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ANALYSIS OF DEVELOPMENT TRENDS OF THE FISHERY PROCESSING INDUSTRY IN INDONESIA

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ABSTRACT

The fisheries sector is an important sector for the Indonesian people and can be used as the main driver of the Indonesian economy. Indonesia is a country that has a fairly high level of fish production every year, that Indonesia provides a large supply of fish for foreign countries. This study aims to analyze the development trend of the provincial fishery processing industry in Indonesia. The study was conducted in February – June 2021. The method used was a literature survey to determine the trend of the development of the fisheries processing industry in 34 provinces in Indonesia. After all the data is processed, the data will be analyzed descriptively. Secondary data in the form of statistical data on the Indonesian Fisheries Processing Industry in 2010-2017 Ministry of Maritime Affairs and Fisheries. The results of the study indicate that the trend of the development of the competitiveness of the fisheries processing industry in Indonesia from 2010-2017 illustrates that the movement of the development of the fishery processing industry in Indonesia undergoes fluctuating changes.

Keywords : Fishery Processing Industry, Indonesia, Trends.

1. INTRODUCTION

As the largest archipelagic country in the world, Indonesia has 17,499 islands from Sabang to Merauke. The total area of Indonesia is 7.81 million km2 which consists of 2.01 million km2 of land, 3.25 million km2 of ocean, and 2.55 million km2 of the Exclusive Economic Zone (EEZ). As a country with a water area larger than the land area, Indonesia is therefore referred to as a maritime country[1]. The potential of the large fisheries sector can also be seen from the volume of Indonesian fishery production. Indonesia is a country that has a fairly high level of fish production every year, that Indonesia provides a large supply of fish for foreign countries.

Administratively, the territory of Indonesia is divided into 34 provinces, namely: Nanggroe Aceh Darussalam, Sumatera Utara, Sumatera Selatan, Sumatera Barat, Bengkulu, Riau, Kepulauan Riau, Jambi, Lampung, Bangka Belitung, Kalimantan Barat, Kalimantan Timur, Kalimantan Selatan, Kalimantan Tengah, Kalimantan Utara, Banten, DKI Jakarta, Jawa Barat, Jawa Tengah, DI Yogyakarta, Jawa timur, Bali, Nusa Tenggara Timur, Nusa Tenggara Barat, Gorontalo, Sulawesi Barat, Sulawesi Tengah, Sulawesi Utara, Sulawesi Tenggara, Sulawesi Selatan, Maluku Utara, Maluku, Papua Barat, Papua. Central Kalimantan Province with an area of 153 564.50 km2 (8.01 percent of the total area of Indonesia), while the smallest area is DKI Jakarta Province with an area of 664.01 km2 (0.03 percent of the total area of Indonesia).

Fishery processing industry is the business of processing fishery products/organisms that live in water for commercial/industrial purposes, both cultivated and caught[2]. Fish processing business is a general term that defines the handling of post-production capture or harvest cultivation using infrastructure and technology. Fishery processing is carried out to increase added value to fishery products and serves to preserve fish because they are easily damaged and rotten[3].

The fishery sector in the processing industry is very diverse, each having its own advantages from each region in Indonesia. The diversity of commodities and their advantages encourage a development trend in the fisheries processing industry in Indonesia.

Trends in the development of the fishery processing industry can be used as a benchmark for development in creating economic productivity, job creation and regional income. In addition, there are still not many studies conducted to determine the trend of development of the fishery processing industry in Indonesia.

Trend is a movement (tendency) up or down in the long term, which is obtained from the average change over time. The average change can increase or decrease. If the average change increases, it is called a positive trend or the trend has an upward trend. Conversely, if the average change decreases, it is called a negative trend or a trend that has a downward trend[4]. Trend shows changes in the value of a relatively stable variable, changes in population, changes in prices, changes in technology, and increases in productivity.

2. METHODOLOGY

The research was carried out using secondary data obtained from the Ministry of Maritime Affairs and Fisheries for six months, namely January - June 2021. The first stage carried out at the start of the research was in the form of collecting secondary data from the Indonesian Ministry of Maritime Affairs and Fisheries. The second stage is to analyze the data that has been obtained during the research.

2.1 DATA TYPES AND SOURCES

The data used in this research consists of secondary. Secondary data consists of five types of data sourced from the Ministry of Maritime Affairs and Fisheries (Table 1).

Table 1. Types of Data and Research Data Sources

No.	Ttpes of Data	Sources
1.	Total production of processed fishery	Ministry of Maritime Affairs and Fisheries
2.	Total of Fish Processing Units	Ministry of Maritime Affairs and Fisheries
3.	Total of Fish Processing Units (UPI) certified processing feasibility (SKP)	Ministry of Maritime Affairs and Fisheries
4.	Total export volume	Ministry of Maritime Affairs and Fisheries
5.	Total export value	Ministry of Maritime Affairs and Fisheries

2.2 METHOD OF COLLECTING DATA

The method used in the research is a literature survey. The data obtained will be used in the form of secondary data which is realized in the form of numbers and analyzed using descriptive statistical methods. This research uses time series data from 2010 to 2017

2.3 DATA ANALYSIS METHOD

Data analysis was carried out by using qualitative descriptive analysis. According to Sugiyono (2012) [5] descriptive research is research conducted to determine the value of independent variables, either one or more variables (independent) without making comparisons, or connecting with other variables. Qualitative descriptive analysis in this study was used to obtain trends in the development of the competitiveness of the fisheries processing industry in Indonesia.

Statistical data for the Indonesian fishery processing industry used in the period 2010 – 2017 is analyzed for its development index using the development index formula according to the Annual Fisheries Index book by Province 2006-2009[6]. The calculated development indices are:

a. Fishery Processing Industry Production Development Index

$$IPPijk = \frac{Qijk}{Qij} \; x \; 100$$

Information :
IPP : Fishery Processing Industry Production Development Index
Q : Production Volume (ton)
i : Provincei i (i = 1, ... , 11)
j : Types of Fisheries Classification
k : Period of Time

b. Fishery Processing Industry Production Facilities Development Index

$$IPSijk = \frac{Sijk}{Sij} \; x \; 100$$

Information :
IPS : Fishery Processing Industry Production Facilities Development Index
S : Fishery Production Facilities (unit)
i : Province i (i = 1, … , 11)
j : Types of Fisheries Classification
k : Period of Time

c. Processing Feasibility Certified UPI Development Index (SKP)

$$IPUijk = \frac{QUijk}{QUij} \; x \; 100$$

Information :
IPU : Processing Feasibility Certified UPI Development Index (SKP)
QU : UPI SKP Volume (unit)
i : Province i (i = 1, ... , 11)
j : Types of Fisheries Classification
k : Period of Time

d. Export Volume Development Index

$$IPVijk = \frac{QVijk}{QVij} \; x \; 100$$

Information :
IPV : Export Volume Development Index
QV : Export Volume (ton)
i : Province i (i = 1, ... , 11)
j : Types of Fisheries Classification
k : Period of Time

e. Export Value Development Index

$$IPNijk = \frac{QNijk}{QNij} \; x \; 100$$

Information :
IPN : Export Value Development Index
QN : Export Value (US$)
i : Province i (i = 1, ... , 11)
j : Types of Fisheries Classification
k : Period of Time

3. RESULT AND DISCUSSION

Based on the research that has been done, the index of the development of the fisheries processing industry in Indonesia for the period 2010-2017 is obtained. This development index includes the index of production development, index of development of facilities and infrastructure, index of development of fish processing units certified for processing feasibility, index of development of export volume, and index of development of export value.

3.1 Overall Index of Fisheries Processing Industry Trends in Indonesia

The development of the fishery processing industry in Indonesia during the period 2010-2017 experienced fluctuating changes. The development of production in several provinces in Indonesia is not very consistent, when production increases it is not supported by infrastructure and the number of certified fish processing unit does not increase significantly. This can be seen when the development of certified fish processing unit tends to increase but is not as significant as production. Production, certified fish processing unit, export volume, and export value fluctuated during the 2010-2017 period, while facilities and infrastructure did not change during the 2010-2017 period due to data availability.

3.2 Trend Development Index of Fishery Processing Industry in Indonesia Per Indicator

Based on the calculations that have been carried out, the development index value per indicator is obtained, namely production, facilities and infrastructure, fish processing units certified for processing feasibility, export volume, and export value.. The value obtained from each province describes the level of development of the competitiveness of the fisheries processing industry in Indonesia.

3.2.1 Production Trend Development Index

The data used in this study is within 8 years from the 2010-2017 period. During this period, the development of fishery processing industry production in Indonesia was very volatile as shown in the following graph (Figure 1).

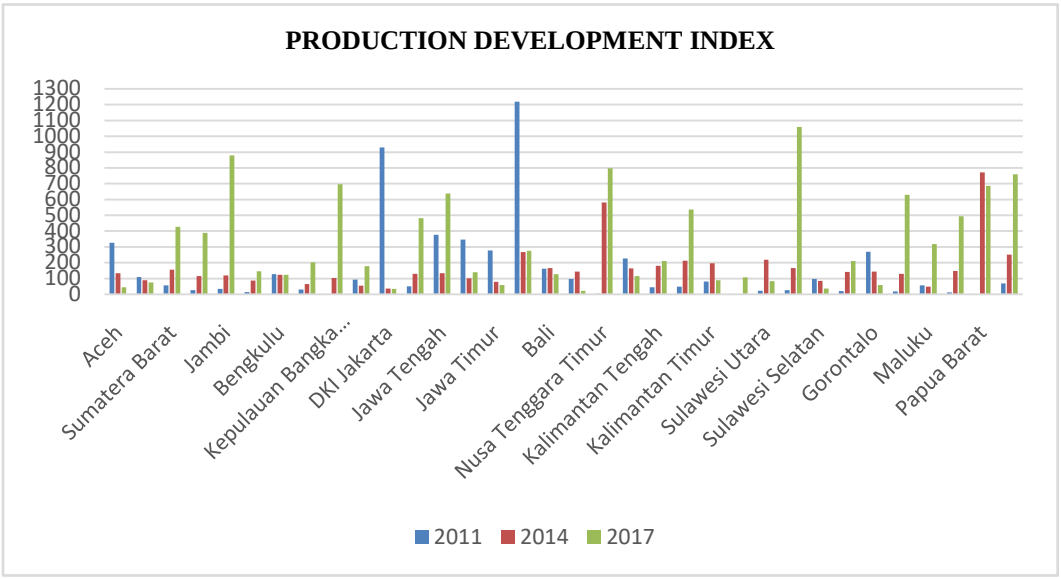

Figure 1. Production Development Index of Fishery Processing Industry in Indonesia

The graph above shows that the production development index in each province experiences fluctuating changes. Central Sulawesi Province in 2011 had an index of 25.35, then increased in 2014 with an index value of 166.23 and experienced a significant increase again in 2017 with an index value of 1,058.3.

DKI Jakarta Province experienced a significant decline in the development index during the 2010-2017 period. In 2011 DKI Jakarta Province had an index of 929.44, then it decreased significantly in 2014 with an index value of 35.68, and decreased again in 2017 with an index value of 34.51.

3.2.2 Infrastructure Trend Development Index

The data used in this study is within 8 years from the 2010-2017 period. During this period, the development of fishery processing industry facilities and infrastructure in Indonesia was very volatile as shown in the following graph (Figure 2).

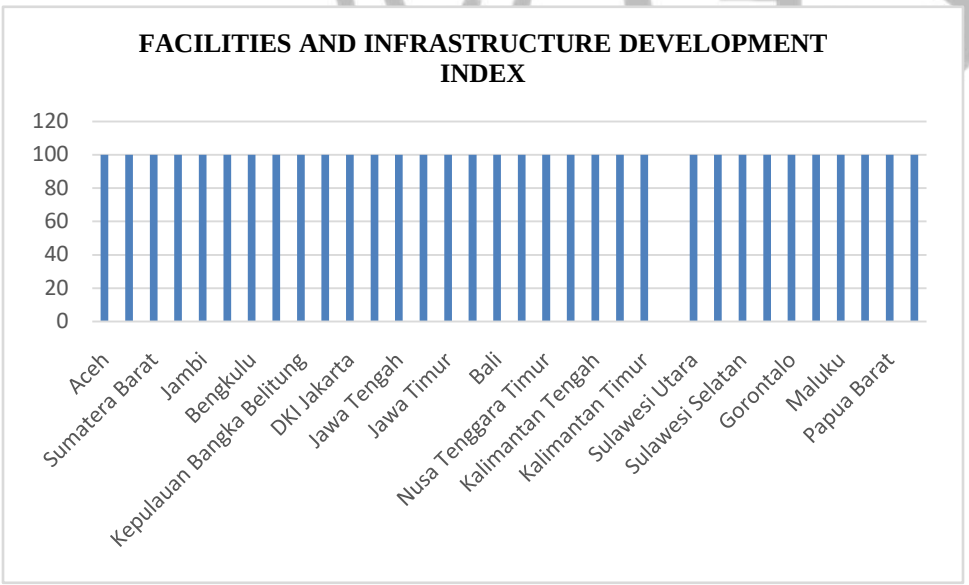

Figure 2. Development Index of Fisheries Processing Industry Facilities and Infrastructure in Indonesia

The graph above shows that the index of development of facilities and infrastructure in the 2010-2017 period did not increase because the availability of data showed that. This shows that the number of facilities and infrastructure used during the last 8 years has not increased the number of facilities and infrastructure, meaning that from year to year the number of facilities and infrastructure is the same.

3.2.3 Certified Fish Processing Unit Trend Development Index

The data used in this study is within 8 years from the 2010-2017 period. During this period, the development of Fish Processing Unit Certified fishery processing industry in Indonesia was very volatile as shown in the following graph (Figure 3).

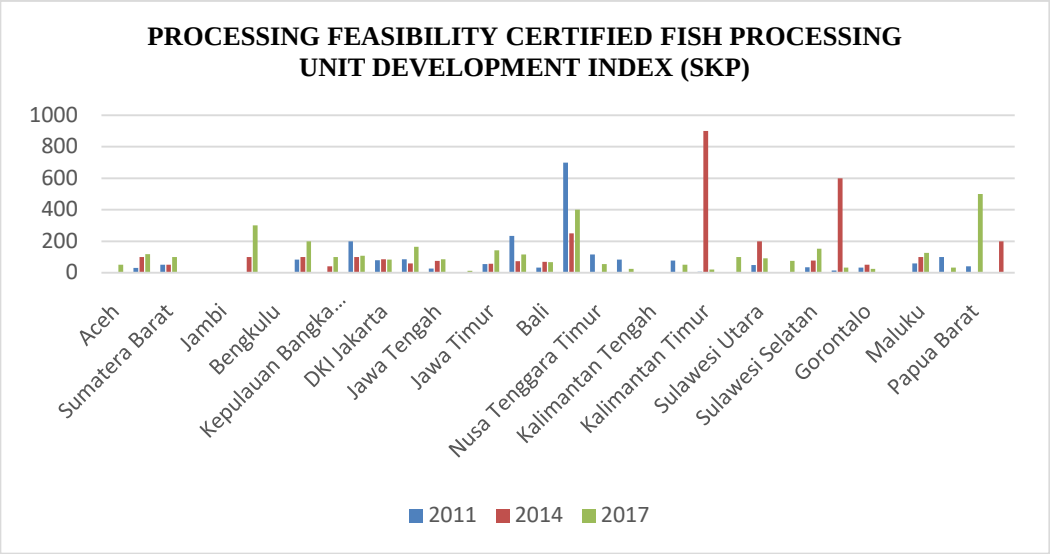

Figure 3. Development Index of Fish Processing Unit Feasibility of Processing Certification (SKP) for Fishery Processing Industry in Indonesia

The graph above shows that the development index of Fish Processing Unit certified processing feasibility (SKP) in each province has fluctuated changes. East Kalimantan Province in 2011 had an index of 6.6, then increased in 2014 with an index value of 900 until it decreased again in 2017 with an index value of 20.

The province of East Nusa Tenggara experienced a significant decline in the development index during the 2010-2017 period. In 2011 East Nusa Tenggara Province had an index of 116.66, then it decreased significantly in 2014 with an index value of 0, and increased again in 2017 with an index value of 55.5.

3.2.4 Export Volume Trend Development Index

The data used in this study is within 8 years from the 2010-2017 period. During this period the development of the export volume of the fishery processing industry in Indonesia was very volatile as shown in the following graph (Figure 4).

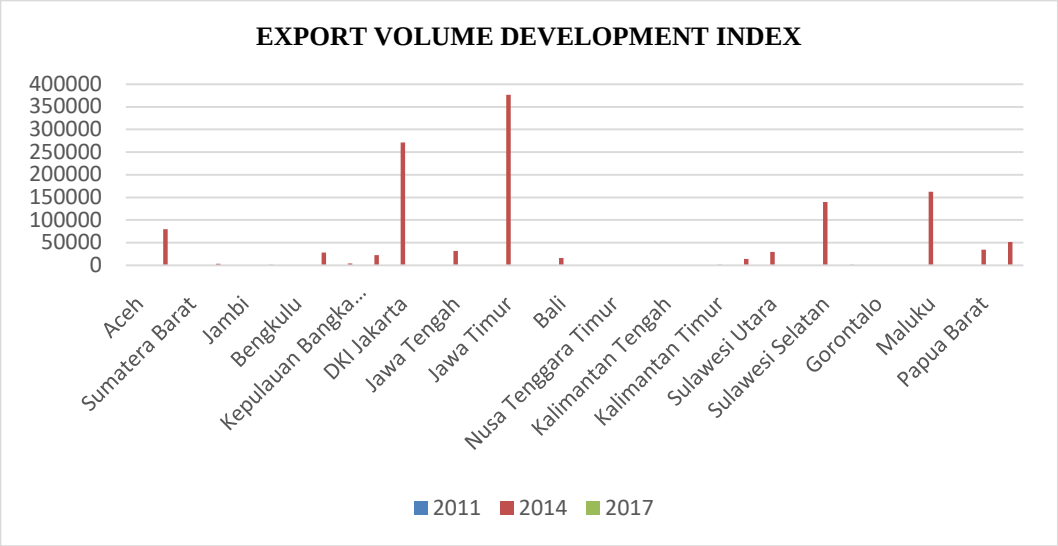

Figure 4. Export Volume Development Index of the Fishery Processing Industry in Indonesia

The graph above shows that the export volume development index in each province has changed too significantly. East Java Province in 2011 had an index of 99.63, then increased in 2014 with an index value of 376892 until it decreased again in 2017 with an index value of 93.13.

DKI Jakarta Province experienced a significant change in the development index during the 2010-2017 period. In 2011 DKI Jakarta Province had an index of 125.35, then it increased significantly in 2014 with an index value of 271363, and decreased in 2017 with an index value of 131.1.

3.2.5 Export Value Trend Development Index

The data used in this study is within 8 years from the 2010-2017 period. During this period the development of the export

value of the fishery processing industry in Indonesia was very volatile as shown in the following graph (Figure 5).

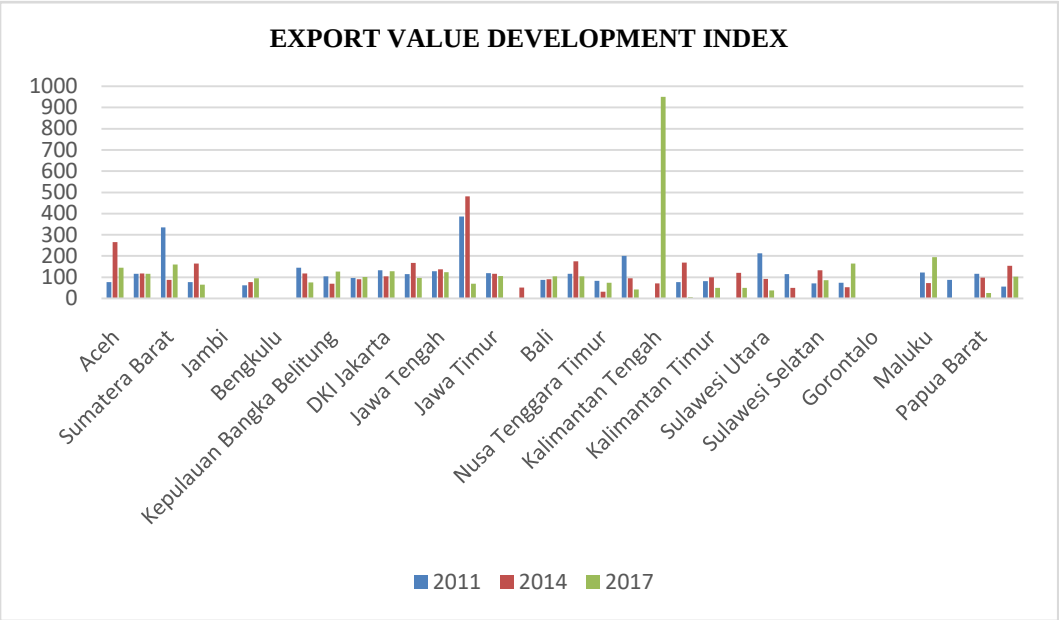

Figure 5. Export Value Development Index of the Fishery Processing Industry in Indonesia

The graph above shows that the export value development index in each province experienced fluctuating changes. Central Kalimantan Province in 2011 had an index of 1.8, then it increased in 2014 with an index value of 71.42 until it increased again in 2017 with an index value of 950.

DI Yogyakarta Province experienced an increase in the development index during the 2010-2017 period. In 2011 DI Yogyakarta Province had an index of 385.71, then it increased in 2014 with an index value of 481.32, and decreased significantly in 2017 with an index value of 68.88.

Conclusion

Based on the results of research that has been carried out, the following conclusions are obtained:
The development of the fishery processing industry in Indonesia seen from the aspect of production, facilities and infrastructure, certified fish processing unit, export volume, and export value experienced fluctuating changes during 2010-2017.

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