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THE INFLUENCE OF INFLATION RATE ON IMPORT VOLUME OF FABRIC WITH RUPIAH EXCHANGE RATE AS MODERATING VARIABLE
(A Case Study at PT. Apparel One Indonesia 1)

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ABSTRACT
The research aims to analyze the influence of Inflation Rate on Import Volume of Fabric, the influence of Exchange Rate on Import Volume of Fabric, the influence of Exchange Rate on relationship between Inflation Rate and Import Volume of Fabric. This research was an explanatory research with quantitative approach. Multiple Linear Regression Analysis and Moderated Regression Analysis. Data used in this study were secondary data which were obtained by doing a literature study and observation, and collected from Bank of Indonesia and PT. Apparel One Indonesia 1 from January 2015-December 2018. The output from this research showed that the inflation rate significantly influenced the import volume of fabric. While exchange rate had no significant influence on the import volume of fabric. The other output explained that exchange rate can't moderate the relationship between inflation rate and import volume of fabric in PT Apparel One Indonesia 1. However, simultaneously, the inflation rate and exchange rate significantly influenced the import volume of fabric in PT Apparel One Indonesia 1.

Keywords: Inflation Rate, Exchange Rate, Import Volume

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ABSTRAK

Studi ini dilaksanakan untuk mengetahui pengaruh tingkat inflasi terhadap volume impor kain, pengaruh nilai tukar terhadap volume impor kain, dan pengaruh nilai tukar terhadap hubungan antara tingkat inflasi dan volume impor kain. Studi ini menggunakan jenis studi penjelasan dengan pendekatan kuantitatif. Studi ini dianalisis dengan menggunakan Regresi Linear Berganda dan Analisis Regresi Moderasi. Data yang digunakan merupakan data sekunder dari bulan Januari 2015 sampai dengan Desember 2018. Hasil analisis pada studi ini menunjukkan bahwa tingkat inflasi secara signifikan mempengaruhi volume impor kain. Sedangkan nilai tukar tidak berpengaruh signifikan terhadap volume impor kain. Hasil lainnya menunjukkan bahwa nilai tukar tidak dapat memoderasi hubungan antara tingkat inflasi dengan volume impor kain pada PT Apparel One Indonesia 1. Akan tetapi, tingkat inflasi dan nilai tukar secara bersama-sama berpengaruh signifikan terhadap volume impor kain pada PT Apparel One Indonesia

Kata kunci: Tingkat Inflasi, Nilai Tukar, Volume Impor

INTRODUCTION

No country in the world can live without connecting with other countries. These countries relate to other countries in various forms, not limited to relationships that are only carried out by the government, but also companies and individuals. Relations between companies are especially in the form of trade. Trading that involves more than one country is called international trade or international business.

Based on the Indonesia Ministry of Industry, the garment industry sector ranks fourth in the largest export value in Indonesia. Therefore, a large number of garment exports will require a lot of raw materials for production. One of the ways to fulfill a large number of raw materials is imports. Imports are carried out because domestic production cannot meet the country's needs.

One of the companies that focuses on the garment industry is PT Apparel One Indonesia. Established in 2011, PT Apparel One Indonesia 1 has the largest customer, Adidas International Trading. Export and import are vital activities in PT Apparel One Indonesia 1, import activities include purchasing raw materials, one of them is fabric. Fabric is the basic ingredient used in making garments. It must be good quality and not in small quantities.

The number of import volume of fabric in PT Apparel One Indonesia 1 in 2015 was 9.234.872 yard, in 2016 was 5.385.629 yard, in 2017 was 3.1076.01 yard, and in 2018 was 3.205.207 yard. It can be concluded that the import volume of fabric always fluctuated from 2015 until 2018. PT Apparel One Indonesia 1 reached the highest volume of import at 1.738.401 yard in April 2015 and the lowest volume of import at 131.133 yard in January 2017.

This fluctuation of import volume of fabric can be caused by several factors. According to Saputra (2015) in *Analisis Impor Indonesia dari Cina*, the factors that influence import volume from China are economic growth, foreign exchange reserves, inflation, and exchange rate.

The inflation rate has a close relationship with the demand for imported goods. This causes the inflation rate to be one of the macroeconomic indicators in Indonesia (Ramdan et al., 2014). If a country's inflation increases compared to its trading partner countries, then the country's current account will decrease if other factors do not change. Consumers and companies in these countries may buy a lot of goods abroad because of high local inflation, while the country's exports will decrease (Madura, 2011: 52).

According to Abdurehman (2016), "Inflation may be one of the factors affecting the exchange rate while it may also be the factor affected by the exchange rate". Inflation will cause the price of domestic goods to be more expensive than abroad so that inflation will increase imports and demand for the foreign exchange rate (Sukirno, 2015: 339). Foreign exchange demand and supply play a central role in international trade because the rupiah exchange rate against USD makes it possible to compare all goods and services produced.

Appreciation and depreciation of the value of the rupiah against the USD will have an impact on the increase or decrease in the volume of imports. This is because the cash out of the company needed to make payments changes. The amount of currency spent to buy a product is different even though the seller does not change the price of the product so the law of demand applies which states that if the price rises then the demand will decrease (Madura 2011: 22).

In the previous studies, the exchange rate has a positive and not significant effect on the consumption of imported goods (Imam, 2013). While Ramdan et al. (2014) in study entitled "*Pengaruh Tingkat Inflasi terhadap Volume Impor Mobil CBU* (Completely Built Up) *dengan Nilai Tukar Rupiah sebagai Variabel Moderasi"* stated that the variable Inflation Level has a significant effect on CBU Car Import Volume

directly, while the variable Exchange shows not a significant effect on the volume of imports of CBU cars directly, and the variable Exchange Rate as a moderating variable weakens the influence of the variable inflation rate on the volume of imports of CBU cars. In the research conducted by Saputra (2015), the variables that partially have a significant effect on imports from China are foreign exchange reserves and exchange rates.

Therefore, this study was aimed to determine the influence of inflation rate on import volume of fabric, the influence of exchange rate on import volume of fabric, and the influence of exchange rate on relationship between inflation rate and import volume of fabric at PT Apparel One Indonesia 1.

METHOD

The data used in this study were quantitative data which can be calculated in numbers. The quantitative data used in this study were inflation rate, exchange rate, and import volume of fabric.

In this study, the data that were analyzed were secondary data which means that the data that had been already collected and readily available from other sources. The secondary data used in this study were obtained from PT. Apparel One Indonesia 1 that contained the import volume of fabric. Moreover, inflation and exchange rate data were obtained from Bank Indonesia through the website www.bi.go.id. The data used in this study were time series data which means the data were arranged chronologically. The data were in the form of monthly starting from January 2015 to December 2018.

There were three variables in this study. The independent variable in this study was inflation rate and the dependent variable was import volume of fabric at PT Apparel One Indonesia 1. While exchange rate as moderating variable in this study.

The data were analyzed using program IBM SPSS 25. The first analysis in this study was descriptive statistics. Descriptive analysis is a way of analyzing data by describing data that has been collected as it is without intending to make conclusions (Sugiyono, 2016: 147). The data were classified into number of data, minimum values, maximum values, mean, and standard deviation.

The classic assumption test must be done in this study to test the regression model. There were 5 test which were multicollinearity test, autocorrelation test, heteroscedasticity test, normality test, and linearity test. According to Ghozali (2016:103), multicollinearity test aims to verify whether the regression model found a correlation between independent variables. While autocorrelation test aims to test whether there is a correlation between confounding errors in period t with the previous period (t-1). Heteroscedasticity test aims to test whether in the regression model founded inequality of residual variance from one observation to another observation. The purpose of the normality test is to find out whether both independent and dependent variable normally distributed or not. Then Linearity test aims to determine whether the model specification used is correct or not.

According to Gujarati (cited in Ghozali, 2016), multiple linear regression is a study of dependency between dependent variable and independent variable. This analysis aims to predict the average of dependent variable value based on the value of independent variable. While coefficient of determination test aims to measure how far the model could explain the variation of the independent variable. The T-test or partial test aims to test how the influence of each independent variable individually on the dependent variable and the F test is a test to see how the effect of all the independent variables on the dependent variable simultaneously. In addition, Moderated Regression Analysis aims to determine whether the moderating variable will strengthen or weaken the interaction between independent variable and dependent variable.

RESULTS AND DISCUSSION

Descriptive Statistics

Inflation rate had the highest value at 0,0726, lowest value at 0,0279, with average at 0,042300 and standard deviation of 0,0142887. Meanwhile, the exchange rate had minimum value at 12.579 rupiahs and maximum value at 15.179 rupiahs. Moreover, the average is 13.578,42 rupiahs and the standard deviation is 547,953. Thereafter, the import volume reached the lowest value at 131.133 yard and highest value at 1.738.401 yard. The average of import volume from 48 data was 436.110,54 yard with standard deviation of 324.488,136.

Classic Assumption Test

Multicollinearity test aims to verify whether the regression model found a correlation between independent variables. A regression model should have no correlation between independent variables.

Table 1. Multicollinearity Test

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Inflation Rate	.895	1.118
	Exchange Rate	.895	1.118

Source: Secondary Data (Processed), 2019

Table 1 showed that the tolerance value of the two independent variables was 0,895 (more than 0,10) and the value of VIF in the two variables was 1,118 which was lower than 10. So, it can be concluded that there was no multicollinearity between the independent variables in the regression model.

Autocorrelation test aims to test whether there is a correlation between confounding errors in period t with the previous period (t-1). A good regression model is a regression that frees from autocorrelation.

Table 2. Autocorrelation Test

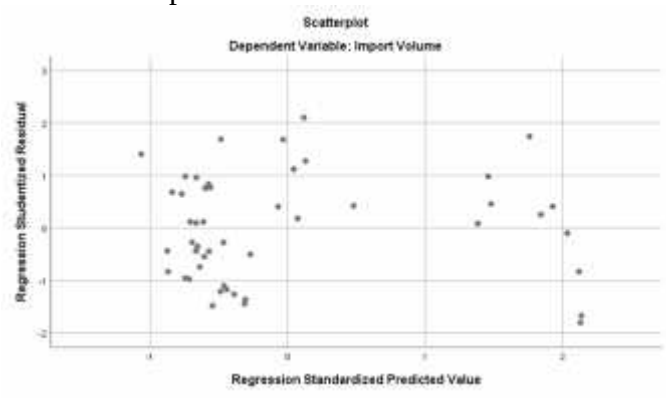
Model Summary[c,d]	
Model	Durbin-Watson
1	2.004

Source: Secondary Data (Processed), 2019

The value of d was 2,004, the value of dU was 1,6231, and the value of 4 – dU was 2,3769. Thus, there was no autocorrelation in this model because dU < d < 4 – dU.

Heteroscedasticity test aims to test whether in the regression model founded inequality of residual variance from one observation to another observation. If the residual variance from one observation to another observation is fixed, it's called homoscedasticity and if it is different it is called heteroscedasticity. A good regression model contains homoscedasticity or heteroscedasticity does not occur.

Figure 1. Scatterplot



Source: Secondary Data (Processed), 2019

From figure 1, it can be learned that there was no clear pattern and the dots spread above and below the number 0 on Y-axis. Thus, there was no heteroscedasticity in this analysis.

The purpose of the normality test is to find out whether both independent and dependent variable normally distributed or not. This test using Kolmogorov-Smirnov statistical test. The table 3 of Kolmogorov-Smirnov in this research.

Table 3. Normality Test

One-Sample Kolmogorov-Smirnov Test	
Asymp. Sig. (2-tailed)	.200[c,d]

Source: Secondary Data (Processed), 2019

From the table 3, it can be seen that the data had a normal distribution because the Sig. value was 0,200 > 0,05.

The last one was linearity test. Linearity test aims to determine whether the model specification used is correct or not.

Table 4. Linearity Test

Model Summary[b]	
Model	R Square
1	.436

Source: Secondary Data (Processed), 2019

The table 4 showed that the R^2 value is 0,436 with n=48, then the C^2 value = 0,436 x 48 = 20,928. After that, the C^2 value compared to C^2 table with df = 48 – 1 = 47 and significance level of 0,05. From the C^2 table, it can be obtained that the value is 64,00111. It concluded that this model is linear because C^2 value was lower than C^2 table (20,928 < 64,00111).

Multiple Linear Regression

The coefficient of determination test aims to measure how far the model could explain the variation of the independent variable. The value of R^2 is between zero and one. If the value of R^2 is closer to zero then the ability of an independent variable to explain the dependent variable is very limited.

Table 5. Coefficient of Determination Test

Model Summary[b]

Model	Adjusted R Square
1	.411

Source: Secondary Data (Processed), 2019

Based on table 5, the value of adjusted R^2 is 0,411 that means that the variability of the dependent variable (import volume) can be explained by the variability of the independent variable (inflation rate and exchange rate) of 41,1%. While the remaining 58,9% was explained by other variables not included in the regression model.

The T-test or partial test aims to test how the influence of each independent variable individually on the dependent variable.

Table 6. T-Test

Coefficients[a]

Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	2.591	8.190	.316	.753
	Inflation Rate	13.454	2.376	5.662	.000
	Exchange Rate	.576	1.974	.292	.772

Source: Secondary Data (Processed), 2019

The result of t-test (table 6) showed Sig. value of inflation rate was 0,000 (less than 0,05). Thus, $H0_1$ was rejected and Ha_1 was accepted. It means partially, there was a significant influence between Inflation Rate on Import Volume.

The result of t-test indicated the Sig. value of exchange rate was 0,772 (more than 0,05). It means that $H0_2$ was accepted and Ha_2 was rejected. Therefore, there was no significant influence between Exchange Rate on Import Volume.

According to Ghozali (2016: 96), the F test is a test to see how the effect of all the independent variables on the dependent variable simultaneously.

Table 7. F-Test

ANOVA[a]

Model		F	Sig.
1	Regression	17.367	.000[b]
	Residual		
	Total		

Source: Secondary Data (Processed), 2019

It can be seen that the Sig. value was 0,000 or less than 0,05 which means Inflation Rate and Exchange Rate were simultaneously give significant influence on Import Volume. The regression model of this study was:

Y = 2,591 + 13,454 X + 0,576 Z

The constant value in this regression model was 2,591 which indicates that if the value of inflation rate and exchange rate didn't change, then the import volume will be

increased by 2,591%. Hereafter, the coefficient of inflation rate was 13,454 which means every increase of inflation rate of 1%, it will increase the import volume by 13,454% assuming other variable remains. Furthermore, the coefficient of exchange rate was 0,576 which means if the exchange rate rises by 1%, it will increase the import volume assuming other variable remains.

Moderated Regression Analysis

According to Ghozali (2016), Moderated Regression Analysis aims to determine whether the moderating variable will strengthen or weaken the interaction between independent variable and dependent variable.

Table 8. Moderated Regression Test

Coefficients[a]

Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	5.355	8.391	.638	.527
	Inflation Rate	-15.493	22.117	-.700	.487
	Exchange Rate	-1.950	2.742	-.711	.481
	Inflation*Exchange Rate	3.250	2.469	1.316	.195

Source: Secondary Data (Processed), 2019

The result of moderated regression (table 8) showed the value of significance variable Inflation*Exchange Rate (multiplication between inflation rate and exchange rate) was 0,195 (not significant). It can be concluded $H0_3$ was accepted that variable Exchange Rate can't moderate the relationship between Inflation Rate and Import Volume.

According to the result of table 8, the variable exchange rate can't moderate the relationship between inflation rate and import volume, then variable exchange rate could be categorized to independent variable in this research. It is proved by the result of F-Test (table 7) which the inflation rate and exchange rate were simultaneously give significant influence on import volume.

DISCUSSION

Based on the multiple regression analysis, it can be seen that the value of coefficients of determination was 0,411. It can be interpreted that the variable import volume can be explained by the independent variables (inflation rate and exchange rate) of 41,1%. While the remaining 58,9% was explained by other variables not included in the regression model.

From those two independents variable in this regression model, it was found that partially not all of the independent variables had significant influence on the dependent variable. It can be seen on the T-test result, the significance value of inflation rate was 0,000 which was lower than 0,05, thus the inflation rate had significant influence on import volume of fabric. While the significance value of exchange rate was 0,772 which was higher than 0,05, so it can be concluded that the exchange rate didn't significantly influence the import volume of fabric.

The Moderated Regression Analysis in this research showed that the value of significance variable Inflation*Exchange Rate (multiplication between inflation rate and exchange rate) was 0,195 (not significant). It can be concluded that exchange rate can't moderate the relationship between inflation rate and import volume. However, the exchange rate variable could be categorized to independent variable, because the result of F-Test which the inflation rate and exchange

rate were simultaneously gave significant influence on import volume.

CONCLUSIONS & SUGGESTIONS

Based on the study entitled The Influence of Inflation Rate on Import Volume of Fabric with Rupiah Exchange Rate as Moderating Variable, it can be obtained that this analysis accepted the first hypothesis that Inflation Rate (X) significantly influence the Import Volume (Y). It is proven by the significance value of inflation rate was 0,000 (less than 0,05).

The significance value of exchange rate was 0,213 (more than 0,05) which proved that there was no significant influence between Exchange Rate (Z) on Import Volume (Y). Besides, the moderated regression analysis proved that Exchange Rate (Z) can't moderate the relationship between Inflation Rate (X) and Import Volume (Y) because the significance value of moderating variable was 0,195 which more than 0,05.

Based on the analysis result of this study, several recommendations were obtained in the form of suggestions about import volume of fabric in PT Apparel One Indonesia 1. The company must pay attention to the Indonesia's inflation rate, so that the company can estimate the raw material price to be purchased later. The company can calculate which is more profitable in buying raw materials from domestics or abroad.

This research is still limited to a small part of macroeconomic variables that have an impact on international trade activities, especially the import volume of raw materials (fabric). There are still other macroeconomic variables that can affect the volume of imports such as economic growth, gross domestic product or interest rates that can be further investigated. Future studies are expected to use other macroeconomic variables.

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