

The Influence of Marketing Mix on The Increase of Billing Sales Volume in Freedom Internet Cafe, Surakarta

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ABSTRACT

This research aims to analyze the influence of the Marketing Mix on the increase of billing sales volume at Freedom Internet Cafe, Surakarta. The hypotheses proposed in this study are as follows: H1: it is suspected that the Product influences the increase in sales volume, H2: it is suspected that Price influences the increase in sales volume, H3: it is suspected that Promotion influences the increase in sales volume, H4: it is suspected that Place influences the increase in sales volume, H5: it is suspected that the Marketing Mix influences the increase in sales volume simultaneously. The research method used is quantitative research through surveys and interviews, intended to provide explanations. Survey research takes samples from a population and uses questionnaires as the primary data collection tool. Sample selection using the stratified random sampling method is applied when the population has heterogeneous and proportionally stratified members. Therefore, this study involved 52 buyers as respondents, and data analysis was conducted using multiple linear regression models with SPSS v25 application. The data analysis results show that the t-value for the Product variable is -0.347, Price variable is 2.103, Promotion variable is 1.620, and Place variable is 2.011. Meanwhile, the t-table value is 1.677. From these research findings, it can be concluded that the Marketing Mix only affects Price and Place variables partially. Product and Promotion variables do not have a partial effect on the increase in billing sales volume at Freedom Internet Cafe. Through the F-test, it is known that the significance value is below 0.05, thus concluding that the Marketing Mix has a simultaneous effect on the increase in billing sales volume at Freedom Internet Cafe, Surakarta.

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1. INTRODUCTION

Information and communication are the most fundamental human needs, and currently, the primary alternative for communication and seeking information is through the Internet. With the existence of the internet, it has become increasingly easier for us to communicate remotely and also to find information.

Warnet Freedom is one of the service companies offering internet services to customers in the city of Surakarta. One crucial aspect that can sustain this business is how to retain customers to remain loyal and continuously increase compared to other internet cafes in the vicinity.

Looking at the net income of Warnet Freedom in 2022, it appears to be improving. The revenue seems stable, with fluctuations at the end of each month, but not drastically decreasing. However, by the end of 2023, the growth of the internet cafe is declining. This is marked by the increasing number of internet cafes that have begun to close. This is caused by the lack of interest and the presence of digital competitors, namely smartphones. In this regard, to win the competition, it is necessary to innovate and implement marketing mix strategies.

Based on the above description, the author is interested in further researching the Marketing Mix's influence on FreedomNet's Sales Volume regarding the Influence of Marketing Mix on Increasing Billing Sales Volume of Warnet Freedom in Surakarta.

2. RESEARCH METHOD

Research variable

The object of research is the variable or what becomes the focus of a researcher, while the subject of research is the Location where the variables are attached. The objects used in this study are Product, Promotion, Price, Place, Marketing Mix as independent variables, and Sales Volume as the dependent variable.

Definition of research variables

The operational definition of each variable in this study is as follows:

a. Marketing Mix

A set of tactical marketing tools used by a company to ensure the target market responds according to the company's desires.

b. Product

Goods, services, or ideas that are offered and developed by a company to fulfill consumer needs.

c. Price

The amount of money that consumers are required to spend in order to obtain a product.

d. Place

The method by which a company positions a product to ensure that target market consumers can easily access it, or it can also be defined as all activities related to how a company delivers its products to consumers.

e. Promotion

All types of activities involving the dissemination of product-related information to consumers, aimed at enticing them to choose the products offered by the company to fulfill their desires.

f. Sales Volume

The level of sales conducted by the company in units (individual/total/currency) over a specific period.

Data Types and Sources

This research uses primary data, which comes straight from respondents answering our questionnaires and secondary data, which we get indirectly from sources like the internet and textbooks that provide the theories for the study..

Method of collecting data

a. Normality test

The purpose of the normality test is to assess whether the disturbance or residual variables in the regression model are normally distributed..

b. Heteroscedasticity Test

The heteroscedasticity test identifies a condition in which the variance of the residuals is unequal across different observations in a regression model (Imron, 2019). Using the Glejser test, heteroscedasticity is indicated if the significance value is less than 0.05. If the significance value is greater than 0.05, it is concluded that heteroscedasticity is not present.

c. Multicollinearity Test

The multicollinearity test is used to determine the presence or absence of multicollinearity symptoms, which can be identified by examining the effects of collinearity. Multicollinearity symptoms can be detected by looking at the tolerance value (> 0.1) and identifying strong or nearly perfect correlations among the independent variables, or a Variance Inflation Factor (VIF) value (< 10). If the tolerance value is less than 0.1 and the VIF value exceeds 10, it indicates the presence of multicollinearity.

2.1 Multiple Linear Regression

The analysis is carried out to test the proposed hypothesis using multiple linear regression. This is done to determine whether there are relationships among the variables of Product, Price, Promotion, and Place on Sales Volume.

2.2 Estimated Coefficient of Determination (R²)

From the coefficient of determination (R²), it can be seen the degree of determination of multiple linear analysis. R² shows the magnitude of the contribution of all independent and dependent variables.

2.3 Statistical Test

After testing the classical assumptions, the hypothesis is tested. If the model is free from deviations from classical assumptions, then hypothesis testing can be carried out. Hypothesis testing is done by testing the significance (significant effect) of the independent variable on the dependent variable, either partially or jointly, using the t-test (t-test) and F-test (F-test).

2.4 Conceptual Framework

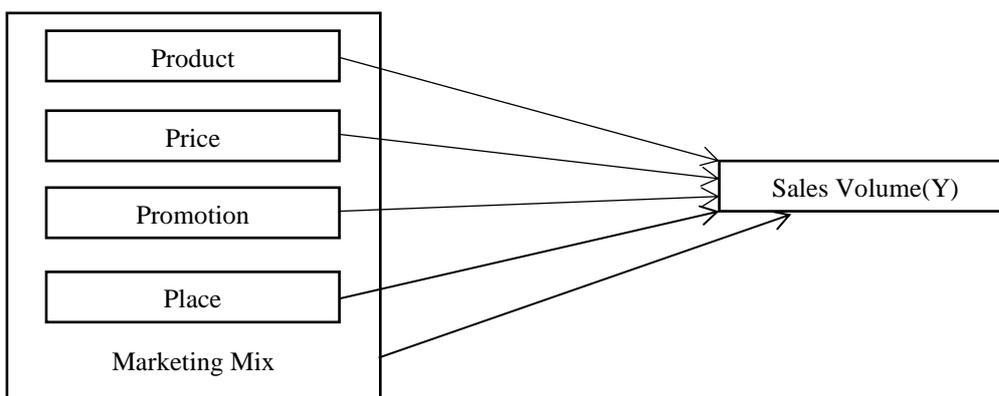


Image 1. Conceptual framework

2.5 Hypothesis

The hypotheses used in this study are as follows:

- Does the Product have a partial effect on increasing the Billing Sales Volume at Warnet Freedom Surakarta?
- Does the Price have a partial effect on increasing the Billing Sales Volume at Warnet Freedom Surakarta?
- Does the Promotion have a partial effect on increasing the Billing Sales Volume at Warnet Freedom Surakarta?
- Does the Place have a partial effect on increasing the Billing Sales Volume at Warnet Freedom Surakarta?
- Do the Marketing Mix elements collectively have a simultaneous effect on increasing the Billing Sales Volume at Warnet Freedom Surakarta?

3. RESULTS AND DISCUSSIONS

Data analysis

The data analysis was carried out using Multiple Linear Regression with the assistance of SPSS v25 software application. the secondary data must first be tested for classical assumptions, namely: multicollinearity test, heteroscedasticity test, and normality test.

Classic Assumption Test

a. Multicollinearity Test

A multicollinearity test is conducted to determine the extent of intercorrelation among the independent variables in this study. If correlation occurs, it indicates the presence of multicollinearity problems. To detect the presence of multicollinearity, the tolerance value and VIF (Variance Inflation Factor) are examined. If the tolerance value is above 0.1 and the VIF value is below 10, then multicollinearity does not occur. The results of the multicollinearity test for the regression model in this study are presented in the table below.

Table 1. Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Product(X1)	.586	1.705
	Price(X2)	.457	2.187
	Promotion(X3)	.550	1.819
	Place(X4)	.565	1.771

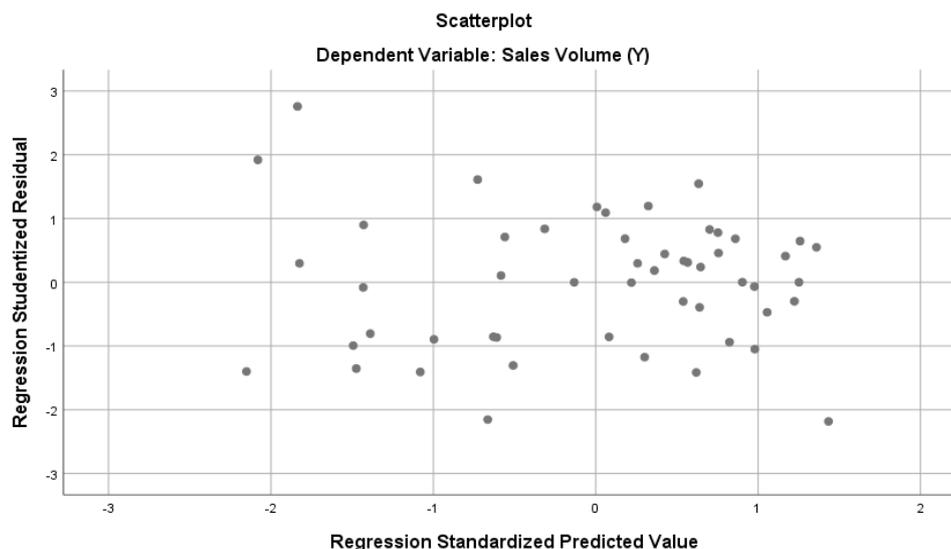
Source : Output SPSS,2024

The table above shows that there's no multicollinearity if the $VIF < 10$. Since the results are below 1, we can conclude that there's no multicollinearity in the regression model..

b. Heteroscedasticity Test

This test is conducted to determine whether there is any indication of heteroscedasticity or not. Characteristics of the absence of heteroscedasticity are as follows: data points scatter above and below/around the value of 0, data points do not cluster only above or below, the spread of data points should not form a wavy pattern that widens and then narrows and widens again, and the spread of data points should not follow a specific pattern.

Graph 1. Heteroskedasticity test results



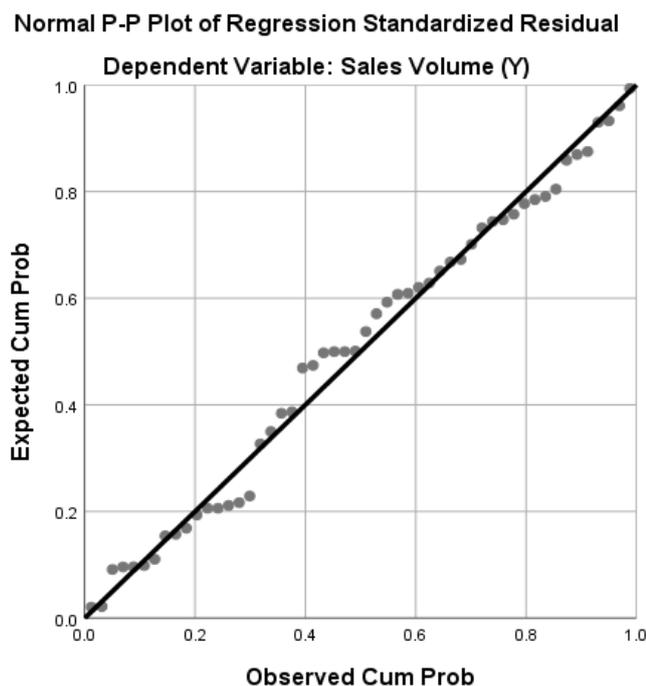
Source: Output SPSS,2024

The scatterplot shown above for the heteroscedasticity test displays randomly scattered points without a clear pattern. The points are spread both below and above the value of 0 on the Y-axis. This indicates the absence of heteroscedasticity in the regression model, making the regression model suitable for prediction.

c. Normality test

To test normality, I used a Normal P-P Plot.

Graph 2. Normality test results



Source: Output SPSS,2024

"The graph above shows that the Normal P-P Plot of Regression Standardized Residual depicts the data spread around the diagonal line, and the spread follows the direction of the diagonal line of the graph. Therefore, the regression model used in this study meets the assumption of normality."

Regression Equation Model

The analysis was conducted to test the hypothesis proposed using Multiple Linear Regression. This was done to determine whether there is a relationship between the variables Product, Price, Promotion, Place, and Sales Volume

Table 2. Results of Multiple Linear Regression Analysis
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.890	2.394		1.625	.111
	Product (X1)	-.053	.154	-.048	-.347	.730
	Price (X2)	.309	.147	.330	2.103	.041
	Promotion (X3)	.230	.142	.232	1.620	.112
	Place (X4)	.284	.141	.284	2.011	.049

a. Dependent Variable: Sales_Volume (Y)

Source: Output SPSS,2024

Based on the table above, the linear regression equation is formulated as follows:
 $\text{Sales Volume} = 3.890 + -0.053\text{Product} + 0,309\text{Price} + 0,230\text{Promotion} + 0,284\text{Place}$.

Estimated Coefficient of Determination (R²)

The coefficient of determination test is conducted to ascertain the influence of independent variables on the dependent variable.

Table 3. Results of the Coefficient of Determination Test

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.685 ^a	.470	.425	3.197

a. Predictors: (Constant), Place (X4), Promotion (X3), Product (X1), Price (X2)

Source: Output SPSS,2024

According to the results of the coefficient of determination test presented in the table above, it is evident that the coefficient of determination or Adjusted R-Square stands at 0.425 or 42.5%. This value suggests that Product (X1), Price (X2), Promotion (X3), and Place (X4) collectively exert a significant influence of 42.5% on sales volume. However, it is noteworthy that 57.5% of the variance in sales volume is attributed to other unexamined factors in this study

Statistical Test

a. F-test

To test whether the Marketing Mix influences the Sales Volume variable, the hypothesis is examined through an F-test as follows:

Table 4. Result of F-Test
ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	425.808	4	106.452	10.413	.000 ^b
	Residual	480.499	47	10.223		
	Total	906.308	51			

a. Dependent Variable: Sales_Volume(Y)

b. Predictors: (Constant), Place(X4), Promotion(X3), Product(X1), Price(X2)

Source: Output SPSS,2024

The simultaneous analysis (F-test) above yields a p-value of 0.000, which is less than the significance level of 0.05. Therefore, it can be concluded that the null hypothesis (H₀) is rejected, and the alternative hypothesis (H_a) is accepted. This indicates that Product (X1), Price (X2), Promotion (X3), and Place (X4) collectively have a significant influence on Sales Volume (Y).

b. T-Test

To see if there's a real influence between the independent variables on the dependent variable, we conduct hypothesis testing. Here's how we do partial hypothesis testing:

Table 5. Result of T-Test
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.890	2.394		1.625	.111
	Product (X1)	-.053	.154	-.048	-.347	.730
	Price (X2)	.309	.147	.330	2.103	.041
	Promotion (X3)	.230	.142	.232	1.620	.112
	Place (X4)	.284	.141	.284	2.011	.049

a. Dependent Variable: Sales_Volume (Y)

Source: Output SPSS,2024

The table above shows that:

1. Product (X1) has a significance level with a p-value = 0.730 > 0.05. Therefore, it can be concluded that H_0 is accepted and H_a is rejected, meaning that Product (X1) does not significantly affect Sales Volume(Y).
2. Price (X2) has a significance level with a p-value = 0.041 < 0.05. Thus, it can be concluded that H_0 is rejected and H_a is accepted, indicating that Price (X2) significantly influences Sales Volume (Y).
3. Promotion (X3) has a significance level with a p-value = 0.112 > 0.05. Hence, it can be concluded that H_0 is accepted and H_a is rejected, indicating that Promotion (X3) does not significantly affect Sales Volume (Y).
4. Place (X4) has a significance level with a p-value = 0.049 < 0.05. Therefore, it can be concluded that H_0 is rejected and H_a is accepted, meaning that Place (X4) significantly influences Sales Volume(Y)

Discussion

From the given regression equation:

$$\text{Sales Volume} = 3.890 - 0.053\text{Product} + 0.309\text{Price} + 0.230\text{Promotion} + 0.284\text{Place}$$

We can interpret the relationship between the independent variables (Product, Price, Promotion, and Place) and the dependent variable (Sales Volume) as follows:

a. Intercept

The intercept of 3.890 indicates that if all independent variables (Product, Price, Promotion, and Place) are zero, the predicted Sales Volume would be 3.890 units.

b. Coefficient of Product ($B_1 = -0.053$):

This negative coefficient means there is a negative relationship between Product and Sales Volume. If the Product variable increases by 1 unit, the Sales Volume is predicted to decrease by 0.053 units, assuming other variables are constant.

c. Coefficient of Price ($B_2 = 0.309$):

This positive coefficient means there is a positive relationship between Price and Sales Volume. If the Price variable increases by 1 unit, the Sales Volume is predicted to increase by 0.309 units, assuming other variables are constant.

d. Coefficient of Promotion ($B_3 = 0.230$):

This positive coefficient means there is a positive relationship between Promotion and Sales Volume. If the Promotion variable increases by 1 unit, the Sales Volume is predicted to increase by 0.230 units, assuming other variables are constant.

e. Coefficient of Place ($B_4 = 0.284$):

This positive coefficient means there is a positive relationship between Place and Sales Volume. If the Place variable increases by 1 unit, the Sales Volume is predicted to increase by 0.284 units, assuming other variables are constant.

In general, the interpretation of these regression coefficients shows how changes in each independent variable affect the Sales Volume, assuming other variables remain constant. A positive coefficient value indicates a positive relationship (an increase in the independent variable results in an increase in Sales Volume), while a negative coefficient value indicates a negative relationship (an increase in the independent variable results in a decrease in Sales Volume).

4. CONCLUSION

Based on the discussion and data analysis above, the conclusions are from the multiple linear regression test, we obtained the equation $Y = 3.890 - 0.053X_1 + 0.309X_2 + 0.230X_3 + 0.284X_4$, indicating that the independent variables (X) have an effect on the dependent variable (Y). After that we got the results of the partial hypothesis test using the T-test are as follows Product (X1) has a significance level of p-value = 0.730 > 0.05, indicating that H_0 is accepted and H_a is rejected, meaning Product (X1) does not significantly affect Sales Volume(Y). Price (X2) has a significance level of p-value = 0.041 < 0.05, indicating that H_0 is rejected and H_a is accepted, meaning Price (X2) significantly affects Sales Volume(Y). Promotion (X3) has a significance level of p-value = 0.112 > 0.05, indicating that H_0 is accepted and H_a is rejected, meaning Promotion (X3) does not significantly

affect Sales Volume(Y).Place (X4) has a significance level of p-value = 0.049 < 0.05, indicating that H0 is rejected and Ha is accepted, meaning Place (X4) significantly affects Sales Volume (Y). And The results of the simultaneous hypothesis test (F-test) show a significance level of p-value = 0.000 < 0.05, indicating that H0 is rejected and Ha is accepted. This means that Product (X1), Price (X2), Promotion (X3), and Place (X4) together have a significant effect on Sales Volume(Y).

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