

Challenges of Exchange Rate Fluctuation and Cpo Prices in Indonesia Palm Oil Industry

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ABSTRACT

Purpose: This study points to analyze the challenges of Rupiah Exchange Rates and International CPO Prices to Indonesia's CPO Export Volume.

Design/methodology/approach : this research exercises explanatory type under a quantitative approach. Data collection techniques in this study were done by time series techniques. The data analysis technique used is Structural Equation Model (SEM) with the Smart Partial Least Square (PLS) tool.

Findings: The study results indicate that: (1) Rupiah Exchange Rates do not have a significant effect on Indonesia's CPO Export Volume; (2) International CPO prices have a significant effect on Indonesia's CPO Export Volume.

Practical implications : intensify business in economy sector in order to reach the lower class people.

Originality/value: This paper is original.

Paper type : Research paper

Keywords: Export Volume, International CPO Prices, Rupiah Exchange Rates

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I. INTRODUCTION

Indonesia is an agricultural and tropical country whose development is sustained by the agriculture sub-sector. One of the agricultural sub-sectors is plantation. Plantation is a sub sector that has a central role in development. For the Indonesia development, export-import transactions are very vital economic activities. Plantation products are exported and become the leading commodity, namely palm oil. Palm oil has good prospects as a source of foreign exchange income and is able to create employment opportunities while increasing the people welfare in the production processing.

Palm oil is one of Indonesia's main export commodities in international trade. Palm fruit is an important part of palm oil plants which will be processed into semi-finished oil, namely Crude Palm Oil (CPO) and finished oil (Palm Oil). Based on BPS 2009 data, almost all Indonesia regions can be used as oil palm plantations that produce CPO (Maygirtasari, Yulianto, & Mawardi, 2015).

The Ministry of Agriculture (2012) explains that in 2011, total world palm oil production was 50,894 thousand tons, Indonesia produced 40.27% or 23,900 thousand tons of total world palm oil production, while Malaysia was 40.26%, Thailand 2.78% , Nigeria 2.03%, and Colombia 1.80%.

According to the Coordinating Minister for the Economy Darmin Nasution explained the palm oil industry is currently facing a number of challenges. One of them is related to the CPO prices decline. So far this

year, CPO prices have fallen 23.7 percent from US \$ 636 per ton in early 2018 to US \$ 485 per ton (CNN Indonesia, 2018). According to East Kalimantan Indonesian Palm Oil Entrepreneurs Association (GAPKI) Muhammad Sjah Djafar said that the growth in the value of CPO exports slowed from 158.85 percent (yoy) in early 2019 to 53.77 percent (Jpnn.com, 2019).

II. LITERATURE REVIEW

A. International Trade Theory

According to Christianto (2013) A simple definition of international trade according to the economic dictionary is trade that occurs between two or more countries. Foreign trade is an important aspect for a country's economy. International trade is becoming increasingly important not only in developing an outward-oriented country but also in finding markets in other countries for the production of products in the country and the procurement of capital goods to support the development of industries in the country.

International trade begins with an exchange or trade in labor for other goods and services. The basis in international trade is the existence of trade in goods and services between two or more countries which aim to gain profit. This trade occurs when there is demand and supply in the international market.

Theories and policies of international trade are microeconomic aspects of international economics because they relate to each country as individuals who are treated as a single unit, as well as related to the relative prices of one commodity. On the other hand, because the balance of payments is related to total revenue and payments while the adjustment policy affects the national income level and the general price index, both of these illustrate the macroeconomic aspects of international economics (Salvatore, 2011).

B. Exchange rate

Currency exchange rates are the prices of currencies relative to other countries' currencies, and because this exchange rate includes two currencies, the balance point is determined by the supply and demand of the two currencies (Abimanyu, 2004). Mankiw (2013) distinguishes between two exchange rates, namely the nominal exchange rate and the real exchange rate. Nominal exchange rate is the relative price of the currencies of two countries. While the real exchange rate is the relative price of the goods of the two countries. The exchange rate of a currency is a comparison of the value of one country's currency to another foreign country's currency (Thobarry, 2009).

Nopirin (2009) elucidates that the exchange rate is an exchange between two different currencies, so the ratio / value between the two currencies will be obtained. Changes in exchange rates can be divided into two, namely depreciation and appreciation. Depreciation is a decrease in the price of the domestic currency against foreign currencies, while appreciation is an increase in the price of the domestic currency to foreign currencies (Krugman, Obstfeld, & Melitz, 2012).

Rupiah exchange rate is a comparison between the value of a country's currency with another country. The exchange rate reflects the balance of demand and supply of domestic and foreign currencies of US \$. The declining rupiah exchange rate reflects the decline in public demand for the rupiah due to the declining role of the national economy or because of the increasing demand for US \$ foreign currencies as an international payment instrument. Strengthening of rupiah exchange rate to a certain extent means that it reflects an improvement in the performance of the money market. As a result of the rising inflation rate, the domestic exchange rate has weakened even more against foreign currencies. This resulted in a decline in the performance of a company and investment in the capital market to be reduced (Nasution, 1998).

C. Price

Price can be interpreted as the amount of money (monetary unit) and or other aspects (non-monetary) that contain certain uses needed to obtain a product (Tjiptono, 2014). Price is one element of the marketing mix that generates opinion. Price is the youngest element in a marketing program to adjust product features, channels and also communication requires more time. The price also communicates the intended value positioning of the product or company brand to the market. Well-designed and marketed products can be sold at high prices and generate large profits (Kotler & Keller, 2012) Prices are measured in money. The value of an item is the basis for determining the price of the item. The price has a set price for the goods to be exported.

D. Export Volume

Mankiw (2013) explains that exports are various kinds of goods and services that are produced domestically and then sold abroad. According to Curry (2001) exports are goods and services sold to foreign countries to be exchanged for other goods (products, money). The export process in general is an act of

removing goods or commodities from within the country to import them into other countries. Large goods exports generally require the intervention of customs in sending and receiving countries.

Export activity is a trading system by removing goods from domestic and abroad by fulfilling applicable regulations. Exports are total goods and services sold by one country to another, including among goods, insurance, and services in a given year (Triyoso, 2004). Furthermore Simamora (2006) described that exports are activities of removing goods from customs areas, while exporters are companies or individuals that carry out export activities. Sukirno (2010) expounds that export activities have several benefits, including:

Expanding the Market for Indonesian Products

Export activities are one way to market Indonesian products abroad. For example, batik clothing is one of Indonesia's products that is becoming known by the world community. If the demand for batik clothes made in Indonesia increases, the income of batik producers is greater. Thus, batik production activities in Indonesia will further develop.

Adding Foreign Exchange

Trade between countries allows Indonesian exporters to sell goods to people abroad. This transaction can increase foreign exchange earnings. Thus, the country's wealth increases because foreign exchange is one source of state revenue.

Expanding Employment

Export activities will open up employment opportunities for the people. With the expanding market for Indonesian products, domestic production activities will increase. More and more workers are needed so that more extensive employment.

Companies that have competence in the fields of marketing, manufacturing and innovation can make its as a source to achieve competitive advantage (Daengs, Istanti, Negro, & Sanusi, 2020:1419).

III. METHODOLOGY

1. Conceptual Framework

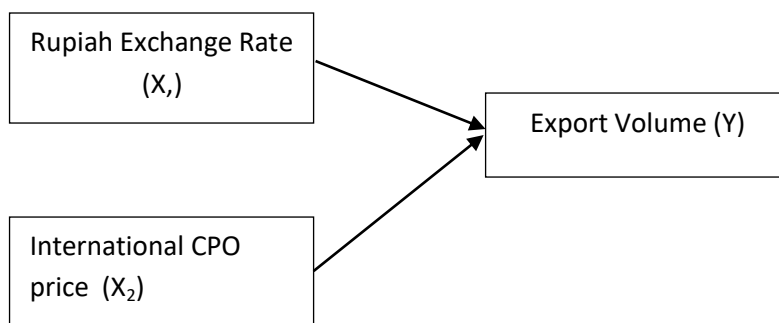


Figure 1. Conceptual Framework

A. Hypothesis

H₁ The Rupiah Exchange Rate has a significant effect on Indonesia's CPO Export Volume.

H₂ International CPO prices have a significant effect on Indonesia's CPO Export Volume.

IV RESEARCH METHODS

1. Types of Research

Type of research is explanatory research. Explanatory research is used with the point to analyzing association between variables through hypothesis testing (Silalahi, 2009). The approach used is a quantitative method. As stated by Sugiyono (2016) quantitative methods are data in the form of numbers or qualitative data that is framed/scoring. Quantitative methods can be interpreted as research methods based on philosophy of positivism, used to examine populations or specific samples, data collection using research instruments,

quantitative / statistical data analysis, with the purpose to test the hypotheses that have been set (Sugiyono, 2016).

2. Definition of Variable Operations

An operational definition is a definition given to a variable or construct by means of giving meaning or specifying an activity, or providing an operation needed to assess the construct or variable (Nazir, 2014). The following will describe the operational definition of each research variable as follows:

1. Rupiah Exchange Rate (X_1)

Rupiah exchange rate is a comparison between the value of a country's currency with another country.

International CPO Price (X_2)

Price is the youngest element in a marketing program to adjust product features, channels and also communication requires more time.

Indonesian CPO Export Volume (Y)

Exports are various kinds of goods and services that are produced domestically and then sold abroad.

3. Data collection technique

This research was conducted under condition of the Indonesian economy in 2007-2017 to examine the rupiah exchange rate and international CPO prices that affect the volume of Indonesian CPO exports that occurred in that year.

4. Data analysis technique

The analysis technique chosen to analyze data and test the hypotheses in this study is The Structural Equation Model (SEM). To answer the hypothesis used Partial Least Square (PLS). As said by Ghozali (2012) calculations are done using the Smart Partial Least Square (PLS) tool, because it is multi-path shaped and the model used is Reflective. Calculation model is performed using Smart PLS aids because in this study it has multi-path association and is formative and reflective.

V. RESULTS AND DISCUSSION

1. Inner Model Evaluation

The inner model which is sometimes also called (inner relation, structural model and substantive theory) specifies the effect between the research variables (structural model).

2. Inner Model Test or Structural Model Test

The analysis results of the suitability of structural model constructed show conclusion that the overall model has been "Relevant" to explain the variables studied and their effects on each variable. For endogenous latent variables in the structural model which has an R^2 of 0.67 indicating that the model is "good", R^2 of 0.33 indicates that the model is "moderate", R^2 of 0.19 indicates that the model is "weak" (Ghozali, 2012) . The PLS output as described below:

Table 1. R-Square value

	R-Square
Rupiah exchange rate (X_1)	
International CPO price (X_2)	
Indonesia's CPO export volume (Y)	0.774

The results in the table above show that the variable Rupiah Exchange Rates and International CPO Prices that affect Indonesia's CPO Export Volume in the structural model have an R^2 of 0.774 which indicates that the model is "Moderate".

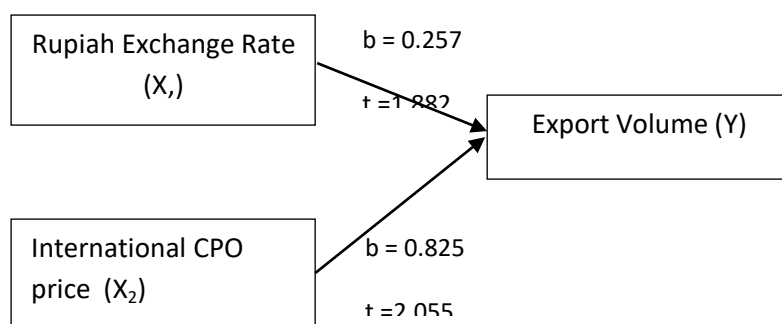


Figure 2. Inner PLS R-Square Model

There are exogenous variables in the inner model studied, namely Rupiah Exchange Rate and International CPO Prices, while endogenous variable in the inner model under study is the Indonesian CPO Export Volume. The results of the inner weight value in Figure 2 above show that the Indonesian CPO Export Volume variable is influenced by Rupiah Exchange Rates and International CPO Prices, which are shown in the following equation:

3. Hypothesis Testing Results

a. Hypothesis 1 Test (H₁)

The first hypothesis in the study was not proven to be true, this is known from the t value of 1,882 which means it is smaller than 1.96, this means that the Rupiah Exchange Rate has no significant effect on Indonesia's CPO Export Volume. The direction of the association between two variables is positive which means that if the rupiah exchange rate increases, it will further increase Indonesia's CPO Export Volume but not significantly by having a large effect of 0.257.

b. Hypothesis 2 (H₂)

The second hypothesis in the research proved to be true, this is known from the t value of 2.055, which means greater than 1.96, this means that the International CPO Price has a significant effect on the Indonesia's CPO Export Volume. The direction of the association between two variables is positive which means that the higher international CPO price will increase the Indonesian CPO exports volume by having a large effect of - 0.825.

VI. DISCUSSION

A. Effect of Rupiah Exchange Rates on Indonesia's CPO Export Volume

Results from data analysis showed that the Rupiah Exchange Rate did not have a significant effect on the Indonesia's CPO Export Volume which was evidenced by the t value of 1.882 which means it was greater than 1.96, so it can be explained that the increase in Indonesia's CPO Export Volume could not necessarily be increased through the existence of value high rupiah exchange rates. The effect of the Rupiah Exchange Rate on the Indonesia's CPO Export Volume is positive which indicates that the higher the rupiah exchange rate will have an impact on the increasing CPO Export Volume in Indonesia but it is not significant. Thus the first hypothesis in this study which reads "Exchange Rate of Rupiah has a significant effect on Indonesia's CPO Export Volume", can be declared unacceptable.

The findings in this study prove that the Rupiah Exchange Rate has a positive but not significant effect on Indonesia's CPO Export Volume. The study results in line with the finding study conducted by Alatas (2015) who found that there was no significant influence of the rupiah exchange rate variable on the volume of Indonesia's CPO exports to the Netherlands. However, the findings in this study are not in line with the findings of research by Maygirtasari et al. (2015) wherein in her research it was said that Indonesia's CPO Export Volume could be significantly influenced by the Rupiah Exchange Rate against the US Dollar or by increasing the Rupiah Exchange Rate against the US Dollar, the Volume Indonesia's CPO exports will experience a significant increase.

B. Effect of International CPO Prices on Indonesia's CPO Export Volume

Data analysis result showed that the International CPO price has a significant influence on Indonesia's CPO Export Volume, which is proven by a t value of 2,055, which means it is greater than 1.96, so it can be explained that the Indonesia's CPO Export Volume can be formed through the International CPO price level. Thus the second hypothesis in this study which reads "International CPO Prices have a significant effect on Indonesia's CPO Export Volume", can be declared acceptable. However, the effect of International CPO Prices on Indonesia's CPO Export Volume is negative, which indicates that the more appropriate International CPO prices offered, the more impact on CPO Export Volume in Indonesia.

Built on the results of research that has been done it is proven that the International CPO price has a significant and negative effect on Indonesia's CPO Export Volume. This significant negative effect indicates that International CPO prices have an important role in efforts to increase Indonesia's CPO Export Volume. So this can be interpreted that the more in line with the international CPO prices offered, the more volume of Indonesia's CPO exports will be reduced. Therefore, if Indonesia wants to increase the volume of Indonesian CPO exports, it is very important for the Indonesian government to pay attention to the lower level of international CPO prices. The findings in this study are not in line with the findings of research conducted by Alatas (2015) who found that there was no significant influence on international price variables on the volume of Indonesian CPO exports to the Netherlands. The findings of this study also do not support the results of a study conducted by Maygirtasari et al. (2015) who also found that international CPO prices did not significantly affect Indonesia's CPO export volume.

CONCLUSION

The Rupiah Exchange Rate does not have a significant effect on Indonesia's CPO Export Volume. Thus the first hypothesis in this study can be declared unacceptable.

International CPO prices have a significant influence on Indonesia's CPO Export Volume. Thus the second hypothesis in this study is acceptable.

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