

Factors Affecting Orange Demand Imports at Consumer Level in Binjai City

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Abstract - The purpose of this study was to analyze the effect of imported orange fruit prices, consumer orange fruit at the consumer level in Binjai city. The research population is imported orange consumers. A sample of 120 samples of imported orange fruit consumers who are buying imported oranges in traditional markets and modern markets in Binjai city by accidental sampling method. The analysis method used in this research is multiple linear regression method. The result of the analysis shows, partially: the price of imported orange fruits negatively; consumer income positively; the price of local orange fruit has a positive; and consumer preferences have a positive effect on the demand of imported orange fruits. The price of imported orange fruits, consumer income, local orange fruit prices, and consumer preferences simultaneously have a positive.

Keywords - Imported Orange Fruit Prices; Consumer Revenue; Local Orange Fruits Prices; Consumer Preferences; Imported Orange Fruit Demands; Multiple Linear Regression (Multiple Linier Regression).

I. INTRODUCTION

Binjai City as a thriving city in North Sumatra Province also became one of the strategic areas in marketing imported oranges. Currently, Binjai and Medan are connected by the Sumatra Lintas Highway connecting between Medan and Banda Aceh. Therefore, Binjai is located in strategic area which is the gateway of Medan City and Banda Aceh City. The total population of 267,901 thousand in 2016 is a potential market in the marketing of imported oranges. The growing urban centers in Binjai City allow for a more modern urban lifestyle change, positively impacting people's awareness in consuming healthy and nutritious foods such as orange fruits.

Identification of problems

Influence of imported orange price, consumer income, local orange price and consumer preference partially and simultaneously to the demand of imported orange fruit at consumer level in Binjai City?

Research purposes

To analyze the influence of imported orange price, consumer income, local orange price and consumer preference partially and simultaneously to the demand of imported orange fruit at consumer level in Binjai City.

Demand (demand) is the amount of goods demanded by consumers in a market. While the market is the place of transactions between producers and consumers of economic goods (Daniel, 2002). Some experts say that the notion of demand is the quantity of goods that buyers can buy at a given place and at a given price at that time. On demand theory there is called the law of demand. The law of demand states that the lower the price of an item the more demand for it, the higher the price of an item, the less demand for it.

II. RESEARCH METHODS

A. Statistical Analysis of Multiple Linear Regression

The function of Multiple Linear regression model in the study "Factors Affecting Demand of Imported Orange Fruits at Consumer Level in Binjai City" is described with the equation model function as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 D + e$$

Information :

- Y = Request for imported citrus fruits (Kg / Month)
 X_1 = Imported orange price (Rp / Kg)
 X_2 = Prices of local oranges (Rp/Kg)
 X_3 = Consumer revenue (Rp / month)
D = Consumer Preferences (0 = More Consumers Like Local Orange, 1 = More Consumers Like Orange Import)
e = Error term

B. Classical Assumption Test Analysis

To obtain an unbiased and efficient approximation value from multiple linear regression equations with Ordinary Least Square (OLS) method, then in the implementation of data analysis must meet several criteria of classical assumption requirements. The requirements of classical assumptions that must be met are as follows:

a. Assumption of Normality

Normality test aims to test whether the residual value of the regression model built has a normal distribution or not. If the Kolmogorov-Smirnov value is significant ($p > 0.05$), then the data has a normal distribution (Ghozali, 2008).

b. Assumptions of Multicollinearity

One of the assumption test of the classical linear regression model is that there is no multicollinearity among the variables that describe those included in the model. The multicollinearity assumption test aims to test whether there is any correlation or relationship between independent variables in the regression model. multikolinearitas are as follows

c. Assumptions Heteroscedasticity

The heteroscedasticity test in principle wants to test whether a group has the same variance among the group members. If the variance is the same, and this is supposed to happen then it says there is homoscedasticity. Whereas if the variance is not the same is said to happen heteroskedastisitas (Situmorang, 2010).

III. RESULT AND DISCUSSION

A. Results of Multiple Linear Regression Model Analysis

Multiple linear regression equations were analyzed to explain the effect of independent or independent variables on the dependent or dependent variable generated.

Based on the results of multiple linear regression that has been done using SPSS 20 software obtained results in Table 1 as follows:

Table 1. Results of Multiple Linear Regression Analysis

No.	Variable Free	Regression Coefficient	t- hit	Sig
	Constants	38,318	8,748	0,000
1.	Imported Orange Prices	-0,002	- 9,138	0,000
2.	Consumer Revenue	2,984	2,168	0,032
3.	Local Orange Prices	1.088	0,070	0,044
4.	Consumer Preferences	0,412	0,380	0,005
	R^2			0,739
	F hit			22,529
	F Significance			0,000

Source: Research Results (Data Processed 2017)

Based on Table 1 above, we get the following regression equation:

$$Y = 38,318 - 0,002 X_1 + 2,984 X_2 + 1,088 X_3 + 0,412 D$$

B. Coefficient of Determination (R^2)

Based on Table 5.1 above note that the value of determination coefficient (R^2) of 0.739. That is, that the dependent variable (Imported Orange Demand) on the model has been able to be explained by independent variables (imported orange prices, consumer income, local orange prices and consumer preferences) 73,9% together and the balance of 26,1% explained by another variable that does not fit into the model.

C. Classic assumption test

In order to obtain an unbiased and efficient estimation value from a linear regression equation with Least Square method, the data analysis must comply with several criteria of classical assumption requirements such as normality test, multicollinearity test and heteroskedasticity test.

a. Normality test

Based on the results of data processing SPSS 20 obtained results Kolmogorov Smirnov significance Test that is, as follows: It is known that the significance value of residual normality test is 0.209. This shows that $\text{Sig } 0.209 > 0.05 \alpha$, then H_0 is accepted, H_1 is rejected which means no

data difference with normal distributed data. Or in other words, research data is normally distributed and free from the problem of normality.

b. Multicollinearity Test

Based on data processing through SPSS 20 obtained tolerance values and VIP independent variables that is, as follows: It is known that the imported orange price variables have a tolerance value of $0.958 > 0.1$ and VIP value $1.043 < 10$, then there is no multicollinearity. Variable of consumer income have tolerance value $0.965 > 0.1$ and value of VIP $1.036 < 10$, hence no multicollinearity. Local orange price variables have a tolerance value of $0.815 > 0.1$ and VIP value of $1.228 < 10$, hence there is no multicollinearity. The consumer preference variable has a tolerance value of $0.800 > 0.1$ and a VIP value of $1.250 < 10$, so there is no multicollinearity. Therefore, it can be concluded all independent variables free from multicollinearity problems.

c. Heterocedasticity Test

Based on the processing using SPSS 20. Obtained is, as follows:

That the spots spread above, below and around the zeros and did not form a pattern, so it can be said that multiple linear regression model for research of imported orange demand at consumer level in Binjai City free from the problem of heterokedastisitas.

D. Results of Hypothesis Test Analysis.

a. The Influence of Imported Orange Prices on Imported Orange Demand in Binjai City

To test the effect of imported orange price on the demand of imported oranges in Binjai City with t-test (partial). Based on t-Test results from data processing through SPSS 20 to test how big factor of imported orange price influence to demand of orange import in Binjai City obtained result significance $0.000 < 0.05 \alpha$ hence, H_0 rejected, H_1 accepted. That is, there is influence between the price of imported oranges to the demand for imported oranges in Binjai City. If there is an increase of imported orange price of Rp. 1 / Kg, it will reduce the amount of imported orange demand at consumer level in Binjai City by 0,002 Kg. Or in other words, if there is an increase in imported orange price of Rp.1.000 / Kg, it will reduce the amount of demand for imported oranges in the city of Binjai by 2 Kg.

In other words, the price of imported oranges has an effect on the demand of imported oranges in Binjai City. The value of the imported citrus price regression coefficient

is -0.002. This indicates the direction of negative influence. Where if the price of imported oranges increases, it will reduce the demand for imported oranges in Binjai City.

Results of field research obtained that imported orange prices negatively affect the number of demand for imported oranges in the city of Binjai. This is in accordance with demand theory. Where the price factor of the goods itself has a negative effect on the amount of demand for the goods. If the price of the goods increases, the demand for the goods will decrease.

The results of previous research also obtained the result that the variable price of goods itself negatively affect the number of demand for the goods themselves. Trisni Noviasari's research result of 2014 about factors influencing the demand of household consumers to red pepper in Coblong Subdistrict, Bandung resulted that the variable of red pepper price had negative effect to the number of red chilli demand in Coblong Sub-district, Bandung.

b. The Effect of Consumer Revenue on Imported Citrus Demand in Binjai City

To test the effect of consumer income on the demand of imported oranges in Binjai City with t-test (partial). Based on the t-Test results from data processing through SPSS 20 to test how much the income factor of the consumer influence on the demand of imported orange in Binjai City obtained result significance $0.032 < 0.05 \alpha$ hence, H_0 rejected, H_1 accepted. That is, there is an influence between consumer income on demand for imported oranges in Binjai City. If there is an increase in consumer income of Rp. 1, it will increase the number of imported orange demand at consumer level in Binjai City of 2,984 Kg. Or in other words, if there is an increase in consumer income of Rp. 1,000, it will increase the number of imported orange demand in Kota Binjai of 2,984 kg or 2,984 tons.

In other words, consumer income affects the demand for imported oranges in Binjai City. The value of regression coefficient of consumer income is 2,984. This shows the direction of positive influence. Where if consumer income increases, it will increase the demand for imported oranges in Binjai City.

Results of field research obtained that consumer income positively affects the total demand of imported oranges in Binjai City. This is in accordance with demand theory. Where consumer income factors have a positive influence on the amount of demand for the goods. If the consumer's income increases, then the demand for the goods will increase.

The results of previous research also obtained the result that consumer income variable has a positive effect on the number of demand of the goods itself. The result of research of Tria Rosana Dewi in 2009 about factors influencing the demand of red pepper in Surakarta City obtained the result that consumer income variable have positive effect to the number of red chilli demand in Surakarta City.

c. The Influence of Local Orange Prices on Imported Orange Demand in Binjai City

To test the effect of local orange price on the demand of imported oranges in Binjai City with t-test (partial). Based on t-Test result from data processing through SPSS 20 to test how big factor of local orange price influence to import orange demand in Binjai City obtained result significance 0,044 < 0,05 α hence, H₀ rejected, H₁ accepted. That is, there is an influence between the price of local orange on the demand for imported oranges in the city of Binjai. If there is an increase in local orange price of Rp. 1 / Kg, it will increase the number of imported orange demand at consumer level in Binjai City of 1,088 Kg. Or in other words, if there is an increase in local orange prices of Rp. 1,000 / Kg, it will increase the number of imported orange demand at consumer level in Binjai City of 1,088 Kg or 1,088 Ton.

In other words, the price of local oranges affects the demand for imported oranges in Binjai City. The local orange price regression coefficient value is 1.088. This shows the direction of positive influence. Where if local orange prices increase, it will increase the demand for imported oranges in Binjai City.

Results of field research obtained that local orange prices have a positive effect on the amount of demand for imported oranges in Binjai City. This is in accordance with demand theory. Where should the price factor of substitution goods have a positive influence on the amount of demand for the goods. If the price of substitutes increases, the demand for such goods will increase.

d. The Influence of Consumer Preference on Imported Citrus Demand in Binjai City

To test the influence of consumer preference on imported orange demand in Binjai City with t-test (partial). Based on t-Test results from data processing through SPSS 20 to test how big consumer preference factor affect on demand of orange import in Binjai City obtained result significance 0,005 < 0,05 α hence, H₀ rejected, H₁ accepted. That is, there is an influence between consumer preferences on the demand for imported oranges in Binjai City. If the

consumer preferences of Dummy 1 variable value (prefer imported oranges) the result is 0.412 to the consumption demand of imported citrus fruit (Y) then, consumers prefer imported oranges a lot. Whereas, Dummy 0 variable value (prefer local orange) result to consumption of imported citrus fruit (Y) then, consumers prefer local orange slightly.

Results of multiple linear regression analysis dummy variables, namely:

$$D = 1 = Y = 38,318 + 0,412 (1)$$

$$Y = 38,73$$

$$D = 0 = Y = 38,318 + 0,412 (0)$$

$$Y = 38,318$$

The results of the Dummy field study that is worth 1 (prefer the imported fruit) is 38.73 larger result than Dummy which is worth 0 (prefer local fruit) is 38.318. From the results of this study with the current government program is very sustainable, harmonious, and appropriate because the government again actively or more aggressively campaigning the Program of Increasing Domestic Product Usage (P3DN) to government agencies, private sector, to the public.

e. The Influence of Imported Citrus Prices, Consumer Revenues and Local Citrus Prices on Imported Orange Demand in Binjai City

The F test is used to see together the positive and significant effects of the independent variables (Imported Citrus Prices, Consumer Income, Local Orange Prices and Consumer Preferences) to the dependent variable (Orange Import Demand in Binjai City).

From the results of data processing using SPSS 20 software obtained value significance F 0,000 < 0,05 α , then, H₀ rejected, H₁ accepted. That is, there is a real effect of the price of imported oranges, consumer income, local orange prices and consumer preferences collectively to the amount of demand for imported oranges in Binjai City.

The simultaneous test results obtained that there is a real effect of imported orange prices, consumer income, local orange prices and consumer preferences collectively to the amount of demand for imported oranges in Binjai City. This is appropriate with demand theory where the price factors of the goods themselves, consumer income, the price of substitutes, the tastes and the number of dependents are the factors that influence the demand for the goods

IV. CONCLUSION AND SUGGESTIONS

A. Conclusion

Based on the results and discussion of the research that has been described, then the conclusions of this study are as follows:

1. The price of imported orange fruits negatively affects the demand of imported orange fruit in Binjai City.
2. Consumer income positively affects the demand of imported orange fruit in Binjai City
3. The price of local orange fruit does not negatively affect the demand of imported orange fruit in Binjai City.
4. Consumer Preference does not negatively affect the demand of imported orange fruit in Binjai City.
5. Prices of imported orange fruits, consumer income, local orange fruit prices and consumer preferences partially and simultaneously have a positive effect on the demand for imported orange fruits in Binjai City.

B. Suggestions

The researcher's suggestion related to this research is as follows:

1. To consumers to be more wise in choosing and buying orange fruits because of the quality, nutritional content, taste, and better color of local oranges than imported oranges caused by oranges imported distribution chain so long to Indonesia and can reduce the quality, nutritional content, taste and color of the imported orange. Not because the price of fruit just so a benchmark of a consumer to choose and buy oranges but there is another factor that is not less important than the price factor of a consumer to consider choosing and buying orange fruits.
2. To the government must have an important and active role to educate the community in the areas that are developing to make local products more preferred, loved by the community and play an active role in helping the distribution and marketing of local orange fruits. Then the government is able to revitalize and run from the old policy to the new policy which from the number of imported products into the country of Indonesia to be less and more to market local products than imported products (if Indonesia can be the largest exporter country in the world especially fruits namely fruit orange).

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