Analysis of Factors Affecting Sales Increases for Deka Wafer Products of PT Dua Kelinci

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Abstract. One of the critical factors in achieving marketing targets is the role of product distribution in sales volume. This study aims to examine the impact of production quality, selling price, and distribution quality on sales volume. The sampling technique used in this research is accidental sampling, with a sample size of 96 respondents. The data analysis method used is quantitative, including classical assumption tests (normality test, multicollinearity test, and heteroscedasticity test), multiple linear regression analysis, hypothesis testing (t-test and F-test), and correlation coefficients. The calculation results show that the t-value for product quality is 4.668 > t-table 1.986, with a significance level of 0.000, which is less than the threshold of 0.05. This indicates that the product quality variable significantly affects sales volume. Similarly, the selling price variable has a significance level of 0.000, indicating a significant impact on sales volume. For the distribution variable, the t-value is 4.328 > t-table 1.986, with a significance level of 0.000, confirming a significant effect on sales volume. To sustain sales volume, PT Dua Kelinci must continue to pay attention to product quality, set consumer-accessible prices, and maintain effective product distribution for Deka wafer products. Future researchers can expand this study by adding other independent variables more relevant to sales volume. Furthermore, alternative research objects could be considered for further studies.

Keywords: Sales Volume; Production Quality; Price; Distribution

INTRODUCTION

The establishment of a company aims to increase sales volume, enhance competitiveness, and minimize production costs to achieve maximum profit. A company's growth and profitability can serve as benchmarks for evaluating its success in conducting operational activities. If the company's goals are achieved, it can sustain its existence and compete with other companies in the future (Widodo, 2020). Companies must consistently strive to manage their operations effectively to accomplish these objectives. Several factors influence the achievement of these goals, one of which is marketing. "From a managerial perspective, marketing is the process of planning and executing concepts, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational goals" (Kotler, 1997).

According to Rudianto (2013), pricing policies significantly impact whether a company achieves its targets. Companies employ pricing and promotional strategies in marketing to boost product sales. Pricing strategies are used to compete and increase sales volume, while promotions provide information and persuade consumers to purchase products. The success of promotions depends on the allocation of available funds (Kusumawati & Aslah, 2024). Pricing policies are crucial for companies to remain competitive because pricing decisions have a significant effect on sales volume growth. Price serves as the primary determinant of buyer choices. Improper pricing policies may lead to substantial losses for the company, weakening its competitiveness in the market, reducing sales volume, and

ultimately failing to achieve its objectives. As a result, the company might struggle to capture market share, and production costs may remain unrecovered (Pepbrilita, Ernawati, & Fauziyanti, 2020)

According to Basu Swastha (2002, 286), and Ravenscraft, D. J. (1983) "Distribution channels serve as pathways through which goods flow from producers to intermediaries and eventually to consumers as users of the produced goods." Another essential condition producers must meet is ensuring the availability of products, so they are easily and quickly accessible whenever needed by consumers. A company's failure to provide its products whenever consumers require them can result in decreased consumer loyalty to its brand, primarily due to the presence of many perfect substitute products with competitive quality and prices. If such failures occur frequently, consumer loyalty to the brand will decline further, and consumers may eventually switch to other brands (Nurbakti, 2023).

METHOD

The population in this study consists of consumers of Deka Wafer products from PT Dua Kelinci. The sampling technique employed in this research is accidental sampling, where data is collected by approaching individuals who happen to be encountered while purchasing Deka Wafer products at stores in the Pati Regency area. The study involves 96 respondents. The data collection methods used include questionnaires, literature review, observation, and interviews. The validity and reliability of the research variables and indicators were also tested.

The data analysis method applied in this research is quantitative, utilizing classical assumption tests (normality test, multicollinearity test, and heteroscedasticity test), multiple linear regression analysis, hypothesis testing (t-test and F-test), and correlation coefficients (Achmad Wahyu E., 2017). Before conducting multiple linear regression analysis to test the research hypothesis, classical assumption testing is first performed on the processed data. Classical assumption tests include normality, multicollinearity, and heteroscedasticity tests.

The t-test is a statistical method used to examine the partial effect of each independent variable on the dependent variable. Its purpose is to test whether product quality (X1), price (X2), and distribution (X3) individually influence sales volume (Y) for Deka Wafer products of PT Dua Kelinci. The F-test is used to determine whether the independent variables (market orientation, innovation, and marketing strategy creativity) simultaneously and significantly affect the dependent variable (marketing performance). A significance level of 0.05 is applied (Ghozali, 2015, in Achmad Wahyu E., 2017).

This study uses the R Square metric, which has a similar interpretation to R^2 but may fluctuate with the addition of new variables, depending on the correlation between the added independent variables and the dependent variable. R Square values can be negative; in such cases, the value is treated as 0, indicating that the independent variables do not explain the variance of the dependent variable at all.

RESULTS AND DISCUSSION
Research Results on the Effect of Product Quality on Sales Volume of Deka Wafer Products by PT Dua Kelinci.

The t-value for product quality is 5.594 > t-table 1.986 (df = n-k-1 = 92), with a significance level of 0.000, less than the threshold of 0.05. This indicates that the product quality variable significantly affects sales volume. The findings suggest that higher product

quality increases the sales volume of Deka Wafer products by PT Dua Kelinci. Product quality is defined by the physical condition, function, and characteristics of a product—whether goods or services—based on the expected level of quality. In this study, the indicators for product quality include taste, packaging design, and durability. Based on responses from the questionnaire, the average product quality rating was 3.45 on a scale of 1–5, indicating a high influence of product quality on sales volume. These results align with the findings of Destia Aktarina (2019), who conducted a study titled *Factors Affecting Sales Volume of 2016 Trend Sariayu Lipstick Products at Martha Tilaar Shop Palembang Icon Mall and Martha Tilaar Shop Palembang Indah Mall.* That study showed that the independent variable of product quality (X1) accounted for 52.8% of the variance in sales volume for Sariayu lipstick products.

Research Results on the Effect of Price on Sales Volume of Deka Wafer Products by PT Dua Kelinci.

The t-value for price is 5.594 > t-table 1.986 (df = n-k-1 = 92), with a significance level of 0.000, below the 0.05 threshold. This confirms that the price variable significantly affects the sales volume of Deka Wafer products. Price is defined as an exchange value, equivalent to money or other goods, reflecting the benefits derived from a product or service for an individual or group at a specific time and place. In this study, price indicators include affordability, alignment with consumer purchasing power, and correspondence with product quality. The average price rating was 3.53 on a scale of 1–5, indicating a high impact of price on sales volume. These findings are consistent with the study by Destia Aktarina (2019), which demonstrated that the independent variable of price (X2) accounted for 52.8% of the variance in sales volume for 2016 Trend Sariayu lipstick products at Martha Tilaar Shop Palembang Icon Mall and Martha Tilaar Shop Palembang Indah Mall.

Research Results on the Effect of Distribution on Sales Volume of Deka Wafer Products by PT Dua Kelinci.

The t-value for distribution is 4.328 > t-table 1.986 (df = n-k-1 = 92), with a significance level of 0.000, lower than the 0.05 threshold. This indicates that the distribution variable significantly affects sales volume. Distribution is a key aspect of marketing and is defined as activities aimed at facilitating and simplifying the delivery of goods and services from producers to consumers. In this study, distribution indicators include the breadth of the marketing area, product availability in small shops, and ease of product accessibility. The average distribution rating was 3.59 on a scale of 1–5, indicating a high impact of distribution on sales volume. These findings align with the study by Destia Aktarina (2019), which found that the independent variable of distribution (X3) explained 52.8% of the variance in sales volume for 2016 Trend Sariayu lipstick products at Martha Tilaar Shop Palembang Icon Mall and Martha Tilaar Shop Palembang Indah Mall.

According to("The impact of national characteristics & technology on the commodity composition of trade in manufactured goods. In The technology factor in international trade ", 1970), as cited by Susanto Budidharmo (2015), sales volume is defined as "the total sales obtained from commodities traded during a certain period."

Winardi (2016) defines sales volume as "the result of sales expressed in qualitative, fiscal, or volume terms." Meanwhile, Swastha (2015) states that "sales volume refers to the net sales from a company's profit statement. Net sales are obtained from the sales of all products (product lines) over a specific period and the sales resulting from market share, which represents potential sales and may include territorial groups and groups of shareholders within a specific timeframe."

From these definitions, it can be concluded that sales volume is the outcome of sales activities carried out by producers (in this case, companies) to deliver products to consumers in their effort to achieve objectives, namely maximizing profits for a defined period. According to Philip Kotler, as cited by Swastha and Irawan (2015), sales volume indicators include the following: (1) Achieving Sales Volume, (2) Gaining Profit, (3) Supporting Company Growth

According to the American Society in Kotler and Keller's book (2016), quality is defined as follows: "Quality is the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs." Kotler and Armstrong (2015) describe product quality as: "Product quality is the characteristics of a product or service that bear on its ability to satisfy stated or implied customer needs." Based on these definitions, product quality can be understood as a product's ability to meet consumer desires, including durability, reliability, ease of use, and other valuable attributes free from defects and damage.
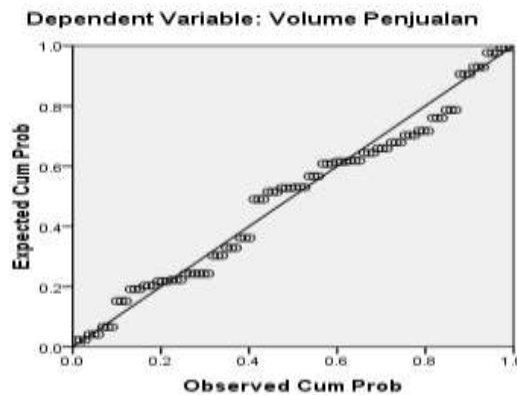
Setting prices for a company requires precise and forward-looking analysis, as pricing decisions are influenced by multiple factors. When determining a price, a company should not only consider the product's cost and profit targets but also other relevant factors. According to Kotler and Armstrong, as cited by Tjiptono (2016), two main factors should be considered in pricing: internal factors and external factors of the company. Mursid (2014) identifies the following price indicators: (a). Competitive price: prices offered are more competitive than competitors' prices. (B). Price alignment with market prices: the prices align with market prices. (C). Price alignment with product quality: prices reflect the quality of the product. (d) Installments: payments can be made in installments over a specific period.

According to Tjiptono (2016), "A distribution channel is a series of organizational participants that perform all the functions needed to deliver products/services from the seller to the final buyer." Etzel (2013) states, "Distribution channels consist of a series of institutions performing all activities used to transfer products and their ownership status from producers to consumers or business users." Similarly, (Daryanto, 2014) defines distribution as "a set of interdependent organizations that make a product available for use or consumption by consumers/users."

In conclusion, a distribution channel refers to the flow of goods from producers to consumers. Distribution channels are essential because they address gaps or mismatches between production and consumption.

The data analysis in this study utilized the SPSS process, where the r-value for each item (variable) can be observed in the correlation table. The validity test results for the variable indicators showed that both the calculated r-value and r-table were valid and reliable, with Cronbach's alpha > 60. A good regression model is characterized by a normal distribution (Ghozali, 2015). One way to check for normality is by examining a histogram comparing observational data with a normal distribution. A reliable method for graphical analysis is the normal probability plot, which compares the cumulative distribution of the actual data with the cumulative distribution of a normal distribution. Below are the results of the normality test using the normal probability plot.

Figure 1. Graph of Normal P-Plot Regression Standardized Residual
*Source: Processed Primary Data, 2020*

In addition to the normal probability plot, normality detection can also be performed using statistical tests. Residual normality testing was conducted using the non-parametric Kolmogorov-Smirnov (K-S) test with a significance level of > 0.05. The Kolmogorov-Smirnov test examines both residual normality and variable normality. The results of the Kolmogorov-Smirnov test showed an Asymp value of 0.387, which is greater than 0.05. This indicates that the residual data is normally distributed.

To detect the presence of multicollinearity in the regression model, the tolerance value and Variance Inflation Factor (VIF) were examined. If the tolerance value > 0.10 and the VIF value < 10, it can be concluded that there is no multicollinearity among the independent variables in the regression model.

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From the table above, it can be observed that each independent variable has a tolerance value ≥ 0.1 and a VIF value ≤ 10. Thus, it can be concluded that there is no multicollinearity among the independent variables in this regression model. Heteroscedasticity refers to the spread of independent variables. A random spread indicates a good regression model. In other words, heteroscedasticity is not present. To test for heteroscedasticity, a scatterplot can be examined for patterns of points scattered above and below the Y-axis.
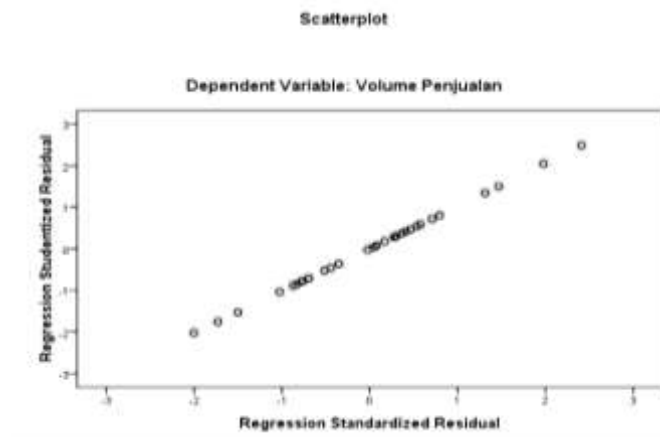
Figure 2. Heterokedastisitas Test

In the scatterplot, it can be seen that the points are randomly scattered and distributed both above and below zero on the Y-axis. This indicates that heteroscedasticity does not occur in this regression model. The purpose of multiple linear regression analysis is to examine the influence of product quality and price on sales volume. Below are the results of the multiple linear regression analysis:

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	1.206	.426		2.832	.006
Product quality	.246	.053	.278	4.668	.000
Price	.358	.064	.394	5.594	.000
Distribution	.327	.076	.339	4.328	.000

a. Dependent Variable: Sales Volume

From the analysis results using the SPSS program, the regression equation from this study can be determined. The linear regression equation formed is as follows:

$$Y = 1{,}206 + 0{,}246X_1 + 0{,}358X_2 + 0{,}327X_3$$

From the above multiple linear regression equation, the analysis can be interpreted as follows:

The constant value is 1.206, which means that the sales volume will be 1.206 if product quality, price, and distribution are all zero. The regression coefficient for product quality is 0.246. A positive coefficient indicates that for every one-unit increase in product quality, sales volume will increase by 0.246. The calculation results show that the t-value for product quality is 4.668 > t-table 1.986 (df = n-k-1 = 92). The significance level is 0.000, which is below the 0.05 threshold. This indicates that the product quality variable has a significant impact on sales volume. The findings suggest that higher product quality will lead to an increase in sales volume. Therefore, the first hypothesis of this study is accepted.

The regression coefficient for price is 0.358. A positive coefficient means that for every one-unit increase in price, sales volume will increase by 0.358. The calculation results show that the t-value for price is 5.594 > t-table 1.986 (df = n-k-1 = 92). The significance level is 0.000, which is below the 0.05 threshold. This indicates that the price variable has a

significant impact on sales volume. The findings show that higher prices will lead to an increase in sales volume. Therefore, the second hypothesis of this study is accepted.

The regression coefficient for distribution is 0.327. A positive coefficient means that for every one-unit increase in distribution, sales volume will increase by 0.327. The calculation results show that the t-value for distribution is 4.328 > t-table 1.986 (df = n-k-1 = 92). The significance level is 0.000, which is below the 0.05 threshold. This indicates that the distribution variable has a significant impact on sales volume.

The findings of this study show that the higher the distribution, the greater the increase in sales volume. Therefore, the third hypothesis of this study is accepted.

To test whether the linear model is appropriate, the probability from the F-test results is examined. If the probability value is < 0.05, the regression model is considered fit and suitable. Based on Table 4.12, the F-calculated value is 196.972, with a significance level of 0.000 < 0.05. This confirms that the model is fit and appropriate.

The coefficient of determination is used to determine the extent to which the variables of product quality, price, and distribution explain the sales volume variable, represented by the R Square value. This measures how much the sales volume of Deka Wafer products by PT Dua Kelinci can be explained by the variables of product quality, price, and distribution. From the results of the coefficient of determination test, the R Square value is 0.865. This means that product quality, price, and distribution collectively account for 86.5% of the variation in sales volume, while the remaining 13.5% (100% - 86.5%) is explained by other variables that influence sales volume.

CONCLUSION

Product quality has a significant effect on the sales volume of Deka Wafer products by PT Dua Kelinci, with a significance level of 0.000, which is below the significance threshold of 0.05. Price also significantly affects the sales volume of Deka Wafer products, with a significance level of 0.000, below the threshold of 0.05. Similarly, distribution has a significant impact on the sales volume of Deka Wafer products, with a significance level of 0.000, below the threshold of 0.05.

The sales volume of Deka Wafer products by PT Dua Kelinci is already quite good, but to continue increasing sales volume, PT Dua Kelinci must maintain product quality by ensuring consistent taste, durability, and attractive packaging. It is also recommended that PT Dua Kelinci provide prices that are affordable for consumers while matching the product's quality. For distribution, PT Dua Kelinci should maintain its existing strategies while expanding its sales regions further.

Future researchers who wish to develop this study can include other independent variables that may more accurately influence sales volume. Additionally, future research could use objects other than those studied here.

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