

Analysis of the Effect of E-Commerce Usage on MSME Sales: A Case Study of MSMEs in Sleman Regency

E-Commerce Usage on
MSME Sales

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ABSTRACT

In the Indonesian economy, MSMEs are the largest group of businesses that have shown resilience to various types of economic crisis shocks. E-commerce has recently been favored by both large and small businesspeople. This study aims to determine the analysis of the effect of e-commerce use on MSME sales. This research uses a quantitative approach with correlation and regression analysis tools, to test the level of relationship and influence that occurs between variables. The results of this study indicate that e-commerce on MSME income has a positive and significant effect with a significance value of 0.005 or less than 0.05. This shows that E-Commerce makes a positive contribution, especially in the economic activities of MSMEs by facilitating online trading activities, enabling product marketing in various regions through digital platforms, and facilitating interaction between sellers in Sleman Yogyakarta Regency and buyers from various locations.

Keywords: e-commerce, MSMEs, Regression Analysis, Sleman

ABSTRAK

Dalam perekonomian Indonesia, UMKM merupakan kelompok usaha terbesar yang telah menunjukkan ketahanan terhadap berbagai jenis guncangan krisis ekonomi. E-commerce belakangan ini digemari oleh kalangan pembisnis baik besar maupun kecil. Penelitian ini bertujuan untuk mengetahui analisis pengaruh penggunaan e-commerce terhadap penjualan umkm. Penelitian ini menggunakan pendekatan kuantitatif dengan alat analisis korelasi dan regresi, untuk menguji tingkat hubungan dan pengaruh yang terjadi antara variabel. Hasil penelitian ini menunjukkan bahwa e-commerce terhadap pendapatan UMKM berpengaruh positif dan signifikan dengan nilai signifikansi sebesar 0,005 atau lebih kecil dari 0,05. Hal ini menunjukkan bahwa E-Commerce memberikan kontribusi positif terutama dalam aktivitas ekonomi UMKM dengan memfasilitasi kegiatan dagang secara online, memungkinkan pemasaran produk di berbagai daerah melalui platform digital, dan mempermudah interaksi antara penjual di Kabupaten Sleman Yogyakarta dengan pembeli dari berbagai lokasi.

Kata kunci: e-commerce, UMKM, Analisis Regresi, Sleman

INTRODUCTION

Over time, the development of technology and networks has affected the mindset of doing business. One of the technological advances in business that is often noticed today is the application of online transactions of goods and services, known as e-commerce (Jannah & Triyanto, 2021). With business competition in the digital era, of course,

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MSMEs must also keep up with these developments, by digitizing sales and recording their activities to facilitate the use of accounting information for decision making. The utilization of e-commerce-based accounting information brings various benefits, one of which is that MSMEs can market their goods or services flexibly without time and location constraints. Thus, it opens very potential opportunities for MSME business entities that have used e-commerce (Budiastuti and Muid, 2020).

E-Commerce is a marketing activity that uses digital media using the internet that utilizes media in the form of web, social media, e-mail, database, mobile / wireless and digital TV to increase target consumers and to know the profile, behavior, product value, and loyalty of customers or target consumers to achieve marketing goals. E-commerce has an information system that is transparent so that it can provide opportunities for users to access this accounting information, one of the efforts to access the system is that system users can see the stock of goods in the online store directly. In this study, we analyze several factors, accounting knowledge, preparation and presentation of financial statements and business turnover on e-commerce-based accounting information users.

In the Indonesian economy, MSMEs are the largest group of businesses that have shown resilience to various types of economic crisis shocks. The criteria for companies to be classified as micro, small and medium enterprises have been determined within the legal framework. Based on Law No. 20/2008 on micro, small and medium enterprises (MSMEs), several criteria are used to define the meaning and criteria of micro, small and medium enterprises. MSMEs themselves are one of the locomotives of the Indonesian economy that can no longer use traditional methods so they must adapt to digital era business models to survive in increasingly fierce market competition (Tayibnapis, et al., 2018). In 2017, the Ministry of Cooperatives and Small and Medium Enterprises launched as many as 3.79 million MSMEs that have utilized online platforms in marketing their products. This number is around 8% of the total MSME players in Indonesia, which is 59.2 million. Then in 2019 there were 8.3 million MSMEs that had utilized online platforms in marketing their products or 14% of the total MSMEs in Indonesia. E-commerce has recently been favored by both large and small businesses. This is because promotion through online media or digital marketing is easier to reach consumers in terms of introducing or selling their products so that it is very helpful for businesspeople (Bala & Verma, 2018; Redjeki & Affandi, 2021; Weber, 2009). The rise of the online shopping trend is evident from the increasing number of MSME players who have joined the e-commerce platform. Until July 2020, there were 27,000 MSME business actors spread throughout Indonesia who have been with the Bibli Gallery. The total products marketed also reached 350,000 units (Rosana, 2020). Without the utilization of the E-Commerce system, it is believed that MSMEs will be weakened in their marketing (Amornkitvikai, et al., 2022; Arianty et al. 2022; Batubara et al., 2021; Maliki, 2023).

The existence of the Effect of E-Commerce on MSME Revenue which has been proven by previous research has found that E-Commerce has a significant effect on revenue by Helmalia & Afrinawati (2018); Lorca et al. (2019); Mandasari & Pratama (2020). The same results were also obtained in the research of Ami et al. (2023); Haryono & Nurlaela (2018); Nugraha & Nugraha (2020); Purba et al. (2021); Purnomo, & Purnamasari (2023), namely that E-Commerce has a significant effect on MSME income. So, it can be concluded that E-Commerce has a significant effect on MSME income.

Based on the background above, the problem to be discussed in this study is "does the use of e-commerce affect MSME sales in MSMEs in Sleman Regency?".

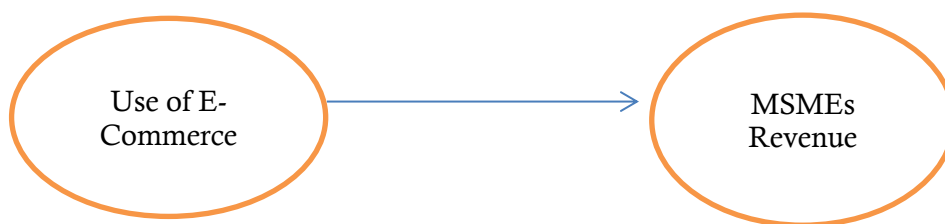


Figure 1. Conceptual Framework

Research Hypothesis

Hypotheses are temporary conjectures or conclusions that will be proven correct through data analysis and testing. The hypothesis in this study is as follows:

Ha: There is a significant positive influence between the use of *e-commerce* on the income of MSMEs in Sleman Regency.

Ho: There is no significant positive effect between the use of *e-commerce* on the income of MSMEs in Sleman Regency.

METHODS

This research was conducted in the Special Region of Yogyakarta, for one month from October 15 to November 15, 2023. The Special Region of Yogyakarta is a province with many MSMEs that are large enough to be used as research objects. This research is a type of quantitative research using a survey method through distributing questionnaires.

The target population is used to provide clear and firm boundaries regarding the elements of the population so that they can be easily identified regarding the criteria included and excluded from the research. Currently, it is recorded that Sleman MSMEs are said to have reached 94,900 MSMEs as of March 2023. Therefore, the population in this study is 94,900.

RESULTS AND DISCUSSION

Descriptive Analysis of Respondents

Table 1. Identity of Respondents Based on Age

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-24 Years	9	9.0	9.0	9.0
	25-29 Years	51	51.0	51.0	60.0
	30-34 Years	40	40.0	40.0	100.0
	Total	100	100.0	100.0	

Source: Data Processed by Researchers, 2023

Based on the table above shows that out of 100 respondents there were respondents aged 20-24 years as many as 9 people (9.0%), respondents aged 25-29 years as many as 51 people (51.0%), and respondents aged 30-34 years as many as 40 people (40.0%), which means that most of the respondents in this study were dominated by respondents aged 25-29 years, namely 51 people (51.0%).

The following is the frequency distribution of respondents based on the gender of the respondents in this study.

Table 2. Respondent Identity Based on Gender

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	36	36.0	36.0	36.0
	Female	64	64.0	64.0	100.0
Total		100	100.0	100.0	

Source: Data Processed by Researchers, 2023

Based on the table above, it shows that out of 100 respondents, there were 36 men (36.0%) and 64 women (64.0%) who were respondents in this study. This indicates that most of those who own MSME businesses in Sleman Regency are female.

Validity Test

Table 3. Instrument Validity Test

Variables	Indicator	r Count	r Table	Description
Use of E-Commerce (X)	P1	0,738	0,1966	Valid
	P2	0,835	0,1966	Valid
	P3	0,792	0,1966	Valid
	P4	0,735	0,1966	Valid
	P5	0,695	0,1966	Valid
	P6	0,731	0,1966	Valid
	P7	0,878	0,1966	Valid
	P8	0,869	0,1966	Valid
Purchase Intention (Y)	Y1	0,418	0,1966	Valid
	Y2	0,344	0,1966	Valid
	Y3	0,768	0,1966	Valid
	Y4	0,841	0,1966	Valid
	Y5	0,798	0,1966	Valid
	Y6	0,739	0,1966	Valid
	Y7	0,788	0,1966	Valid
	Y8	0,420	0,1966	Valid

Source: Data Processed by Researchers, 2023

Based on the results of the instrument validity test in the table above, it shows that all question items with N = 100 samples and all question items have a calculated r value greater than r table, this means that all items are declared valid.

Reliability Test

Reliability test is a tool for measuring a questionnaire which is an indicator of a variable or construct. A questionnaire is said to be reliable or reliable if someone's answer to a statement is consistent or stable over time (Ghozali, 2018). A variable is said to be reliable if Cronbach alpha > 0.60. The following are the results of the reliability test of the E-Commerce Usage and MSME Revenue variables as follows.

Table 4. Reliability Test

Variables	Standard Reliability	Cronbach Alpha Value	Description
Use of E-Commerce (X)	0,60	0,912	Reliable
MSME Income (Y)	0,60	0,803	Reliable

Source: Data Processed by Researchers, 2023

Based on the test results above, a variable is declared a variable if Cronbach alpha > 0.60. The table above shows that all variables have a large enough Cronbach alpha, which is above 0.60. Thus, it can be concluded that the reliability of the Use of E-Commerce and MSME Revenue studied is reliable.

Normality Test

According to Ghozali (2018), the normality test aims to test whether in the regression model, confounding or residual variables have a normal distribution. The following are the results of the normality test using the IBM SPSS Statistics 25 program.

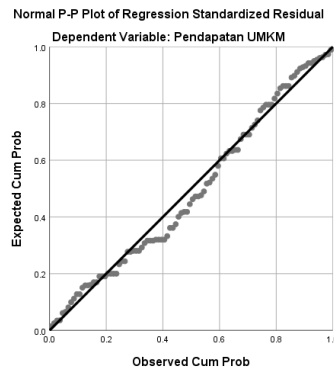


Figure 2. Normality Test Results

Based on the picture above, the data points spread around the diagonal line and follow the diagonal line of the histogram graph. Thus, it can be concluded that the data is normally distributed, and the linear regression model has met the assumption of normality.

Multicollinearity Test

Table 5. Multicollinearity Test Results

		Coefficients ^a			Collinearity Statistics	
Model		t	Sig.	Tolerance	VIF	
1	(Constant)	6.022	.000			
	Use of E-Commerce	10.992	.000	1.000	1.000	

a. Dependent Variable: MSME Revenue

Source: Data Processed by Researchers, 2023

Based on the table above, the VIF (Variance Inflation Factor) for the E-Commerce Usage variable (X) is 1.000, or smaller than 10.00 and 1.000, or greater than 0.10. So, it can be concluded that there is no multicollinearity in the variables studied.

Heteroscedasticity Test

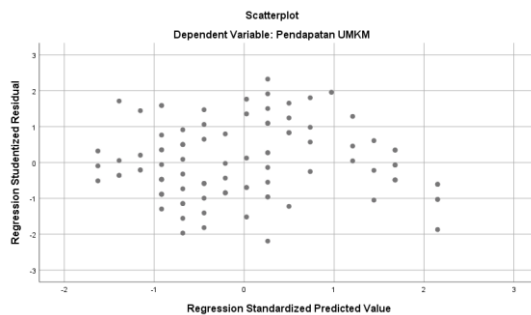


Figure 3. Heteroscedasticity Test Results

Based on the picture above, the data points spread above and below the number 0 on the Y axis and do not form a certain pattern. Thus, it can be concluded that the regression model in this study is free from heteroscedasticity problems. So, it can be said that the regression model in this study is accurate and suitable for further research.

Hypothesis Test Results

Based on the data processing that has been done, the relationship model of this simple linear regression analysis can be seen in the following table.

Table 6. Multicollinearity Test Results

		Coefficients ^a		
Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.

	B	Std. Error	Beta		
1 (Constant)	10.905	1.811		6.022	.000
Advertisement	.639	.058	.743	10.992	.000

a. Dependent Variable: Purchase Intention

Source: Data Processed by Researchers, 2023

Based on the table above, the linear regression equation that reflects the relationship between the variables in this study is as follows.

$$Y = 10.905 + 0.639X + e$$

1. Based on the acquisition of the value of the equation above, it shows that the independent variable of *e-commerce* usage (X) is constant or has not changed, the income of MSMEs (Y) is 10,905.
2. The regression coefficient value of the *e-commerce* usage variable (X) is 0.639, which means it shows that if the use of *e-commerce* is considered good, it can increase MSME income.

The equation above shows that the *e-commerce* usage variable has a positive coefficient value, meaning that the *e-commerce* usage variable used in this study has a direct relationship or influence on the MSME income variable.

Coefficient of Determination

The coefficient of determination (R²) test is used to test how much influence the independent variable has on the dependent variable. Data processing with the SPSS 25 program, provides the following results.

Table 7. Test Results of the Coefficient of Determination (R²)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.743 ^a	.552	.548	2.448

a. Predictors: (Constant), Advertising

Source: Data Processed by Researchers, 2023

Based on the table above, it shows that the results of the coefficient of determination test obtained the value (Adjusted R Square) obtained is 0.548, which means 54.8%, which means that MSME income is influenced using *e-commerce*, while the remaining 45.2% is influenced by other variables outside the model studied.

Model Feasibility Test

To test the feasibility of the model from the variables, the test results can be seen in the following table.

Table 8. Model Feasibility Test Results

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	724.071	1	724.071	120.835	.000 ^b
Residuals	587.239	98	5.992		
Total	1311.310	99			

a. Dependent Variable: MSME Revenue

b. Predictors: (Constant), Use of E-Commerce

Source: Data Processed by Researchers, 2023

The F value in the table above is 120.835 > F-table 2.31 with a significance value of 0.000 < 0.05, so it can be concluded that the proper use of *e-commerce* has a positive and significant effect on MSME revenue in Sleman Regency.

Hypothesis Test (t Test)

The t test is used to test the regression coefficient individually, this test is carried out to determine the hypothesis of a study which is whether the independent variable has a significant effect or not on the dependent variable. The results of the t test can be seen in the table as follows.

Table 9: Multicollinearity Test Results

Model	Coefficients ^a		t	Sig.
	Unstandardized Coefficients			
	B	Std. Error		
1 (Constant)	10.905	1.811	6.022	.000
Use of E-Commerce	.639	.058	10.992	.000

a. Dependent Variable: MSME Revenue

Source: Data Processed by Researchers, 2023

The results of the table description above which describes the results of the simple linear analysis test can be concluded more clearly that from these results it is found that the Hypothesis Test for the use of *e-commerce* (X) on MSME income (Y). Based on the results of the calculations that have been carried out, the t-count value is 10.992 > t-table 1.98447 (t table value for n = 38 and significance 0.05) with a significant result of 0.005 < 0.05. This shows that **H_a is accepted** and **H₀ is rejected**, which means that there is a significant positive effect between the use of *e-commerce* on the income of MSMEs in Sleman Regency.

CONCLUSION

Based on the results of research and discussion, it can be concluded that E-Commerce has a positive and significant influence on the income of MSMEs in Sleman Regency, Yogyakarta. This is evident with a one-unit percent increase in E-Commerce has a positive impact on increasing MSME income. The regression analysis results show that the regression model between the E-Commerce variable (X) and the MSME Income variable (Y) is normally distributed and partially has a positive and significant effect on MSME income. E-Commerce makes a positive contribution especially in the economic activities of MSMEs by facilitating online trading activities, enabling product marketing in various regions through digital platforms, and facilitating interaction between sellers in Sleman Yogyakarta Regency and buyers from various locations. In addition, E-Commerce also gives merchants control over payments and provides informative product offering facilities, making buying, and selling transactions more efficient and profitable for all parties involved. This conclusion answers the formulation of the research problem by underlining the positive impact of E-Commerce on the income of MSMEs in the economic context of Sleman Regency Yogyakarta.

There are several suggestions that the author can give to related parties. Theoretically, researchers suggest in-depth research on external factors that can increase the economic application for MSME players in buying and selling activities through E-Commerce. It is important to consider these aspects in developing the concept of E-Commerce. In addition, it is hoped that the community, especially business actors, can discuss more about E-Commerce issues so that their understanding will be deeper.

In a practical context for MSMEs, it is suggested that there should be product diversification that is more in line with market demand to increase production capacity. Continuous coaching and assistance, both in terms of skills and capital, need to be provided by relevant agencies. This aims to enable MSMEs to compete in the global market through E-Commerce, develop their businesses sustainably, and remain a pillar of the Indonesian economy. Thus, this effort is expected to make a positive contribution to microeconomic growth at the local and national levels.

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