



Financial Literacy and Attitude as Drivers of Financial Behavior among Women-led MSMEs in Sidoarjo

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Abstract

This research seeks to analyze and assess how financial literacy and financial attitudes impact the financial management behaviors of Micro, Small, and Medium Enterprises (MSME) participants, focusing on members of the Indonesian Businesswomen Association (IWAPI) in Sidoarjo Regency. The study adopts a descriptive quantitative methodology, gathering primary data through questionnaires distributed to MSME members who act as respondents. The research population includes 300 IWAPI members, from which a sample of 75 respondents was chosen using random sampling based on the Slovin formula. Data is analyzed using the Structural Equation Modeling Partial Least Squares (SEM-PLS) technique, facilitated by SmartPLS version 3.0 software. The results demonstrate that both financial literacy and financial attitudes significantly affect the financial management behavior of MSME actors. This suggests that greater financial knowledge and more positive attitudes towards finances are linked to improved financial management practices among business participants. The study underscores the necessity of enhancing financial understanding and fostering positive financial attitudes to enhance effective financial management within the MSME sector.

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Introduction

The Ministry of Cooperatives and SMEs in 2023 revealed in its data that the role of Micro, Small, and Medium Enterprises (MSMEs) is vital in the Indonesian economy. This is based on the contribution of MSMEs of 61% to Indonesia's Gross Domestic Product (GDP), approximately IDR 9,580 trillion, and able to absorb 97% of the total workforce in Indonesia (Akbar et al., 2023). This substantial contribution shows that MSMEs are the main backbone of the national economy, especially in improving welfare and creating good jobs for the community (Atikah & Kurniawan, 2020). Even though MSMEs have a vital role, they still face several challenges, especially in terms of financial management, low levels of financial literacy, and low financial attitudes in planning budgets for their businesses (Eugenianda & Safitri, 2024).

According to a report from infobanknews.com, a study conducted by Bank OCBC and NielsenIQ, a global marketing research company using a face-to-face survey method, revealed that the financial management of MSMEs in Indonesia remains categorized as alert. This can be seen from the average Business Fitness Index (BFI) score, which only reached 43.84 from an ideal score of 75 (infobanknews., 2024). Inggit Primadevi, Director of Consumer Insight NielsenIQ Indonesia, said that this study involved 818 MSMEs as respondents in Indonesia, with data collection carried out directly through a digital survey platform. These findings show that the majority of MSME actors still face challenges in managing their business finances effectively.

One of the leading causes of the low score is the lack of financial literacy. Although the financial literacy survey of MSMEs conducted by the Financial Services Authority (OJK) shows an increase from year to year, the level of financial literacy among MSMEs is still relatively low (Dayanti et al., 2020). This is reflected in the results of the 2024 National Survey of Financial Literacy and Inclusion (SNLIK), which recorded the financial literacy index of the Indonesian people at 65.43%. In addition, other factors that influence the low Business Fitness Index (BFI) score are individual attitudes that are less supportive, such as the high number of bad credit cases according to the OJK report and the habit of not separating business accounts from personal accounts (Muhammad et al., 2024).

A study conducted by Akbar et al. (2023) explains that financial literacy has a significant influence on the financial management behavior of MSMEs, where MSMEs can effectively allocate capital, manage debt, and avoid excessive financial risks when they have a good financial understanding. In addition, the results of research conducted by Rosyadah (2020) explain that financial attitudes also play an important role in determining how someone can manage their finances well. A good financial attitude tends to make business actors more disciplined in planning a budget and separating personal finances from their business finances (Firlianti et al., 2023). Thus, it is concluded that the more positive a person's financial attitude, the better they will be in making financial decisions such as saving, investing, and managing debt correctly and healthily (Ayu Wardani & Fitrayati, 2022).

The phenomenon that has been observed in MSME business actors who are also members of the Indonesian Women Entrepreneurs Association (IWAPI) Sidoarjo, from the results of interviews and pre-surveys conducted, showed that there are still problems in the aspects of literacy, attitudes, and financial management in MSME business actors in the IWAPI Sidoarjo organization. The results of the pre-survey revealed that 62.50% of business actors possess basic knowledge of financial literacy, including financial records and understanding the distinctions between income, profit, and cash flow in business. In terms of financial attitudes, 62.50% of respondents have a positive attitude due to understanding the importance of budget planning, whereas 37.50% still exhibit less favorable attitudes, particularly in budget planning and debt management.

Then, in financial management behavior, only 53.12% of respondents consistently record income and expenses and separate business finances from personal finances. Also, 46.88% of respondents still face obstacles in managing their business finances, which is reflected in the lack of financial records and the

absence of separation between personal and business finances. The survey results indicate that, despite most MSME actors in the Sidoarjo branch of IWAPI possessing good financial literacy and attitudes, they have not consistently applied these skills in effective financial management. This still shows a gap between knowledge/attitudes and financial practices carried out, so further assistance or training is needed so that this knowledge and attitude can be implemented optimally in business activities.

Based on the results of interviews and pre-surveys that have been conducted, it is known that financial literacy and financial attitudes play an important role in the financial management process. Unlike previous studies that primarily focus on general populations or specific sectors, this study targets explicitly women entrepreneurs who are members of the Indonesian Women Entrepreneurs Association (IWAPI) in Sidoarjo, providing unique insights into how financial literacy and attitudes influence financial behavior in this demographic. Therefore, this study aims to analyze the influence of these two factors on financial management behavior in MSME business actors who are members of the Indonesian Women Entrepreneurs Association (IWAPI) Sidoarjo. IWAPI itself is an organization that has a strategic role in supporting and empowering female entrepreneurs, especially in terms of developing business skills and financial management. By focusing on IWAPI members in Sidoarjo, this study contributes to the literature by offering empirical evidence on how financial literacy and financial attitudes affect financial management behavior, specifically among female MSME actors. This group has received limited attention in previous studies. This research provides contextual insights that can support the development of gender-responsive financial education programs.

Literature Review

Hypothesis Development

The Influence of Financial Literacy on Financial Management Behavior

According to the Theory of Planned Behavior, an individual's actions, including those related to financial management, are shaped by three key components: their attitude toward the behavior, perceived social norms, and perceived behavioral control. Those with strong financial literacy tend to exhibit favorable attitudes toward managing finances, as they understand the long-term advantages of doing so. Social norms such as family support or a financially conscious environment also contribute to the formation of healthy financial behavior. In addition, good financial literacy increases an individual's confidence in controlling and making wise financial decisions.

Study [Dwi Astuti and Soleha \(2023\)](#) further emphasizes that financial competence significantly contributes to rational financial choices. Thus, financial literacy is a crucial component in promoting responsible financial behavior. A study conducted by [Akbar et al. \(2023\)](#) and [Napitupulu et al. \(2021\)](#) found that business actors' understanding of basic financial knowledge, such as credit savings, insurance, and investment, can have a positive influence on their financial management. Similar findings were also expressed by [Munthay and Sembiring \(2024\)](#) and [Aminah \(2023\)](#), who showed that financial literacy has a significant and positive influence on financial management. Financial literacy encompasses knowledge and understanding of financial risks, coupled with the skills, motivation, and confidence to apply this knowledge in effective decision-making to improve the financial well-being of individuals and society and participate in economic activities.

H1: Financial Literacy Influences Financial Management Behavior

The Influence of Financial Attitude on Financial Management Behavior

According to [Ajzen's \(1991\)](#) Theory of Planned Behavior (TPB), a person's actions are guided by three foundational aspects: their attitude, perceived social pressures, and the sense of control over their behavior. Within this model, financial attitudes operate as a mental or cognitive factor that influences an individual's motivation to participate in managing their finances, which in turn impacts how they handle financial matters. Individuals with positive financial attitudes usually show better financial behavior because they

realize the importance of financial planning, wise debt management, and proper investment. Conversely, those with negative financial attitudes tend to engage in bad financial habits, such as impulsive spending and lack of planning. Rosyadah's research (2020) supports this finding by stating that positive financial attitudes play an important role in encouraging healthier and more responsible financial management behavior. Research conducted by Ayu Wardani and Fitrayati (2022) and Firlianti et al. (2023) concluded that individuals with a positive attitude toward money tend to be more prepared in determining financial management steps. This includes budgeting, setting aside funds for savings, and making other financial decisions. The results of research conducted by Septiana Putri et al. (2023) and Handayani et al. (2022) also show that positive financial attitudes will encourage increased behavior in managing finances, while negative financial attitudes tend to cause a decline in financial management behavior.

H2: Financial Attitude Influences Financial Management Behavior

Method

This study uses a quantitative approach, namely a method that aims to determine and analyze the influence of independent variables on dependent variables through hypothesis testing (Sugiyono & Lestari, 2021). The focus of this study is financial management in MSMEs, with the research subjects being MSME actors who are members of the Indonesian Women Entrepreneurs Association (IWAPI) Sidoarjo branch. The variables in this study were measured using a structured questionnaire developed based on previous literature. Respondents assessed each item using a 5-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), to indicate their level of agreement with the given statements (Musyaffi et al., 2021).

The population in this study includes all members of the IWAPI Sidoarjo UMKM who are active and engaged in various business sectors, such as culinary, fashion, crafts, and services, with a total of 300 members. Population data was obtained through a survey conducted in a series of studies. This study employed probability sampling using a random sampling method, which ensures that each member of the population has an equal chance of being selected as a respondent (Musyaffi et al., 2021). The sample size was calculated using the Slovin formula, resulting in a total of 75 respondents participating in this research.

Result and Discussion

Description of Respondent Characteristics

Age

The characteristics of the research respondents can be seen from the age of the respondents obtained through the results of the questionnaire that has been distributed to respondents and can be divided into three groups, namely as follows:

Table 1. Respondent Age

No.	Age	Total	Percentage
1.	> 40 Years	20	26,67%
2.	40 – 50 Years	33	44,00%
3.	< 50 Years	22	29,33%
Sum		75	100,00%

Source: Questionnaire data processing results (2025)

Table 1 presents the results of questionnaire data, indicating that among the MSME actors in the Indonesian Women Entrepreneurs Association (IWAPI) who participated in this study, 33 individuals aged 40-50 years constitute 44.00% of the respondents. The age range of less than 40 years is 20 people, with a percentage of 26.67%. The age group of more than 50 years comprises 22 people, accounting for 29.33% of the total.

Type of business

The characteristics of respondents in this study are categorized based on the type of business operated. The business categories are as follows:

Table 2. Respondent Business Type

No.	Business Category	Total	Percentage
1.	Food and Beverage (FnB)	31	41,33%
2.	Fashion	12	16,00%
3.	Beauty	6	8,00%
4.	Craft	9	12,00%
5.	Services and Services	17	22,67%
Sum		75	100,00%

Source: Questionnaire data processing results (2025)

Based on Table 2, the type of business most run by members of IWAPI Sidoarjo MSMEs is in the food and beverage category with the highest percentage of 41.33%. Followed by service and service businesses at 22.67%, which include printing, transportation, and other services. Businesses in the fashion sector are in third place with a percentage of 16%, followed by handicrafts at 12%, and businesses in the beauty sector, which include sales of cosmetics and skincare at 8%.

Length of Business

The characteristics of respondents in this study can be seen from the duration of the business that has been running, which is grouped into four categories as follows:

Table 3. Respondent Length of Business

No.	Business Duration Category	Total	Percentage
1.	< 1 Year	4	5,33%
2.	13 years old	14	18,67%
3.	4 – 7 Years	13	17,33%
4.	> 7 Years	44	58,67%
Sum		75	100%

Source: Questionnaire data processing results (2025)

Based on the data in Table 3, it is known that MSME actors in the IWAPI organization, as respondents in this study, have mostly run their businesses for more than 7 years, namely 44 people or 58.67%. Meanwhile, respondents with a business period of between 1 and 3 years numbered 14 people (18.67%), and those who have run their businesses for 4 to 7 years numbered 13 people (17.33%). Meanwhile, respondents who have had a business for less than 1 year numbered four people with a percentage of 5.33%.

IWAPI Membership

The characteristics of the respondents can then be seen from whether the respondents are MSME actors registered as members of the Sidoarjo branch of IWAPI, whether they are still active or no longer routinely active in organizational activities, as can be seen from the table below:

Table 4. Respondent Membership

No.	IWAPI Membership	Total	Percentage
1.	Still Active	75	100,0%
2.	Not active	0	0,0%
Sum		75	100,0%

Source: Questionnaire data processing results (2025)

According to Table 4, it can be seen that all SMEs actors who are also members of the IWAPI organization and respondents in this study are still recorded as active members, with a total of 75 people or 100% of the

total sample. Meanwhile, there was not a single respondent who stated that they were no longer active in participating in organizational activities, which is indicated by a percentage of 0%.

Description of Research Variables

Financial Literacy

Financial literacy is a combination of knowledge, skills, and beliefs that a person has, which directly influences attitudes and behaviors in making decisions and managing finances in order to achieve financial well-being. A higher level of financial literacy in MSME actors can improve their ability to manage business capital, avoid excessive debt burdens, and improve the sustainability of the business being run. The Financial Literacy variable (X1) consists of four indicators, each of which contains two to three question items (Chen & Volpe, 1998). The frequency distribution of respondents' answers related to the Financial Literacy variable is presented in detail in the table below:

Table 5. Frequency Distribution of Financial Literacy Variables

Indicator Question		Respondents' Answers					Sum
		S.T.S	T.S	N	S	S.S	
		[1]	[2]	[3]	[4]	[5]	
FL-1	F	0	0	0	41	34	75
	%	0,00%	0,00%	0,00%	54,67%	45,33%	100%
FL-2	F	0	0	0	46	29	75
	%	0,00%	0,00%	0,00%	61,33%	38,67%	100%
FL-3	F	0	0	0	40	35	75
	%	0,00%	0,00%	0,00%	53,33%	46,67%	100%
FL-4	F	1	0	0	38	36	75
	%	1,33%	0,00%	0,00%	50,67%	48,00%	100%
FL-5	F	0	0	1	42	32	75
	%	0,00%	0,00%	1,33%	56,00%	42,67%	100%
FL-6	F	2	1	13	42	17	75
	%	2,67%	1,33%	17,33%	56,00%	22,67%	100%
FL-7	F	4	3	31	20	17	75
	%	5,33%	4,00%	41,33%	26,67%	22,67%	100%
FL-8	F	0	0	2	41	32	75
	%	0,00%	0,00%	2,67%	54,67%	42,67%	100%
FL-9	F	0	0	4	45	26	75
	%	0,00%	0,00%	5,33%	60,00%	34,67%	100%
FL-10	F	0	0	2	43	30	75
	%	0,00%	0,00%	2,67%	57,33%	40,00%	100%
Sum	F	7	4	53	398	288	750
	%	0,93%	0,53%	7,07%	53,07%	38,40%	100%

Source: Questionnaire results processed by SmartPLS (2025)

According to the recapitulation results in Table 5, the majority of respondents gave the responses "agree" (53.07%) and "strongly agree" (38.40%) to the statements in the financial literacy questionnaire, which means they admit to having a good understanding and skills in planning, recording, and managing business finances. Meanwhile, 7.07% of respondents chose "neutral," indicating that they were not yet fully confident in their financial understanding. A small number of respondents chose "disagree" (0.53%) and "strongly disagree" (0.93%), reflecting the low level of financial literacy in certain aspects. Indicators X1.6 and X1.7 show a relatively high level of disagreement compared to other indicators, indicating that MSME actors' understanding of the insurance aspect is still lower than other aspects, such as recording, budgeting, and savings.

Financial Attitude

Financial Attitude refers to an individual's views and behavior in understanding and managing money in everyday life. A positive financial attitude can support MSME actors in making more appropriate and wise financial decisions. The Financial Attitude variable (X2) is measured through six indicators, each consisting of one to two statements (Johnson & Parrotta, 1998). The frequency distribution of respondents' answers related to the Financial Attitude variable is presented in detail in the table below:

Table 6. Frequency Distribution of Financial Attitude Variables

Indicator Question		Respondents' Answers					Sum
		S.T.S [1]	T.S [2]	N [3]	S [4]	S.S [5]	
FA-1	F	0	0	0	33	42	75
	%	0,00%	0,00%	0,00%	44,00%	56,00%	100%
FA-2	F	0	1	3	32	29	75
	%	0,00%	1,33%	4,00%	42,67%	52,00%	100%
FA-3	F	0	0	1	36	38	75
	%	0,00%	0,00%	1,33%	48,00%	50,67%	100%
FA-4	F	0	1	2	43	29	75
	%	0,00%	1,33%	2,67%	57,33%	38,67%	100%
FA-5	F	0	0	0	40	35	75
	%	0,00%	0,00%	0,00%	53,33%	46,67%	100%
FA-6	F	0	0	2	39	34	75
	%	0,00%	0,00%	2,67%	52,00%	45,33%	100%
FA-7	F	0	0	1	42	32	75
	%	0,00%	0,00%	1,33%	56,00%	42,67%	100%
FA-8	F	0	0	0	39	36	75
	%	0,00%	0,00%	0,00%	52,00%	48,00%	100%
FA-9	F	1	0	3	38	33	75
	%	1,33%	0,00%	4,00%	50,67%	44,00%	100%
FA-10	F	1	1	6	34	33	75
	%	1,33%	1,33%	8,00%	45,33%	44,00%	100%
Sum	F	2	3	18	376	351	750
	%	0,27%	0,40%	2,40%	50,13%	46,80%	100%

Source: Questionnaire results processed by SmartPLS (2025)

Table 6 shows that the majority of respondents gave "agree" (50.13%) and "strongly agree" (46.80%) responses to the statements in the Financial Attitude variable, which means they show a positive attitude, namely believing in the importance of good financial behavior such as controlling spending, saving habits, and financial planning. The answer "agree" reflects that the respondents agree and generally apply the attitude, while "strongly agree" indicates a higher level of acceptance and belief in the statements in the questionnaire. Meanwhile, the answer "neutral" (2.40%) indicates that a small number of respondents are hesitant or do not yet have a clear view regarding certain financial attitudes.

Respondents who chose "disagree" (0.40%) and "strongly disagree" (0.27%) tended to disagree or not implement the intended financial attitude. For example, in statement X2.1, a dominant positive response was seen. However, in statement X2.10, a higher level of doubt was found, indicating that although, in general, the respondents' financial attitudes were classified as good, there were still several aspects, such as financial reporting or recording, that all MSME actors had not fully internalized.

Financial Management Behavior

Financial Management behavior misbehavior is a learning process that involves preparing financial plans, executing actions according to the plan, and evaluating and improving the plan's implementation, which may require adjustments at both the individual and family levels. The Financial Management Behavior (Y) variable

is measured through four indicators, each of which consists of two to three statement items. The frequency distribution of respondents' answers related to the Financial Management Behavior variable is presented in detail in the table below:

Question Items		Respondents' Answers					Sum
		S.T.S [1]	T.S [2]	N [3]	S [4]	S.S [5]	
FMB1	F	0	1	3	38	33	75
	%	0,00%	1,33%	4,00%	50,67%	44,00%	100%
FMB2	F	1	0	12	36	26	75
	%	1,33%	0,00%	16,00%	48,00%	34,67%	100%
FMB3	F	0	0	2	38	35	75
	%	0,00%	0,00%	2,67%	50,67%	46,67%	100%
FMB4	F	0	2	4	36	33	75
	%	0,00%	2,67%	5,33%	48,00%	44,00%	100%
FMB5	F	1	1	4	38	31	75
	%	1,33%	1,33%	5,33%	50,67%	41,33%	100%
FMB6	F	1	1	8	39	26	75
	%	1,33%	1,33%	10,67%	52,00%	34,67%	100%
FMB7	F	1	0	11	40	23	75
	%	1,33%	0,00%	14,67%	53,33%	30,67%	100%
FMB8	F	1	2	7	41	24	75
	%	1,33%	2,67%	9,33%	54,67%	32,00%	100%
FMB9	F	2	2	7	33	31	75
	%	2,67%	2,67%	9,33%	44,00%	41,33%	100%
FMB10	F	1	0	4	37	33	75
	%	1,33%	0,00%	5,33%	49,33%	44,00%	100%
Sum	F	8	9	62	376	295	750
	%	1,07%	1,20%	8,27%	50,13%	39,33%	100%

Source: Questionnaire results processed by SmartPLS (2025)

Based on Table 8, the majority of respondents showed a positive tendency towards financial management behavior, with 50.13% choosing "agree" and 39.33% "strongly agree," reflecting that they have generally implemented financial management habits such as budgeting, recording transactions, and controlling expenses consistently. The choice of "agree" indicates that respondents feel pretty confident and often carry out the behavior, while "strongly agree" indicates strong confidence and more routine implementation. Conversely, 8.27% of respondents chose "neutral," indicating doubt or inconsistency in carrying out certain financial behaviors. The choices of "disagree" (1.20%) and "strongly disagree" (1.07%) indicate that a small number of respondents did not carry out financial management behaviors as stated in the questionnaire. The highest level of agreement appeared in statements Y.1 (financial planning) and Y.4 (control), while statement Y.7 (financial audit) showed a higher level of doubt, with 14.67% choosing neutral. This implies that IWAPI MSME actors have been quite good in terms of planning and recording but still need improvement in terms of evaluation and more structured financial documentation.

Data Analysis Description

Outer Model

This Outer Model explains the relationship between latent variables and the indicators that measure them (Musyaffi et al., 2021). The evaluation of this model aims to ensure that the research instrument has adequate validity and reliability. Tests conducted on the outer model:

Convergent Validity Assessment

A convergent validity assessment evaluates how strongly each indicator correlates with the latent construct it is intended to measure. When the Average Variance Extracted (AVE) surpasses 0.50, the indicators are deemed valid because the latent variable explains more than half of the average variance in those indicators (Musyaffi et al., 2021). The SmartPLS output presenting the results of this convergent validity test is displayed in the table below:

Table 8. Average Variance Extracted (AVE)

No.	Variables	AVE Values
1.	X1	0,586
2.	X2	0,586
3.	Y	0,690

Source: Questionnaire results processed by SmartPLS (2025)

All variables in the model have achieved an AVE value above 0.5, as shown in Table 8, so it can be concluded that all variables meet the convergent validity criteria. Variable X1 (Financial Literacy) is declared acceptable with an AVE value of 0.586, as is Variable X2 (Financial Attitude), which is also accepted because it has an AVE value of 0.586. Meanwhile, Variable Y (Financial Management Behavior) also meets the convergent validity requirements with an AVE value of 0.690. These values indicate that the indicators in each latent variable have been able to represent their constructs well. Therefore, it can be inferred that the variables within the model fulfill the criteria for convergent validity and are appropriate for further analysis in the subsequent testing phase.

Discriminant Validity Test

Discriminant validity is measured through the cross-loading factor value to assess whether each construct in the study is genuinely different from the others. In the reflective indicator, discriminant validity is stated to be fulfilled if the cross-loading value of each variable is more than 0.7 (Musyaffi et al., 2021). The following are the results of the calculation of the discriminant validity test by reviewing the cross-loading value in each variable using SmartPLS software presented in the table below:

Table 9. Cross Loading of Financial Literacy Variables (X1)

Question Items	Cross Loading			Information
	X1	X2	Y	
FL-1	0,812	0,745	0,595	Accepted
FL-2	0,774	0,674	0,610	Accepted
FL-3	0,807	0,634	0,616	Accepted
FL-4	0,748	0,643	0,689	Accepted
FL-5	0,754	0,724	0,583	Accepted
FL-6	0,763	0,669	0,760	Accepted
FL-7	0,725	0,645	0,616	Accepted
FL-8	0,707	0,681	0,594	Accepted
FL-9	0,776	0,675	0,519	Accepted
FL-10	0,780	0,632	0,504	Accepted

Source: Questionnaire results processed by SmartPLS (2025)

Based on Table 9, all items in the Financial Literacy variable (X1) show the highest loading value for construct X1 compared to other constructs, namely X2 and Y. This applies consistently to all indicators in variable X1. Therefore, all indicators are declared valid because they have succeeded in distinguishing construct X1 from other constructs.

The following are the results of the cross-loading calculations on the Financial Attitude variable (X2), which are presented in the table below:

Table 10. Cross Loading Financial Attitude Variable (X2)

Question Items	Cross Loading			Information
	X1	X2	Y	
FA-1	0,679	0,794	0,571	Accepted
FA-2	0,691	0,784	0,645	Accepted
FA-3	0,711	0,789	0,578	Accepted
FA-4	0,648	0,778	0,718	Accepted
FA-5	0,724	0,800	0,602	Accepted
FA-6	0,676	0,739	0,596	Accepted
FA-7	0,652	0,748	0,655	Accepted
FA-8	0,714	0,735	0,562	Accepted
FA-9	0,611	0,729	0,689	Accepted
FA-10	0,641	0,752	0,742	Accepted

Source: Questionnaire results processed by SmartPLS (2025)

Based on Table 10, all statement items in the Financial Attitude variable (X2) have the highest loading value for construct X2 compared to constructs X1 and Y. The results above show that each indicator can measure the Financial Attitude construct well and has met the discriminant validity requirements based on cross-loading testing.

The following are the results of the cross-loading calculations on the Financial Management Behavior (Y) variable, which are presented in the table below:

Table 11. Cross Loading of Financial Management Behavior Variables (Y)

Question Items	Cross Loading			Information
	X1	X2	Y	
FMB-1	0,671	0,674	0,764	Accepted
FMB-2	0,727	0,652	0,816	Accepted
FMB-3	0,674	0,691	0,710	Accepted
FMB-4	0,625	0,692	0,892	Accepted
FMB-5	0,668	0,727	0,892	Accepted
FMB-6	0,696	0,738	0,911	Accepted
FMB-7	0,638	0,690	0,867	Accepted
FMB-8	0,676	0,672	0,861	Accepted
FMB-9	0,606	0,652	0,804	Accepted
FMB-10	0,701	0,761	0,835	Accepted

Source: Questionnaire results processed by SmartPLS (2025)

Based on Table 11, all indicators in the Financial Management Behavior (Y) variable have the highest loading value for construct Y as the original construct. This shows that these indicators have presented construct Y well. All items in construct Y exhibit a consistent pattern, with the highest correlation with construct Y and lower correlations with other constructs. Therefore, all indicators in the Financial Management Behavior (Y) variable have met the discriminant validity criteria based on the cross-loading test and are suitable for use in further structural model testing.

Reliability Test (Composite Reliability)

The composite reliability value is used as a measure to assess the reliability of an indicator. Assessing the Composite Reliability value is the primary reference in conducting reliability testing of an instrument or variable, where the value that is considered to meet the requirements for composite reliability is more than 0.7. The results of the composite reliability test with SmartPLS software are presented in the table below:

Table 12. Composite Reliability

No.	Variables	Composite Reliability
1.	Financial Literacy	0,934
2.	Financial Attitude	0,934
3.	Financial Management Behavior	0,957

Source: Questionnaire results processed by SmartPLS (2025)

Based on Table 12, it can be concluded that all variables in the model are classified as reliable according to the results of the Composite Reliability test. Variable X1 (Financial Literacy) shows a good level of reliability with a Composite Reliability value of 0.934, which exceeds the minimum threshold of 0.7. The same thing is also shown by Variable X2 (Financial Attitude), which obtained a value of 0.934 and met the same criteria. In addition, Variable Y (Financial Management Behavior) is also declared reliable with a Composite Reliability value of 0.957, which is greater than the standard criteria of 0.7.

The above shows that all constructs in this research model meet the criteria for good reliability so that the indicators used can be considered consistent in measuring the constructs in question and are suitable for use in further analysis.

Inner Model

Structural model testing is carried out to identify and analyze the relationship between independent variables (exogenous) and dependent variables (endogenous) in the study. This analysis aims to meet the research objectives by testing previously made hypotheses (Musyaffi et al., 2021). The steps for testing the structural model are as follows:

R Square

The R Square value represents the coefficient of determination, which illustrates the strength of the relationship in explaining endogenous constructs. It indicates how much of the variation in the endogenous variable can be accounted for by the variation in the exogenous variables. Several categories below classify the explanation of variation based on its strength, namely R Square = 0.67 (meaning strong), R Square = 0.33 (meaning moderate), and R Square = 0.19 (meaning weak). The table below will show the results of the R Square value with SmartPLS software:

Table 13. R-Square Test Results

	<i>R-Square Values</i>	<i>Adjusted R Square Values</i>
Y	0,726	0,718

Source: Questionnaire results processed by SmartPLS (2025)

Based on Table 13, the R Square value of 0.726 indicates that the variables Financial Literacy and Financial Attitude together can explain 72.6% of the variation in financial management behavior of IWAPI Sidoarjo MSME actors. The Adjusted R Square value of 0.718 strengthens these findings, with a slight difference indicating that the model has good stability without any indication of overfitting. Thus, this research model has a strong predictive ability on the dependent variable.

Effect Size (F Square)

Changes in the R Square value in endogenous constructs are measured using Effect Size or F Square, where the F Square value for the small category is 0.02, the medium category is 0.15, and the large category is 0.35. The following shows the results of the F-Square test with SmartPLS software presented in the table below:

Table 14. F-Square Test Results

Hypothesis		<i>f-square</i>	Results
Financial Literacy → Financial Management Behavior	H1	0,076	Little Influence
Financial Attitude → Financial Management Behavior	H2	0,272	Influence is getting bigger

Source: Questionnaire results processed by SmartPLS (2025)

Referring to Table 14, it can be concluded that the Financial Literacy variable (X1) has an F-Square value of 0.095, which indicates that this variable has a low influence on the Financial Management Behavior variable (Y). Also, the Financial Attitude variable (X2) shows an F-Square value of 0.307, which indicates that this variable falls into the category of moderate to strong influence and provides the most significant contribution among all independent variables. Overall, the results indicate that Financial Attitude (X2) plays a significant role in explaining variations in Financial Management Behavior (Y) of MSME actors, with a greater impact compared to Financial Literacy (X1).

Hypothesis Testing

Hypotheses are formulated based on theory, previous research, and logical considerations and then tested using available algorithm calculation procedures (Musyaffi et al., 2021). The P-value (Probability Value) is a measure of probability used in statistical hypothesis testing to assess whether the research results are strong enough to reject the null hypothesis (H_0). The test statistics used to see the significance of the results are indicated by the p-value with the following criteria:

$P < 0.05$ Hypothesis is accepted, indicating a significant effect.

$P > 0.05$ The hypothesis is rejected, indicating an insignificant effect.

The following are the results of the hypothesis test using SmartPLS software, which are presented in the table and image below:

Table 15. Hypothesis Test Results

Hypothesis		Original Sample	p-value	Results
Financial Literacy → Financial Management Behavior	H1	0,303	0,012	Support
Financial Attitude → Financial Management Behavior	H2	0,573	0,000	Support

Source: Questionnaire results processed by SmartPLS (2025)

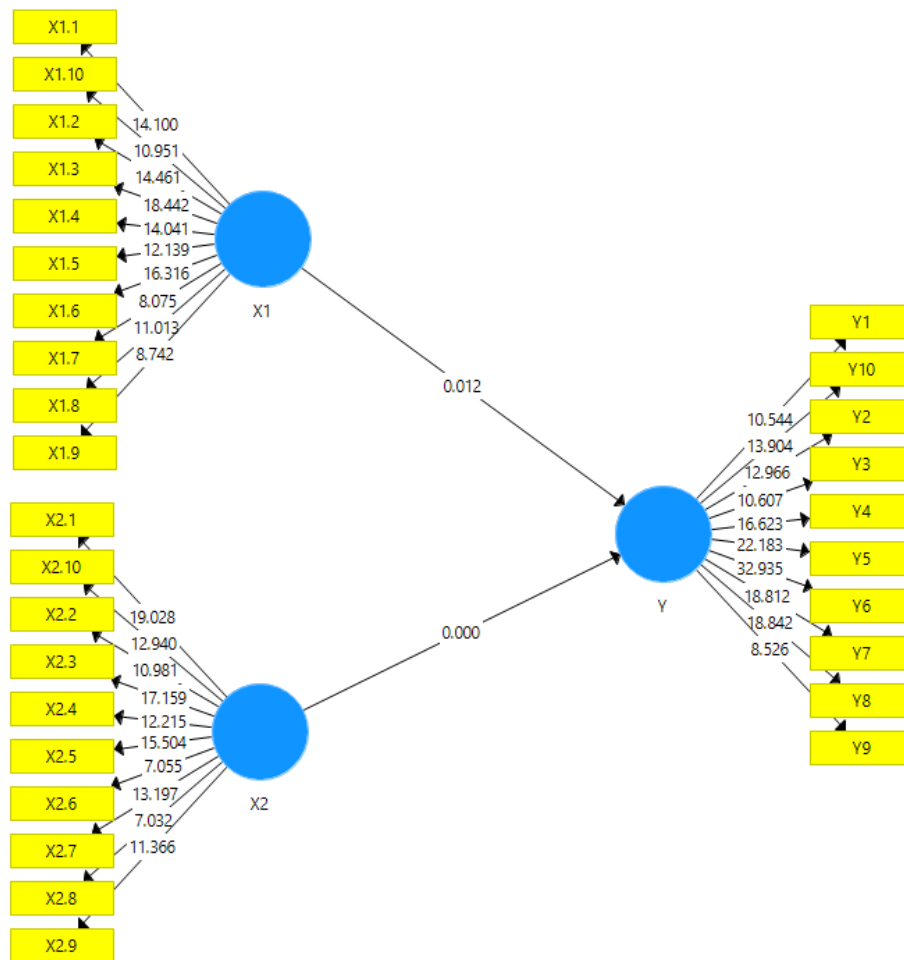


Figure 1. The Results of Full Model Analysis

The findings from the hypothesis testing presented in Table 16 and Figure 1 indicate that Financial Literacy (X1) and Financial Attitude (X2) both have a notable impact on Financial Management Behavior (Y). The analysis shows path coefficients of 0.303 (P-Value = 0.012) and 0.573 (P-Value = 0.000), respectively, with X2 identified as the variable with the most significant influence. Therefore, the hypotheses for both Financial Literacy (X1) and Financial Attitude (X2) are supported and acceptable.

The Influence of Financial Literacy on Financial Management Behavior

The findings from the results of the previous data analysis show that individuals with a high level of financial literacy tend to exhibit better financial management behavior. The relationship is positive and one-directional, meaning that improvements in financial understanding, such as knowledge of saving, investing, and insurance, encourage MSMEs to manage their finances more efficiently and systematically. Additionally, strong financial knowledge is influenced by factors such as education, age, and the length of time the business has been operating, which support the effectiveness of financial management. These findings align with the Theory of Planned Behavior (TPB), which suggests that a positive financial attitude is shaped through enhanced financial literacy and a supportive environment. This conclusion is also reinforced by previous research from [Akbar et al. \(2023\)](#); [Nasution and Balatif \(2025\)](#); [Dwi Astuti and Soleha \(2023\)](#); [Napitupulu et al. \(2021\)](#); [Munthay and Sembiring \(2024\)](#); [Muhammad et al. \(2024\)](#); and [Anisyah et al. \(2021\)](#), which show that financial literacy has a significant effect on financial management behavior, where when individuals have basic financial understanding, such as credit savings, insurance, and investment, it can have a positive impact on their financial management. Research by [Dwyanti \(2024\)](#); [Mustafa et al. \(2024\)](#); [Putu et al. \(2022\)](#); [Fadilah and Purwanto \(2022\)](#); [Gusnafitri and Martha \(2024\)](#); [Rahman Pakaya and Nahar \(2024\)](#); [Wati and Panggiarti \(2021\)](#); [Humaidi et al. \(2020\)](#); [Eugenianda and Safitri \(2024\)](#) also concluded that this financial literacy includes knowledge and understanding of financial risks, coupled with the skills, motivation, and

confidence to apply this knowledge in effective decision-making to improve the financial well-being of individuals and society and participate in economic activities.

The Influence of Financial Attitude on Financial Management Behavior

The findings of the alignment analysis indicate a positive and unidirectional influence, suggesting that a favorable attitude positively impacts business actors in managing southern finances effectively. This finding effectively confirms that Financial Attitude has an important role in encouraging effective financial management practices. Positive financial attitudes reflect an individual's views and beliefs about the importance of managing finances, such as making plans, controlling expenses, and saving for the future of the business. These results are in line with the Theory of Planned Behavior (TPB), which explains that attitude is the main factor that influences intentions and ultimately shapes actions. This finding is also supported by previous research from Handayani et al. (2022); Rosyadah (2020); Napitupulu et al. (2021); Pratiwi et al. (2023); Firlianti et al. (2023); and Ginting et al. (2024), who found that individuals with a positive attitude towards money tend to be more prepared in determining financial management steps. This includes budgeting, setting aside funds for savings, and making other financial decisions. Research conducted by Satriadi et al. (2023); Khovivah and Hetty Muniroh (2023); Khoirotun Nisa and Asandimitra Haryono (2022); Aminah (2023); Septiana Putri et al., (2032); and Kusumawati and Putri (2023) also explains that in making financial decisions and having a long-term mindset for the sustainability of the business is due to a good financial attitude in the business finances.

Conclusions and Recommendations

This study aims to examine and evaluate the impact of financial literacy and financial attitudes on the financial management behavior of MSME actors within the IWAPI Sidoarjo organization. The results indicate that both variables significantly influence financial management practices. This suggests that the financial behavior of business actors will become more organized and well-managed when they possess strong financial literacy and maintain a positive financial attitude.

Theoretically, this finding strengthens the importance of the role of financial knowledge and attitudes in shaping sustainable financial behavior, especially on a small business scale. The practical implication is the need for continuous improvement of financial education and training for MSME actors. By equipping business actors with adequate financial understanding and a wise attitude in managing finances, they will be better able to maintain the stability and growth of their businesses.

This study has several limitations, namely that the respondents only consist of IWAPI Sidoarjo members, so the results may not fully represent MSME actors in other areas. Therefore, it is advised that future studies expand the research coverage to include broader areas and a more diverse group of respondents while also exploring other potential factors that may affect financial behavior. Additionally, ongoing financial education and attitude development for MSME actors should be prioritized to ensure they are capable of managing business finances more effectively and consistently over time.

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