"Business sustainability: Functions of financial behavior, technology, and knowledge"

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BUSINESS SUSTAINABILITY: FUNCTIONS OF FINANCIAL BEHAVIOR, TECHNOLOGY, AND KNOWLEDGE

Abstract

Micro, small, and medium-sized enterprises (MSMEs) are among the cornerstones of the Indonesian economy that managed to survive the world crisis. The development of MSMEs also demands that owners be ready to compete with other MSMEs. This study aims to analyze whether business sustainability is influenced by financial literacy with financial behavior and financial technology as mediators. The research sample includes owners and managers of MSMEs in Indonesia, totaling 342 respondents. Data collection methods used are non-probability sampling techniques by distributing questionnaires. This study uses SEM analysis with PLS analysis tools. It was found that financial literacy does not directly affect business sustainability but affects financial behavior and financial technology. Financial behavior and financial technology are proven to influence business sustainability. Furthermore, financial behavior and financial technology mediate the effect of financial literacy on business sustainability. The results of this study show that financial behavior and financial technology can fully mediate the relationship between financial literacy and business sustainability. Moreover, financial literacy cannot directly affect business sustainability, which must be fully mediated by financial behavior and financial technology. This study also provides practical value regarding the sustainability of MSMEs. Thus, companies can survive in the long term not only with a robust financial literacy foundation but they must be supported by good financial behavior and also be able to choose the right financial technology in their business activities.

Keywords financial knowledge, financial behavior, fintech, corporate finance, MSMEs

JEL Classification G40, G53, D91

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INTRODUCTION

Micro, small, and medium-sized businesses are among the cornerstones of the Indonesian economy that managed to survive the crisis hitting the world. During the monetary crisis of 1997–1998, MSMEs continued to keep operating and were even able to absorb the workforce. At that time, they were not prohibited from working or doing business, and there were no work-from-home activities. However, when the pandemic hit the world, which first appeared in China, it impacted not only public but also the economic health of the entire world. A member of the Financial Sector Stability Committee (KSSK), Ubaidillah (2020), remarked that, in the worst case scenario, it is estimated that Indonesia's economic growth would reach as low as negative 0.4%.

This results from existing circumstances responsible for the predicted 3.2% to 1.22% decrease in household consumption. Additionally, the investment would drastically reduce. Previously, the government had high hopes for an increase in investment. However, it was anticipated that investment would decrease to 1% following the pandemic or, in the worst case, reach –4%. According to Ubaidillah (2020), "the MSME sector is also a sector that received an adverse impact, despite it being the safety net all this time. Now, this sector, which was usually resilient and able to deal with various conditions, experienced a massive blow due to restrictions on economic and social activities that affect the ability of MSMEs. In 1997–1998, MSMEs managed to survive. However, currently, MSMEs received another hard hit due to the absence of/a decline in people's purchasing power."

Economic growth directly impacts increasing employment (Durana et al., 2020). This means that large or small commerce supports increasing economic growth. Following Law Number 20 of 2008, MSMEs are medium and small businesses operated and owned by a person or a small group of people with a certain amount of income and wealth (Purnamasari et al., 2022). MSMEs have a vital position in the country's economic development and encourage Indonesia's economic development (Asianti et al., 2021). The MSME sector provides jobs that absorb the workforce (Haddad & Hornuf, 2019).

The development of MSMEs also demands that MSME owners be ready to compete with other MSMEs (Susan, 2020). This encourages MSME owners to create new and different businesses. Other than that, MSMEs are also expected to have good performances. Although MSMEs have a potential role, there are still many problems faced in their development. One of the difficulties MSMEs face today is business management-related problems (Morgan & Long, 2020). MSMEs often experience delays in their growth due to various general difficulties that cannot be resolved perfectly, such as problems with financing, human resource capacity, marketing, ownership, and various other problems related to business management.

Financial literacy is possessing financial understanding (Sabri et al., 2021). It is the level of skills, knowledge, and beliefs that can influence behavior and attitudes and improve the quality of decision-making and financial management to achieve prosperity (Noor et al., 2020). Moreover, financial literacy is knowledge and understanding related to finance, which can influence someone to apply and carry out financial management (Henager & Cude, 2019). It refers to knowledge that can hone a person's abilities and skills in finance to achieve success in a business. Based on this definition, it is expected that small and medium enterprises not only know and understand financial services but also understand financial literacy to operate their businesses better (Klapper & Lusardi, 2020).

Regulations for Banks in Indonesia 2017 state that financial technology is "the use of financial system technology that produces new products, services, technology, and/or business models and can have an impact on monetary stability, financial system stability, efficiency, smoothness, security and the reliability of the payment system." Because consumers can only conduct internet-based and smartphone transactions, fintech is a development that benefits the general public in the financial sector. In addition, because the value and quantity of purchases continue to soar, the presence of fintech has a beneficial effect on growing the economy (Hu et al., 2019). However, beyond those positive impacts, online and cashless shopping also bring a side effect, materialism, which can affect a person's financial behavior.

1. LITERATURE REVIEW AND HYPOTHESES

One economic behavior development that has not been performed for a very long time in Indonesia is financial literacy, also known as knowledge of financial regulation (Lusardi, 2019). Based on the Financial Services Authority Regulation concerning the Development of Financial Inclusion and Literacy in the Financial Services Sector for the Community and Consumers, "financial literacy is knowledge, skills, and beliefs, which influence attitudes and behavior making and financial management in achieving prosperity." According to the Financial Services Authority, there are four types of levels of a person's financial proficiency. First is well literate level. At this level, a person has confidence and knowledge of financial service products and institutions, including the benefits, nature, risks, obligations, and rights associated with financial services and products, and is knowledgeable about how to use them (Darma et al., 2020b).

Second is sufficiently literate. Someone already believes and knows what is meant by financial products, financial service organizations, and financial services at this time, despite not yet being proficient in their use, such as their characteristics, advantages, and hazards, as well as their authorities and responsibilities related to products and services in financial services (Zhao & Zhang, 2020). Third is less literate level – someone who just needs to be familiar with financial products, institutions, and services. Finally, the last is not literate level. At this level, one's beliefs about financial services and products, service providers, and expertise in banking services and products are lacking.

Due to the demands of the expanding corporate and academic worlds, financial conduct evolved, which began addressing how people behave when making financial and investment decisions (Urban et al., 2020). How a person manages, organizes, and uses all of his finances is known as behavioral finance (Sorongan, 2022). For example, a person with good financial habits would use money wisely, stick to a budget, save money, keep spending under control, make investments, and make timely debt payments (Hastings & Mitchell, 2020).

Putting expectations and ideals into practice leads to financial behavior, which results from the desire for financial behavior to mediate the link between financial security and expectations (Deuflhard et al., 2015). A person's financial responsibilities and how he handles the funds are related to how a person behaves about the finances (Wiyono & Kirana, 2021). The practice of handling money and other assets in a way that is regarded as productive is known as financial responsibility (Sugiyanto et al., 2019). This also has something to do with regulating how financial resources are used. Effective money management involves some factors, including budgeting, determining if expenditures are necessary, and paying off retirement debt within a reasonable amount of time (Yuliani et al., 2019).

The name "fintech" contains "financial" and "technology" (Hu et al., 2019). In line with Bank Indonesia, financial technology is the application of technology and financial systems to services, new products, technology updates, and many business concepts. It affects the security, efficiency, and fluency of the financial system, the currency's stability, and trust in the payment method.

According to Bank Indonesia, there are four groups of financial technology. First is crowdfunding and peer-to-peer lending (P2P). This categorization is based on the use of the platform as a means to bring together capital seekers and investors in the lending industry. The platform offers simple lending and borrowing money using information technology, especially the internet (Noor et al., 2020). Through an online platform, the borrower manages the lending process while the lender just gives funds.

Second is market aggregator. This medium gathers financial information from numerous data suppliers to show to users. Users will then find it easier to compare and select the best financial products using this financial data (Nurohman et al., 2021). Third is investment and risk management. Finally, virtual financial planning is one of the classifications of financial technology services that can assist users in managing their finances (Wati et al., 2020). This service can help users plan and understand financial conditions at each phase and under any conditions.

The last is payment, clearing, and settlement. Using technology, this category of financial services helps consumers swiftly complete online payments (Febriani & Sa'diyah, 2021). In 2016, Regulations were published by Bank Indonesia on the Introduction of Procedures for Payment of Transactions. By placing a high priority on management and fulfillment principles, considering increased accessibility, consumer protection, and national interests, as well as international practices and standards, this regulation looks for ways to support the improvement of payment methods that are efficient, smooth, reliable, and secure (Subagiyo, 2021).

Considering the literature review, the study elaborates on the research model (Figure 1) and the following hypotheses:

H1: Financial literacy influences financial behavior.

H2: Financial literacy influences financial technology.

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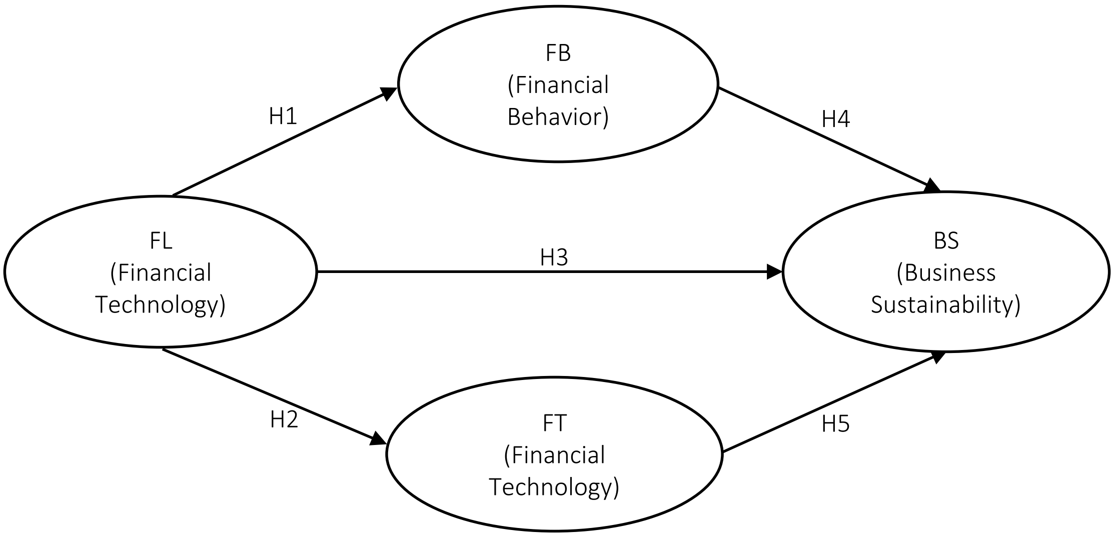

Figure 1. Conceptual framework

H3: Financial literacy influences business sustainability.

H4: Financial behavior influences business sustainability.

H5: Financial technology influences business sustainability.

H6: Financial literacy influences business sustainability with financial behavior as a mediator.

H7: Financial literacy influences business sustainability with financial technology as a mediator.

2. METHODOLOGY

This study is explanatory research that aims to see the results of the relationship between the variables in the study (Cooper & Schindler, 2014). The study uses a questionnaire in the form of a list of statements distributed online and offline for six months in 2022 with a cross-sectional time dimension. According to Hair et al. (2014), cross-sectional design means the respondent's data collection process is carried out at a particular time. Quantitative and statistical approaches are used to process the data (Cooper & Schindler, 2014). This study used the maximum likelihood estimate (MLE) technique to determine the sample size. Ideally, the large sample size when adopting the MLE technique is 100-400 respondents. Based on the technique used to determine the sample size, the sample in this study was 342 respondents (Hair et al., 2014).

This study focuses on four variables: business sustainability as the dependent variable, financial literacy as the independent variable, and financial behavior and financial technology as mediating variables. This study defines financial literacy as the ability to process financial information and make decisions regarding wealth accumulation, financial planning, retirement and debt (Purwidianti & Tubastuvi, 2019). Business sustainability is a sustainable business that grows long-term and produces long-term benefits (Ye & Kulathunga, 2019). In addition, financial behavior is the capability to manage (plan, check, budget, store, control and search) the available financial resources (Arianti, 2020). Financial technology refers to the development of technological innovations in the financial sector with the aim of making financial transactions easier, more convenient, and more effective (Wiyono & Kirana, 2021). This research analysis uses SEM with the PLS tool.

3. RESULTS

342 respondents participated in the survey; Table 1 shows their demographic information: gender, age, education, business location, average income, and business operation duration.

Table 1. Respondent demographics

Category	Information	Total respondents	Percentage (%)
Gender	Female	229	67%
	Male	113	33%
Age	< 30 years	55	16%
	30-40 years	202	59%
	> 40-50 years	75	22%
	> 50 years	10	3%
Most recent education	Elementary school	31	9%
	Junior high school	99	29%
	Senior high school	171	50%
	College	38	11%
Business location	Java, East Nusa Tenggara, Bali, and West Nusa Tenggara	113	33%
	Sumatra Island	82	24%
	Borneo Island	89	26%
	Sulawesi Island	14	4%
	Papua Island	41	12%
Average income (in IDR)	< 10 million	150	44%
	10 million-20 million	168	49%
	> 20 million-30 million	17	5%
	> 30 million	3	1%
Business operation duration	15 years	89	26%
	> 5-10 years	164	48%
	> 10-15 years	75	22%
	> 15 years	14	4%

Note: N = 342 (sample size).

Based on Table 1, most respondents are women (229 or 67%). The age of 30-40 years (202 or 59%) shows the top answer results. Most respondents' most recent education was high school level, 171 or 50%. The majority of MSME business locations are in Java, East Nusa Tenggara, Bali, and West Nusa Tenggara, with as many as 113 MSMEs (33%), which incidentally are relatively dense areas. Respondent profile analysis also shows that most MSMEs in this study are businesses that earn a pretty high income, namely 168 MSMEs, or 49%, have an average income of 10-20 million. Furthermore, when asked how long their MSMEs have been in operation, as many as 164 (48%) stated that they had been established for > 5-10 years.

This study uses three measurements: the external model goodness of fit test, which consists of discriminant validity, composite reliability, and convergent reliability. When the value is greater than 0.5, each variable's outer loading is deemed valid. Table 2 shows the convergent validity results.

Table 2. Convergent validity

Source: Own elaboration using PLS.

Variable	Item statement	Outer loading	Description
Financial Literacy (FL)	Can prepare monthly income reports	0.920	Valid
	Have attended bookkeeping training	0.901	Valid
	Know the files needed to get a bank loan	0.906	Valid
Financial Behavior (FB)	Pays bills on time	0.758	Valid
	Sets a budget for expenses and spending	0.780	Valid
	Records expenses and spending (daily, monthly, etc.)	0.809	Valid
	Sets aside funds for emergency expenses	0.809	Valid
Financial Technology (FT)	Fintech in sales/ turnovers	0.813	Valid
	Fintech makes transactions easy	0.862	Valid
	Fintech increases the number of customers	0.861	Valid
	Fintech is an easy-to-use application	0.816	Valid
Business Sustainability (BS)	Cuts operating costs	0.900	Valid
	Increases the profit growth rate and expands market share	0.891	Valid

Table 2 shows all outer loading higher than 0.7, according to the data processing results. Therefore, it was determined that each construct measuring indication is valid. Therefore, a research instrument is reliable if the composite reliability results are greater than 0.7. Table 3 shows the result of reliability calculations.

Table 3. Reliability test

Source: Own elaboration using PLS.

Variable	Composite Reliability	Description
Financial Literacy	0.934	Reliable
Financial Behavior	0.869	Reliable
Financial Technology	0.904	Reliable
Business Sustainability	0.890	Reliable

A research instrument is reliable if the composite reliability value is more than 0.7. Based on Table 3, the research instrument showed more than 0.7. Therefore, all indicators can be used as measurements. Partial least square (PLS) analysis is carried out in several stages (Figure 2), including calculating the goodness-of-fit and inner and outer models. The PLS formula in this study is described by:

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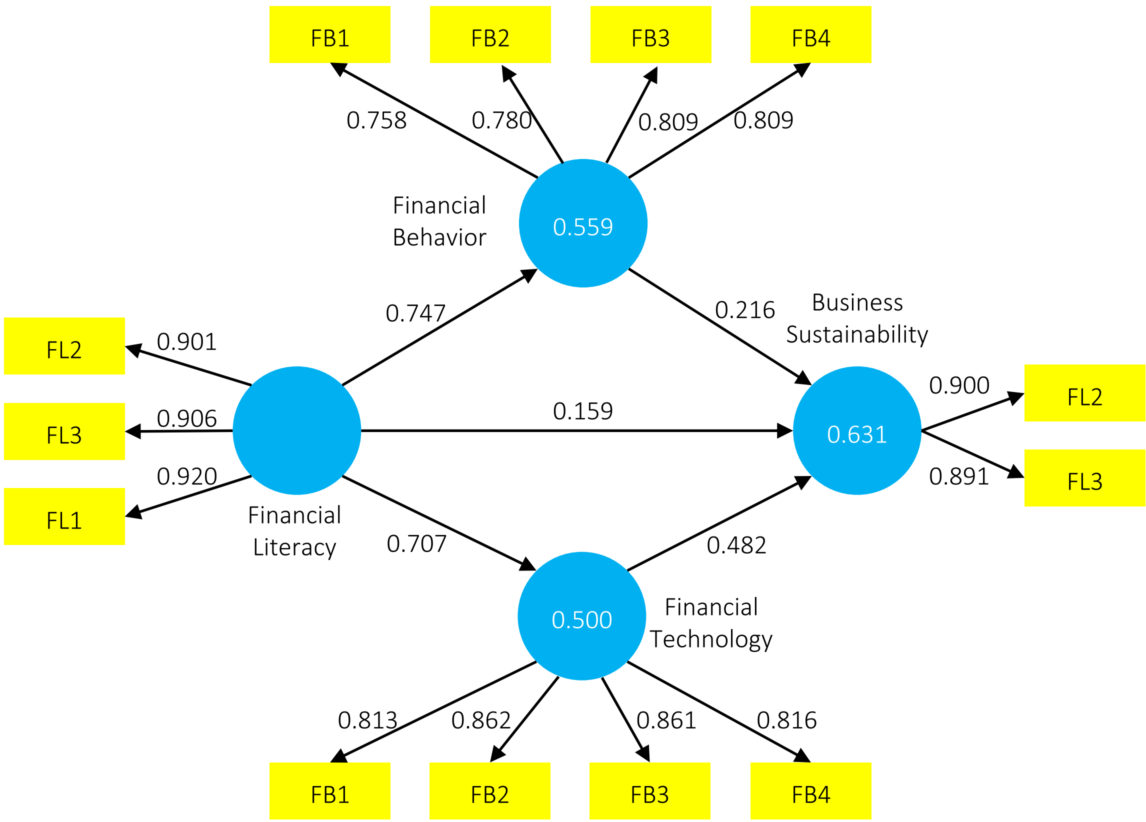

Figure 2. PLS algorithm processing results

$$\eta = \beta 0 + \beta 1\xi + \beta 2\xi + \beta 3\xi + \beta 4\xi + \varepsilon. \quad (1)$$

The R^2 value, among other things, is used to express each endogenous variable:

1) Financial behavior (FB) and financial technology (FT), with 0.559 and 0.500, is influenced by financial literacy (FL).

2) Business sustainability (BS) with 0.631 is influenced by financial literacy (FL), financial technology (FT), and financial behavior (FB).

The following formula is used to calculate the predictive value of relevance (Q^2):

$$\begin{aligned} Q^2 &= 1-\left(1-R1^2\right)\cdot\left(1-R2^2\right)\cdot\left(1-R3^2\right)= \\ &=1-\left(1-0.559^2\right)\cdot\left(1-0.500^2\right)\cdot\left(1-0.631^2\right)= \\ &=1-\left(1-0.312\right)\cdot\left(1-0.250\right)\cdot\left(1-0.398\right)= \\ &=1-\left(0.688\right)\cdot\left(0.750\right)\cdot\left(0.602\right)= \\ &=1-0.310=0.690. \end{aligned} \quad (2)$$

The result of the calculation is 0.690. In light of this, the model's predictive-relevance value was determined. The result of 0.690 or 69% demonstrates that the PLS model can describe the diversity of the data, while other factors accounted for 0.310 or 30%. The most significant outer loading summarizes the indicators for these critical factors. Outer model results are significant if the p-value is less than 0.05 and the calculated t-value is greater than 1.96.

Based on Table 4, financial literacy (FL) is described by three statement items: "Can prepare monthly income reports" (FL1), "Have attended bookkeeping training" (FL2), and "Knows the files needed to get a bank loan" (FL3). The results showed that the third indicator showed the highest score, "Knows the files needed to get a bank loan" (FL3).

Four statement items reflect financial behavior (FB): "Pays bills on time" (FB1), "Sets a budget for expenses and spending" (FB2), "Records expenses and expenses" (daily, monthly, etc.) (FB3), and "Sets aside funds for emergency expenses" (FB4). The results showed that the highest score was shown by the fourth indicator, "Sets aside funds for emergency expenses" (FB4).

Table 4. Outer loading of financial literacy

Source: Own elaboration using PLS.

Indicator	Outer Loading	T-statistics	P-value	Description
FL1 ← Financial Literacy	0.920	49.764	0.000	Sig.
FL2 ← Financial Literacy	0.901	39.034	0.000	Sig.
FL3 ← Financial Literacy	0.906	55.745	0.000	Sig.

Table 5. Outer loading of financial behavior

Source: Own elaboration using PLS.

Indicator	Outer Loading	T-statistics	P-value	Description
FB1 ← Financial Behavior	0.758	18.732	0.000	Sig.
FB2 ← Financial Behavior	0.780	23.809	0.000	Sig.
FB3 ← Financial Behavior	0.809	26.730	0.000	Sig.
FB4 ← Financial Behavior	0.809	32.149	0.000	Sig.

Table 6. Outer loading of financial technology

Source: Own elaboration using PLS.

Indicator	Outer Loading	T-statistics	P-value	Description
FT1 ← Financial Technology	0.813	27.420	0.000	Sig.
FT2 ← Financial Technology	0.862	32.618	0.000	Sig.
FT3 ← Financial Technology	0.861	35.740	0.000	Sig.
FT4 ← Financial Technology	0.816	25.342	0.000	Sig.

Table 7. Outer loading of business sustainability

Source: Own elaboration using PLS.

Indicator	Outer Loading	T-statistics	P-value	Description
BS1 ← Business Sustainability	0.900	40.329	0.000	Sig.
BS2 ← Business Sustainability	0.891	37.741	0.000	Sig.

Table 8. Direct and indirect impact

Source: Own elaboration using PLS.

Direct and Indirect Impact	Original sample	T-statistics	P-value	Description
Financial Behavior → Business Sustainability	0.216	2.076	0.038	Sig.
Financial Literacy → Business Sustainability	0.159	1.950	0.052	Insig.
Financial Literacy → Financial Behavior	0.747	19.285	0.000	Sig.
Financial Literacy → Financial Technology	0.707	18.659	0.000	Sig.
Financial Technology → Business Sustainability	0.482	5.047	0.000	Sig.
Financial Literacy → Financial Behavior → Business Sustainability	0.161	2.088	0.037	Sig.
Financial Literacy → Financial Technology → Business Sustainability	0.341	5.013	0.000	Sig.

Financial technology (FT) is reflected by four statement items: “Fintech increases store sales/turnovers” (FT1), “Fintech makes transactions easy” (FT2), “Fintech increases the number of customers” (FT3), and “Fintech is an easy-to-use application” (FT4). In addition, the results showed that financial technology was dominated by “Fintech makes transactions easy” (FT2).

Two statement items reflect business sustainability (BS): “Cuts operating costs” (BS1) and “Increases the profit growth rate and expands market share” (BS2). The results showed that business sustainability was dominated by “Cuts operating costs” (BS1).

After completing the outer model, it is continued with the calculation of the inner model. Two kinds of impacts were caused by partial testing, namely direct and indirect impact, with p-values and t-tests on each path. An intermediate was used to measure the impact, and a p-value greater than 0.05 indicates an unimportant result, while one of 0.05 or less indicates significance (Table 8).

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4. DISCUSSION

Testing the first and second hypotheses, this study describes literacy as a behavior about finance and the choice of financial technology to be used. This shows that financial literacy influences behavioral finance and financial technology. These results are supported by previous research that showed that the financial knowledge possessed by MSME owners would affect behavior toward the use of finance (Sabri et al., 2021; Henager & Cude, 2019). Under the same condition, Deuflhard et al. (2015) and Hastings and Mitchell (2020) also stated that one's financial knowledge also affects the use of financial technology. Financial knowledge can form a good mindset in financial management (Sugiyanto et al., 2019). Proper financial management habits will also support the improvement and sustainability of MSMEs. Adequate financial understanding also encourages someone to manage their finances to be simpler using various existing technologies (Yuliani et al., 2019). One that is often introduced and used these days is financial technology. By using financial technology, financial monitoring will become more accessible (Klapper & Lusardi, 2020; Cahuana & Rojas, 2020). Sound financial management habits will also support the improvement and sustainability of MSMEs (Lyons et al., 2020).

Furthermore, the third hypothesis is rejected: financial literacy has no impact on business sustainability (Hikmah et al., 2019). Previous studies showed that financial literacy is essential in business management, including MSMEs (Ye & Kulathunga, 2019; Lyons et al., 2020). As previously mentioned, financial literacy is vital for MSME owners because it supports their financial management (Hastings & Mitchell, 2020). However, in this study, financial literacy does not directly affect business sustainability. Thus, MSME owners with good financial literacy must also have good financial behavior and financial technology to make it easier to run MSMEs properly (Darma et al., 2020a).

According to the findings, the fourth and fifth hypotheses demonstrate that financial behavior and financial technology affect business sustainability. These results are supported by previous research (Hu et al., 2019; Shneor & Munim, 2019). Good financial behavior and the use of financial technology will encourage good corporate management (Purwidianti & Tubastuvi, 2019). Business management will also produce high productivity (Wiyono & Kirana, 2021; Widagdo & Sa'diyah, 2022). Financial behavior carried out systematically with structured financial records will make it easier to monitor and make perfect and transparent financial reports (Nurohman et al., 2021). This can prevent the company from cheating by unscrupulous persons (Hilabi et al., 2021). In addition, financial technology will make it easier for companies in terms of transactions and more effective and efficient bookkeeping (Schammo, 2019).

The results of the indirect influence show that financial technology influences business sustainability through financial behavior. This means that behavioral finance can mediate the influence of financial technology on business sustainability. Thus, someone with sound financial knowledge will improve that person's habits in using money more wisely and ultimately improve business sustainability (Tumba et al., 2022). In addition, the results of this study conclude that financial technology has an impact on business sustainability through financial technology. This means that financial technology can help SMEs manage finance more easily and influence business sustainability (Darma et al., 2020a). People with proper financial knowledge can choose the best way to conduct financial transactions (Widagdo & Roz, 2022). Many people have used fintech as a means of transactions that will facilitate their business so that business continuity will be better (Sarjono et al., 2022).

The findings show that some research updates can be explained by including financial technology as a mediating variable (Nurohman et al., 2021). The results of the indirect impact can also be explained that financial technology has a mediation effect that is greater than financial behavior. These results indicate that financial technology is more valuable than financial behavior. Someone with good financial knowledge in the digital era will increasingly look for more efficient ways of helping their business activities (Shankar et al., 2022). Financial technology is included in the operational activities of MSMEs, mainly related to making faster, more transparent, more accessible, and more flexible payments.

This study implies that owners or managers of small and medium businesses should pay attention to their financial knowledge to improve financial performance. Risk management that is carried out correctly can be done by making investments, buying insurance, and conducting financial audits to maintain financial sustainability (Pikus et al., 2018). Financial sustainability in MSMEs is also a characteristic of looking at financial conditions and the direction of strategic business plans (Azarenkova et al., 2018). Research on MSMEs finance is significant because MSME is one of the main factors supporting Indonesia's economy so that it can guarantee the country's progress. If a country's economic foundation is excellent, optimism and hope will materialize, leading to financial well-being and financial resilience (Ravikumar et al., 2022).

CONCLUSION

The study proves that financial behavior and financial technology can fully mediate the relationship between financial literacy and business sustainability. However, financial literacy cannot have a direct effect on business sustainability. This study provides some practical value regarding the sustainability of MSMEs, where companies can survive in the long term with a robust financial literacy foundation. However, they must be supported by good financial behavior and also be able to choose the right financial technology for their business activities. Good financial literacy will make MSME owners wiser in managing their finances; thus, they prefer financial technology as a means to help their business activities and promote better financial behavior. Companies will survive in the long term if they pay attention to financial literacy, financial behavior, and financial technology.

There are certain limitations in this study. For instance, although using online questionnaires is widely accessible to respondents throughout Indonesia, incomplete replies are received due to time limits, taking respondents' psychology into account when filling out question items.

AUTHOR CONTRIBUTIONS

Conceptualization: Chalimatuz Sa'diyah, Bambang Widagdo.
Data curation: Bambang Widagdo.
Formal analysis: Chalimatuz Sa'diyah.
Investigation: Chalimatuz Sa'diyah, Bambang Widagdo.
Methodology: Chalimatuz Sa'diyah, Bambang Widagdo.
Project administration: Chalimatuz Sa'diyah, Bambang Widagdo.
Resources: Chalimatuz Sa'diyah, Bambang Widagdo.
Supervision: Chalimatuz Sa'diyah.
Validation: Chalimatuz Sa'diyah, Bambang Widagdo.
Writing – original draft: Chalimatuz Sa'diyah, Bambang Widagdo.
Writing – review & editing: Chalimatuz Sa'diyah, Bambang Widagdo.

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