



Received: 12-05-2024
Accepted: 22-06-2024

ISSN: 2583-049X

How Significant is the Influence of Price, Product Quality, and Brand on Purchase Decisions? (A Study on the Facebook Application for Members of the Used Mobile Phone Buy and Sell Group in Bandar Lampung)

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Abstract

Effects from a price, product quality, and brand on purchase decisions is discussed in this study. Members of the Bandar Lampung Used Cell Phone Buying and Selling Group comprise the study's population, and explanatory research using a quantitative approach is the research methodology employed. Online surveys were developed in obtaining this information. using an overall count sample size from 100 respondents, this sample methodology utilized during this process study was probabilistic sample collection included simple random sampling technique combined with nonprobability sample included purposive technique.

Both descriptive multiple linear regression test and analysis were adopted in the data analysis for this investigation. Using SPSS 26.0 software, I tested hypotheses using the t-test, F-test, and R-square test. Price, product quality and brand all possess a 64% simultaneous influence judgments about purchases, according to study findings and data analysis techniques. Meanwhile, the partial testing results show that price has a significant influence on purchasing decisions, product quality does not have a significant influence on purchasing decisions, and brand has a significant influence on purchasing decisions.

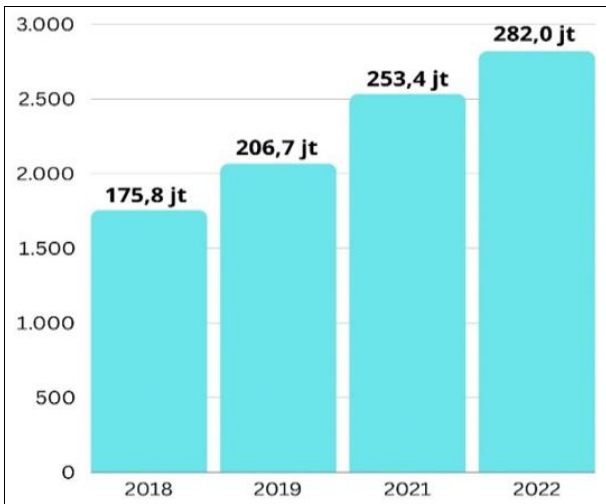
Keywords: Price, Product Quality, Brand and Purchasing Decision

1. Introduction

Innovations in 4.0 technology have driven the emergence of social media in recent times. Specifically, social networking sites like Facebook provide marketers with a means to interact directly with consumers and offer an ideal environment for creating online brand communities within marketplaces. In Indonesia, several well-known and frequently used local marketplaces have emerged, such as Tokopedia, Bukalapak, Blibli, Shopee, Lazada, and others. Various products, including a wide range of food items, can be marketed through these marketplaces.

In everyday life, consumers often feel pressured by various external events, such as doubts about their own competence, alienation by others, and challenges to their status. Consumers may purchase goods that help them overcome their deficiencies in an effort to achieve personal growth (Abuhashesh *et al.*, 2021) ^[1]. According to Kotler (2000), preference is the liking, choice, or something that is more favored by consumers. A person's preferences for the products or services they use might be characterized as their likes or dislikes. The level of consumer preference varies depending on the consumer's perception. Factors influencing preference include product, price, quality or brand, promotion, and atmosphere. These factors are considered by consumers when making purchasing decisions.

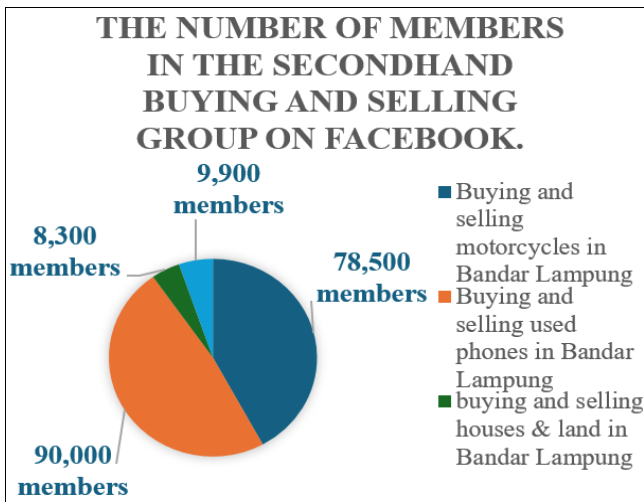
Mobile phones have become one of the consumer goods that have transitioned from being luxury items to more readily accessible shopping items (Nurhayati, 2011) ^[6]. Used mobile phones on marketplaces have become one of the most favored products. In Indonesia, there are an enormous number more individuals who use smartphones. Moreover, the secondhand mobile phone market has grown year by year, as illustrated in the following figure:



Source: International Data Corporation (2023)

Fig 1: Data on Secondhand Mobile Phone Sales from Year to Year

According to data obtained, it is evident that sales with applied mobile phones are growing, as they have increased annually, from 175.8 million units in 2018 to 282 million units in 2022. Thus, the average annual sales growth rate for secondhand mobile phones has reached 10% to 20%. Social media applications like Facebook can be used as a medium to market business products more broadly, one example being the buy and sell group Bandar Lampung on Facebook.



Source: Processed Data (2023)

Fig 2: Number of Members in Facebook Buy and Sell Secondhand Goods Group

The data shows that the buy and sell group in Bandar Lampung on Facebook has varying numbers of members. The group with the highest number of members is the Buy and Sell Secondhand Mobile Phones Bandar Lampung group with 90,000 members. The existence of Facebook group media is certainly beneficial for consumers who want to find desired items or just browse. In addition, Facebook's own outstanding feature, Facebook COD (Cash on Delivery), allows for direct buying and selling transactions at agreed-upon locations. Due to Facebook's ease of use, socializing is unrestricted, which promotes effective communication and feedback between consumers and merchants or vice versa (Arizal *et al.*, 2021)^[2]. Meanwhile, in Indonesia, the number of monthly active Facebook users reached 205 million in 2023.

2. Methodology

A quantitative research approach is used in this study. In-depth statistical analysis and the use of numbers are key components of quantitative research methodology (Azwar, 2012). The population studied in this research is the members of the Facebook marketplace group for secondhand mobile phones in Bandar Lampung, which numbered 90,000 members in February 2024. The author determined the sample size using the Slovin formula and had to collect data from a sample of 100 individual. Purposive sampling combines with nonprobability sampling is the sample strategy employed in this study. The instrument accustomed in obtain data in this research is a questionnaire.

3. Result and Discussion

3.1 Method of Data Analysis

a. Normality Test

Kolmogorov-Smirnov analysis is used in this study's normality assessment for data distribution.

Table 1: The Outcome of the Normalcy test

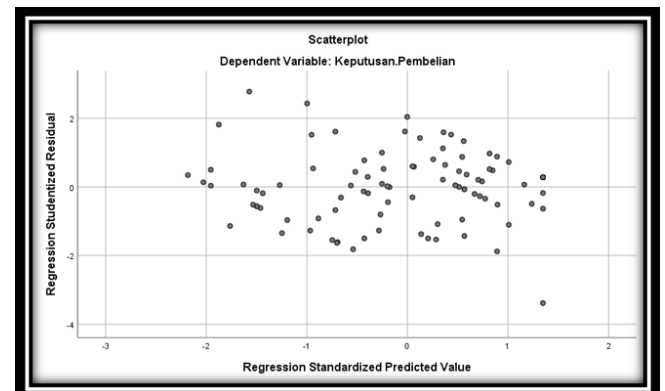
One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		100
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	2.18552486
Most Extreme Differences	Absolute	.081
	Positive	.081
	Negative	-.080
Test Statistic		.081
Asymp. Sig. (2-tailed)		.107 ^c
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Source: Processed Data (2024)

The significance value, as determined by the normalcy test, is 0.107 > 0.005 indicating that the distribution of the remaining values is normal.

b. Heteroscedasticity Test

To ascertain which one there is a variance variation within the residuals during observations, hypothesis test for heteros is utilized.



Source: Processed Data (2024)

Fig 3: Result of the heteroscedasticity test

The scatter graph in Fig 3 indicates that there is no heteroscedasticity, meaning there is no discernible pattern

formed by the data points. Consequently, this model satisfies the requirements of the traditional heteroscedasticity

c. Test of Multicollinearity

Finding out as long as any association exists at all among the independent variables in the regression model is done using the test of multicollinearity. We look at the range setting and the variance inflation factor (VIF) to find multicollinearity. The independent variables do not have a multicollinearity problem if the tolerance is more than 0.10 and the VIF is less than 10.

Table 2: Result Test of Multicollinearity

Model	Collinearity Statistics	
	Tolerance	VIF
1 (Constant)		
Price	.393	2.545
Product Quality	.438	2.281
Brand	.488	2.051

Source: Processed Data (2024)

Table 2 demonstrates that the tolerance values for all three variables are higher over 0.10 additionally there are less than ten VIF values. Consequently, it should be said as the independent variables in this study do not exhibit multicollinearity.

3.2 Multiple Regression Analysis

This study employed regression of multiple analysis to evaluate the premise about the outcome of one perhaps greater autonomy factors regarding a dependent variable. The study's dependent variable is the members of the Buy and Sell Secondhand Mobile Phones Bandar Lampung group's purchase decision (Y), as opposed to the independent variables, which are price (X₁), quality (X₂), and brand (X₃). The following table displays the outcomes of the analysis from multiple linear regression:

Tabel 3: Multiple Regression Outcomes

Model	Unstandardized Coefficients	
	B	Std. Error
1 (Constant)	7.402	2.902
Price	.857	.169
Product Quality	.106	.120
Brand	.531	.154

Source: Data Processed (2024)

The third table presents multiple linear regression outcomes calculations. This indicates of the constant value is 7.402, the values for Price (X₁), Quality (X₂), and Brand (X₃) are 0.857, 0.106, and 0.531, respectively. Regression's formula can be expressed thereby using regression findings in the table as a guide:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

$$Y = 7,402 + 0,857 HRG + 0,106 KP + 0,531 MRK + e$$

3.3 Results of Hypothesis Test

a. Result of the t-test, a partial test

Outcome of a Partial Test (t-test) By partially presuming that other factors are constant, using the t-test, one can

examine significance such as influence between variables of independent (trust, price perception, and product quality) regarding the dependent variable (buying decisions). To assess test a hypothesis utilizing the t-test, the value of outcomes of the multiple linear regression calculation must be inserted. One way to do the t-test is to compare the study's t-table, which has a merits of 1.660 and a degree of relevance $\alpha = 0.05$, with $df = n - k - 1$ ($100 - 3 - 1 = 96$). The t-test yielded the following results:

1. Results of the price variable testing: The price variable's t-test calculation demonstrates that $t\text{-calculation} > t\text{-table}$, or $5.080 > 1.660$, with a degree of relevance $0.000 < 0.05$. This indicates that price (X₁) has a considerable influence on buying decisions, at least in part.
2. Test results for the quality variable: The quality variable's t-test calculation outcomes demonstrates that $t\text{-calculation} < t\text{-table}$, which is $0.885 < 1.660$ with a degree of relevance $0.378 > 0.05$. This suggests that, at least in part, quality (X₂) has little influence on consumers' decisions to buy.
3. Brand variable testing outcomes: With a degree of relevance $0.001 < 0.05$, the t-test calculation results for the brand variable show that $t\text{-calculation} > t\text{-table}$, or $3.447 > 1.660$. This indicates that brand (X₃) has a considerable influence on purchase decisions to some extent.

b. Simultaneous Test (F-test)

This study's goal is to determine how independent variables relate to the dependent variable concurrently or jointly. At alpha 5%, the influence has a significance level. The F calculation $> F$ table and the significant value < 0.05 are the criteria used to evaluate significance. The F-test yielded the following results:

Table 4: Results of the F-test

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1406.405	3	468.802	56.914	.000 ^b
	Residual	790.755	96	8.237		
	Total	2197.160	99			
a. Dependent Variable: Keputusan.Pembelian						
b. Predictors: (Constant), Brand, Quality, Price						

Source: Data Processed (2024)

Value of the multiple linear regression computation results is inserted into the F-test as part of the hypothesis testing procedure utilizing the F-test. Table 4 is used in the computation, which yields a F value of 56.914 at a degree of relevance 0.000. With degrees of freedom set at 0.05, the table displays $df_1 = k = 1 = 4 - 1 = 3$ and $df_2 = n - k = 100 - 4 = 96$, resulting in an F-table value of 2.70. This data clearly shows that, with a probability of $0.000 < 0.05$, F calculation $> F$ table ($56.914 > 2.70$). Therefore, the conclusion is that price, product quality, and brand significantly influence purchase decisions among members of the Buy and Sell Secondhand Mobile Phones Bandar Lampung group, hence H₄ is accepted.

c. Outcomes R² Test

The determination coefficient, or R², test is accustomed to get a result that represents the amount of change brought about by other variables. How effectively the independent model explains by examining the coefficient of determination (R²), one may ascertain the variation in the dependent variable. The range of values for the coefficient of determination is 0 to 1. A good model is indicated by a value that is high or near 1. The subsequent are findings of the R² test for this investigation:

Table 5: Outcomes of the R² Test

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.800 ^a	.640	.629	2.87002
a. Predictors: (Constant), Brand, Quality, Price				
b. Dependent Variable: Keputusan.Pembelian				

Source: Data Processed (2024)

The fifth table illustrates that the study's coefficient of determination (R²) was determined to be 0.640. This figure represents the degree to which the independent variables—price, product quality, and brand—have an impact, which is 0.640 or 64%. This demonstrates that the percentage of price, quality, and brand is strong. It can be interpreted that 64% of the purchase decision variable is influenced 36% is affected by factors not covered in this research, with the remaining 36% being determined by the study's independent factors, which are price, quality, and brand. Therefore, it is concluded that H4 is accepted.

3.4 Price's Effect on Purchasing Decisions

Based on hypothesis testing results, it was found that price significantly influences purchase decisions. This indicates that the price variable impacts purchasing decisions. The coefficient of multivariate linear regression calculation shows that the price variable (X₁) is positive, with a of relevance 0.857. This indicates that the decision to buy made by members of the Buy and Sell Secondhand Mobile Phones Bandar Lampung group increases by 0.857 for each unit increase in the price perception variable.

The price variable's t-test findings show that, at a degree threshold of 0.000 < 0.05, the t-value > t-table, or 5.080 > 1.660, indicates that the price (X₁) influences purchasing decisions to some extent. This proves that price is the main factor for consumers when making purchasing decisions, hence H1 is accepted. Within the price variable, the highest item received a positive assessment from 94.00% of respondents for the statement "Competitive prices are my choice," suggesting that consumers consider product prices that match the quality offered by the seller when making purchase decisions.

3.5 Product Quality's Effect on Purchasing Decisions

According to hypothesis testing outcomes, it was found that product quality does not significantly influence purchase decisions. This indicates that the product quality variable does not impact purchasing decisions. The multiple linear regression coefficient calculation shows that the variable representing product quality (X₂) displays a negative value

of 0.106. This implies that the variable will rise by one unit for each representing product quality, purchase decision among members of the Buy and Sell Secondhand Mobile Phones Bandar Lampung group decreases by 0.106.

The product quality variable's t-test findings show that, at a significance threshold of 0.378 > 0.05, t-value < t-table, or 0.885 < 1.660, meaning that product quality (X₂) does not significantly influence purchasing decisions. This proves that product quality is not the main factor for consumers when making purchasing decisions, hence H2 is accepted. This data is supported by descriptive statistics showing that the highest-rated item by respondents is the statement "The product is free from defects," which reflects the condition of second-hand phones, often with diminished quality in terms of battery life, hardware, and other aspects, yet still considered usable.

3.6 Brand Influence on Purchasing Decisions

According to hypothesis testing outcomes, it was found that product brand significantly influences purchase decisions. This indicates that the product brand variable impacts purchasing decisions. The coefficient of multivariate linear regression calculation demonstrates that the brand variable (X₃) is positive, with a of relevance 3.447. It indicates that among members of the Buy and Sell Secondhand Mobile Phones Bandar Lampung group, the purchase decision increases by 3.447 for each unit increase in the brand variable.

The brand variable's t-test results show that, at a significance threshold of 0.001 < 0.05, t-value > t-table, or 3.447 > 1.660, meaning that the brand (X₃) partially influences purchasing decisions. This proves that brand is the main factor for consumers when making purchasing decisions, hence H3 is accepted. This data is supported by descriptive statistics showing that 91% of respondents gave a positive assessment to the statement "Well-known brands have a better reputation compared to unknown brands," suggesting that established brands tend to build consumer trust and satisfaction over time through consistent product quality or service.

3.7 Price, Product Quality, and Brand Effects on Purchasing Decisions

Multiple linear regression results are incorporated into the F-test during hypothesis testing. With a degree of relevance 0.000, the computed F-value is 56.914 based on Table 4.10. With a degree of freedom of 0.05, the table presents df₁ = k - 1 = 4 - 1 = 3 together with df₂ = n - k = 100 - 4 = 96, resulting in an F-table value of 2.70. The data displays that the calculated F-value > F-table (56.914 > 2.70) with a probability of 0.000 < 0.05, proving that price, product quality, and brand significantly influence purchase decisions among members of the the Buy and Sell Secondhand Mobile Phones Bandar Lampung group, hence H4 is accepted.

The results for the determination coefficient (R²) indicate a of relevance 0.640. This demonstrates that 64% of the purchase decision variable is affected by the variables that are independent, such as brand, price, and product quality. This illustrates how price, quality, and brand have a significant percentage influence. As a result, the study's independent factors have an influence on 64% of the purchase decision variable, with other factors not covered in this study influencing all of it 36%.

4. Conclusion

The following findings can be made in light of the investigation and debate of the impact of brand, price, and product quality on members of Second Handphone Buying and Selling Group in Bandar Lampung's purchase decisions:

1. Price has a positive and significant impact on the purchasing decisions of members of the "Jual Beli Handphone Second Bandar Lampung" group. This means that price perception influences their decision to buy. Members are willing to purchase at the offered price if it matches the specifications. Hence, H_{a1} is accepted.
2. Product quality does not have a positive or significant impact on the purchasing decisions of members of this group. This indicates that quality is not a major factor influencing the purchase of secondhand phones, as used items typically have decreased quality. Therefore, H_{o2} is accepted.
3. Brand has a positive and significant impact on purchasing decisions within the group. Consumers feel more comfortable buying well-known brands, which gives them a sense of satisfaction. Thus, H_{a3} is accepted.
4. Price, product quality, and brand together influence purchasing decisions, with an F-value of 56.914, which is greater than the F-table value of 2.699. Therefore, H_{a4} is accepted.
5. According to the coefficient of determination test, price, product quality, and brand together have a positive and significant impact on purchasing decisions among the group members. This is evidenced by an R^2 (coefficient of determination) value of 64%.

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