ANALYSIS OF FISHERY COMMODITES : THE DETERMINANT OF INDONESIA YELLOW FIN TUNA EXPORT

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ABSTRACT

Fishery is one of the ways to increase the Indonesia economic growth, Indonesia has a potential sector by having a huge amount of natural resources in fishery sector. Indonesia has advantage to become the homes of many biodiversity and especially become the home of yellow fin tuna. The huge amount of yellow fin tuna can become one of solutions to increase Indonesia economic growth. The demand of the yellow fin tuna all over the world is high. It is the reason Indonesia should utilize this advantage to push the export of yellow fin tuna.

Analysis were performed by using panel data regression, this method is used to recognize the potential that Indonesia has on fishery sector, also to recognize the effect among the independent variables and the dependent variables. The results of the panel data regression as we know in GDP (Government Consumption), Inflation, and exchange rate have the significance impact to the total export of Indonesia yellow fin tuna performance whether it is partially and simultaneously.

***Keywords* : *Yellow fin tuna, Export Performances,* Fishery sector.**

A. INTRODUCTION

The world is surrounded by the ocean, with seventy one percent of world is covered by the ocean, the ocean has the ability to offer the world with huge amount of natural resources (Wikipedia, online). Many countries in the world depend on their economic activities on the results of fishery sector, the fishery sector has attracted many countries with the ability of the ocean to provide their natural resources such as crab, fish, clams, prawn and etc that seems do not have a limit, so the results of fishery sector becomes a potential sector to increase or expand the economic growth of a country.

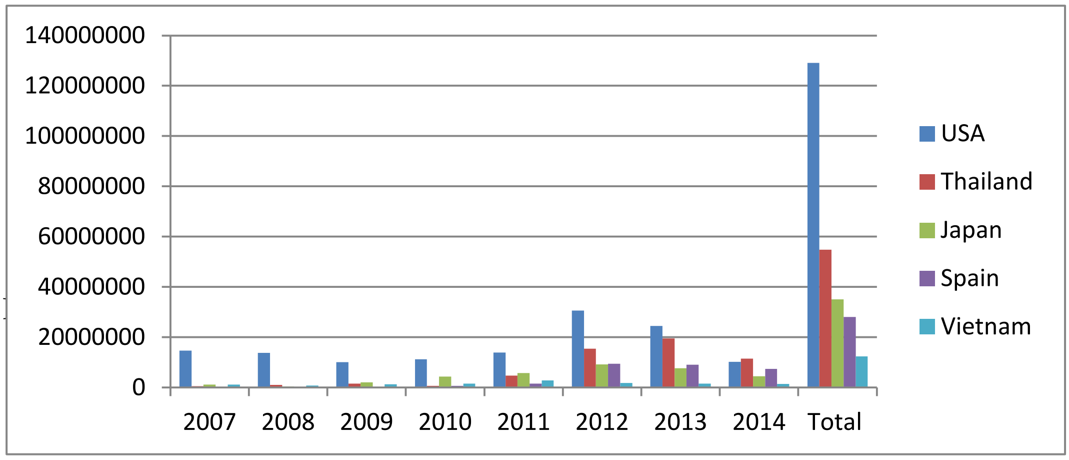
The fishery sector is not only used by a country to feed their domestic needs, but also to find another way to increase their economic growth with the fishery potential sector that they have. The country that has an abundance area of ocean usually depend on their economic activities on fishery sector, they try to sell their high amount of production and ocean natural resources by following international trade. Using their advantage in order to increase their profit or country revenue and increase their economic growth. According to Johnson and Barkley (2002) International trade is based on the simple ideas of arbitration: buy a product at a certain location at a low price, transported to another place and sell it with higher price. In the modern era like this, we cannot imagine the international trade just a movement of goods and services from one location to another location.

International trade especially on fishery sector is a complex activity, the relationship cooperation between countries is not only about exchange the goods and services but also barriers and political issues which are connected with the international trade itself. International trade truly uses the comparative advantage that a country has and uses it to gain more profit to emerge their domestic economic condition from another country and also fulfill their needs because a country cannot produce all of goods and services that they need or their society needs.

Countries that depend on their main economic activities from fishery sector usually come from developing countries. They are developing countries because the fishery sector already existed since antiquity, it was used by traditional people to fulfill their needs of food. Fishery sector also becomes favorite on developing countries because only need modest way to catch the fish, it is not necessary of the newest technology to caught the fish. The traditional fisherman is a hero on expanding the fishery sector of a country, with the existence country can gain profit from their traditional way. These activities are the basic steps on increasing the fishery sector and maximizing the potential that fishery sector has on participating to increase the economic growth and also increase the people social welfare.

The one of the top commodities that Indonesia has for their export is yellow fin tuna. Indonesian sea is a suitable place for yellow fin tuna living and breeding, the Indonesia yellow fin tuna is the favorite food to eat for a lot of people in many countries such as United States of America, Thailand, Japan, Spain, and Vietnam. Yellow fin tuna is usually found in Indian Ocean and the big part of Indian Ocean which is located on the territory of Indonesia, this advantage is used by Indonesia to maximize the export of yellow fin tuna. The yellow fin tuna export always has a progress, the top five destinations of yellow fin tuna exported by Indonesia are 1) United States of America 2) Thailand 3) Japan 4) Spain 5). The yellow fin tuna exported by Indonesia is in the form of fresh tuna and processed tuna. The number one top destination of yellow fin tuna exported by Indonesia is the United States of America which its growth is about six percent 6%, (UN Comtrade, 2016, processed). According to Purnomo and Suryawati (2007) the propel of tuna export must be supported with quantity, quality and increasing value added of the tuna itself, so there needs the concrete efforts of the exporter, so the exporter will keep developing and have a good level of competitive.

Figure 1.2 Graph of Yellow Fin Tuna Indonesia Export to Top Five Destination Countries (Net on US dollar)



from Figure 1.2 above, we can see that the flow of Indonesia yellow fin tuna export to the top five destination countries. The export of Indonesia yellow fin tuna is led by United states of America, the amount is about 129.091.783 (US dollar) and followed by Thailand in the second place with 54.815.508 (US dollar), on the third place is Japan with 35.101.112 (US dollar), on the fourth place is Spain with 28.025.481 (US dollar), on the fifth place is Vietnam with 12.369.697 (US dollar. The following amounts sequentially are 9.837.038 (US dollar), 9.238.807 (US dollar), 5.280.671 (US dollar), 4.575.435 (US dollar), 2.973.108 (US dollar). The data above shows us that Indonesia has an advantage on fishery sector by export the yellow fin tuna worldwide, and those ten countries above are the top ten destination countries of Indonesia to export the yellow fin tuna.

Indonesia has the ability to making this commodity (yellow fin tuna) become the major commodities in fishery sector, this show us from the availability of this yellow fin tuna in Indonesian ocean territory. Yellow fin tuna or Madidihang is suitable to live in Indonesia sea and ocean because have a warm weather and place for them to reproduction. In Indonesia yellow fin tuna can be seen in Halmahera sea, Flores sea, and Strait of Makassar. This commodity considered can be maximize as the export commodity from Indonesia. (Atuna, online)

This situation still can be forced to the maximum in order to increase the Indonesia fishery sector and increase the social welfare of Indonesian people. The writer believes that by having the abundance area of sea, Indonesia can be one of the powerful countries in the world that have fundamental economic activities based on their fishery sector.

B. LITERATURE REVIEW

Theory of Trade

Trade has a specific meaning in economics theory, trading is interpreted as exchange activity that is based on free will or will voluntarily from each side. The trade activity that happened is not because of the threat from another side or the force from another side but it is freely the willingness of the both side to do trade activity. Each side in this activity has the right to decide their profit and loss from their own perspective.

Free will on this trade activity is important because trade, in special understanding, is the fundamental implication activity, that trade activity will happen if only, at least one party which has benefits of the trade and the other party does not feel the disadvantage of this trade activity.

These are the factors that emerge trade between countries (Boediono : 11): Cost Savings, The purpose is to gain the increasing in return. Decreasing on average large cost production, the production cost will have lower average production cost if the volume of the production increases. The product sold in the global market will increase as well. The Different in Technology and Science, The difference between science and technology in one country to another will impact on the different type of commodities that they produce. The country with a good level of science and technology will produce more commodities because they already applied machine (industry sector) in producing their commodities. The country with low level of science and technology will produce lower commodities and especially they produce traditional commodities similar to the agricultural sector. The Different Condition in Production, The difference condition in production location has the impact on trade activity itself. The sub-tropical country will produce different commodities with the tropical country. These countries need each other in order to fulfill their society needs. The Different Taste of The Society, The different taste of the society also becomes the reason of the country to do the international trade. For the example, the Z country and Y country both produce tea and coffee. The majority people of Z country prefer to drink tea instead of coffee and the majority people of Y country prefer to drink coffee instead of tea. Z country and Y country have a mutually agreement in order to gain from trade, so the Z country exports coffee to country Y and imports tea, in the other hand Y country exports tea to country Z and imports coffee from the Z country. The difference in taste has an impact to encourage trade activities. Motives, The motives on gaining extra profit from trade also become factor for a country doing trade. The advantages that they get from trade activities become motives why countries want to make trades.

Theory of the International Trade

Trade is an important element on the economic growth of a country. The increasing relationship between international trade systems with the countries is the international trade system will raise the trade volume of a country. According to Nongsina and Hutabarat (2007) the international trade main concentration is to increase the revenue of the countries and lowering the production costs, in other word usually called gain from trade.

International trade is happened because there are needs between the countries. The trade activity is also happened because there are differences on a price level of the commodities and it causes the different in amount, type, quality, the combination of the production cost, the different of income per capita, and the different of taste. We can assume that international trade can be done because there are factors that affect demand and supply from another country (Nopirin, 1992). The trade between the countries is happened based on mutual benefit and mutual trust. Developing countries and developed countries also do the international trade, in order to gain from trade and increase their countries revenue.

There is also blow theory stated by David Ricardo (1817) known as theory of comparative advantage. This theory explained if the country is inefficient in producing certain commodities if we compare with another country, it can be solved with production specialization of certain commodities that have the lowest level inefficiency and import product with the highest inefficiency level. David Ricardo also stated that (in The Law of Reciprocal Demand) in comparative advantage there is also relative price, relative price is decided by the activities between push and pull of the purchasing power in one country to buy products or commodities from another country and the power of another country to buy the products produced from the country itself. (Boediono, 1981).

The one of the several people who is agree with this comparative theory is J.S Mill, J.S Mill argument is a country will do a specialization on their export products which has the highest comparative advantage or in the other hand the lowest cost production and import a product which has comparative disadvantage. It means that the country tends to import the products because if they produced by themselves it will cost higher than doing import from another country.

The neoclassical economics by Eli Heckscher and Bertil Ohlin, two Swedish economist who stated this theory in first half of twentieth century and elaborated with David Ricardo theory about comparative advantage. The Heckscher – Ohlin theory explains about the existence of a country comparative advantage by its endowment factor: A country has a comparative advantage in the production of a product if that country relatively well- endowed with inputs used intensively in the production of that product (Case and Fair : 672).

Paul Krugman also realized the new idea from comparative advantage which was called as new trade theory. New trade theory explains that there are some very specific kinds of capital that are not currently available to other producers. For the example, Japanese automotive factory develops skills and knowledge that give them an edge in making an fuel efficient car. There is also Volvo, a brand of automotive from Sweden, makes intangible capital called *goodwill,* it is an advantage for Volvo which is well known as a producer of automotive that produce the cars for the good reputation of safety and quality over the years. This is the new comparative advantage, intangible advantage that not all of producers can apply this ability (Case and Fair : 673).

The new international trade export theory by Michael Porter, it is the diamond model. According to Porter, there are several things that must be owned by the countries in order to increase their competitive advantage, they are advances in technology, highly entrepreneurship behavior, high efficiency level or high productivity, high quality of the output, wide promotion and aggressive, services after sales, skilled labor, and etc. The Porter paradigm is important with imperfect competition condition especially in the international market.

Theory of Export

Export is activity to sell the goods / commodities and services from domestic to outside or foreign countries, whether it is a normal trade or individual trade. Export activity is selling domestic goods and services outside the country, it means the people outside the country use one country's domestic products. This condition injects the revenue side of the exporter country so it can be categorized as investment also. Export formula is (X-M), export is the medium to connect the national revenue with international transaction. Net export is one of component on aggregate expenditure (AE = C + I + G + (X-M)), Export from exporter country is an import for another country, so export activity depends on foreign revenue not from national revenue of the country itself (Nopirin, 1999).

The Demand and Supply Export Theory

Basic theory for International trade is absolute advantage (Adam Smith), comparative advantage (Heckscher – Ohlin, David Ricardo, Linder), and competitive advantage (Porter). These theories explained about what products that should be produced and exported by the countries, so the countries will get benefits from the international trade.

Comparative advantage is more common to explain that there are international trades among the countries. Based on comparative advantage, the countries learn to produce commodities which has high comparative advantage, meaning it has the resources (low cost) and import the goods or commodities which has low comparative advantage. Low comparative advantage means the countries rather import because the cost of import is lower than the country produce commodities by themselves. Competitive advantage is the new theory from Porter which is more suitable in today economics condition. Competitive advantage is focused on advances in technology and skilled labor, so the countries are pushed to be creative and actively following the change of international trade condition which the international trade nowadays having imperfect competition market. The country is pushed to be creative to get the benefits from the international trade.

Gross Domestic Product (GDP)

Gross domestic product is the main calculation to measure the national economic activity. Generally, gross domestic product is total market value of a country output. It is the market value of all final goods and services produced within a given period of time by factors of production located within the country (Case and Fair : 455). Regarding to this definition, there are four things to note; first, the treatment of the government production usually the product which is not sold to the market. Therefore, the price of the products is reflected by the input in making that product. Second, the product which is produced on that period is not sold into the market, but put in the storage as an inventory. This condition is also considered as GDP. Third, certain products like production machines are not sold into last consumer, but bought by another producer to make another product. Fourth, the product calculated as GDP is product that only produced on that period (Nopirin, 1992).

$$\boxed{GDP = C + I + G + (EX - IM)}$$

Inflation

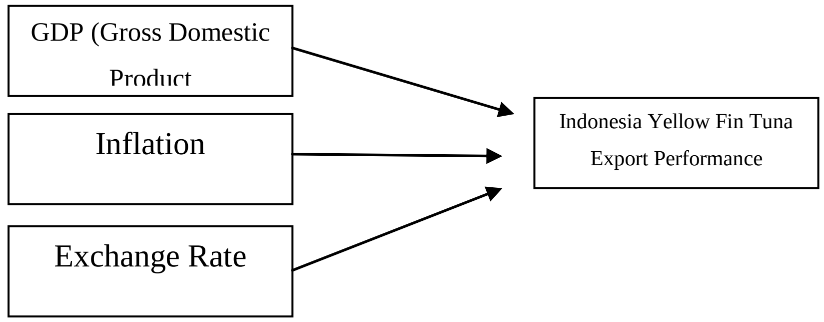
Generally, inflation is the process of increasing the price of goods continuously. The continuously increasing of price is happened on certain of period. The not continuosly increasing price (even in high percentage) is not categorized as inflation (Mankiw, 2003). Inflation is the process of one condition, not about high and low of the price. It means that the high and low of commodities price are not necessarily considered as inflation. A condition is considered as inflation if the increasing price of commodities happened continuously.

Exchange Rate

Exchange rate is comparison of two different currencies. According to Krugman and Obsfelt (2012) exchange rate is currency of a country measured by another country currency. (Mankiw, 2003) exchange rate is the price level that already approved by the citizens of both countries to do trade activity. There are two concepts based on exchange rate. First, nominal concept is concept to measure different currencies between two countries based on value. Second, real concept is a concept used to determine the competitive level of country export in the international market.

Depreciation is increasing the foreign rate or decreasing value of domestic currency because there are demand and supply of certain currency in the free trade market. Appreciation is decreasing the foreign rate value or increasing relative value of domestic currency. Devaluation is decreasing the value of domestic currency because of government policy in order to achieve special purpose.

Conceptual Frame Work



Hypothesis

Based on the Literature Review and previous research, therefore the hypotheses for this research are:

H1: Assumed that independent variable gross domestic product (GDP), inflation , and exchange rate simultaneously affect the export performance of yellow fin tuna Indonesia.

H2 : Assumed that independent variable gross domestic product (GDP), inflation , and exchange rate partially affect the export performance of yellow fin tuna Indonesia.

H3 : Assumed that gross domestic product has significance effect to export performance of yellow fin tuna Indonesia.

H4 : Assumed that inflation has significance effect to export performance of yellow fin tuna Indonesia.

H5 : Assumed that exchange rate has significance effect to export performance of yellow fin tuna Indonesia.

C. RESEARCH METHODOLOGY

Research design used in this study was descriptive quantitative. This research uses five countries specifically as the top destination countries of Indonesia yellow fin tuna export, they are United States of America, Thailand, Japan, Spain, and Vietnam. The variable that is used on this research is limitation. The data export of yellow fin tuna is in the time period from 2007 - 2014 from United Nation trade. The data of foreign GDP (gross domestic product), inflation (CPI) and exchange are publisher by World Bank from 2007 until 2014. This research used panel data analysis with fixed effect model (FEM) and the transmission is using Eviews 7 Software application.

The research model equation :

Log Tuna = $\beta_0 + \beta_1$ log GDP + β_2 log Inflation (CPI) + β_3 log Exchange Rate + εt

D. RESULTS AND DISCUSSION

The results of this panel data analysis is already passed two kinds of test, there are Chow test and Hausman test. Chow test is test to determine between common effect model and fixed effect model. While Hausman test determine between fixed effect model and random effect model. The results of both test is more efficient using fixed effect model.

Table 1.4 Fixed Effect Model Regression Test

Variable	Coefficient	t-Statistic	Prob.	Decision
C	-31220588	-3.254660	0.0027	
GDP?	4.61E-06	2.128162	0.0411	Significant
INF?	590686.3	3.944129	0.0004	Significant
EXRATE?	-6809.758	-3.525429	0.0013	Significant
R – Squared	0.684051			
Prob (F – Statistic)	0.000002			

(Significance level /α = 0,05)

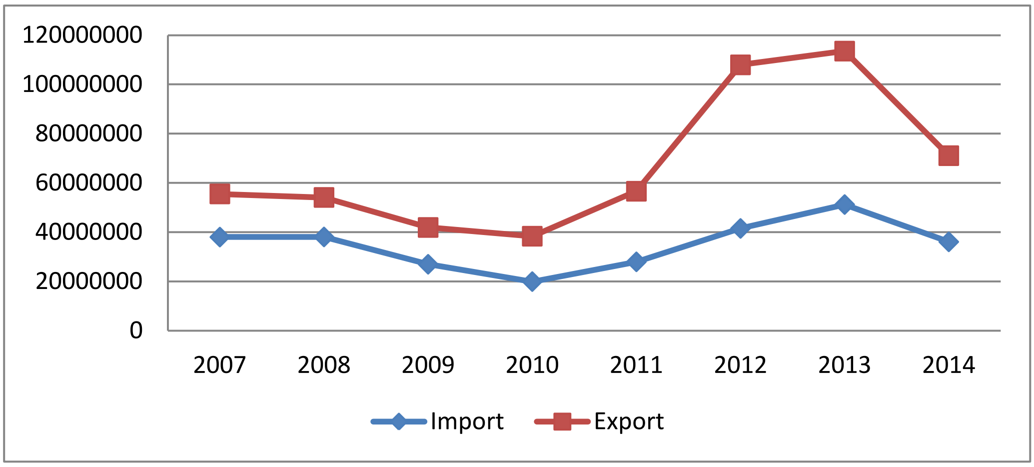
Source : Secondary Data, Processed

The Equation of This Panel Data Results :

Y (Indonesia Tuna Performance) = -31220588 + 4,61X1 (Foreign GDP) + 590686,3X2 (Foreign Inflation) -6,089,758X3 (Exchange Rate) +ε

According the results and equation above and the significance level $\alpha = 0,05$, we can conclude that the increasing 1% of foreign GDP (gross domestic product) will affect total export of Indonesia yellow fin tuna increasing about 4,61%. Where the writer assumes other variables are constant or ceteris paribus. The increasing 1% of foreign inflation will affect increasing to the total export of Indonesia yellow fin tuna about 590686,3%. Where the writer assumes the other variables are constant or ceteris paribus. increasing 1% of exchange rate will affect decreasing on total exports of yellow fin tuna Indonesia about 6,089,758%. Where the writer assumes the other variables are constant or ceteris paribus.

Figure 4.6 The Overall Export and Import Value of Yellow Fin Tuna To and From Top 5 Countries (on US dollar)



source : comtrade (processed) 2007 - 2014

Discussion

The Effect of Foreign GDP (gross domestic product) Importer Country on Total Export of Indonesia Yellow Fin Tuna

Based on statistical analysis from panel data regression test, the result is there is positive relationship between GDP (gross domestic product) and the total export of Indonesia yellow fin tuna. The effect is also significance with standard deviation α = 5%/0,05 and the coefficient is 4,61. From that results the writer can assume that if there is increasing of GDP (gross domestic product) 1% will affect increase of the total export of Indonesia yellow fin tuna about 4,61%. Vice versa, if there is decreasing 1% of GDP (gross domestic product) it will affect decreasing on total export of Indonesia yellow fin tuna for about 4,61%.

The result that GDP (gross domestic product) has positive relationship with exports is appropriate with the previous study by Mahmoud Abolpour Mofrad (2012) and Helmi Hamdi and Rashid Sbia (2013). GDP (gross domestic product) of importer countries represent the ability of the countries in absorbing the goods and services from foreign countries. The big power of absorbing makes the countries possible to purchase goods and services which are not produced domestically. The countries sometimes tend to import goods and services because the cost of import is lower than if they produced it by themselves.

The trends of importing goods and services also impact of the availability of the resources. If there are abundance amount of resources a country tend to export the products, but if there are lack of resources the country tend to import resources for domestic needs or import raw material and sell it again in form of finished goods so they sell with a higher price.

The higher GDP of a country shows the power of their economic growth and economic condition. The higher GDP shows that the ability to absorb is high and this condition affects the countries which export their products to importer countries. It means the trade activity increases the economic condition of both countries, whether as importer or exporter countries.

In this case, it is the total export of Indonesia yellow fin tuna. The top five destination countries of yellow fin tuna export, majority from developed countries such as United States of America, Japan, Spain which have a big GDP and relatively have a stabile economic condition. Moreover the Thailand and Vietnam are two of the best tuna fish exporters, they buy Indonesia yellow fin tuna and sell it again with higher price. The condition makes a mutualism agreement, United States of America, Thailand, Japan, Spain, and Vietnam with a good condition of economic will import the exported products from Indonesia. While for Indonesia the increasing demand over the years of yellow fin tuna will increase their GDP by making a new labor field (decrease unemployment rate) and also increase their national income.

The effect of Foreign Inflation to The Total Export of Indonesia Yellow Fin Tuna

Based on the statistical analysis from panel data regression test, the result is there is positive relationship between inflation (CPI) with the total export of Indonesia yellow fin tuna. The effect is also significance with standard deviation α = 5%/0,05 and the coefficient is 590686,3. From that results the writer can assume that if there is an increasing 1% of inflation (CPI) it will affect the increasing on total export of Indonesia yellow fin tuna for about 590686,3%. Vice versa if there is a decreasing of inflation 1% it will affect the Indonesia yellow fin tuna decreasing about 590686,3%.

The result is the inflation has positive relationship with exports which is appropriate with the previous study by Imran Choudry, Muhammad Hasan, and Muhammad Ali (2015). Inflation represents as the price of goods increasing and service continuously, inflation happened in the importer country will impact on increasing of their domestic goods and services price. The positive relationship is happened because in previous study by Imran Choudry, Muhammad Hasan and Muhammad Ali the exported products that come from Indonesia are in the form of foods, the consumer price index that is the object of this research shows that the increasing domestic average price impact decreasing on society to consume the domestic goods and rather to consume import goods that relatively have a cheaper or lower price. For Indonesia the increasing in export also will affect the decreasing on domestic supply, this condition leads increasing the demand of yellow fin tuna and it will make increasing price that leads into increasing the inflation.

The inflation happened in top five destination countries of Indonesia yellow fin tuna export tends to higher than if they import from Indonesia, the lower price of export Indonesia tuna makes the relationship between inflation (CPI) and total export of Indonesia yellow fin tuna becoming positive. CPI also determine the ability of the society in consuming goods and services, in this case consuming the yellow fin tuna is show us that the destination countries have a bigger welfare so they can consuming the yellow fin tuna that have relative expensive price.

The Relationship Between Exchange Rate and Total Export of Indonesia Yellow Fin Tuna

Based on statistical analysis from panel data regression test, the results are there are negative relationships between exchange rate and total export of Indonesia yellow fin tuna. The effect is significance between the independent and dependent variable, the value is lower than standard deviation α = 5%/0,05 and the coefficient is 6,089,758 %. From the results the writer can assume that an increasing 1% of exchange rate will affect decreasing on the total export of Indonesia yellow fin tuna for about 6,089,758 %. Vice versa if there is a decreasing 1% of exchange rate it will affect increasing on the total export of Indonesia yellow fin tuna for about 6,089,758 %.

The result is the exchange rate has negative relationship with exports which is appropriate with the previous study from Carmen Sandu and Nicolae Ghiba (2011).

Exchange rate has negative relationship with exports because if the exchange rate is appreciate, it will impact the cost of the production of the exporter countries to become more expensive, and the higher cost spent by the exporter countries makes the price of the products become expensive and hardly compete with other goods. The exchange rate volatility makes the export condition become negative.

In the case of Exchange rate with total export of Indonesia yellow fin tuna, there are negative relationships because the trade between Indonesia and the top five destination countries is using US dollars, furthermore the negative relationship between exchange rate and export also can be happened because the higher cost and the transaction will risk traders, if higher exchange rate increases the expected marginal utility of export revenue (De Grauwe, 1988). The higher cost in exporting yellow fin tuna makes negative relationship between the exchange rate and total export of Indonesia yellow fin tuna that using US dollar as the currency in making trades. The weakens rupiah with US dollar make the production cost for Indonesia as the exporter country become increase, this circumstances make the relationship between export of Indonesian yellow fin tuna and exchange rate have negative relationship. Indonesia as the exporter country tend to decreasing the export volume because the cost of export is increase (US dollar having appreciates) that is why the relationship between exchange rate and export is negative relationship.

E. CONCLUSION AND RECCOMENDATION

Conclusion

Based from the research on the previous chapter about the impact of GDP (gross domestic product), inflation, and exchange rate to the total export of Indonesia yellow fin tuna export performance, the writer can conclude and give recommendation as follows.

Simultaneously the independent variables (GDP/ gross domestic product, inflation, and exchange rate) simultaneously have significance impact to the dependent variables (Total export of Indonesia yellow fin tuna) from period of 2007 – 2014.

Partially the relationship between GDP (gross domestic product) and the total export of Indonesia yellow fin tuna is significance and having positive relationship. The higher the GDP (government consumption) of the importer shows us the ability of the importer countries to consume goods and services. In this case the importer countries, they are (United States of America, Thailand, Japan, Spain, and Vietnam) have relatively big amount of GDP which makes them absorbing bigger amount of Indonesia yellow fin tuna.

The relationship between inflation and total export of Indonesia yellow fin tuna Indonesia has a significance impact and positive relationship. The inflation in this case is consumer price index show us the ability of society to consume the goods and services, the effect of inflation on importer countries to the total export of Indonesia yellow fin tuna is significance and positive.

The relationship between exchange rate and total export of Indonesia yellow fin tuna is significance but having negative relationship. The impact is negative relationship because increasing the exchange rate of US dollars makes the production cost of Indonesia will increase too. It makes the production decrease and the price of yellow fin tuna itself increases, moreover the increasing price will make yellow fin tuna hardly to compete with other goods from other countries.

The power of a country also can be seen from the stabilize of its exchange rates, yellow fin tuna that has more ability than the other kind of tuna types can give Indonesia advantage as a powerful country as the export maritime commodities. The encouraging in maritime sectors especially yellow fin tuna will make Indonesia to increase the gross domestic product, increase the social welfare of Indonesia fisherman, expand the potential of maritime sector that Indonesia has like prawn, sea shell, and other fishes to increase the Indonesia export performances activities.

Recommendations

Based on the research on the previous chapter and the conclusion above, the writer would like to give some recommendations they are:

a. The results of chapter IV is taken from the maritime sectors especially in export of yellow fin tuna. This commodity has a bright potential future if government can provide some new regulations or policies that can maximize the production and the fishing of yellow fin tuna. The regulations or policies can be in the form of minister regulation from ministry of trade, ministry of maritime, and ministry of economics. The suitable regulation or policy that government gives will make positive impact on yellow fin tuna export itself and the Indonesia trading activity, so the impact will directly increase the overall in Indonesian economics.
b. Indonesian government should keep the exchange rates of rupiah in a precise point, so the price of the commodities of yellow fin tuna export can compete with other goods and services from other countries. The export activities that have an increasing will make rupiah more stabilize in the international market and exchange market. The stabilization of Indonesia economics can also attract investor to invest in Indonesia, because the economic stability and the business can run safely. So the export and the stabilize exchange rates have a positive domino effect to Indonesian economic.
c. Indonesia government should have special agreement with the friendly countries of yellow fin tuna export countries such as United States of America, Thailand, Japan, Spain, and Vietnam to make some agreements. Bilateral or Multilateral agreement to support export of Indonesia yellow fin tuna, so Indonesia and the friendly countries can have a mutual-beneficial relationship while doing international trade activities. The special occasion due to the formation of government agreement is each country especially Indonesia can have advantages in export and import goods and services to the friendly countries that free from tariff barriers, quota, and having the decreasing in payment customs duties from the friendly countries.
d. The government also should protect the domestic fisherman from foreign fisherman, strengthening the Indonesian area by giving 24 hours police water and marine force in protecting the Indonesian area from illegal fishing. Indonesia has lost at least 101 billion because of the illegal fishing activities. Indonesia has a massive potential from maritime sectors, and one of solutions to maximize this potential is by giving protection and strictly securing Indonesia ocean area from illegal fishing.
e. Indonesia also needs to increase the technology in order to maximize the potential maritime sectors. The simplest thing is to make cultivation and increase the human resource skills so they can operate the new equipment to get the better efficiency and maximize the profit. The increasing fisherman skills can be by giving them training to operate new technologies such as new boat, new radars, new techniques in catching fish that more efficient from other expertise. The good technologies and human resource skills can give Indonesia

more profits and reduce the obstacles and bad weathers in sailing, so the Indonesian fisherman can always be productive.

f. The limitation of variables and information cause many shortcomings and hopefully there are further developments on this research.

F. BIBLIOGRAPHY

Atuna. Online (http://www.atuna.com/index.php/en/tuna-info/tuna-species-guide).

Baltagi, Badi. 2004. *Econometric Analysis of Panel Data*. John Wiley & Sons Ltd

Boediono. 1981. *Pengantar Ilmu Ekonomi No.3 Ekonomi Internasional*. Edisi Pertama (1). Universitas Gadjah Mada Yogyakarta. BPFE Yogyakarta. Indonesia.

Case & Fair. 2012. *Principles of Economics*. Tenth Edition. Pearson Education International.

Comtrade. Online (http://comtrade.un.org/data/).

Chi Junwook & Cheng Seu Keow. 2016. *Do Exchange Rate Volatility and Income Affect Australia's Maritime Exports Flow to Asia?*. Journal Transport Policy.

Choudry Imran & Hasan Muhammad & Ali Muhammad. 2015. *The Relationship Between Export Food Items and Inflation (CPI) : Case Study of Pakistan*. Journal of Management Science.

FAO. 2008. Sustainable Fisheries Partnership August 2008. Journal Indonesian Tuna at Global Market.

Gujarati Damodar. 2003. *Essentials of Econometrics*. International Edition. Mcgraw Hill Inc.

Halwani Hendra. 2002. *Ekonomi Internasional dan Globalisasi Ekonomi.* Ghalia Indonesia.

Hamdi Helmi & Sbia Rashid. 2013. *Dynamic Relationship Between Oil Revenues, Government Spending, and Economic Growth in an Oil Dependent Economy*. Journal.

Kementrian Kelautan dan Perikanan. Online (http://www.eafmindonesia.net/profil_perikanan/profil_komoditi/Tuna).

Lee Chien Hui & Huang Bwo Nung. 2002. *The Relationship Between Exports and Economic Growth In East Asian Countries : A Multivariate Threshold Autoregressive Approach*. Journal of Economic Development.

Lidya L A Herda. 2011. *Analisis Variabel yang Mempengaruhi Perdagangan Bilateral ASEAN – 8 dan Mitra Dagangnya : Sebuah Aplikasi Model Gravitasi*. Thesis. Malang : Universitas Brawijaya.

Lina Asmara Wati & Wen I Chang & Mustadjab Moch Muslich. 2013. *Competitiveness of Indonesian Shrimp Compare with Thailand Shrimp in Export Market.* Journal.

Lipsey, R. G. 1995. *Pengantar Ilmu Ekonomi Edisi 10*. Bina Rupa Aksara Jakarta.

Mankiw Gregory. 2010. *Brief Principles of Macroeconomics*. Sixth Edition. South Western Publishing.

Ministry of Marine Affairs and Fishery of Republic Indonesia. Online www.kkp.go.id

Mofrad Abolpour Mahmoud. 2012. *The Relationship Between GDP, Export and Investment : Case Study Iran*. Journal.

Nongsina F. S & Hutabarat M. 2007. *Pengaruh Kebijakan Liberalisasi Perdagangan Terhadap Laju Pertumbuhan Ekspor – Impor Indonesia*. Jakarta.

Nopirin. 1992. *Ekonomi International*. Cetakan ketiga. Universitas Gadjah Mada Yogyakarta. Indonesia.

Nosita Firda. 2009. *Pengaruh Variabel Inflasi, Pendapatan Nasional, dan Nilai Tukar Terhadap Ekspor Non Migas Republik Indonesia ke Amerika Serikat*. Thesis. Malang : Universitas Brawijaya.

Obstfeld Krugman. 2012. *International Economics Theory and Policy*. Ninth Edition. Pearson Education Limited. England.

Root Franklin. 1990. *International Trade and Investment*. Sixth Edition. South Western Publishing. United States of America

Sadono Sukirno. 2006. *Makro Ekonomi Teori Pengantar Edisi 3*. Raja Grafindo Persada. Jakarta.

Salvatore Dominick. 1997. *Ekonomi Internasional*. Edisi Kelima. Erlangga. Indonesia.

Sandu Carmen & Ghiba Nicolae. 2011. *The Relationship Between Exchange Rate and Exports in Romania Using A Vector Autoregressive Model*. Journal : Universitatis Apulensis Series Oeconomica.

Setiawati Linda. 2011. *Analisis Pengaruh Pendapatan Nasional (GDP), Jarak, Infrastruktur, Kesamaan Ukuran Ekonomi, Bahasa, dan ACFTA Terhadap Total Perdangangan Negara ASEAN – 6 dan Cina*. Thesis. Malang : Universitas Brawijaya.

Sunoko Rahmadi & Huang Hsian – Wen. 2014. *Indonesia Tuna Fisheries Development and Future Strategy*. Journal Marine Policy.

T H Tulus Tambunan. 2004. *Globalisasi dan Perdagangan Internasional*. Cetakan Pertama. Ghalia Indonesia.

Wibowo Eko Ari Prasetyo. 2008. *Analisa Variabel – Variable yang Berpengaruh Terhadap Tingkat Ekspor Kopi Indonesia*. Thesis. Malang : Universitas Brawijaya.

Widarjono Agus. 2009. *Ekonometrika, Teori dan Aplikasi untuk Ekonomi dan Bisnis.* Ekonisia Edisi Kedua

World Bank. Online (http://data.worldbank.org/).

Yudiarosa Indriana. 2009. *Analisis Ekspor Tuna Indonesia*. Journal.

Yuniarti Dini. 2008. *Potensi Perdagangan Global Indonesia : Pendekatan Gravity Model*. Jurnal Ekonomi.