrapping procedure, a resampling method used to generate the empirical distribution of the model's path coefficients. According to Ghozali and Latan (2023), bootstrapping produces a t-statistic and a p-value for each path. A relationship between variables is considered significant when it meets the following criteria: a t-statistic greater than 1.96 (at a 0.05 significance level), and a p-value below 0.05. This testing procedure is applied to both direct and indirect effects; when a mediating variable shows a significant result for the indirect effect, that variable can be concluded to play a mediating role in the relationship between the corresponding variables.

Goodness-of-Fit Model Evaluation

Goodness-of-fit evaluation aims to assess the extent to which the overall research model corresponds to the empirical data. The criteria used include: (1) an SRMR (Standardized Root Mean Square Residual) value below 0.10, indicating a good level of model fit; (2) a high R^2 value on the endogenous constructs, indicating a strong contribution from the independent variables; and (3) a positive Q^2 value, indicating that the model has good predictive capability. According to Ghozali and Latan (2023), a model can be declared to have good fit once all three of these criteria are satisfied.

RESULTS AND DISCUSSION

Data were analyzed using Structural Equation Modeling based on Partial Least Squares (SEM-PLS) with the assistance of SmartPLS 4.0 software (Ringle et al., 2024), based on 155 valid questionnaire responses collected from Padang restaurant MSME owners in Bandung City. The analysis covers the evaluation of the measurement model (outer model), the structural model (inner model), hypothesis testing through the bootstrapping procedure, and mediation-effect testing. Four latent constructs are examined in this model: Financial Literacy (LK), Access to Financing Products (APP), Financial Risk Attitude (SRK), and MSME Performance (KU).

Measurement Model (Outer Model)

The measurement model was evaluated through convergent validity (outer loadings and Average Variance Extracted/AVE) and construct reliability (Cronbach's Alpha and Composite Reliability). An indicator is considered to have adequate convergent validity when its outer loading exceeds 0.70 and the corresponding construct achieves an AVE greater than 0.50, while a construct is considered reliable when its Cronbach's Alpha and Composite Reliability values exceed 0.70. The results are presented in Table 3.

Table 3 Measurement Model Analysis

Variable	Indi-ca-tor	Loa-ding	Cron-bach's Alpha	rho_a	rho_c	AVE
Financial Literacy (LK)	LK1	0.760	0.928	0.929	0.939	0.583
	LK2	0.761				
	LK3	0.769				
	LK4	0.767				
	LK5	0.769				
	LK6	0.761				
	LK7	0.757				

Variable	Indi-ca-tor	Loa-ding	Cron-bach's Alpha	rho_a	rho_c	AVE
	LK8	0.766				
	LK9	0.759				
	LK10	0.770				
	LK11	0.758				
Access to Financing Products (APP)	APP1	0.865	0.932	0.934	0.945	0.711
	APP2	0.859				
	APP3	0.824				
	APP4	0.780				
	APP5	0.863				
	APP6	0.891				
	APP7	0.817				
Financial Risk Attitude (SRK)	SRK1	0.911	0.900	0.902	0.931	0.771
	SRK2	0.871				
	SRK3	0.833				
	SRK4	0.894				
MSME Performa nce (KU)	KU1	0.771	0.943	0.945	0.952	0.689
	KU2	0.870				
	KU3	0.899				
	KU4	0.842				
	KU5	0.845				
	KU6	0.847				
	KU7	0.792				
	KU8	0.762				
	KU9	0.835				

Table 3 shows that all 31 indicators produced outer loading values above 0.70, so no indicators needed to be removed from the model. All four constructs achieved AVE values above 0.50, satisfying the convergent-validity requirement, while Cronbach's Alpha, rho_a, and rho_c values for all constructs exceeded 0.70, indicating satisfactory construct reliability. Therefore, all constructs were considered valid and reliable and suitable for subsequent structural model analysis.

In addition to convergent validity and construct reliability, discriminant validity was assessed using the Fornell–Larcker criterion and the Heterotrait–Monotrait Ratio (HTMT). The results are presented in Table 4 and Table 5.

Table 4 Discriminant Validity Analysis (Fornell–Larcker Criterion)

	APP	KU	LK	SRK
APP	0.843			
KU	0.553	0.830		
LK	0.531	0.731	0.763	
SRK	0.359	0.616	0.662	0.878

Based on Table 4, the square root of the AVE for each construct (shown on the diagonal) is greater than its correlations with the other constructs, confirming that discriminant validity is established.

Table 5 Discriminant Validity Analysis (HTMT)

	APP	KU	LK	SRK
APP				
KU	0.588			
LK	0.568	0.780		
SRK	0.392	0.667	0.721	

Based on Table 5, all HTMT values are below the recommended threshold of 0.90 (Hair et al., 2019), with the highest value observed between Financial Literacy and MSME Performance (0.780) and the lowest between Financial Risk Attitude and Access to Financing Products (0.392). These results confirm that all constructs are empirically distinct from one another.

Structural Model Evaluation (Inner Model)

After the measurement model satisfied the validity and reliability requirements, the structural model was evaluated through model-fit assessment, the coefficient of determination (R^2), path coefficients, and hypothesis testing via bootstrapping.

Table 6 Model Fit Analysis

Indicator	Value	Criterion	Result
SRMR	0.048	< 0.10	Fit
NFI	0.867	Close to 1	Acceptable

The SRMR value of 0.048 is below the recommended threshold of 0.10, indicating that the proposed model has a good level of fit, while the NFI value of 0.867 indicates an acceptable level of model fit. The proposed research model is therefore considered adequate for examining the relationships among the constructs in this study.

Table 7 Coefficient of Determination (R^2)

Dependent Variable	R-square	R-square adjusted
Access to Financing Products (APP)	0.281	0.277
Financial Risk Attitude (SRK)	0.438	0.434
MSME Performance (KU)	0.603	0.595

The R^2 values indicate that financial literacy explains 28.1% of the variance in access to financing products and 43.8% of the variance in financial risk attitude, while financial literacy, access to financing products, and financial risk attitude jointly explain 60.3% of the variance in MSME performance. Following the criteria of Hair et al. (2010), the R^2 value for MSME performance (0.603) falls within the moderate-to-substantial range, while the R^2 values for access to financing products (0.281) and financial risk attitude (0.438) fall within the weak-to-moderate range.

Hypothesis Testing

Hypothesis testing was conducted using the bootstrapping procedure (5,000 resamples) to determine whether the path relationships proposed in the research model are statistically significant. A hypothesis is considered supported when the t-statistic exceeds 1.96 and the p-value is below 0.05 (Hair et al., 2011). The results are presented in Table 8.

Table 8 Hypothesis Testing Results (Path Coefficients)

Hypothesis	Original Sample (O)	T Statistics	P Values	Result
H1 Financial Literacy → MSME Performance	0.456	5.631	0.000	Supported
H2 Financial Literacy → Access to Financing Products	0.531	7.666	0.000	Supported
H3 Access to Financing Products → MSME Performance	0.228	3.110	0.002	Supported
H4 Financial Literacy → Financial Risk Attitude	0.662	12.070	0.000	Supported
H5 Financial Risk Attitude → MSME Performance	0.233	3.528	0.000	Supported

Based on the results presented in Table 8, all five proposed hypotheses are supported, as their t-statistics exceed 1.96 and their p-values are below 0.05. Financial literacy has a positive and significant direct effect on MSME performance (H1), on access to financing products (H2), and on financial risk attitude (H4), the latter being the strongest path coefficient in the model (β = 0.662). Access to financing products (H3) and financial risk attitude (H5) each have a positive and significant effect on MSME performance. These findings indicate that, unlike models in which the mediating variables fully absorb the effect of the exogenous construct, financial literacy in this study continues to exert a strong and significant direct influence on MSME performance even after access to financing products and financial risk attitude are included in the model.

Mediation Effect Testing

Mediation testing was conducted using the bootstrapping procedure to evaluate the roles of access to financing products and financial risk attitude in mediating the relationship between financial literacy and MSME performance. The results are presented in Table 9.

Table 9 Mediation Analysis Results

Indirect Effect	Original Sample (O)	T Statistics	P Values	Result
LK → APP → KU	0.121	2.988	0.003	Supported

Indirect Effect	Original Sample (O)	T Statistics	P Values	Result
LK → SRK → KU	0.154	3.231	0.001	Supported
LK → KU (total indirect effect)	0.275	3.983	0.000	Supported

Based on Table 9, both access to financing products and financial risk attitude significantly mediate the relationship between financial literacy and MSME performance, with specific indirect effects of 0.121 (through access to financing products) and 0.154 (through financial risk attitude), and a combined total indirect effect of 0.275 ($t = 3.983$, $p < 0.001$). Because the direct effect of financial literacy on MSME performance (H1: $\beta = 0.456$, $p = 0.000$) also remains significant alongside these significant indirect effects, access to financing products and financial risk attitude are found to act as partial mediators specifically, complementary partial mediators, since the direct and indirect effects are both positive and point in the same direction (Hair et al., 2022). In other words, financial literacy improves the performance of Padang restaurant MSMEs both directly and indirectly, with the indirect pathways operating through improved access to financing and a more rational financial risk attitude.

DISCUSSION

The findings indicate that financial literacy has a positive and significant direct effect on the performance of Padang restaurant MSMEs in Bandung City. This result is consistent with the Resource-Based View (Barney, 1991; Wernerfelt, 1984), which holds that financial literacy functions as a valuable and difficult-to-imitate intangible resource that enables business actors to manage working capital, control cash flow, and make sound financial decisions, thereby directly strengthening business performance. This finding is also in line with Buchdadi et al. (2020), who explained that a good level of financial literacy among MSME actors is associated with stable business performance through efficient management of capital and cash flow, and with Yuliani et al. (2025), who found that improved financial literacy encourages business actors to make wiser financial decisions with a positive impact on small-business performance.

The results further show that financial literacy has a strong positive effect on access to financing products, consistent with Ferli (2023) and Rahayu (2022), who found that financially literate business actors are more confident and proactive in seeking and selecting financing products suited to their business needs. Access to financing products, in turn, has a significant positive effect on MSME performance, supporting Anthanasius Fomum & Opperman (2023) and Putra (2025), who emphasized that easier access to financing enables business actors to strengthen working capital and expand their operations.

Financial literacy is also found to have the strongest effect in the model on financial risk attitude, in line with Susanti and Putra (2025) and Masdupi et al. (2024), who argued that financially literate individuals are better able to evaluate the potential gains and losses of a financial decision, resulting in a more rational and calibrated risk attitude. Financial risk attitude, in turn, positively affects MSME performance, consistent with Sukmana et al. (2024) and Buchdadi et al. (2020), suggesting that Padang restaurant owners who are willing to take calculated risks are more responsive to business opportunities, such as menu innovation, outlet expansion, or adoption of digital ordering platforms.

An important finding of this study is that the direct effect of financial literacy on

MSME performance remains strong and significant even after accounting for access to financing products and financial risk attitude. Access to financing products and financial risk attitude were found to act as complementary partial mediators rather than full mediators. This suggests that, among Padang restaurant MSME owners in Bandung City, financial literacy improves business performance not only by shaping more favorable access to financing and a more rational risk attitude, but also directly, through more effective day-to-day financial management, cost control, and decision-making activities that do not necessarily require external financing or an explicit risk-taking decision to translate into better business outcomes.

Overall, the structural model demonstrates a good level of fit (SRMR = 0.048) and reasonably strong explanatory power, with financial literacy, access to financing products, and financial risk attitude jointly explaining 60.3% of the variance in MSME performance. These findings reinforce the Resource-Based View perspective that internal, intangible resources such as financial literacy together with a business actor's ability to convert that literacy into external resources (financing access) and calibrated risk-taking behavior jointly determine the competitiveness and performance of Padang restaurant MSMEs in Bandung City.

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