



## Digital Adaptation to Performance of SMEs in Surakarta City, Indonesia

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### **Abstract**

Micro, Small, and Medium Enterprises (MSMEs) experience very complex problems. One of them relates to efforts to maximize the performance of SMEs. Adoption of technology into offers for all sectors increases productivity. The application of digitalization to the MSME sector is expected to boost the performance of these MSMEs. This study aims to examine the effect of digital adaptation as measured by digital literacy and the use of financial technology (fintech) on the performance of MSMEs in Surakarta City. Data was collected by distributing questionnaires to food and beverage business owners in Surakarta City. The analysis uses multiple linear regression analysis techniques. The results of the study show that there is a partial effect, only the digital literacy variable influences the performance of MSMEs, and simultaneously digital adaptation affects the performance of MSMEs in Surakarta City. So that government stakeholders, SOEs or capital businesses, and business owners can increase digitalization efforts for MSMEs in Surakarta City.

**Keywords:** *Digital Adaptation; Digital Literacy; Financial Technology, MSME Performance*

### **Introduction**

The spread of the covid-19 virus impacts the Indonesian economy (Kim, 2020; Octavina & Rita, 2021). It does affect not only large companies but also micro, small, and medium enterprises. This condition causes business actors to experience financial difficulties. So business actors who cannot survive in these unstable economic conditions will choose to close outlets.

The condition of MSMEs as Indonesia's most significant contributor to GDP reached 60% during Covid-19 (Kusuma et al., 2021). MSME business actors contribute to reducing unemployment and poverty. However, with the Covid-19 pandemic in February 2021, it recorded that the unemployment rate rose to 8.75 million unemployed in Indonesia. There was an increase of 26.26% compared to 2020, namely 6.93 million people (BPS, 2021). The government has encouraged MSMEs to become MSMEs go digital—help from other stakeholders, such as the existence of financial sector companies or startups.

Using digital technology for MSMEs is a new opportunity and challenge for business people (Ilyas et al., 2021; Munir et al., 2021). Digital connectivity is becoming a new economic cycle chain. The use of digital technology for business actors needs to be accompanied by good digital literacy to

encourage MSME performance to be more optimal (Damayanti et al., 2021). Digital literacy, according to Paul Gilster is the ability to adapt to using digital media. Mastery of digital technology is expected to become more efficient intermediaries between sellers and buyers. Apart from that, the role of digital can also help businesses access financial technology (Astuti et al., 2020; Octavina & Rita, 2021). Financial technology is usually called fintech. The role of fintech can help businesses facilitate access to financial transactions (Kusuma et al., 2021). In addition, technology for digital payments has been rife to be applied to business actors.

The contribution of MSMEs in Surakarta City is quite significant. From the GRDP value, the trading business field has the second most significant contribution. During the pandemic, the culinary business in Surakarta City continues to increase. This is evidenced by the increasing number of food stalls, and government support for traders is also evident from the existence of a shelter construction program. The shelter is a culinary center located in strategic areas in several places in the city of Surakarta. Shelter construction support also comes from third parties, namely the role of banking as a stakeholder that provides education and access to technology adoption. The part of banking by providing counseling.

Octavina & Rita (2021) looks at the success of MSMEs by referring to the existence of digital marketing and the use of fintech. The sustainability and performance of MSMEs in Solo Raya were investigated by Kusuma et al. (2021) stated that financial inclusion affects the financial performance of MSMEs in Solo Raya, but financial literacy has no effect on business sustainability. Research in Cirebon Regency says that 10 MSMEs have successfully adopted digital technology, as evidenced by easy access to capital and easy access to food products (Astuti et al., 2020).

Based on the description of the research background, there are several research questions: (1) does digital literacy affect the performance of MSMEs? (2) Does financial technology use affect the performance of MSMEs? (3) can digital adaptation play a significant role in MSME performance? The results of this study are expected to provide theoretical and practical benefits for the development of MSMEs in Surakarta City.

### **Research Method**

This research includes MSMEs business actors in Surakarta's food and beverage sector. Data was obtained by distributing questionnaires to business actors within a period of 1 (one) month. The criteria for MSME actors include MSME actors who have used internet adoption both for utilizing payment methods (financial technology) and selling digital-based products. The sample calculation uses Isaac & Michael's theory as follows (Sugiyono, 2018):

$$s = \frac{\lambda^2 \cdot N \cdot P \cdot Q}{d^2(N-1) + \lambda^2 \cdot P \cdot Q}$$

$$s = \frac{2,706 * 550 * 0,5 * 0,5}{0,01 * 549 * 2,706 * 0,5 * 0,5} = \frac{372,08}{6,17} = 60,3 \cong 60$$

From the sample calculation using Isaac & Michael's theory with an error rate of 10%, it is known that the sample is 60 respondents. Data analysis used SPSS 26 software with the testing stages namely 1) validity test; 2) reliability test; 3) hypothesis testing (t-test, F test, and test of the coefficient of determination); 4) classic assumption test. The following is the research regression model equation

$$KUMKM = \alpha + \beta_1 LD + \beta_2 PF + e$$

With the description of KUMKM = the dependent variable that shows the performance of UMKM;  $\alpha$  = constant;  $\beta$  = coefficient; LD = independent variable indicating digital literacy; PF = is the second independent variable that shows the use of financial technology.

### **Result and Discussion**

This research was conducted in Surakarta City by conducting interviews and documenting data using questionnaires. The research respondents included MSME traders who were registered at the Surakarta City Trade Office. The following respondents are grouped into five sections as follows:

Table 1. Characteristics of respondents

<b>Characteristics of Respondents</b>		<b>Total</b>
Gender	Male	14
	Female	46
	Total	60
Age	<26 years	16
	>25 years	44
	Total	60
Length of work	<3 years	16
	3-5 years	32
	>5 years	12
	Total	60
Education	SD	16
	SMP	20
	SMA	11
	Lainnya	13
Income	Total	60
	<3.000.000	22
	3.000.000-5.000.000	27
	>5.000.000	11
	Total	60

Source: data processed by author, 2023

Based on the table above, it is known that 60 respondents are dominantly women who have registered businesses. Age ranged from 15 years to 45 years. With the highest level of education and the most, namely, junior high school. Their monthly income also varies with an average income of IDR 3.000.000 to IDR 5.000.000.

### **Validity Test**

Through distributing questionnaires to obtain respondent data, it is necessary to test all question items prepared by the researcher. The validity test measurement is calculated at a significant level of 5% from  $r$  count  $>$   $r$  table (0.2108) so that the item is said to be valid (Imam Ghozali, 2018; Sugiyono, 2018). Based on the test results, all question items are valid with a value of  $r$  count  $>$   $r$  table (0.2108). The following results of the validity test:

Table 2. Validity test result

Variable	Item	R hitting	Information
Digital Literacy (X1)	X1.1	0,518	Valid
	X1.2	0,844	Valid
	X1.3	0,844	Valid
	X1.4	0,584	Valid
	X1.5	0,673	Valid
Use of Financial Technology (X2)	X2.1	0,873	Valid
	X2.2	0,826	Valid
	X2.3	0,672	Valid
Performance (Y)	Y.1	0,847	Valid
	Y.2	0,765	Valid
	Y.3	0,664	Valid
	Y.4	0,773	Valid

Source: data processed by author, 2023

### Reliability Test

Measurement of data reliability is used to determine the Cronbach alpha value from SPSS calculations. It can be concluded that when the Cronbach alpha value is more significant than 0.5, it is a reliable research variable (Imam Ghazali, 2018; Sugiyono, 2018). The results of the reliability test of the three research variables were declared reliable. The following are the results of data reliability testing:

Table 3. Reliability test result

Variable	Cronbach alpha	Information
Digital Literacy (X1)	0,737	Reliable
Use of Financial Technology (X2)	0,699	Reliable
Performance (Y)	0,757	Reliable

Source: data processed by author, 2023

### Multiple Linear Regression Test

Based on the results of multiple linear regression tests, the following results are known

Table 4. Multiple linear regression test

Variable	Coef	t	sig
Constant	1.584	0.774	0.442
Digital Literacy (X1)	0.760	5.222	0.000
Use of Financial Technology (X2)	0.207	1.735	0.088
F statistic		20.571	
F sig		0.000	
R square		0.647	

Source: data processed by author, 2023

Based on the results, it is known that the multiple linear regression equation is

$$KUMKM = 1,584 + 0,760LD + 0,207PF + e$$

That means that assuming the variables of digital literacy (X1) and the use of financial technology (X2) are considered constant, this will increase the performance of MSMEs by 1.584. When the value of digital literacy rises to one level, it will increase the performance of MSMEs by 0.76. The

value of financial use up one level will increase the performance of MSMEs by 0.207. This means that each variable has a positive relationship.

### **Hypothesis Testing**

The hypothesis test is divided into three tests:

1. Partial testing can be seen from the t-test for each independent variable on the dependent variable (Sugiyono, 2018). Based on the results of data processing, a significance value of  $<5\%$  was obtained, which means that the hypothesis is accepted. The digital literacy variable (X1) is partially seen from the significant value  $(0.00) < 5\%$  meaning that the digital literacy variable (X1) affects the MSME performance variable (Y). Likewise, the variable use of financial technology (X2) has a significance value  $(0.88) > 5\%$ , meaning that the variable use of financial technology (X2) does not affect the performance variable of SMEs (Y).
2. A simultaneous test, seen from the significant f value, is said to be influential when the f value is significant  $<5\%$ . Based on the test results, a substantial value of 0.00 was obtained, meaning that simultaneously the digital literacy variable (X1) and the use of financial technology (X2) had an effect on the MSME performance variable (Y).
3. Test the coefficient of determination (R squared), and this test is useful to see how the research model is selected. The test results for the coefficient of determination show the number 0.647. This means that the digital literacy variable (X1) and the use of financial technology (X2) can explain 64% of the MSME performance variable (Y). Meanwhile, 36% is explained by other variables that are not used in this study.

### **Discussion**

There is a significant influence of digital literacy variables on MSME performance. This is reinforced by the results of Damayanti et al., (2021); Farhan et al., (2022) that digital literacy has a significant effect on the use of MSME e-commerce in Kayungyun Malang. The performance of MSME types of food and beverage where the owners are aware of digital literacy also contributes to the performance of MSME businesses in South Jakarta.

Digital literacy according to Paul Gilster describes a person's ability to search for information by utilizing digital media connected to the internet, by increasing literacy regarding digitalization which is currently supported by all stakeholders, both government, private, and community (Bahar et al., 2019; Jadhav et al., 2023). The government supports the existence of MSMEs to go digital, launched through the Ministry of Industry and followed up by the Department of Commerce in Surakarta City. Private stakeholders have contributed to the success of MSMEs going digital through several startups that support MSMEs, such as food delivery services. The main obstacle to the MSME sector in Indonesia is related to the lack of marketing to attract potential customers (Ilyas et al., 2021; Munir et al., 2021). MSME sector actors with information disclosure can maximize digitalization. This is expected to optimize the role of digital to maximize the performance of MSMEs.

Based on the results of research on the use of fintech variables, the results show no significance. This was explained by Wiyono & Kirana (2020) with digital development through increased digital literacy and increased use of fintech but apparently had no effect on MSME performance. Public awareness of the ease of use of fintech but there are also considerations for using it. Because the habit of paying in cash is still considered easy. Through the results of interviews, many MSMEs have been supported by state-owned banks in Surakarta City as well as fintech facilities.

## Conclusion

Based on the results of testing each hypothesis, it can be concluded that (1) digital literacy has a significant effect on MSME performance, (2) the use of financial technology has no effect on MSME performance, (3) simultaneously digital literacy and financial technology variables affect MSME performance in Surakarta City. Business owners are expected to be able to adopt digital technology in order to optimize the performance of their business further.

The suggestion for this research is to increase digital literacy and skills in using or adopting the use of financial technology not only to focus on supporting the performance of MSMEs, but also to make other efforts so that the human resources of business actors can be creative with the use of technology. Efforts to encourage digitization to require the role of many stakeholders such as the government, BUMN or capital businesses, and business owners can increase digitalization efforts for MSMEs in Surakarta City.

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