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The Transformation Of SME Financial Management In The Digital Age: The Role Of Financial Technology As A Bridge Between Digital Literacy And Financial Attitudes

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Abstract

Digital transformation encourages MSMEs to adapt to technological developments in business activities, particularly in financial management. However, low technological literacy and suboptimal financial attitudes remain challenges in utilizing digital services for MSMEs. These conditions make financial technology a tool that can support the effectiveness and efficiency of business financial management. This study aims to analyze the influence of technological literacy and financial attitudes on MSME financial management, with financial technology as a mediating variable. The study used a quantitative approach with a survey method of 160 MSMEs in Madiun Regency selected using purposive sampling. Data collection was carried out through questionnaires with a rating scale of 1–10 and analyzed using Structural Equation Modeling–Partial Least Square (SEM-PLS) through SmartPLS 4.0. The results show that technological literacy and financial attitudes have a positive and significant effect on both financial technology and MSME financial management. In addition, financial technology is proven to be able to mediate the influence of technological literacy and financial attitudes on MSME financial management. These findings indicate that improving technological literacy, financial attitudes, and the use of financial technology can support digital transformation and improve the quality of MSME financial management more effectively and adaptively.

Keywords:Technology Literacy, Financial Attitude, Financial Management, Financial Technology

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INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) continue to assert their role as a key pillar of the national and regional economy amidst the global economic slowdown and increasingly massive digital transformation. MSMEs play a vanguard role in realizing sustainable development through job creation, strengthening local value chains, and increasing community economic independence (Ardila & Christiana, 2020). Globally, recent literature shows that MSMEs in developing countries are among the most vulnerable but also the most resilient sectors in facing economic shocks, especially when they receive adequate policy support and access to digital technology (OECD, 2023; World Bank, 2022).

In Indonesia, the role of MSMEs is increasingly strategic along with the accelerated adoption of the digital economy and the expansion of the financial technology (fintech) ecosystem, which encourages financial inclusion for small businesses (Bank Indonesia, 2023; Financial Services Authority, 2022). Data from the Ministry of Cooperatives and SMEs shows that the number of MSME units in Indonesia continues to increase significantly, with the majority consisting of micro-enterprises that absorb more than 45 million workers, making this sector a major pillar of national socioeconomic stability (Ministry of Cooperatives and SMEs, 2024; Ardila & Christiana, 2020). However, this significant contribution has not been fully balanced by adequate financial management quality, so many MSMEs still face the risk of unsustainability due to weak financial management.

At the regional level, economic growth trends are driven by strengthening the MSME sector through capital access programs, digital capacity training, and encouraging the use of financial technology (Madiun Regency Statistics Agency, 2024; Madiun Regency Government, 2023). Regional economic growth, which reached 4.65 percent in 2024, reflects the increasing activity of MSMEs; however, many business actors are still unable to optimally utilize fintech platforms or digital systems to manage their finances systematically. This phenomenon is exacerbated by low technological literacy and prudent financial attitudes, resulting in reactive financial decisions that are not supported by accurate data.

Recent academic studies confirm that the main obstacles facing MSMEs are not only limited capital and market access, but also related to low financial management skills and digital literacy among business actors (Fitri et al., 2024; Layyinaturrobaniyah & Muizu, 2017). Various studies in Indonesia indicate that understanding of financial management in many MSMEs is still limited to daily cash management, without comprehensively

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integrating aspects of financial planning, control, and evaluation. Furthermore, several studies indicate that weak internal controls and inconsistent financial attitudes encourage MSMEs to make high-risk decisions without adequate mitigation, thus negatively impacting business stability and continuity (Nuryani et al., 2025; Cahyani et al., 2025).

However, research on the relationship between digital and technological literacy and MSME financial management still shows inconsistent findings. Several studies have found that digital literacy has a positive effect on fintech use and MSME financial management, but this effect is not always significant when tested in specific contexts due to suboptimal technology utilization (Nurbaiti & Sidiq, 2025; Kholiq, 2025). Conversely, several studies have stated that individual financial attitudes have a negative effect on MSME financial management, indicating that not only knowledge levels but also financial management practices and culture play a significant role (Almira Fadya, 2023; Yanti et al., 2022). Previous research also has limitations in the dominance of univariate or bivariate approaches, as well as the lack of testing the mediating role of fintech as a mediating variable between technological literacy and financial attitudes on MSME financial management behavior.

Based on the literature gap, this study identified several crucial research gaps: (1) the lack of studies that simultaneously examine the relationship between technological literacy, financial attitudes, and fintech on MSME financial management in one integrated framework; (2) the limited number of studies that examine the mediating role of fintech in the context of semi-urban areas such as Madiun Regency; and (3) there are not many studies that integrate the Theory of Planned Behavior (TPB) to explain how technological capabilities and individual financial attitudes influence the intention and behavior of MSME financial management through fintech. Thus, the main problem statements of this study are: (a) how technological literacy and financial attitudes influence the use of fintech by MSMEs; (b) how fintech mediates the influence of technological literacy and financial attitudes on financial management; and (c) whether the use of fintech significantly improves the quality of MSME financial management in Madiun Regency.

This study aims to empirically analyze the influence of technological literacy and financial attitudes on the use of fintech, as well as the role of fintech mediation in the financial management of MSMEs in Madiun Regency. The urgency of this research lies in the urgent need to improve the quality of MSME financial management amidst the increasingly rapid digital transformation, so that it can support business continuity, job creation, and regional economic stability. The novelty of this research lies in the integration of the TPB theoretical framework with fintech variables as a mediator in the

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context of Indonesian MSMEs, particularly in semi-urban areas that have unique digital ecosystem characteristics and financial behavior. Theoretically, this research contributes to the development of MSME financial management and digital literacy studies. While practically, the research results can be the basis for policies to strengthen technological literacy, design financial attitude training programs, and encourage more massive fintech adoption for MSMEs.

METHODOLOGY

This study uses a quantitative approach with a survey method to analyze the influence of technological literacy and financial attitudes on the financial management of MSMEs with financial technology as a mediating variable in MSMEs in Madiun Regency (Sugiyono, 2018; Hair et al., 2019). The quantitative approach was chosen because it is able to explain the relationship between variables systematically through replicable statistical analysis (Sudaryono, 2020). This study focuses on testing the direct and indirect relationships between variables using the SEM-PLS method (Ghozali & Latan, 2015; Abdillah & Hartono, 2015).

The research population was MSMEs in Madiun Regency registered with the East Java Provincial Cooperatives and MSMEs Office (Ministry of Cooperatives and SMEs, 2024). The sampling technique used purposive sampling with the following criteria: (1) active MSMEs, (2) have been running a business for at least one year, (3) are involved in business financial management, and (4) know or use financial technology services. The research sample size was 160 respondents and met the requirements of SEM-PLS analysis, which is at least five to ten times the number of research indicators (Hair et al., 2019; Ghozali, 2015).

The data collection method was carried out by distributing questionnaires directly to respondents who met the research criteria. The research instrument was compiled based on variable indicators of technological literacy, financial attitudes, financial technology, and MSME financial management from previous studies (Fitriani & Sari, 2021; Amelia et al., 2023; Layyinaturrobaniyah & Muizu, 2017). Respondents' responses were measured using a 1–10 rating scale, where 1 indicates strongly disagree and 10 indicates strongly agree. The 1–10 scale was chosen because it provides a broader range of assessments and can therefore describe respondents' perceptions in more detail (Sugiyono, 2018).

The data analysis method was carried out using outer model and inner model testing. The outer model test was used to measure convergent validity, discriminant

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validity, and construct reliability through Composite Reliability and Cronbach's Alpha with values >0.70 (Ghozali & Latan, 2015; Hair et al., 2019). Meanwhile, the inner model test was carried out using the R-square value, path coefficient, Q-square, and SRMR to determine the relationship between research variables. Hypothesis testing was carried out using the bootstrapping technique with a significance level of 5% (Yamin, 2022; Abdillah & Hartono, 2015). In addition, mediation testing was conducted using the Baron and Kenny (1986) approach.

RESULTS AND DISCUSSION

Research Data Description

The research data was obtained by distributing questionnaires to 160 MSMEs as respondents. The survey method was used because it can produce structured data suitable for objective and representative quantitative measurement. Respondent characteristics analyzed included business type, length of operation, number of employees, and business capital to provide a comprehensive profile. In general, respondents had an understanding of business management and the use of digital technologies, such as social media, marketplaces, and financial applications. This condition indicates that MSMEs have a fairly good level of technology adaptation, thus potentially supporting increased operational efficiency, market access, and the quality of business financial management.

Research Respondent Profile

Respondent Data Based on Criteria

Table 1. Respondent Data Based on Business Type

Type of business	F	%
Trade / Retail	88	55%
Industry / Production	48	30%
Service	24	15%
Amount	**160**	**100%**

Based on Table 1, the respondents' businesses were dominated by trade/retail (88 MSMEs/55%), which are transaction-intensive and require good financial management for effective cash flow. This was followed by industry/production (48 MSMEs/30%), which

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require a production cost structure, inventory, and financial planning. Then, services (24 MSMEs/15%), which focus on service quality and revenue efficiency.

Conclusion: Retail dominance indicates the need for intensive financial management and financial technology for the effectiveness of MSMEs.

Table 2. Respondent Data Based on Business Length

Length of Business	F	%
1 Year - 8 Years	115	72%
9 Years - 16 Years	27	17%
17 Years - 25 Years	18	11%
Amount	160	100%

Based on Table 2, respondents' business duration was predominantly 1–8 years (115 MSMEs/72%), indicating the majority were at a development stage requiring increased financial and technological capacity for sustainability. This was followed by 9–16 years (27 MSMEs/17%), with sufficient experience for stable financial decisions. And 17–25 years (18 MSMEs/11%), with extensive experience for long-term sustainability.

Conclusion: The dominance of the initial business phase emphasizes the need for financial management and financial technology to optimize the growth of MSMEs.

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Table 3. Respondent Data Based on Number of Employees

Number of employees	F	%
0 - 4 Workers	102	64%
5 - 19 Workers	51	32%
20 - 99 Workers	6	4%
100 Workers	1	1%
Amount	160	100%

Based on the employee data in Table 3, it is known that the majority of respondents are micro-enterprises with 0–4 employees, representing 102 MSMEs, or 64%. This indicates that the majority of MSMEs in this study are still operating small-scale businesses with limited workforce capacity. This situation indicates that business management, including financial management, is generally still carried out in a simple manner and has not fully utilized complex systems.

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Furthermore, 51 MSMEs, or 32%, have a workforce of 5–19 people, categorized as small businesses. This number indicates that some businesses have experienced business growth, marked by an increased need for workers to support operations. Meanwhile, medium-sized businesses with 20–99 employees account for only 6 MSMEs, or 4%, while large businesses with more than 100 employees account for only 1 MSME, or 1%.

Based on these results, it can be concluded that the respondents in this study were predominantly micro and small businesses. This indicates that the majority of MSMEs in Madiun Regency are still in the development stage, requiring improved financial management skills and technology utilization to support optimal business growth.

Table 4. Respondent Data Based on Business Capital

Capital	F	%
< 50 million	65	41%
50 million - 500 million	71	44%
500 million - 10 M	24	15%
Amount	**160**	**100%**

Based on Table 4, respondents' business capital was dominated by IDR 50–500 million (71 MSMEs/44%), a small business category with adequate operational and development capabilities. This was followed by <IDR 50 million (65 MSMEs/41%), micro-enterprises with limited capital that hinders modern technology and management. And IDR 500 million–IDR 10 billion (24 MSMEs/15%), medium-sized businesses with strong capacity. Conclusion: The dominance of micro-small businesses emphasizes the need for financial management and financial technology for capital optimization and sustainable growth.

Description of Research Variables

This study uses two independent variables, namely Technological Literacy and Financial Attitude, and one dependent variable, namely MSME Financial Management. Furthermore, this study also includes one mediating variable, namely Financial Technology, which acts as an intermediary variable in the relationship between the independent and dependent variables.

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This section will describe the results of the respondents' responses obtained through the questionnaire. The collected data was then processed and analyzed using descriptive analysis techniques to provide an overview of the levels of technological literacy, financial attitudes, financial technology utilization, and financial management among MSMEs in Madiun Regency.

Descriptive analysis was conducted using the average (mean) value of each research variable indicator. This average value was used to interpret the respondents' responses to each of the variables studied. Furthermore, to facilitate interpretation of the research results, the following categorical criteria were used based on an interval scale:

Table 5. Interval Scale

Interval Scale	Information
8.20 – 10.00	Very high
6.40 – 8.19	Tall
4.60 – 6.39	Currently
2.80 – 4.59	Low
1.00 – 2.79	Very Low

Based on the criteria in Table 5, the average value obtained for each variable can be categorized to determine the level of technological literacy, financial attitudes, financial technology use, and financial management of MSMEs. Therefore, the results of this analysis are expected to provide a clear picture of the actual condition of MSMEs in Madiun Regency according to the variables studied.

The results of the descriptive analysis of respondents' responses to the independent variables, namely Technological Literacy and Financial Attitude, the dependent variable, namely Financial Management, and the intervening variable, namely Financial Technology, are as follows:

Partial Least Square Model Scheme

In this study, the analysis applied is Partial Least Square (PLS) using the SmartPLS 4 application. The following is a model diagram of the PLS program:

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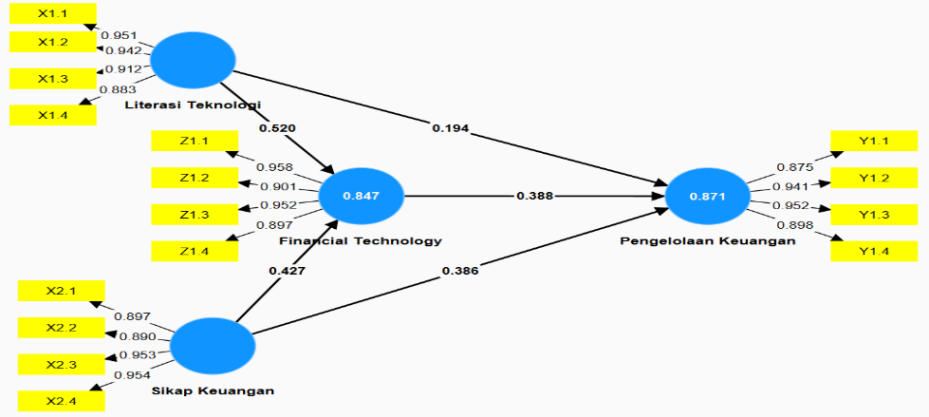


Figure 1. Model SchemePartial Least Square

Measurement Model (outer model)

Validity Test

According to Ghozali and Latan (2015), validity testing is conducted to assess whether a questionnaire is acceptable or not. In PLS analysis, validity testing consists of two types, namely convergent validity and discriminant validity.

A. Convergent Validity Test

Table 6. Convergent Validity Test

	Technology Literacy	Financial Attitude	Financial Management	*Financial Technology*
X1.1	0.951			
X1.2	0.942			
X1.3	0.912			
X1.4	0.883			
X2.1		0.897		
X2.2		0.890		
X2.3		0.953		
X2.4		0.954		
Y1			0.875	
Y2			0.941	
Y3			0.952	
Y4			0.898	
Z1				0.958

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Z2				0.901
Z3				0.952
Z4				0.897

Based on the results of the smart PLS output in table 6 and figure 2, it can be concluded that all indicator outputs are in the range of 0.50 to 0.50, which means that the variables of technological literacy, financial attitudes, financial technology and financial management in this study, the variables can be considered valid and have met the convergent validity criteria.

B. Discriminant Validity Test

Table 7. Discriminant Validity Test

	Literacy Technology	Attitude Finance	Management Finance	Financial Technology
X1.1	**0.951**	0.852	0.873	0.869
X1.2	**0.942**	0.819	0.819	0.830
X1.3	**0.912**	0.802	0.812	0.833
X1.4	**0.883**	0.799	0.756	0.781
X2.1	0.773	**0.897**	0.829	0.794
X2.2	0.845	**0.890**	0.808	0.838
X2.3	0.833	**0.953**	0.841	0.830
X2.4	0.828	**0.954**	0.858	0.822
Y1.1	0.776	0.780	**0.875**	0.786
Y1.2	0.827	0.841	**0.941**	0.855
Y1.3	0.842	0.855	**0.952**	0.864
Y1.4	0.801	0.834	**0.898**	0.814
Z1.1	0.820	0.816	0.844	**0.958**
Z1.2	0.877	0.838	0.835	**0.901**
Z1.3	0.829	0.821	0.838	**0.952**
Z1.4	0.807	0.819	0.840	**0.897**

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Based on Table 7 of the Discriminant Validity Test using the cross loading approach, it can be seen that all indicators in each construct have the highest loading value on the measured variable compared to other variables.

Specifically, the Technological Literacy variable has the highest loading values for its construct, such as 0.951, 0.942, and 0.912, all of which are higher than its correlation values with the Financial Attitude, Financial Management, and Financial Technology constructs. The Financial Attitude variable also has the highest loading values for its own construct, for example, 0.897, 0.890, and 0.954, which are higher than the values for the other constructs.

Furthermore, for the Financial Management variable, the indicator shows the highest loading values for its construct, such as 0.875, 0.941, and 0.952, which are consistently higher than those for other constructs. Similarly, for the Financial Technology variable, the highest loading values, such as 0.958, 0.901, and 0.952, are for its own construct and are greater than those for other variables.

These findings indicate that each indicator has a good ability to represent its respective construct and is able to differentiate itself from other constructs. Therefore, it can be concluded that the measurement model has met the criteria for discriminant validity based on cross-loading, thus each variable in this study is declared valid and has a good level of discrimination.

Reliability Test

Table 8. Reliability Test

	Cronbach's alpha	Composite reliability (rho_a)
Technology Literacy	0.941	0.944
Financial Attitude	0.943	0.943
Financial Management	0.937	0.939
Financial Technology	0.946	0.946

In table 8, it was found that the composite reliability indicator value in the variables of financial knowledge, financial attitudes, hyperconsumerism behavior and locus of control had met the criteria with a composite reliability value of more than 0.70. It can be concluded that all variables used are said to be reliable.

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3. Structural Model (Inner Model)

A. R-Square (R^2)

Table 9. R-Square Test (R2)

	R-square
Financial Management	0.871
Financial Technology	0.847

According to Table 9, the R2 estimation accuracy of Financial Management (Y) is 0.871, so this value has a moderate accuracy estimate because the R2 value can be said to be high if the R2 value is 0.75. This indicates that the technological literacy (X1), financial attitudes (X2), and financial technology (Z) variables influence the financial management variable by 87.1%. Meanwhile, the R-square value of the financial technology variable is 0.847, indicating that the technological literacy and financial attitudes variables can explain the financial technology variable by 84.7%, so it is said that the model is considered strong.

Fit Model

Table 10. SRMR Test

	Saturated model
SRMR	0.038

The Standardized Root Mean Square Residual (SRMR) value in Table 10 shows a saturated model value of 0.038. This value indicates that the research model has a good level of goodness of fit, as the SRMR value is below the 0.08 threshold. The smaller the SRMR value, the smaller the difference between the observed correlation matrix and the correlation matrix predicted by the model.

Thus, these results indicate that the research model used is appropriate and able to describe the relationship between variables in the research well, so that it can be used for further hypothesis testing.

Hypothesis testing

Hypothesis testing aims to identify relationships between variables that can be determined or concluded from a specific hypothesis. To establish a hypothesis,

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bootstrapping is performed using the SmartPLS 4.0 application. A hypothesis is considered significant or proven if the t-statistic is greater than the t-table (1.96) and the p-value is less than 0.05.

This hypothesis testing is used to understand the influence of an influencing variable on the affected variable. The hypothesis testing used is based on a 5% alpha, so the value obtained through the calculation of the one-tailed t-statistic for N = 95 and the results obtained from the t-table df = (N-1 = 94) = 1.66123, the t-table value is 1.66123 and the p-value with a significance level of 0.05 is used as the rejection and acceptance criteria. The following are the rejection and acceptance criteria for the hypothesis, namely:

1. H0 is rejected and Ha is accepted if the t-statistic > 1.96 with a p-value < 0.05, which proves a significant influence.
2. H0 is accepted and Ha is rejected if the t-statistic < 1.96 with p-value > 0.05, which proves that there is no significant influence.

Research using bootstrapping testing with calculated data in the research data tabulation table (based on data in the appendix) obtained path coefficient output to determine whether there is an influence between each construct. The results of the hypothesis test using SmartPLS 4.0 can be seen in Table 15 as follows:

Table 11. Path Coefficients Results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Technology Literacy -> Financial Technology	0.52	0.518	0.067	7,808	0.000
Financial Attitude -> Financial Technology	0.427	0.425	0.068	6,301	0.000
Financial Technology -> Financial Management	0.388	0.387	0.08	4,872	0.000

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Technology Literacy -> Financial Management	0.194	0.194	0.068	2,837	0.002
Financial Attitude -> Financial Management	0.386	0.385	0.071	5,442	0.000

Based on Table 11, there are direct hypothesis test results with a t-statistic value > 1.96 and a p-value < 0.05. However, this study uses two models as follows:

1. Technological Literacy → Financial Technology

Technological literacy has a positive and significant effect on financial technology (coefficient 0.520; t-statistic 7.808; p-value 0.00). Increased literacy drives FinTech adoption among MSMEs. The hypothesis is accepted.

2. Financial Attitude → Financial Technology

Financial attitudes have a positive and significant effect on Financial Technology (coefficient 0.427; t-statistic 6.301; p-value 0.000). Good financial attitudes increase FinTech utilization. The hypothesis is accepted.

3. Financial Technology → Financial Management

Financial Technology has a positive and significant effect on Financial Management (Original Sample 0.388; p-value 0.000 < 0.05). The increase in FinTech improves financial management. Ha is accepted, H0 is rejected.

4. Technology Literacy → Financial Management

Technological Literacy has a positive and significant effect on Financial Management (Original Sample 0.194; p-value 0.002 < 0.05). Hypothesis H1 is accepted, H0 is rejected.

5. Financial Attitude → Financial Management

Financial Attitude has a positive and significant effect on Financial Management (Original Sample 0.386; p-value 0.000 < 0.05). A good attitude improves financial management. Ha is accepted, H0 is rejected.

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Table 12. Results of Specific Indirect Effects

In table 12 it can be seen that the results of the indirect hypothesis test are:

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Technology Literacy -> Financial Technology -> Financial Management	0.202	0.201	0.05	4,071	0.000
Financial Attitude -> Financial Technology -> Financial Management	0.166	0.164	0.043	3.86	0.000

1. Technological Literacy → Financial Management via Financial Technology

Mediating effect: p-value 0.000 < 0.05; Original Sample (O) 0.202 (positive, significant indirect effect). FinTech partially mediates (direct effect remains 0.194), according to Baron & Kenny (1986).

2. Financial Attitude → Financial Management via Financial Technology

Mediating effect: p-value 0.000 < 0.05; Original Sample (O) 0.166 (positive, significant indirect effect). FinTech partially mediates (direct effect remains significant), according to Baron & Kenny (1986).

Discussion of Research Results

1. The Influence of Technological Literacy (X1) on Financial Technology (Z)

Based on the results of the hypothesis testing, a p-value of 0.000 < 0.05 was obtained, so it can be concluded that the Technological Literacy variable has a positive and significant effect on Financial Technology. These results indicate that the higher the level of technological literacy possessed by MSMEs, the higher the utilization of financial

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technology services to support business operations, especially in financial management. Technological literacy describes an individual's ability to understand, use, and manage digital technology to support business activities. In the current digital era, this ability is important because MSMEs are required to be able to adapt to various technological innovations, especially in digital financial services.

MSMEs with high technological literacy tend to more easily understand the benefits of financial technology services, such as digital payments, e-wallets, financial recording applications, and online loans, in supporting business financial management. Utilizing these services can help improve transaction efficiency, speed up payment processes, simplify cash flow recording, and expand access to formal financial services. The better a business owner's technological capabilities, the greater the opportunity to optimize the use of financial technology to support daily business financial management.

This is supported by the highest average value of 9.04 in item X1.2, namely "I know the function of technology that can help business operations", which indicates that MSMEs in Madiun Regency have a good understanding of the function of technology in supporting business financial management. Meanwhile, the lowest average value of 8.72 in item X1.3, namely "I often use digital technology in carrying out daily business activities", although still considered high, indicates that the intensity of digital technology use can still be further increased.

The results of this study align with the Theory of Planned Behavior, which explains that an individual's ability to understand technology can increase perceived behavioral control, thereby encouraging the use of digital financial technology. This finding is also supported by research by Awwaliyah et al. (2023), which states that the ability to understand technology influences the use of digital financial services. Therefore, the results of this study indicate that the higher the technological literacy of MSMEs, the higher their utilization of financial technology to support business financial management.

2. The Influence of Financial Attitude (X2) on Financial Technology (Z)

Based on the results of the hypothesis testing, a p-value of 0.000 < 0.05 was obtained, indicating that financial attitudes have a positive and significant effect on financial technology. These results indicate that the better the financial attitudes of MSMEs, the higher the utilization of financial technology to support business financial management. A good financial attitude is reflected in the ability of MSMEs to manage finances in a disciplined, responsible, and planned manner, thus encouraging more open behavior towards the use of digital financial technology.

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This is evident from the high level of respondents' assessment of the indicator "I avoid using business funds for non-business purposes," with an average score of 8.95. This condition indicates that MSMEs in Madiun Regency have been able to separate business and personal interests and have good financial control. Furthermore, the indicators "I feel fully responsible for the financial condition of my business" and "I save or set aside profits for business development" also received a high average score of 8.72. These results indicate that MSMEs are aware of maintaining business financial stability and are oriented towards business sustainability.

This positive financial attitude encourages MSMEs to utilize financial technology as a means of supporting financial management, such as using digital payments and financial recording applications. The use of financial technology is considered to provide convenience, increase transaction efficiency, and help manage business cash flow more systematically. The results of this study align with the Theory of Planned Behavior, which explains that an individual's positive attitude toward a behavior will influence their intention and decision to use technology. This finding is also supported by research by Agustiar et al. (2025) and Yulianto and Rita (2023), which shows that financial attitudes and financial technology play a significant role in improving the quality of business financial management.

3. The Influence of Financial Technology (Z) on Financial Management (Y)

Based on the results of the hypothesis testing, the financial technology variable on financial management showed a p-value of 0.000 < 0.05, indicating a significant effect. Furthermore, the original sample value of 0.388 indicates a positive relationship. These results indicate that the more optimal the use of financial technology, the better the financial management of MSMEs in Madiun Regency.

The use of financial technology helps MSMEs record transactions more accurately, simplify cash flow management, and increase efficiency in business financial activities. The use of financial technology also supports faster and more accurate financial decision-making because financial information can be accessed more easily and systematically. This demonstrates that financial technology is used not only as a transaction tool but also as a supporting tool for improving the quality of business financial management.

This is evident from the high level of respondents' assessment of statement Z3, "Using fintech applications helps me save time and operational costs for financial recording," with an average score of 8.95. These results indicate that MSMEs in Madiun Regency utilize financial technology to improve the effectiveness and efficiency of their business financial management. Meanwhile, statement Z2, "I find it easy to access

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financial data digitally through fintech applications," received an average score of 8.60 and remains in the high category. This indicates that MSMEs have perceived good access to financial technology services, although their utilization can still be optimized.

The results of this study align with the Theory of Planned Behavior, which explains that technology use behavior is influenced by individual intentions, which are formed from the perceived benefits and ease of use of the technology. In this study, MSMEs who perceive the benefits and ease of use of financial technology tend to be more motivated to utilize it in their business financial management. This finding is also supported by research by Yulianto & Rita (2023), which states that financial technology influences financial management. Thus, the use of financial technology is a crucial factor in improving the quality of MSME financial management.

4. The Influence of Technological Literacy (X1) on Financial Management (Y)

Based on the results of the Partial Least Square (PLS) test, the variable of technological literacy on financial management among MSMEs in Madiun Regency showed a p-value of 0.000 < 0.05 with a coefficient value (original sample) of 0.194. These results indicate that technological literacy has a positive and significant effect on financial management. This means that the higher the level of technological literacy possessed by MSMEs, the better the financial management of their businesses.

From the perspective of the Theory of Planned Behavior, technological literacy can reflect perceived behavioral control, namely an individual's ability to understand and utilize technology. The better an MSME's ability to use technology, the greater their confidence in managing their business finances effectively. Technological literacy helps entrepreneurs more easily access financial information, manage cash flow, record transactions, and develop more systematic and targeted financial plans.

The results of this study align with those of Awaliyah et al. (2023), who stated that digital financial literacy significantly impacts the financial performance of MSMEs, and those of Yulianto and Rita (2023), who demonstrated that the use of financial technology can improve the quality of financial management. Thus, technological literacy not only helps improve efficiency and accuracy in financial management but also supports MSMEs in making more rational financial decisions that are oriented towards business sustainability.

5. Financial attitude variable (X2) towards financial management (Y)

Based on the results of the hypothesis test, the financial attitude variable toward financial management showed a p-value of 0.000 < 0.05, indicating a statistically significant effect. Furthermore, the original sample (O) value of 0.386 indicates a positive

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relationship. These results indicate that the better the financial attitudes of MSMEs in Madiun Regency, the better the quality of their financial management.

Financial attitudes reflect discipline, responsibility, and prudence in managing business finances. This is evident in MSMEs' ability to control expenses, develop financial plans, manage cash flow, and make rational and informed financial decisions. MSMEs with positive financial attitudes tend to be more capable of managing business finances effectively, thus supporting business sustainability.

The results of this study align with the Theory of Planned Behavior, which explains that an individual's positive attitude toward a behavior will form a strong intention and encourage the emergence of actual behavior. In this study, a positive attitude toward financial management encourages MSMEs to implement better and more planned financial management. This finding is also consistent with research by Safitri et al. (2023), which states that financial attitudes influence MSME financial management. Thus, financial attitudes are a crucial factor in improving the quality of financial management in MSMEs.

6. The influence of technological literacy (X1) on financial management (Y) through financial technology (Z)

Based on the results of the hypothesis testing, the influence of technological literacy on financial management through financial technology shows a p-value of 0.000 < 0.05 with an original sample (O) value of 0.202. These results indicate that financial technology is able to mediate the influence of technological literacy on financial management positively and significantly. This means that the higher the technological literacy of MSMEs in Madiun Regency, the more optimal the use of financial technology will be, which ultimately can improve the quality of business financial management.

MSMEs with strong technological capabilities tend to more easily understand and utilize financial technology services in their business finances. The use of financial technology helps businesses record transactions more systematically, manage cash flow more structuredly, and obtain more accurate financial information to support business decision-making. This demonstrates that the use of financial technology can help improve the effectiveness and efficiency of MSME financial management.

The results of this study align with the Theory of Planned Behavior, which explains that technological literacy can strengthen perceived behavioral control, namely an individual's confidence in their ability to use technology. The stronger this confidence, the greater the incentive to utilize financial technology in business financial management. This finding is also supported by research by Awwaliyah et al. (2023), which states that

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digital literacy influences financial behavior, and research by Yulianto and Rita (2023), which shows that financial technology can improve the quality of financial management. Therefore, increasing technological literacy supported by the use of financial technology can encourage more effective, efficient, and structured financial management of MSMEs.

7. The influence of financial attitudes (X2) on financial management (Y) through financial technology (Z)

Based on the results of the hypothesis testing, the influence of financial attitudes on financial management through financial technology showed a p-value of 0.000 < 0.05 with an original sample (O) value of 0.166, indicating a positive relationship. These results indicate that financial technology is able to mediate the influence of financial attitudes on financial management positively and significantly. This means that the better the financial attitudes of MSMEs in Madiun Regency, the more optimal the use of financial technology will be, which ultimately can improve the quality of business financial management.

Good financial behavior is reflected in discipline, responsibility, and prudence in managing business finances. This encourages MSMEs to utilize financial technology to support financial activities, such as recording transactions, controlling cash flow, and managing payments more systematically. The use of financial technology helps businesses obtain more accurate financial information, enabling more effective and rational financial decision-making.

The results of this study align with the Theory of Planned Behavior, which explains that positive individual attitudes influence behavioral intentions, which then drive actual behavior. In this study, positive financial attitudes encourage MSMEs to utilize financial technology as a means of managing their business finances. This finding is also supported by research by Yulianto and Rita (2023), which states that financial technology plays a role in improving the quality of financial management. Therefore, the combination of positive financial attitudes and the use of financial technology can support more effective, efficient, and sustainable financial management of MSMEs.

CONCLUSION

This study shows that technological literacy and financial attitudes have a positive and significant impact on financial technology and the financial management of MSMEs in Madiun Regency. Furthermore, financial technology has been shown to mediate the influence of technological literacy and financial attitudes on MSME financial management. These results indicate that the better MSMEs understand technology and implement sound financial attitudes, the more optimal the use of financial technology to

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support effective and efficient business financial management.

Research findings also indicate that the digital transformation of MSMEs depends not only on the availability of technology but also on the readiness of business actors to utilize digital technology in financial activities. The use of financial technology can assist MSMEs in recording transactions, managing cash flow, controlling finances, and improving operational efficiency. Therefore, MSMEs need to increase their use of digital technology and conduct regular financial evaluations to ensure more accurate and targeted business decisions.

For local governments and related agencies, the results of this study can serve as a basis for expanding digital training and mentoring for MSMEs, particularly regarding the use of financial technology in business financial management. Furthermore, further research is recommended to include other variables related to digital transformation, such as digital readiness, financial inclusion, or digital infrastructure, to obtain more comprehensive and broader-ranging research results.

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