



Implementation of E-Commerce During Pandemic and Its Influence in Increasing Revenue of Small Medium Enterprises in Tegal City

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Abstract. The purpose of this study was to determine the effect of the application of e-commerce on increasing the income of MSMEs (Micro, Small and Medium Enterprises) in Tegal City. The role of mobile technology is important for MSMEs as an element in business to develop global markets and increase MSME income. In contributing, MSMEs are able to improve and develop the digital economy. The data collection method used is a survey method using a questionnaire. The sample used is 45 respondents from SMEs in the business sector of beauty, fashion and food. Determination of the sample is done by non-probability sampling method with the type of saturated sample technique. The analytical method used is simple linear regression analysis with the help of SPSS. Shows that the application of e-commerce has a significant positive effect on increasing MSME income in the City of Tegal. MSME actors experience obstacles, namely knowledge about technology is still limited when using e-commerce. When MSME actors start using e-commerce, they automatically contribute income and carry out very effective and practical promotions during the pandemic, so that they can encourage the development of the digital economy.

Keywords: E-commerce · Income · MSME

1 Introduction

The Micro, Small, Medium Enterprises (MSMEs) sector based on the populist economy has an important role in supporting the backbone of the regional and national economy. The role of MSMEs is very strategic in supporting labor absorption and economic growth to reduce the problem of unemployment and poverty. In addition, MSMEs play a role in the distribution of development results. Therefore, the government pays attention and strengthening to continue to be developed micro, small and medium enterprises sector involving many groups.

Recognizing the activities of MSMEs in the era of globalization with high competition makes MSMEs must be able to face challenges in order to increase product and service innovation, human resource and technology development, and the expansion of

marketing areas. The main challenge of MSMEs today is the decline in MSME performance due to the covid-19 pandemic. Reporting from the results of the KPw BI Tegal survey, the number of MSMEs in Pekalongan Ex-karesidenan is 152 MSMEs. From these results, as many as 88.82% of MSMEs experienced a decrease in turnover and 7.89% of MSMEs have been permanently closed. The msme groups most affected by this pandemic are the food and drink supply sector, retail trade and processing industry [1]. From the data, it can be seen the decrease in the number of MSMEs in 2020 which has an impact on the income received by MSMEs. Easy transactions, marketing, good product quality and affordable prices are some alternatives so that MSME interest increases again.

Increasing sales revenue can be done with various strategies. The strategy is to establish cooperation between producers (MSMEs) and distributors, MSMEs use technology better and more effectively, increase promotions through social media and print media, improve product quality while maintaining competitive selling prices. With the activities of the digital economy, product sales have become easier between producers and consumers through e-commerce. The Central Statistics Agency (BPS) provides data on 8 million of the 58 million MSMEs in Indonesia that have just joined e-commerce. This means that only 14% of MSMEs have changed their sales strategy by being more active in selling in e-commerce [2].

In line with the concept of the digital economy, it focuses more on transactions or buying and selling processes and markets on the internet. The digital economy is a complex economic system and is an emerging phenomenon related to aspects of microeconomics, macroeconomics, and organizational theory and administration. The concept of economic activities that can be carried out is utilizing information and digitalization as a means of promoting production, modern information networks as an important activity space and the effectiveness of the use of Information and Communication Technology (ICT), in increasing productivity growth and optimizing structural economics [3].

The globalization will bring many advantages for enterprises however SMEs will face fierce competition at the local, national and international level. In order to maintain and promote the important role of SMEs in the context of increased competition, SMEs have to change and adopt new technologies. Ecommerce and digital technologies are bringing opportunities to help SMEs improve their competitiveness, narrow the gap with big enterprises thanks to their fairness and flexibility of the digital business environment a Collection Techniques [4].

The role of mobile technology is important for MSMEs as an element in transporting business to develop markets globally to increase MSME income. This concept encourages the digital economy to explain the impact of all information and communication technologies, internet users, but is included in the economic sector [5]. Macro and micro economic growth is successful because of the development of innovation and technological advances that are carried out.

E-commerce is the trading of goods or services through telecommunications networks, especially the internet [6]. Solutions for using the right technology into a technology-based business. Today, the most effective interactive communication for sellers, buyers or other business associates is the internet. Done more practically and quickly, online business marketing is increasingly popular and used for the needs of

producers and consumers. Ease of shopping for consumers is one of the offers of business transactions via the internet. Promotion of MSME products through the internet is easy to do anywhere. With the existence of social media, MSME entrepreneurs can also use their smartphones as a medium to be quickly recognized by the wider community. E-commerce applications product development, delivery and marketing, as well as ongoing technical support and manufacturer cooperation also participate in online sales. Thus, it can increase revenue.

It was revealed from previous research that the income of MSMEs decreased at the start of the COVID-19 pandemic, but with the use of e-commerce revenue increased but not as much the same as before the COVID-19 pandemic it can be concluded that E-commerce has a positive and significant impact on revenue, this means the use of e-commerce during the COVID-19 pandemic can increase income. In addition, E-Commerce has a positive and significant effect on sales volume, meaning that: that with the use of e-commerce on SMEs [7].

Conditions that occur in the use of social media to conduct online marketing for MSMEs in Tegal are still many obstacles, such as a lack of knowledge about technology and the availability of devices that support technology. People are not used to accessing online services to conduct economic transactions through e-commerce. It is hoped that online marketing using e-commerce as an alternative to sales during the pandemic and able to increase the income of MSMEs in Tegal City as an alternative to sales during the pandemic. Recognizing the importance of online marketing during a pandemic and technology continues to develop, the purpose of this study is to analyze the influence of e-commerce on income and the constraints faced by MSMEs in implementing E-commerce during the development of the digital economy.

2 Research Methods

This research was conducted in the City and Regency of Tegal in November 2020–January 2021 with samples taken by Micro, Small and Medium Enterprises users of e-commerce in the field of beauty and fashion businesses.

MSME actors in Tegal City are used as the population in this study, Sample is determined by the nonprobability sampling method of a type of saturated sample technique, which is a retrieval of all population objects to be used as samples. Using this technique, a sample of 45 respondents can be obtained. MSMEs that are sampled are MSMEs that sell online and use e-commerce applications.

The data in this study was conducted by providing questionnaires through contact persons or MSME actor managers that can be reached by researchers. Before use researchers pretest research instruments. The results of the questionnaire were used to obtain research data in the form of the dimensions of the question construct. Statements contained in kuesioner aremeasured on a scale likert 1 to 4 to obtain data that is ordinal and given a score or value [8].

3 Results and Discussions

3.1 Result

The purpose of descriptive statistical analysis is for researchers to know the description of research data related to the use of e-commerce. From the results of this analysis, it can be seen that of all respondents in the food, beauty and fashion sectors who use e-commerce applications, there are 28 respondents who use the Shopee application, 3 respondents use the Tokopedia application, 9 respondents with the rest of the marketplace, there are 5 respondents who use various application.

3.1.1 Data Quality Test

The data quality test in this study was tested on 45 respondents using validity and reliability tests.

3.1.1.1 Validity Test

Validity test was conducted to determine the level of quality of the instrument in measuring the concept. Validity test is used to measure the validity of a questionnaire. Below are the results of the validity test on each variable.

Table 1 shows the results of the validity test found the sig of value. (2-tailed) is less than 0.05 so that each variable indicator can be declared valid.

3.1.1.2 Reliability Test

The reliability test is a test tool for measuring the results of the questionnaire and does not focus on variables or constructs. Cronbach Alpha value (α) from reliability testing as shown in Table 2.

Table 1. Validity test results of e-commerce and income variables

Indicator	Sig Value. (2-tailed)	Information
E-commerce(X)_1	.001	Valid
E-commerce(X)_2	.006	Valid
E-commerce(X)_3	.003	Valid
E-commerce(X)_4	.001	Valid
E-commerce(X)_5	.000	Valid
Income(Y)_1	.023	Valid
Income(Y)_2	.002	Valid
Income(Y)_3	.000	Valid
Income(Y)_4	.000	Valid
Income(Y)_5	.000	Valid

Source: Data processed, 2021

Table 2. Reliability test

Variable	Cronbach's Alpha	Information
E-commerce	0.779	Reliable
Income	0.779	Reliable

Table 3. Normality test results

	Unstandardized Residual
Test Statistic	0.111
Asymp. Sig (2-tailed)	0.200

Cronbach's alpha value in Table 3 is more than 0.60 so that each variable can be declared reliable.

3.1.2 Classic Assumption Test

3.1.2.1 Normality Test

The normality test of the data was carried out through statistical analysis using the Kolmogorov-Smirnov One-Sample Non-Parametric Statistical Test. Data can be declared normally distributed if the significance value is greater than 0.05 [9].

Based on the results of Table 3 the normality test using statistical analysis with the Kolmogorov Smirnov test, the results showed $0.200 > 0.05$ so that the test results can be said to be normally distributed data.

3.1.2.2 Simple Linear Regression Analysis

The results of simple linear regression analysis in this study are as follows:

$$\text{Revenue} = 4.755 + 0.709(\text{E-Commerce}).$$

The meaning of the regression equation above can be explained as follows (Table 4):

- The value of the regression constant is positive at 4.755, which means that if the independent variable (E-Commerce) is assumed to be constant, the income variable will have a value of 4.755 units.
- The regression coefficient value of the E-Commerce variable is 0.709, which means that for each independent variable (E-Commerce) there is an increase of 1 unit, it will increase revenue by 0.709.

3.1.2.3 Partial Test (t statistic test)

Individual parameter testing is carried out in order to find out whether individual variables have an influence on the independent variables with the assumption that the other

Table 4. Simple linear regression test results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B		Beta		
1 (Constant)	4.775			2.519	0.016
E-Commerce	0.709		0.713	6.664	0.000

Source: Data processed, 2021

Table 5. T-Test results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std Error	Beta		
1	(Constant)	4.775	1.888		2.519	0.016
	E-Commerce	0.709	0.106	0.713	6.664	0.000

Source: Data processed, 2021

dependent variables are constant. The variables tested are e-commerce and income, so the test results are as in Table 5.

From the results of the t test (partial) shows the value of E-Commerce is smaller than the significance value of 0.05 (5%). This means that the E-Commerce variable has a significant effect on revenue.

3.2 Discussions

The result of t-test statistic (partial) shows the value of e-commerce (0.00) is smaller than the significance value of 0.05 (5%). This means that the e-commerce variable has a significant effect on income. Where the use of e-commerce can increase the income of MSME actors in sales. The greater the development of e-commerce, the more income MSMEs will get in Tegal. E-commerce encourages the digital economy in the Tegal City area, the awareness of business actors has begun to shift to payment transactions through digital technology and/or online buying and selling processes.

That E-commerce has a positive and significant effect on income, meaning the use of e-commerce during the COVID-19 pandemic can increase income from the results of this study according to the research of Mandasari and Pratama [7].

Supporting the research of Tayibnafis et al., it is stated that digital technology has proven to play a strategic role in providing goods and services in a way that is convenient, practical, cheaper, faster, time-saving, and labor-intensive. Influencing the growth of the digital economy with the availability of banking services that use digital technology is very important appreciated by the community, including MSMEs [10].

Most MSMEs have problems in using e-commerce. These inhibiting factors include limited technological knowledge regarding online sales, trust between buyers and sellers in transactions, intense competition and the large number of people who shop at traditional markets due to the unsupportive internet network.

4 Conclusion

The conclusion that can be drawn from the above explanation in the use of e-commerce empirical results has a significant positive effect on the income of Micro, Small and Medium Enterprises in Tegal City. E-commerce is able to create digital markets and online transactions for MSME actors and encourage the development of the digital economy in the face of globalization.

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