Implementation of E-Commerce During the Post Covid-19 Recovery in Increasing Sales Volume on Jewelry Gold Gallery Brotoseno 2 Nganjuk

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Abstract. In this study, the aim of this study was to prove that the implementation of e-commerce during the post-Covid-19 recovery period was able to influence the increase in sales volume at Jewelry Gold Gallery Brotoseno 2 Nganjuk.

The researcher uses a quantitative approach in proving the truth of the study by using a significance level of 5% in taking samples by random sampling. The validity limit of the sample was calculated using the Raosoft sample size calculator and the sample limit was 67 respondents. The research instrument used a closed questionnaire with 26 statements. The data analysis technique used simple linear regression with classical assumption test of normality, multicollinearity, and heteroscedasticity in hypothesis testing.

The results of the study prove that it is proven that there is a significant effect of positive e-commerce implementation on increasing sales volume at Jewelry Gold Gallery Brotoseno 2 Nganjuk with a coefficient of determination of 58.4%. The results of the level of e-commerce implementation criteria have good criteria of 23.6% and the level of increase in sales volume with very good criteria is 73.6%.

Keywords: Implementation · e-commerce · Sales volume · Jewelry Gold

1 Introductions

In the business world in this new normal era, business people are required to have more knowledge and the right strategy in following the 4.0 industrial revolution that puts forward the advancement of online-based interaction technology [1]. This industrial revolution makes businesspeople compete freely and tightly with innovations that bridge business actors to reach the widest target market through digital networks as a supporter of marketing tools. One of the digital marketing platform innovations is e-commerce [2].

E-commerce is one type of media promotion in an effort to increase sales. [3] , E-commerce itself is an abbreviation of electronic commerce [4]. E-commerce is a platform that utilizes internet access in running its business. E-commerce is a form of implementing an Enterprise Resource Planning (ERP) management system [5]. E-commerce was developed with its five constituent elements that maximize its function

as a management system in managing and managing businesses with aspects forming context (context providers), interface systems.

2   Literature Review/Theoretical Study

2.1   Sales Volume Increase

To be able to measure the increase and decrease in sales volume, an analysis of the indicator aspect in sales can be carried out [6]. There are several indicators of sales volume is the achievement of a certain sales volume; earn a certain profit; and support the company's growth [7]. To assess sales volume, an analysis of the indicator points can be carried out, namely: purchase intensity, payment terms, consumer purchasing power [8].

2.2   E-Commerce Implementation

According to [9] there are several components that can be used as an indicator of the success of e-commerce sites in influencing the increase in sales volume, namely:

2.2.1   Interface (Main View)

Interface (Main Display) one of the first indicators that becomes a very important point. Because the interface determines the visitor's first impression of the site seen at first glance [9]. The site's home screen has four rating metrics ranging from: display design, imagery, writing style, and flexibility.

2.2.2   Navigation Features

The navigation feature is that this point becomes the main component for visitors as potential consumers to be able to make the process of moving from one page that is displayed to another menu view [10]. Navigation has four component metrics. Namely: display structure, user friendliness, search engines, and navigation access [11].

2.2.3   Contents (Content Providers)

Content is a form of feedback between managers and consumers. [12] explained that content that is not too complicated and searches that are not too difficult and having a scheduled application update schedule are the main things that have an impact on increasing the use of e-commerce applications. Content can be in the form of a product catalog or a search menu. Content has four rating component metrics [13].

2.2.4   Reliability (reliability)

Reliability is an assessment of the reliability of an e-commerce consisting of two aspects, the first is the level of consumer confidence and the level of business trust [9]. Fairness is compliance with delivery of goods on time and in acceptable conditions. E-commerce reliability has four assessment metrics, namely, customer profile storage, order processing, after-order pick-up, and customer service [14].
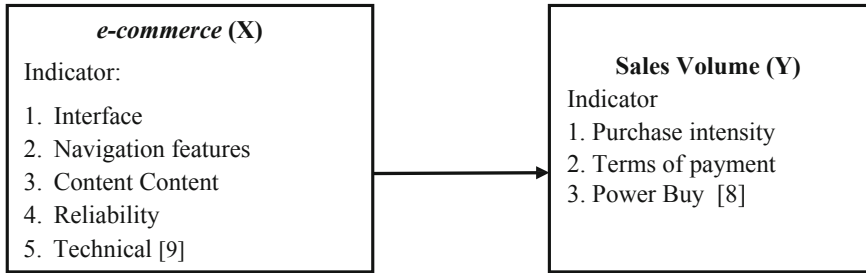
Fig. 1. The conceptual framework in this study.

2.2.5 Technical (Technical)

Technical (technical) is also part of the components that make up an e-commerce. This component is an important thing to be used as a technical aspect of an e-commerce website [15]. So that the technical aspects of e-commerce can function properly. Technology has four component metrics for assessing technical indicators, namely speed, security, and software and system design [9] (Fig. 1).

Ha = There is an effect of the implementation of e-commerce during the recovery period after the Covid-19 pandemic on the increase in sales volume at Jewelry Gold Gallery Brotoseno 2 Nganjuk.

H0 = There is no effect of e-commerce implementation during the recovery period after the Covid-19 pandemic on increasing sales volume at Jewelry Gold Gallery Brotoseno 2 Nganjuk.

3 Research Methods

The researcher uses a quantitative research design with quantitative descriptive statistics [16]. Descriptive statistics are statistics used to analyze data by describing the results of data that have been collected in accordance with the problem formulation that is determined to be able to make conclusions that apply to the public or generalizations [17]. This analysis only looks for or explains interrelationships, tests hypotheses, makes predictions, or draws conclusions with the accumulation of basic data in the form of descriptions only in testing hypotheses [18].

3.1   Operational Research Variables

Research variable	Research Indicators	Source Theory
E-commerce implementation (X)	1. Interface 2. Navigation features 3. Contents 4. Reliability 5. Technical	[9]
Research variable	Research Indicators	Source Theory
Sales Volume Increase	1. Purchase intensity 2. Terms of payment 3. Purchasing power	[8]

Source: Processed by Researchers (2022)

4   Research Results and Discussion

1. Description of Respondents by Gender

Based on the results of the recapitulation of customers who are willing to fill out online questionnaires at Shopee belonging to Jewelry Gold Gallery Brotoseno 2 Nganjuk, they can be categorized according to gender as follows (Tables 1 and 2):

Based on the grouping of respondents based on the age above, it can be seen that most of the customers of Shopee Jewelry Gold Gallery Brotoseno 2 Nganjuk are in the 18-27 year age group as much as 72.2% and the minimum age is the 48-57 year age group as much as 1.4%.

5   Research Result

5.1   Simple Linear Regression Analysis

Based on the results of statistical analysis with IBM SPSS version 26.0 software from primary data obtained from a questionnaire instrument with e-commerce as the independent variable and the increase in sales volume as the dependent variable (Y) obtained the output of a simple linear regression analysis equation as follows (Table 3):

Table 1. Recapitulation of Respondent Data by Gender

Gender	Frequency	Percent
Man	4	65.7%
Woman	63	94.3%
Total	67	100.0%

Source: Primary Data (2022).

Table 2. Recapitulation of Respondent Data by Age

Age Group (Year)	Frequency	Percent
18–27	50	72.5%
28–37	10	14.5%
38–47	6	8.7%
48–57	1	1.4%
Total	67	100.0%

Source: Primary Data (2022)

Table 3. Output Result of Simple Linear Regression Equation

Coefficients						
Unstandardized Coefficients				Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	24,657	3,621		6809	.000
	E-commerce	.292	.054	.558	5.415	.000

a. Dependent Variable: increase. Volume. Sales

Source: Output Data (2022)

Based on the results of the coefficients table above, it can be seen that the value of the regression equation constant is positive at 24,657 and the coefficient value of the E-commerce variable is 0.292 with a positive value. Based on this value, a simple linear regression equation can be formed as follows (Table 4).

$$Y_{Sales} \text{ Volume Increase} = 24,657 + 0.292X_{E-commerce}$$

Based on the results of the KS normality test, the value of asymptotic significance 2-tailed $= 0.200 > 0.05$ which indicates that there is no difference between the data and the normal curve implies that the data follow a normal distribution. So that the data is able to represent the population data of Jewelry Gold Gallery Brotoseno 2 Nganjuk customers in assessing the increase in sales volume (Table 5).

Based on the results of the multicollinearity test between the e-commerce variables on increasing sales volume, the tolerance value is $1,000 > 0.10$ and the VIF value is $1,000 < 10.00$ which fulfills the assumption that there is no multicollinearity between the independent variables of e-commerce (Table 6).

The coefficient of determination of the e-commerce variable in influencing the increase in sales volume is indicated by the value of Adjusted R Square $= 0.300$ (30%). This shows that the e-commerce variable as an independent variable is able to influence an increase in sales volume by 30% with an estimated data error of 3.5 data units. While

Table 4. One-Sample Kolmogorov-Smirnov Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		67
Normal Parameters, b	mean	.0000000
	Std. Deviation	3.56191046
Most Extreme Differences	Absolute	.095
	Positive	.095
	negative	-.056
Test Statistics		.095
asymp. Sig. (2-tailed)		.200c,d
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Source:Statistical Output (2022)

Table 5. Variable Multicollinearity Test Results

Model		*Collinearity Statistics*	
		Tolerance	*VIF*
1	*(Constant)*		
	E-commerce	1,000	1,000

Source: Statistical Output (2022)

Table 6. Model Results Summary

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin – Watson
1	.558a	.311	.300	3.58921	2.072
a. Predictors: (Constant), E-commerce					
b. Dependent Variable: increase.volume.sales					

Source: Output Data (2022)

Table 7. Hypothesis Test Results

Coefficient						
Unstandardized Coefficients				Standardize d Coefficients	T	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	24,657	3,621		6809	.000
	E-commerce	.292	.054	.558	5.415	.000

a. Dependent Variable: increase.volume.sales

the remaining 70% increase in sales volume is influenced by other variables besides the implementation of e-commerce.

Based on the results of hypothesis testing with t-test showing the value of t-count = 5.415 > t-table = 1.99656 (df = Nk = 67 − 1 = 66) and p-value = 0.000 <0.05, then Ha is accepted and H0 is rejected. Statistical results prove that there is an effect of e-commerce implementation on increasing sales volume at Jewelry Gold Gallery Brotoseno 2 Nganjuk.

6 Discussion

Based on the results of data analysis that has been collected as many as 67 respondents who are willing to provide complete answers and have the validity and reliability of the answers that can be used in measuring the independent variable e-commerce (X) and the variable of increasing sales volume as the dependent variable (Y). The results of hypothesis testing indicate that there is an effect of e-commerce implementation on increasing sales volume at Jewelry Gold Gallery Brotoseno 2 Nganjuk with t-count value = 5.415 > t-table = 1.99656 and p-value = 0.000 <0.05. Based on the results of a simple linear regression analysis, an equation for increasing sales volume (Y) = 24,657 + 0.292XE-commerce is formed with a coefficient of determination or contribution value of 55. 8% shows the estimated statistical error of data processed with IBM SPSS version 26.0 of 3.5 data units. This shows that the existence of e-commerce that Jewelry Gold Gallery Brotoseno 2 Nganjuk applies in implementing marketing strategies in an effort to increase sales volume is statistically proven to be influential and able to have a positive impact on achieving sales volume globally both in direct and online sales. In this study, it supports activities for other researchers to be able to develop themes and other indicators that affect sales volume in online businesses (Table 7).

6.1 The Effect of Increasing Sales Volume on Jewelery Gold Gallery Brotoseno 2 Nganjuk

Ha = There is an effect of the implementation of e-commerce during the recovery period after the Covid-19 pandemic on the increase in sales volume at Jewelry Gold Gallery Brotoseno 2 Nganjuk.

H0 = There is no effect of e-commerce implementation during the recovery period after the Covid-19 pandemic on increasing sales volume at Jewelry Gold Gallery Brotoseno 2 Nganjuk.

7   Conclusions and Recommendations

Based on the results of statistical analysis of evidence shows that it is proven that there is an effect of e-commerce implementation on increasing sales volume at Jewelry Gold Gallery Brotoseno 2 Nganjuk with a value of sig. $0.000 < 0.05$. For Jewelry Gold Gallery Brotoseno 2 Nganjuk can improve the interface aspect of the e-commerce that has been built so that it can attract consumers who visit e-commerce to feel a high level of trust in purchasing jewelry through online. Share Jewelry Gold Gallery Brotoseno 2 Nganjuk. is expected to facilitate payment terms in making consumer payments through Shopee. In order not to reduce consumer purchases through shopee ROSE 2.

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