

The Impact of Online Customer Reviews on Purchase Intention in Online Marketplace

Agus Rahayu^{1,*}, Dian Herdiana Utama², Ririe Novianty³

¹ Universitas Pendidikan Indonesia

² Universitas Pendidikan Indonesia

³ Universitas Pendidikan Indonesia

*Corresponding author. Email: agusrahayu@upi.edu

ABSTRACT

This study aims to determine the description of online customer reviews on Blibli website visitors in Indonesia, knowing the description of purchase intentions on Blibli website visitors in Indonesia, and to find the magnitude of the influence of online customer reviews on purchase intention on Blibli website visitors in Indonesia. This type of research is descriptive explanative, and the method used is a survey method using a simple random sampling technique with a sample size of 400 respondents. Data analysis technique used is path analysis with SPSS 22.0 for Windows computer software. The findings of this study indicate that the description of online customer reviews is in the good category, the description of purchase intention in the good category, the variable online customer reviews that has a high influence on purchase intention is the source credibility dimension, while the dimension that has the lowest influence is the quality of the argument. Based on the results of research purchase intention is influenced by online customer reviews with a strong category and external influences that are not examined also with the medium category.

Keywords: *online customer reviews, online reviews, purchase intention.*

1. INTRODUCTION

Marketing is the most crucial part of everyday life in the external environment, including consumers, so companies need to develop a good strategy in marketing activities to make a profit. According to the American Marketing Association (AMA), marketing is an organizational function and a set of processes for creating, communicating, and providing value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders [1]. Reference [2] argue that marketing stimuli consist of products, prices, places, and promotions that companies provide to consumers [3].

Marketing management is the art and science of determining target markets and reaching, retaining, and multiplying consumers by creating, delivering, communicating superior customer value. Marketing is a process carried out by companies to build and create value for consumers, aiming to have a relationship with consumers and get value for the company from consumers who have bought the products offered in return. Marketing is seen as the task of finding and stimulating consumers for company output that involves product development, pricing, distribution, and communication so that companies must pay attention to changing consumer needs and develop new products by modifying and new services that can meet consumer needs [1].

Introducing a new product to consumers requires good communication so that consumers can accept it. An indication of communication has a direct impact on marketing, such as trust, coordination, and commitment [4]. Reference [1] state that marketing communication is a means used by companies to provide information, persuade, instigate and remind consumers directly or indirectly about a product to be sold. Marketing communication is divided into two parts: the marketing communication mix and integrated marketing, one of the critical components of integrated marketing, namely social media.

Marketing communication uses social media such as Twitter, Instagram, Facebook, or Youtube. Social media is an online application, platform, and media that facilitates communication and provides information on a product. This information can be in the form of images, videos, product ratings [5]. Social media is a two-way communication by seeking empathy for consumers, which will cause a familiar emotion about a product. One of the crucial components in social media is online communities and forums, where there will be online customer reviews that provide opportunities and reduce misunderstanding and negative thinking about a product to increase brand value through a platform to exchange ideas and information between online consumers [6].

Online consumer reviews can be understood as a medium for consumers to see reviews from other consumers of a company's products, services, and how a company as a producer is [7]. Online customer reviews can be defined as evaluations of products produced by colleagues posted on online retailer websites or third-party websites [8]. Online consumers reviews (OCRs) are a piece of information created by website users who have purchased the target product. OCRs contain information and recommendations regarding products from a consumer perspective.

The dimensions of online customer reviews are also stated [9], namely: 1) argument quality. The quality of the argument refers to the strength or reasonable consumer argumentation, 2) volume, the volume of online customer reviews of a product that represents the popularity of the product because it is related to product sales volume, 3) valence, concerning how online reviews can be viewed, for example, viewed negatively or positive, 4) timeliness, related to whether the message is current, up-to-date, and timely, and 5) source credibility, Source credibility refers to the perception of the recipient of the message about the trustworthiness of the message source, does not reflect anything about the message itself. Ference [10] states that online reviews are positively related to consumer purchase intention and have a significant effect on purchase intention [11] because they provide understanding to consumers, besides that the benefits of online customer reviews are to increase consumer purchase intention [12].

The competition of the e-commerce industry in Indonesia is currently getting higher. Online sales platforms are already in demand by many people rather than buying directly on the spot or offline, one of which is Blibli, which sells various kinds of products for consumer needs. Currently, there is a problem regarding purchase intention to purchase products in Blibli.

The formulation of the problem in this study is how to describe and how much influence online customer reviews have on visitors' purchase intention to the Blibli website in Indonesia. This study aims to determine the description and magnitude of the influence of online customer reviews on the purchase intention of visitors to the Blibli website in Indonesia. Based on the explanation of the online customer reviews and purchase intention, a research paradigm is drawn up, clearly depicted in Fig. 1.

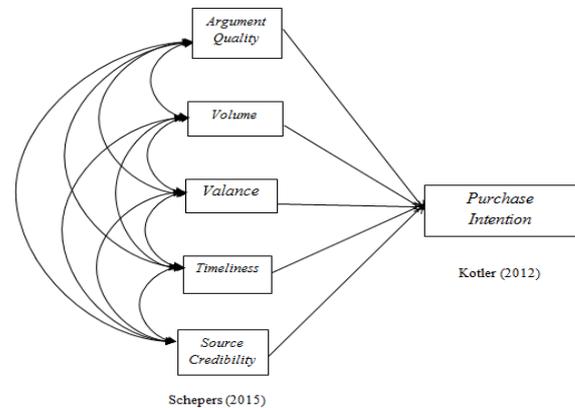


Figure 1. Research framework.

2. METHODS

This research was conducted to determine the effect of online customer reviews on purchase intention. This study's independent variables are online customer reviews with the dimensions of argument quality, volume, valence, timeliness, and source credibility. Meanwhile, the dependent variable is purchase intention with the dimensions of product characteristics, previous online shopping, and trust in online shopping.

The object/unit of analysis in this study is the Blibli website visitors in Indonesia. This research was conducted in less than one year, so this study's data collection technique was a cross-sectional method. The sampling technique used in the study was simple random sampling by taking a sample of 400 people. The data sources used are in Table 1 below.

Table 1. Type and Source of Data

No	Data	Type of data	Source of data
1	Traffic Rank Startup E-	Iprice.co.id	Secondary

	Commerce		
2	Monthly Website Visitors, Ranking, Appstore Playstore, Instagram, Facebook Startup Ecommerce	Iprice.co.id	Secondary
3	Daily Pageviews Per Visitor, Daily Time on Site, Bounce Rate Starup E-Commerce	Similarweb.com	Secondary
4	Respondents' Responses regarding Indicators of Product Characteristics Purchase Intention of Blibli Website Visitors in Indonesia (Preliminary-Research)	Pengunjung website Blibli	Primary
5	Respondents' Responses regarding Previous Online Shopping Experience Purchase Intention Indicators for Blibli Website Visitors in Indonesia (Preliminary-Research)	Pengunjung website Blibli	Primary
6	Responses to Indicators of Trust in Online Shopping Purchase intention of Blibli Website Visitors in Indonesia (Preliminary-Research)	Pengunjung website Blibli	Primary
7	Reviews of Blibli Consumer App Store in Indonesia (Preliminary-Research)	Konsumen Blibli	Primary

Source : data processing result 2019

Data collection techniques used were observation, documentation study, and questionnaires. Verification data analysis used path analysis with the help of SPSS 22.0 for windows software.

3. RESULT AND DISCUSSION

3.1. Normality test

The normality test is carried out to determine whether the data obtained from the field research results are normally distributed or not so that the data can be used or not in the path analysis model. The way to find out this can be done through statistical test analysis. The Kolmogorov Smirnov test results can be seen in Table 2 as follows.

Table 2. Normality Test of Relationship Quality on Customer Loyalty One-Sample Kolmogorov-Smirnov Test

One-Sample Kolmogorov-Smirnov Test	
	Standardized Residual
N	400

Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	6.05675516
Most Extreme Differences	Absolute	.061
	Positive	.061
	Negative	-.061
Test Statistic		.061
Asymp. Sig. (2-tailed)		.099 ^c

Source: data processing 2020

Based on Table 2 above, it can be seen that the significance value of the normality test of the research data is 0.099. This value is > 0.05 so that the research variable data is stated to have a normal distribution of data.

3.2. Testing the correlation coefficient and path coefficient

To test the effect of online customer reviews' dimensions consisting of argument quality, volume, valence, timeliness, and source credibility on purchase intention, it can be seen in Table 3.

Table 3. Correlation Matrix between the Dimensions of Online Customer Reviews (X) and Purchase Intention (Y) Variable

Variable	AQ	V	V	T	S	PI
AQ	1	0,787	0,702	0,739	0,745	0,748
V	0,787	1	0,745	0,761	0,724	0,752
V	0,702	0,745	1	0,673	0,623	0,698
T	0,739	0,761	0,673	1	0,795	0,731
S	0,745	0,724	0,623	0,795	1	0,721
PI	0,748	0,752	0,698	0,731	0,721	1

Source : data processing result 2019

To obtain the path coefficient, the inverse correlation matrix associated with the correlation between the independent sub variable (X) and the dependent variable (Y) is presented in Fig. 2.

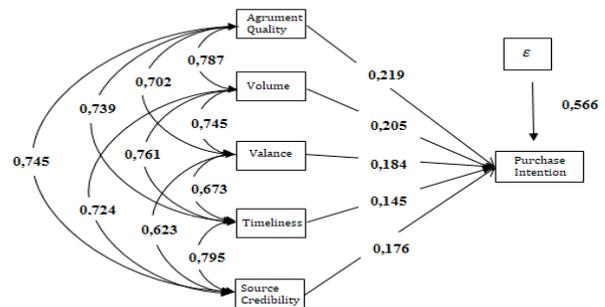


Figure 2. Path diagram of the variable X against Y

Note :

→ = Causality relationship

↔ = Correlational relationship

ε = Other influencing factors (epsilon)

After the path coefficient is obtained, the magnitude of the influence of instrument quality (X1), volume (X2), valence (X3), timeliness (X4), and source credibility (X5) on purchase intention (Y) can be determined from the multiplication of the path coefficient on the matrix. The correlation between the causal variable (X) and the effect variable (Y).

3.3. Total coefficient of determination (R2)

In the SPSS program, to determine the total coefficient of determination, it can be seen in the R square column as listed in Table 4.

Table 4. Total Coefficient of Determination argument quality, volume, valence, timeliness, and source credibility on purchase intention

Model Summary ^a				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,824a	0,679	0,675	6,095

a. Predictors: (Constant), Argument Quality (X1), Volume (X2), Valence (X3), Timeliness (X4), Source Credibility (X5)

The total coefficient of determination or the effect of the endogenous variables as a whole is 0.679, and if the percentage is 67.9%, it means that the effect of online customer reviews on purchase intention is in a strong category. In contrast, the rest is influenced by other variables not examined in this study.

3.4. Direct and indirect influence

To find out the results of testing the direct and indirect effect of online customer reviews on purchase intention based on the path coefficient and correlation coefficient between the sub-variable argument quality (X1), volume (X2), valence (X3), timeliness (X4), and source credibility (X5) regarding purchase intention (Y) can be seen in Table 5.

Table 5. Direct and Indirect Effect Test Results Online Customer Reviews (X) on Purchase Intention (Y)

Variable	Path coefficient	Direct influence	Indirect influence					Total indirect influence	Total
			AQ	V	V	T	S		
AQ	0,219	0,048	-	0,035	0,028	0,023	0,029	0,115	0,163
V	0,205	0,042	0,035	-	0,028	0,028	0,026	1,112	0,154
V	0,184	0,034	0,028	0,028	-	0,018	0,20	0,094	0,128
T	0,145	0,021	0,023	0,023	0,018	-	0,021	0,085	0,106
S	0,176	0,031	0,029	0,026	0,020	0,021	-	0,096	0,127
Total Influence									0,678

Source: data processing result 2020

The results of the test on the direct effect of online customer reviews (X) on purchase intention (Y) are the most dominant sub variable argument quality (X1) with a value of 0.048. Meanwhile, the sub variable with the least dominant direct influence is timeliness (X4), with a value of 0.021. Then the test results of the indirect effect of online customer reviews (X) on purchase intention

(Y), the most dominant is the volume sub variable (X2) through argument quality (X1) or vice versa with a value of 0.035. In comparison, the sub-variables with the least dominant indirect effect are timeliness (X4) through valence (X3) or vice versa with a value of 0.018.

The variable that can increase another variable indirectly on purchase intention is argument quality. Meanwhile, the variable that can indirectly reduce other variables on purchase intention is timeliness.

3.5. Eplison path coefficient (other variable)

The total coefficient of determination of the online customer reviews and purchase intention variables based on SPSS data processing is 0.679. To find out the path coefficient value for other variables, you can use the following formula:

$$P_{YX} = \sqrt{1 - R^2 Y(X_1, X_2, X_3, X_4, X_5)}$$

$$P_{YX} = \sqrt{1 - 0,679}$$

$$P_{YX} = \sqrt{0,321} = 0,566$$

Based on these calculations, it can be seen that the path coefficient of other variables that affects purchase intention is 0.566 or $(0.566)^2 = 0.566 \times 100\% = 56.6\%$. This illustrates that 56.6% of the purchase intention on Blibli in Indonesia is influenced by other variables that are not researched. While simultaneously, it is known that argument quality (X1), volume (X2), valence (X3), timeliness (X4), and source credibility (X5) affect purchase intention (Y) by $0.679 \times 100\% = 67.9\%$ in the strong category. Tabel 6 show simultan hypothesis test.

Table 6. Simultaneous Hypothesis Test

ANOVA ^a						
Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	31011,761	5	6202,352	166,955	.000b
	Residual	14637,029	394	37,150		
	Total	45648,790	399			

- Hypothesis test

Simultan thpothesis testing

This test is conducted to determine the significance of the influence of online customer reviews on purchase intention. This test's hypothesis is the effect of argument quality, volume, valence, timeliness, and source credibility on purchase intention simultaneously, which is tested using SPSS 22.0 For Windows. Can be seen in Table 7 below.

The simultaneous (overall) hypothesis test results can be seen in Table 7.

Table 7. Simultaneous Hypothesis Test Result

Hypothesis Alternative	F count	F table	Decision	Conclusion
Argument Quality, Volume, Valance, Timeliness, And Source Credibility On Purchase Intention	166,955	2,394	H0 rejected	Significant effect

Source : data processing result 2020

The table above shows that the test for the F test was taken from Anova with a probability level (Sig) = 0,000 because Sig > 0.05, the decision is H0 rejected, meaning that simultaneously or overall, there is a positive influence between online customer reviews on purchase intention on visitors to the Blibli website in Indonesia.

Partial hypothesis testing

The overall test results provide significant results, so finding out each dimension/sub variable influences or does not affect purchase intention can be tested partially. The following can be seen the partial test results in Table 8 using SPSS 22.0 for Windows.

Table 8. Partial Hypothesis Test

Coefficient					
Model	Unstandardized coefficients		Hipotest standardized coefficient	t	Sig.
	B	Std. error	Beta		
(constant)	9,047	1,997		4,530	,000
Argument Quality	,272	,065	,219	4,178	,000
Volume	,563	,151	,205	3,732	,000
Valance	,493	,121	,184	4,063	,000
Timeliness	,343	,134	,145	2,566	,011
Source Credibility	,514	,158	,176	3,263	,001

Source : data processing result 2020

Argument quality (X1) on purchase intention (Y)

This hypothesis aims to determine the significance of the sub-variable argument quality on purchase intention, which is partially tested. The results of this test can be seen in Table 9 as follows.

Table 9. Partial Testing Argument Quality (X¹) on Purchase Intention (Y)

Hypothesis	Path coefficient	Tcount	Ttable	Decision
X2 affects Y	0,219	4,178	1,966	H0 accepted

Source : data processing result 2020

Based on the table above, it can be seen that argument quality gets t count (4.178) > t table (1.966), so the Ho hypothesis is rejected, which means that argument quality affects purchase intention.

Volume (X₂) on purchase intention (Y)

This hypothesis aims to determine the significance of the volume sub variable's effect on purchase intention, which is partially tested. The results of this test can be seen in Table 10 as follows.

Table 10. Partial Volume Testing (X₂) On Purchase Intention (Y)

Hypothesis	Path coefficient	Tcount	Ttable	Decision
X2 affects Y	0,205	3,732	1,966	H0 accepted

Source: data processing result 2020

Based on the table above, it can be seen that volume gets t count (3,732) > t table (1,966), so the Ho hypothesis is rejected, which means that volume affects purchase intention.

Valance (X₃) on purchase intention (Y)

This hypothesis aims to determine the significance of the sub variable valance effect on purchase intention, which is partially tested. The results of this test can be seen in Table 11 as follows.

Table 11. Partial Valance Testing (X₃) On Purchase Intention (Y)

Hypothesis	Path coefficient	Tcount	Ttable	Decision
X3 affects Y	0,184	4,063	1,966	H0 accepted

Source : data processing 2020

Based on the table above, it can be seen that the volume gets the value of t count (4.063) > t table (1.966), so the Ho hypothesis is rejected, which means that valance affects purchase intention.

Timeliness (X1) on purchase intention (Y)

This hypothesis aims to determine the significance of the timeliness sub variable's influence on purchase intention, which is partially tested. The results of this test can be seen in Table 12 as follows.

Table 12. Partial Test of Timeliness (X₄) on Purchase Intention (Y)

Hypothesis	Path coefficient	Tcount	Ttable	Decision
X4 affects Y	0,145	2,566	1,966	H0 accepted

Source : data processing result 2020

Based on the table above, it can be seen that the volume gets the value of t count (2.566) > t table (1.966), so the Ho hypothesis is rejected, which means that timeliness affects purchase intention.

Source credibility (X5) terhadap purchase intention (Y)

This hypothesis aims to determine the significance of the sub-variable effect of source credibility on purchase intention, which is partially tested. The results of this test can be seen in Table 13 as follows.

Table 13. Determine the significance of the sub-variable effect of source credibility on purchase intention,

Hypothesis	Path coefficient	T _{count}	T _{table}	Decision
X ₅ affects Y	0,176	3,263	1,966	H ₀ accepted

Source : data processing result 2020

Based on the table above, it can be seen that the volume gets the value of t count (2.566) > t table (1.966), so the H₀ hypothesis is rejected, which means that source credibility affects purchase intention.

Hypothesis test

Judging from the R² value for the dimensions consisting of argument quality, volume, valence, timeliness, and source credibility of 0.679, meaning that online customer reviews can influence purchase intention by 67.9%. Based on the results of the t-test, it can be seen that the effect of online customer reviews on purchase intention is significant, with a t-statistic value of 4.530 (> 1,966). The probability value (Sig) of online customer reviews is 0,000. Thus, the hypothesis H_a: $\rho > 0$ means that there is a positive effect of argument quality, volume, valence, timeliness, and source credibility on purchase intention simultaneously. The sub hypotheses of this study are as follows.

- Based on the results of the t-test, it can be seen that the effect of argument quality on purchase intention is significant with a t-statistic value of 4.178 (> 1,966). The probability value (Sig) of argument quality is 0,000. Thus, the hypothesis H_a: $\rho > 0$ means that there is a positive effect of argument quality on purchase intention.
- Based on the results of the t-test, it can be seen that the effect of volume on purchase intention is significant with a t-statistic value of 3,732 (> 1,966). The probability value (Sig) of the volume is 0,000. Thus, the hypothesis H_a: $\rho > 0$ means that volume positively affects purchase intention.
- Based on the results of the t-test, it can be seen that the effect of valence on purchase intention is significant, with a t-statistic value of 4.063 (> 1.966). The probability value (Sig) of valence is 0,000. Thus, the hypothesis H_a: $\rho > 0$ means that there is a positive effect of valence on purchase intention.
- Based on the results of the t-test, it can be seen that the effect of timeliness on purchase intention is significant, with a t-count value of 2.566 (> 1.966). The probability value (Sig) of timeliness is 0,000. Thus, the hypothesis H_a: $\rho > 0$ means that there is a positive effect of timeliness on purchase intention.
- Based on the results of the t-test, it can be seen that the effect of source credibility on purchase

intention is significant with a t-statistic value of 3.263 (> 1.966). The probability value (Sig) of source credibility is 0,000. Thus, the hypothesis H_a: $\rho > 0$ means that there is a positive effect of source credibility on purchase intention.

4. CONCLUSION

Based on the research results that have been carried out using descriptive and explanative analysis using path analysis regarding online customer reviews and purchase intention, the dominant variable that directly affects purchase intention is argument quality. Meanwhile, the non-dominant variable that directly affects purchase intention is timeliness.

The magnitude of the influence of the online customer reviews dimension on purchase intention partially, namely, the argument quality sub variable is stated to have a significant effect on the purchase intention variable. The volume sub variable is stated to have a significant effect on the purchase intention variable. The valence sub variable is stated to have a significant effect on the purchase intention variable. The timeliness sub variable is stated that it has a significant effect on the purchase intention variable. The source credibility sub variable is stated to have a significant effect on the purchase intention variable. Meanwhile, simultaneously (as a whole), there is a positive and significant influence on online customer reviews on visitors' purchase intention to the Bilibli website in Indonesia.

The variable that can increase another variable indirectly on purchase intention is argument quality. Meanwhile, the variable that can indirectly reduce other variables on purchase intention is timeliness.

This research is expected to help the next researchers in researching online customer reviews and purchase intention on Bilibli, either using the same or different indicators from more diverse theoretical sources and on different objects. Because there are still many limitations in this study, especially those related to research methods and data collection techniques and the low value of the dimensions studied, such as timeliness.

REFERENCES

- [1] P. Kotler, and K.L. Keller, Marketing management. Pearson Educ. Int., 2012.
- [2] P. Kotler, and Amstrong, Principles of Marketing. 2008
- [3] A.O. Oke, P. Kamolshotiros, O.Y. Popoola, M.A. Ajagbe, and O.J. Olujobi, "Consumer behavior towards decision making and loyalty to particular

- brands,” *Int. Rev. Manag. Mark.*, vol. 6, no. S4, pp. 43-52, 2016.
- [4] P.H. Andersen, “Relationship development and marketing communication: An integrative model,” *J. Bus. Ind. Mark.*, 2011.
- [5] A.J. Kim and E. Ko, “Do social media marketing activities enhance customer equity? An empirical study of luxury fashion brand,” *J. Bus. Res.*, vol. 65, no. 10, pp. 80-86, 2012.
- [6] L. De Vries, S. Gensler, and P.S.H. Leeflang, “Popularity of brand posts on brand fan pages: an investigation of the effects of social media marketing,” *J. Interact. Mark.*, vol 26, pp. 83-91, 2012.
- [7] A.R. Kanitra and A. Kusumawati, “Pengaruh country of origin dan online consumer review terhadap trust dan keputusan pembelian,” *J. Adm. Bisnis.*, vol 61, no. 1, 2018.
- [8] L.J. Sondakh, D.P.E. Saerang, F.S. Rumokoy, “The impact of online costumer review and celebrity endorsement on purchase intention,” *J. Berk. Ilm. EFISIENSI.*, vol. 16, no.04, pp. 296–306, 2016.
- [9] M. Schepers, “The impact of online consumer reviews factors on the dutch consumer buying decision,” 2015.
- [10] R. Obiedat, “Impact of online consumer reviews on buying intention of consumers in UK: Need for Cognition as the Moderating Role,” *Int. J. Adv. Corp. Learn.*, vol. 6, no. 4, 2013.
- [11] A. Elwalda, “The impact of online customer review valence on purchase intention : the moderating role of internal factors.” 2013, doi: 10.13140/RG.2.1.2487.6884.
- [12] R. Filieri and F. McLeay, “E-WOM and accommodation: an analysis of the factors that influence travelers’ adoption of information from online reviews,” *J. Travel Res.*, 2014