The effect of business digitalization, technology utilization, and financial literacy on the sustainability of MSMEs in Surakarta

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ABSTRACT

Micro and Small Enterprises (MSMEs) constitute one of the business categories forming the backbone of the national economy, including in the city of Surakarta, Central Java. According to data from the Central Bureau of Statistics (BPS) in 2019, Surakarta had 1,863 micro and small business actors, employing 42,962 workers. The continuity of SMEs is anticipated to play a crucial role in strengthening the community's economy. Against this backdrop, this study aimed to analyze the impact of business digitalization, technology use, and financial literacy on the sustainability of SMEs in Surakarta. The research employed a quantitative approach, with data analysis conducted using multiple linear regression tests. The results revealed that the independent variables of business digitalization, technology use, and financial literacy each had a significant positive effect on business sustainability individually. Simultaneously, all three variables significantly influenced business sustainability. Based on these findings, it is recommended that future SMEs focus on enhancing their business digitalization, technology use, and understanding of financial literacy.

Keywords: Micro, Small and Medium Enterprises (MSMEs), business digitalization, technology utilization, financial literacy

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INTRODUCTION

In line with technological advances during the Industrial Revolution 4.0, where the majority of activities are carried out boldly using digital technology, MSME players must adapt to these developments in order to be able to maintain their business in the long term (Gunawan and Hudiono, 2023). Currently, it is known that internet technology and digital technology allow humans to fulfill their various needs in a short time (Kumar et al., 2019). Likewise, regarding business actors, this technological advancement facilitates business processes ranging from the fulfillment of raw materials, and production processes to marketing activities using digital marketing (Wanof and Gani, 2023).

During the Covid-19 pandemic, it is known that digitalization is an important process. According to Jayanti

and Karnowati (2023), restrictions on community activities have led to increased utilization of e-learning services, e-commerce, digital literacy education, and demand for delivery services. This development is still ongoing in the post-pandemic period with various adjustments in product aspects, business models, and so on.

But on the other hand, the digitalization of MSMEs still has many obstacles. For example, it is known that the characteristics of MSMEs in Indonesia are still very few that develop networked digital marketing and use sophisticated technology. Furthermore, according to (Yustika & Kasidi, 2022) there are still many consumers who feel inferior in making digital transactions. In line with technological advances during the Industrial Revolution 4.0 where the majority of activities are carried out online using digital technology, MSME players must adapt to these developments in order to be able to maintain their business sustainability in the long term. Currently, it is known that internet technology and digital technology allow humans to fulfill many of their needs in a short time. Likewise, from the side of business actors, this technological advancement facilitates business processes ranging from the fulfillment of raw materials, and production processes to marketing activities using digital marketing.

During the Covid-19 pandemic, it is known that digitalization has become an important process. According to Jayanti and Karnowati (2023), the limitations of community activities led to an increase in the utilization of e-learning services, e-commerce, digital literacy education, and demand for delivery services. These developments are still ongoing in the post-academy period with various adjustments in the aspects of products, business models, and so on (Syafitra and Ardianto, 2023).

However, on the other hand, there are still many problems with the digitalization of MSMEs. For example (Rahayu and Day, 2017) state that the characteristics of MSMEs in Indonesia are still very few to develop digital marketing that is networked and uses sophisticated technology. Furthermore, according to (Yustika & Kasidi, 2022) there are still many consumers who feel unsafe to make digital transactions.

The utilization of technology can improve business transformation through speed, accuracy, and efficiency of information exchange in large quantities. Therefore, the role of technology is needed to accelerate the success of companies to increase access to markets or prospective buyers through the use of web-based information technology that can be used as a modern marketing communication medium.

Research (Rohmah, 2019) refers to data from the research institute Hootsuite Indonesia as a country with a population of 268.2 million people, as many as 150 million people already use social media and the internet. When looking at this data, it is a very appropriate choice if MSME players continue to adapt their business processes to advances in digital technology.

According to the results of a survey conducted by the Financial Services Authority (OJK) in 2016, it is known that the understanding of the financial literacy of the Indonesian population is only 22%. The report also revealed that Indonesia has the largest number of MSMEs compared to many other countries, but Indonesia's financial literacy level is still relatively low. According to (Desiyanti, 2016), MSME actors must master the understanding and knowledge of financial literacy, because this greatly affects financial management and has an impact on the performance and sustainability of the business of MSMEs. Without good financial literacy, MSME actors will be constrained in maintaining the sustainability of their business, because they tend to be short-term oriented, less capable in managing cash, lack of sustainable business investment strategies, and do not have access to business financing which is still difficult for business actors.

TABLE 1. Number of Business Units and Labor Absorption in the Industrial Sector in Surakarta

Industry Type	Business Unit	Labor
Great	72	14.264
Medium	190	12.432
Small Industry	1.673	30.530
Creative Industry	473	497
Non-Formal	6.010	16.441
Total	8.403	74.164

Source: bps.go.id (2019)

The data shows that the medium category industry amounted to 190 business units and was able to absorb 12,434 workers in Surakarta city in 2018. While the small category industry amounted to 1,673 business units and could absorb 30,530 workers in the same year.

LITERATURE REVIEWS

Development of Micro, Small, and Medium Enterprises

Micro, Small, and Medium Enterprises (MSMEs) are recognized as vital contributors to economic development and inclusive growth. The role of MSMEs in fostering economic activities, generating employment, and promoting

entrepreneurship has been acknowledged in numerous studies. Ristanti et al. (2020) emphasize the importance of MSMEs in driving inclusive economic growth, highlighting their role as small companies owned and managed by individuals or entities with low turnovers. The regulatory environment plays a crucial role in shaping the landscape for MSMEs. In the context of Indonesia, Law No. 20 of 2008 concerning Micro, Small, and Medium Enterprises (MSMEs) serves as the regulatory framework governing these businesses. The following literature review delves into the various dimensions of MSMEs and the impact of regulatory frameworks on their development. Research consistently underscores the significance of MSMEs in promoting economic growth. A study by Ayyagari et al. (2007) found that MSMEs contribute significantly to job creation and income generation, particularly in developing economies. Their nimbleness and ability to adapt to changing market conditions make them crucial players in fostering economic dynamism (Beck et al., 2006). Effective regulatory frameworks are essential for providing a conducive environment for MSMEs to thrive. Laws and policies that address access to finance, market entry barriers, and business support services are critical components. Beck and Demirguc-Kunt (2006) highlight that well-designed regulatory frameworks can enhance access to credit for MSMEs, enabling them to invest, expand, and contribute more substantially to economic growth.

Business Digitalization

The term "business digitalization" refers to the comprehensive transformation of traditional business models into virtual and digitally driven entities. Scholars like Kraus et al., (2022) emphasize that this involves integrating digital technologies across various business functions, from operations to marketing and customer service. Understanding the nuances of this process is essential for businesses contemplating or undergoing digital transformation. Business digitalization is the process of transforming a business from a conventional to a virtual concept. By applying digital technology in business, it can increase competitiveness and survive against the onslaught of technology. The policy of community activities during the COVID-19 pandemic has had a direct impact on the economic sector (Sulchan, 2021). According to Adella and Rio (2021), as mentioned in Jayanti and Karnowati, the digitalization of MSMEs involves applying market intelligence results in the context of product development for the technological growth of MSMEs. The literature recognizes that while digitalization offers numerous opportunities, it also presents challenges for MSMEs. Lack of resources, digital literacy, and cybersecurity concerns are common hurdles (Gkrimpizi et al., 2023). However, studies by Loo et al., (2023) highlight success stories of MSMEs overcoming these challenges by fostering a culture of innovation and investing in employee training.

Technology Utilization

The development of technology opens wide opportunities for many MSME businesses and the perpetrators. With technology, you can not only socialize but also run your business more easily. Whether in terms of management, production, or expedition services, there are various platforms that can help your business run more smoothly. Arifin (2022) emphasizes the pivotal role of technology in streamlining various facets of business operations. The integration of technology extends beyond mere socialization, permeating through management, production, and expedition services. The integration of technology in MSMEs goes hand in hand with the optimization of production processes. Automation, data analytics, and smart technologies enable MSMEs to enhance their production efficiency, reduce costs, and maintain higher quality standards. This paradigm shift in production methods not only improves the bottom line but also positions MSMEs as agile and competitive players in the market. One significant aspect of technology's influence on MSMEs is its contribution to business management. Various platforms and software solutions now offer MSMEs comprehensive tools for managing their operations more efficiently. From customer relationship management to supply chain optimization, these technological tools empower businesses to make informed decisions and streamline their internal processes.

Financial Literacy

The Association of Chartered Certified Accountants (2014) states that the components of financial literacy include insight into the concepts of finance, understanding communication about financial concepts, and the ability to manage finances both personally and in a company. Additionally, financial literacy involves skills and determination in making financial decisions in every situation (ACCA, 2014). Financial literacy extends beyond personal comprehension; it encompasses the ability to communicate effectively about financial matters. According to research by Mandell (2006), effective communication facilitates collaboration in financial decision-making within families, businesses, and communities. This involves not only being knowledgeable but also being able to convey financial information clearly and understandably. Financial literacy is dynamic, given the ever-changing financial landscape. As noted by Chamorro-Koc et al. (2021), individuals and organizations must engage in continuous learning to stay abreast of new financial products, regulations, and economic trends. The ability to adapt and apply newfound knowledge is integral to maintaining financial literacy over time.
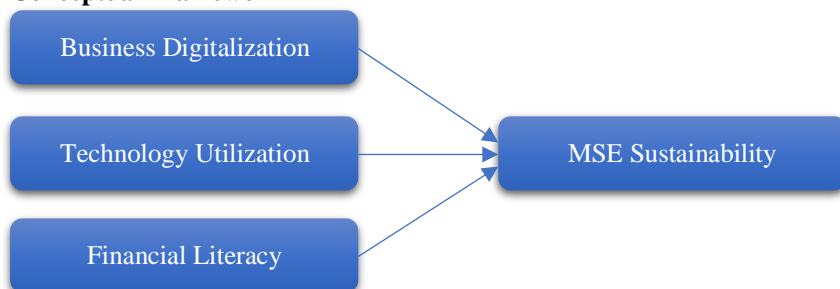
Conceptual Framework

FIGURE 1. Conceptual Framework of The Study
Source: Rahayu & Day, 2015

METHODS

This study uses a descriptive quantitative approach. The population in the study were all actors of Small and Medium Enterprises (SMEs) in the city of Surakarta, totaling 1,863 (BPS, 2021). (BPS, 2021). The number of 186 samples is 10% (Arikunto, 2013) of the total population of Small and Medium Enterprises in the city of Surakarta. Data collection is done through a survey questionnaire process that is distributed directly or through an online survey questionnaire (Google form). Data analysis method through multiple linear regression using SPSS 25. The data analysis techniques used in this study are as follows: Classical assumption test which consists of normality test, heteroscedasticity test, multicollinearity test, and regression analysis including t test and F test.

RESULTS AND DISCUSSION
Results
Data Validity and Reliability Test
Each item in this study is declared valid if the r-count value is greater than the r-table value. In this study with a significance level of 0.05, it is known that the r-table value is 0.219. It can be seen in the table that each item has an R-count value above 0.219, so it can be stated that all research items are valid.

TABLE 2. Validity Test Result

Variables	Indicator	r-count
Business Digitalization	X1.1	0,263
	X1.2	0,500
	X1.3	0,619
	X1.4	0,515
	X1.5	0,762
Technology utilization	X2.1	0,616
	X2.2	0,808
	X2.3	0,297
	X2.4	0,327
	X2.5	0,947
Financial literacy	X3.1	0,339
	X3.2	0,629
	X3.3	0,518
	X3.4	0,679

The data in the table above shows that the research variables have a *Cronbach alpha* value > 0.6, so that it can be said that all variables meet the criteria or are reliable.

TABLE 3. Reliability Test Results

Variables	Cronbach's Alpha
Business Digitalization	0,723
Technology utilization	0,802
Financial Literacy	0,752

Normality Test

The normality test shows that all points spread around the diagonal line and in the direction of the diagonal line. So, it can be concluded that the research data is normally distributed, as can be seen in the figure below.
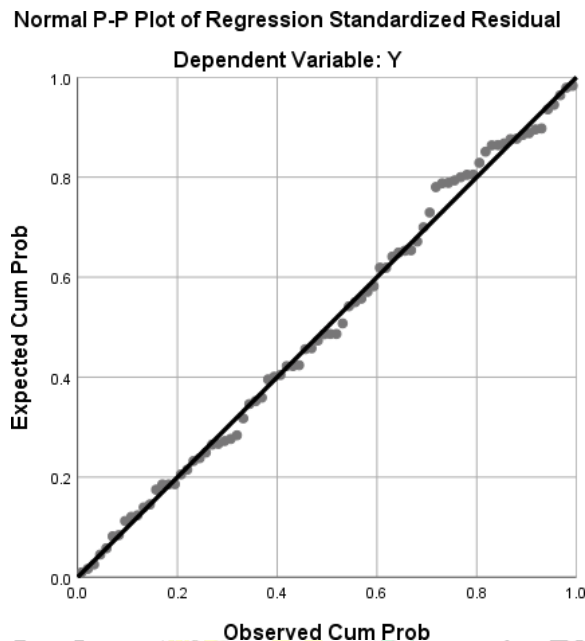

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Y

FIGURE 2. Data Normality Test Results

Multicollinearity Test

The results obtained in the multicollinearity test are shown in the table below.

TABLE 4. Multicollinearity Test Results

Variables	Tolerance	VIF	Description
Business digitization	0.458	2.185	Multicollinearity Free
Technology utilization	0.666	1.502	Multicollinearity Free
Financial Literacy	0.389	2.568	Multicollinearity Free

Each value of VIF is below 10, as well as the *tolerance* value is more than 0.1. So, it can be stated that this regression model is free from multicollinearity problems.

Heteroscedasticity Test
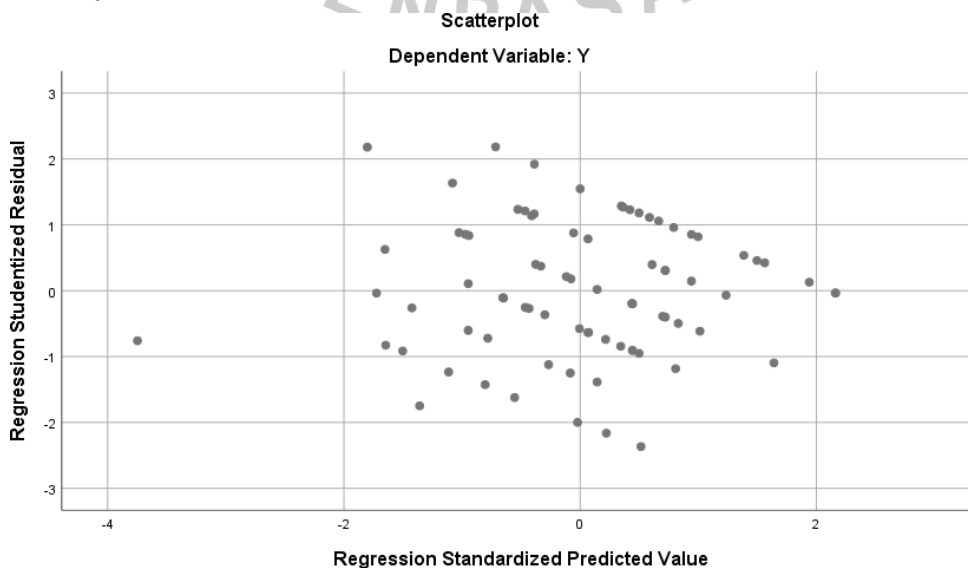

Scatterplot

Dependent Variable: Y

FIGURE 3. Heteroscedasticity Test Results

The majority of these points are above and below the value of 0 on the Y-axis. So, it can be concluded that there is no heteroscedasticity problem.

Multiple Linear Regression Analysis
The following is a summary of the multiple linear regression analysis test results.

TABLE 5. Results of t Test, F Test, and Determinant Coefficient Test

Variables	Regression Coefficient (B)	t-count	Sig
Constant	-4,702	-2,978	0,003
Business digitization	0,159	1,746	0,083
Technology utilization	0,552	9,754	0,000
Financial literacy	0,978	8,906	0,000

F-count = 84.282
Sig.F = 0.000
Adjusted R^2 = 0,573

From the data in the table, a multiple linear regression equation can be formulated as follows:
$$Y = -4.702 - 0,159 + 0,552 + 0,978$$

Partial Test
a. The coefficient value b_1 (0.159) which shows the business digitalization variable has a positive influence on the sustainability of SMEs. If the business digitalization variable increases by one unit, the sustainability of SMEs will also increase by 0.159 with the assumption that X_2 and X_3 constant.
b. The coefficient value b_2 coefficient value is 0.552 indicating that the technology utilization variable has a positive influence on the sustainability of SMEs. If the variable utilization of technology has increased by one unit, the sustainability of SMEs will also increase by 0.552 assuming X_1 and X_3 constant.
c. The coefficient value b_3 is 0.978, indicating that the financial literacy variable has a positive influence on the sustainability of SMEs. If the financial literacy variable increases by one unit, it can be seen that the investment decision will also increase by 0.978 with the assumption of X_1 and X_2 constant.

F Test
The results of the table 5 test provide evidence that the F-count> F-table value (84.282> 2.72) and the significance level is below 0.05 (0.000 <0.05). From these results, it is concluded that Ho is rejected while Ha accepted. So, it can be concluded that business digitalization, technology utilization, and financial literacy have a significant effect on the sustainability of SMEs.

Coefficient of Determination
From Table 5, it is known that Adjusted $R2$ 0.573, which means that the variables of business digitalization (X1), technology utilization (X2), and financial literacy (X3) have contributed to investment decisions. (Y) by 57.3%. While the rest, namely (100% - 57.3% = 42.7%) is influenced by various other variables or factors outside those studied

Discussion
Business Digitalization on MSME Sustainability
The results showed that business digitalization (X1) has a significant influence on the sustainability of MSMEs (Y), so the alternative hypothesis (Ha) is proven correct. The regression coefficient value of business digitalization is positive. The following research results support the research conducted by Arifin et al (2021) and Jayanti and Karnowati (2023). Thus, the higher the level of business digitalization for MSMEs, the higher the level of MSME sustainability. Business digitalization is an effort to sustain MSME actors.

Technology Utilization on MSME Sustainability
The results showed that technology utilization (X2) has a significant influence on the sustainability of MSMEs (Y), so the alternative hypothesis (Ha) is proven correct. The regression coefficient value of business digitalization is positive. The following research results support research conducted by Eryc (2022) and Arifin et al (2023). The higher the intensity and creativity of technology utilization by SMEs, the higher the level of sustainability of SMEs. The use of technology is used to introduce and expand the reach to be more widely known among the market.

Financial Literacy on MSME Sustainability

The results showed that financial literacy (X3) has a significant influence on the sustainability of MSMEs (Y), so the alternative hypothesis (Ha) is proven correct. The regression coefficient value of business digitalization is positive. The following research results support the research conducted by Jayanti and Karnowati (2023), Rahayu and Musdholifah (2017), and Hilmawati & Kusumoningtias (2021). The results show that when MSME actors have sufficient financial literacy skills, decisions related to business or business and finance will lead to increased development and business survival during unstable conditions it will make the business always sustainable for a long period.

CONCLUSIONS

Based on the results of the research that has been conducted, it can be concluded that business digitalization, technology utilization, and financial literacy had a significant positive effect on the sustainability of MSMEs. This information suggests that every MSME player in the city of Surakarta needed to enhance their understanding of financial literacy before starting their business. It can also be understood that the greater the use of technology and business digitalization, the greater the potential for MSMEs to continue being sustainable. The findings of this study are expected to serve as guidelines for MSME actors and related parties in making decisions regarding MSME sustainability through the selection of digitization efforts, utilization of technology, and the enhancement of financial literacy by their respective profiles. Additionally, it is recommended to continually improve individual financial literacy before deciding to engage in MSME-level business, enabling better anticipation of the risk of loss and the ability to run a business sustainably.

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