

## **Competitiveness and Performance Analysis of Indonesian Crude Palm Oil (CPO) Exports against Malaysia in International Trade: A Case on European Markets (Netherlands and Spain)**

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### ***Abstract***

*Competition and competitiveness between Indonesia and Malaysia are always interesting to study, especially in the economic field. This study aimed to analyze and find out the difference competitiveness and performance of Indonesian Crude Palm Oil (CPO) against Malaysia in the Netherlands and Spain. This study used the quantitative method. The data were gathered from the total export value and the export value of CPO from 2010-2019 which were obtained from the International Trade Statistics (ITC) with the HS code 151110. The analysis technique used the Revealed Comparative Advantage (RCA) method, Constant Market share (CMS) and using the Man-Whitney statistical test. The results showed that the average RCA value for Indonesia shows a higher value than Malaysia ( $47,005 > 37,152$ ), while in Spain, the average RCA index value for Indonesia is below Malaysia ( $68,291 < 91,1458$ ). The effect of standard growth and commodity effects on Indonesia's CPO export performance is lower than Malaysia. On the market distribution effect and the competitiveness effect in the Netherlands, Indonesia is still lower than Malaysia. while in Spain, Indonesia is higher than Malaysia. The Man-Whitney test results show that it fails to reject  $H_0$ , which means that there is no significant difference between the competitiveness and performance of Indonesian CPO against Malaysia in the Netherlands and Spain.*

**Keywords: Competitiveness and Performance; Crude Palm Oil Exports; International Trade**

## A. INTRODUCTION

The study of international trade and economic growth itself began to appear in the 18th century (during the classical period) when at that time David Ricardo and also Adam Smith stated that trade activities could have a general effect on positive growth in the economy (Samue, 2019). This is the same as what Renaldy said (2019) International trade arises because of the dependence of one country on another (interdependence). This dependence is mainly caused by the inability of a country to meet all the needs of its people, both for consumption and industrial needs, so that trade relations between countries that are universal require clear supervision, especially regarding the stability of a country's economy.

One of the mainstay commodities after coal which is often traded across countries is Crude Palm Oil (CPO) (BPS, 2018). Throughout 2018 CPO has reached a value of 15.04 billion \$ with a total contribution of 11% of the total non-oil and gas exports. However, when compared to the previous year, this value decreased by 10.61% due to a decrease in the price of palm oil in the global market (Ekonomiindonesia, 2019). CPO is the largest foreign exchange earner in non-oil and gas export commodities for the country and also has an important role in stimulating Indonesia's economic growth (Turnip, Lely et.al, 2016).

Crude Palm Oil is one of the most consumed and produced products because it has a variety of benefits so that the amount of demand for palm oil is enormous. It can be seen that the demand for world palm oil in 2019 reached 14.44 million tonnes with an export value of the US \$ 7.29 billion. Even so, the export value in 2019 has decreased, in 2018 the value of CPO exports was US \$ 7.72 billion (Trade Map, 2020). In the CPO commodity, Indonesia, Malaysia, Guatemala, Papua New Guinea and Colombia are the five largest exporting countries (Trade Map, 2020). The export value of Indonesian's CPO is superior among the five main exporting countries, but in the last four years the value of Indonesia's exports has fluctuated due to the demand for CPO in the European Union region, namely the Netherlands and Spain, has decreased and is followed by a decline in export value CPO in 2018-2019.

Malaysia as the largest exporter after Indonesia also experienced a decline and experienced a slight increase in 2018 amounting to US \$ 59.9 million. In Guatemala and Colombia in 2016-2018 the export value has increased and in 2019 the export value has decreased followed by a decrease in the value of world palm oil (CPO) exports. World CPO production is dominated by Indonesia and

Malaysia, which produce 85-90% of the total production of palm oil or CPO in the world (Indonesia Investment, 2017).

Based on the background description above, it has been explained that CPO is one of the largest foreign exchange contributor commodities in Indonesia, therefore it is important to see or observe the competitiveness and performance of Indonesian CPO to maintain its position in order to make new strategies or efforts to increase the export value of CPO in the European market, especially the Netherland and also Spain, which are the largest CPO importers in the European market.

There are several previous studies that have relevance to this research, namely the research conducted by Hagi, Syaiful Hadi, and Ermi Tety (2012) entitled "Analysis of the Competitiveness of Indonesian and Malaysian Palm Oil Exports in the International Market". The purpose of this study is to analyze the dynamics of the competitiveness of Indonesian and Malaysian palm oil exports in the international market. The method used is Constant Market Share (CMS) to measure the dynamics of competitiveness and Revealed Comparative Advantage (RCA) to describe the competitive advantage of a country's commodities. Furthermore, research conducted by Agung Prasetyo, Sri Marwanti and Darsono (2017), Dian Widyaningtyas and Tri Widodo (2016), Sry March Lely Turnip, Suharyono and M. Kholid Mawardi (2016), and Gisa Rachma Khairunisa and Tanti Novianti (2017), but the main difference with this research is the object of the international market which takes the Netherlands and Spain as the European International Market with the HS code 151110. The methods used are Revealed Comparative Advantage (RCA) and Constant Market Share (CMS) and the Man-Statistical Test. Whitney with data from 2010-2019.

Based on the background of the problem, it can be explained that the objectives of this study are: (1) to analyze the export competitiveness of Indonesian palm oil (CPO) against Malaysia in the European market in the Netherlands and Spain (2) to analyze the export performance of Indonesian palm oil (CPO) against Malaysia, which is also the largest exporting country in the European market in the Netherlands and Spain (3) to find out the difference between the competitiveness and performance of Indonesian palm oil (CPO) against Malaysia in the European market in the Netherlands and Spain.

## **B. RESEARCH METHOD**

The research approach used in this research is a descriptive quantitative approach. Descriptive quantitative research is data analysis by describing or describing the collected data as it is

(Sugiyono, 2015: 207). The Netherlands and Spain are the largest importing countries of palm oil (CPO) in the European region for the last 10 years, namely in 2010-2019 based on International Trade Statistics (ITC) data for 2020. This research focuses on the export of Crude Palm Oil (CPO) commodities to two countries, namely Indonesia and Malaysia, which are the largest CPO exporting countries in the world according to data from the International Trade Statistics (ITC) in 2020. The samples used in this study are the Netherlands and Spain, which are the largest importing countries of Crude Palm Oil (CPO) in the European region for the last 10 years, namely in 2010-2019 based on International Trade Statistics (ITC) data in 2020.

Data collection is carried out to obtain information related to research in achieving research objectives. The type of data used is secondary data in the form of time series. The data collection technique used in this research is the literature study technique, namely the collection of data and theories taken from websites, books, written materials and relevant references. The data collected is in the form of total export value and the export value of CPO commodities from Indonesia and Malaysia to the European market, namely the Netherlands and Spain from 2010-2019 which were obtained from the International Trade Statistics (ITC) with the HS code 151110. In this research, data analysis uses the Revealed Comparative Advantage (RCA) method to explain comparative advantage, and uses the Constant Market share (CMS) method to explain a country's export performance. Both the results of this analysis need to be carried out with the Man-Whitney statistical test to test the difference between Indonesia's competitiveness and performance against Malaysia in the destination countries, namely the Netherlands and Spain. Data processing used Microsoft Excel 2007 program and also SPSS Statistics 25.0 which is an analytical tool for the Man-Whitney test.

## **C. RESULTS AND DISCUSSION**

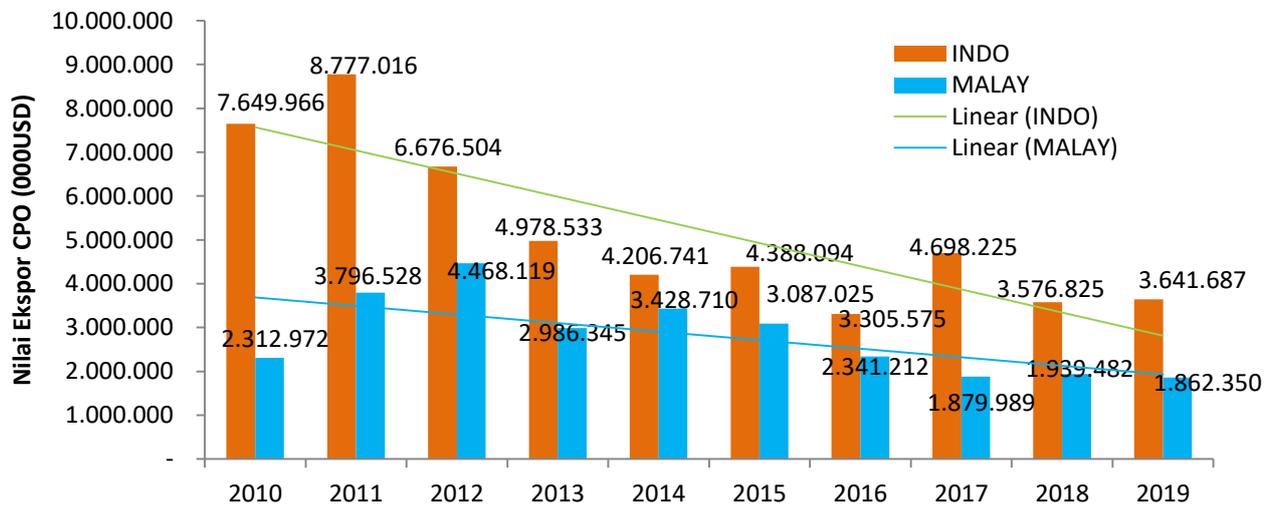
### ***Results***

This research uses time-series data from 2010-2019 from the two largest producer/exporter of CPO in the world, namely Indonesia and Malaysia in the Netherlands and Spain, which are one of the largest importing countries of palm oil (CPO) in the world. The data used is in the form of CPO export value obtained from ITC (International Trade Statistics).

### **Export Value of Indonesian and Malaysian Crude Palm Oil (CPO) in the International Market**

The value of Indonesian and Malaysian CPO exports to the international market from 2010 to 2019 fluctuated with a tendency to decline as shown in Figure 1. In terms of export value, Indonesia's CPO is higher than Malaysia's. Indonesia's highest CPO export value reached US \$ 8.77 billion in 2011, and the lowest was in 2016 which only reached US \$ 3.30 billion. Meanwhile, Malaysia only achieved the highest CPO export in 2012 with a value of US \$ 4.46 billion and the lowest was in 2009 with a value of US \$ 1.67 billion.

Figure 1 Export Value of Indonesian and Malaysian CPO Commodities to International Markets 2010-2019 (000 USD) (Source: Trade Map, 2020)



### **Export Value of Indonesian and Malaysian Palm Oil (CPO) to the Dutch and Spanish Markets**

As the world's largest CPO producer, the trade of Indonesian palm oil with the European Union has been started since the 18th century based on the need of the European Union for CPO as vegetable oil which can be used as various kinds of processed products and has a relatively cheaper price than other vegetable oils. (wartaekonomi, 2020). Among the European Union countries, the Netherlands and Spain are the two countries that continue to be export destinations for CPO products produced by both Indonesia and Malaysia. Figure 2 shows the value of Indonesian and Malaysian CPO exports entering the Dutch market. It appears that the value of CPO products entering the Dutch market comes from Malaysia. Malaysia's highest CPO export value was in 2012 at US \$ 1.24 billion and the lowest value in 2019 was US \$ 354.3 million and Indonesia achieved the highest and lowest export value in the same year as Malaysia with a value of US \$ 1.03 billion

and US \$ 234 million. From 2013 to 2019, the export trend of Indonesian and Malaysian CPO continued to show a downward trend.

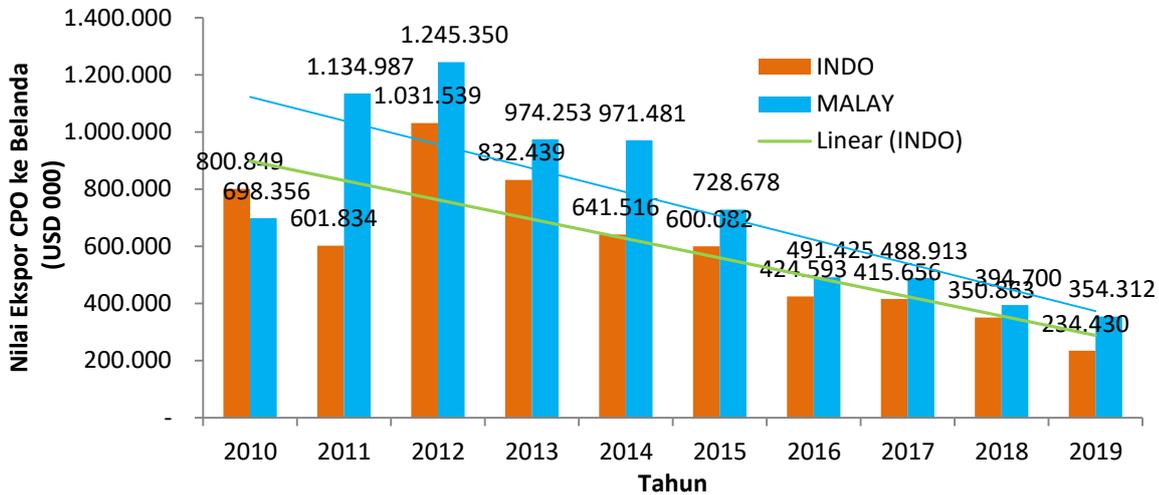


Figure 2 Export Value of Indonesian and Malaysian CPO Commodities to the Dutch Market 2010-2019 (000 USD) (Source: Trade Map, 2020)

Different conditions occur in the Spanish market as shown in Figure 3, where Indonesian CPO products dominate the Spanish market with a trend in the export value of CPO which tends to increase in the period 2010 to 2019. Despite a rather sharp decline in 2016 to 2018, in 2019 the export value Indonesia's CPO increased to US \$ 430.16 million. The export value of Malaysian CPO experienced the same thing, it can be seen that the export value of Malaysian CPO has increased in 2012, 2014, 2018, 2019 and decreased in 2013, 2015-2017 with the highest CPO export value in 2019 amounting to US \$ 213.16 million.

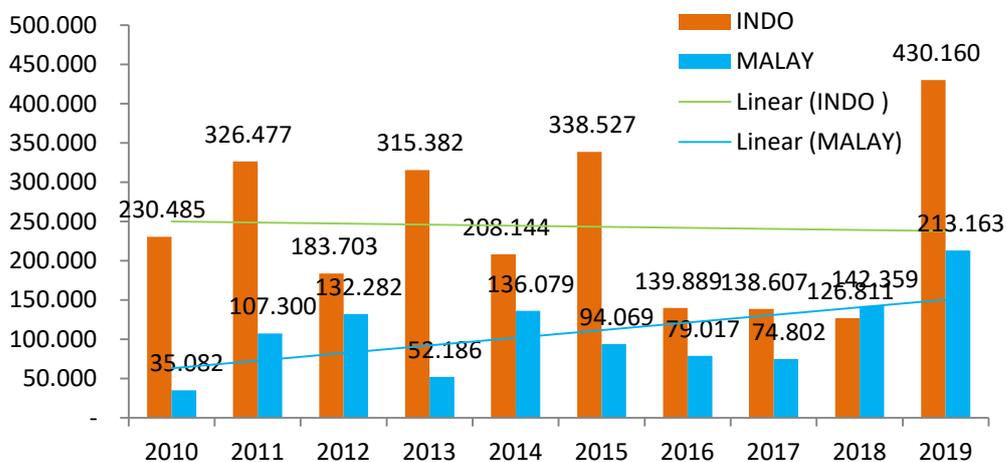


Figure 3 Export Value of Indonesian and Malaysian CPO Commodities to the Spanish Market 2010-2019 (000 USD) (Source: Trade Map, 2020)

**Revealed Comparative Advantage (RCA) for CPO commodities from Indonesia and Malaysia**

To determine the comparative advantage or level of export competitiveness of CPO commodities between the two countries as the basis for the calculation, the RCA analysis model is used. If the RCA index value is more than one, it shows that the market share of the country's export commodity is higher than the world export average and the country has competitiveness for that commodity and vice versa. If the RCA index value is less than one, the commodity will have less advantage to compete in the international market.

**a. RCA results for Indonesian and Malaysian CPO commodities in the Netherlands' market**

Figure 4 shows the RCA index for Indonesian and Malaysian CPO commodities in the Dutch market. It appears that the RCA Index for Indonesia and Malaysia from 2010 to 2019 is greater than 1, which means that both Indonesia and Malaysia have a comparative advantage, or in other words Indonesian and Malaysian CPO commodities have strong competitiveness in the Dutch market. The average RCA index scores for Indonesia and Malaysia during the period 2010 to 2019 are 47.00 and 37.15, respectively, which indicates that Indonesia has a slightly stronger competitiveness than Malaysia. However, over time, in the period 2010 to 2019 the RCA Index for Indonesia and Malaysia in the Dutch market showed a trend that tended to decline.

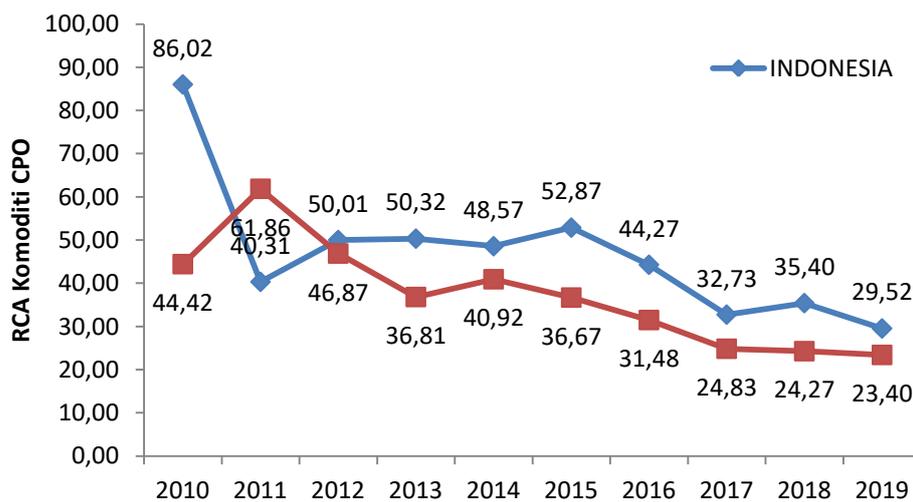


Figure 4 RCA Index for Indonesian and Malaysian CPO Commodities in the Dutch Market (Source: processed data, 2021)

**b. RCA results for Indonesian and Malaysian CPO commodities in the Spanish Market**

The RCA results look different in the Spanish market, although both have a CPO commodity RCA index that is greater than one, which means they have strong competitiveness, but in numerical terms, Malaysia has a larger average RCA Index (91 , 15) compared to Indonesia (68.29). It appears that in the period 2010 to 2019, Malaysia's RCA index fluctuation was higher than Indonesia, with a trend that tended to increase, as shown in Figure 5 below.

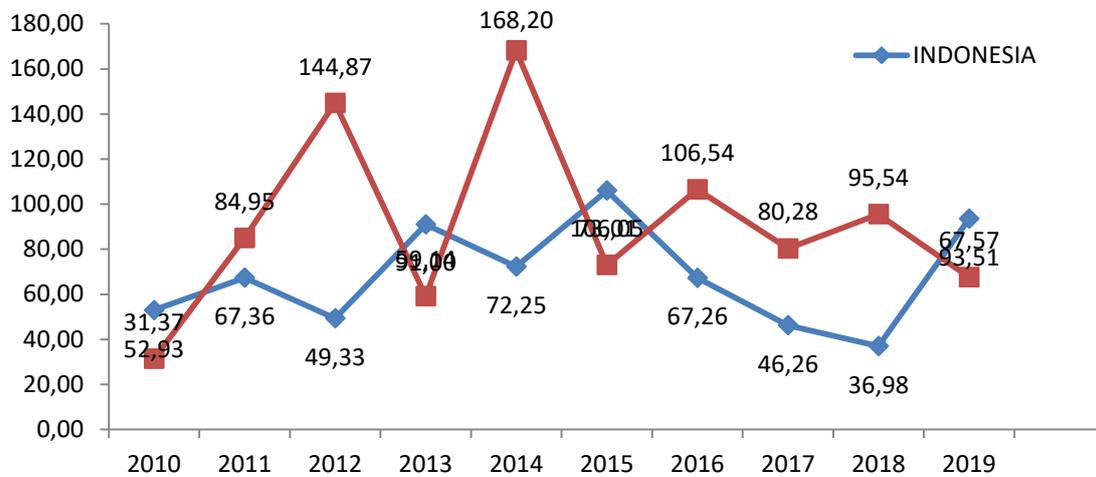


Figure 5 RCA Index for Indonesian and Malaysian CPO Commodities in the Spanish Market (Source: processed data, 2021)

***Constant Market Share (CMS) for CPO commodities from Indonesia and Malaysia***

To determine the export performance of Indonesian and Malaysian CPO commodities, the CMS analysis method is used. This is described in several effects, namely the standard growth effect, the commodity composition effect, the market distribution effect and the competitiveness effect.

**a. Standard Growth Effects**

It can be seen in Figure 6 the effect of growth in world standards, Indonesia and Malaysia. The growth of Indonesia's CPO exports was higher than the growth of world CPO in 2010,2015,2017 and for Malaysia in 2010,2011,2012,2014,2018. With the average value of Indonesia's CPO export growth of (-0.0162) negative and Malaysia's (0.039) positive, it means that Indonesia's export growth is still below Malaysia's. Malaysia's average export growth yield (0.393) is above the world growth (0.003).

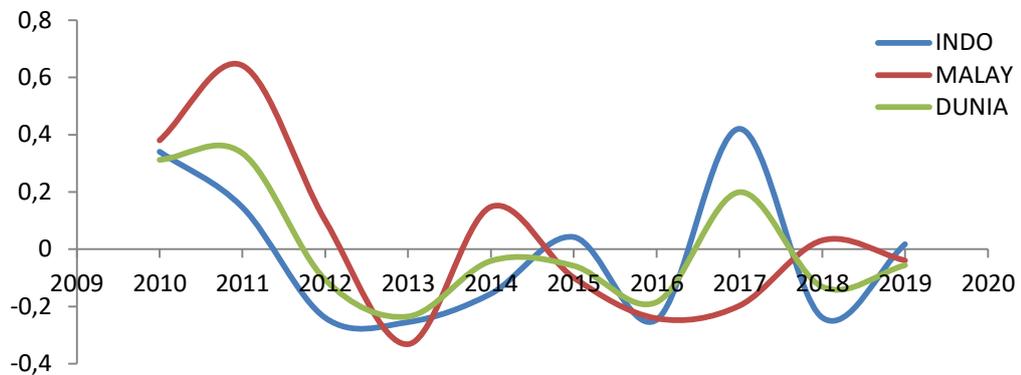


Figure 6 The Effects of Growth of Indonesian and Malaysian CPO Standards on the World (Source: processed data, 2021)

b. Commodity composition effects

Figure 7 shows the development of the effects of CPO composition in 2010-2019. Indonesia and Malaysia both show positive trends in 2010, 2011, 2015, 2017 and show negative trends in 2012, 2013, 2014, 2016, 2018 and 2019. This identifies that Indonesia and Malaysia have a relatively similar tendency in composition effects. commodity. When viewed from the average value of the effect of the composition of CPO products, Indonesia shows a value of -0.0012 (negative) and Malaysia (-0.00076) which means that Malaysia is still better than Indonesia on the effect of commodity composition even though it has decreased or weakened.

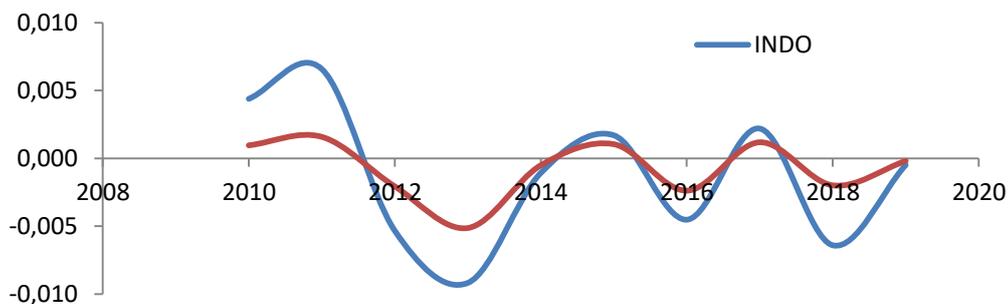


Figure 7 The Development of the Effects of Indonesian and Malaysian CPO Commodity Composition on the International Market (Source: processed data, 2021)

c. World Market Composition Effects

Figure 8 shows that the growth of CPO exports on the effect of the composition of the world market, Indonesia is below Malaysia for the Dutch market as an export destination, in the period 2010 to 2019. In 2010, 2011, 2014 and 2015, both Indonesia and Malaysia had effect values. the composition of the world market is negative, and in the period 2012, 2013 2016 2017 2018 and 2019 the effect of the composition of the world market is positive. This condition indicates that

Indonesia and Malaysia have been able to take advantage of the CPO commodity market opportunities in the Netherlands. If you look at the average value of the effect value of the world market composition of commodity Malaysia 0.000268, it is positive, it is bigger than Indonesia which is only about 0.000088.

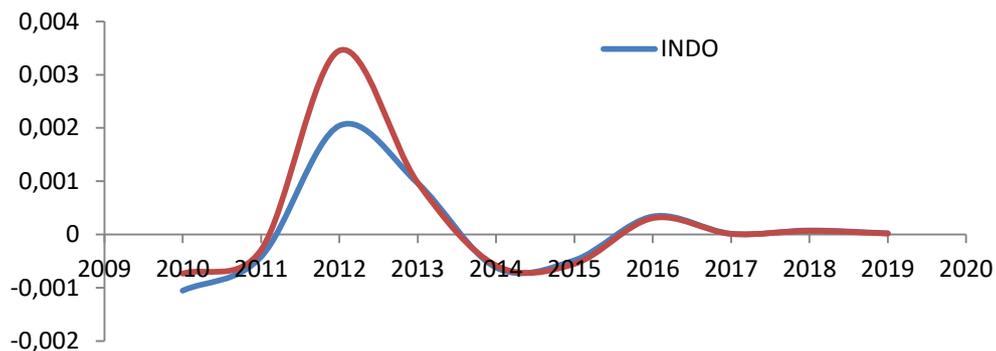


Figure 8 Effects of World Market Composition of Indonesian and Malaysian CPO on the Netherland Market (Source: processed data, 2021)

Unlike the conditions in the Spanish Market, the effects of the World Market Composition of Indonesian and Malaysian CPO commodities showed a positive trend throughout the period 2010,2013,2015,2017 to 2019, however, Indonesia showed more negative trends than Malaysia, namely in 2011,2012,2014,2016 while Malaysia was only in 2014 and 2016 as shown in Figure 9. Both Indonesia and Malaysia tend to have relatively the same effect on world market composition because the average effect of world market composition is positive. The average effect of Indonesia's world market composition is 0.000101, which is more positive than Malaysia's which is only 0.000090.

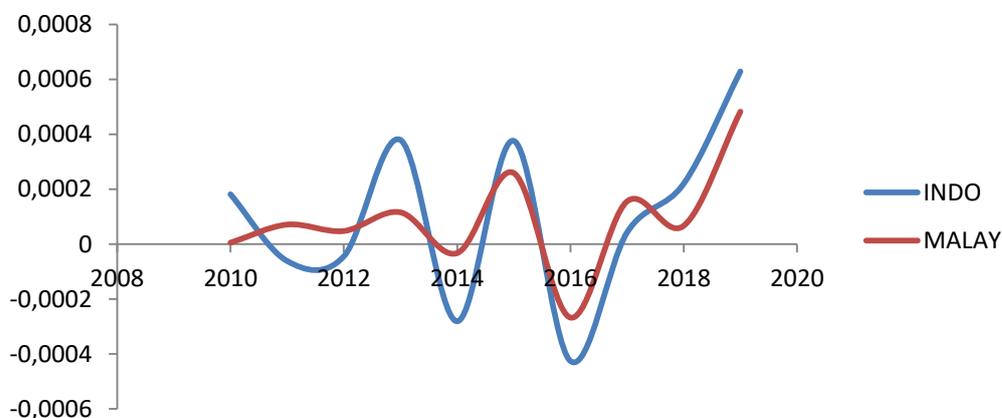


Figure 9 The Effect of World Market Composition of Indonesian and Malaysian CPO on the Spanish Market (Source: processed data, 2021)

#### d. Competitiveness Effect

Figure 10 shows that Indonesia's CPO commodity only has a relatively good competitiveness effect value in the Netherlands in 2010, 2012 and 2015 where the value of the competitiveness effect is still positive, this indicates that in 2010, 2012 and 2015 Indonesia is still capable and still has strong competitiveness among other exporting countries for CPO commodities in that country. Meanwhile, Malaysia only recorded positive competitiveness values in 2011 and 2015 during this research period. If you look at the average value of the effect of CPO competitiveness in the Dutch market, Indonesia has a value of -0.000405 (negative) while Malaysia has a competitiveness effect value of -0.000298 (negative). However, despite being negative, Malaysian CPO still has a better or better competitiveness than Indonesia in the Netherlands even though it is experiencing weakness.

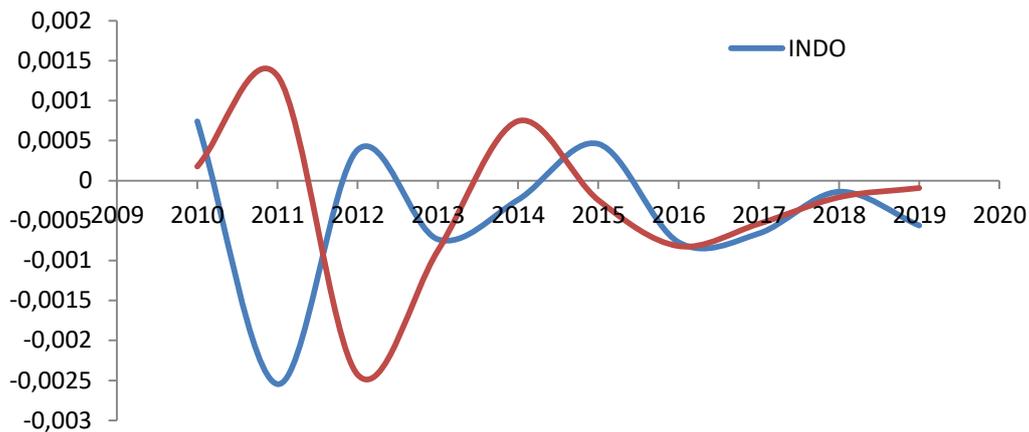


Figure 10 The Effect of Competitiveness of Indonesian and Malaysian CPO on the Dutch Market  
(Source: processed data, 2021)

For the Spanish Market, Indonesia's CPO commodity has a positive competitive value and is higher than Malaysia in 2010, 2011, 2013, 2015 and 2019 as presented in Figure 11. From the average competitiveness value, Indonesia reached 0.000068 (positive), higher than Malaysia which only reached 0.000034 (positive). This indicates that Indonesia has been able and has stronger competitiveness than Malaysia in that country during the study period.

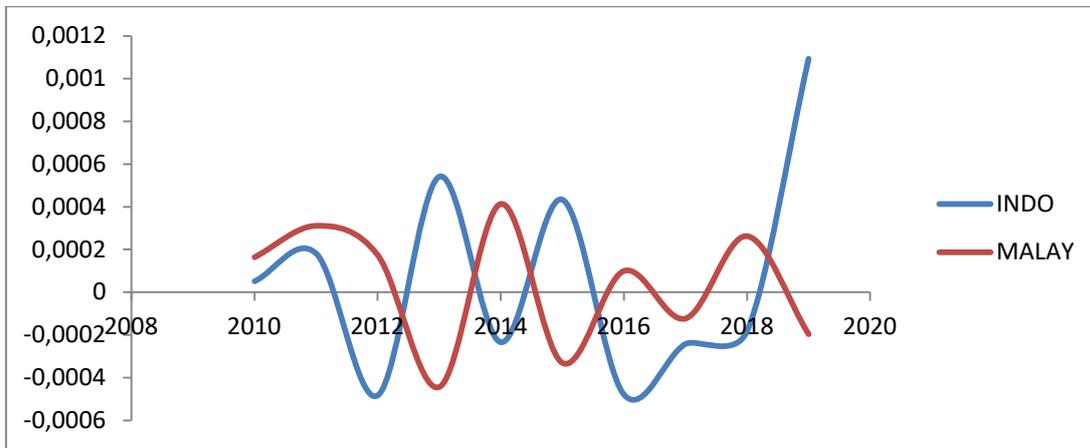


Figure 11 The Effect of Competitiveness of Indonesian and Malaysian CPO on the Spanish Market  
(Source: processed data, 2021)

#### ***Man-Whitney Test Results on the RCA Index for CPO Commodity***

To show the differences in competitiveness between Indonesia and Malaysia in CPO exports to the Dutch and Spanish markets, a Mann-Whitney statistical test was conducted on the RCA Index for Indonesian and Malaysian CPO commodities as presented in Table 1.

**Table 1 Results of Comparative Test Analysis for Indonesian and Malaysian CPO RCA Index to the Dutch and Spanish markets**

Test Statistics <sup>a</sup>		
	RCA di Pasar Belanda	RCA di Pasar Spanyol
Mann-Whitney U	30,000	30,000
Wilcoxon W	85,000	85,000
Z	-1,512	-1,512
Asymp. Sig. (2-tailed)	,131	,131
Exact Sig. [2*(1-tailed Sig.)]	,143 <sup>b</sup>	,143 <sup>b</sup>

By paying attention to the results of the data analysis presented in Table 4.1, the 2-tailed sig value on the RCA of Indonesia and Malaysia in the Dutch and Spanish markets is 0.131, greater than 0.05 ( $0.131 > 0.05$ ), it can be concluded that it failed to reject  $H_0$ . So it can be stated that there is no significant difference between the RCA Index for Indonesian CPO commodities and the RCA for Malaysian CPO commodities both in the Dutch market and the Spanish market.

### **Man-Whitney Test Results on CMS for CPO commodities**

To see whether there are differences in the performance of Indonesia and Malaysia in CPO exports, a non-parametric difference test has been carried out on the performance of Indonesian and Malaysian CPO commodities on the four effects of the Constant Market Share (CMS) method.

**Table 2 Results of statistical analysis of Indonesian and Malaysian CMS CPO using the Man-whitney test**

Test Statistics <sup>a</sup>						
	EPS_Indo vs Malay	EKK_Indo vs Malay	EKPD_BEL ANDA	EKPD_SPA NYOL	EDS_BELA NDA	EDS_SPA NYOL
Mann-Whitney U	43,000	49,500	50,000	49,000	47,000	48,000
Wilcoxon W	98,000	104,500	105,000	104,000	102,000	103,000
Z	-,529	-,038	,000	-,076	-,227	-,151
Asymp. Sig. (2-tailed)	,597	,970	1,000	,940	,821	,880
Exact Sig. [2*(1-tailed Sig.)]	,631 <sup>b</sup>	,971 <sup>b</sup>	1,000 <sup>b</sup>	,971 <sup>b</sup>	,853 <sup>b</sup>	,912 <sup>b</sup>

By paying attention to the results of data analysis presented in Table 4.2, the value of Asymp Sig. (2-tailed) on the Standard Growth Effect on CPO exports from Indonesia and Malaysia is 0.597 which means that the value is greater than 0.05 ( $0.597 > 0.05$ ) so it can be said that there is no significant difference in the value of the Standard Growth Effect between Indonesia and Malaysia. For the 2-tailed Asymp sig value on the CPO Commodity Composition (EKK) effect between Indonesia and Malaysia on the international market is 0.97 or greater than 0.05 ( $0.97 > 0.05$ ), it can be concluded that it failed to reject H0. So that it can be stated that there is no significant difference between the Composition Effect of Indonesian CPO and Malaysian CPO on the international market. Taking into account the results of the data analysis presented in Table 2, the 2-tailed sig value on the World Market Composition Effect (EKPD) between Indonesia and Malaysia on the Dutch market is 1 or greater than 0.05 ( $1 > 0.05$ ). it is concluded that it fails to reject H0 so that it can be stated that there is no significant difference between the World Market Composition Effect (EKPD) of Indonesian and Malaysian CPO on the Dutch market. The same thing also happened in the Spanish market, the value of Asymp sig 2-tailed was 0.94 or greater than 1 which could be stated that there was no significant difference between the EKPD of Indonesian and Malaysian CPO in the Spanish market. The results of the competitiveness effect data test in table 4.2, the 2-tailed sig on the Indonesian and Malaysian Competitiveness Effects in both the

Netherlands and Spain are 0.821 and 0.88 or greater than 0.05 ( $0.821 > 0.05$  and  $0.88 > 0.05$ ). So it can be stated that there is no significant difference in the Competitiveness Effect.

### **Discussion**

**Comparative Advantage Between Indonesian and Malaysian CPO Commodities in the Dutch and Spanish Markets** One of the objectives of this study is to analyze the competitiveness of Indonesian palm oil export products against Malaysia, which is also Indonesia's closest competitor. The method to be used is Revealed Comparative Advantage (RCA). RCA analysis shows that Indonesia and Malaysia have a strong export performance in the CPO commodity trade in the Dutch and Spanish markets, which is indicated by the RCA index for CPO commodity exports to be greater than one ( $> 1$ ), which means that CPO exports from Indonesia and Malaysia are comparative. advantage above the world average.

Indonesia and Malaysia are the two largest oil palm exporting countries in the world. The competitiveness of Indonesian palm oil can be seen from the results of the RCA analysis. The calculation of the results of RCA analysis in the two largest CPO importing countries in the world, shows that Indonesian CPO has strong export competitiveness, but the average RCA value in the Spanish market in 2010 to 2019 is still below Malaysia. This is because the value of Indonesia's CPO exports compared to its total exports to Spain is relatively small. If Indonesia is at 12%, while Malaysia is at 16%, so the yield from Indonesia's RCA is smaller than Malaysia's. In the Netherlands, the average RCA value for Indonesia is superior to that of Malaysia with a difference value of only 9.84. Based on the data, Indonesia is superior because 15% of the value of total exports comes from CPO exports, while Malaysia is only 11%, so that Indonesia is superior in the Netherlands.

In general, the decline in the value of CPO exports in the European market is due to the renewable energy directive (RED) policy. In this policy there is a limitation on the export of palm oil-based biofuels. RED also imposes anti-dumping tariffs on CPO products which results in a decrease in exports of Indonesian biofuel or CPO derivative products to the EU. The implementation of the renewable energy directive (RED) policy, which was initiated in 2011 on the provision of greenhouse emissions, made it increasingly difficult for palm oil products, especially CPO to enter the European Union and the writing of the label "without palm oil" on various products such as cosmetics, hygiene products, and food, so that this also has an impact on the decline in RCA results or the competitiveness of Indonesia and Malaysia.

The non-tariff barrier is in the form of a black campaign against Indonesian CPO. This campaign raises environmental and health issues. On environmental issues, the EU said that the clearing of oil palm land has resulted in deforestation, environmental pollution, and the extinction of various flora and fauna. On health issues, the presence of acidic oil in CPO causes heart damage according to the Ministry of Trade (2012) in the discussion of Anika Kania's 2014 research. According to Roberto Akyuwen and Arifin Indra in 2011 in their book entitled "Dynamics of Indonesian Palm Oil Production and Exports" said that the black campaign had a negative effect on the volume of CPO exports.

We also need to know the comparison of the productivity of oil palm land between Indonesia and Malaysia, because according to data from the Directorate General of Plantations, Ministry of Agriculture in 2017, the superiority of Indonesia's oil palm land area is not balanced with its productivity. This can be seen, Malaysia has oil palm land productivity of 3.96 tonnes / ha per year and Indonesia only has oil palm productivity of 2.70 tonnes / ha per year (coaction.id, 2020).

Indonesia has a strong comparative advantage, this is supported by the existence of the first, the area of oil palm land which reaches 16.3 million hectares spread across 26 provinces in Indonesia in 2019 (sawitindonesia, 2020). Second, Indonesia is one of the largest palm oil exporting countries in the world. Third, supportive production costs can be seen from cheap labor wages and factors of production.

However, it needs to be underlined that although the results of Indonesia's RCA are said to be superior in the Dutch market, there is a phenomenon of a fairly large decline in the trend in the export value of Indonesian CPO from year to year compared to the trend in the export value of Malaysian CPO. In contrast to the phenomenon in Spain, Indonesia has begun to focus on marketing CPO products to the Spanish market so that the trend of CPO export value is positive.

Based on the description above, for now Indonesia must be able to maintain its competitive advantage in the Netherlands and increase the competitiveness of CPO exports in Spain by increasing the value of Indonesian exports by increasing production and quality to be marketed on the international market.

#### ***CPO Export Performance between Indonesia and Malaysia in the Dutch and Spanish Markets***

Constant Market Share (CMS) analysis is used to see the extent of Indonesia's CPO export performance in the international market in the context of growth, composition, distribution and

competition. On the effect of standard growth, it discusses the growth of a country's CPO exports on the growth of world CPO. The average yield of Indonesia's growth effect is negative and below the average world growth yield and also below Malaysia's growth, meaning that Indonesia's CPO products in 2010-2019 experienced a decline in growth in exporting CPO products due to a decline in demand for CPO in several countries and less than optimal in terms of growth. marketing CPO products. The growth of Malaysian CPO exports over Indonesia is due to the Malaysian government's policies that are more synergistic in investment and the private sector (Prasetyo et al, 2017). This can be proven by looking at the average growth of Malaysian CPO exports above the world average.

The commodity composition effect explains how a country is focused on certain commodities such as CPO products. The average effect of the composition of Indonesian and Malaysian CPO products is negative, meaning that Indonesia and Malaysia have not been careful in paying attention to the demand and growth of CPO imports in importing countries. The average effect value of the commodity composition of Indonesia (-0.0012) and Malaysia (-0.0007), although both experienced a decline, Malaysia was still better than Indonesia. This decline occurred due to dry weather factors which resulted in a decrease in palm oil production in Indonesia and Malaysia in the short to medium term, which affected CPO stocks (Wartaekonomi, 2019).

The focus of the study in this study is CPO products in raw form, meaning that the effect of the composition of CPO products is also closely related to the type of quality of CPO that consumers want in importing countries, namely the Netherlands and Spain. There needs to be efforts in standard CPO product specifications such as compliance with the Roundtable Sustainable Palm Oil (RSPO) certification and Hazard Analysis and Critical Control Points (HACCP) for consumer safety and protection (Prasetyo et al, 2017). Not only that, as an exporting country it must be careful in taking business opportunities and consistently maintain quality in order to increase consumer confidence.

The effect of the composition of the world market discusses how much the country controls the market in one destination country for the same commodity. The results of the average effect of the composition of the world market for Indonesia and Malaysia have good market positions in the Netherlands and Spain, which are indicated by positive results. In the Netherlands, the average composition effect of Malaysia's world market is superior with a value of 0.000268 compared to Indonesia of 0.000088 so that Malaysia has more control over the marketing of CPO products in the

Netherlands. Meanwhile, the average value of Indonesia in Spain is 0.000101 (positive) and Malaysia amounting to 0.000090, it can be seen that the effect value of Indonesia's world market composition is greater than that of Malaysia. This means that Indonesia has more control over and has optimized the marketing of CPO products in the Spanish market.

On the effect of competitiveness, describes the export market share of a country's commodity in the destination country. In the Netherlands, the parameters for the effect of the competitiveness of Indonesia and Malaysia both experience a decline or are weak (negative). This can be seen from the average value for Indonesia of -0.000405 and Malaysia -0.000298. however, the average score of Malaysia's competitiveness effect is still better than Indonesia's, although experiencing a weakening. This happened because of the decreasing demand for CPO products in the Dutch market. In the markets of Spain, Indonesia and Malaysia, the scores are equally positive on the effect of competitiveness with Indonesia being superior with an average score of 0.000068 and Malaysia 0.000034. This is supported by an increase in demand in 2019 by 3 times from the previous year, namely from 228,999 tons with an export value of US \$ 126.8 million in 2018 to 821,718 tons with a value of US \$ 430.16 million in 2019.

***The results of the Man-Whitney Difference Test between RCA and CMS for Indonesian CPO commodities against Malaysia in the Dutch and Spanish markets***

Based on the results of the Man-Whitney test on the results of the RCA and also the Indonesian CMS against Malaysia, it was stated that they failed to reject H0 so that there was no significant difference between the RCA and CMS results for Indonesian CPO commodities with Malaysia, both in the Netherlands and Spain. This suggests that Malaysia can be a threat because Indonesia and Malaysia have equal opportunities in winning the competition.

We can see that based on the results of the RCA and CMS, in the Netherlands Indonesia is certainly superior to Malaysia in competitiveness, but the results of Indonesia's performance state that there is a decline in market distribution effects and also the effect of competitiveness because Indonesia focuses on improving its performance in Spain so Indonesia needs to improve or maximize performance in the two countries not only in Spain so that there is no decline in the Netherlands and can increase CPO exports in Spain.

In terms of CPO productivity, Indonesia and Malaysia have a productivity difference of 1.26 tones / hectare for palm oil. Indonesia has an advantage in the area of oil palm land which reaches

16 million hectares, but this is not matched by land productivity. Indonesia only produces 2.7 tons / hectare per year, while Malaysia produces 3.9 tons / hectare per year (coaction.id, 2020).

Another factor is the status of land ownership, where one third of the total oil fields managed by the community have low productivity compared to those managed by private companies. This is noted to have an effect on the average level of productivity in Indonesia so that Malaysia is superior (Yonulis, 2018). Meanwhile, according to Agung Prasetyo, Sri Marwati and also Darsono in their journals in 2017, they explained that Malaysia can meet the quality of palm oil (CPO) better than Indonesia so that consumers in the European market prefer Malaysia.

#### **D. CONCLUSION**

Based on the description of the discussion of research results on Analysis of the Competitiveness and Performance of Indonesian CPO Exports against Malaysia in International Trade in European Markets (Netherlands and Spain) during 2010-2019, it can be concluded as follows that Indonesian and Malaysian palm oil (CPO) in the Dutch and Spanish markets have an advantage over the world average. In the Netherlands, the average RCA value for Indonesia shows a higher value than Malaysia ( $47,005 > 37,152$ ), while in Spain, the average RCA index value for Indonesia is below Malaysia ( $68,291 < 91,1458$ ). This means that Indonesia has superior competitiveness compared to Malaysia in the Dutch market and less superior in Spain.

Based on the results of the analysis of constant market share (CMS), the effect of standard growth and commodity effects on Indonesia's CPO export performance is lower than Malaysia. On the market distribution effect and the competitiveness effect in the Netherlands, Indonesia is still lower than Malaysia. while in Spain, Indonesia is higher than Malaysia. This situation illustrates that the international trade in Indonesian CPO is experiencing very tight competition in the Netherlands and Spain.

The Man-Whitney test results show that it fails to reject  $H_0$ , which means that there is no significant difference between the competitiveness and performance of Indonesian CPO against Malaysia in the Netherlands and Spain (the difference is only small). So that there are times when Malaysia can overtake Indonesia in the international trade of CPO in the European market or the potential share of the Indonesian market can be seized by Malaysia. Further research is needed to identify and develop CPO products that have great potential in the market, so that they can be superior to the competition.

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