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Trade Potential of Agricultural Commodities from Indonesia to African Countries

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ABSTRACT

Purpose: *The consistent economic growth achieved by countries in the African continent is an opportunity for Indonesia to increase bilateral and multilateral cooperation with the region. One thing that can be encouraged is trade flow, especially in agricultural commodities. The main objective of this study is to determine the trade potential of agricultural commodities with countries in the African continent.*

Research Method: *Purposive sampling is used to determine countries in the African continent as potential trading partners for Indonesia to increase trade flow in agricultural commodities. Secondary data were obtained through the International Trade Center and UN COMTRADE. Data were analyzed using acceleration ratio, revealed symmetric comparative advantage, and constant market share analysis.*

Findings: *Indonesia has the potential to accelerate trade in agricultural commodities to sixteen destination countries in the African continent. The commodities with positive export value growth and a strong position of Indonesian competitiveness consist of product labels 03, 09, 15, 16, 17, 18, 19, and 20.*

Research Limitations: *The selected partner countries are based on Indonesia's agricultural commodities export from 2011 until 2019.*

Originality/ Value: *Provides comprehensive agricultural commodities and a method that is an overlay of four indicators to decide the trade potential.*

Keywords: *agricultural commodities, african countries, constant market share analysis, potential trade, revealed symmetric comparative advantage*

INTRODUCTION

The agricultural sector is a significant player in providing basic human needs in raw materials and processed food (Lakitan, 2019). Among all countries globally, Indonesia is one of the countries where the agricultural sector plays a strategic role besides the food supply, namely economic development, poverty alleviation, and employment. Moreover, it is inseparable from Indonesia's status as a country with extensive land and sea areas and abundant natural resources, both fauna and flora. In connection with this role, relatively many people depend on income from the agricultural sector until finally, this country is given the predicate as an agrarian country (Tambunan, 1998; Barichello & Patunru, 2009; Bettinger *et al*. 2014).

Over time, the agricultural sector in Indonesia has proven to withstand a variety of economic

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shocks. In 1998, when there was an economic crisis, the agricultural sector recorded the highest positive growth (BPS, 1999). Meanwhile, in the most recent economic shock, namely the COVID-19 pandemic, this sector has proven to be resilient when most other business fields contracted (BPS, 2021a). From the expenditure side, Indonesia's economy in 2020 is heavily supported by government consumption and a trade balance surplus. At the final point, agriculture, including agro-industry, plays an essential role in the trade surplus. The value of agricultural commodity export transactions during the COVID-19 pandemic has increased compared to 2019 (BPS, 2021b; International Trade Center, 2021). It is inseparable from the fact that all countries need agricultural products for direct consumption and raw materials. In addition, Indonesia also has a relatively good production capacity and productivity (Ojogho & Egware, 2016)

International trade brings benefits to the parties involved. In producing countries, this can increase the product's added value due to the difference between the prices on the international market and the domestic prices. On the other hand, in consumer countries, imported products can increase the consumer surplus due to the relatively lower prices of commodities from abroad than domestic prices (Krugman & Obstfeld, 2009). The African continent is one of the export destinations for Indonesian agricultural products. With the momentum of economic growth that continues from year to year and a reduction in the poverty rate, there is an opportunity for Indonesia to increase the value of exports and the diversity of export commodities in this region (Beegle & Christiaensen, 2019).

Agricultural products exported from Indonesia to countries in Africa are very diverse. Therefore, the first step to be taken is identifying commodities that can increase their export capacity. Studies on trade potential generally compare the export trend from an exporting country to a destination country against world exports in the same destination country (Alatas, 2015) or use another measurement method, namely export growth (Nurcahyani *et al*. 2018). However, in connection with international trade involving many countries, increasing the value of exports is not sufficient to justify the sustainability of exports.

Export activities can continuously occur if the competitiveness of the exporting country is strong and maintained from time to time. On this basis, studies on competitiveness have been carried out for various commodities such as transportation and travel services (Seyoum, 2007) textiles (Kathuria, 2013), agricultural products such as tuna (Supongpan Kuldilok *et al*. 2013) and commodities groups as well as the study of Matkovski *et al*., (2021) regarding agri-food products. The occurrence of stronger or weaker competitiveness can be seen through the effect decomposition proposed by Leamer & Stern (1970). This identification will determine whether the export value has increased or decreased due to world export growth, market distribution, population composition, or competitiveness (Mahmood & Akhtar, 1996; Oktaviana *et al*. 2016).

In this study, changes in the value of exports, growth in export value, competitiveness, and the decomposition of the effects of changes in the value of exports are combined to answer the research objectives, namely determining the trade potential of agricultural commodities from Indonesia to Africa. This combination is also a novelty in this research. Furthermore, with this combination method, priority can be given to agricultural commodities that already have a positive development with strong competitiveness.

MATERIALS AND METHODS

Conceptual Framework

The potential for trade in agricultural commodities from Indonesia to countries in the African continent is estimated using a combination of the acceleration ratio, revealed symmetric comparative advantage, and constant market share analysis. Furthermore, the agricultural products investigated in this study consisted of 20 types (Table 01). Next, the source of the international trade value of each kind of commodity is the

publication of UNCOMTRADE (2021).

Data Collection

This study uses data published by the IMF, World Bank, International Trade Center, and UN COMTRADE on economic growth and export-import. The African continent was chosen as a research area with the consideration of consistent economic growth so that it is an opportunity for Indonesia to increase trade cooperation (Bright & Hruby, 2015). The countries involved in this study consist of Benin, Burkina Faso, Cameroon, Congo, Côte d'Ivoire, Egypt, Ethiopia, Ghana, Guinea, Kenya, Mauritius, Morocco, Mozambique, Niger, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Tanzania and Togo. Meanwhile, thirty-four other countries in the African continent were not involved because they did not continuously trade agricultural commodities with Indonesia (2011-2019).

Table 01: Agricultural commodities referred to in this study

Product Label	Agricultural Commodity
01	Live Animals
02	Meat and edible meat offal
03	Fish and crustaceans, mollusks and other aquatic invertebrates
04	Dairy produce; birds' eggs; natural honey; edible products of animal origin
05	Products of animal origin, not elsewhere specified or included
06	Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage
07	Edible vegetables and certain roots and tubers
08	Edible fruit and nuts; peel of citrus fruit or melons
09	Coffee, tea, maté and spices
10	Cereals
11	Products of the milling industry; malt; starches; inulin; wheat gluten
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal
13	Lac; gums, resins and other vegetable saps and extracts
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included
15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal
16	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates
17	Sugars and sugar confectionery
18	Cocoa and cocoa preparations
19	Preparations of cereals, flour, starch or milk; pastrycooks' products
20	Preparations of vegetables, fruit, nuts or other parts of plants

Source : UNCOMTRADE, 2021

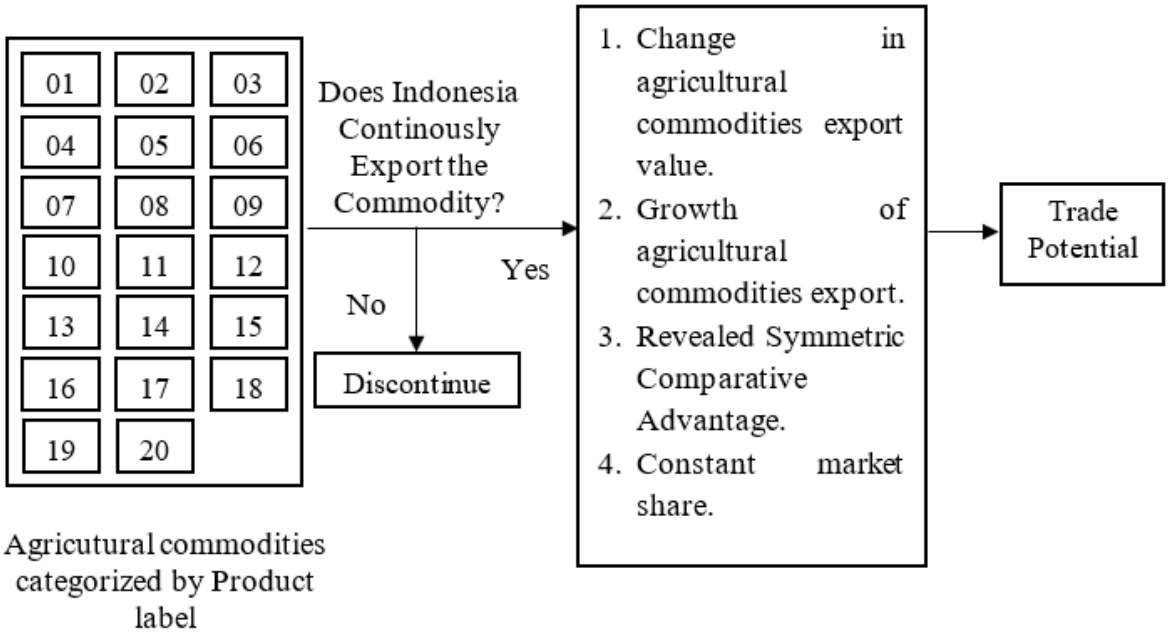

Figure 01: The proposed conceptual framework

Data Analysis

First of all, the measurement of the acceleration ratio is carried out to determine the comparison of agricultural commodity exports from Indonesia to countries in the African continent with exports of agricultural commodities from all countries in the world to the same regions (Pratama *et al*. 2020).

$$\text{Acceleration Ratio} = \frac{\text{Trend of } X_{ij}+100}{\text{Trend of } W_{ij}+100} \quad (1)$$

Where : X_{ij} = export value of commodity i in country j, and W_{ij} = world export value of commodity i in country j.

Simple regression with the ordinary least-squares method is used to determine the trend of Xij and Wij (Dougherty, 2007).

$$Y_i = \beta_0 + \beta_1 X + e \quad (2)$$

Then, (2) transformed to (3) using natural logarithm (Gujarati, 2003).

$$\text{Ln } Y_i = \beta_0 + \beta_1 \text{Ln } X + e \quad (3)$$

Where : Y_i = Indonesia's Agricultural Commodities export / All countries' Agricultural Commodities export; β_0 = intercept, X = time (Year), e = disturbance term, and i = African countries i-th.

To be able to perform calculations (2), the independent variable in (3) must be significant. If it continues even though it is not significant, there will be a biased interpretation (Stock & Watson, 2020). On this basis, if the significance value is lower than the confidence level, a growth comparison is used with the following formula:

$$\text{Acceleration Ratio based on growth} = \frac{g_{ij}}{g_{wj}} \quad (4)$$

Where: = Indonesia's export of agricultural commodity i to country j; = World's export of agricultural commodity to country j. If the result is more than one, Indonesia accelerates its agricultural commodities export more than most exporters to country j. On the contrary, the acceleration ratio based on growth below one means Indonesia's export is slower than the world's.

The calculation in the first stage involves all commodities, which are divided into 20 product labels. The next step is to sort the commodities that are consistently imported by destination countries (Figure 01). Then, for the selected commodities, a measure of Indonesia's superiority

or disadvantage will be measured using Revealed Symmetric Comparative Advantage (RSCA) (Saleh and Widodo, 2010; Fligenspan *et al.* 2015; Rossato *et al.* 2018).

$$RSCA_{ij} = \frac{(RCA_{ij}-1)}{(RCA_{ij}+1)} \quad (5)$$

Where : RSCAij = Revealed Symmetric Comparative Advantage of commodity i in country j, RCAij = Revealed Comparative Advantage of commodity i in country j. If RSCA > 0, Indonesia has a comparative advantage for product j, while RSCA < 0 showed that Indonesia has a comparative disadvantage for product j.

RCA in formulation (5) generated from calculation in (6).

$$RCA_{ij} = \frac{\frac{X_{ij}}{X_j}}{\frac{X_{iw}}{X_w}} \quad (6)$$

Where : Xij = value of exports of product i by country j, X_j = value of total exports by country j, X_{iw} = value of world exports of product i, and Xw = value of total world exports (Balassa, 1965; Bojnec and Fertő, 2017; Aksoy and Kaymak, 2021).

The final stage, using Constant Market Share Analysis (CMSA) developed by Leamer and Stern (1970) based on calculations from Tyszynski (1951) to determine the effect that causes changes in export value with the following formula

$$V'ij - Vij = rVij + (ri - r)Vij + (rij - ri)Vij + (V'ij - Vij - rijVij) \quad (7)$$

Where: $r = \frac{V^{wt} - V^{wo}}{V^{wo}}$, $r_i = \frac{V_i^{wt} - V_i^{wo}}{V_i^{wo}}$, $r_{ij} = \frac{V_{ij}^{wt} - V_{ij}^{wo}}{V_{ij}^{wo}}$,

,V^{wt} = export value of all commodities in the world in period t, V^{w0} = export value of all commodities in the world in period 0, V_i^{wt} = export value of commodity i in the world in period t, V_i^{w0} = value of export of commodity i in the world in period 0, V_{ij}^{wt} = value of world export of commodity i to destination country (j) in period t, V_{ij}^{w0} = value of world export of commodity i to country destination (j) in period 0, V'_{ij} = Value of export of country i to country j in period t, V_{ij} = Value of export of country i to country j in period 0 (Oktaviana *et al*. 2016; Widodo, 2008).

Through calculation (7), the CMSA method decomposes the value of changes in exports based on world growth effects, commodity composition effects, market distribution effects, and competitiveness effects (Mahmood & Akhtar, 1996).

Determining the trade potential of agricultural commodities from Indonesia to countries in the African continent modifies the growth ratio model by Yusuf (1999). The ratio model is a commonly used method that combines the results of the location quotient calculation with the growth ratio in the studied area. Next, this combination is applied to classify a sector based on growth dominance and its contribution. Following that method, this study combines the value of acceleration ratio, RSCA, and CMSA calculations to classify product labels that have trade potential or not.

RESULTS AND DISCUSSION

Trend of Agricultural Commodities Trade

The total contribution of Indonesia's agricultural commodity exports to countries in the African continent to the total exports of the same commodities to the world shows a positive trend (Table 02). In other words, along with the increasing value of Indonesia's agricultural commodity exports to the world, the penetration of countries in the African continent is getting bigger. Benin, Côte d'Ivoire, and Ghana were the last three countries in the previous nine years with the most significant increase in contribution, namely 0.34%, 0.14%, and 0.13%.

Table 02: The results of simple regression analysis

No	Country	Trend of Xij		Trend of Wij	
		β	t-stat	β	t-stat
1	Benin	1.00	3.62***	0.33	2.94**
2	Burkina Faso	0.38	1.04^{ns}	0.07	1.43 ^{ns}
3	Cameroon	-0.53	-6.05^{ns}	-0.12	-2.33^{ns}
4	Congo	-0.68	-3.78^{ns}	-0.01	-0.16^{ns}
5	Côte d'Ivoire	0.47	1.02^{ns}	0.09	1.96*
6	Egypt	-0.01	-0.14^{ns}	0.00	-0.01^{ns}
7	Ethiopia	0.54	1.16^{ns}	0.02	0.09^{ns}
8	Ghana	-0.15	-0.59^{ns}	0.02	0.16^{ns}
9	Guinea	0.96	1.85^{ns}	0.42	4.97^{ns}
10	Kenya	0.01	0.06^{ns}	0.13	1.39^{ns}
11	Mauritius	0.02	0.19^{ns}	-0.01	-0.39^{ns}
12	Morocco	-0.03	-0.53^{ns}	-0.03	-0.68^{ns}
13	Mozambique	-0.41	-1.28^{ns}	0.18	1.78^{ns}
14	Niger	1.11	1.75^{ns}	0.37	4.35***
15	Rwanda	3.27	5.27***	0.44	6.74***
16	Sao Tome & Principe	-0.42	-2.01^{ns}	0.03	0.92^{ns}
17	Senegal	0.73	3.19**	0.03	0.53^{ns}
18	Seychelles	0.24	1.60^{ns}	0.08	1.23^{ns}
19	Tanzania	-0.09	-0.66^{ns}	-0.21	-2.05^{ns}
20	Togo	0.72	3.44**	0.17	4.55***

Source: Secondary Data Analysis, 2021
*ns = not significant; *** = significant at the 99% (α = 1%); ** = significant at the 95% (α = 5%); * = significant at the 90% (α = 10%)*

Suppose the export performance of Indonesian agricultural commodities is compared with other countries in the world for the African continent. In that case, there are two categories, namely: the market share is getting bigger, and the market share tends to decline. In the first category, as shown in Table 03, this occurred in Benin, Burkina Faso, Côte d'Ivoire, Ethiopia, Ghana, Guinea, Kenya, Mauritius, Morocco, Niger, Rwanda, Senegal, Seychelles and Togo. Meanwhile, the second category only occurred in Mozambique, Cameroon, Congo, Egypt, Kenya, Sao Tome & Principe, and Tanzania. Market share growth occurred in Togo from initially around 9 percent in 2011 to 33.14 percent in 2019. On the other hand, Tanzania's agricultural commodity imports are increasingly dominated by countries other than Indonesia. In 2019, Indonesia's market share remained 20.48 percent or decreased by 4.79 percent compared to 2011.

Based on the calculation of the acceleration ratio using a comparison of Indonesia's and the world's export trends, only three countries have significant independent variables (Table 02). On this basis, the justification of the acceleration ratio is replaced by using a ratio of growth in export value (Table 03). With this measurement, the highest acceleration occurred in Rwanda (248), Côte d'Ivoire (38.61), Guinea (28.08), and Senegal (22.28), while the weakening occurred in Ghana (7.20), Sao Tome & Principe (-6.32), Congo (-36), Egypt (-2.32), and Ethiopia (-0.06%). Alatas (2015) explains that the acceleration score is more than one, indicating that exporting countries can seize the commodity market in the destination country compared to most other exporting countries with similar commodities. This acceleration is illustrated by visualizing the development of Indonesia's export value and the world through a histogram, as provided by Saygili and Saygili (2011). A bar chart below zero indicates that export growth is negative (Figure 02).

Table 03: Growth of agricultural commodities export

No	Country	g_{ij}	g_{wj}	No	Country	g_{ij}	g_{wj}
1	Benin	272	66	11	Mauritius	23	2
2	Burkina Faso	161	17	12	Morocco	-4	-4
3	Cameroon	-68	-18	13	Mozambique	4	58
4	Congo	-68	19	14	Niger	227	186
5	Côte d'Ivoire	1,148	30	15	Rwanda	25,978	104
6	Egypt	-27	12	16	Sao Tome & Principe	-50	8
7	Ethiopia	3	-56	17	Senegal	320	14
8	Ghana	56	-8	18	Seychelles	12	4
9	Guinea	2,895	103	19	Tanzania	-24	-6
10	Kenya	-18	29	20	Togo	426	52

Source: Secondary Data Analysis, 2021
g_{ij} = Indonesia's growth of agricultural commodities export to country j; g_{wj} = World's growth of agricultural commodities export to country j;

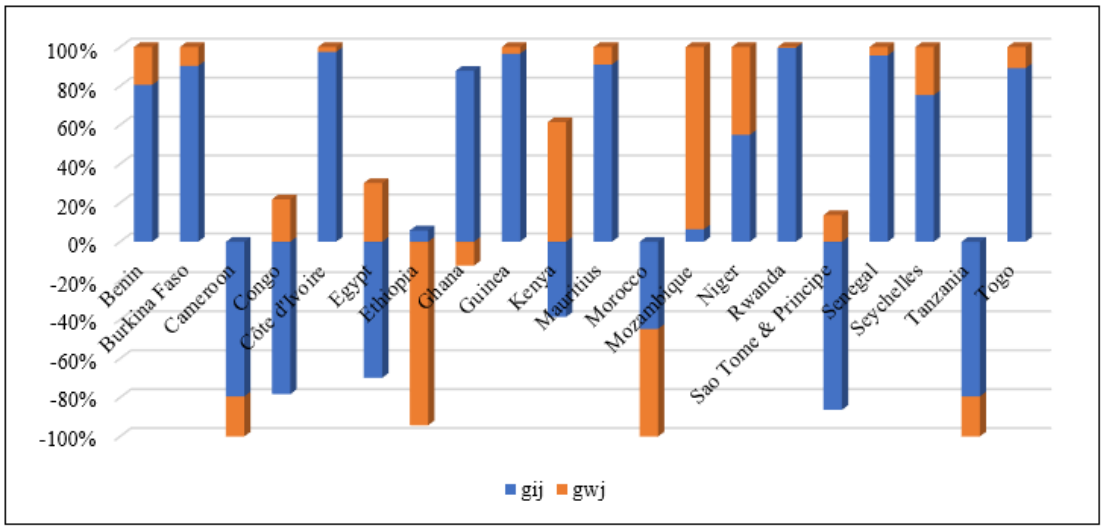

Figure 02: The percentage of g_{ij} to g_{wj} according to Partner Country (es)

On the other hand, above zero indicates that export performance has improved in the last nine years. The comparison of the blue and orange bar charts shows the growth-share. The higher the blue color, the more Indonesia's exports go further than exports from the world in the African continent.

Comparative Advantage and Constant Market Share

After knowing the trend of agricultural commodities based on the total value of the twenty product labels, the next step is to identify the products that have been continuously exported from Indonesia in the last nine years. Based on the sorting results, it is known that there are partner countries with the same products and some that are not. However, no single country imported twenty product categories (Table 04).

Mauritius and Egypt are the countries with the most diverse imported commodities from Indonesia, namely twelve label products. On the

other hand, Burkina Faso, Ethiopia, Rwanda, Sao Tome & Principe are four countries that import only one product label. Furthermore, on average, Indonesia sent 5 product labels to countries in the African continent. Next, the partner country then identified the extent of Indonesia's superiority based on the RSCA value (Table 05).

Table 04: Export value identification

No	Country	Product Label																			
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
1	Benin	x	x	x	x	x	x	x	x	x	x	x	x	x	x	✓	✓	✓	x	x	x
2	Burkina Faso	x	x	x	x	x	x	x	x	x	x	x	x	x	x	✓	x	x	x	x	x
3	Cameroon	x	x	x	x	x	x	x	x	x	x	x	✓	x	x	✓	✓	x	✓	✓	x
4	Congo	x	x	x	x	x	x	x	x	x	x	x	x	x	x	✓	✓	✓	x	x	x
5	Côte d'Ivoire	x	x	x	x	x	x	x	x	x	x	x	x	x	x	✓	✓	x	x	x	x
6	Egypt	x	x	✓	x	x	x	x	✓	✓	x	x	✓	✓	✓	✓	✓	✓	✓	✓	✓
7	Ethiopia	x	x	x	x	x	x	x	x	x	x	x	x	x	x	✓	x	x	x	x	x
8	Ghana	x	x	x	x	x	x	x	x	✓	x	x	x	x	x	✓	x	x	x	x	x
9	Guinea	x	x	x	x	x	x	x	x	x	x	x	x	x	x	✓	✓	✓	x	✓	✓
10	Kenya	x	x	x	x	x	x	x	✓	x	x	x	x	x	x	✓	✓	✓	✓	✓	✓
11	Mauritius	x	x	✓	✓	x	✓	x	✓	✓	x	x	x	x	✓	✓	✓	✓	✓	✓	✓
12	Morocco	x	x	✓	x	x	x	x	✓	✓	x	x	✓	✓	x	✓	x	✓	✓	✓	✓
13	Mozambique	x	x	✓	x	x	x	x	✓	x	x	x	x	x	x	✓	✓	✓	✓	✓	x
14	Niger	x	x	x	x	x	x	x	x	x	x	x	x	x	x	✓	x	✓	✓	✓	x
15	Rwanda	x	x	x	x	x	x	x	x	x	x	x	x	x	x	✓	x	x	x	x	x
16	Sao Tome & Principe	x	x	x	x	x	x	x	x	x	x	x	x	x	x	✓	x	x	x	x	x
17	Senegal	x	x	✓	x	x	x	✓		✓	x	x	x	x	x	✓	✓	✓	✓	✓	✓
18	Seychelles	x	x	✓	x	x	x	x	x	x	x	x	x	x	x	✓	x	✓	x	✓	✓
19	Tanzania	x	x	x	x	x	x	x	x	x	x	x	x	x	x	✓	✓	x	✓	✓	x
20	Togo	x	x	x	x	x	x	x	x	x	x	x	x	x	x	✓	✓	✓	✓	✓	x

Source: Author's calculation based on secondary data, 2021
X = Zero value or there is no continously export from Indonesia to partner country during 2011 – 2019, ✓ = There is continously export from Indonesia to Partner Country during 2011 – 2019

Table 05: The results of revealed symmetric comparative advantage calculation

No	Country	Year								
		2011	2012	2013	2014	2015	2016	2017	2018	2019
1	Benin									
	a. 15	0.55	0.78	0.8	0.94	0.94	0.91	0.86	0.85	0.91
	b. 16	0.34	0.85	0.81	0.52	0.36	0.75	0.09	0.44	0.71
	c. 17	0.07	-0.2	-0.5	-1	-0.8	-0.9	-1	-1	-0.9
2	Burkina Faso									
	a. 15	0.75	0.88	0.93	0.89	0.88	0.71	0.92	0.58	0.86
3	Cameroon									
	a. 12	0.87	0.95	0.91	0.86	0.94	0.91	0.91	0.75	0.86
	b. 15	0.96	0.94	0.95	0.93	0.97	0.95	0.94	0.96	0.96
	c. 16	0.94	0.97	0.91	0.95	0.9	0.66	0.52	-0.2	0.77
	d. 18	0.49	0.68	0.77	0.89	0.67	0.83	0.89	0.88	0.94
	e. 19	-0.4	-0.4	-1	-0.3	-0.1	0.76	-0.2	-0.9	-0.6

No	Country	Year								
		2011	2012	2013	2014	2015	2016	2017	2018	2019
4	Congo									
	a. 15	0.9	0.86	0.91	0.93	0.93	0.83	0.92	0.92	0.95
	b. 16	0.93	0.91	0.93	0.9	0.94	0.93	0.93	0.96	0.86
	c. 17	-1	0.36	-0.8	0.32	0.39	0.49	-0.2	0.2	0.28
5	Côte dIvoire									
	a. 15	0.65	0.97	0.97	0.98	0.97	0.98	0.98	0.95	0.98
	b. 16	0.96	0.92	0.97	0.83	0.96	0.81	0.3	0.89	0.59
6	Egypt									
	a. 03	-0.6	-0.2	-0.4	-0.5	-0.6	-0.6	-0.8	-0.8	-0.8
	b. 08	-0.1	-0.6	-0.1	-0.4	-0.5	-0.5	0.14	0.07	-0.5
	c. 09	0.44	0.69	0.66	0.55	0.68	0.68	0.71	0.78	0.8
	d. 12	-1	-1	-1	-1	-1	-1	-1	-1	-1
	e. 13	0.23	0.56	0.32	0.5	0.47	0.51	0.33	0.61	0.43
	f. 14	0.32	-0.4	-1	-1	0.61	-1	-1	-1	-0.9
	g. 15	0.9	0.91	0.91	0.95	0.97	0.94	0.94	0.94	0.95
	h. 16	0.42	0.32	0.27	0.31	-0.1	0.12	0.05	0.3	0.16
	i. 17	-0.9	-0.8	-0.8	-0.7	-0.7	-0.9	-1	-0.8	-0.8
	j. 18	0.04	0.17	0.37	-0.3	0.73	0.76	0.69	0.66	0.59
	k. 19	-0.9	-0.9	-0.9	-0.9	-0.9	-0.7	-1	-0.7	-0.9
	l. 20	-0.6	-0.7	-0.8	-0.7	-0.7	-0.5	-0.4	-0.9	-0.5
7	Ethiopia									
	a. 15	0.28	0.58	-0.5	-0	0.19	0.22	0.67	0.72	0.53
8	Ghana									
	a. 09	-1	-1	-1	-0.7	-1	-1	-0.7	-0.9	0.59
	b. 15	0.93	0.94	0.95	0.95	0.95	0.92	0.86	0.8	0.94
	c. 16	0.93	0.94	0.88	0.91	0.85	0.93	0.88	0.86	0.73
	d. 17	-0.6	-0.8	-0.9	-1	-0.9	-0.6	-0.9	-0.8	-0.8
	e. 18	0.73	0.09	0.45	0.45	-1	-0.6	-0.6	-0.7	0.47
	f. 19	-0.4	-0.5	-0.7	-0.7	-0.4	-0.1	-0.3	-0.5	-0.6
	g. 20	-0.7	-1	-1	-1	-1	-1	-1	-1	-1
9	Guinea									
	a. 15	0.44	0.97	0.96	0.96	0.95	0.94	0.94	0.95	0.95
	b. 16	-1	0.41	-1	-1	-1	0.65	-1	-1	-0.3
	c. 17	-0.7	-1	-0.9	-1	-1	-0.9	-1	-0.9	-0.7
	d. 19	-0	-0.5	-0.8	-0.7	-1	-0.9	-1	-1	-0.9
	e. 20	0.75	-0.4	-0.9	-1	-0.8	-0.6	-0.7	-0.9	-0.8
10	Kenya									
	a. 08	-0.5	-1	-0.9	-0.6	-0.5	-0.7	-0.7	-0.7	-0.8
	b. 15	0.85	0.88	0.89	0.9	0.9	0.88	0.9	0.91	0.87
	c. 16	0.69	0.92	0.89	0.82	0.73	0.33	-1	0.31	0.27
	d. 17	-0.6	-0.8	-0.9	-0.9	-0.8	-0.8	-0.9	-0.8	-1
	e. 18	0.28	0.56	-0.1	0.14	0.51	0.4	0.25	-0	-0.7
	f. 19	-0.7	-0.7	-0.8	-0.7	-0.6	-0.6	-0.6	-0.7	-0.8
	g. 20	-1	-1	-1	-1	-0.3	-1	-0.6	-0.8	-0.7
11	Mauritius									
	a. 03	-0.3	-0.1	0.04	-0	-0.1	0.15	0.1	0.17	0.38
	b. 06	-0.9	-0.8	-0.8	-0.9	-0.9	-0.9	-0.9	-0.9	-1
	c. 08	-0.2	-0.7	-0.4	-0.4	-0.4	-0.6	-0.4	-0.3	-0.6
	d. 09	0.15	-0.2	-0.4	0.01	-0.2	-0.8	-0.4	-0.7	-0.5
	e. 14	0.15	-0.3	0.48	-0	-0.1	-0.5	-0.4	-0.5	-0.5
	f. 15	0.62	0.55	0.64	0.72	0.34	-0.5	0.54	0.79	0.21
	g. 16	-0.3	-0.6	-0.3	-0.2	0.21	-0	-0.2	-0.5	-0.4
	h. 17	0.11	-0.1	0.4	-0	-0.1	-0	-0.1	0.3	-0.1
	i. 18	0.71	0.75	-0.1	-0.7	-0.9	-0.8	-0.8	-0.8	-0.9
	j. 19	0.15	0.19	0.58	0.65	0.62	0.66	0.68	0.53	0.56
	k. 20	-1	-0.9	-1	-0.9	-1	-0.9	-1	-1	-0.9

No	Country	Year								
		2011	2012	2013	2014	2015	2016	2017	2018	2019
12	Morocco									
	a. 03	-0.9	-0.5	-0.7	-0.4	-0.4	-0.3	-0.3	-0.3	-0.3
	b. 08	0.07	-1	0.08	-0.8	-0	-0.7	-0.3	0.35	0.17
	a. 09	0.96	0.95	0.96	0.95	0.94	0.93	0.94	0.94	0.93
	b. 12	-0.8	-1	-0.8	-1	-0.9	-0.5	-0.7	-1	-1
	c. 13	0.31	0.13	0.64	0.23	0.28	0.32	0.3	0.03	0.02
	d. 15	0.81	0.88	0.8	0.89	0.8	0.86	0.86	0.82	0.88
	e. 17	-0.9	-0.9	-0.8	-0.9	-0.8	-0.9	-0.9	-0.6	-0.8
	f. 18	0.44	0.41	0.51	0	0.31	0.29	0.43	0.26	0.28
	g. 19	-1	-1	-1	-1	-1	-1	-0.6	-0.8	-0.8
	h. 20	-0.2	-0.1	-1	-0	-1	0.27	-1	-0.3	-0.5
13	Mozambique									
	a. 03	0.32	0.27	-0.9	-0.7	-1	-1	-1	-1	-0.9
	b. 08	0.37	-0.7	-0.3	-0.6	0.16	0.59	0.25	0.34	-0.6
	c. 15	0.93	0.97	0.95	0.95	0.96	0.89	0.94	0.91	0.9
	d. 16	-0.4	0.71	0.85	0.86	0.85	0.84	0.62	0.84	-0.7
	e. 17	-0.9	-0.9	-0.4	-0.4	-0.3	0.35	0.33	0.55	-0
	f. 18	-1	-1	-1	-0.9	-1	-1	-0.3	-0.4	-1
	g. 19	-0.6	-0.8	-0.2	-0.7	-0.6	-1	-1	-0.3	-0.9
14	Niger									
	a. 15	0.84	-0.4	0.43	0.92	0.93	0.9	0.86	0.84	0.67
	b. 17	-0.9	-0.9	-0.3	-0.7	-0.4	0.31	0.4	0.46	0.93
	c. 18	1	0.98	-1	0.94	-1	-1	-1	-1	-0.5
	d. 19	-1	-0.9	0.36	-0.7	-0.4	-0.8	-0.4	-1	-1
15	Rwanda									
	a. 15	-1	-1	0.54	0.84	0.7	0.92	0.92	0.92	0.92
16	Sao Tome & Principe									
	a. 15	0.93	0.92	0.9	0.94	0.91	0.88	0.9	0.92	0.94
17	Senegal									
	a. 03	-1	0.68	-1	-1	-1	-0.6	-0.4	-0.5	0.04
	b. 07	-1	-1	-1	-1	-1	-1	-1	-1	-1
	c. 09	-1	-0.5	-1	-0.9	-0.7	-1	-0.6	-1	0.38
	d. 15	0.75	0.87	0.89	0.92	0.94	0.86	0.93	0.94	0.93
	e. 16	-1	0.81	0.71	0.87	0.83	0.86	0.88	0.85	0.94
	f. 17	-0.9	-0.6	-0.9	-0.7	-0.9	-1	-1	-0.5	-0.8
	g. 18	-1	-1	-1	-0.1	-1	-0.7	-0.6	-1	-0.4
	h. 19	-0.9	-1	-1	-1	-1	-0.2	-1	-0.9	-0.9
	i. 20	-1	-1	-0.7	-0.7	-1	-0.8	-0.8	-1	-1
18	Seychelles									
	a. 03	-1	-1	-1	-0.9	-0.4	-0.8	-1	-0.8	-0.5
	b. 15	-1	-1	-0.4	0.19	-0.5	-0.6	0.67	0.19	0.19
	c. 17	0.63	-1	-0.7	-0.7	-1	-0	-0.2	0.3	-0.2
	d. 19	0.9	0.83	0.84	0.91	0.91	0.92	0.88	0.89	0.87
	e. 20	-0.1	-1	-1	0.17	-0.5	-1	-0	-0.1	0.5
19	Tanzania									
	a. 15	0.94	0.94	0.95	0.91	0.96	0.9	0.92	0.93	0.92
	b. 16	0.93	0.94	0.94	0.87	0.95	0.78	0.63	0.87	0.63
	c. 18	0.25	0.28	0.38	0.21	0.54	-0.1	-0.4	-0.6	-0.3
	d. 19	-0.8	-0.8	-0.7	-0.8	-0.4	-1	-0.9	-0.9	-0.9
20	Togo									
	a. 15	0.89	0.89	0.92	0.95	0.92	0.94	0.92	0.91	0.92
	b. 16	0.85	0.77	0.86	0.57	0.45	0.74	-0.1	0.48	0.59
	c. 17	0.2	-0.9	-0.9	-0.8	-0.5	-0.6	-0.9	-0.4	-1
	d. 18	-1	0.9	0.88	0.23	-0.1	-0.9	-1	-1	-0.8
	e. 19	-0.9	-1	-0.8	-0.9	-0.9	-0.6	-0.9	-0.9	-0.9

Source: Author's Calculation based on secondary data from ITC, 2021

Benin

Indonesia has a competitive advantage in exporting product labels 15 and 16 from time to time. In the last ten years, Indonesia's competitiveness has increased, as indicated by the RSCA value, which increased by 0.36 and 0.38 in each commodity category. On the other hand, Indonesia's export performance for vegetables and certain roots and tubers (17) has declined.

In terms of export value developments, product label 15 is driven by an increase in demand for commodities from destination countries (world export growth effect) and commodity composition, namely changes in world market interest in the commodity concerned. In product label 16, Indonesia's export growth rests on increasing competitiveness. On the other hand, for product label 17, Indonesian exports fell by approximately US$ 2,000,000 due to the inability to compete with other countries.

Burkina Faso

From 2011 to 2019, despite fluctuations, Indonesia has consistently had a competitive advantage for product labels 15 to Burkina Faso. The export value grew by US$ 652,000, which was driven by the growth of world exports to Burkina Faso, which was followed by Indonesia's better ability to market products to this country. Among the four effects, new markets are the only ones that have a negative value. According to Aguiar *et al.*, (2017) this condition can occur because Indonesia's exports are dominated by commodities, with export growth below the average world export growth.

Cameroon

In general, the export performance of Indonesian agricultural commodities to Cameroon is experiencing a slowdown. The transaction value of shipping goods from Indonesia on product labels 12, 15, 16, and 19 decreased by respectively US$ 379,000, US$ 12,328,000, US$ 1,750,000, and US$ 160,000. This decline was dominated by a decline in demand from importing countries. Meanwhile, for product label 18, Indonesia recorded positive gains by increasing the export value by US$ 261,000. Cameroon's demand for product label 18 from exporting countries has tended to decline. However, Indonesia has maintained its position as one of the main exporters of this commodity.

Congo

In the past nine years, Indonesia's exports to Congo for product labels 15 and 16 decreased by US$ 7,978,000 and US$ 5,473, respectively. However, for product label 15, Indonesia still occupies a country with a competitive advantage, while for product label 16, Indonesia's competitiveness drops. The positive trend in terms of export value and RSCA value is shown by product label 17. In 2011, Indonesia did not export this commodity at all. However, in 2019 Congo imports were recorded at US$ 456,000.

Côte d'Ivoire

Indonesia has a competitiveness that continues to improve for product label 15, but on the contrary, it decreases for product label 16. As a result, the export value of product label 15 increased by US$ 40,995,000, while imports of the second commodity fell to US$ 1,445,000 from 2011 to 2019. Specifically, the demand for Côte d'Ivoire for product label 15 has increased from time to time. This performance shows that Indonesia has succeeded in positioning itself as an exporter with an ever-increasing transaction value. Meanwhile, for product label 16, demand for Côte d'Ivoire from exporting countries has decreased relatively, which directly impacts Indonesia.

Egypt

Of the 12 product labels, six indicate that Indonesia has a relatively weak competitive position. Moreover, this unfortunate position has continued to decline in the past nine years. Among the four effects on the calculation of

constant market share, the decline in these six products is dominated by Indonesia's inability to compete with other exports.

Furthermore, in product labels 13, 15, and 17, even though Indonesia can be said to be superior through the RSCA value of more than zero, the export performance decreases. For each product label, Indonesia experienced a decrease in shipping transactions of US$ -113,000, US$ -290,425, and US$ -642,000. Thus, as a whole, it can be concluded that Egypt's imports from Indonesia decreased not because of the reduced demand for Egypt's product labels but because of Indonesia's weakening competitiveness.

Ethiopia

In 2011, Indonesia ranked eight out of 23 exporters of 15 label products to Ethiopia. This rank has implications for Indonesia's position as a country with relatively strong competitiveness than the average exporter. Indonesia's RSCA value was recorded at 0.28 in 2011 and rose 0.25 points to 0.53 at the end of 2019. Indonesia's market share is consistently large in Ethiopia and even tends to increase. However, from 2018 to 2019, the import value of 15 Ethiopian label products fell by approximately 40 percent, and decreased exports from Indonesia to this region (International Trade Center, 2021). It is supported by the decomposition of the constant market share analysis, which shows that the market distribution effect and the commodity composition effect have decreased significantly, causing a change in the export value of US$ -125,000.

Ghana

Exports of Indonesian agricultural commodities to Ghana are dominated by product label 15. In 2011, approximately the transaction value reached US$ 199,240,000, and 75% was the contribution of product label 15. Based on the RSCA value, it is known that Indonesia's position for product 15 in Ghana is solid, almost touching number 1. Competitiveness is dynamic but consistently above zero. Due to its strategic role, five product labels (16, 17, 18, 19, 20) experienced a decline in export value of US$ 9,236,000, US$ 420,000, US$ 401,000, US$ 197,000, and US$ 217,000, respectively, the transaction value in Indonesia is still quite large. Indonesia's exports are again supported by product label 15, which recorded an increase of US$ 46,362,000 from 2011 to 2013.

Guinea

In 2011 and 2019, Indonesia excelled for product label 15 with RSCA values of 0.44 and 0.95. The market share of 15 Indonesian product labels in Guinea was less than 10 percent in 2011 and continued to grow until finally, in 2019, it contributed 30 percent of total imports in Guinea. Meanwhile, product labels 16, 17, 19, and 20 have still recorded relatively low performance in the last nine years. While the demand for Guinea for these products tends to increase, Indonesia is unable to market. In other words, other countries have succeeded in increasing their penetration in Guinea.

Kenya

Indonesia consistently exports agricultural commodities containing product labels 08, 15, 16, 17, 18, 19, and 20. Among the seven categories, Indonesia has relatively strong competitiveness for product labels 15 and 20. The position of competitiveness against commodities shows a strengthening trend compared to eight years ago. However, if traced further, when Kenya's demand for product label 15 increased, the value of Indonesia's exports decreased from 2011 to 2019, amounting to US$ 26,801,000. Based on the decomposition of the constant market share calculation, the value of the market distribution effect is -3,492,227, while the other three results are positive.

Mauritius

Mauritius continuously imports agricultural commodities from Indonesia for eleven product

labels. In general, through these 11 product categories, Indonesia's competitiveness is relatively weak, as indicated by the RSCA value being below zero. However, there are two commodities with a positive trend: product labels 03 and 19. In 2011, Indonesia's competitiveness was relatively weak for fish and crustaceans, mollusks, and other aquatic invertebrates. However, eight years later, the position was reversed, and Indonesia succeeded in positioning itself as one of the strategic exporters to Mauritius for 03 label products.

For preparations of cereals, flour, starch or milk, pastrycooks' products, in 2011, Indonesia was able to export US$ 1,040,000 of the total value of Mauritius for the same product, with a value of US$ 46,664,000. Eight years later, the export value of 19 label products from Indonesia to Mauritius reached US$ 3,149,000, while Mauritius's total imports for the same label product were valued at US$ 62,546,000. Changes in the export value of product label 19 amounting to US$ 2,274,000 are decomposed into four effects, namely: a) world export growth with a value of US$ 3,476,000, b) market distribution with a value of US$ 38,667,000, c) commodity composition with a value of US$ -6,747,000, and d) competitiveness with a value of US$ -33,122,000.

Morocco

From 2011 to 2019, the export value of Indonesian agricultural commodities has tended to decline. Of the total 10 product labels shipped sustainably from Indonesia to Morocco, three of them experienced a decrease of up to US$ 4,567,000. During the same period, product labels 03, 08, 13, 15, 17, 18, and 19 added to approximately US$ 820,000. Based on the measurement of the level of excellence using the RSCA, the competitiveness of the five product labels decreases, while others tend to increase. In terms of the constant market share decomposition, the effect that generally dominates the decline in export value is market distribution. It means that Indonesia's ability to export-related products has decreased over time.

Mozambique

In 2011, Indonesia had the title as a country with solid competitiveness for product labels 03, 08, and 15 with the destination country of Mozambique. At that time, the export value for each commodity category reached US$ 1,780,000, US$ 189,000, and US$ 68,438,000, and at the same time, Mozambique's imports of these commodities were approximately US$ 1,866,000, US$ 5,309,000, and US$ 141,224,000. Over time, Indonesia's exports fluctuated with a decreasing trend, while demand for Mozambique had an upward trend. This export development is consistent with the results of constant market share, which indicates that Indonesia's competitiveness is the leading cause of the decline in export value.

Niger

Niger imports agricultural commodities from Indonesia in a sustainable manner for four product labels, namely 15, 17, 18, and 19. For products of animal or vegetable fats and oils and their cleavage products, prepared edible fats (15), Indonesia's exports grew by approximately 150 percent within nine years. In the same period, Niger's imports rose from US$ 34,090,000 to US$ 126,640,000, or more than 300 percent. In other words, Indonesia's competitiveness has decreased in terms of a lower development market share than Niger's total imports. It is supported by the value of the RSCA product label 15, which in 2011 was 0.84 to 0.67. The RSCA value remains above zero, meaning that Indonesia is still one of the most significant contributors but with a decreasing portion from time to time.

The phenomenon of decreasing competitiveness also occurred in product label 18, wherein in 2011, the value was one to -0.5 in 2019. In terms of export value, at the beginning of the period, Indonesia succeeded in sending label products worth US$ 223,000 to Niger, but in 2019 it only reached US$ 55,000. This decline in value is inversely proportional to the development of Niger's imports of product labels, which

increased by approximately US$ 1,600,000 from 2011 to 2019.

Rwanda

In 2011 and 2012, Indonesia had not yet exported product label 15 to Rwanda. Therefore, the RSCA value touches one of the lowest points in measuring competitiveness. In that period, Rwanda has imported from other countries globally and reached US$ 62,561,000 in 2011 and then increased to US$ 71,227,000 in 2012. In 2013, Indonesia started exporting 15 product labels, and in the following years, fluctuation occurred. The highest point of Indonesian exports appeared in 2017, with an export value of US$ 17,702,000, while Rwanda's total imports for the same commodity reached US$ 108,906,000. Unfortunately, in 2019 the value of product label transactions from Indonesia to Rwanda fell considerably to reach US$ 2,347,000 as a result of weakening imports from Rwanda by approximately US$ 5,000,000. The decline in Indonesia's trade transactions outweighed the decrease in Rwandan imports.

Sao Tome & Principe

The value of Indonesian exports for product label 15 to Sao Tome & Principe decreased by US$ 528,000 from 2011 to 2019. Based on the calculation of constant market share, this decline is dominated by the effects of market distribution and commodity composition. Furthermore, even though the export value has decreased from competitiveness, Indonesia is still listed as an exporter with continuous competitiveness, as evidenced by the RSCA value, which is consistently greater than 0.9.

Senegal

Senegal is one of the countries in the African continent that imports from Indonesia a variety of commodities. Nine product labels were exported sustainably from Indonesia to this nation. Of the nine, only one recorded negative growth, namely product label 17. While the other eight increased by a total of US$ 23,441,000 from 2011 to 2019. Six out of 9 product labels were not exported since 2011 but in subsequent years. This performance indicates a broader market penetration from Indonesia to Senegal.

Judging from the RSCA calculation, Indonesia has strong competitiveness for product labels 03, 09, 15, and 16. With the first and last categories this shows a significant achievement. The reason is that in 2011, Indonesia had not exported or exported with a market share at all. It was very small. On the other hand, Indonesia has strong competitiveness sustainably for product label 15. In nine years, competitiveness has fluctuated but with a tendency to strengthen. From 2011 to 2019, the RSCA value increased by 0.18.

Based on the calculation of constant market share, changes in the export value of product label 15 are dominated by world export growth (US$ 24,163,000) and commodity composition (US$ 206,853,000).

Seychelles

Indonesia's competitiveness for exports to Seychelles is divided into four categories: First, it is not competitive initially but has a strong competitiveness (20). From 2011 to 2019, there was an increase in the export value of approximately US$ 47,000. Second, strong competitiveness was seen at the beginning but decreases at the end of the period (17) (Seychelles' demand for this product fell from US$ 4,837,000 in 2011 to US$ 3,021,000 in 2019.) Third, they were not competitive initially. Still, the market share continued to increase (03 and 15). Product label 03 increased by US$ 545,000 from 2011 to 2019, while product label 15 increased by US$ 44,000 in the same period. Fourth, strong competitiveness at the beginning is observed but gradually decreases (19). In 2011, Indonesia's exports reached US$ 372,000 and became US$ 353,000 at the end of 2019. At the same time, the value of Seychelles imports of product label 19 has almost doubled from US$ 5,582,000 to US$ 9,731,000.

Tanzania

Indonesia has a relatively large market share for product label 15 in Tanzania. In 2011, of the total import value of US$ 317,678,000, Indonesia contributed US$ 262,471,000 or approximately eighty percent. Over time, Indonesia competed with Malaysia to export product label 15. In 2019, Indonesia's market share fell to around 43 percent. On the other hand, Malaysia's market share increased from 12 percent in 2011 to 48 percent. This condition is in line with the results of the RSCA, which show that Indonesia still has strong competitiveness, but compared to eight years ago, there has been a decline.

The same trend occurs in the RSCA value of the three product labels from Indonesia to Tanzania, namely 16, 18, and 19. Competitiveness is decreasing, and if it is juxtaposed with the calculation of constant market share, this weakening is dominated by the decreasing ability to compete with other exporters.

Togo

In 2011, Indonesia exported 15 label products worth US$ 16,919,000 to Togo. At that time, Togo's total import value reached US$ 28,582,000. In other words, Indonesia's market share reaches more than fifty percent. This strategic position is supported by competitiveness measurements that place Indonesia in a position of exporters with strong competitiveness (RSCA> 0). Eight years running, Togo's demand for product label 15 has increased. As a result, there was a positive growth in imports of approximately US$ 32,000,000. An increase followed this trend in the value of exports from Indonesia to Togo.

On other product labels, Indonesia's export performance tends to decline. For example, product label 16, where the RSCA value was 0.85 in 2011 to 0.59 in 2019. If seen from the composition of changes in export value, this is dominated by Indonesia's declining ability and facing exporters from other countries with an increasing market share.

Trade Potential of Agricultural Commodities

The decision to measure which commodity has the trade potential in this study is based on four indicators: positive change in export value, growth of export from Indonesia is higher than the growth of export from the world, change in RSCA is positive, and the effect of competitiveness is positive.

The following describes the considerations of each parameter, namely: First, the increase in export value and the acceleration ratio based on growth shows that Indonesia can compete with other exporting countries in line with the dynamic development of international trade. Second, an increase in the RSCA value greater than zero reduces the RSCA value for the end period from the initial period. If it is positive, it shows more substantial competitiveness and vice versa. Third, CMSA with the parameter of competitiveness effect is positive. If the value is greater than zero, it is assumed that Indonesia's competitiveness for an export commodity will increase or improve (Table 06). According to Ongsritrakul and Hubbard (1996), increased competitiveness can be caused by various factors, including efficiency in production or marketing, cost reduction, technological improvements, or government policies.

Table 06: The results of constant market share analysis

No	Country	Constant Market Share				Total Effect
		A	B	C	D	
1	Benin					
	a. 15	106,582	-733,633	823,013	-96,136	99,826
	b. 16	2,413	9,077	-32,940	21,676	226
	c. 17	6,988	-61,238	314,800	-262,550	-2,000
2	Burkina Faso					
	a. 15	1,357	-9,340	7,464	1,171	652

No	Country	Constant Market Share				Total Effect
		A	B	C	D	
3	Cameroon					
	a. 12	1,965	8,324	-12,527	1,859	-379
	b. 15	59,863	-412,055	196,200	143,663	-12,328
	c. 16	8,519	32,045	627,769	-670,083	-1,750
	d. 18	264	968	-1,347	376	261
	e. 19	685	7,622	-4,825	-3,642	-160
4	Congo					
	a. 15	48,156	-331,470	440,539	-165,202	-7,978
	b. 16	21,279	80,043	193,005	-299,800	-5,473
	c. 17	0	0	0	456	456
5	Côte dIvoire					
	a. 15	4,218	-29,032	27,833	37,976	40,995
	b. 16	5,528	20,793	-3,105	-24,661	-1,445
6	Egypt					
	a. 03	8,773	64,439	217,174	-291,793	-1,407
	b. 08	13,860	173,946	488,794	-677,723	-1,123
	c. 09	88,221	-215,479	621,684	-458,842	35,584
	d. 12	130	552	2,334	-3,025	-9
	e. 13	2,613	-1,306	-5,925	4,504	-113
	f. 14	555	2,305	-1,584	-1,438	-162
	g. 15	2,986,086	-20,554,078	-18,476,540	35,754,107	-290,425
	h. 16	26,229	98,662	84,243	-213,781	-4,648
	i. 17	3,676	-32,215	-33,606	61,503	-642
	j. 18	7,359	26,988	132,719	-161,215	5,851
	k. 19	471	5,242	-7,587	1,841	-32
	l. 20	2,329	6,135	-32,168	23,410	-293
7	Ethiopia					
	a. 15	4,054	-27,904	-74,813	98,539	-125
8	Ghana					
	a. 09	0	0	0	295	295
	b. 15	150,657	-1,037,015	3,019,270	-2,086,550	46,362
	c. 16	41,669	156,742	-402,872	195,225	-9,236
	d. 17	2,580	-22,609	2,305	17,304	-420
	e. 18	1,714	6,287	-39,104	30,701	-401
	f. 19	1,828	20,337	-28,031	5,668	-197
	g. 20	792	2,086	-13,115	10,020	-217
9	Guinea					
	a. 15	1,701	-11,709	100,954	-65,111	25,835
	b. 16	0	0	0	89	89
	c. 17	150	-1,318	9,893	-8,630	96
	d. 19	317	3,532	45,487	-49,402	-65
	e. 20	802	2,113	72,566	-75,701	-221
10	Kenya					
	a. 08	301	3,775	5,351	-9,469	-43
	b. 15	507,349	-3,492,227	1,247,350	1,710,727	-26,801
	c. 16	167	629	16,033	-16,824	5
	d. 17	2,269	-19,886	126,114	-109,069	-572
	e. 18	1,708	6,263	17,339	-25,757	-447
	f. 19	481	5,354	11,015	-16,871	-21
	g. 20	0	0	0	62	62

No	Country	Constant Market Share				Total Effect
		A	B	C	D	
11	Mauritius					
	a. 03	8,676	63,727	-108,253	41,989	6,139
	b. 06	3	2	256	-261	0
	c. 08	889	11,157	1,038	-13,201	-117
	d. 09	625	-1,526	58,099	-57,213	-15
	e. 14	37	153	413	-609	-7
	f. 15	16,052	-110,490	-66,522	157,174	-3,786
	g. 16	939	3,533	5,781	-10,224	29
	h. 17	2,630	-23,049	28,923	-8,763	-258
	i. 18	5,591	20,504	18,554	-46,297	-1,648
	j. 19	3,476	38,667	-6,747	-33,122	2,274
	k. 20	27	70	62	-151	9
12	Morocco					
	a. 03	67	491	365	-747	175
	b. 08	822	10,318	29,683	-40,299	525
	a. 09	75,808	-185,161	991,184	-886,354	-4,523
	b. 12	84	354	-695	235	-22
	c. 13	74	-37	8,820	-8,821	36
	d. 15	37,795	-260,157	6,396	218,878	2,913
	e. 17	201	-1,757	-86	1,665	22
	f. 18	695	2,549	11,446	-14,663	27
	g. 19	0	0	0	35	35
	h. 20	257	678	1,489	-2,446	-22
13	Mozambique					
	a. 03	5,949	43,696	78,721	-130,076	-1,710
	b. 08	632	7,928	-507	-8,212	-159
	c. 15	228,724	-1,574,374	5,370,061	-4,019,753	4,658
	d. 16	157	591	1,605	-2,375	-22
	e. 17	124	-1,084	-985	2,150	205
	f. 18	0	0	0	1	1
	g. 19	190	2,119	5,196	-7,527	-21
14	Niger					
	a. 15	2,012	-13,849	175,272	-163,090	345
	b. 17	3	-29	109	1,619	1,702
	c. 18	745	2,733	121,075	-124,776	-222
	d. 19	0	0	0	2	2
15	Rwanda					
	a. 15	0	0	0	2,347	2,347
16	Sao Tome & Principe					
	a. 15	3,549	-24,431	-2,142	22,496	-528
17	Senegal					
	a. 03	0	0	0	401	401
	b. 07	0	0	0	1	1
	c. 09	0	0	0	205	205
	d. 15	24,163	-166,322	206,853	-42,741	21,953
	e. 16	0	0	0	861	861
	f. 17	204	-1,786	-1,540	3,095	-28
	g. 18	0	0	0	21	21
	h. 19	57	632	1,776	-2,439	26
	i. 20	0	0	0	1	1
18	Seychelles					
	a. 03	0	0	0	73	73
	b. 15	0	0	0	44	44
	c. 17	257	-2,255	-893	2,819	-72
	d. 19	1,243	13,831	19,139	-34,247	-33
	e. 20	60	158	1,119	-1,291	47

No	Country	Constant Market Share				Total Effect
		A	B	C	D	
19	Tanzania					
	a. 15	877,195	-6,037,985	7,485,104	-2,387,296	-62,982
	b. 16	2,132	8,021	283,474	-293,785	-158
	c. 18	331	1,213	15,363	-16,929	-22
	d. 19	134	1,487	6,330	-7,956	-6
20	Togo					
	a. 15	56,544	-389,211	2,363,278	-1,945,551	85,060
	b. 16	4,124	15,513	58,204	-77,783	59
	c. 17	3,756	-32,918	130,233	-102,121	-1,050
	d. 18	0	0	0	6	6
	e. 19	120	1,338	227	-1,645	41

Source: Author's Calculation based on secondary data from ITC, 2021
A = growth of world's export effect, B = market distribution effect , C = commodity composition effect, D = competitiveness effect

Based on the combination of four predetermined criteria, out of a total of 20 countries involved in the study, four countries (Egypt, Ethiopia, Sao Tome & Principe, and Tanzania) are categorized as not available because none of the product labels meet the positive export growth indicators, the growth in export value exceeds the growth of world exports for the same commodity. RSCA is up compared to the previous period, and the competitive effect is positive. Furthermore, there is at least one product label in sixteen other countries that can be followed up in planning policy-making or decisions related to trade cooperation between Indonesia and partner countries.

Table 07: Trade potential of agricultural commodities from Indonesia to African countries

No	Country	$X_t - X_{t-1}) > 0$	$g_{ij} > g_{iw}$	$RSCA_t - RSCA_{t-1}$	$V'ij - Vij - rij.Vij > 0$
1	Benin				
	• 16	226	✓	0.376	21,676
2	Burkina Faso				
	• 15	652	✓	0.118	1,171
3	Cameroon				
	• 18	261	✓	0.454	376
4	Congo				
	• 17	456	✓	1.282	456
5	Côte dIvoire				
	• 15	40,995	✓	0.333	37,976
6	Egypt	na	na	na	na
7	Ethiopia	na	na	na	na
8	Ghana				
	• 09	295	✓	1.595	295
9	Guinea				
	• 16	89	✓	0.747	89
10	Kenya				
	• 20	62	✓	0.262	62
11	Mauritius				
	• 03	6,139	✓	0.704	41,989
12	Morocco				
	• 15	2,913	✓	0.067	218,878
	• 17	22	✓	0.094	1,665
	• 19	35	✓	0.240	35

No	Country	$X_t - X_{t-1}) > 0$	$g_{ij} > g_{iw}$	$RSCA_t - RSCA_{t-1}$	V'ij - Vij - rij.Vij > 0
13	Mozambique				
	• 17	205	✓	0.842	2,150
	• 18	1	✓	0.017	1
14	Niger				
	• 17	1,702	✓	1.873	1,619
15	Rwanda				
	• 15	2,347	✓	1.922	2,347
16	Sao Tome & Principe	na	na	na	na
17	Senegal				
	• 03	401	✓	1.042	401
	• 09	205	✓	1.384	205
	• 16	861	✓	1.936	861
	• 18	21	✓	0.558	21
18	Seychelles				
	• 03	73	✓	0.455	73
	• 15	44	✓	1.188	44
19	Tanzania	na	na	na	na
20	Togo				
	• 15	85,060	✓	0.024	-1,945,551
	• 18	6	✓	0.170	6

Source: Author's Calculation based on secondary data from ITC, 2021
na = there is no product label that fit all of the criterias; ✓ = growth of agricultural commodities from Indonesia to country j is bigger than the growth of world's export of agricultural commodities to country j; t = in Year 2019; t-1 = In Year 2011

CONCLUSIONS

Export activities play an essential role in creating added value for producers in Indonesia for consumption and processing in the destination country. As an agricultural country with abundant natural resources, Indonesia has cooperated with all countries, including those on the African continent. It is hoped that ongoing cooperation can be encouraged and enhanced by increasing the intensity of exports and imports of goods.

Based on the result and discussion, it is known that most agricultural commodities from Indonesia have continued growth annually, as well as the level of competitiveness is growingly stronger. Stakeholder involvement efforts to maintain this positive trend and strategic position include strengthening bilateral cooperation to increase international trade and establishing trade agreements with destination countries to accelerate existing trade activities. Furthermore, further research is needed on the factors that influence Indonesia's exports to countries in the African continent to identify variables that significantly affect trade activity.

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