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TRANSFORMATION OF MSMES' FINANCIAL BEHAVIOR: THE ROLE OF FINANCIAL TECHNOLOGY, FINANCIAL LITERACY, AND FINANCIAL INCLUSION IN PEKALONGAN CITY

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Abstract

Financial behavior is a key factor in creating financial stability. This study aims to examine and analyze the effects of financial technology, financial literacy, and financial inclusion on the financial behavior of MSMEs in Pekalongan City. The sampling technique used was non-probability sampling with a purposive sampling method. The sample obtained in this study consisted of 100 respondents who are MSME actors in Pekalongan City. This study used multiple linear regression analysis and conducted partial hypothesis testing (t-test).
The results of this study indicate that financial technology has a positive and significant effect on the financial behavior of SME operators in Pekalongan City. Financial literacy has a positive but insignificant effect on the financial behavior of SME operators in Pekalongan City. Financial inclusion has a positive but insignificant effect on the financial behavior of SME operators in Pekalongan City.

Keywords: Financial Technology, Literasi Keuangan, Inklusi Keuangan, Perilaku Keuangan

INTRODUCTION

Micro, small, and medium-sized enterprises (MSMEs) are not affected by the crisis because, in addition to contributing to economic growth and job creation, MSMEs also contribute to the distribution of development benefits. One key consideration when managing micro, small, and medium-sized enterprises (MSMEs) is financial management knowledge. By 2023, 27 million MSMEs in Indonesia had adopted digital technology. By 2024, Indonesia aims to have 30 million MSME operators adopt digital technology.

The findings of the study by Ummah et al. (2021) indicate that financial behavior influences the performance of SMEs. Good financial behavior supports businesses in enhancing their competitiveness in the global economy, while poor financial behavior leads to the closure of a business. According to Statman (as cited in Hijir, 2022), financial behavior is the result of various academic disciplines. The first discipline is psychology, which analyzes human thought processes and behavior, as well as how these psychological processes are influenced by the physical and external environment. The second discipline is finance, which analyzes financial systems, the distribution and use of natural resources, and the third discipline is systematic sociology, which analyzes human behavior systematically.

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The increasing modernization of payment systems has led to the emergence of the term "financial technology," commonly known as fintech. According to Saleh & Fatima (as cited in Ariska et al., 2023), financial technology refers to the optimal use of technology to enhance financial services. Various industries, including payment startups, lending, personal finance, retail investment, crowdfunding, remittances, and financial research, have witnessed the rapid development of fintech (Wulandari et al., 2022).

According to the OJK, the financial literacy rate in Indonesia in 2024 is 65.43%. Financial literacy, as defined by Hijir (2022), is the ability to manage one's finances effectively to ensure future growth and a more prosperous life. Financial literacy helps improve the quality of financial services and contributes to a country's economic growth and development. Having financial knowledge helps individuals manage their financial plans so they can increase the time value of money, generate more income, and improve their quality of life.

Financial inclusion is a strategy aimed at eliminating all forms of barriers that prevent people from accessing financial services, regardless of whether they are paid or free (Pinem & Mardiatmi, 2021). The promotion of financial inclusion encourages the use of financial products and enables individuals to use them more freely for their personal and professional needs. Therefore, through financial inclusion, entrepreneurs can use their financial knowledge to make decisions that align with their business.

However, the main issue that frequently arises is the public's low level of financial literacy. Many people do not yet understand basic financial concepts such as budgeting, investing, saving, and borrowing. This can lead to poor financial decision-making, such as high levels of debt or reliance on credit, without considering the associated risks. Although access to financial services is becoming easier, gaps in financial inclusion still exist, particularly among low-income communities and those living in remote areas. Additionally, not everyone is able to effectively utilize fintech, whether due to a lack of digital literacy or distrust of technology. There are also risks related to data security and the risk that people may misuse fintech services, which can impact their ability to make wise financial decisions.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

The theory that explains the determinants of behavior is the Theory of Planned Behavior (TPB) (Ajzen, 1991). The TPB explains why people do certain things. The TPB explains that a person's behavior is influenced by three factors: attitude or perceived value of the behavior, subjective norms, and perceived behavioral control. TPB has several objectives, namely: predicting and understanding the influence of behavioral intentions, identifying strategies to change behavior, and explaining current human behavior. The relationships in this study pertain to financial literacy, financial inclusion, and financial technology and their expected effects on individual behavior and behavioral control.

The use of fintech apps that offer automation features, such as setting up regular fund allocations for investments or savings, helps users better plan their long-term finances. This aligns with TPB, which also notes that people's views on fintech usage will influence their attitudes toward financial management. The adoption of fintech in the financial behavior of MSMEs is based on their positive view that fintech provides an effective and convenient way to manage their money. This aligns with research by Hijir (2022), Ariska et al. (2023), and W. P. Sari & Nikmah (2023), which states that financial technology has a significant positive effect on financial behavior.

H1 : Financial Technology has a positive and significant effect on financial behavior.

Financial literacy influences investment behavior and risk management. People who understand the importance of diversification and have a grasp of financial markets tend to be more confident when making investment decisions. Additionally, they will have a better understanding of the potential risks associated with various financial options, which increases the likelihood that they will make smarter and more prudent investments. In relation to TPB, an individual's financial

behavior refers to how they view the importance of possessing financial knowledge and skills. Individuals who tend to possess financial literacy recognize the importance of financial knowledge. This aligns with research by Ariska et al. (2023), Hijir (2022), and Andriyani & Sulistyowati (2021), which indicates that financial literacy has a positive and significant influence on financial behavior.

H2 : Financial Literacy has a positive and significant effect on financial behavior.

Financial inclusion is a key factor in shaping an individual's financial behavior according to the TPB. Access to formal financial services fosters a more positive attitude toward effective financial management, establishes social norms that promote ethical financial behavior, and strengthens the perception of control over financial decisions. Thus, financial inclusion enhances an individual's motivation and ability to manage their finances more effectively and responsibly. This is consistent with research by Andriyani & Sulistyowati (2021), Pinem & Mardiatmi (2021), and Savira & Ratu (2024), which states that financial inclusion has a significant positive effect on financial behavior.

H3 : Financial Inclusion has a positive and significant effect on financial behavior

RESEARCH METHODS

This study employs a causal research design, which examines cause-and-effect relationships. Causal research aims to establish causality between the independent variable and the related dependent variable (Sugiyono, 2017). The object of this study is MSMEs in Pekalongan City, covering various important aspects that play a role in local economic development. The population in this study consists of MSME actors in Pekalongan City. Each individual participating in this study draws their own conclusions from the research results. In 2023, the population consisted of 23,951 MSME operators, whereas the figure for 2024 is not yet directly known. Therefore, it is difficult to determine the sample size. The sampling method to be used in this study is purposive sampling. This study is quantitative and involves the use of primary data. The primary data collected in this study consists of questionnaires distributed to MSME operators in Pekalongan City. Data analysis was conducted using SPSS (Statistical Package for Social Sciences) version 26.

RESULTS AND DISCUSSION

Validity Test

Table 1. Validity Test

Variabel	Item	R hitung	R table	Note
*Financial Technology (*X1)	X1.1	0,532	0,1966	Valid
	X1.2	0,512	0,1966	Valid
	X1.3	0,509	0,1966	Valid
	X1.4	0,363	0,1966	Valid
	X1.5	0,517	0,1966	Valid
	X1.6	0,414	0,1966	Valid
Financial Literacy *(*X2)	X2.1	0,752	0,1966	Valid
	X2.2	0,617	0,1966	Valid
	X2.3	0,542	0,1966	Valid
	X2.4	0,637	0,1966	Valid
	X2.5	0,645	0,1966	Valid
	X2.6	0,661	0,1966	Valid
	X2.7	0,641	0,1966	Valid
	X2.8	0,717	0,1966	Valid
Financial Inclusion *(*X3)	X3.1	0,440	0,1966	Valid

	X3.2	0,720	0,1966	Valid
	X3.3	0,710	0,1966	Valid
	X3.4	0,742	0,1966	Valid
	X3.5	0,659	0,1966	Valid
	X3.6	0,766	0,1966	Valid
	X3.7	0,751	0,1966	Valid
	X3.8	0,807	0,1966	Valid
Financial Behavior *(*Y)	Y.1	0,641	0,1966	Valid
	Y.2	0,786	0,1966	Valid
	Y.3	0,591	0,1966	Valid
	Y.4	0,580	0,1966	Valid
	Y.5	0,598	0,1966	Valid
	Y.6	0,642	0,1966	Valid
	Y.7	0,682	0,1966	Valid
	Y.8	0,197	0,1966	Valid
	Y.9	0,701	0,1966	Valid
	Y.10	0,628	0,1966	Valid

Data source: Primary data analyzed using SPSS (2024)

Based on the data analysis, the Corrected Item-Total Correlation for each question item is greater than the critical value of 0.1966. Therefore, it can be concluded that all question items are valid.

Reliability Test

Table 2. Reliability Test

Variabel	Cronbach Alpha	R tabel	Note
Financial Technology (X1)	0,647	0,60	Reliable
Financial Literacy (X2)	0,804	0,60	Reliable
Financial Inclusion (X3)	0,848	0,60	Reliable
Financial Behavior (Y)	0,787	0,60	Reliable

Data source: Primary data analyzed using SPSS (2024)

Based on the results of the analysis, each variable has a Cronbach's Alpha value greater than 0.60, so it can be considered reliable.

Normality Test

Table 3. Normality Test

Keterangan	Nilai
N	100
Normal Parameters	
Mean	0,0000000
Std. Deviation	1,85728346
Most Extreme Differences	
Absolute	0,065
Positive	0,065
Negative	-0,049
Test Statistic	0,065
Asymp. Sig. (2-tailed)	0,200

Data source: Primary data analyzed using SPSS (2024)

Based on the results of the analysis, the sig (2-tailed) value was 0.200, which is greater than the significance level of 0.05; therefore, the data are normally distributed.

Multicollinearity Test

Table 4. Multicollinearity Test

Variabel	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	30,243	5,216	-	5,798	0,000	-	-
Financial Technology (X1)	0,292	0,108	0,264	2,699	0,008	0,992	1,008
Financial Literacy (X2)	0,151	0,098	0,153	1,548	0,125	0,974	1,027
Financial Inclusion (X3)	0,047	0,087	0,053	0,539	0,591	0,977	1,024

Data source: Primary data analyzed using SPSS (2024)

Based on the analysis results, the tolerance values for each variable were > 0.100 and the VIF values were < 10.00; therefore, it was concluded that there was no multicollinearity.

Heteroscedasticity Test

Table 5. Heteroscedasticity Test

Variabel	B	Std. Error	Beta	t	Sig.
(Constant)	-1,252	2,666	-	-0,470	0,640
Financial Technology (X1)	0,041	0,060	0,069	0,683	0,496
Financial Literacy (X2)	-0,021	0,052	-0,043	-0,405	0,686
Financial Inclusion (X3)	0,077	0,049	0,167	1,591	0,115

Data source: Primary data analyzed using SPSS (2024)

The results of the analysis indicate that the significance value is above the 5% significance level; therefore, it can be concluded that there is no heteroscedasticity among these variables.

Multiple Linear Regression Analysis

Table 6. Multiple Linear Regression Analysis

Variabel	B	Std. Error	Beta	t	Sig.
(Constant)	30,243	5,216	-	5,798	0,000
Financial Technology (X1)	0,292	0,108	0,264	2,699	0,008
Financial Literacy (X2)	0,151	0,098	0,153	1,548	0,125
Financial Inclusion (X3)	0,047	0,087	0,053	0,539	0,591

Data source: Primary data analyzed using SPSS (2024)

Based on the results of the multiple linear regression analysis, the financial behavior of MSMEs in Pekalongan City is positively and significantly influenced by financial technology. The t-test results indicate that H0 is rejected and Ha is accepted, as the study findings show that the significance level of 0.008 is less than 0.05 and the calculated t-value of 2.699 is greater than the critical t-value of 1.985. Therefore, the first hypothesis (H1)—that financial technology has a positive and significant effect on the financial behavior of MSMEs in Pekalongan City in this study—is accepted. Financial technology can simplify business operations, such as online payments, which can attract customers to use these services. Financial technology also offers solutions that can assist SMEs in financial services, particularly in payment systems. Additionally, perceived behavioral control is a key factor in fintech adoption. The transformation of SMEs' financial behavior in Pekalongan City, shifting from a reliance on manual methods to technology-based financial managementFintech helps address various challenges frequently faced by SMEs, such as difficulties in recording transactions, limited access to formal financial services, and a lack of cash flow transparency. By adopting fintech, SMEs can improve their financial planning, minimize the risk of recording errors, and enhance operational efficiency. These findings are consistent with the Theory of Planned Behavior proposed by Ajzen (1991), which explains that human behavior is influenced by three main factors: attitudes toward the behavior, subjective norms, and perceived behavioral control. These three components contribute to the strong intention of MSME owners to use fintech, which is then reflected in changes in their financial behavior. A positive attitude toward the benefits of fintech, social support from the business community, and perceived ease of access are the main drivers of this change. This study is consistent with the research conducted by (Hijir, 2022), (Ariska

et al., 2023), and (W. P. Sari & Nikmah, 2023), whose findings indicate that financial technology has a significant influence on the financial behavior of MSMEs.

Based on the results of the multiple linear regression analysis, financial behavior among MSMEs in Pekalongan City is positively but not significantly influenced by financial literacy. The t-test results indicate that H0 is accepted and Ha is rejected, as the study findings show that the significance level of 0.125 > 0.05 and the calculated t-value of 1.548 < the critical t-value of 1.985. Therefore, the second hypothesis (H2)—that financial literacy has a positive and significant effect on financial behavior among SMEs in Pekalongan City in this study—is rejected. This finding can be explained using the Theory of Planned Behavior, which states that an individual's behavior is influenced by three main factors: attitude toward the behavior, subjective norms, and perceived behavioral control. Financial literacy fosters a positive attitude among SME operators regarding the importance of sound financial management, such as maintaining regular transaction records, managing cash flow, and long-term financial planning. However, despite these attitudes, high financial literacy has not been fully translated into concrete actions, given external factors such as resource constraints, time limitations, or the influence of the business environment, which hinder the optimal implementation of financial literacy in daily activities. Many MSMEs in Pekalongan City still rely on traditional methods of financial management, such as manually recording expenses or relying on intuition when making financial decisions. This creates a gap between their level of financial literacy and their ability to apply it in business operations. Within the Planned Behavior theory framework, increasing subjective norms and perceived behavioral control through environmental support and relevant tools can be key to making financial literacy more effective in changing the financial behavior of MSMEs. This study aligns with research conducted by (N. R. Sari & Listiadi, 2021) and (Hariyani, 2024), whose results indicate that financial literacy has a positive but non-significant effect on the financial behavior of MSMEs.

Financial behavior among MSMEs in Pekalongan City is positively but not significantly influenced by financial inclusion. Therefore, the second hypothesis (H2)—that financial literacy has a positive and significant effect on financial behavior among MSMEs in Pekalongan City—is rejected in this study. This finding can be explained using the Theory of Planned Behavior proposed by Ajzen (1991), which states that behavior is influenced by attitudes toward the behavior, subjective norms, and perceived behavioral control. Attitudes toward financial inclusion among SMEs in Pekalongan City indicate a positive outlook, where business owners recognize the importance of access to formal financial services such as financing, savings, or insurance to support the sustainability of their businesses. However, this positive attitude is not yet strong enough to translate into tangible changes in financial behavior. This is likely due to the low intensity of use of available financial services, even though access has become more open. Financial inclusion also tends to be weak among MSMEs in Pekalongan; many MSME operators are still more comfortable with informal financial methods, such as borrowing from family or friends, compared to using formal financial products. This indicates that social pressure or environmental influence to utilize formal financial services is not yet strong enough to drive behavioral change. Furthermore, although various financial services are available, the perceived control over financial behavior among MSMEs remains limited. This study aligns with the findings of a previous study (Anisyah et al., 2021), which indicated that financial inclusion has a positive but not significant effect on the financial behavior of MSMEs.

CONCLUSION

Based on the above discussion, it can be concluded that there is an influence of financial technology (X1) on the financial behavior of MSMEs in Pekalongan City. There is an influence, though not significant, of financial literacy (X2) on the financial behavior of MSMEs in Pekalongan City. There is an influence, though not significant, between financial inclusion (X3) and the financial behavior of MSMEs in Pekalongan City. Limitations of this study include the fact that the sample

consists mostly of micro-enterprises, which cannot adequately represent MSMEs in a balanced manner; furthermore, the variables used have not been able to comprehensively explain the behavioral issues of MSMEs in Pekalongan City, thus requiring additional variables capable of explaining these behavioral issues.

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