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The Influence of Brand Image, Electronic Communications from Word of Mouth, and Product Quality on Acer Laptop Purchase Decisions

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Abstract
This study aims to determine the influence of brand image, electronic communication from word of mouth, and product quality to the purchase decision of Acer laptops. This type of research is a quantitative research with data sources obtained from primary data. This study used a sample of 95 respondents. Sampling was carried out using purposive sampling with the characteristics of the respondents, namely students of the Faculty of Economics and Business, Mulawarman University who are consumers of Acer laptops. In this study, the data collection technique was carried out using questionnaires distributed online. Data analysis using multiple linear regression with IBM SPSS tools statistics 29. Based on the analyzed data, it can be concluded that brand image, e-WOM, and product quality partially (individually) have a positive and significant effect on purchase decisions. then for simultaneous testing, it was found that the variables of brand image, e-WOM, and product quality together had a significant effect on the purchase decision.

1. Introduction

At this time, the digital and technological world has undergone continuous development, which has resulted in many new technologies being created. It affects many aspects of human life including the way humans work, study, communicate and various other activities. Due to these technological developments, various technology companies compete in developing their technology products, thus creating a lot of competition in the industry. Laptops are one of the technologies where there are many competitors in the technology industry, many companies are making various innovations in this technology product. Laptops are designed as personal computers to be used in a portable manner and are easy to carry anywhere. For students, laptops have a very important role, this is because students really need laptops in various lecture activities such as completing assignments, finding materials for studying, communicating, conducting research, and various other activities.

Table 1. Top Brand Index data for sub-categories Notebooks, and Laptops

Brand Name	2018	2019	2020	2021	2022	2023
Acer	31,7	31,2	26,1	26	27,1	21,2
Apple	0	7,7	6,3	8	8,5	10,1
Asus	23,6	21,2	25,4	27,9	24,8	24,4
HP	9,4	0	0	6	6	8,6
Lenovo	10,9	9,7	10,2	10,8	10,3	11,9

Source: Top Brand Award (www.topbrand-award.com)

Based on the data from the *Top Brand Award*, several laptop brands that are commonly used and also owned by the Indonesian people are obtained, such as Acer laptops, Asus laptops, Lenovo, Apple, and *HP.* Acer laptops themselves have always managed to rank at the top of the list of brands chosen by the Indonesian people, but it is very unfortunate if you look at the data on *the value of the Top Brand Index* for Acer laptops that have decreased and it is difficult to consistently grow in the last 6 years. On the other hand, the value *of the Top Brand Index of* other laptop brands continues to develop, so this requires Acer management to continue to find ways to get more consumers.

Therefore, it is very important for Acer to find out what things can influence consumers in making purchase decisions. Brand image can be a factor considered by potential customers in influencing purchase decisions, because a product that has a strong and good image tends to be more remembered and trusted by consumers. Therefore, it is very important for companies to be able to continue to maintain and improve their brand image.

In addition, in making purchasing decisions, information about products is also very important for consumers, because customers need to evaluate the product they want to buy. In looking for product-related information, consumers can search through one of them, namely through electronic word-of-mouth communication (e-WOM).

However, in influencing purchasing decisions, it is not only influenced by brand image and e-WOM, but product quality can also be an important part that can influence customer purchase decisions. This is because consumers will prefer the best quality products that they can get among several choices, but still according to their budget.

2. Methods

The type of research conducted in this study is quantitative research. Meanwhile, the subjects in this study are students of the Faculty of Economics and Business who are consumers of Acer laptops. In this study, there were 95 respondents. The sampling technique used is *nonprobability sampling* using *purposive sampling*. The data collection method uses the distribution of questionnaires that are carried out online. Data analysis and hypothesis testing were carried out by multiple linear regression using the SPSS 29 tool.

3. Results and Discussion

3.1. Data Analysis

3.1.1. Validity Test

Based on the validity test is a test used to find out whether a research questionnaire is valid or not. In this study, the validity test to be used is using   Ghozali (2018:51) *the Pearson Correlation method.* This is a way of calculating the correlation between the scores obtained from the questionnaire. In this validity test, it will be compared between *the calculated r* value obtained with *the r table,* with the degree of freedom (df) = n-2. A question item is considered valid when the result of *the value r is calculated > r table.*

Table 2. Validity Test Results

Variabel	Variable Indicators	R Count	R Table	Status
Brand Image	X1.1	0.842	0.201	Valid
	X1.2	0.836	0.201	Valid
	X1.3	0.832	0.201	Valid
e-WOM	X2.1	0.809	0.201	Valid
	X2.2	0.775	0.201	Valid
	X2.3	0.732	0.201	Valid
	X2.4	0.785	0.201	Valid
Product Quality	X3.1	0.679	0.809	Valid
	X3.2	0.713	0.201	Valid
	X3.3	0.688	0.201	Valid
	X3.4	0.750	0.201	Valid
	X3.5	0.726	0.201	Valid
	X3.6	0.758	0.201	Valid
	X3.7	0.684	0.201	Valid
	X3.8	0.593	0.201	Valid
Purchase Decision	Y1	0.819	0.201	Valid
	Y2	0.703	0.201	Valid
	Y3	0.768	0.201	Valid
	Y4	0.763	0.201	Valid

From table 2, results were obtained that showed that all items of the statements in the study conducted were indicators of brand image, e-WOM, product quality, and purchase decision variables, which showed that all of these indicators had a correlation value (*r calculation*) greater than the validity limit value (r table) which was 0.201 so that it was declared valid.

3.1.2. Reliability Test

Test used to find out the consistency of a questionnaire in use when used repeatedly. To measure reliability, Cronbach alpa can be used, where an instrument can be considered reliable if the Cronbach alpa value is equal to or greater than 0.60. Below are the results of the reliability test. (Ghozali, 2018) .

Table 3. Reliability Test Results

Variable Indicators	Cronbach Alpa	Limit Value	Status
Brand Image (X1)	0.785	0.60	Reliabel
e-WOM (X2)	0.771	0.60	Reliabel
Product Quality (X3)	0.849	0.60	Reliabel
Purchase Decision (Y)	0.761	0.60	Reliabel

Based on the results of the tests that have been carried out, it is known that all *cronbach alpha* values in each variable show a value of >0.60. Therefore, it can be concluded that all variables in this study are reliable.

3.1.3. Multiple Linear Regression Test

In this study, a data processing process will be carried out using multiple linear regression through a computerized system with the SPSS 29 program, the data used comes from the results of questionnaire responses that have been filled in by the participants. This method is performed to

identify how far the influence between the free and bound variables is. Here are the results of the multiple linear regression test:

Table 4. Multiple Linear Regression Test
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Itself.
		B	Std. Error	Beta		
1	(Constant)	0,457	0,220		2,074	0,041
	X1	0,218	0,064	0,268	3,390	0,001
	X2	0,363	0,071	0,397	5,084	0,000
	X3	0,329	0,105	0,312	3,129	0,002

a. Dependent Variable: Y

Based on the results of the analysis in the table above, it can be seen that the regression results with a (constant) value of 0.457, b1 value of 0.218, b2 value of 0.363, and b3 value of 0.329. So the multiple regression equation is obtained as follows:

$$Y = 0.457 + 0.218 + 0.363 + 0.329 + X_1 X_2 X_3 e$$

From the above equation, it is shown that all independent variables in this study have positive values, namely brand image (X1), e-WOM (X2), and Product Quality (X3) can be explained as follows:

1) The constant value of the linear equation shows the number 0.457, which indicates that if the brand image variables (X1), e-WOM (X2), and product quality (X3) are eliminated or assumed (0), then the purchase decision variable will be valued at 0.457.
2) The value of the brand image regression coefficient (X1) amounting to 0.218 indicates that there is a positive influence on the purchase decision of Acer laptops. The results show that if there is an increase of 1 score in the brand image variable (X1), it will increase the purchase decision variable (Y) by 0.218.
3) The value of the e-WOM regression coefficient (X2) of 0.363 shows that this variable has a positive influence on the purchase decision of Acer laptops. This shows that if there is an increase of 1 score in the e-WOM variable (X2), it will also result in the purchase decision variable (Y) increasing by 0.363.
4) The value of the product quality regression coefficient (X3) is 0.329 and has a positive value. This shows that if there is an increase in the product quality variable (X3) by 1 score, it will also result in the purchase decision variable (Y) increasing by 0.329.

3.1.4. **Coefficient of Determination** (*Adjusted R-Square*)

Adjusted R-Square is a suitable method to be used in this study because it involves many variables, so that by *Adjusted R Square* The amount of information obtained is better. Value *Adjusted R Square* can increase or decrease if one independent variable is added to the model. Below are the results of the determination coefficient test: (Ghozali, 2018)

Table 5. Determination Coefficient Test
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,880a	0,774	0,766	0,270

a. Predictors: (Constant), X3, X2, X1

Based on table 5, the *Adjusted R-Square* value of 0.766 was obtained. This figure shows the influence of brand image variables (X1), e-WOM (X2), and product quality (X3) on the dependent variable, namely the purchase decision (Y) combined is 76.6%, while the remaining 23.4% is influenced by other variable factors outside this study or error values.

3.1.5. Significance Test of Individual Parameters T (Statistical Test T)

Sujarweni (2015:161) explains that the T-test is used to test each independent variable partially, in order to determine whether each independent variable individually has an influence on the dependent variable. If the significance value is less than 0.05, and *the t-value of the* table is calculated > *t,* then it can be concluded that there is a significant partial influence between the independent and dependent variables. On the other hand, if the significance value is greater than 0.05, and *the value t is calculated* < *t table* , then it can be assumed that there is no significant influence between the variables. Here are the test results:

Table 6. T Test Results
Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Itself.
1	(Constant)	0,457	0,220		2,074	0,041
	X1	0,218	0,064	0,268	3,390	0,001
	X2	0,363	0,071	0,397	5,084	0,001
	X3	0,329	0,105	0,312	3,129	0,002

a. Dependent Variable: Y

From the results of table 13, it can be seen that the magnitude of each of these variables is partially (individual) on the dependent variables, namely:
1) First Hypothesis Testing (H1)
   The sig value for the brand image variable on the purchase decision was 0.001 < 0.05 and the t-value was calculated 3.390 > t table 1.986. Thus, it can be concluded that the brand image has a positive and significant effect on the purchase decision of Acer laptops.
2) Second Hypothesis Testing (H2)
   The sig value for the e-WOM variable on the purchase decision was 0.001 < 0.05 and the t-value was calculated 5.084 > t table 1.986. So it can be concluded that e-WOM has a positive and significant effect on the purchase decision of Acer laptops.
3) Testing the third hypothesis (H3)
   The sig value for the product quality variable on the purchase decision was 0.002 < 0.05 and the t-value was calculated 3.129 > t table 1.986. So it can be concluded that product quality has a positive and significant effect on the purchase decision of Acer laptops.

3.1.6. Simultaneous Significance Test (Statistical Test F)

The F test in this study was used to find out the effect of the overall independent variable simultaneously on the dependent variable. In addition, this test can also be applied to assess the feasibility of the regression model that is analyzed whether or not . If the sig value < 0.05 and the value F is calculated > F table, then it can be concluded that all independent variables together have a significant effect on the dependent variables. The results of the f test are as follows: (Ferdinand, 2014)

Table 7. Results of Statistical Test F
ANOVA

Model		Sum of Squares	df	Mean Square	F	Itself.
1	Regression	22,696	3	7,565	103,633	<,001b
	Residual	6,643	91	0,073		
	Total	29,339	94			

a. Dependent Variable: Y
b. Predictors: (Constant), X3, X2, X1

3.1.7. Testing the Fourth Hypothesis

From the results of the analysis, it can be concluded that together, the variables of brand image (X1), e-WOM (X2), and product quality (X3) have a significant effect on the purchase decision of

Acer laptops. This can be seen from the significance value of 0.001 < 0.05 and the F value calculated 103.633 > F table 3.097.

3.2. Discussion

3.2.1. The Influence of Brand Image on Purchase Decisions

Based on the first hypothesis test, it was obtained that the brand image variable had a positive and significant effect on the purchase decision of Acer laptops. This can be seen from the correlation coefficient between the two variables of 0.218 which has a positive value, as well as a sig value of 0.001 which is smaller than 0.05 and a t-value of 3.390 which is greater than the t table which is 1.986, so that it can be concluded that H1 is accepted. The results of this study indicate that the higher the brand image, the higher the decision to purchase Acer laptops for students of the Faculty of Economics and Business, Mulawarman University. The results of this study support the findings of the study that there is a positive and significant relationship between brand image and purchase decisions. Rachmawati & Andjarwati (2020) Ningsih & Pradanawati (2021)

3.2.2. The Influence of Electronic Communications from Word of Mouth on Purchase Decisions

Based on the results of the second hypothesis test, the results were obtained if e-WOM had a positive and significant effect on the purchase decision of Acer laptops. This can be proven from the value of the correlation coefficient between the two variables of 0.363 which has a positive value, as well as a sig value of 0.001 which is smaller than 0.05 and the t-value of 5.084 is greater than the t-value of the table of 1.984, which can then be concluded that H2 is accepted. These findings illustrate that the higher the e-WOM, the higher the purchase decision. The results of this study are in line with the findings obtained by SERTA which show that e-WOM has a positive and significant effect on purchase decisions. Rupayana et al., (2021) Ramadhani & Prihatini (2018)

3.2.3. The Influence of Product Quality on Purchase Decisions

Based on the results of the third hypothesis test, the results were obtained if the quality of the product had a positive and significant effect on the purchase decision of Acer laptops. This is evident from the value of the correlation coefficient between the two variables of 0.329 which has a positive value, then the sig value of 0.002 which is smaller than 0.05 and the value of t calculation 3.129 which is greater than the t table which is 1.986, so that it can be concluded that H3 is accepted. This means that the higher the quality of the product, the higher the decision to purchase an Acer laptop for students of the Faculty of Economics and Business, Mulawarman University. The results of this study are in line with what was carried out which shows that quality has a positive and significant effect on purchasing decisions. Sakinah & Firmansyah (2021)

3.2.4. The Influence of Brand Image, Electronic Word-of-Mouth Communication, and Product Quality on Purchase Decisions

Based on the results of the fourth hypothesis test, it shows that brand image, e-WOM, and product quality together have a significant effect on the purchase decision of Acer laptops. This can be proven from the sig value of 0.001 being smaller than 0.05 and the value of F calculating 103.633 which is greater than the F of table 3.097, so that it can be concluded that H4 is accepted. These findings are in line with those carried out which in their research show that brand image, e-WOM, and product quality together have a significant effect on Purchase Decisions. This shows that the higher the brand image, e-WOM, and product quality, the higher the level of consumer desire to make a decision to buy an Acer laptop in students of the Faculty of Economics and Business, Mulawarman University. Nazib et al., (2021)

The results of the Adjusted R Square determinant test in this study showed a value of 0.766. This means that the percentage of influence of brand image, e-WOM, and product quality variables on simultaneous purchase decisions is 76.6%, while the remaining 23.4% is influenced by other factors outside of this study.

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4. Conclusion

Based on the results of the research and discussion, conclusions can be drawn as follows:

1) The results of this study show that brand image has a positive and significant effect on the decision to purchase Acer laptops in FEB UNMUL students. This result explains that the higher the brand image, the higher the decision to purchase Acer laptops for FEB UNMUL students. Therefore, Hypothesis 1 in this study is accepted.

2) The findings of this study show that e-WOM has a positive and significant effect on the purchase decision of Acer laptops in FEB UNMUL students. This result explains that the higher the e-WOM, the higher the decision level to purchase Acer laptops for FEB UNMUL students. So Hypothesis 2 in this study is accepted.

3) The results of the research conducted show that product quality has a positive and significant effect on the decision to purchase Acer laptops in FEB UNMUL students. So that these results indicate that the higher the quality of the product, the higher the decision to buy Acer laptops for FEB UNMUL students. Therefore, Hypothesis 3 in this study is accepted.

4) The results of the findings conducted show that brand image, e-WOM, and product quality simultaneously have a significant effect on the purchase decision of Acer laptops for FEB UNMUL students. So that these results show that the higher the brand image, e-WOM, and product quality, the higher the desire of consumers to make a decision to buy Acer laptops for FEB UNMUL students. So Hypothesis 4 in this study is accepted.

References

Arthur A. Thompson, M. A. (2016). Crafting and executing strategy: the quest for competitive advantage, concepts and readings. McGraw-Hill Education.

Fandy, T. (2016). Service, Quality & satisfaction. Andi.

Ferdinand, A. (2014). Management research method: Research guidelines for writing a thesis and a dissertation on management science.

Gadhafi, M. (2015). The Influence of Electronic Word of Mouth on Purchase Intention Mediated by Brand Image on Acer Laptop Products in Surabaya Perbanas College of Economics Surabaya 2015.

Ghozali, I. (2018). Multivariate Analysis Applications with IBM SPSS 25. Publishing Agency of Diponegoro University.

Ghozali, I. (2018). Quantitative and Qualitative Research Design. Primary Yoga.

Keller, K. L., & Swaminathan, V. (2020). Strategic brand management: building, measuring, and managing brand equity. Pearson.

Kotler, P., & Keller, K. L. (2016). A framework for marketing management (sixth). McGraw-Hill Education.

Kotler, P., & Kevin Lane Keller. (2016). Marketing Managemen (15th ed.). Pearson Education,Inc.

Nazib, M. A., Lasiyono, U., & Prabowo, T. A. (2021). The Influence of Brand Image, Quality & E-WOM on Honda CV Motorcycle Purchase Decisions. Tirta Sejahtera. Journal of Sustainability Business Research (JSBR), 2(1), 304–312.

Ningsih, S., & Pradanawati, S. L. (2021). The Influence Of Brand Image, Price And Promotion On Purchase Decision (Case Study on Gea Geo Store). International Journal of Economics, Business and Accounting Research (IJEBAR), 5(3), 1769–1780.

Rachmawati, S. D., & Andjarwati, A. L. (2020). The Influence of Brand Awareness and Brand Image on Purchase Decisions. E-Journal of Business Economics and Accounting, 7(1), 25–29.

Ramadhani, R., & Prihatini, A. E. (2018). The influence of electronic word of mouth and perceived risk on purchase decisions in Tokopedia consumers. Journal of Business Administration Sciences, 8(1), 140–145.

Rupayana, I. K., Suartina, I. W., & Mashyuni, I. A. (2021). The influence of product quality, impulse buying and electronic word of mouth (ewom) on purchase decisions on OPPO brand smartphone products in

the city of Denpasar. WidyaAmrita: Journal of Management, Entrepreneurship and Tourism, 1(1), 233–247.

Sakinah, N., & Firmansyah, F. (2021). Product Quality and Price Towards Purchase Decisions with Purchase Intention as Intervening Variables. Scientific Journal of Management and Business, 22(2), 192–202.

Sujarweni, V. W. (2015). Business & economic research methodology. Yogyakarta: Pustaka baru press.