

**THE EFFECT OF TRANSSHIPMENT PROHIBITION POLICY TOWARDS  
TOTAL EXPORT VALUE OF FRESH YELLOWFIN  
TUNA AND BIGEYE TUNA  
(Study at Statistics Indonesia, August 2012 – February 2017)**

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**ABSTRAK**

*Penelitian ini bertujuan untuk mengetahui pengaruh dari penerapan kebijakan larangan alih muat kapal pada bulan November 2014 terhadap nilai total ekspor ikan tuna sirip kuning segar dan ikan tuna mata besar segar. Penelitian ini merupakan penelitian event study dengan metode kuantitatif. Populasi pada penelitian ini adalah nilai total ekspor ikan tuna sirip kuning segar dan ikan tuna mata besar segar sebelum kebijakan diterapkan yang terdiri dari 27 bulan pada bulan Agustus 2012 – Oktober 2014, dan sesudah kebijakan diterapkan yang terdiri dari 27 bulan pada bulan Desember 2014 – Februari 2017. Penelitian ini menggunakan teknik sampel jenuh yang mengikutsertakan seluruh anggota populasi sebagai sampel. Penelitian ini menggunakan Uji Statistik Deskriptif, Uji Normalitas, Uji T Sampel Berpasangan. Hasil penelitian ini menunjukkan adanya perbedaan yang signifikan pada nilai total ekspor ikan tuna sirip kuning segar setelah penerapan kebijakan. Berdasarkan hasil yang ditunjukkan, kebijakan yang terkait berpengaruh secara negatif terhadap nilai total ekspor ikan tuna sirip kuning segar. Sedangkan di sisi lain, penelitian ini menunjukkan bahwa tidak ada perbedaan yang signifikan pada nilai total ekspor ikan tuna mata besar segar setelah penerapan kebijakan. Hal ini dikarenakan nilai ekspor tuna mata besar segar sebelum dan sesudah penerapan kebijakan cukup stabil.*

**Kata kunci : Alih Muat, Ekspor, Tuna Sirip Kuning, Tuna Mata Besar.**

**ABSTRACT**

This research aims to know whether transshipment prohibition policy implementation in November 2014 gives a significant effect towards Indonesian total export value of fresh yellowfin tuna and bigeye tuna. This research is an event study research with quantitative method. Population in this research is Indonesian total export value of fresh yellowfin and bigeye tuna before the policy implementation which consists of 27 months from August 2012 – October 2014, and after the policy implementation which consists of 27 months from December 2014 – February 2017. This research uses saturated sampling technique which includes all items in population as the sample. This research uses Descriptive Statistical Analysis, Normality Test, and Paired Sample T-Test. The result shows that there is significant difference in total export value of fresh yellowfin tuna after the implementation of the policy. Based on the result, it indicates that the policy implementation negatively affects the total export value of fresh yellowfin tuna. On the other hand this research reveals that there is no significant difference in total export value of fresh bigeye tuna after the implementation of the policy. It is because the export values of fresh bigeye tuna before and after the policy implementation are fairly stable.

**Keywords: Transshipment, Export, Yellowfin Tuna, Bigeye Tuna.**

## 1. INTRODUCTION

Indonesia is the biggest archipelagic country with 17.508 islands, with 81.000 km of coastline (www.indonesia.go.id, 2017). This country is rich by the tremendous fish varieties, reefs, and other biotic and abiotic sources. The bountiful resource gives the MMAF great obstacles of Illegal, Unreported, and Unregulated Fishing (IUUF). IUUF is an act performed by the fishers, which includes but not limited to: fishing in a conflict area; non-reporting, miss-reporting, and under reporting of fishing activities; unclear vessel' identity; and a fishing that is not regulated by the country. One of the well-known practices of IUUF in Indonesia is transshipment. It is reported by press media as a disadvantaging act toward Indonesian fisheries. It is because transshipment often related to act of unreported fishing activity, where the fisherman sells their catch directly to abroad market.

In 2012, the Ministry of Maritime Affairs and Fisheries of Indonesia released the regulation number 30 of Capture Fisheries (*Menteri Kelautan dan Perikanan Republik Indonesia Nomor Per. 30/MEN/2012*). The article 69 regulates the practice of transshipment even though it stated that every fish capture vessel and fish transport vessel must landed their fish on port as regulated and written on their license (Gustina, 2014: 345). The regulation was changed in 2013, in MMAF regulation number 26, the article 69 was deleted but the article 37 was augmented with three new paragraphs. The new paragraphs declare that transshipment is allowed with a certain requirements (*Menteri Kelautan dan Perikanan Republik Indonesia Nomor 26/PERMEN-KP/2013*). These two MMAF regulations were considered ambiguous because both trigger and support the practice of IUUF itself. By the time Susi Pudjiastuti gained the position of Minister of Maritime Affairs and Fisheries of Indonesia in October 2014, she passed new regulations to improve Indonesian fisheries performances. One of them is the second amendment for MMAF regulation number 30/ year of 2012. The new amendment changed the article 37 again and finally stated that transshipment is prohibited and the doer will have their fishing license taken as the consequence. This new amendment is written in MMAF regulation number 57/year of 2014 (*Menteri Kelautan dan Perikanan Republik Indonesia Nomor 57/PERMEN-KP/2014*) and known as transshipment prohibition policy. The aim of this amendment is to eradicate the practice

of transshipment which often resulting to Indonesian loss of tons of tuna.

Transshipment prohibition policy gained many protests from many stakeholders. It came from Indonesian tuna associations, fisheries experts from both practitioner and scholar, and also from some government bodies. It is because the practice of tuna capture requires both tuna capture vessel and also tuna transport vessel. By the implementation of transshipment prohibition policy, the tuna transport vessel could no longer operate.

Tuna commodity is one of superior commodity in industrialization. It is because tuna is the second highest foreign exchange contributor in fisheries sector, right after shrimp commodity. In 2011, tuna contributed 14% of total Indonesian fisheries export (Arthatiani, 2015: 72). Tuna plays a big role in Indonesian export, and with Indonesia placing the number one archipelagic country in the world, Indonesia also has a huge potential to improve this commodity performance.

According to Arthatiani, whom conducted interviews with one of the fisheries port' employees in Jakarta about the ex-foreign moratorium regulation (a regulation that was passed on the same time with transshipment prohibition policy), the tuna exporters do not feel the significant impact of ex-foreign ship moratorium regulation. The tuna exporters rather concern about transshipment prohibition policy affecting the tuna catch production. It is because the time requires for a tuna catching vessel using the long-line tools is ranged from eight to twelve months, which make the use of tuna transport vessel a mandatory. The fresh tuna exporters in Jakarta had to anticipate the implementation of transshipment prohibition policy. They even had to import fresh tuna from other countries, and change the fresh tuna export in to the frozen tuna export (Arthatiani, 2015:75-76). This journal assures the writer of this minor thesis to use the value of fresh tuna export as an indicator to evaluate the implementation of the transshipment prohibition policy.

Tuna is a global commodity and listed inside the Harmonized System (HS) code. HS code is a list of categories of goods, which is arranged systematically to ease the process of trade (www.djpen.kemendag.go.id, 2017). Indonesian tuna export, is divided into two main categories which are raw tuna and the tuna based processed goods. According to HS Code 1996, the code for raw tuna is HS 03, and the code for tuna based

processed goods is HS 16. The HS 03 is divided into two parts; the commodities that have the code starts with HS 0302 are the fresh products, on the other hand HS 0303 represents a code for frozen fish commodity (Suhana, 2016:1252). The HS code is renewed a couple of times and the latest one was in 2012. The arrangement for tuna commodities in the HS code 2012 is similar yet has a few differences from the old code. One of the differences is in the HS code 1996, the bigeye tuna is included in the “other tuna” category, which in comparison to HS code 2012 where bigeye tuna has its own code.

## 2. LITERATURE REVIEW

### 2.1. International Trade

#### Theories

There are several theories of international trade that developed since long time ago. Wild explains a couple theories of international trade. The first one is mercantilism. Mercantilism defined as, “the trade theory that nations should accumulate financial wealth, usually in the form of gold, by encouraging exports and discouraging imports is called mercantilism” (Wild, 2013: 168).

The second theory is absolute advantage. It refers to, “the ability of a nation to produce a good more efficiently than any other nation is called an absolute advantage” (Wild, 2013: 169).

The third theory is comparative advantage. It is an advantage that happens if, “a country has comparative advantage when it is unable to produce a good more efficiently than other nations but produces the good more efficiently than it does any other good” (Wild, 2013: 171).

The fourth theory is factor proportions theory. This theory states that, “countries produce and export goods that require resources (factors) that are abundant and import goods that require resources in short supply” (Wild, 2013: 173).

The last one is international product life cycle theory. International product life cycle theory says that, “a company will begin by exporting its product and later undertake foreign direct investment as the product moves through its life cycle” (Wild, 2013: 174).

#### Advantages

There are many advantages that can be obtained through practicing international trade. Spulber (2007:75-79) explains there are five major gains from international trade

1. Preference of variety and economies of scale. a major source gains from trade comes from the combination of consumer preferences for

increased variety and the advantages manufacturers derive from economies of scale

2. Comparative advantage. Countries end up specializing in those products where they have relatively lower unit labor costs as compared to other countries
3. Advantage of comparative availability of factors of production. This advantage explains that, in trade between two countries, one country will specialize in the production of goods that take advantage of that country’s relatively more intensive factor as compared to the other country
4. Differences in preferences and endowments. These advantages can occur when, “countries have different endowments but similar consumer preferences, or different preferences but similar endowments
5. Advantage of innovation and technology transfer. This advantage means that, “a rapidly developing source of gains from trade stems from differences in technologies across countries

### 2.2. Export

#### Classifications

Based on Ministry of Trade of Indonesia, regulation number: 01/M-DAG/PER/1/2007 there are 4 classifications of export goods (djpen.kemendag.go.id, 2011):

1. Type of goods that are governed by their services
2. Type of goods that its export is controlled
3. Type of goods that is prohibited for export
4. Type of goods that free to be exported

#### Procedure

East Java’ Industry and Trade Service provides us with a simple picture to illustrate the flow of an export (www.eximjatim.com, 2017). It gives an illustration of the involved stakeholders in the process in each procedure. The explanation of some abbreviations on figure 2.1 based on the website of East Java Industry and Trade Services are as follow (www.eximjatim.com, 2017):

a. L/C

L/C stands for Letter of Credit. It is a system of payment which allows the exporter to receive their payment without waiting for the notification after the products and the documents have been sent to the destination country.

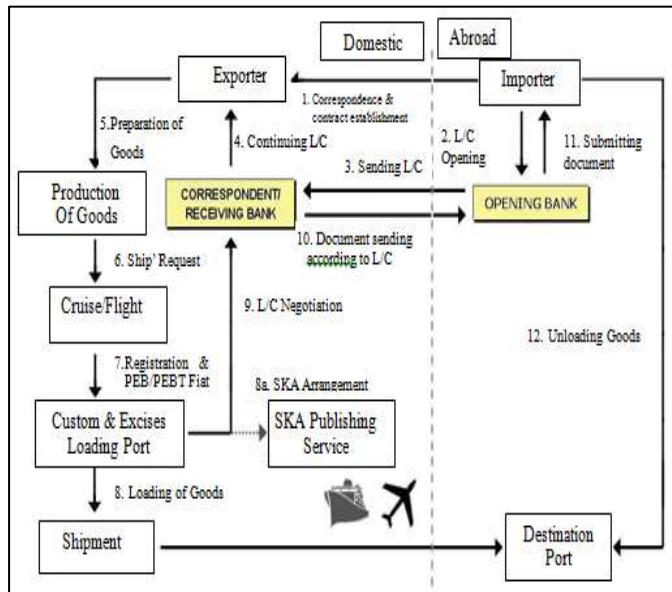
b. *PEB/PEBT*

*PEB* stands for Goods’ Export Notification (*Pemberitahuan Ekspor Barang*) and *PEBT* stands for Certain Goods’ Export Notification

(Pemberitahuan Ekspor Barang Tertentu). PEB is the main document in export process.

c. SKA

SKA stands for Certificate of Origin (*Sertifikat Keterangan Asal*). This document is attached along with the exported goods to prove that the shipped products are from Indonesia (www.eximjatim.com, 2017)



**Figure 1. The Export Procedure**  
Source: www.eximjatim.com (2017).

**2.3. Ministry of Maritime Affairs and Fisheries**

Below is the organizational structure of Ministry of Maritime Affairs and Fisheries (MMAF) based on the Presidential regulation number 94 year of 2006 (www.indonesia.go.id, 2017):

1. Minister of Maritime Affairs and Fisheries;
2. General Secretary;
3. General Inspectorate;
4. General Directorate of Fishing;
5. General Directorate of Aquaculture;
6. General Directorate of Monitoring and Control of Marine Resources and Fisheries;
7. General Directorate of Fisheries Processing and Marketing;
8. General Directorate of Marine, Coastal and Small Islands;
9. Marine and Fisheries Research Agency;
10. Human Resources Development Agency of Maritime Affairs and Fisheries;
11. Expert Staff.

**2.4. Illegal, Unreported, and Unregulated Fishing**

Based on the International Plan of Action to prevent, deter, and eliminate illegal, unreported,

and unregulated fishing, written by Food and Agriculture Organization of United Nation, IUUF definition is such follows (FAO, 2001: 2-3):

1. Illegal fishing refers to activities:
  - a. Conducted by national or foreign vessels in waters under the jurisdiction of a State, without the permission of that State, or in contravention of its laws and regulations;
  - b. Conducted by vessels flying the flag of States that are parties to a relevant regional fisheries management organization but operate in contravention of the conservation and management measures adopted by that organization and by which the States are bound, or relevant provisions of the applicable international law; or
- c. In violation of national laws or international obligations, including those undertaken by cooperating States to a relevant regional fisheries management organization.
2. Unreported fishing refers to fishing activities:
  - a. Which have not been reported, or have been misreported, to the relevant national authority, in contravention of national laws and regulations; or
  - b. Undertaken in the area of competence of a relevant regional fisheries management organization which have not been reported or have been misreported, in contravention of the reporting procedures of that organization.
3. Unregulated fishing refers to fishing activities:
  - a. In the area of application of a relevant regional fisheries management organization that are conducted by vessels without nationality, or by those flying the flag of a State not party to that organization, or by a fishing entity, in a manner this is not consistent with or contravenes the conservation and management measures of that organization; or
  - b. In areas or for fish stocks in relation to which there are no applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law.

## 2.5. Transshipment Prohibition Policy

### 2.5.1. Ministry of Maritime Affairs and Fisheries regulation number 30/ year of 2012 (*Menteri Kelautan dan Perikanan Republik Indonesia Nomor Per. 30/MEN/2012*)

The MMAF regulation number 30 in 2012 is regulating about the catch fisheries in Indonesia. The article 37 regulates the catching area and port, it contains six paragraphs but it doesn't clearly state whether the transshipment is allowed or not. It is because it says both fishing vessel and fish transport vessel must land their catch on the appointed port as written in their license. On the other hand, the article 69 – 72 of this regulation explains about the mechanism of transshipment allowed by the government. Therefore, this regulation allows transshipment with a certain requirements.

### 2.5.2. Ministry of Maritime Affairs and Fisheries regulation number 26/ year of 2013 (*Menteri Kelautan dan Perikanan Republik Indonesia Nomor 26/Permen-KP/2013*)

This is the first amendment of MMAF regulation number 30 in 2012, this regulation changes some articles including the transshipment regulation. It erases the article 69 – 72 of the previous regulation, while adding three new parts of article 37 related to transshipment practice. The transshipment practice is allowed and explained in the article 37A, 37B, and 37C.

### 2.5.3. Ministry of Maritime Affairs and Fisheries regulation number 57/ year of 2014 (*Menteri Kelautan dan Perikanan Republik Indonesia Nomor 57/Permen-KP/2014*)

This MMAF regulation number 57 in 2014 deleted the three articles added in MMAF regulation number 26 in 2013. It erases the article 37A, 37B, and 37C. It also erases the paragraphs number 7 and 8 in article 37 which mentions that transshipment is allowed. By this amendment the government of Indonesia officially announced that transshipment practice prohibited.

## 2.6. Tuna and Fresh Tuna

Tuna is a fish from Scombroidae family. It has characteristics as follows (Wibowo, 2007: 11):

1. It has two back fins (dorsal fin).
2. It has finlet, which are short and small fins behind the dorsal fin and it look like bumps.
3. The tail fin (caudal fin) shaped typical tuna forked.

4. It shapes like torpedo. It shapes like a cone toward the head and shrink towards the tail with the base of tail rounded.
5. At the base of the tail, there is long slim bulge which called caudal penducle with 1-2 bulges.
6. It has small cycloid shaped scale.

Below are a few things that should be practiced in order to get the fresh tuna (Wibowo, 2007: 30):

1. The tuna catching process has to be strict in following the good handling process (GHP).
2. Treat tuna gently, because any physical damage will affect the tuna grade.
3. Tuna has to be killed in the right way in the most soothing way.
4. The blood needs to be cleans from the body. It needs to be gutted and beheaded in the right way.
5. The inside and outside part of the body need to be cleansed in the right way.
6. The temperature of tuna body needs to be cooled down close to 0o C, this process is called precooled.
7. Keep the precooled fish in the chilled seawater (CSW) or refrigerated seawater (RSW) right away.
8. Maintain the temperature low along the way back to the port.
9. Unload the fish during low air temperature (night time is suggested) carefully.
10. Maintain the low temperature in the storage.

## 2.7. Yellowfin Tuna

Yellowfin tuna (*Thunnusal bacares*) is known as *Madidihang* or *Tuna Sirip Kuning* in Indonesia. This type of tuna has bright yellow colored back fin tip. The color of the back until the stomach is metallic dark blue. On the belly part the color is silvery yellow. On grown yellowfin tuna, 120 cm or more, the second dorsal fins and anal fins is quite long and it can reach 20% of its body length. It is mostly found in open tropical and subtropical water, such as Atlantic, Mediterranean Sea, and Indonesian water, and east and west Pacific. The size of this type of tuna is pretty big, because it can reach 2,4 m and weigh to more than 150 kg. The meat's color is pink and very flavorful (Wibowo, 2007: 13).

## 2.8. Bigeye Tuna

Bigeye tunas (*Thunnus Obesus*) are recognizable from their eyes size. Its body could range from 60 – 250 cm long. The pectoral fin is long and it could extend to the second dorsal fin. It has 13-14 tail spikes. The color of its back is

metallic dark blue, silvery blue on both sides of its body, and greyish white on the stomach part. Its fins, for all dorsal, tail, and other fins are yellow. It usually live until 250 m deep in the open tropical water, such as Indonesian water and Pacific, but it's not found in Mediterranean Sea. Bigeye tuna's meat is soft and it contains just the right number of fat that made it suitable for canned products. The fat in it is pretty high, therefore gives a special flavor and make this commodity very valuable (Wibowo, 2007: 15-16).

### 3. RESEARCH METHOD

This research is an event study research. The data used in this research is taken from Statistics Indonesia' website (www.bps.go.id). Statistics Indonesia' head office is located in Jl. Dr. Sutomo 6 – 8 Jakarta, Indonesia. The population in this research is the total value of Indonesian fresh yellowfin and bigeye tuna export before the implementation of transshipment prohibition policy, in which consists of 27 monthly data to be observed from August 2012 until October 2014, and after the implementation of transshipment prohibition policy, in which also consist of 27 monthly data from December 2014 until February 2017. This research uses one of the non-probability sampling techniques which is saturated sampling. The sample in this research is using all the elements inside the population which is the total value of Indonesian fresh yellowfin and bigeye tuna export before the implementation of transshipment prohibition policy. This research observes secondary data as the main observation.

This research is using the documentary data collection method. Data analysis is an activity to examine the relevancies and formulation between samples' element and also to test the hypothesis set by a researcher. This research is aimed to seek the differences between total export value of fresh yellowfin tuna and bigeye tuna before and after the implementation of transshipment prohibition policy. This research will use three types of statistical test using the IBM SPSS Statistic 23 application to help in data interpretation.

1. Descriptive Statistical Analysis
2. Inferential Statistical Analysis
  - a. Classical Assumption Test
  - b. Comparative T-Test

## 4. RESULT AND ANALYSIS

### 4.1. Descriptive Statistical Analysis

#### 4.1.1. Descriptive Statistical Analysis on Fresh Yellowfin Tuna Export

Figure 2 shows the movement of export values of fresh yellowfin tuna from August 2012 until February 2017. The yellow line represents the export values of fresh yellowfin tuna after the transshipment prohibition policy is implemented in November 2014. The yellow line shows dynamic movement of export and placed below the blue line which represents the export values before the policy is implemented. In comparison with the yellow line, the blue line shows that before the transshipment prohibition policy the fresh yellowfin tuna commodity contributes higher values of export. This figure indicates that there is a significant decrease of fresh yellowfin tuna export value after the transshipment prohibition policy is implemented.

**Figure 2. The Movement of Fresh Yellowfin Tuna Export**

Source: Processed Data (2017).

**Table 1. Descriptive Statistical Analysis on Fresh Yellowfin Tuna Export**

	N	Minimum	Maximum	Mean	Std. Deviation
Yellowfin Before	27	7,974	3,077,167	1,336,479.37	757,394.506
Yellowfin After	27	6,891	1,722,129	634,770.22	392,460.359
Valid N (listwise)	27				

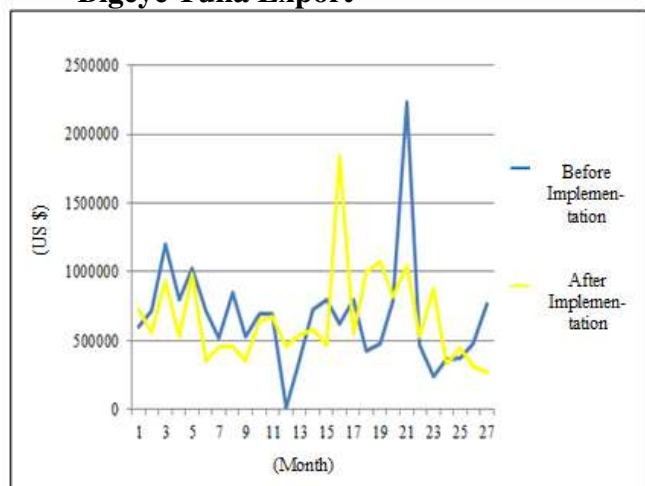
Source: Processed Data (2017).

Based on the result of Descriptive Statistics shown on the table above the conclusions drawn from the data are:

- 1) The minimum value of fresh yellowfin tuna export before the implementation of transshipment prohibition policy is US\$.7,974, which is the export value in March 2013. On the other hand, the minimum value of fresh yellowfin tuna export after the implementation of transshipment prohibition policy is US\$.6,891, which is the export value in March 2016.
- 2) The maximum value of fresh yellowfin tuna export before the implementation of transshipment prohibition policy is US\$.3,077,167, which is the export value in December 2012. On the other hand, the maximum value of fresh yellowfin tuna export after the implementation of transshipment prohibition policy is US\$.1,722,129, which is the export value in December 2014.

- 3) The average value of fresh yellowfin tuna export before the policy implementation is US\$.1,336,479.37 and after the policy implementation is US\$ 634,770.22.
- 4) The standard deviation value of fresh yellowfin tuna before the policy implementation is US\$ 757,394.506 and after the policy implementation is US\$ 392,460.359.

#### 4.1.2. Descriptive Statistical Analysis on Fresh Bigeye Tuna Export



**Figure 3. The Movement of Fresh Bigeye Tuna Export**

Source: Processed Data (2017).

Figure 3 shows the movement of export values of fresh bigeye tuna, for both before and after the transshipment prohibition policy is implemented. The blue line represents the export values before the policy was implemented, and the yellow line represents the export values after the policy was implemented. Based on this figure we can observe that the yellow line placed below the blue line, yet they are not significantly apart. This figure indicates that even though there is a decrease in the export values of fresh bigeye tuna, the decrease is not significant.

**Table 2. Descriptive Statistical Analysis on Fresh Bigeye Tuna Export**

	N	Minimum	Maximum	Mean	Std. Deviation
Bigeye Before	2	6,933	2,232,512	675,062.96	396,682.188
Bigeye After	7	271,252	1,841,789	659,162.78	335,871.96
Valid N (listwise)	2				
	7				

Source: Processed Data (2017).

Based on the result of Descriptive Statistics shown on the table above the conclusions drawn from the data are:

- 1) The minimum value of fresh bigeye tuna export before the implementation of transshipment prohibition policy is US\$.6,933, which is the

export value in July 2013. On the other hand, the minimum value of fresh bigeye tuna export after the implementation of transshipment prohibition policy is US\$.271,252, which is the export value in February 2017.

- 2) The maximum value of fresh bigeye tuna export before the implementation of transshipment prohibition policy is US\$.2,232,512, which is the export value in April 2014. On the other hand, the maximum value of fresh bigeye tuna export after the implementation of transshipment prohibition policy is US\$1,841,789, which is the export value in March 2016.
- 3) The average value of fresh bigeye tuna export before the policy implementation is US\$.675,062.96 and after the policy implementation is US\$ 659,162.78.
- 4) The standard deviation value of fresh bigeye tuna before the policy implementation is US\$ 396,682.188 and after the policy implementation is US\$ 335,871.96.

#### 4.2. Inferential Statistical Analysis

##### 4.2.1. Classical Assumption Analysis

**Table 3. Normality Test on Fresh Yellowfin Tuna Export**

		Ln Yellowfin Before	Ln Yellowfin After
N		27	27
Normal Parameters	Mean	13.7582	12.9803
	Std. Deviation	1.22548	1.22562
	Absolute	.278	.213
Most Extreme Differences	Positive	.168	.184
	Negative	-.278	-.213
Test Statistics		.278	.213
Asymp. Sig. (2-tailed)		.000	.003
Monte Carlo Sig. (2-tailed)	Sig. 99% Lower Bound	.024	.154
	Confidence Upper Bound	.020	.145
	Interval	.028	.163

Source: Processed Data (2017).

Table 3 shows the result of Kolmogorov Smirnov Test on transformed values of fresh yellowfin tuna export, both before and after the transshipment prohibition policy implementation. In the table, the Test Statistics value shows 0.278 for Ln Yellowfin Before. This value is above  $\alpha$  which is 0.05. The result shows the Test Statistics  $\geq 0.05$ , hence based on the criteria of conclusion drawing explained in the previous chapter, the  $H_0$  is accepted. The Test Statistics value of Ln Yellowfin After shows 0.213 which also higher than  $\alpha$ . Based on the processed data the Test Statistics values of both Ln Yellowfin Before and Ln Yellowfin After conclude that both data are normally distributed.

**Table 4. Normality Test on Fresh Bigeye Tuna Export**

			Ln Bigeye Before	Ln Bigeye After
N			27	27
Normal Parameters	Mean		13.1893	13.2953
	Std. Deviation		.97242	.45100
	Absolute		.252	.117
Most Extreme Differences	Positive		.206	.117
	Negative		-.252	-.078
Test Statistics			.252	.117
Asymp. Sig. (2-tailed)			.000	.200
Monte Carlo Sig. (2-tailed)	Sig. 99% Confidence Interval	Lower Bound	.052	.823
		Upper Bound	.046	.813
			.058	.832

Source: Processed Data (2017).

Table 4. shows the result of Kolmogorov Smirnov Test on transformed values of fresh bigeye tuna export, both before and after the transshipment prohibition policy implementation. In the table, the Test Statistics value shows 0.252 for Ln Bigeye Before. This value is above  $\alpha$  which is 0.05. The Test Statistics  $\geq 0.05$ , hence based on the criteria of conclusion drawing explained in the previous chapter, the  $H_0$  is accepted. The Test Statistics value of Ln Bigeye After shows 0.117 which also higher than  $\alpha$ . Based on the processed data the Test Statistics values of both Ln Bigeye Before and Ln Bigeye After conclude that both data are normally distributed.

#### 4.2.2. Comparative T-Test

On Table 5.  $t_{calculated}$  shows 2.266. This value is higher than the  $t_{table}$  which is 2.056. The  $t_{table} \leq t_{calculated}$  means that  $H_1$  is accepted. In addition, the p value shows 0.032 which is less than 0.05. This condition concludes that  $H_1$  which state there is a difference of fresh yellowfin tuna export after the implementation of transshipment prohibition policy in November 2014 is accepted.

**Table 5. Paired Sample T-Test on Fresh Yellowfin Tuna Export**

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Ln Yellowfin Before Ln Yellowfin After	.77787	1.78412	.34335	.07209	1.48364	2.266	26	.032

Source: Processed Data (2017).

On Table 6  $t_{calculated}$  shows -0.556. This value is less than the  $t_{table}$  which is 2.056. The  $t_{table} \geq t_{calculated}$  means that  $H_2$  is rejected. In addition, the p value shows 0.583 which is more than 0.05. This condition concludes that  $H_2$  which state there is a

difference of fresh bigeye tuna export after the implementation of transshipment prohibition policy in November 2014 is rejected.

**Table 6 Paired Sample T-Test on Fresh Bigeye Tuna Export**

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Ln Bigeye Before Ln Bigeye After	-.10599	.99037	.19060	-.49777	.28579	-.556	26	.583

Source: Processed Data (2017).

### 4.3. Discussion

#### 4.3.1. Transshipment prohibition policy implementation in November 2014 gives significant effect towards Indonesian total export value of fresh yellowfin tuna.

The result of Paired Sample T-Test shows that the implementation of transshipment prohibition policy in November 2014 gives significant effect towards the total export value of fresh yellowfin tuna. The result is similar with the Figure 2 that shows there is a decrease in the fresh yellowfin tuna export after the transshipment prohibition policy is implemented. The Figure 2 shows the movement of export values of fresh yellowfin tuna from August 2012 until February 2017. The yellow line represents the export values of fresh yellowfin tuna after the transshipment prohibition policy is implemented. The yellow line shows movement of export and placed below the blue line which represents the export values before the policy is implemented. In comparison with the yellow line, the blue line shows that before the transshipment prohibition policy the fresh yellowfin tuna commodity contributes higher values of export. This figure indicates that there is a significant decrease of fresh yellowfin tuna export value after the transshipment prohibition policy is implemented.

Described in the Table 1, the Descriptive Statistical Analysis shows that the average value of fresh yellowfin tuna export decrease significantly from US\$.1,336,479.37 before the policy implementation to US\$ 634,770.22 after the policy implementation. Even though there are extreme minimum and maximum values in both before and after the implementation of the policy shown in the Table 1, the result of Normality Test that displayed in the Table 3 shows that data are normally distributed. The extreme values might have been caused by other factors that are not explained in this research, considering that the observed commodity



is a wild catch tuna export which related to many science, technical, and trading factors.

#### **4.3.2. Transshipment prohibition policy implementation in November 2014 does not give significant effect towards Indonesian total export value of fresh bigeye tuna.**

The result of Paired Sample T-Test shows that transshipment prohibition policy does not give significant effect towards the total export value of fresh bigeye tuna. Fresh bigeye tuna export in Figure 3 shows fairly stable values in both before and after the implementation. Figure 3 shows the movement of export values of fresh bigeye tuna, for both before and after the transshipment prohibition policy is implemented. The blue line represents the export values before the policy was implemented, and the yellow line represents the export values after the policy was implemented. Based on this figure we can observe that the yellow line placed below the blue line, yet they are not significantly apart. This figure indicates that even though there is a decrease in the export values of fresh bigeye tuna, the decrease is not significant.

Table 2 shows the average value of fresh bigeye tuna export decrease from US\$.675,062.96 before the policy implementation to US\$ 659,162.78 after the policy implementation. Even though there is a decrease, the average of total export value of fresh bigeye tuna before and after the implementation does not show a big margin. Normality Test' result in Table 4 shows that data is normally distributed. Table 2 shows that fresh bigeye tuna export contains wide spread of minimum and maximum values. This condition might also be influenced by the same factors as fresh yellowfin tuna export. The result also support the findings by Kurniawati (2014) that addressed there are other affecting factors if an agreement does not give significant effect towards a sector, depending on each variable's condition.

## **5. CONCLUSION AND SUGGESTION**

### **5.1. Conclusion**

1. Transshipment prohibition policy implementation in November 2014 gives significant difference in total export value of fresh yellowfin tuna. The purpose of this policy implementation is to eradicate the practice of illegal, unreported, and unregulated fishing (IUUF) in Indonesia, yet it hampered the total export value of fresh yellowfin tuna export. This condition reflected on the export movement of

fresh yellowfin tuna, which shows significant decrease after the implementation.

2. Transshipment prohibition policy implementation in November 2014 does not give significant difference in total export value of fresh bigeye tuna. This condition reflected on the export movement of fresh bigeye tuna, which shows fairly stable values.

### **5.2. Suggestion**

1. Government should evaluate the implementation of the policy and construct the best strategy which will positively impact Indonesia. This could be held with considerations from all small, medium and big fresh tuna exporters. The different condition of each area should also be the part of consideration if the policy is to be amended.
2. Government should provide the required services that will boost the fresh tuna export. Transshipment prohibition policy affects the fresh tuna production because by the implementation, it costs more money on fuel. Hence, controlled incentive could be one of the solutions to solve the problem.
3. Considering that export of fresh tuna is a complex process to maintain the quality of the product, the government should give trainings and socializations for fishermen in order to optimize the fresh tuna export.
4. Considering there is no significant different in total export value of fresh bigeye tuna after the implementation of transshipment prohibition policy, for the future researcher who are willing to conduct a study to use other commodity to evaluate the effect of the policy.

## **REFERENCE**

- Spulber, Daniel. 2007. *Global Competitive Strategy*. New York: Cambridge University Press.
- Wibowo, S., B. S. B. Utomo, M. Suhermen, S. Putro. 2007. *Penanganan Ikan Tuna Segar Untuk Ekspor ke Uni Eropa*. Jakarta: Balai Besar Riset Pengolahan Produk dan Bioteknologi Kelautan dan Perikanan, Dinas Kelautan dan Perikanan.
- Wild, John J., K. L. Wild. 2013. *International Business, The Challenges of Globalization*. 6<sup>th</sup> edition. England: Pearson Education Limited.

## Journal :

- Arthathiani, F. Y., and T. Apriliani. 2015. Dampak Kebijakan Moratorium Kapal Eks Asing Terhadap Perikanan Tuna: Studi Kasus di DKI Jakarta. *J. Kebijakan Sosek KP*, Vol. 5 No. 2.71-82.
- Gustina, Amelya. 2014. Analisis Transshipment Pasal 69 Ayat 3 Peraturan Menteri Kelautan dan Perikanan No. 30 Tahun 2012 Tentang Usaha Perikanan Tangkap. *Jurnal Dinamika Hukum*, Vol 14 No. 2 Mei 2014. 340-349.
- Kurniawati, Indah. 2014. Dampak ACFTA Terhadap Perdagangan Sektor Industri dan Pertanian Indonesia (Studi Komparatif Indonesia-China dan Indonesia-Vietnam). *EKO-REGIONAL*, Vol.9 No.2 September 2014. 114 – 124.
- Suhana., T. Kusumastanto, L. Adrianto, and A. Fachrudin. 2016. Tuna Industries Competitiveness in International Market. Case of Indonesia. *AAFL Bioflux*, 9:6. 1251-1259.

## Regulation :

- Menteri Kelautan dan Perikanan Republik Indonesia. NOMOR PER.30/MEN/2012.2012. *Usaha Perikanan Tangkap Di Wilayah Pengelolaan Perikanan Republik Indonesia*. Jakarta: Menteri Hukum dan Hak Asasi Manusia Republik Indonesia.
- Menteri Kelautan dan Perikanan Republik Indonesia. NOMOR 26/PERMEN-KP/2013.2013. *Perubahan Atas Peraturan Menteri Kelautan dan Perikanan Nomor Per.30/MEN/2012 Tentang Usaha Perikanan Tangkap Di Wilayah Pengelolaan Perikanan Republik Indonesia*. Jakarta: Menteri Hukum dan Hak Asasi Manusia Republik Indonesia.
- Menteri Kelautan dan Perikanan Republik Indonesia. NOMOR 57/PERMEN-KP/2013.2013. *Perubahan Kedua Atas Peraturan Menteri Kelautan dan Perikanan Nomor Per.30/MEN/2012 Tentang Usaha Perikanan Tangkap Di Wilayah Pengelolaan Perikanan Republik Indonesia*. Jakarta: Menteri Hukum dan Hak Asasi Manusia Republik Indonesia.

Food and Agriculture Organization of United Nation. 2001. International Plan of Action to prevent, deter, and eliminate illegal,

unreported, and unregulated fishing. Rome: FAO.

## Website :

- KementerianKelautandanPerikanan*.2017. Accessed on March 28<sup>th</sup> 2017. Indonesia.go.id. <http://indonesia.go.id/?p=1523>
- DefinisidanManfaat*.2011. Accessed on March 29<sup>th</sup> 2017. Directorate General for National ExportDevelopment. [http://djpen.kemendag.go.id/app\\_frontend/contents/147-definisi-manfaat](http://djpen.kemendag.go.id/app_frontend/contents/147-definisi-manfaat)
- Prosedur Ekspor*. 2017. East Java Industry and Trade Services. Accessed on April 9<sup>th</sup> 2017. [http://eximjatim.com/index.php?option=com\\_content&view=category&layout=blog&id=37&Itemid=87&lang=in](http://eximjatim.com/index.php?option=com_content&view=category&layout=blog&id=37&Itemid=87&lang=in)