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DESCRIPTIVE OF QUANTITATIVE DATA | SUPPLEMENTARY

Brand and Country of Origin Towards Consumer Attitudes in Choosing Smartphones

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Abstract: As technology advances, smartphone devices become a fascinating topic for conversation. The growth of multiple smartphone brands as choices appears to be inextricably linked to the relevance of customer attitudes in deciding which smartphone to use. The growth of multiple smartphone brands as choices appears to be inextricably linked to the relevance of customer attitudes in deciding which smartphone to use. Furthermore, when choosing a smartphone, shoppers consider the product's nation of origin. This study uses a quantitative approach method. Involving the 100-person Dumai City community. The findings of the partial analysis indicate that brands have a positive and significant effect on consumer attitudes and country of origin variables have a positive but not significant effect on consumer attitudes. Brand and country of origin together have a positive and significant effect on consumer attitudes in the Dumai City community. The result of the Determination Coefficient is 21.3%, with the remaining 78.7% impacted by other variables.

Keywords: Brand, Country of Origin, Consumer Attitudes.

1. INTRODUCTION

The world is experiencing important technological advances, particularly in technology and telecommunication (Afrizal, Wallang, et al., 2023). Smartphones are the most recent advancements in cellular phone technology (Siwu et al., 2023). Smartphones are gadgets that emerged as a result of developments in information and communication technology, which has accelerated technological growth (Afrizal, Utama, et al., 2023). This technology increasingly has inevitable negotiating power. As time passes and a big number of Smartphone goods enter the production cycle, their advantages become increasingly clear and inseparable. One of the advantages of owning a smartphone is that it facilitates communication over both short and long distances. It is a form of oral and written communication that immediately benefits those who use it. This is what drives many smartphone makers to continue developing new models on a regular basis. The goal is for users to experience benefits that are consistent with the device specs and fulfill the owner's needs. Manufacturers continuously develop their products through the usage of materials, labour, and expenditures incurred during production. This is a specific worry because it will correspond with consumer attitudes when purchasing a smartphone. Consumers will undoubtedly take advantage of the benefits provided by producers. As a result, it is unsurprising that consumers will gravitate towards a brand that will inspire pride in its owner.

According to (Fransiskus & Nasution, 2017) consumer attitude is a significant component that influences consumer behaviour. Consumer attitudes are the processes and behaviours that occur when someone searches for, selects, purchases, uses, and evaluates items and services to suit their needs and preferences (Sulistiyani, 2023). This is what drives manufacturers to prioritize manufacturing aspects employed as resources in the production of Smartphones that symbolise their brand.. According to Kotler (1997) in (Fransiskus & Nasution, 2017) a brand is a name, word, symbol, or design, or a combination of all of these, that is meant to identify goods or services from a seller or group of sellers in order to distinguish them from competitors' products. Brands can offer value to a product because they are an essential component of product strategy (Citra & Syahlani, 2008).

Consumers not only consider the brand when selecting a smartphone, but the market also appears to enquire about the country in which the device was produced. Will this product provide more benefits than those produced in other countries.. Consumers might be influenced by their country of origin when evaluating products for decision making, as well as by a general description. (Hananto, 2015; Sudirjo et al., 2023). Country of origin is an identity in product qualities that influences



consumer evaluation in determining the country of origin of a product (Soraya & Siregar, 2021). This question arises because the prospective beneficiary obtains so much information that they want to make sure whether the choice they are going to make is appropriate or still needs to be considered. Various brands that will be chosen by consumers such as products with the brands Samsung, Apple, Xiaomi, Oppo, Vivo and others. According to (Figure 1), the smartphone brands that dominated the market share in the first, third, and fourth quarters of 2021 were Samsung, Apple, Xiaomi, Oppo, Vivo, and others (yellow diagram) and the first quarter of 2022, the same brands stayed in their positions and experienced movements, causing the diagram in the image above to not be at the same proportion in each quarter. This phenomenon can occur because consumers' needs change at different periods; therefore, how can smartphone makers capitalise on this occurrence by competing effectively in the output market

Table 1. shows that several smartphone brands from various countries of origin are available in the Indonesian output market, allowing consumers to purchase smartphones based on their demands. Everyone has a purchasing attitude that will be modified to the required smartphone requirements. This situation is being exploited effectively by manufacturers from diverse nations of origin, who continue to produce the best features for each type of smartphone. The specs are designed for consumers who will profit from the Smartphone device. This is what helps users determine which smartphone to use and this will also be a market share that producers will continue to be interested in, allowing them to do ongoing research and development. This will undoubtedly have a substantial impact on the sales of Smartphone products owned by manufacturers from various nations of origin in Indonesia's output market. As previously discussed, the purpose of this study was to determine the impact of brand and place of origin on consumer attitudes towards smartphone purchases in Dumai City society.

The method utilised in this research is a quantitative approach, in which the combined information is analysed using statistics and the conclusions are presented as numbers (Sugiyono, 2018). This study used a survey method (Kothari, 2004; Afrizal, Saputra, et al., 2023). The survey approach is used to collect information from respondents on the brand and place of origin, as well as consumer attitude views about smartphone purchases. This study's population consists of Dumai City citizens. This study used a sample size of 100 respondents. The number of responders was obtained using the Slovin formula. The questionnaire dissemination is done online through the Survey Heart application function. The data measuring technique employs a five-point Likert scale, beginning with Strongly Agree (SS = 5), then Agree (S = 4), Neutral (N = 3), Less Agree (KS = 2), and Disagree (TS = 1). The validity instrument was tested using the Pearson Correlation formula, with a significance level of $\alpha = 0.05$. A p-value of less than 0.05 indicates that the instrument item is legitimate. The Cronbach Alpha formula is used in reliability testing. If the Cronbach Alpha is more than 0.60, the test is considered reliable (Ghozali, 2005). Data analysis approaches employed included descriptive statistics. Data collection methods include a questionnaire. Data was analysed using Multiple Linear Regression, including the partial test (t), simultaneous test (F), and determinant coefficient (R^2). Classical assumption tests, such as the normality, heteroscedasticity, and multicollinearity tests.

2. RESULT AND DISCUSSION

Validity testing uses the following criteria: if $R_{count} > R_{table}$, the question is valid; if $R_{calculated} < R_{estimated}$, the question is invalid. Based on (table 3), the Corrected Item-Total Correlation displays the correlation between the total item scores, which can be used to verify the instrument's validity, with a R-estimated value of $df = n-2$ at a significant level.5 % The equation $n-2 = 100-2 = 98$ yielded the desired results, with a r table value of 0.1966. This demonstrates that all items were declared valid. The equation $n-2 = 100-2 = 98$ yielded the desired results, with a r table value of 0.1966. This demonstrates that all items were declared valid.

The Reliability Test is undertaken with the goal of determining which questions were pronounced valid in the validity test. If R Alpha is positive or $>$ from the R-estimated then the question is reliable and if R Alpha is negative or $<$ from the R Table then the question is not reliable. The data processing results reveal that the value of Cronbach's Alpha is acceptable if > 0.6 (Yuhardi et al., 2022) so, based on the Cronbach's Alpha analysis, 0.878 is greater than 0.6, indicating that the data is reliable.

Multiple linear regression analysis is used to examine the influence or relationship of independent factors (X_1 and X_2), which are Brand variables and Country of Origin variables, on the dependent variable (Y), which is Consumer Attitude variables. Based on the findings of data processing (table 4), a multiple linear regression equation model can be developed, namely $Y = 10.552 + 0.388 + 0.080 + e$, with the following interpretation for this regression model: (a) The constant value is 10,552, which is positive, indicating that increasing the independent variable will affect or raise consumer attitudes, (b) The coefficient $\beta_1 X_1$ equals 0.388. This demonstrates that Brand (X_1) has a favorable

influence on consumer attitudes, (c) The coefficient β_{2X2} is 0.080. This shows that Country of Origin (X2) has a positive influence on consumer attitudes. This demonstrates that Country of Origin (X2) has a positive influence on consumer attitudes.

Normality test using the Kolmogorov-Smirnov statistical technique. Based on (table 5), the Asymp. Sig. (2-tailed) value is greater than 0.05, indicating that the data is normally distributed. Meanwhile, for the Heteroscedasticity Test, the Glejser Statistical Approach is employed. Glejser offers regressing the absolute residual value against the independent variable. If the independent variable has a statistically significant influence on the dependent variable, this indicates heteroscedasticity. Decision-making criteria for the Glejser test: If the significance level is greater than 0.05, there is no heteroscedasticity disorder. A significant value < 0.05 indicates a heteroscedasticity issue. Table 6 shows how the statistically significant independent variables influence the dependent variable. The significant probability over the 5% confidence level indicates that the regression model does not result in heteroscedasticity.

The multicollinearity test was also performed, and indications of multicollinearity can be noticed in the magnitudes of the Tolerance and Variance Inflation Factor values (VIF). These measures measure how much of each independent variable is explained by the other independent variables. Tolerance measures the variability of a single independent variable that other independent variables cannot explain. The general values that are usually used are Tolerance values > 0.1 or Variance Inflation Factor (VIF) values < 5 , so there is no multicollinearity (Ningsih & Dukalang, 2019). Table 7 shows that the Brand and Country of Origin variables have Variance Inflation Factor (VIF) values below 5, indicating no multicollinearity across the independent variables in the regression model. The Brand and Country of Origin variables have a tolerance value larger than 0.1, indicating that there is no multicollinearity between the independent variables in the regression model. In (table 8) the Brand variable (X1) has a t-calculated value of 3,800 and the Country of Origin variable (X2) has a t-calculated value of 1,154 while the t-estimated value $n-k-1: \alpha/2 = 100-2-1: 0.05/2 = 1.98472$, where the t-estimated value is 1.98472, thus the t-calculated value of X1 (3,800) $>$ t-estimated (1.98472) with a significance level of $0.00 < 0.05$. This demonstrates that brands have a positive and significant effect on consumer attitudes. In conclusion, H_0 is refused, but H_a is accepted. The estimated t value of X2 (1.154) $<$ t table (1.98472) with a significance level of $0.25 > 0.05$. This demonstrates that Country of Origin has a positive but insignificant effect on customer attitudes. In conclusion, H_0 is accepted but H_a is rejected.

The F test determines if all independent variables (X) included in the model have a simultaneous influence on the variable (Y). The decision-making criteria are H_0 is accepted if F-calculated $<$ F-estimated at $\alpha = 5\%$ and H_a is accepted if F-calculated $>$ F-estimated at $\alpha = 5\%$. In (table 9) the calculated F-calculated is 14.410 with a significance level of 0.000. while the F-estimated with a confidence level of 95% ($\alpha = 0.05$) and (df1) = 2 degrees of freedom of the denominator (df2) = 97 is 3.09. Thus, the F-calculated $>$ F-estimated (14.410 $>$ 3.09) and the significance level (0.000) $<$ (0.05), This demonstrates that the independent factors, brand and country of origin, both have a positive and significant effect on the dependent variable, customer attitudes. Testing the Determination Coefficient (R^2) is seen from the determination coefficient which measures how far the model's ability to explain the variation in independent variables. The value is 0 - 1; if it is closer to zero, it indicates that the regression model is deteriorating or that the model is extremely limited in explaining and vice versa, if it approaches one, the model is better (Septira, 2019). Based on Table 10, the adjusted determination coefficient (Adjusted R Square) is 0.213, or 21.3%. This suggests that 21.3% of the influence of Brand and Country of Origin on customer views may be explained by independent factors, with the remaining 78.7% explained by variables not investigated in this study.

The results of partial testing (t-test) show that Brand has a positive and significant effect on consumer attitudes and the Country-of-Origin variable has a positive and insignificant effect on consumer attitudes in the Dumai City community. It has been established that the country of origin does not significantly influence consumer attitudes when selecting a smartphone. The results of simultaneous testing (F Test) of Brand and Country of Origin together have a positive and significant influence on consumer attitudes in the Dumai City community. The results of the Determination Coefficient (R^2) Test show that 0.213 or 21.3% of the Brand variable can be explained by Country of Origin. While the other 78.7% is explained by other variables not discussed in this study.

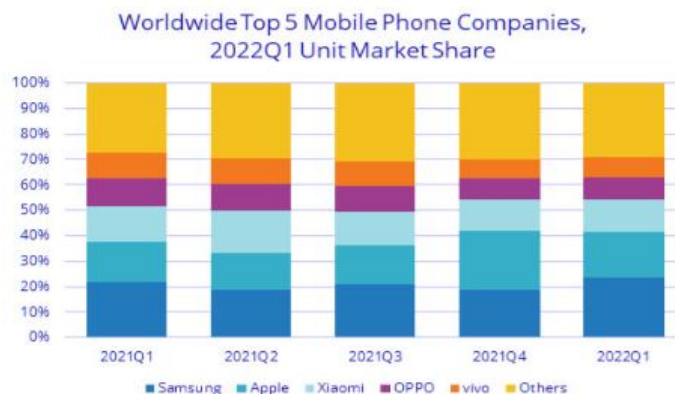


Figure 1. Worldwide Top 5 Mobile Phone Companies, 2022 (Q1) Unit Market Share
 (Source: ID, 2024)

Table 1. Smartphone Brand and Country of Origin

Country of Origin	Smartphone Brand
Indonesia	1. Nexian 2. Evercoss 3. Genpro 4. Polytron 5. Advan 6. Axioo
China	1. Huawei 2. Lenovo 3. Xiaomi 4. Oppo 5. Vivo 6. Realme
South Korea	1. Samsung 2. LG
USA	1. Apple 2. Garmin

Source: Wikipedia.com, 2024

Table 2. Measurement of Variables

Variable	Indicator	Source
Brand	<ul style="list-style-type: none"> • Brand recognition • Brand confidence • Brand perception • Country of Origin 	(Rangkuti, 2004)
Country of origin	<ul style="list-style-type: none"> • Country innovation in production • Level of technological advancement • Product design • Creativity in production • Quality in production • Image of the country of origin 	(Mohd et al., 2007)
Consumer attitudes	<ul style="list-style-type: none"> • Knowledge of the product • Feelings towards the product • Tendency to act 	(Sumarwan, 2011)

Source: Research data, 2024

Table 3. Validity Test

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
X1.1	47.82	29.018	.628	.866
X1.2	47.77	29.411	.580	.868
X1.3	47.90	30.273	.479	.872



X1.4	48.29	28.612	.521	.872
X2.1	47.92	29.832	.627	.867
X2.2	48.04	29.594	.554	.869
X2.3	48.02	29.111	.668	.864
X2.4	47.95	29.826	.516	.871
X2.5	47.90	29.525	.639	.866
X2.6	47.86	30.546	.479	.872
X2.7	47.90	30.354	.540	.870
Y1	47.56	30.936	.443	.874
Y2	47.81	30.539	.454	.873
Y3	47.84	30.338	.414	.876
Y4	47.46	30.958	.442	.874
Y5	47.41	31.557	.382	.876

Source: Processed Data SPSS Statistics 22, 2024

Table 4. Results of Multiple Regression Analysis Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	10.552	1.355		7.785	.000
Brand	.388	.102	.402	3.800	.000
Country of Origin	.080	.069	.122	1.154	.251

Source: Processed Data SPSS Statistics 22, 2024

Table 5. Normality Test

	Unstandardized Residual	
N	100	
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	1.79664399
Most Extreme Differences	Absolute	.108
	Positive	.108
	Negative	-.60
Kolmogorov-Smirnov Z	1.082	
Asymp. Sig. (2-tailed)	.192	

a. Test distribution is Normal.

b. Calculated from data.

Source: Processed Data SPSS Statistics 22, 2024

Table 6. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	3.134	.734		4.267	.000
Brand	-.018	.055	-.038	-.322	.748
Country of Origin	-.066	.038	-.206	-1.759	.082

Source: Processed Data SPSS Statistics 22, 2024

Table 7. Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	10.552	1.355		7.785	.000		
Brand	.388	.102	.402	3.800	.000	.711	1.407
Country of Origin	.080	.069	.122	1.154	.251	.711	1.407

Dependent Variable: Consumer attitudes

Source: Processed Data SPSS Statistics 22, 2024

Table 8. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	10.552	1.355		7.785	.000



Brand	.388	.102	.402	3.800	.000
Country of Origin	.080	.069	.122	1.154	.251

a. Dependent Variable: Consumer attitudes
Source: Processed Data SPSS Statistics 22, 2024

Table 9. Anova

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	94.945	2	47.472	14.410	.000a
Residual	319.565	97	3.294		
Total	414.510	99			

Source: Processed Data SPSS Statistics 22, 2024

Tabel 10. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.479a	.229	.213	1.815

Source: Processed Data SPSS Statistics 22, 2024

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