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The Analysis of Export Determinant of Merchandise inthe ASEAN 5

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Abstract

Every country uses an open economic system or an open economy. The state adheres to an open economic system characterized by international trade and bilateral and multilateral interactions. Each country carries out production and specializes in selling its products to benefit from international trade. The financial sector such as investment. Exchange rates also have an important role in increasing a country's production capacity. While the purchasing power parity of the community reflects the ability of the community to buy the products produced by the factory. The purpose of this research is to find out the investment performance, purchasing power, and exchange rate, towards factory goods exports in ASEAN-5. The results of the study indicate that investment has a significant, meaning that any increase in investment will directly reduce exports to ASEAN-5 countries in 2010-2016. Likewise, the Power Purchase Parity has a significant but negative effect, this illustrates that every occurrence of increasing public purchasing power, it will reduce the export of goods, which means that people's appetite for consuming tends to choose domestically produced goods. While the exchange rate does not have a significant effect, meaning that changes in prices that occur globally do not affect the export of goods.

1. Introduction

International economics, in this case, concerns on relations between countries or many countries and their relation to how to observe scarce resources and how to meet the needs of the international community. Bilateral or multilateral relations in the context of the international economy include trade, investment, debt, or other international cooperation assistance. Trade can be carried out between countries or can benefit both countries, namely the fulfillment of goods or services that cannot be met by the state (scarcity), benefits for those who can produce efficiently and transfer of technology and knowledge [1]. Globalization has made the interdependence of a country with other countries (bilateral / multilatetral) increase both in the political, economic, and cultural fields in order to survive and not be ostracized by other countries. This era of globalization can be seen through the existence of openness in dependency or linkages and competition, especially in the economic field [2].International trade in general is divided into two, namely exports and imports. Exports are sales of goods or services produced by a country against other countries. Imports are the flow of goods and services coming from abroad. Exports and imports are important components in the

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formation of a country's income. In an economy involving exports and imports it is called the economy of the four sectors or the open economy [3]. Today, in all the world almost all countries cannot ignore their economic activities with other countries. This is based on the very diverse community needs that have not been able to be met from domestic production activities. Given the limitations in increasing the number and types of goods and services produced, this is the situation that has led to trade between one country and another. The rapid development of the international economy has an inter-country impact in increasing trade flows in the form of goods and money and capital to illustrate the development of the value of the export index from several ASEAN countries.

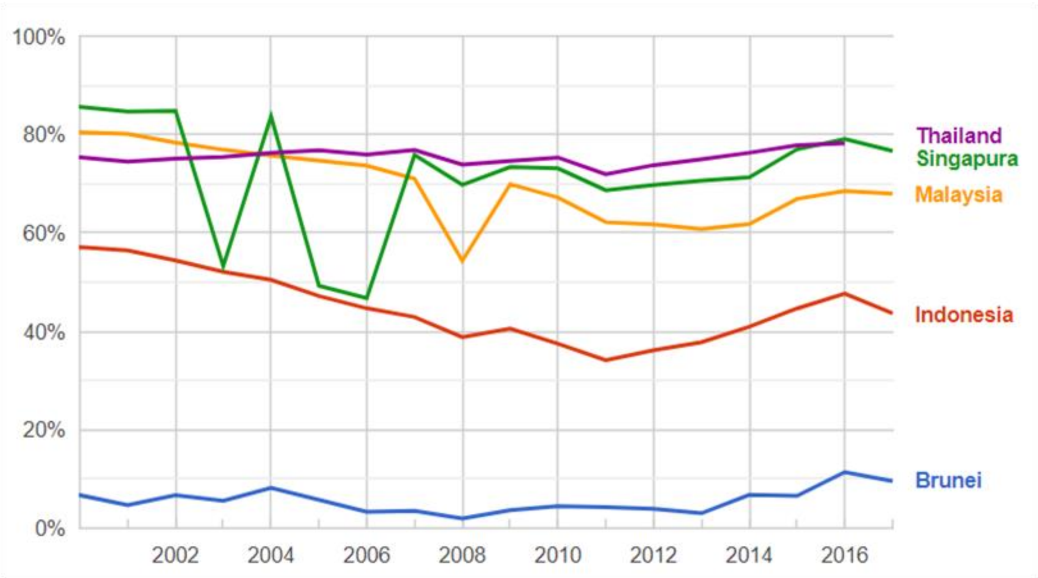

Figure 1. ASEAN Countries Export Index

Singapore has the highest export index compared to several other countries. Whereas among the countries it was seen that Brunei had the lowest export index, and Malaysia saw its export index in the middle between Thailand and Indonesia. By prioritizing increasing exports, the relationship between countries will be stronger, both directly and indirectly, which will have an impact on economic development between countries.

2. Literature Review

According to Nongsina, [4], the rate of growth of export-import in Indonesia is looking at the influence of liberal trade policy. The results of his research show that in the short term trade liberalization policy resulted in faster growth in imports compared to exports [4].Sarwedi[5] with the research title Analysis of Factors affecting Foreign Investment and its role in economic growth, using variables such as Exchange Rate, Infrastructure, net exports, and international interest rates, used a Multiple Linear Regression method. The results of his research indicate that the exchange rate variable against foreign investment is not significant. While other variables such as infrastructure, net exports, and international interest rates have a partially significant effect on foreign investment. Foreign direct investment in Indonesia and the factors that influence it. This study uses the GDP variable, Economic Growth, Labor Wages and exports, with the analysis model using the Ordinary Last Square (OLS) Model. The results of his research show that in the short term the GDP variable, Economic Growth, Labor Wages and exports have a positive effect on explaining factors that affect PMA, while in the long run it has a negative effect.

International Trade

International trade can be interpreted as trading that occurs between two countries or more based on the principle of mutual agreement. International trade is very fragile and complex when compared to domestic trade, this is borne out by the limitations that trigger relations for the two countries. Some countries that have the potential to produce goods, will encourage the country to conduct cross-country trade. Indonesia for example, with its natural resources and management that will efficiently implement exports abroad. Likewise, vice versa, Indonesia will also import goods from other countries for the needs and progress of other sectors.

Investation

Economic theory explains investment as a government expenditure used in buying capital goods and new production equipment, in order to replace old goods, so that users are more optimal in producing goods and services in the future. explained that investment is an addition of capital stock or goods in a country, such as building production equipment, and inventory items within one year. In the long run, investment growth is ensured to have an effect on the increase in capital stock, which in turn will result in an increase in productivity. In the Neo Classical theory which emphasizes the importance of saving as an investment [6]. This view focuses on investment which is believed that investment is one of the main drivers in a country's economic growth and development. it means that the more development of investment is prioritized when compared with population growth, then the development of the capital stock from the average per workforce will be faster. So that with a high ratio of capital to labor, this will cause the production capacity of the workforce to be even higher[7].

Moreover, based on the type of investment is divided into two types, namely: first Government investment, which is an investment made by the government itself, both the central government and the local government. Second Private investment, which is an investment made by the national private sectors, what is meant by the national private sector here is Domestic Investment (PMDM) or investments made by the foreign private sector, often referred to as Foreign Investment (PMA). The investment carried out by the private sector aims to obtain a profit or income generation. Foreign Investment (PMA) is a strategy that is carried out as an effort to increase the amount of capital for economic development whose sources come from abroad. Dominick [8] confirms that PMA consists of; First Portfolio investment (investment portfolio), is an investment classified as financial assets only, including bonds, and shares whose value is in the form of national currency. This activity usually takes place by involving financial institutions, such as banks, pension fund companies, retirement foundations, and so on. The Chairperson of Foreign Direct Investment is PMA which includes investment into real assets in the form of building factories, procuring various kinds of capital goods, purchasing land for production purposes, and so on. Wiranata[9] explained that this direct foreign investment could be used as a source of capital for economic development that is very important. Some countries that use the economic system are open, they will need foreign investment, especially for companies whose products are in the form of

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goods and services for export purposes. But it does not rule out the possibility that developed countries. For example America also needs foreign capital, but the use of capital is only to spur domestic growth, anticipate market complaints and job creation.

Export

Exports are part of international trade and they are inseparable. In addition, exports can also be interpreted as trading efforts carried out in order to sell goods or services out of the country, so, with these activities, they will give profits to the country. This export activity can also be interpreted as a trading system that is carried out by issuing goods from domestic to foreign countries in a legal manner and fulfilling the applicable rules and regulations. Moreover, exports are an economic sector that has an important role through market expansion between several countries by encouraging expansion in an industry, so that it will influence other sectors in improving the economy [10].

Other research conducted by Miguel D. Ramirez and Shahryar "A Cointegration Analysis of Purchasing Power Parity 1973-1996" in the International Advance in Economic Research. The study was conducted to test the validity of the PPP theory in the case of five advanced industrial countries, namely the German Mark, British-pound, Japanese-Yen, Canadian-Dollar, and French-Franc against internationally recognized currencies namely the United States Dollar . In this study the researcher used error correction model regression.

Purchasing Power Parity

The theory of purchasing power parity states that in currency exchange rates will adjust over time, this is an illustration of the difference in inflation between two countries so that consumers 'purchasing power in buying domestic products will be the same as consumers' purchasing power in buying foreign products . That is, that the exchange rate of a currency will change as a form of the difference in inflation from two countries and the purchasing power of consumers in buying domestic products and imported goods from other countries [11]. In this theory, it is basically a method used in forecasting the equilibrium rate when the country experiences a balance of payments imbalance Ball [12] explained that the theory of purchasing power parity is a theory which states that the exchange rate between one country and another will be balanced when the price of a group of goods and services from the two countries is the same.

Exchange Rate

The exchange rate is the price of a country's currency against another country's currency. In this case, the exchange rate plays an important role in transaction activities, especially in export-import activities, it is said to be because the exchange rate is able to translate values or prices with different currencies between countries throughout the world. Currency exchange rates that are constantly changing can result in a currency experiencing depreciation and appreciation. The state of depreciation of a country's currency can create prices for domestic goods will be cheap for other countries. Conversely, the situation of the currency experiencing appreciation results in an increase in the value of a country's currency against the US dollar. Thus causing domestic goods to be higher for other countries.

Absolute Vs Advantage Theory

Adam Smith made a point that absolute profit will be achieved if a country can reduce the cost of producing goods compared to other countries, in the sense that if the cost of production between countries is the same then international trade

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activities will not be achieved. Salvatore[13] Through this theory, Adam Smith states that absolute profit will be achieved if a country can reduce the cost of producing goods compared to other countries, in the sense that if production costs between countries are the same then international trade activities will not be achieved.

Otherwise, David Ricardo explains that in the law of Comparative Advantage, in countries that are less efficient than other countries in producing the two types of goods produced, there is still a basis for trading which can benefit both defenders. party. Whereas in opinion Tangkilisan, [14] explain that comparative advantage can refer to the ability of the organization to formulate a strategy that places a very favorable position with regard to other companies. Badudu, [15] interpret comparative as the nature of comparison so that Comparative Excellence can be defined as an advantage possessed by an organization in order to be able to compare itself with other organizations. So that we can conclude that comparative advantage is the superiority possessed by the organization including Human Resources, facilities, and wealth, which can later be used in achieving the goals of the organization.

3. Research methodology

The research methodology used is a technique to solve research problems. This research has a span of time from 2010 to 2016, in 5 countries in ASEAN with 4 parameters. Parameters as independent and dependent variables. In this study, researchers used panel data regression. Panel data regression is superior compared to cross section or time series data.

First, the data panel makes the number of observations (n) large, which will affect the degree of freedom that will increase, the collaborative test between explanatory variables, and make the efficiency of econometric estimation. Second, the superiority of panel data can analyze economic statements that cannot be explained by cross-section or time-series data. In cross-section data can only describe short-term behavior while time series illustrates long-term impact. The combination in panel data will produce a dynamic and comprehensive structure formulation. The classic assumption test in the Random Effect Model (REM) model because the model is GLS (General Least Square). In the Random Effect Model (REM) model only requires a multicollinearity test. To detect the presence of multicollinearity symptoms in the regression model is to look at the Variance Inflation Factor (VIF) value and tolerance value. If the value is close to 1, and the VIF value is around the number 1 and not higher than 10, then it can be explained that there is no multicollinearity between the independent variables in the regression model.

3.1Variables Operational Definition

3.1.1 Export of Merchandise

Exports of merchandise are shipping goods carried out by economic actors by means of cross-border countries that cover all goods, it can be added to or be reduced from resources economically. The procurement of these export activities will not only bring profits to export countries or import countries. Export activity is also one of the factors that can determine the turnover of the wheels of his economy between countries. some countries that are rich in agricultural products and oil and gas, will not be able to avoid international trade.

3.1.2 Purchasing Power Parity

Is a calculation or exchange rate of currencies from two different countries. The concept developed by purchasing power parity focuses on the relationship of one price, so it will be stated that the price of one commodity in the same between two different countries will be the same if measured using the value of the same currency.

3.1.3 Exchange rate

Exchange Rate is the price of a country's currency that can be measured or expressed in a currency. The exchange rate used is the official exchange rate which refers to the exchange rate provisions previously determined by the national authority or by the foreign exchange market which then has legal approval. The exchange rate that will be used will be based on the value of the local currency against the United States dollar.

3.1.4 Direct Foreign Investment

Defined as a net inflow obtained from investment to get sustainable management interest. Investments are made for one or more activities that are owned and usually have a long period of time in the hope of gaining profits in the future [15]

4. Results and Discussion

4.1 Selection of regression Model

This study is a combination of data elements between cross-sections consisting of 5 countries in ASEAN-5 and time series data from 2010 to 2016. To get the best model in panel data a series of model tests have been conducted. The chow test results to determine the common effect (CEM) and fixed effect (FEM) get the result of P-Value (Prob> F) <Alpha 0.05 which is equal to 0.0000 which means the fixed effect model (FEM). The second stage of testing is the Lagrange Multiplier (LM) test to determine the Random effect with the common effect (CEM) and the result of the selected model is Random effect (REM) with a <5% prob-chi value of 0.0000. The third test is the hausman test used to choose Fixed effect and Random effect, the result is Prob> chi2> Alpha 0.05, which means the choice of the Randon effect (REM) model is equal to 0.2631. From the conclusion above, the best model is the random effect (REM) regression model. The data processing is done by using STATA software to get results with regression testing. The output results show the linear regression equation model Random Effect Model (REM):

$$Y_{it} = 68{,}24764 - 51{,}84542X1_{it} + 0{,}0004381 + 0{,}9963585X3_{it} + \mu_{it}$$

Through the model equation above, it can be interpreted and tabulated as follows:

Table 1. Result of Regression

Dependent Variable: Export of Goods				
Independent Variable	Dir.	Koeficient	Prob	Std. Error
Purchasing Power Parity (X1)	-	-51,84542	0,001	2,684783
Exchange Rate (X2)	+	0,0004381	0,553	0,0076325
Investation (X3)	+	0,9963585	0,14	0,0000338
Constanta	+	68,24764	0,000	19699,64
R-square within		0,6202		
Prob F (Prob >Chi2)		0,0008		

Source: processed data

From the equation and tabulation model above, we get a constant or intercept 68,24764. It means that the value of Y (Export of goods) is 68,24764 when the variable X1 (Parity of Purchasing Power), variable X2 (Exchange Rate), and variable X2 (Foreign Direct

Investment) equals zero or constant. The value of β1 (X1) variable regression coefficient (X1) Buy Power Parity of -51,84542. Describing there is a negative influence between (X1) Purchasing Power Parity on (Y) Export of goods is -51,84542. If variable X1 (Purchasing Power Parity) rises by 1 unit then (Y) Export of goods will decrease by -51,84542 units of goods exports assuming other variables are considered zero. The value of β1 (X2) variable regression coefficient (X2) Exchange rate is 0,0004381. Describing there is a positive influence between (X2) Exchange rate of Y (Export of goods) is 0,0004381. If the variable (X2) the rate increases by 1 unit then Y (Export of goods) will increase by 0,0004381 the unit of export of goods assuming the other variable is considered zero. The value of β1 (X3) variable regression coefficient (X3) Direct Foreign Investment is 0.9963585. Describing there is a positive influence between (X3) Investment in Y (Export of goods) is 0.9963585. If the variable X3 (Investment) rises by 1 unit then Y (Export of goods) will increase by 0.9963585 units assuming other variables are considered zeroThe results of the determination coefficient (R2) are 0.6202 or 62.02%. These results explain the ability of independent or dependent variable namely Purchasing Power Parity (X1), Exchange Rate (X2) and Investment (X3) to explain the dependent or independent variables of factory goods exports of 0.6202 (62.02%) and the remaining 37.98 % is explained by other parameters outside the model which can be implicitly seen in the disturbing variable. Simultaneous statistical tests are seen with prob values F = 0,0008 or 0.08% less than α = 5%, which means that the variables of factory goods export, purchasing power parity, exchange rate, and investment jointly influence the export of factory goods in the region ASEAN-5. Then, the partial statistical test (T-Test) to see the effect of individual independent variables on the dependent variable summarized in the following table:

Table 2.Independent Variables Significant Tables

Independent Variable	Reg. Results	Prob	Sig
(X1)	Negatif	0,001	Significant
Kurs (X2)	Positif	0,553	Not significant
Investasi (X3)	Positif	0,14	Significant 15%

Source : processed data

In the significance test table, the purchasing power parameter has a significant negative effect of 0.1% on the 5% confidence level. Then the exchange rate parameter has a positive and not significant effect on goods exports by 55.3%. While investment has a significant positive effect of 14% with a degree of trust at 15%.

Table 3. Multicollinearity Test Table

Variable	VIF	1/VIF
X1 Purchasing Power Parity	4,58	0,218537
X2 Kurs	3,87	0,258095
X3 Investation	1,37	0,729009
Mean VIF		3,27

Source : processed data

The results of detection tests for the presence of multicollinearity symptoms in the regression model are by looking at the Variance Inflation Factor (VIF) value and tolerance value. The VIF test results are around number 1 and not higher than 10, so that there can be no multicollinearity between the independent variables in the regression model.

5. Conclusion and Suggestions

5.1 Conclusion

Based on the results of a series of analyzes, tests and discussions in this study, the following conclusions are obtained: first, the results of the regression analysis with Random Effect Model (REM) indicate that the variable that has a positive and significant influence on Goods Export (Y) in ASEAN-5 from year 2010 to year 2016 is purchasing power parity has a significant negative effect, and investment is significant at the level of 15 percent . This means that it can illustrate that whenever there is an increase in the purchasing power parity, it can reduce the export of goods (Y). This means that people's appetite for consuming goods prefers what is produced by the factory in their country. Whereas every increase in foreign direct investment can reduce exports of goods to ASEAN-5 countries in year 2010-2016. Second, variables that do not have a significant effect on the Export of Goods (Y) in ASEAN-5 countries in year 2010-2016, namely the exchange rate has no significant effect. This global price change does not affect the export of goods. By the increased purchasing power at X1 (purchasing power parity), people prefer to consume their own domestic products so as not to encourage exports or sell their factory products out of their country.

5.2 Suggestion

To increase economic growth in ASEAN-5 countries, one of them is to see the production of goods produced. Looking at the results of the above research, it can be suggested by the government to increase the value of an investment. It can be seen that investment can affect the multiplier effect on the economy in the country if the country encourages investment in the productive sector.Then, the aggregate purchasing power of the community seems to have a negative impact on exports. The results of this study support the government to love the products of their own country. In this case, the government must push and make programs use domestic products.

References

[1] Nopirin. (1996). EkonomiInternasional, Edisi 2. Yogyakarta: : BPFE-UGM.

[2] Hamdy, H. (2001). EkonomiInternasional:Teori dan KebijakanKeuanganInternasional. Jakarta: GhaliaInternasional .

[3] Sadono, S. (2006). Ekonomi Pembangunan. Jakarta: Kencana

[4] Nongsina, F. S. (2007). Pengaruh Kebijakan Liberalisasi Perdagangan terhadap Laju Pertumbuhan Ekspor-Impor Indonesia. Woring Paper on “Seminar Akademik Ekonomi”. Jakarta, Desember 13.

[5] Sarwedi. (2002). Investasi Asing Langsung di Indonesia Faktor yang Mempengaruhinya. Jurnal Akuntansi & Keuangan. 4, 21.

[6] Samuelson, P. A. (2004). Ilmu Makro Ekonomi. Jakarta: PT. Media Edukasi.

[7] Arsyad, L. (2010). Ekonomi Pembangunan. Yogyakarta : UPP STIM YKPN.

[8] Dominick, S. (1997). Ekonomi Internasional, alih bahasa oleh Haris Munandar. Jakarta: edisi 5 cetak 1. Erlangga.

[9] Wiranata, S. (2004). Pengembangan Investasi di Era Globalisasi dan Otonomi Daerah. Jurnal Ekonomi Pembangunan, XII (1) .

[10] Badawi, A. (2005). Private capital formation and macroeconomic policies in Sudan: application of a simple cointegrated vector autoregressive model.[Retrieved from]. In Economic Research Forum (p. 47).

[11] Madura, J. (2006). International Corporate Finance. Terjemahan.Jakarta:Salemba Empat.

[12] Ball, D. E. (2004). International Business. Jakarta: Salemba Empat.

March- April 2020
ISSN: 0193-4120 Page No. 3484 - 3492

[13] Salvatore, D. (2004). Theory and Problem of Micro Economic Theory. Jakarta: 3rd Edition. Alih Bahasa oleh Rudi Sitompul. Penebit Erlangga.
[14] Tangkilisan, H. N. (2005). Manajemen Publik. Jakarta: Gramedia Widia Sarana.
[15] Badudu, J. S. (1994). Kamus Umum Bahasa Indonesia. Jakarta: Pustaka Sinar Harapan.
[16] Sunariyah. (2003). Pengantar Pengetahuan Pasar Modal. Yogyakarta.: (UPP) AMP YKPN.