

FINANCIAL LITERACY INNOVATION FOR ENHANCING THE FINANCIAL CAPABILITIES OF MSME

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Abstract

This study aims to examine the influence of financial behavior, financial attitudes, and financial knowledge on the financial capabilities of MSMEs in Kupang City, as well as to understand the interaction of these three dimensions of financial literacy in improving MSME financial capabilities. The methodology used was a quantitative technique with an exploratory design. Data was collected through an online questionnaire distributed to 200 MSMEs in Kupang City, targeting only 173 MSMEs. Data were analyzed using SPSS 25.0. The results of this study indicate that financial behavior and attitudes have a significant influence on improving the financial capabilities of MSMEs in Kupang City. Financial knowledge has little impact if not balanced with supportive habits and attitudes. This study emphasizes the importance of a comprehensive financial literacy program to increase knowledge and improve financial behavior and attitudes of MSMEs in Kupang City in order to enhance their financial capabilities.

Keywords: *financial behavior; financial attitude; financial knowledge; innovation; MSME*

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a very important role in the Indonesian economy, including in Kupang City, East Nusa Tenggara Province (ENT). Based on data from the (BPS, 2021), the MSME sector contributes more than 60% to the region's Gross Domestic Product (GDP), while absorbing most of the local workforce. Although MSMEs have great potential to encourage economic growth and equitable distribution of welfare, MSME actors, especially those engaged in the trade, culinary, and household industry sectors, still face various significant challenges. One of the biggest challenges faced by MSME actors is inadequate financial management, which often hinders their business continuity and reduces competitiveness in an increasingly competitive market (Idrus, 2026; Suryawati et al., 2025). Poor financial behavior, failure in budget planning, and limitations in managing capital are the main obstacles that hinder the growth of MSMEs (Hussein et al., 2025). This is exacerbated by restrictions on access to formal and digital financial services that are more accessible to large businesses. This situation illustrates the urgency of increasing financial literacy among MSME actors which is the main foundation for better and sustainable financial management (Indrawati et al., 2025; Nawi et al., 2025).

Financial literacy, which includes knowledge and skills in managing personal and business financial aspects, is key to overcoming these challenges. High financial literacy not only improves the ability of MSME actors to manage their daily finances, but also helps them in (Bayar et al., 2020; Utami, 2023; Xie et al., 2024) making more rational and strategic financial decisions. Similarly explained by (Lu et al., 2024; Pitthan & De Witte, 2021), strong financial literacy allows individuals to understand financial products, plan budgets, and manage financial risks effectively. On the other hand, financial ability or financial capability that includes the application of financial knowledge in daily practice is a determining factor in increasing the competitiveness and financial resilience of MSMEs (Nadir et al., 2026; Riwu, Kamuri, et al., 2026). Therefore, the ability to manage business finances wisely is essential for the continuity and growth of MSMEs.

However, even though financial literacy has a significant influence on financial management, many MSME actors in Kupang City still face difficulties in managing their finances efficiently. A number of previous studies, such as those conducted by (Nadir et al., 2026; Resmi et al., 2022; Riwu, Somba Poddala, et al., 2026), show that although many MSMEs have knowledge of financial products, they are often unable to apply them in daily practice. This indicates a knowledge gap that affects their ability to face increasingly complex economic challenges. This study seeks to examine the relationship between financial literacy and the financial ability of MSME actors in Kupang City, with a special focus on financial behavior, financial attitudes, financial knowledge, and financial ability. The contribution of this research is to provide a deeper insight into how the financial literacy dimension interacts in the context of local MSMEs, which in particular has not been widely researched in the context of Kupang City.

Thus, this research not only aims to fill the gaps in the existing literature but also to make a practical contribution to the empowerment of MSMEs in Kupang City through increasing financial literacy and strengthening their financial capabilities. Through this research, it is hoped that financial literacy-based solutions can be created that can be applied practically, so that MSMEs can be more competitive and sustainable in facing global economic challenges. This research is also very relevant considering the increasingly complex challenges faced by MSMEs, especially with digitalization and the increasingly open global market. The increasing access to digital financial technology and products requires MSMEs to have higher financial literacy skills in order to take advantage of these opportunities optimally. Therefore, this research is not only important for the development of financial literacy theory, but also for more effective economic empowerment policy strategies in supporting MSMEs to adapt and develop in an increasingly connected and digital world.

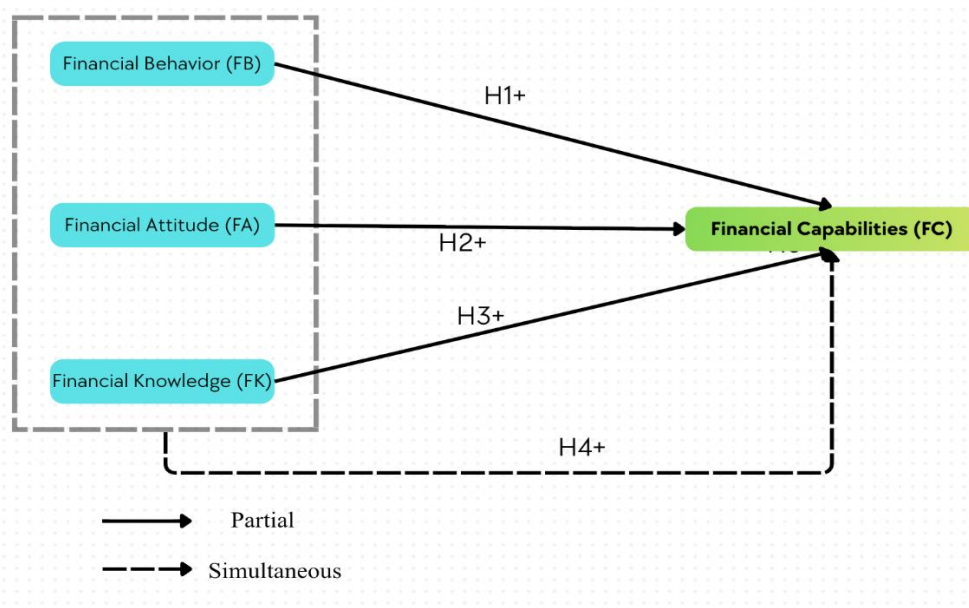
METHODS

This study uses a quantitative method with an exploratory approach to examine the causal relationship between financial literacy which includes financial attitudes, financial behavior, financial knowledge and financial capabilities of MSMEs in Kupang City. This methodology facilitates the objective quantification of variables with standard instruments, thus allowing the generalization of research findings to a wider population. The main objective of this method is

to evaluate the hypothesis and quantify the impact of each aspect of financial literacy on financial capability using inferential statistical analysis (Bayar et al., 2020). The dependent variable in this study is financial capability, while the independent variable is financial literacy, which includes financial attitudes, financial behavior, and financial knowledge.

Those factors were assessed with modified items from other studies. Financial attitudes were assessed through tools created by (Talwar et al., 2021), while financial behavior was evaluated with questionnaires used by (Soetjipto & Restuningdiah, 2022; Talwar et al., 2021). Financial knowledge was assessed using tools modified from (Soetjipto & Restuningdiah, 2022), while financial capability was evaluated using items created by (Marson et al., 2021). The research population consists of all MSMEs owners in Kupang City. The Slovin formula is used to ensure a representative sample size, with a margin of error of 10%, which results in a minimum sample size of 100 respondents. A reliable final sample of 173 MSMEs was obtained after the data collection process. Multiple regression analysis was conducted to evaluate the impact of financial literacy on the financial capability of MSMEs, hypothesis tests (t-test and F-test), and Determination Efficiency (R^2) testing (Hair et al., 2021). The data is processed with the help of the Statistic Package for the Social Science (SPSS) software.

Research Framework



Sources: Data processed by researchers (2026)

Figure 1. Research Framework

Hypothesis Development

H1: Financial behavior significantly improves the financial capabilities of MSMEs in Kupang City.

H2: Financial attitudes have a considerable positive impact on the financial capabilities of MSMEs in Kupang City.

H3: Financial knowledge significantly increases the financial capabilities of MSMEs in Kupang City.

H4: Financial Behavior, Financial Attitude and Financial knowledge significantly increases the financial capabilities of MSMEs in Kupang City

RESEARCH RESULTS AND DISCUSSION

RESULTS

Descriptive Statistic

Demographic data shows that most MSME respondents in Kupang City have a high school education, with the majority of their businesses being 1-5 years old and having fewer than 5 employees. Most respondents were over 30 years old, with more men than women involved in MSMEs. The culinary sector dominates the types of businesses run. This data illustrates that MSMEs in Kupang are generally relatively young and small, but have significant potential for local economic development.

Table 1. Descriptive Statistics

Demographic variable	n	%	Demographic variable	n	%
Level of education			Number of Employees		
Primary – Senior high school	99	57.23	<5 employees	96	55.49
Bachelor	61	38.15	6-10 employees	57	32.95
Master	13	7.51	>10 employees	20	11.56
Business Age			Business Sector		
1 -5 years	73	42.19	Advertising	2	1.56
6 - 10 years	55	31.79	Craft	13	7.51
11 - 15 years	19	10.98	Culinary	78	45.09
>15 years	26	15.03	Electronic	6	3.47
Respondent Age			Fashion	41	23.71
20-25 years	89	51.45	Publisher	1	0.58
26-30 years	55	31.79	Photography	3	1.73
> 30 years	29	16.76	Service	29	16.76
Gender					
Female	65	35.57			
Male	108	62.43			

Sources: Data processed by researchers (2026)

Validity and Reliability

Validity measures whether the questionnaire created can really measure what it wants to measure.

Table 2. Validity Test

Variables	Items	r-count	r-table	Note
Financial Behavior (FB)	FB1	0.650	>0,1493	Valid
	FB2	0.570	>0,1493	Valid
	FB3	0.743	>0,1493	Valid
	FB4	0.674	>0,1493	Valid
	FB5	0.652	>0,1493	Valid
	FB6	0.730	>0,1493	Valid
Financial Attitudes (FA)	FA1	0,751	>0,1493	Valid
	FA2	0,829	>0,1493	Valid
	FA3	0,769	>0,1493	Valid
	FA4	0,753	>0,1493	Valid
	FA5	0,853	>0,1493	Valid
	FA6	0,812	>0,1493	Valid
	FA7	0,750	>0,1493	Valid
Financial Knowledge (FK)	FK1	0,543	>0,1493	Valid
	FK2	0,529	>0,1493	Valid
	FK3	0,634	>0,1493	Valid
	FK4	0,545	>0,1493	Valid
	FK5	0,640	>0,1493	Valid
	FK6	0,549	>0,1493	Valid
Financial Capability (FC)	FC1	0,782	>0,1493	Valid
	FC2	0,791	>0,1493	Valid
	FC3	0,832	>0,1493	Valid
	FC4	0,789	>0,1493	Valid
	FC5	0,867	>0,1493	Valid
	FC6	0,897	>0,1493	Valid
	FC7	0,878	>0,1493	Valid

Sources: Data processed by researchers (2026)

From table 1. Above it can be seen that the calculation results of each variable have an R-count of > 0.1493 so that it can be said that the measuring tool used in this study is valid and can be continued to the next test.

Table 3. Reliability Test

Variables	Cronbach's Alpha	Criteria	Note
Financial Behavior (X1)	0,703	>0,60	Reliabel
Financial Attitudes (X2)	0,767	>0,60	Reliabel
Financial Knowledge (X3)	0,730	>0,60	Reliabel
Financial Capability (Y)	0,769	>0,60	Reliabel

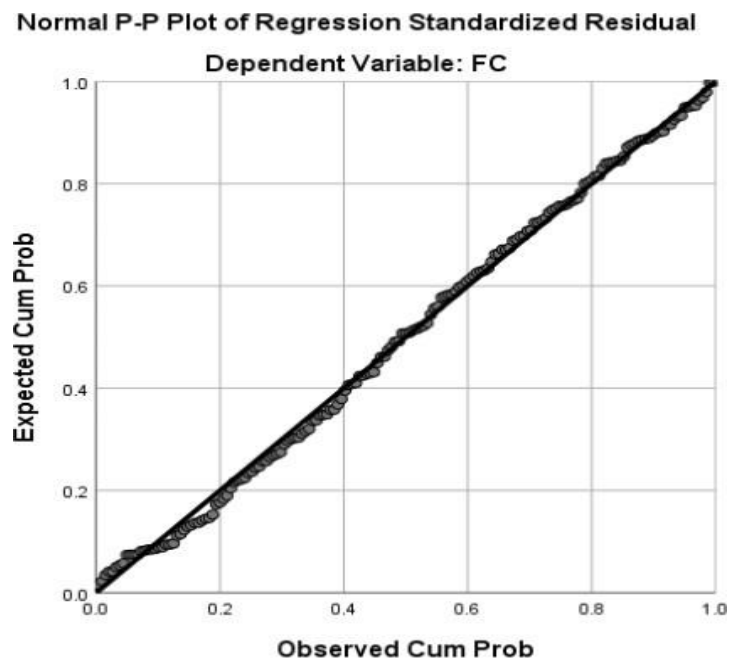
Sources: Data processed by researchers (2026)

Based on the results of the reliability test shown in the table above, it is known that Cronbac's alpha value of financial behavior (X1) is 0.703, financial attitudes (X2) is 0.767, financial knowledge (X3) is 0.730 and financial capability (Y) is 0.769. These values are greater than Cronbach's minimum alpha value of 0.60. Therefore, it can be concluded that the research instruments used to measure all the variables used in the research can be said to be reliable.

Classic Assumption Test

Normality Test

The normality test is used to test whether the regression, disruptive variable or residual model has a normal distribution or not (Gill, 2021)



Sources: Data processed by researchers (2026)

Figure 2. Normality Test

Based on Figure 1. shows that the data or (points) spread around the diagonal line and follow the direction of the diagonal line, so it can be concluded that the regression model is stated to meet the normal assumption.

Multicollinearity Test

The multicollinearity test is performed to test the regression model if there is a correlation between independent variables or dependent variables (Gill, 2021).

Table 4. Multicollinearity Test

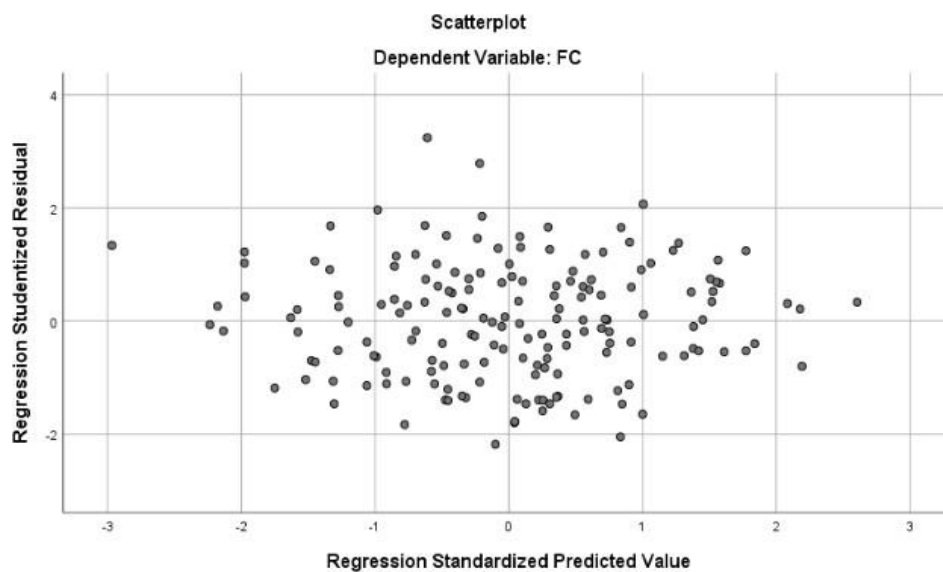
Model	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	-2.866	3.804		-0.753	0.452		
FB	0.581	0.076	0.471	7.693	0.000	0.730	1.370
FA	0.765	0.146	0.334	5.224	0.000	0.671	1.491
FK	0.085	0.140	0.036	0.610	0.543	0.778	1.285
FC	1.150	0.690	0.090	1.667	0.097	0.941	1.063

Sources: Data processed by researchers (2026)

Based on the results of the test conducted, the VIF values for X1 (FB), X2 (FA), X3 (FK), and X4 (PI) are 1.370, 1.491, 1.285, and 1.063, respectively. Since all VIF values are below 10, and in accordance with the criteria established by (Gill, 2021) it can be concluded that the regression model does not exhibit multicollinearity.

Heteroscedasticity Test

The heteroscedasticity test is used to determine whether in the regression model there is a variance of the variation from the residual of one observation to another observation (Gill, 2021).



Sources: Data processed by researchers (2026)

Figure 3. Heteroscedasticity Test

Based on figure 3 above, it is known that the point does not form a certain pattern, such as increasing or decreasing. Thus, it is concluded that there is no heteroscedastic problem so that a good and ideal regression model can be fulfilled.

Hypothesis Test Results

Partial Test (t)

With a significance test level of 0.05, the t-test is used to assess the extent to which FB (X1), FA (X2), FK (X3), affect the FC (Y). The hypothesis can be said to be acceptable if the significance level > 5% on Table 3:

1. Financial behavior (X1) shows a calculated t-value (7.693) greater than the table's critical t-value (1.974). Thus, H0 is rejected and H1 is accepted, showing a significant positive relationship between Financial Behavior and Financial Ability. These findings are in line with previous research by (Arifin, 2018; Dzampe & Takahashi, 2024), which reported similar results. Therefore, it can be concluded that the better a person's financial behavior, the higher the level of financial ability.

2. The financial attitude (X2) shows a calculated t-value of 5.361, which exceeds the critical t-value of the table by 5.224. Thus, H0 is rejected and H2 is accepted. These results show a positive and statistically significant relationship between financial attitudes and financial ability. Although these results differ from the findings reported by (Soetjipto & Restuningdiah, 2022), they are consistent with the empirical evidence presented by (Arifin, 2018). Overall, hypothesis tests show that individuals with stronger, positive financial attitudes tend to show higher levels of financial ability.
3. Financial knowledge (X3) shows a calculated t-value of 0.610, which is lower than the critical t-table value of 1.974. As a result, H0 was accepted and H3 was rejected, suggesting that financial knowledge has no significant relationship with financial ability. These findings contrast with the results reported by (Soetjipto & Restuningdiah, 2022), thus offering a new contribution to the literature when compared to previous studies.

Simultaneous Test (F)

The F test was carried out to determine the influence of fluency (X1), safety (X2) and convenience (X3) on the use of qris (Y). In this study, the F test was used to determine the significant level of influence of independent variables together (simultaneously) on dependent variables (Gill, 2021). The results of the simultaneous tests can be seen in the following table 5:

Table 5. Simutanneous Test (F)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	5346.242	4	1336.560	49.317	.000
Residual	4553.076	168	27.102		
Total	9899.318	172			

a. Dependent Variable: FC

b. Predictors: (Constant), External Support, FA, FK, FB

Sources: Data processed by researchers (2026)

The results of the F test showed a significance value of 0.000, which is less than 0.05. The calculated F-value was 49.317, exceeding the critical value of table F ($49.317 > 3.05$). This signifies the rejection of H0 and the acceptance of H4. It can be concluded that there is a significant relationship between the independent variables of financial literacy (financial behavior, financial attitudes, and financial knowledge) and dependent variables (financial ability), taking into account external support variables such as family, friends, and donors among MSME actors in Kupang.

Coefficient of Determination (R²)

The determination coefficient is used to see how much the independent variables together affect the dependent variables. The results of the determination coefficient can be seen in the table as follows:

Table 6. Coefficient of Determination (R²)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.735	.540	.529	5.206	2.063

a. Predictors: (Constant), Extenal Support, FA, FK, FB

b. Dependent Variable: FC

Sources: Data processed by researchers (2026)

The independent variables of financial behavior, financial attitudes, and financial knowledge explained 46% of the variance in the dependent variables, with the remaining percentage due to external factors beyond the scope of this study. The Adjusted R-Square value, which gives the most accurate estimate, is 0.529. This shows that the three elements of financial literacy account for 52.9% of the variance in financial competence, while the remaining 47.1% is influenced by other factors that were not analyzed in this study.

DISCUSSION

The financial behavior of MSMEs in Kupang City significantly improves their financial capabilities.

Financial behavior is an important element in effective and sustainable financial management for MSMEs. In the theory of financial ability, responsible financial management practices, including debt management, cash flow management, and regular spending, are essential for improving the financial capabilities of individuals and organizations. The capabilities to make smart financial decisions, which is based on disciplined and strategic behavior, distinguishes MSMEs in their ability to survive and thrive in a competitive market (Marson et al., 2021; Niccolai et al., 2022). The relevance of financial capability theory to this hypothesis is clearly seen in the importance of utilizing financial knowledge in daily actions. This approach underscores that information alone is not enough; The critical factor is the application of that knowledge into actions that directly affect finance. The study emphasizes that effective financial practices, including careful record-keeping, disciplined cash flow management, and comprehensive budget planning, positively affect the financial capabilities of MSMEs in Kupang City.

The findings of this study offer valuable insights for MSMEs in Kupang City to improve their financial practices. Programs designed to foster sound financial practices, including debt management, long-term financial planning, and realistic budgeting, are essential for increasing financial capabilities. This also shows that improving financial behavior can be an effective first step in improving the financial status of MSMEs who experience difficulties in daily financial management.

Financial attitudes significantly increase the financial capabilities of MSMEs in Kupang City.

Financial attitudes, which relate to an individual's viewpoint on monetary issues and financial choices, are an important aspect of financial capabilities theory. An optimistic and constructive perspective on finances will have an impact on wiser financial choices, including

choosing profitable assets, allocating savings, and budgeting expenses carefully. As a result, a positive financial attitude is expected to improve financial competence, especially for MSMEs who manage their company's funds (Soetjipto & Restuningdiah, 2022; Talwar et al., 2021). The contribution of financial competency theory to this hypothesis underscores that a good attitude towards financial management is an important determinant in logical and strategic financial decision-making. This idea establishes that success in financial management is influenced not only by knowledge but also by an individual's perspective or attitude towards money and finance. With a good attitude, MSMEs are more likely to make targeted and profitable decisions for the sustainability of their business.

This study illustrates the importance of fostering a good financial mindset for MSMEs in Kupang City. By encouraging MSMEs to be disciplined in saving, investing, and managing debt, they can increase financial stability. It also supports programs that promote increased financial literacy, emphasizing the cultivation of positive attitudes and mindsets in money management, not just technical skills.

The Financial Ability of MSMEs in Kupang City Increases Significantly Thanks to Financial Knowledge

Good financial administration is based on the fundamental aspects of financial knowledge. Financial capability theory underscores the importance of having a comprehensive understanding of financial products and instruments, as well as an understanding of their risks and benefits, in order to make informed financial decisions (Luo, 2020; Marson et al., 2021). In the context of MSMEs, business owners are able to choose the right financial instruments, manage budgets more efficiently, and avoid financial management mistakes that can harm their business by having adequate financial knowledge. However, the results of the study show that financial knowledge is an important component, but it is not enough to substantially improve the financial capabilities of MSMEs without supportive behaviors and attitudes (Shaikh & Vasudevan, 2020). This illustrates the gap between the knowledge possessed by MSME owners and its practical application. This demonstrates the importance of integrating knowledge with actions that facilitate more effective financial management in the theory of financial capabilities.

In practice, financial knowledge is useful for MSME owners to understand various financial instruments and concepts. However, this study shows that the full potential of this knowledge to improve financial ability will not be realized if it is not accompanied by good financial attitudes and behaviors. Therefore, to improve the financial capabilities of MSMEs, it is necessary to implement an approach that encourages the development of attitudes and behaviors that facilitate the application of this knowledge in their daily lives, in addition to improving their understanding of financial products and strategies.

Simultaneous Influence of Financial Behavior, Financial Attitudes, and Financial Knowledge on Financial Capabilities

The combined impact of the three dimensions of financial literacy on financial capabilities is the subject of this hypothesis. According to the theory of financial capabilities,

an individual's financial capabilities is significantly influenced and interdependent by all three dimensions of financial behavior, attitude, and knowledge (Luo, 2020; Marson et al., 2021; Niccolai et al., 2022). While each dimension has its own influences, the integration of the three will build a strong foundation for improved financial management. In the context of MSMEs, optimal financial capabilities is achieved when good financial behavior, positive attitudes, and adequate knowledge are combined financial (Arifin, 2018; Wulansari et al., 2023). This theory's contribution to the fourth hypothesis is the recognition that effective financial management depends on the synergy between these three elements, not on one aspect alone. As a result, to increase the financial capabilities of MSMEs, it is very important to simultaneously improve the three dimensions of financial literacy. This theory serves as a reminder that MSMEs that concentrate only on one aspect of financial literacy, such as financial knowledge, without considering their behavior and attitudes, may not achieve the best results.

The importance of a comprehensive approach in empowering MSMEs is one of the practical applications of this research. Educational policies or programs that simultaneously address these three dimensions will produce more substantial results in improving the financial capabilities of MSMEs. In addition, this study shows that to achieve business sustainability, MSMEs in Kupang City must be empowered through education that covers all aspects of financial literacy. This will allow them to manage their finances more effectively and become more competitive

CONCLUSION

This study shows that financial behavior, financial attitudes, and financial knowledge are very important in improving the financial capabilities of MSMEs in Kupang City. Prudent loan management and consistent cash flow management improve the financial capabilities of MSMEs. A constructive financial mindset greatly influences wise decision-making and the management of savings and investments for business sustainability. At the same time, adequate financial intelligence is essential for the selection of appropriate financial instruments and an understanding of financial risks, but nevertheless this knowledge must be complemented by appropriate behaviors and attitudes for effective execution.

This study shows that the three pillars of financial literacy behavior, attitudes, and knowledge are interrelated to improve financial ability. The interaction between these three aspects is very important for MSMEs to increase competitiveness and ensure business sustainability in an increasingly competitive market. Therefore, MSME empowerment must adopt a comprehensive strategy that emphasizes not only knowledge enhancement but also the cultivation of attitudes and behaviors that are conducive to good financial management.

Governments and financial institutions should provide comprehensive financial literacy initiatives for MSMEs, which aim to improve financial knowledge, behavior, and attitudes. MSMEs must prioritize strict financial management, which includes prudent debt and cash flow supervision, while fostering a constructive financial mindset. Training providers: Provide training that covers all three dimensions of financial literacy, empowering MSMEs to leverage knowledge and foster effective financial practices.

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