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# THE EFFECT OF PRODUCT, PRICE, AND PROMOTION ELEMENTS ON SALES VOLUME OF CLASS 3 PRODUCTS IN THE TOYOTA MATERIAL HANDLING DIVISION (Case Study at PT Traktor Nusantara)

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**ABSTRACT**

This research seeks to determine the effects of various factors on the sales volume of Class 3 products in the Toyota Material Handling Division at PT. Traktor Nusantara (TN). Specifically, it aims to investigate the influence of product elements, price elements, and promotional elements on sales volume. Additionally, it aims to analyze the combined impact of product, price, and promotion on sales volume.

This study employs an associative quantitative approach, using survey-based data gathering methodologies. The target demographic comprises all firms that are users of the division, amounting to a total of 875 organizations, with a sample size of 40 companies.

The research findings indicate that: (1) the components of the product have a significant and favorable effect on the volume of sales; (2) the pricing strategy has a significant and favorable effect on the volume of sales; (3) promotional activities have a significant and favorable effect on the volume of sales; and (4) the integration of product, price, and promotion has a significant and favorable effect on the volume of sales.

***Keywords:***
Product, Price, Promotion, Sales Volume.

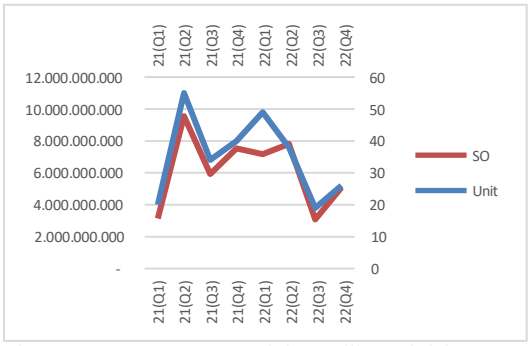
## 1. Introduction

The heavy equipment sales industry is expected to see significant annual expansion. The increase in demand is driven by the progress of several industries that require the use of heavy equipment, including construction, mining, agriculture, and plantations. In an effort to achieve the Vision of Golden Indonesia 2045, each sector has shown extraordinary progress. This was conveyed on the website of the Ministry of Public Works and Public Housing. The development of heavy equipment sales companies from year to year is inseparable from the positive progress that has occurred in the industry, especially heavy equipment material handling equipment. Material handling equipment refers to large machines designed for the purpose of transporting objects over short distances in enclosed spaces, including factories, gardens, and warehouses. Material handling equipment is very important in various business sectors because of its ability to increase time and spatial efficiency (Kay, 2012). PT. Archipelago Tractor is one of the companies in Indonesia that sells material handling equipment, which is one category of heavy equipment used for relocation and transportation of goods.

PT. TN is a leading company in Indonesia that drives the growth of the Construction, Mining, Agriculture, and Plantation sectors. Since 1974, the Company has served as a distributor of heavy equipment specializing in material handling equipment through the Material Handling Division. Traktor Nusantara remains a leading player in the material handling equipment sales industry, maintaining its dominance in the market with its outstanding products, especially Toyota and BT Raymond Forklifts. These products have consistently been industry leaders, offering profitable product features and flexibility.

However, PT. TN is currently experiencing significant difficulties in sales volume in the Toyota Material Handling division. Sales volume is directly influenced by consumer purchases and has a direct impact on the profitability of the organization (Malik, 2015). PT. Traktor Nusantara is currently experiencing a significant decline in sales volume of Class 3 goods from the Toyota Material Handling business which presents quite a big challenge. The problem of declining sales volume has emerged in the last 2 years, this can be seen based on Figure 1.1 Sales Graph below. This situation requires a thorough analysis to find the underlying cause and find the right solution.

Figure 1. Sales Graph of Class 3 Products




Source: Sales Data 2021-2022 Material Handling Division PT. Traktor Nusantara.

The decline in sales also affected PT. Barang kelas 3 Traktor Nusantara in the Material Handling Division. World Industrial Trucks Statistics (WITS) data - Material handling Indonesia Market Share as presented in table 1, shows that the company's market share in class 3 products determined based on factory orders is estimated to reach 15.9% in 2017. 2022. The company's limited market share shows a lack of ability to compete efficiently in the increasingly ambitious class 3 product sector in the material handling business.

Table 1. WITS – Market Share Material handling Class 3

| Indonesia *Material handling Market Share* | | | | | | | |
|---|---|---|---|---|---|---|---|
| Class 3 | Year | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| | Factory Order | 1,083 | 1,491 | 1,831 | 1,267 | 1,587 | 2,455 |
| Traktor Nusantara *Material handling* Class 3 *Market Share* | | | | | | | |
| Class 3 | Year | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| | Market Share | 20.5% | 16.7% | 20.0% | 5.9% | 4.4% | 15.9% |
| | Factory Order | 222 | 249 | 367 | 75 | 70 | 388 |

Source: WITS Market Share

The industry faces major competitive barriers due to its insufficient market share. The product is classified as a class 3 PT. TN has not been able to reach its maximum sales potential in the market, as seen from the limited market share. Sales volume refers to the total value of goods that have been sold in a certain period of time, with excellent service techniques that have a significant impact(Kotler & Armstrong, 2008).In order to increase sales volume and achieve market dominance, PT. TN needs to develop a plan that can be implemented effectively in its target market. The company must apply different methodologies to determine and advance the target market, ensure positioning, and organize the marketing mix (Kotler inMalik, 2015).

This strategy is stated in the principles of management, where management is an organization's goal achieved effectively through the process of planning, organizing, directing and managing the organization's resources.(Daft, 2002). Specifically, the strategy implemented with a target in the form of a target market. Marketing principles are also used to achieve targets in the form of target markets. Marketing is a strategic process that aims to meet the demands and preferences of a company's target customer base through the formulation of pricing, promotion, and distribution strategies for its products.(Kotler et al., 2004). In order to reach the target market appropriately, the company also needs to maximize marketing management activities. Marketing management involves strategic identification of target markets and implementation of strategies to attract, retain, and expand the customer base. This is achieved by designing, delivering, and communicating exceptional value to customers.(Kotler & Keller in Poltak et al., 2020).

One of the appropriate marketing management designs, namely reaching the target market and achieving sales volume, is the Marketing mix. The marketing mix is a strategic combination of several marketing tactics that are carefully designed and controlled by a company in order to get the expected response from a particular target market in an effective way.(Kotler & Armstrong in Sunarsi & Hartono, 2020)The marketing mix instruments in this study include Product, Price, and Promotion. Productsis any good or service that is introduced to the market with the aim of attracting attention, being owned, utilized, or worn, and especially has the function of accommodating customer needs and desires. (Kotler, 1964). Price is the amount of money that must be spent to obtain a product and also the combination of products and services that accompany it.(Kotler et al., 2004). Promotion refers to a series of systematic and deliberate actions, events, or initiatives undertaken by a company to educate and support its products or services to its target customer audience.(Kotler et al., 2004). Based on the explanation of the background, this research aims to: (1) understand the impact of product on the sales volume of class 3 product elements in the Toyota Material Handling division, (2) understand the impact of price elements on the sales volume of class 3 products in the Toyota Material Handling division, (3) understand the impact of promotion on the sales volume of the Toyota Material Handling division, and (4) understand the impact of product, price and promotion elements simultaneously on the sales volume of class 3 products in the Toyota Material Handling division.

## 2. Method

This research utilizes a type of field research, where researchers actually visit the field to collect data and information directly from respondents in their natural habitat.(Marzuki, 2002).This study uses a quantitative methodology based on association, using survey techniques. Associative quantitative techniques attempt to investigate and evaluate the correlation between the variables studied, with the aim of identifying patterns of relationships and establishing a causal relationship between 2 or more variables.(Sugiyono, 2013). This study will conduct a test of the relationship or influence between the independent variables (Product, Price, Promotion) and the dependent variable (Sales Volume). The study was conducted in the Toyota Material Handling division of PT. TN located in the Pulo Gadung Industrial Area, East Jakarta. The target population includes all companies that are consumers of the division, totaling 875 companies with 40 companies as samples. The sampling approach used is purposive sampling. Data collection is carried out through the observation process and the provision of questionnaires. The data analysis procedure is carried out in three stages, namely instrument testing, inferential analysis, and hypothesis testing using multiple regression analysis.

## 3. Results and Discussion

### 3.1. Result

**1. Research Instrument Test**

a. Validity Test

The validity test achievement in this study shows that each statement item in the independent variables, namely Product (X1), Price (X2), and Promotion (X3) and in the dependent variable, namely sales volume (Y) has been declared valid. The statement items are considered valid.

because the Pearson correlation (r) value in the Pearson Product-Moment test has exceeded the specified r-table, namely 0.312.

b. Reliability Test

Table 2. Reliability Test Results

| Variables | | |
|---|---|---|
| Products(X1) | **Tolerance** | **VIF** |
| Price(X2) | 0.319 | 3.137 |
| Promotion(X3) | 0.518 | 1,932 |
| Sales Volume (Y) | 0.317 | 3.150 |

Source: SPSS Output Data 2024

Based on the reliability test achievements that can be seen in table 2, it is known that per variable has Cronbach Alpha > 0.60 (α > 0.60). In accordance with the basis for decision making in the reliability test if Cronbach alpha > 0.60, then all variables starting from X1, X2, X3, and Y can be called reliable.

**1. Inferential Analysis**

a. Multicollinearity Test

Table 3. Multicollinearity Test Results

| **Collinearity Statistics** | | |
|---|---|---|
| **Variables** | **Tolerance** | **VIF** |
| *Products*(X1) | 0.319 | 3.137 |
| *Price*(X2) | 0.518 | 1,932 |
| *Promotion*(X3) | 0.317 | 3.150 |

The table shows the tolerance values for the variables Product (X1), Price, and Promotion (X3) of 0.319, 0.518, and 0.317, respectively. In addition, the corresponding VIF values are 3.137, 1.932, and 3.150. The results show that each independent variable has a tolerance value of > 0.10 and a value of < 10. These findings show that there is no multicollinearity among the independent variables in the regression model.

b. Autocorrelation Test

Table 4. Autocorrelation Test Results

| **R** | **R Square** | **Adjusted R Square** | **Std. Error of the Estimate** | **Durbin-Watson** |
|---|---|---|---|---|
| .907a | 0.823 | 0.808 | 2.63246 | 1,824 |

Based on the data given in table 4, the calculated d value is 1.824. To determine the presence of autocorrelation, the calculated d value is compared with the theoretical d value obtained from the Durbin-Watson distribution table at a significance threshold of α = 5%. In this study, a sample size (n) of 40 was used, resulting in a dl value of 1.338 and a du value of 1.659. The results of the comparison show that 1.659 < 1.824 < 4 - 1.659 (du < d < 4 - du), so it can be concluded that there is no positive or negative autocorrelation at a significance level of α = 5%.

c. Heteroscedasticity Test

Table 5. Heteroscedasticity Test Results

| Variables | t | Sig. | Note |
|---|---|---|---|
| *Products*(X1) | -1.025 | 0.312 | Nonheteroscedasticity |
| *Price*(X2) | -0.495 | 0.624 | Nonheteroscedasticity |
| *Promotion*(X3) | 0.142 | 0.888 | Nonheteroscedasticity |

Source: SPSS Output Data 2024

The table shows that the p-value for the product variables (X1), price (X2), and promotion (X3) are 0.312, 0.624, and 0.888, respectively. These findings show that each independent variable has a p-value > 0.05, thus indicating that the regression model studied is not affected by heteroscedasticity problems.

d. Normality Test

Table 6. Normality Test Results

| | | Unstd. Residual |
|---|---|---|
| **N** | | 40 |
| **Normal Parameters** | **Mean** | 0.4026048 |
| | **Std. Deviation** | 1.49146234 |
| **Most Extreme Differences** | **Absolute** | 0.108 |
| | **Positive** | 0.108 |
| | **Negative** | -0.089 |
| **Test Statistics** | | 0.108 |
| **Asymp. Sig. (2-tailed)c** | | 0.200d |

The table shows a 2-way significance value of 0.200. The findings show that the 2-way significance value is above 5% or 0.05, indicating that (H0) is accepted. Therefore, it can be concluded that the data follows a normal distribution.

**3. Hypothesis Testing**

a. Multiple Regression Analysis

Table 7. Results of Multiple Regression Analysis

| Coefficientsa | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 11 | (Constant) | 3,845 | 2,421 | | .588 | .121 |
| | *PRODUCT* | .181 | .060 | .379 | .048 | .004 |
| | *PRICE* | .220 | .066 | .325 | .331 | .002 |
| | *PROMOTION* | .249 | .101 | .306 | .459 | .019 |

Dependent Variable: SALES VOLUME

Table 7 shows the variable coefficients: product (X1) has a coefficient of 0.181, price (X2) has a coefficient of 0.220, and promotion (X3) has a coefficient of 0.148. The constant term is 3.845. The given values provide a regression equation model:

$$Y = a + \beta 1\ X1 + \beta 2\ X2 + \beta 3\ X3 + e$$

$$Y = 3.845+0.181X1+0.220X2+0.249X3$$

Based on this equation, the following can be explained.

a) The constant value shows a constant value of 3.845, which means that if the product, price, and promotion values are zero, then the sales volume value is equal to 3.845.
b) The product regression coefficient (X1) of 0.181 shows a positive correlation between the product and sales volume. This shows that a 1% increase in the product will result in an increase in sales volume of 0.181. A 1% decrease in the product variable will result in a decrease in sales volume of 0.181.
c) The regression coefficient of the price variable (X2) is 0.220, indicating a positive impact of price on sales volume. This shows that a 1% increase in price will result in an increase in sales volume of 0.220. According to him, a 1% price variable will result in a decrease in sales volume of 0.220.
d) The promotion regression coefficient (X3) of 0.249 shows a positive correlation between promotion and sales volume. This shows that a 1% increase in promotion will result in an increase in sales volume of 0.249. A 1% decrease in the promotion variable will result in a decrease in sales volume of 0.249.

b. Statistical T Test (Partial)

Table 8. T-Test Results

| Variables | Regression Coefficient (b) | T-count | Sig.t | Information |
|---|---|---|---|---|
| *Products*(X1) | 0.181 | 3,048 | 0.004 | H1 Accepted |
| *Price*(X2) | 0.220 | 3.331 | 0.002 | H2 Accepted |
| *Promotion*(X3) | 0.249 | 2.459 | 0.019 | H3 Accepted |

a) Product Variable (X1).
The results of the product variable utility test have a significance level of 0.004. Based on the results of the study, the product variable has a significance value of less than 0.05 and a positive regression coefficient of 0.181. The "product" variable also obtained a T value of 3.048, which is greater than the critical T value of 2.028. Based on these results, it is stated that H1 "Product has a positive and significant effect on sales volume" is accepted.
b) Price variable (X2).
The findings of the price variable t-test show a significance level of 0.002. Based on these findings, the price variable is statistically substantial with a p-value of less than 0.05 and has a positive regression coefficient of 0.220. The price variable also produces a T-count value of 3.331> 2.028. Based on these findings, H2 confirms that "Price has a positive and significant effect on Purchasing Decisions" is accepted.
c) Promotion Variable (X3)
The t-test findings of the promotion variable show a significance level of 0.019. Based on these findings, the promotion variable has a significance level of <0.05 and a positive regression coefficient of 0.249. The promotion variable has a calculated T value of 2.459> 2.028. Based on these findings, Hypothesis 3 (H3) confirms that "Promotion has a positive and significant effect on sales volume" is accepted.

c. F Test (Simultaneous)

Table 9 F Test Results

| Model | F-count | Sig. | Information |
|---|---|---|---|
| 1 | 55,803 | .000b | H4 Accepted |

Calculation on multiple linear regression produces F-count value which is 55.803 > 3.25. Data in Table 4.18 shows that the significance level is 0.000, smaller than the planned significance threshold of 5% or 0.05. From here it can be concluded that H4 confirms that "product, price, and promotion have a positive and significant effect together on sales volume" is accepted.

d. Coefficient of Determination

Table 10 Results of Determination Coefficient

| R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|
| .907a | 0.823 | 0.808 | 2.63246 | 1,824 |

The Adjusted R Square column displays the coefficient of determination, which is 0.808, which shows that 80.8% of the variation in sales volume can be attributed to the influence of product, price, and promotion. The remaining 19.2% is influenced by variables not included in this study.

3.2. Discussion

1. The Influence of Product Elements on Sales Volume of Class 3 Products in the Toyota Material Handling Division.

   The research findings show that the product variable produces a T-count value of 3.048 > 2.028, at a significance level of 0.004 < 0.05. Furthermore, the regression coefficient of the product variable is positive, namely 0.220, indicating a good influence. Based on these findings, it can be concluded that the first hypothesis, which states that pricing has a positive and large impact on sales volume, is proven.

2. The Influence of Price on Sales Volume of Class 3 Products of Toyota Material Handling Division

   The findings of this study indicate that the price variable produces a T-value of 33.331 > 2.028 at a significance level of 0.002 < 0.05. In addition, the regression coefficient of the product variable has a positive value of 0.220. Based on this explanation, it is concluded that this study has successfully validated the second hypothesis which states that pricing has a positive and large effect on sales volume.

3. The Influence of Promotion on Sales Volume of Class 3 Products of Toyota Material Handling Division

   The research findings show that the promotion variable has a T-value of 2.459 > 2.028, at a significant level of 0.019 < 0.05. In addition, the regression coefficient of the product variable has a positive value of 0.249. These figures indicate that this study has successfully validated the third hypothesis, which confirms that promotion has a profitable and large impact on sales volume.

4. The Influence of Simultaneous Product, Price, and Promotion on Sales Volume of Class 3 Products in the Toyota Material Handling Division.

The findings show that the F test conducted using the SPSS statistical analysis tool ver 26 produces an Fcount value of 55.803> 3.25, with a significance level of 0.000 <0.05. The findings show that this study yields validating hypothesis 4, which confirms that the combination of product, price, and promotion factors has a positive and large influence on sales volume.

## 4. Conclusions

1. ElementProductshas a positive and substantial impact on the Sales Volume of Class 3 Products in the Toyota Material Handling Division of PT TN
2. ElementPricehas a positive and substantial impact on the Sales Volume of Class 3 Products in the Toyota Material Handling Division of PT TN
3. ElementPromotionhas a positive and substantial impact on the Sales Volume of Class 3 Products in the Toyota Material Handling Division of PT TN
4. Product, Price, and Promotion aspects have a simultaneous and large influence on the Sales Volume of Class 3 Products of Toyota Material Handling Division PT TN. These three factors have a significant influence, with a magnitude of 80.8% as shown by the Adjusted R Square value of 0.808. The determination coefficient of 80.8% shows that the independent variables of Product, Price, and Promotion have a substantial portion of the Sales Volume variant. The remaining 19.2% is due to other aspects.

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