

# Analysis of the Effect of Price on Students Purchase Interest Using Linear Regression

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This study aims to analyze the effect of price on students' purchase intention using a simple linear regression method. This research adopts a quantitative approach with data collected through questionnaires distributed to 94 student respondents. The independent variable is price, while the dependent variable is purchase intention. The results show that price has a positive and significant effect on students' purchase intention, with a regression coefficient value of 0.58. This indicates that an increase in perceived price value will be followed by an increase in purchase intention. In addition, the coefficient of determination ( $R^2$ ) of 0.36 indicates that price explains 36% of the variation in purchase intention, while the remaining 64% is influenced by other factors outside this study. The significance test also shows that the effect of price on purchase intention is statistically significant. Therefore, it can be concluded that price is an important factor influencing students' purchase intention, although other factors also play a role in the purchasing decision process.

**Keywords:** Price, Purchase Intention, Students, Linear Regression, Consumer Behavior

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## 1. Introduction

The increasingly competitive development of the business world requires companies to be able to understand consumer behavior accurately, especially in determining pricing strategies. Price is one of the important factors that influence consumers' decisions to purchase a product or service. In the student environment, price becomes a major consideration because most students have financial limitations and tend to choose products with prices that match their economic capacity. Therefore, an analysis of the influence of price on students' purchase intentions becomes important to understand the extent to which price changes can affect students' willingness to buy a product [1].

Purchase intention is a person's tendency to take purchasing actions toward a product after developing interest and desire for that product. Purchase intention is influenced by various factors, such as product quality, promotion, brand, and price. Among these factors, price often becomes a dominant consideration because consumers tend to compare the benefits obtained with the costs that must be incurred. Students, as young consumers, have characteristics that are critical and sensitive to price changes, making research on the influence of price on students' purchase intention relevant to be studied in greater depth [2].

In marketing theory, price is defined as the amount of money that must be paid by consumers to obtain the benefits of a product or service. Setting the right price can increase consumer appeal and create satisfaction in the purchasing process. Conversely, a price that is considered too high can reduce consumer buying interest. Therefore, companies need to understand consumers' perception of price so that the marketing strategies implemented can run effectively. Research related to the relationship between price and purchase intention has been widely conducted and shows that price has a significant influence on consumer purchasing behavior [3].

The linear regression method is one of the statistical methods that is often used to analyze the relationship between independent and dependent variables. In this study, linear regression is used to determine how much the price variable influences students' purchasing interest. The use of the linear regression method is considered effective because it can provide a quantitative overview of the relationship and generate a predictive model based on research data. With linear regression analysis, researchers can determine the direction of the relationship and the degree of price influence on students' purchasing interest in a more objective and measurable way [4].

Students were chosen as the research subjects because this group includes active consumers who often make purchases both directly and through digital platforms. In addition, students are also known to have consumptive behavior towards certain products such as food, fashion, and technology needs. However, limited income makes students more selective in making purchasing decisions. This condition makes price a factor that is highly considered before making a purchase transaction for a product [5].

This research is important to conduct because it can provide benefits for business actors in determining pricing strategies that suit the characteristics of student consumers. By understanding the influence of price on purchase intention, companies can set competitive prices to increase sales and maintain consumer loyalty. In addition, the results of this study can also serve as an academic reference for future research related to consumer behavior and marketing analysis using statistical methods [6].

Based on the above description, this study aims to analyze the effect of price on students' purchase intention using the linear regression method. This research is expected to provide an overview of the relationship between the price variable and purchase intention, which can be used as a basis for decision-making in marketing as well as for the development of further research. Thus, the results of this study are expected to provide theoretical and practical contributions in understanding students' consumer behavior regarding price factors [7].

## **2. Literature Review**

Price is one of the important factors in marketing activities that influences consumer behavior in making purchase decisions [8]. Price is not only seen as a medium of exchange, but also as an indicator of the value and quality of a product [9]. Consumers tend to compare the benefits obtained with the costs that must be incurred before making a purchase [10]. In the marketing world, setting the right price can increase consumer appeal and encourage purchase interest in a product [11]. In addition, consumer behavior in making purchases is also influenced by social, cultural, personal, and psychological factors that shape perceptions of a product's price [12].

Purchase intention is the tendency of consumers to make a purchase after developing an interest in a product or service. Purchase intention can arise from consumer attention, desire, belief, and need for a

particular product. Among university students, purchase intention is often influenced by economic conditions, lifestyle, and purchasing power [13]. Students as consumers tend to be more sensitive to price changes, making price one of the main considerations before making a purchase [14]. A price perceived as appropriate relative to the product's benefits can enhance purchase intention, while a price that is too high can reduce consumers' willingness to purchase the product [15].

### 3. Method

This study employed a quantitative approach using a survey method. The quantitative approach was chosen because the study aimed to analyze the influence of price on students' purchase intention in a measurable and systematic manner.

The population in this study consisted of university students. The sampling technique used was purposive sampling, which is a technique for determining samples based on specific criteria. The criteria for respondents in this study were students who had made purchases and were willing to fill out the questionnaire. The total number of respondents in this study was 94 people.

The data collection technique was carried out using questionnaires distributed online through Google Forms. The research instrument was prepared based on the research variables, namely price as the independent variable (X) and purchase intention as the dependent variable (Y). The questionnaire was divided into two sections: the section measuring perceptions of price and the section measuring purchase intention.

Each statement in the questionnaire was measured using a five-point Likert scale, namely strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5). This scale was used to measure the respondents' level of agreement with each statement provided.

The indicators of the price variable included price affordability, price suitability with quality, and price competitiveness. Meanwhile, the indicators of purchase intention included interest, desire to purchase, and tendency to make a purchase.

Data analysis in this study used the simple linear regression method to determine the effect of price on students' purchase intention [8]. The regression equation model used was:

$$Y = a + bX$$

Description:

Y = Purchase Intention

X = Price

a = Constant

b = Coefficient

The data obtained were then analyzed to determine the relationship between the price variable and purchase intention, as well as to test whether price had a significant effect on students' purchase intention.

### 4. Results And Discussion

Before conducting the regression analysis, this study first presents a descriptive analysis to describe the tendency of respondents' answers toward the variables being studied. This analysis is important to understand the pattern of respondents' perceptions regarding price (X) and the level of purchase intention (Y) in general. The distribution of respondents' answers for each variable indicator is presented in the form of the following graphs.

### Descriptive Analysis of the Price Variable (X)

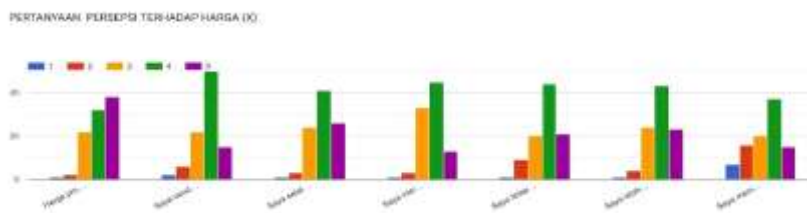


Figure 1. Questions on Price Perception (X)

Based on Figure 3.1, it can be seen that most respondents provided answers in the agree (4) and strongly agree (5) categories for all indicators of the price variable. This indicates that students have a fairly high perception of the importance of price in the purchasing decision-making process. Indicators such as the tendency to choose lower prices, compare prices before purchasing, and interest in promotions or discounts show a dominance of positive responses.

### Descriptive Analysis of Purchase Intention Variable (Y)

This condition indicates that price is a factor that is highly considered by students, mainly due to their financial limitations. In addition, price perception is not only viewed in terms of nominal value, but also in terms of the suitability between price and the benefits obtained. Thus, it can be concluded that the price variable has a strong tendency to influence respondents' purchasing behavior.

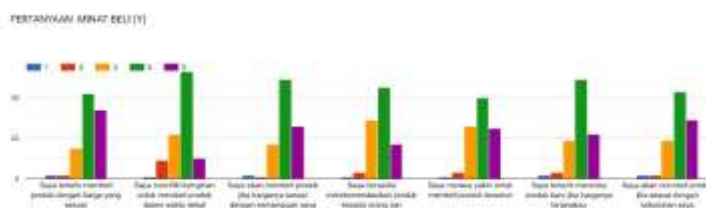


Figure 2. Purchase Intention Questions (Y)

Based on Figure 3.2, it can be seen that the majority of respondents also selected the agree (4) and strongly agree (5) categories for the purchase intention indicators. This indicates that the level of students' purchase intention toward the product is relatively high. Indicators such as interest in purchasing products at an appropriate price, intention to purchase in the near future, and willingness to recommend the product to others show positive responses.

This high level of purchase intention indicates that students not only consider price but also tend to make purchases when the price is perceived as suitable for their ability and needs. This strengthens the assumption that there is a relationship between price perception and purchase intention, which is further analyzed using linear regression methods.

### Data Processing and Measurement Scale

The data in this study were obtained through the distribution of questionnaires to student respondents using a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The use of the Likert scale aimed to transform respondents' perceptions into quantitative data so that they could be analyzed statistically.

The variables used in this study consisted of the price variable (X) as the independent variable and the purchase intention variable (Y) as the dependent variable. Each variable was measured using 7

statement items. To obtain representative values, the average score of each variable for every respondent was calculated. Mathematically, the average was calculated using the following formula:

$$X = \frac{X_1 + X_2 + X_3 + X_4 + X_5 + X_6 + X_7}{7}$$

$$Y = \frac{Y_1 + Y_2 + Y_3 + Y_4 + Y_5 + Y_6 + Y_7}{7}$$

The results of this calculation produced one X value and one Y value for each respondent, which were then used in the regression analysis. The calculation of these averages aimed to simplify the data from several indicators into a single composite value representing each variable. In this way, the analysis became more focused and was able to describe the general tendency of respondents' perceptions.

### Simple Linear Regression Analysis

Simple linear regression analysis was used to determine the relationship and the effect of the price variable on students' purchase intention. The regression model used in this study is as follows:

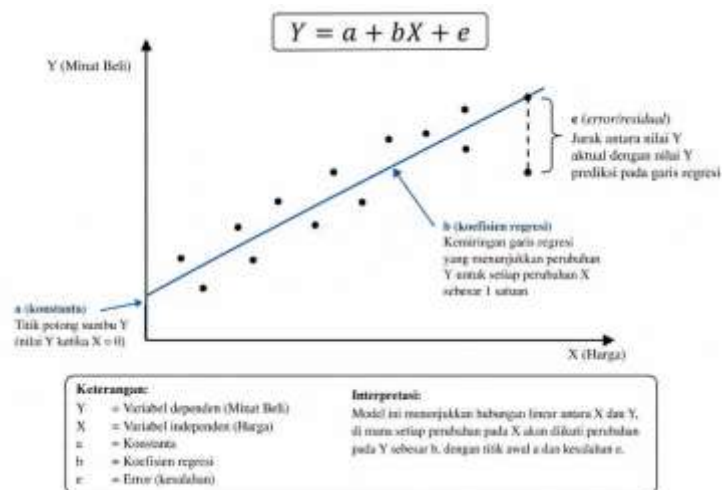


Figure 3. Linear Regression Model

In this model, the constant value (a) represents the value of purchase intention when the price variable is equal to zero, while the regression coefficient (b) represents the magnitude of changes in purchase intention caused by changes in price. Based on the data processing results, the values obtained were  $n = 94$ ,  $\sum X = 356.48$ ,  $\sum Y = 362.11$ ,  $\sum XY = 1398.72$ , and  $\sum X^2 = 1375.65$ . Furthermore, the regression coefficient was calculated using the following formula:

$$b = \frac{n \sum XY - (\sum X)(\sum Y)}{n \sum X^2 - (\sum X)^2}$$

Through the substitution process, the following result was obtained:

$$b = \frac{94(1398,72) - (356,48)(362,11)}{94(1375,65) - (356,48)^2}$$

$$b = \frac{131.479 - 129.108}{129.312 - 127.077}$$

$$b = \frac{2.371}{4.235} = 0,58$$

The regression coefficient value of 0.58 indicates that there is a positive relationship between price and purchase intention. This means that when students' perceptions of price improve, their purchase intention will also increase. This shows that price is one of the important factors influencing students' purchasing decisions. Furthermore, the constant is calculated using the following formula:

$$a = \frac{\sum Y - b \sum X}{n}$$
$$a = \frac{362,11 - (0,58 \times 356,48)}{94}$$
$$a = \frac{362,11 - 206,76}{94}$$
$$a = \frac{155,35}{94} = 1,72$$

The calculation results show that the constant value is 1.72. This value indicates that even if the price variable does not change, purchase intention still has a baseline value. This shows that there are other factors besides price that also influence students' purchase intention. Based on the constant value and the regression coefficient, the following regression equation was obtained:

$$Y = 1,72 + 0,58X$$

This equation indicates that the relationship between price and purchase intention is positive, where an increase in price perception will be followed by an increase in students' purchase intention.

#### **Koefisien Korelasi dan Determinasi**

Furthermore, the coefficient of determination was calculated to determine the extent of the influence of price on purchase intention. The calculation began by determining the correlation value using the following formula:

$$r = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{[n \sum X^2 - (\sum X)^2][n \sum Y^2 - (\sum Y)^2]}}$$

Based on the calculation, the correlation value obtained is:

$$r = \frac{2,371}{\sqrt{(2,235)(1,631)}}$$
$$r = \frac{2,371}{1,91} = 0,60$$

This value indicates that the relationship between price and purchase intention falls into the moderate to strong category. Furthermore, the coefficient of determination is calculated using the following formula:

$$R^2 = r^2$$

$$R^2 = 0,36$$

This value indicates that 36% of the variation in students' purchase intention can be explained by the price variable, while the remaining 64% is influenced by other factors outside the study. This shows that price has a fairly important influence, but it is not the dominant factor.

#### **Significance Test (t-Test)**

Furthermore, a significance test was conducted to determine whether the effect of price on purchase intention was significant. The test results showed a significance value of 0.000, which is smaller

than 0.05. This indicates that the price variable has a significant effect on students' purchase intention, therefore the research hypothesis can be accepted.

#### **Based on the Research Findings**

Based on the overall results of the analysis, it can be concluded that price has a positive and significant effect on students' purchase intention. The regression coefficient value of 0.58 indicates that an increase in price perception will increase purchase intention. Meanwhile, the coefficient of determination value of 0.36 shows that the influence of price falls into the moderate category.

The results of this study are consistent with previous studies stating that price has a significant effect on purchase intention. However, the level of influence in this study is considered moderate, indicating differences in respondent characteristics as well as other factors influencing consumer behavior. In addition, students as consumers tend to be more sensitive to price due to financial limitations and easy access to information, making them more selective in making purchasing decisions.

#### **4. Conclusion**

Based on the results of the study conducted regarding the effect of price on students' purchase intention using the simple linear regression method, it can be concluded that the price variable has a positive and significant effect on students' purchase intention. This is indicated by the regression coefficient value of 0.58, which means that every increase in price perception will be followed by an increase in students' purchase intention. In addition, the analysis results show that the coefficient of determination ( $R^2$ ) value is 0.36, meaning that the price variable is able to explain 36% of the variation in students' purchase intention, while the remaining 64% is influenced by other factors outside this study. This indicates that price is an important factor, but not the only factor affecting purchase intention. The significance test results also show that the calculated t-value is greater than the t-table value at a significance level of 0.05, so it can be concluded that the effect of price on purchase intention is significant. Therefore, the hypothesis in this study stating that price influences students' purchase intention can be accepted. Overall, this study shows that students as consumers are sensitive to price in determining purchasing decisions. However, other factors such as product quality, needs, and personal preferences also play a role in influencing purchase intention. Therefore, an appropriate pricing strategy needs to be combined with other factors in order to increase purchase intention optimally. Nevertheless, this study still has several limitations, namely that it only uses one independent variable, so it has not been able to comprehensively describe other factors influencing purchase intention. In addition, the scope of respondents limited to students also causes the results of this study to not be generalized broadly to all consumer segments. The measurement of variables based on respondents' perceptions through questionnaires also has the potential for subjectivity bias. Based on these limitations, future research is suggested to include other variables such as product quality, promotion, brand image, and lifestyle in order to provide a more comprehensive understanding of the factors influencing purchase intention. Future studies may also expand the research objects to more diverse community groups and use more complex analytical methods such as multiple linear regression or SEM (Structural Equation Modeling) so that the relationships among variables can be analyzed more deeply.

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