

## IDENTIFICATION AND THE MEASUREMENT OF COMPETITIVENESS AND EXPORT DETERMINANT OF JAMBI PROVINCE, INDONESIA

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### ABSTRACT

*The objectives of this study are: (1) to identify products that have a comparative advantage in Jambi Province; (2) to analyze the changes in the export orientation of Jambi Province based on the country of destination; (3) to analyze the changes in the orientation of Jambi Province imports based on country of origin; (4) to determine the superior products of Jambi Province which are competitive and have the opportunity to be exported by Jambi province; (5) to analyze the factors that influence the export of superior products. Revealed Comparative Advantage (RCA), Constant Market Share (CMS), and Error Correction Models (ECM) have been used as tools in the analysis. Based on the results of calculations, there are 5 (five) commodities that have an RCA value greater than Vegetable Oil, Rubber, Plywood, Paper, and fuel oil. Excellence The results of the study also showed that based on CMS calculations, the growth of the main commodity exports of Jambi Province to the world in the 2011-2015 period was more influenced by the influence of commodity composition. While the effects of growth and competitiveness effects do not have a significant effect on the growth of key commodity exports in Jambi Province. Partially, the two variables, namely the exchange rate and government policy are not significant to Jambi Province's exports. The results showed that there were two independent variables that caused Jambi province exports to rise, namely export prices and imports of raw materials. Based on these results, we conclude that although there are superior commodities, the export of these commodities still depends on the stability of the rupiah exchange rate and the growth of the GDP of Jambi Province.*

**Keywords:** Competitiveness, Revealed Comparative Advantage, Constant Market Share, Effect of Competitiveness, and Regression Model

### 1. INTRODUCTION

The role of exports on economic growth is one of an interesting subject and widely disputed by many experts. In macroeconomic theory, the relationship between exports, economic growth and national income is an identity because export itself is part of national income. However, in the theory of economic development, the linkages between exports and economic growth is a special case that is pulled to be discussed especially in the empirical realm. Basically, the relationship between exports and economic growth is not merely an identity, but is more focused on the issue of its ability to create prosperity for the community in both the state and regional contexts.

In conjunction with these problems, Jung and Marshall (1985) suggested that there are at least four hypotheses in the context of the relationship between exports and economic growth. First, the export hypothesis as a driving force for economic growth (export-led growth hypothesis). Second, the export hypothesis is the cause of the economic decline (export-reducing growth hypothesis). Third, the hypothesis which states that exports are not a driving force for domestic economic growth, but on the contrary, domestic economic growth is a driver for exports (Internally generated export hypothesis), and the fourth is a hypothesis that states that economic growth is a factor causing the decline export (growth-reducing export hypothesis). All four hypotheses have good reasons.

Aside from differences of opinion, regarding export and economic growth, about all countries, including the regions, are always trying to increase their exports. Through the enhancement of exports, is expected to be an increase in foreign exchange will ultimately be used to finance development. In addition, exports are usually done because the domestic market is not able to accommodate all production or in other words the occurrence of excess supply. This condition can lead the government to always push the exports.

The role of exports in a region, including in the division of provinces, is also quite significant. As a proof, is shown by the role of exports in the province of Jambi, Indonesia. Jambi Province is one of quite large exports contributor for a number of commodities. The contribution of the Jambi province's exports to the GDP of the Jambi province is also quite significant. Until now, Jambi province exports are still aimed at traditional (old) markets such as Singapore, Japan, Europe, and America. However, due to the implementation of free trade between ASEAN and many East Asian countries (China, Japan, and South Korea), the purpose of Jambi province's export is also expected to change. The implementation of free trade on the one side, does open up export opportunities, but at the same time, high competition can potentially become a threat. Therefore, it is necessary to formulate a strategy to increase the export of Jambi province both in existing markets and in new markets. To get a more comprehensive strategy, it needs a thorough study, to identify products that have a comparative advantage.

The objectives of this study are as follows: (1) to identifying products that have a comparative advantage in Jambi Province; (2) analyze changes in export orientation based on destination country; (3) analyze changes in import orientation based on country of origin; (4) analyze the factors that influence the export of leading products.

## 2. LITERATURE REVIEW

In the development of a globalized world economy, the current flow of goods and services trade are more freely between countries. Each country will strive to obtain the benefits of these developments (Salvatore, 2000). The countries that are unable to compete will be eliminated from the tight trade arena.

The theory of international trade begins with the mercantilist concept that considers the economic growth of a country as a result of spending from other countries. Mercantilism emphasizes maintaining higher export access than imports so that the trade balance is always in a surplus. An increase in surplus reflects the wealth and power of a country. Adam Smith criticized this concept and put forward the theory of absolute advantage. According to Smith, a country would enjoy a trade if the State that specialize in products that has an absolute advantage. Adam Smith's theory marks the emergence of the classical theory in international trade (Haryadi, 2007).

This theory was later developed by J.S Mill. The theory of international trade that stated earlier still has limitations because the basis of international exchange is one on one. According to Mill, international trade can still take place if the basis of international exchange is located between the exchange rates of each country. The three theories mentioned earlier are known as classical theories which assume the only factor of production is the labor (Tambunan, 2004).

### 2.1.1 Export Demand Theory

Export demand for a commodity is a comprehensive relationship between the number of commodities that consumers will buy over a certain period at a price level. Market demand for a commodity is the horizontal sum of the individual demands of a commodity (Lipsey et al., 1995).

In terms of demand, export activities are assumed to be a function of international market demand for a commodity that produced by a country. The demand for exports is the demand of certain international / country markets for a commodity. The theory of export demand aims to determine the factors that affect a country's export demand. Theoretically on the demand side, exports are influenced by export prices, real exchange rates, world income, and devaluation policies. Sahoo, Dash and Mishra (2015) find insignificant, weak or negative impact. Hence, the contribution of FDI towards export performance has remained controversial.

### 2.1.2. Revealed Comparative Advantage (RCA) Theory

Revealed Comparative Advantage (RCA) is one of the methods to measure the comparative advantage in an area (country, province, etc.). The RCA method is based on a concept that trade between regions actually shows the comparative advantage possessed by a region. The measured variable is the export performance of a product to the total exports of a region which is then compared to the share of product value in world trade.

### 2.1.3. Constant Market Share (CMS) Theory

Building export competitiveness is a long, costly, and risky process, as it calls for large investment in research and development, advanced technology, high quality infrastructure and close interactions between firms and research institutes (Zhang, 2015). The Constant Market Share (CMS) approach is used to measure the dynamics of an industry's competitiveness. The use of this approach is based on the understanding that a country's export growth rate can be smaller, equal, or higher than the world average export growth rate. So in the CMS analysis, the slow or high growth rate of a country's exports compared to the standard growth rate (world average) is broken down into three factors, namely the composition of export commodities, import growth and competitiveness.

#### Import growth effect :

$$mX_{ijk}^1 \dots\dots\dots (2.1)$$

where;

$m$  = The percentage of general enhancement imports in country k

$X_{ijk}^1$  = The export of commodity i from country j to country k year (t-1)

#### The effects of the composition of export commodities:

$$\{(m_i - m)X_{ijk}^1\} \dots\dots\dots (2.2)$$

Where;

$m$  = The percentage of general enhancement imports in country j

$m_i$  = The percentage of enhancement in imports commodity i in country k

$X_{ijk}^1$  = The export of commodity i from country j to country k year (t-1)

#### The Effect of Competitiveness:

$$\{X_{ij}^2 - X_{ij}^1 - m_i X_{ijk}^1\} \dots\dots\dots (2.3)$$

where;

$m_i$  = The percentage of enhancement in imports commodity i in country j

$X_{ijk}^1$  = The export of commodity i exports from country j to country k year (t-1)

$X_{ijk}^2$  = The Commodity i exports from country j to country k year (t)

#### 2.1.4. Theoretical Concepts of Correction Mechanism (ECM)

Time series data (time series) can be considered as a decrease from a stochastic process or a random process. A collection of data, can be assessed as a realization (sample) of the stochastic process. Thus, a stochastic process is said to be stationary if the average value and variance are constant during the observation period, and the covariance value between two time periods does not depend on the actual time at which the covariance is calculated, but only depends on the time lag between the two periods that time. Mathematically the time series data criteria of a stochastic process that is stationary can be written as follows:

$$\text{Average : } E(Y_t) = \mu \dots\dots\dots [2.4]$$

$$\text{Variance : } \text{var}(Y_t) = E(Y_t - \mu)^2 = \sigma^2 \dots\dots\dots [2.5]$$

$$\text{Covariance : } \gamma_k = E[(Y_t - \mu)(Y_{t+k} - \mu)] \dots\dots\dots [2.6]$$

where  $Y_t$  is a stochastic time series data,  $\gamma_k$  is the covariance at the different times  $k$  (covariance between the values of  $Y_t$  and  $Y_{t+k}$ , or between two  $Y$  values at two different periods  $k$ ). Or it can also be written as follows :

$$Y_t = \rho Y_{t-1} + \mu_t ; \mu_t \text{ NID}(0, \sigma^2) \dots\dots\dots [2.7]$$

where:

$t=1,2,\dots,n$

NID (0,  $\sigma^2$ ) in equation [2.7] shows that stationary time series data are normally distributed (NID) with average values = 0, fixed variance =  $\sigma^2$ , and covariance = 0. The stationary conditions in equation [2.7] are shown by the absolute value  $|\rho| < 1$ . In this case it is necessary to test the null hypothesis (null hypothesis)  $\rho = 1$  against alternative hypotheses (alternative hypothesis) 1. <1. In general, the time series analysis used is regression analysis, where variables that are not stationary are not included in the analysis model. This is done so that no spurious regression will occur which will cause high  $R^2$  and low DW which means there is a serial correlation on the error, so that the assumptions between the independent errors are not fulfilled and maybe even the resulting model has no meaning based on economic theory. (Granger and Newbol in Daryanto, 2010).

### 3. RESEARCH METHOD

#### 3.1 Data Analysis Methods

Data analysis methods that used are descriptive and quantitative methods. Descriptive method is used to analyze the development of the data used in this study. The quantitative method with the Revealed Comparative Advantage (RCA) approach is used to analyze the leading export level of Jambi province. Then the Constant Market Share (CMS) approach is used to estimate the determinants that affect the growth of the leading exports. While the quantitative method that used to analyze the factors affecting the export of leading products in Jambi province is the ECM approach.

#### 3.2 Model Specifications

##### 3.2.1 Revalead Comparative Advantage (RCA)

Indonesia's position in US trade can be determined by the RCA method. This method is based on the concept that trade between regions shows the comparative advantage of a country. The measured variable is the performance of exports to abroad by calculating the share of export value to the total exports of Jambi to abroad which is compared with the share of the value of Indonesia's exports to abroad.

The RCA formula is as follows:

$$RCA = \frac{X_{ij}/X_{it}}{W_j/W_t} \dots\dots\dots (3.1)$$

where :

$X_{ij}$  = export value of commodity  $i$  from Jambi province

$X_{it}$  = total export value (commodity  $i$  and others) from Jambi province

$W_j$  = Value of Indonesian exports of commodities  $i$

$W_t$  = Value of total Indonesian exports

The RCA index ranges from zero to infinity. RCA index value equal to one means that there is no increase in RCA or the export performance of Jambi province in the world market is now the same as last year (Laursen, 2015).

##### 3.2.2 Constant Market Share (CMS)

This study also uses the constant market share method (Constant Market Share) to determine the determinants that affect Jambi export growth in the world market. The measured variable is the expansion effect (demand side) which is divided into two, namely the macro share effect (import growth) and micro share effect (commodity composition effect) then the competition effect or competitiveness effect (supply side). The formula is as follows:

$$X_{ij}^2 - X_{ij}^1 = mX_{ij}^1 + \{(m_i - m)X_{ij}^1\} + \{X_{ij}^2 - X_{ij}^1 - m_i X_{ij}^1\} \dots\dots\dots (3.2)$$

(1) (2) (3)

where:

- $X_{ij}^1$  = Jambi's Exports to the World in year (t-1)  
 $X_{ij}^2$  = Indonesian exports to the world year (t)  
 $m$  = The percentage of enhancement world general imports  
 $m_i$  = The percentage of enhancement leading product imports of Jambi's export in the world  
(1) = The effect of import growth;  
(2) = Composition effect;  
(3) = Competitiveness effect  
 $X_s = f(P_x, DP, M_{raw}, EP)$  ..... (3.3)

### 3.2.3 Regression Model

To find out the factor of Jambi province's export supply to the world market, a regression model is used through the error correction model approach. The data will first be formulated in the form of natural logarithms (Ln). The goal is that the variant of the data is not too wide so the decision to form data in Ln aims to get better regression results. It can be systematically formulated as follows:

$$X_s = f(P_x, RER, DP, M_{raw}, GP) \dots \dots \dots (3.4)$$

where :

- $X_s$  = Export Volume  
 $P_x$  = export Prince  
 $RER$  = Real Exchange Rate  
 $DP$  = The number of Jambi production  
 $M_{raw}$  = Import of raw materials  
 $GP$  = Government policies related to Sports

## 4. RESULTS AND DISCUSSION

### 4.1 Determination of Competitive Products

#### 4.1.1 Revealed Comparative Advantages (RCA)

Overall, there are more than twenty export commodities in Jambi province. However, based on the ranking, there are eight export commodities that are relatively prominent. These eight commodities are calculated their RCA value. Based on the calculation results, there are 5 (five) commodities that have an RCA value of more than 1, namely Plywood Paper, Fuel- Oil and Vegetable Oil, Paper, and Fuel Oil, meaning that apart from the 5 (five) commodities, there are no commodities that have competitiveness.

Table 4.1 RCA Value of Main Commodities in Jambi Province

|                    | 2011          | 2012          | 2013          | 2014          | 2015          |               |
|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| RCA Ikan dan Udang | 0             | 0             | 0,100087642   | 0             | 0,000094586   | Uncompetitive |
| RCA Kopi           | 0,013892717   | 0,014381127   | 0,01299279    | 0             | 0             | Uncompetitive |
| RCA Vegetabel Oil  | 1,293,006,962 | 0,938359653   | 0,452671962   | 0,978751287   | 1,608,241,193 | Competitive   |
| RCA Rubber         | 9,202,944,427 | 1,758,270,628 | 487,551,421   | 7,826,679,379 | 8,435,566,888 | Competitive   |
| RCA Plywoods       | 0,64583074    | 0,845315381   | 0,553998664   | 0,836508905   | 1,419,507,695 | Competitive   |
| RCA Paper          | 2,693,961,736 | 3,611,208,784 | 3,774,308,407 | 5,118,558,812 | 7,687,643,703 | Competitive   |
| RCA Fuel Oil       | 3,144,611,162 | 6,127,394,124 | 326,899,069   | 9,819,454,346 | 1,863,463,213 | Competitive   |

Coal RCA 0.477322995 0.587436059 0.252148964 0.39603698 0.382726701 Not Competitive

In 2011, the RCA value of more than 1 was Vegetable Oil (1.29); Rubber (9,20); Paper (2.69); and Oil Raw Materials (3.13) so that these commodities have competitiveness, while the rest have no competitiveness or low competitiveness. This is because the RCA value is below 1, namely Fish and Shrimp, and Coffee.

#### 4.1.2 Constant Market Share (CMS)

The results of the CMS calculation can be seen in Table 4.2. Based on this table, it can be noted that in the 2011-2012 period the export performance of Jambi Province's Commodity has increased, this is reflected in enhancement the value of the leading commodity exports in Jambi Province worth US \$ 818,319 thousand (44.35 percent). It turned out that the increase in the value of exports of these leading commodities was more due to an increase in the effect of the export composition valued at US \$ 319,624,445.6 thousand. However, the effect of competitiveness and the effect of the growth of leading commodities in Jambi Province declined by US \$ 299,366,087.1 thousand and US \$ 22,328,286.24 thousand.

**Table 4.2 Import Growth Effects, Commodity Composition Effects, and Export Commodity Competitiveness Effects of Jambi Province.**

| Tahun     | Import Growth Effects (in Thousand US\$) | Commodity Composition Effects (in Thousand US\$) | Competitiveness Effects (in Thousand US\$) | The Export Growth (%) |         |
|-----------|------------------------------------------|--------------------------------------------------|--------------------------------------------|-----------------------|---------|
|           |                                          |                                                  |                                            | (Thousand US\$)       | ( % )   |
| 2011-2012 | -22328286,24                             | 319624445,6                                      | -299366087,1                               | 818319,31             | 44 , 35 |
| 2012-2013 | -18230921,8                              | 260971586,1                                      | -244403347,5                               | -955070               | -35,86  |
| 2013-2014 | -14198982,72                             | 203255275,9                                      | -190317457,2                               | -632224               | -37     |
| 2014-2015 | -18113794,4                              | 259294933,4                                      | -242864152,7                               | -102315               | -9 , 51 |
| Rata-rata | -18217996,29                             | 260786560,3                                      | -244237761,1                               | -217822,42            | -9,51   |

Source: Central Bureau of Statistics

Then in the 2012-2013 period, the performance of leading commodities in Jambi Province declined. It can be seen from the value of exports that decreased by US \$ 955,070 thousand (35.86 percent). Although the commodity composition effect increased by US \$ 260,971,586.1 thousand, the effect of import growth and competitiveness also decreased by US \$ 1,230,921.8 thousand and US \$ 244,403,347.5 thousand.

#### 4.2 Analysis of Factors Affecting Export Bidding

To answer the fourth goal of the factors that affect the exports of the province of Jambi, the simulation regression that used is Eviews. Simulation results show that overall the independent variables significantly influence the dependent variable. This indication is shown by the probability value (F statistic) is 0.000002. This means that statistically, overall the independent variables have a significant effect on the dependent variable at significant level 100 percent.

Partially, the two variables, the exchange rate and government policy did not significantly influence the Jambi province's export supply. Two independent variables that affect Jambi province exports are the price of exports and imports of raw materials. This fact is shown by the probability value of the exchange rate of 0.96 and the probability value of government policy of 0.56. This means that Jambi exporters do not make the exchange rate and government policies as factors causing the increase or decrease of Jambi province's exports.

##### 4.2.1 The Regression Results of Determinant Vegetable Oil Export Offers

The Simulation results show that overall the independent variables significantly influence the dependent variable. This indication is shown by the probability value (F statistic) is 0.02. This means that statistically, overall the independent variables significantly influence the dependent variable at a significance level above 95 percent.

The simulation results also show that the adjusted R-square value is 0.91. This figure shows that the ability of free variable to explain dependent variable is 91 percent. Economically and statistically, this means that the ability of free variables to explain dependent variables is quite high.

Of the three independent variables, government policy has no effect on rubber exports. Simulation results show that the probability of government policy is 0.42. This means that exporters do not depend on government policies.

#### 4.3 Economic Analysis of Jambi Province Export Offers

Based on the simulation results, the two variables that affect the total exports of Jambi province are imports of raw materials and export prices. Two other variables included in the model, namely foreign exchange rates and government policies, have no effect on exports. The simulation results show that the coefficient value for the import of raw materials is 0.000007. This means that if imports of raw materials are increased by 1 percent, exports will increase by 0.000007 percent. This figure shows that although the effect of imports of raw materials is significant on exports, the percentage impact is very small. The effect of importing raw materials is included as an independent variable with the consideration that there are allegations that most export commodities also contain imported components. The simulation results prove that the effect of raw material imports on the Jambi province's exports is relatively small.

The simulation results show that the two factors that influence rubber exports are the exchange rate of the rupiah and the GRDP. Based on the simulation results, the coefficient value for the exchange rate variable is minus 0.000239. This figure shows that if the rupiah exchange rate strengthens by 1 percent, the Jambi province's rubber exports will decrease by 0,000239 percent. This figure, although relatively small in percentage, is significant enough to affect Jambi Province's rubber exports.

Meanwhile, GRDP has a positive effect on rubber exports. This means that if the GRDP rises, there will be encouragement from exporters to increase exports. The coefficient value for GRDP variable is 0.000229. This means that if the GRDP increases by 1 percent, rubber exports will increase by 0.0002 percent.

The results of the regression simulation conducted to see the determinants of vegetable oil exports showed that there was only one variable that had a significant effect, namely the GRDP, while the other variables, namely the foreign exchange rate and government policy, had no significant effect, based on the simulation results, the coefficient value of the GRDP variable was 0.000301. This means that an increase in GDP of 0.03 percent means that an increase of 1 percent will encourage an increase in vegetable oil exports by 0.03 percent. The results of this simulation indicate that the GRDP is a determining factor for an increase in palm oil production which in turn increases vegetable oil production so that the volume of exports increases.

The simulation results also show that all the variables both the foreign exchange rates of the GRDP and the government policy have a significant effect on plywood exports, the value of the foreign exchange coefficient is 0.000267. This means that an increase in the foreign exchange rate will increase plywood exports by 0.02%. Of the three variables included in the plywood determinant simulation, government policy is one of the most decisive factors.

This fact is shown by the government policy variable which has a negative sign, this means that in line with the government policy which tightens export permit for plywood so that both the value and volume of plywood decrease. Simulation results for paper exports also have a relatively similar typical of plywood exports except for foreign exchange rates (in paper exports are not significant). Regression results for fuel oil show that there is no significant effect of the GRDP variable on the export of fuel oil, a factor which is considered quite influential in addition to foreign exchange is government policy.

## 5. CONCLUSION AND POLICY IMPLICATION

### 5.1. Conclusion

1. Based on the results of the calculation, there are 5 (five) commodities that have an RCA value greater than that of Vegetable Oil, Rubber, Plywood, Paper, and BBM.
2. Based on the results of CMS calculations, the growth of exports of Jambi Province's leading commodity to the world in the 2011-2015 period is more influenced by the effect of commodity composition. While the effect of import growth and the effect of competitiveness lacked a significant influence on the growth of leading commodity exports in Jambi Province.
3. Partially, the two variables namely the exchange rate and government policy do not significantly influence the Jambi province's export supply. Two free variables that affect Jambi province exports are the price of exports and imports of raw materials
4. The simulation results show that the two factors that influence rubber exports are the rupiah exchange rate and the GRDP. For vegetable oil exports, there is only one variable that has a significant effect, namely GRDP, while other variables, namely foreign exchange rates and government policies, do not have significant effect. plywood. Simulation results for paper exports also have a relatively similar typical of plywood exports except for foreign exchange rates (in paper exports are not significant). Regression results for BBM show that there is no significant effect of the GRDP variable on fuel exports. A factor considered to be quite influential in addition to foreign exchange is government policy.

### 5.2. Policy Implications

1. Vegetable Oil, Plywood, Paper, BBM and coal are competing commodities, this is not surprising because these commodities are the mainstay commodities of the Jambi province, and for the next year other commodities which have competitiveness must be developed.
2. Increasing the Value Added from FFB into vegetable oil should be a concern of the local government, considering that Jambi Province still relies on the FFB commodity as the most dominant commodity in Jambi Province

## REFERENCES

- Aji Hp. 2016. Analysis of the performance of Indonesian fishery exports to Japan and the United States in 1984-2003. Thesis MPKP UI. Depok.
- Chairul M. 2006. Analysis of Competitiveness of Agroindustry Export Products of Coconut-Based Commodities in Indonesia Icaseps Working Paper No. 87
- Daryanto A dan Y Hafizriandra (2010). Model-Model Kuantitatif Untuk Perencanaan Ekonomi Daerah: Konsep dan Aplikasi. IPB Press. Bogor.
- Dunn Jr, R.M. and J.H. Mutti. 2000. International Economics. Fifth Edition. Routledge, New York.
- Feder, G. 1982. The Impact of Export on Economic Growth. *Journal of Development Economics*, 12 (3) : 59-73.
- Feridhanusetyawan, T. 2001. Indonesia's Trade Policy and Performance. Working paper. Centre for Strategic and International Studies, Jakarta.
- Guarascio, D., Pianta, M., & Bogliacino, F. (2015). Export, R&D and new products. *Journal of Evolutionary Economics*, 1-37.
- Haryadi, 2007. *Ekonomi Internasional I*, Buku Pertama, Biografika, Bogor.
- Haryadi. 1998. Determinant of Indonesian Manufactured Exports. Master Thesis. University of Waikato, Hamilton.
- Khair-Uz-Zaman 2005 export Supply Function Estimates For The Pakistan Carpet Industry, Department of Economics Gomal University, D.I.Khan



- ,NWFP, Pakistan. BCID RESEARCH PAPER NO. 9
- Krugman, P. R. and M. Obstfeld. 2000. *International Economics: Theory and Policy*. Fifth Edition. Addison-Wesley Publishing Company, Boston.
- Laursen, K. (2015) 'Revealed comparative advantage and the alternatives as measures of international specialization', *Eurasian Business Review*, Vol. 5, No. 1, pp.99–115
- Munadi, E. 2015. Penurunan pajak ekspor dan dampaknya terhadap ekspor minyak kelapa sawit Indonesia ke India(Pendekatan Error Correction Model). *Informatika Pertanian*. Volume 16 No.2.
- Muslim A. 2015. Implementasi algoritma cluster fuzzy dab beyro fuzzy. Studi kasus ekspor Indonesia ke Jepang. Departemen Perdagangan RI. FE-UI Jakarta
- Nicholson W, 1985. *Teori Ekonomi Mikro: Prinsip Dasar dan Pengembangannya*. Penyadur. Deliarnov. PT RajaGrafindo, Jakarta
- Vj hcnn Malik A.1995. Demand for Textile and clothing Exports ofPakistan. Pp1-14, <http://www.pide.org.pk>
- Munadi E, 2007. Declining Export Tax and Its Impact on Indonesia's Palm Oil Exports to India (Error correction model approach). *Agricultural Informatics*. Volume 16 (2)
- Nicholson, W. 1999. *Microeconomic Theory: Basic Principles and Their Development*. Translate. Raja Grafindo Persada, Jakarta.
- Olarreaga, M, A Sperlich, and V Trachsel (2015), "Export Promotion: What Works?" Working Paper.
- Pindyck, R.S. 2000. *Microeconomics*. Fifth Edition. McGraw-Hill Inc. New York.
- Prajogo U. H and S Mardianto, 2004. Comparative Analysis of Competitiveness of Agricultural Products Between ASEAN Countries In the Era of Afta Free Trade Agro Economic Journal, Volume 22 No.1, May 2004: 46 - 73
- Tambunan, T. 2004. *Globalization and International Trade*. Ghalia, Jakarta
- Tambunan, T. 2008. *Food Security in Indonesia: Identifying Several Causes*. Center for Industrial and SME Studies, Trisakti University, Jakarta
- Thee, K.W. 2000. 'The Impact of the Economic Crisis on the Indonesia's Manufacturing Sector', *The Developing Economies*, 38(4):420-53.
- Zhang, K.H. (2015). What Drives Export Competitiveness? The Role of FDI in Chinese Manufacturing. *Contemporary Economic Policy*, 33(3), 499-512. doi. 10.1111/coep.12084

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