Impact of Policy of Soybean Price Stability on Imported and Local Soybean Price

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Article Info

Abstract

The research aims at analyzing the impact of PKSHK (Duty, Import Income Tax, and Subsidy) and the Imported Soybean Price on the Local Soybean Price. This research is a quantitative research, the data used in this research is time series secondary data starting from January 2005 to December 2014. The method of analysis is Multiple Linear Regression and Simple Linear Regression. The tests used are statistical t-test and F-test statistics. The results of this research show that the variables of PKSHK do not significantly have impact on the Local Soybean Price, while the variable of Soybean Import Price positively and significantly has impact on the Local Soybean Price. The conclusion of this research is that PKSHK made by the government is not effective.
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INTRODUCTION

The development of imported soybean price from 2007 until 2009 shows an increasing trend. Soybean production has become a significant force for economic development in the world (Garrett, et al, 2013). During 2007 the price of imported soybean was in the range from Rp 4,818.00 to Rp 5,458.00. In 2008 the price of soybeans increased ranging from Rp 6,962.00 to Rp 7,270.00. Furthermore, in 2009 the price of imported soybean also increased, which ranged from Rp 7,338.00 to Rp 7904.00.

The increase of imported soybean price was also followed by the increase of local soybean price. There is also a significant relation between soybean price in local with soybean imported (Avalos, 2014). Local soybean price also showed an increase from 2007 to 2009. In 2007 the local soybean price was in the range of Rp 4,884.00 to Rp 5,824.00. In 2008 the price of soybeans increased ranging from Rp 7,513.00 to Rp 8,679.00. Furthermore, in 2009 the local soybean price also increased, with prices ranging from Rp 8,688.00 to Rp 9,026.00. The development of local and imported soybean price can be seen in Figure 1.1
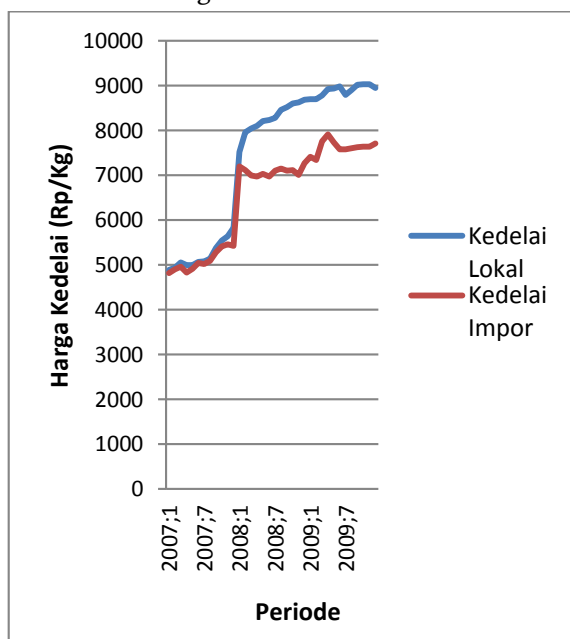
Figure 1. Development of Imported and Local Soybean Price
Source: Ministry of Trade 2015, data processed.

The development of imported soybean price from 2007 until 2009 shows an increasing

The increase of soybean price makes the Indonesian people restless because soybeans have the very high benefits. Soybeans can be processed into various types of food products and industrial raw materials. Soybean is a healthy source of vegetable protein with a relatively cheap price and affordable by most Indonesian people. Soybean is one of the main food commodities after rice and corn; it is a food ingredient that gains great attention for the Indonesian government. Soybean appears to be a particularly important variable (Choumert and Pascale, 2015). Historical and cultural development shows that most Indonesian people use soybeans in various kinds of food products.

RESEARCH METHOD

Type and Source of Data, the type of data used in this research is secondary data that is recorded systematically in the form of time series data with time period of 120 months starting from January to December 2014.

Variable of Research, this research focuses on the analysis of the impact of Imported Soybean Price and PKSHK (Import Duty, Income Tax, and Subsidies) on Local Soybean Price. The variables used are as follows:

Local Soybean Price, the price of local soybean is the price of that is applied in the international market in the form of monthly price, starting from January 2005 to December 2014 in unit Rp / Kg

Imported Soybean Price, the price of imported soybean is the price that is applicable in the international market in the form of monthly price, starting from January 2005 to December 2014 in unit of Rp / Kg

Import Duty, import Duty is imposed on imported soybeans. From January 2005 to December 2007 it amounted 5% and from January 2008 to December 2014 amounted 0%

Import Income Tax, import Income Tax is the tax levied related to the activities in imported soybeans. From January 2005 to January 2008 it

amounted 2.5% and from February 2005 to December 2014 amounted 0.5%

Subsidy, subsidy is payment granted by the government to the producers of tahu and tempe artisans from April to December 2008 and from September 2009 to February 2010 amounted Rp 1000.00 / Kg

Method of Data Analysis, the method of data analysis uses Multiple Linier Regression.

In this research, the multiple linier regression is written as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 D_1 + \beta_3 X_2 + \beta_4 D_2 + e$$

Description :

Y   : Local Soybean Price
α : Constanta
X_1 : Imported Soybean Price
D_1 : 1; period with duty
0   ; period without duty
X_2 : Import Income Tax
D_2 : 1; period with subsidy
0   ; period without subsidy
e : Error *(residual error)*

RESULTS AND DISCUSSION

Result of Model Test 1 (Impact of PKSHK on Imported Soybean Price), Coefficient of Determinant (R^2)

Table 2. Statistic Calculation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.88 9[a]	.852	.850	.01119

Predictors : (Constant), Log of imported soybean price, Subsidy, Import Income Tax, Duty

Dependent Variable : Log of local soybean price

Column R square is the square of the correlation value of 0.852 R square that is also called the coefficient of determination. It means that variables of Subsidy, Import Income Tax, and Import Duty can describe 85.2% of the Imported Soybean Price while the rest (100 - 85.2

= 14.8%) are described by other causes or variables. The smaller the R square is indicates the smaller or weaker the relationship among the variables themselves.

F-Statistic Test

Table 3. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.744	4	.436	3.773	.000[a]
	Residual	.038	115	.000		
	Total	1.782	119			

a. Predictors: (Constant), Log of imported soybean price, Subsidy, Import Income Tax, Duty

b. Dependent Variable: Log of local soybean price

The conclusion is if F count = 3.773> F table = 3.49, H0 is rejected. So simultaneously, the variables of import duty, import income tax, subsidy, and imported soybean price have significance value and influence the variable of local soybean price.

Dependent Variable : Log of local soybean price

From the coefficient values of Imported Soybean Price variable = 0.577 Import Duty variable = -0.62 Import Income Tax variable = -2.107 Subsidy variable = -0,009, a regression equation can be formulated as follows:

Y = 1.703 + 0.577X1 − 0.62D1 − 2.107X2 − 0.009D2

X1 = Imported Soybean Price
D1 = Import Duty
X2 = Import Income Tax
D2 = Subsidy
Y = Local Soybean Price

The t column is used to know whether each free variable individually has impact on the formulated regression equation. The process of testing from the t analysis is as follows:

H0 : βi = 0
H1 : βi ≠ 0

If the trust level (real level = 5%) with the degree of freedom (N-2) = 120 – 2 = 118 then the t table = 1.657.

t-Statistic Test

Table 4. Calculation of Regression

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity of Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.703	.137		12.410	.000		
Log of imported soybean price	.577	.034	.617	16.728	.000	.136	7.335
1 Duty	-.062	.019	-.233	-3.178	.022	.135	8.864
Import Income Tax	-2.107	.932	-.160	-2.261	.026	.137	6.843
Subsidy	.009	.005	.027	1.647	.102	.679	1.473

Conclusion :

X1 = 16.728 > t table = 1.657, H0 is rejected, so the Imported Soybean Price has impact on the Local Soybean Price.

D1 = -3.178 < t table = 1.657, H0 is accepted, so the Import Duty policy has no impact on the Local Soybean Price.

X2 = -2.261 < t table = 1.657, H0 is accepted, so the Import Income Tax policy has no impact on the Local Soybean Price.

D2 = 1.647 < t table = 1.657, H0 is accepted, so the Subsidy policy has no impact on the Local Soybean Price.

Using the probability test is as follows:

If probability > 0.05, H0 is accepted

If probability < 0.05, H0 is rejected

X1 = 0.000 < 0.05, H0 is rejected, so X1 variable (Imported Soybean Price) significantly has impact on Y variable (Local Soybean Price)

D1 = 0.022 > 0.05, H0 is accepted, so D1 variable (Import Duty) has no significant impact on Y variable (Local Soybean Price)

X2 = 0.026 > 0.05, H0 is accepted, so X2 variable (Import Income Tax) has no significant impact on Y variable (Local Soybean Price).

D2 = 0.102 > 0.05, H0 is accepted, so D2 variable (Subsidy) has no significant impact on Y variable (Local Soybean Price).

The Impact of PKSHK (Duty, Import Income Tax, and Subsidy) and Imported Soybean Price on Local Soybean Price, a discussion with a model of Policy Package of Soybean Prices and Imported Soybean Price Stability on the local soybean prices will be divided into four parts according to these variables, as follows:

Impact of Imported Soybean Prices on Local Soybean Price, from the regression result of the imported soybean price variable on the local soybean price, it can be seen that the imported soybean price has an impact on the local soybean price and the imported soybean price can be used to predict the local soybean price, which is in accordance with the result of statistical test on the imported soybean price variable. It is known that the imported soybean price has a positive impact with negative coefficient of 0.577 on the local soybean price. This shows that if the imported soybean price increased by 1%, it will raise the local soybean price by 0.577%. This result is in accordance with the hypothesis that there is an impact of the imported soybean price on the local soybean price.

Impact of Import Duty on Local Soybean Price, referring to the regression result it can be seen that the import duty has no impact on the local soybean price and the import duty cannot

be used to predict the local soybean price. It is in accordance with the result of the statistical test of the import duty variable on the local soybean, which has the value -3.178 <t table = 1.657. Based on the result between the import duty variable and the imported soybean price variable, it can be said that the Policy Package of Soybean Price Stability in the form of abolishing the import duty from 5% to 0% is not effective in reducing the local soybean price. It is in accordance with the hypothesis that there is no impact of the import duty price variable on the local soybean price variable.

Impact of Import Income Tax on Local Soybean Prices, in accordance with the regression results, the Import Tax has no impact on the imported soybean price and the import income tax cannot be used to predict the imported soybean price, which is in accordance with the statistical test result between the import income tax variable and the local soybean variable that producing value -2.261 <t table = 1.657. Based on the impact of the import income tax variable on the local soybean price variable, it can be concluded that the Policy Package of Soybean Price Stability in the form of decreasing the import income tax from 2.5% to 0.5% is not effective in reducing the local soybean price.

Impact of Subsidy on Local Soybean Price, from the regression results, subsidy has no impact on the local soybean prices and subsidy can be used to predict the local soybean prices. It is in accordance with the statistical test results between the subsidy variable with the local soybean variable that produce value 1.647 <t table = 1.657. Based on the impact of subsidy variable on the local soybean price variable, it can be concluded that the Policy Package of Soybean Price Stability in the form of subsidy of Rp 1000,00 / kg to the producers of tahu and tempe is not effective in reducing the local soybean price.

CONCLUSION

Based on the results of research and discussion, the following conclusions can be drawn: There is a positive and significant impact of the Soybean Imports Price variable on the Local Soybean Price, there is no significant impact of the Import Duty variable on the Imported Soybean Price, there is no significant impact of the Imported Income Tax variable on the Imported Soybean Price, there is no significant impact of the Subsidy variable on the Imported Soybean Price, the government-issued PKSHK is a reactive policy. The government then issued PKSHK after an increase in soybean prices.

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