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The Competitiveness of Indonesian Agricultural Products in G-20 Market

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ABSTRACT

Membership in the G-20 forum is both a threat and an opportunity for Indonesian agricultural commodities. Indonesia must be able to take advantage of this great opportunity to increase international trade activities, especially exports. Although the G-20 market is a potential market, Indonesia faces challenges because it is considered as not ready to compete and threatened to become a market for other countries. In 2020, Indonesia's agricultural exports (HS 01-24) were in the ninth place compared to its competitors in G-20 market. In order to increase the export share, the purpose of this study is to analyze the development of exports from Indonesia to the G20 market and the competitiveness of agricultural products. The analyzes used were descriptive analysis, Revealed Comparative Advantage (RCA), and Dynamic Revealed Comparative Advantage (DRCA). The results showed that 63.25% of the five selected agricultural export commodities had comparative competitiveness in the G-20 market. From the trend of increasing exports, several countries that become non-traditional markets had the potential as a market diversification destination, including Saudi Arabia, Mexico, Turkey, and Argentina. DRCA analysis shows that the dynamics of the G-20 market were quite large, and some of them experienced a decline. The strategy to increase exports to the G-20 market is to maintain the competitiveness of commodities in the rising star quadrant, as well as increase the competitiveness of commodities that are in the lagging opportunity and lost opportunity quadrant due to high global demand for these commodities.

Keywords: Competitiveness, Export of agricultural commodities, G-20

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INTRODUCTION

G-20 countries are important trading partners and potential markets for various commodities and products from Indonesia. According to worldbank, the GDP percentage of G-20 member countries accounted for 70.5%

of the total world GDP, with a population reaching at 58.37% of the world's total population. Sabaruddin (2017) stated that some of the G-20 member countries are Indonesia's traditional export destinations that need to be maintained as Indonesian trading

partners, and several others are nontraditional countries with potential as export markets that need to be improved.

One of the important sector in Indonesia's exports to G-20 countries is agriculture. Based on data processed by the author from trademap, the development of export commodities in 2011-2020 had an increasing trend. Although the share of Indonesian agricultural commodity exports to the G-20 market has reached 53.86%, the share of exported agricultural commodities from Indonesia compared to the total G-20 agricultural imports is still low at 2.09%. One of the reasons is Indonesia's weak to export performance with the main export destinations (Sabaruddin, 2017; Sidiq et al., 2019).

It is not easy for Indonesia to increase its agricultural exports to the G-20 market due to high competition. Based on data processed by the author from UN Comtrade, Indonesia's agricultural export (HS 01-24) was in the ninth place compared to its competitors, namely the US (13,87%), Brazil (9%), Mexico (7,24%), Canada (6,47%), Spain (4,85%), the Netherlands (4,13%), Italy (3,68%), and France (3,24%).

Various studies on the competitiveness of agricultural commodities have been carried out, including in the Organization of Islamic Conference (OIC) countries by Sunardi et al. (2014), Association of South East Asian Nation by Isventina et al. (2015), South Asia by Sidiq et al. (2019), and

least developed countries by Syachbudy et al. (2017). The results depended on the export destination country. The agricultural commodities with strong competitiveness dominated by raw material commodities, like coffee bean, this shows that Indonesia has not been able to take advantage of technology transfer from the trade liberalization process.

After Indonesia became a member of the G-20 in 1999, there were various pro and contra opinions. There were suggesting that increasing studies economic cooperation in wider trade can have positive and negative effects on Indonesia (Sabaruddin, 2013; Wibisono, the 2017). On one hand. membership is an opportunity to increase Indonesia's exports between member countries (Sushanti, 2019). On the other hand, Indonesia is considered not ready to face the policies implemented for the G-20 members, such as reducing trade barriers. This is because of the characteristics of Indonesian farmers, in which, they are mostly small-scale farmers (Amin, 2015; Pudjiastuti, 2014).

Indonesia should improve the competitiveness of its export commodities in order to compete with other countries in the G-20 market. However, there is no research discussing Indonesia's competitiveness in the G-20 market. This study aimed to 1) analyze the export development of Indonesian agricultural commodities with the G-20 countries, and 2) analyze the competitiveness of agricultural

export commodities from Indonesia to the G-20 market.

METHODS

The data used in this study were secondary data from Trade Map and World Bank. This research was conducted in 2020, and the competitiveness analysis was focused on leading export agricultural (6-digit commodities Harmonized System code) with the highest average export value in 2010-2019. This commodities contribution agricultural commodity exports reaching at 61.4% in the G-20 market.

Trading partners consist of 18 member countries G-20 (Australia, China, UK, India, Japan, Saudi Arabia, South Korea, United States, Argentina, Brazil, Canada, France, Germany, Italy, Mexico, Russia, South Africa, and Turkey).

Competitiveness analysis methods used were Revealed Competitive Advantage (RCA) and Dynamic Revealed competitive advantage (DRCA). The methods were chosen according to the needs in answering the study objectives.

RCA is a method used to analyze the competitive advantage reflected in exports (Andari, 2015; Rifin, 2013; Sidiq et al., 2019). In general, the RCA value is $0 < RC < \infty$. RCA value > 1 indicates the commodity or product has competitiveness in the export destination. The modification of the RCA formulation by Balassa is as follows:

$$RCA = \frac{\left(\frac{Xij}{Xi}\right)}{\frac{Wij}{Wi}}$$

Note for RCA and DRCA: Xij is the export value of commodity j from the country of origin (US\$), Wij is

the export value of commodity j from all countries (world), Xi is the total value of exports of all commodities from the country of origin, and Wi is the total value of exports of all commodities from all over the world.

DRCA is the development of RCA analysis by considering changes in time **Table 1.** Dynamics of Export Market Position

ΔCountry's share		ΔWorld's share	MP	EE
Up	>	Up	RS	Success
Up		Down	FS	Poor
Down	>	Down	LaR	Poor
Down		Up	LO	Poor
Down	<	Down	LeR	Success
Up	<	Up	La0	Poor

Sources: Ozcelik dan Erlat (2014)

affecting competitiveness (Mashari et al., 2019; Rosiana et al., 2017). According to Güneş & Tan (2017) DRCA can be written as follows:

$$\text{DCRA} = \frac{\Delta RCAj}{RCAj} = \frac{\Delta \left(\frac{Xij}{\sum j \, Xij}\right)}{\frac{Xij}{\sum j \, Xij}} - \frac{\Delta \left(\frac{Xwj}{\sum j \, Xwj}\right)}{\frac{Xwj}{\sum j \, Xwj}}$$

The export market position dynamics can be seen in Table 1. Based on market position (MP), can be known about the export evaluating (EE). In this table, FS is *falling star*, RS is *rising star*, LO is *lost opportunity*, LaO is *lagging opportunity*, LeR is *leading retreat*, and LaR is *lagging retreat*. The most profitable position is in the "rising stars" position and the most unprofitable position is in the "lost opportunity" position.

RESULTS AND DISCUSSION Export Development of Indonesian Agricultural Commodities with G-20 Countries

The G-20 was formed in 1999 to address the global financial crisis. Since 2008, the G-20 meeting has become a High-Level Meeting attended by state leaders. One of the important topics in any meeting is trading. Reducing trade barriers and economic openness are emphasized for G-20 members to improve the economies of member countries and the world. The big challenge for Indonesia is to develop the competitiveness of agricultural products in order to compete with other countries and increase the G-20 market share.

The development of Indonesian agricultural commodity exports to G-20 countries in 2011-2020 can be seen in Table 2. The table shows that Indonesia exported 741 agricultural commodities to G-20 countries in 2011-2020. There were 25 commodities having the highest export contribution with a share of 83.55%.

five largest export commodities, with the market share of 63.25% in the G-20 market, were palm oil and its derivatives (HS 151190), crude palm oil (HS 151110), frozen shrimp (HS 030617), palm kernel, babassu oil, and its derivatives (HS 151329), and coffee (HS 090111). In recent years, exports of crude palm oil, coffee, vegetable fats and oils, crude palm kernel and babassu oil tend to decline. Indonesia's coffee exports are decreasing in the market of G-20 due to quite extreme rainfall and a significant

increase in production from Brazil as a competitor (Nurfadila et al., 2021). Crude palm oil has a downward trend due to trade barriers from export destination countries (Gumelar, Affandi, & Situmorang, 2020).

The another cause is the increase in Malaysian CPO exports as Indonesia's competitors (Widyaningtyas & Widodo, 2016). Some marine commodities have increased sharply in recent years, such **Table 2.** The Development of the Average Export Value of Indonesian Agricultural Commodities to G-20 Countries in 2011-2020 (US\$,000).

HS Code	Value	Share	Trend				
ns code	value	(%)	(%)				
151190	5,242,778	30.26	1.13				
151110	3,102,796	17.91	-6.09				
030617	1,088,112	6.28	8.63				
151329	825,471	4.76	8.05				
090111	698,620	4.03	-4.56				
180400	470,608	2.72	9.46				
151790	406,887	2.35	2.49				
151319	267,180	1.54	0.71				
160521	251,603	1.45	10				
160414	242,884	1.40	3.12				
160510	224,557	1.30	7.85				
030743	215,523	1.24	13.88				
151321	186,185	1.07	-18.39				
151620	183,296	1.06	-5.92				
230660	134,130	0.77	9.95				
041000	108,101	0.62	35.52				
121221	105,516	0.61	17.61				
190532	105,099	0.61	17.15				
030389	102,989	0.59	16.60				
200820	101,968	0.59	2.54				
030487	98,613	0.57	22.63				
190531	90,378	0.52	7.95				
140490	81,717	0.47	30.82				
180500	75,216	0.43	5.20				
152000	64,843	0.37	15.71				
25 com	14,475,069	83.55					
716 com	2,850,276	16.45					
Total	17,325,345	100					
Source: LIN Comtrade processed (2021							

Source: UN Comtrade processed (2021)

as frozen shrimp, processed shrimp, frozen tuna fillet, seaweed, and frozen fish. Indonesia's agricultural commodity export activities to G-20 countries can also be seen from export destination countries as shown in Table 3. Based on Table 3, the ten largest export destinations countries for Indonesian commodities agricultural to G-20 countries consist of four countries of traditional markets (China, USA, Japan, and South Korea) and six countries of non-traditional markets (India, Italy, Germany, Russia, Saudi Arabia, and Brazil). Based on the average increase in exports over the last 15 years, Saudi Arabia has the largest export trend of 31.4%, followed by Mexico (23.55%) and Turkey (19.89%).

Table 3. Export Performance of Indonesian Agricultural Commodities to G-20 Countries 2005-2019

Country	Average of Agricultural Export	Trend (%)
India	3,776,888	12.15
China	3,141,387	15.95
USA	2,519,888	9.00
Japan	1,036,029	4.18
Italia	663,991	17.84
Germany	475,937	1.88
Russia	424,684	15.94
South Korea	367,349	15.53
Saudi Arabia	278,427	31.40
Brazil	274,394	14.37
South Africa	205,909	11.20
Australia	200,366	12.78
UK	179,641	3.30
Turkey	177,572	19.89
France	102,234	9.47
Canada	78,633	9.73
Mexico	54,506	23.55
Argentina	13,065	17.81

Source: UN Comtrade processed (2020)

Competitiveness of Agricultural Export Commodities to the G-20 Market

Indonesia's export performance is determined by the competitiveness of the export destination country. The RCA from five selected value export commodities from Indonesian agricultural commodity exports in the G-20 market can be seen in Figure 1. This figure shows that all of the RCA values had a comparative advantage. In 2011-2020, the RCA value of most agricultural commodities has tended to be stable, although there has been a spike in certain years. The RCA with a significant increase was found in Refined Palm Kernel Oil/RPKO (HS 151329). In recent years, export of RPKO have increased sharply because importing countries that initially imported CPO began to switch to derivative products.

The RCA value of the CPO (HS 151110) increased sharply in 2017 but then decreased again. Data of Trademap found the increase in CPO exports in 2017 to the G-20 market (57.1%) and to the world (42.13%). The decline in CPO exports occurred again after 2017 due to various factors, including the trade war between the US and China, the increasing trade barriers in the import costs, NTM barriers imposed by India as the second largest importing country, and the black campaign of CPO in Europe (Harapuspa *et al.* 2018).

Specifically, the RCA value of the top 5 commodities including each

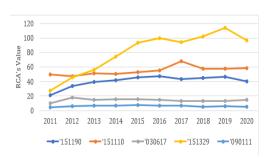


Figure 1. The RCA Value of Indonesian Agricultural Commodities in G-20 Markets

Source: Trademap Processed (2020)

destination country can be seen in Table 4. The RCA value from the table show that 68.9% of Indonesian agricultural commodities have comparative competitiveness in each G-20 country.

Based on Table 4, RPO had the highest competitiveness in Russia, South Italy. According Africa. and Sabaruddin (2013), Russia is a potential export country in an untapped market category, and based on Syadullah (2018), South Africa is still under trade so it has the opportunity to expand the export market to South Africa. RPO commodities are not competitive in Australia and Canada because most of their needs are met by Malaysia (Sasmito et al., 2019).

CPO had the highest competitiveness in India, Italy, and Germany. The government seeks to increase the competitiveness of Indonesian CPO in India by lobbying for a reduction in import tariffs (Sasmito et al., 2019).

The competitiveness of CPO was good enough in Germany because this harmonized **ISPO** country renewable energy standards in Germany to facilitate the supply of CPO from Indonesia (Putra et al., 2019). Competitiveness is also affected by the campaign CPO black in several countries, especially the EU.

Frozen Shrimp had the highest competitiveness in the US, Japan, and the UK. Some countries imported from closer countries, such as South Korea imports from Vietnam and Malaysia, while Canada imports from India. Processed Shrimp (HS 160521) had the highest competitiveness in the US, Italy,

Tabel 4. RCA Value of Indonesian Agriculture Commodities in G-20 Countries (2011-2020)

AUS 0.8 0 1.5 0 4.7 USA 16.9 0.1 58.6 75.3 14.3 CHN 74.3 0.9 1.7 161.7 0.8 ARG 0.7 0 0.0 67.2 0.1 BRA 61.4 0.2 0 1.255.2 0 IND 74.5 387.4 0 15.6 1.7 CAN 0.4 0.0 17.7 0.3 22.5 FRA 5 41.3 10.8 0 10.4 KOR 10.8 0.1 0.7 2.8 1 ITA 131.1 278.7 1.8 17.2 30.2 UK 11.2 12.4 15 9.8 24.2 SAU 67.2 0 0 31.9 0.2 MEX 12.7 2.1 0.1 73.1 3.1 TUR 76.7 2.0 0.5 130.2 0.1 JER 10.5 65.5 1.6 2.3 26.8		RPO	СРО	Frozen Shrimp	RPKO	Coffe
CHN 74.3 0.9 1.7 161.7 0.8 ARG 0.7 0 0.0 67.2 0.1 BRA 61.4 0.2 0 1.255.2 0 IND 74.5 387.4 0 15.6 1.7 CAN 0.4 0.0 17.7 0.3 22.5 FRA 5 41.3 10.8 0 10.4 KOR 10.8 0.1 0.7 2.8 1 ITA 131.1 278.7 1.8 17.2 30.2 UK 11.2 12.4 15 9.8 24.2 SAU 67.2 0 0 31.9 0.2 MEX 12.7 2.1 0.1 73.1 3.1 TUR 76.7 2.0 0.5 130.2 0.1 JER 10.5 65.5 1.6 2.3 26.8	AUS	0.8	0	1.5	0	4.7
ARG 0.7 0 0.0 67.2 0.1 BRA 61.4 0.2 0 1.255.2 0 IND 74.5 387.4 0 15.6 1.7 CAN 0.4 0.0 17.7 0.3 22.5 FRA 5 41.3 10.8 0 10.4 KOR 10.8 0.1 0.7 2.8 1 ITA 131.1 278.7 1.8 17.2 30.2 UK 11.2 12.4 15 9.8 24.2 SAU 67.2 0 0 31.9 0.2 MEX 12.7 2.1 0.1 73.1 3.1 TUR 76.7 2.0 0.5 130.2 0.1 JER 10.5 65.5 1.6 2.3 26.8	USA	16.9	0.1	58.6	75.3	14.3
BRA 61.4 0.2 0 1.255.2 0 IND 74.5 387.4 0 15.6 1.7 CAN 0.4 0.0 17.7 0.3 22.5 FRA 5 41.3 10.8 0 10.4 KOR 10.8 0.1 0.7 2.8 1 ITA 131.1 278.7 1.8 17.2 30.2 UK 11.2 12.4 15 9.8 24.2 SAU 67.2 0 0 31.9 0.2 MEX 12.7 2.1 0.1 73.1 3.1 TUR 76.7 2.0 0.5 130.2 0.1 JER 10.5 65.5 1.6 2.3 26.8	CHN	74.3	0.9	1.7	161.7	8.0
IND 74.5 387.4 0 15.6 1.7 CAN 0.4 0.0 17.7 0.3 22.5 FRA 5 41.3 10.8 0 10.4 KOR 10.8 0.1 0.7 2.8 1 ITA 131.1 278.7 1.8 17.2 30.2 UK 11.2 12.4 15 9.8 24.2 SAU 67.2 0 0 31.9 0.2 MEX 12.7 2.1 0.1 73.1 3.1 TUR 76.7 2.0 0.5 130.2 0.1 JER 10.5 65.5 1.6 2.3 26.8	ARG	0.7	0	0.0	67.2	0.1
CAN 0.4 0.0 17.7 0.3 22.5 FRA 5 41.3 10.8 0 10.4 KOR 10.8 0.1 0.7 2.8 1 ITA 131.1 278.7 1.8 17.2 30.2 UK 11.2 12.4 15 9.8 24.2 SAU 67.2 0 0 31.9 0.2 MEX 12.7 2.1 0.1 73.1 3.1 TUR 76.7 2.0 0.5 130.2 0.1 JER 10.5 65.5 1.6 2.3 26.8	BRA	61.4	0.2	0	1.255.2	0
FRA 5 41.3 10.8 0 10.4 KOR 10.8 0.1 0.7 2.8 1 ITA 131.1 278.7 1.8 17.2 30.2 UK 11.2 12.4 15 9.8 24.2 SAU 67.2 0 0 31.9 0.2 MEX 12.7 2.1 0.1 73.1 3.1 TUR 76.7 2.0 0.5 130.2 0.1 JER 10.5 65.5 1.6 2.3 26.8	IND	74.5	387.4	0	15.6	1.7
KOR 10.8 0.1 0.7 2.8 1 ITA 131.1 278.7 1.8 17.2 30.2 UK 11.2 12.4 15 9.8 24.2 SAU 67.2 0 0 31.9 0.2 MEX 12.7 2.1 0.1 73.1 3.1 TUR 76.7 2.0 0.5 130.2 0.1 JER 10.5 65.5 1.6 2.3 26.8	CAN	0.4	0.0	17.7	0.3	22.5
ITA 131.1 278.7 1.8 17.2 30.2 UK 11.2 12.4 15 9.8 24.2 SAU 67.2 0 0 31.9 0.2 MEX 12.7 2.1 0.1 73.1 3.1 TUR 76.7 2.0 0.5 130.2 0.1 JER 10.5 65.5 1.6 2.3 26.8	FRA	5	41.3	10.8	0	10.4
UK 11.2 12.4 15 9.8 24.2 SAU 67.2 0 0 31.9 0.2 MEX 12.7 2.1 0.1 73.1 3.1 TUR 76.7 2.0 0.5 130.2 0.1 JER 10.5 65.5 1.6 2.3 26.8	KOR	10.8	0.1	0.7	2.8	1
SAU 67.2 0 0 31.9 0.2 MEX 12.7 2.1 0.1 73.1 3.1 TUR 76.7 2.0 0.5 130.2 0.1 JER 10.5 65.5 1.6 2.3 26.8	ITA	131.1	278.7	1.8	17.2	30.2
MEX 12.7 2.1 0.1 73.1 3.1 TUR 76.7 2.0 0.5 130.2 0.1 JER 10.5 65.5 1.6 2.3 26.8	UK	11.2	12.4	15	9.8	24.2
TUR 76.7 2.0 0.5 130.2 0.1 JER 10.5 65.5 1.6 2.3 26.8	SAU	67.2	0	0	31.9	0.2
JER 10.5 65.5 1.6 2.3 26.8	MEX	12.7	2.1	0.1	73.1	3.1
	TUR	76.7	2.0	0.5	130.2	0.1
TDN 4.60 0.04 4.00 4.00 4.0	JER	10.5	65.5	1.6	2.3	26.8
JPN 4.60 0.04 18.3 19.8 4.3	JPN	4.60	0.04	18.3	19.8	4.3
RUS 277.3 3.6 4.2 431.2 34.7	RUS	277.3	3.6	4.2	431.2	34.7
ZAF 175.1 0 0.6 254.0 6.9	ZAF	175.1	0	0.6	254.0	6.9

Source: UN Comtrade processed (2020)

and Canada. Indonesia was ranked fifth as an exporter of processed shrimp to Canada, one of which is due to cooperation through the CEPA (Panjaitan et al., 2020).

Indonesia was the largest exporter of RPKO in the world (65%). This commodity had the highest competitiveness in Brazil, Russia, and South Africa. However, the competitiveness was low in Australia and Canada because these countries already have cooperation agreements with Malaysia (Sasmito et al., 2019).

Coffee had highest the competitiveness in Russia, Italy, and Germany. Even though having no coffee plantations, Italy had the best position of processing coffee beans for export throughout Europe SO that Italy imported coffee beans from Indonesia. The competitors of Indonesia in the Russian and Italian markets were Vietnam and Brazil.

DRCA analysis for each commodity in three period can be seen in Table 5. Based on the DRCA analysis of commodity one/RPO (HS151190), most countries were in the falling star quadrant in three-time periods. However, there were several countries experiencing dynamics due to shifting from "falling star" to "lagging retreat".

In the "falling star", the increase in market share in each of these countries was accompanied by a decrease in world market share. Meanwhile, the "lagging retreat" indicated that the decline in market share in the two countries was greater than the decline in world markets. This indicates that in the declining market share of RPO, the market share in export destination countries initially increased and turned into a decline. In Period 3, the US was only country experiencing a decrease in RCA (lost opportunity). This indicates that the market share in that country decreased when there was an increase in the world market. Some countries, such as Mexico, Turkey, Brazil, France, and Russia, had very dynamic market positions because their quadrant changed in each period.

Commodity two is CPO (HS151110). CPO in period 3 was in the best condition because there were five countries (China, India, France, Japan, and Russia) from the "falling star" quadrant experiencing movement in the "rising star" quadrant. This dynamic was driven by changes in the share of global commodity exports due to increased demand. In the "rising star" condition, the enhancement in country's market share was greater than in the world's. This is the best condition because Indonesia can export to destination countries beyond the increasing of world demand. During this period, three countries experienced a decrease in RCA opportunity" ("lost and "lagging opportunity" quadrant). "Lagging opportunity" indicated that the increase in market share in these countries was not as large as the increase in world markets.

Tabel 5. Dynamics of Indonesian Agricultural Commodity Market Position in G-20 Country

	ъ	Commodities				
Con	Per	1	2	3	4	5
AUS	1	FS	FS	FS	tad	FS
	2	LaR	tad	LO	tad	La0
	3	tad	tad	FS	tad	LaR
USA	1	FS	tad	FS	FS	LeR
	2	FS	tad	LO	RS	LO
	3	LeR	tad	LeR	LaR	LaR
CHN	1	LaR	LeR	FS	FS	FS
	2	LaR	FS	LO	RS	RS
ADO	3	LaR	RS	FS	LaR	LaR
ARG	1	FS	tad	tad	FS	tad
	2	FS	tad	tad	RS	tad
DD A	3	tad	tad	tad	LeR	tad
BRA		LeR	tad	tad	LaR	tad
	2	LaR FS	tad tad	tad tad	RS LeR	tad tad
IND	<u></u>	FS	LaR	tad	FS	FS
IND	2	FS	FS	tad	LO	LO
	3	LaR	RS	tad	LaR	FS
CAN	1	FS	tad	FS	tad	LeR
GIIII	2	FS	tad	LO	tad	RS
	3	tad	tad	FS	FS	LeR
FRA	1	tad	tad	FS	tad	FS
	2	FS	tad	La0	tad	RS
	3	LaR	RS	FS	tad	FS
KOR	1	LeR	tad	FS	FS	FS
	2	FS	tad	LO	RS	RS
	3	FS	tad	FS	FS	LeR
ITA	1	FS	FS	FS	LaR	FS
	2	FS	LaR	LO	LO	RS
	3	LaR	La0	LaR	LaR	LaR
UK	1	tad	tad	FS	tad	FS
	2	LaR	FS	LO	RS	RS
	3	FS	LO	LaR	LeR	LaR
SAU	1	FS	tad	tad	tad	LaR
	2	FS	FS	tad	RS	RS
14537	3	FS	tad	tad	FS	FS
MEX	1	FS	tad	tad	LaR	LaR
	2	LaR	tad	RS	La0	RS LaD
TUR	3	FS FS	tad	tad FS	LaR FS	LaR
IUK	2		tad tad			LeR RS
	3	LaR FS	RS	LO FS	LO LeR	ks LaR
GER	1	LaR	LeR	FS	tad	FS
GEN	2	LaR	FS	RS	tad	RS
	3	LaR	LO	LaR	tad	LaR
	J	Lan	пО	Lan	ıau	цап

Con	Per	Commodities					
Con	Pei	1	2	3	4	5	
JPN	1	FS	tad	FS	FS	LeR	
	2	FS	tad	RS	RS	RS	
	3	FS	RS	FS	LeR	LaR	
RUS	1	LeR	FS	FS	LaR	FS	
	2	LaR	tad	RS	LO	LO	
	3	FS	RS	FS	FS	LaR	
ZAF	1	FS	tad	FS	LaR	FS	
	2	FS	tad	RS	RS	RS	
	3	FS	tad	tad	LeR	LaR	
C	IN C						

Source: UN Comtrade processed (2020)

The Frozen Shrimp Commodity (HS030617) commodity as three, experienced considerable dynamics because the market position changed in each period. In period 1, most of the countries were in the "falling star" quadrant. However, there was a change, where the majority of countries were in the position of "lost opportunity" (period 2) and "falling star" (period 3). In period 3, eleven countries had an increase in RCA values, ("falling star" and "lagging retreat"). During this period, the US was the only one to experience a decline in RCA values and was in a "leading retreat".

In periods 1 and 3, Commodity four/RPKO (HS151329) in the most countries were in a "falling star" and "lagging retreat" quadrant. In period 3, six countries had decreased RCA scores and were in the "leading retreat" quadrant. In this condition, the decline in countries's exports was greater than the world. This commodity was in the best market position during 2014-2016 (period 2), because there were several countries in the "rising star" quadrant, namely the US, China, Argentina, Brazil, South Korea, England, Saudi Arabia, Japan and South Africa.

The Coffee Commodity (HS090111) as commodity five, had quite large dynamics because the market position changed in each period. In period 1, ten countries were in the falling star quadrant. In period 2, third teen countries were in the "rising star" quadrant. In the last period, eleven countries were in the "lagging retreat" quadrant.

CONCLUSION AND SUGGESTION

The largest export commodities in the G-20 market during 2011-2020 were palm oil and its derivatives, crude palm oil, frozen shrimp, palm kernel oil and its derivatives, and coffee. The largest export destinations countries were India, China, and USA. Of the 5 commodities, 68.9% showed the competitiveness of commodities in each country had a comparative advantage. The export performance of each commodity was different in each of the countries. Indonesian export commodities should be maintained because they have competitiveness and good market position which were in the rising star and lagging opportunity quadrant; export commodities having the potential to develop their export performance were in the lost opportunity quadrant; while export commodities requiring market diversification were in the falling star quadrant. The next research should focus more on commodities (HS 151110, 090111, 151620, 151321) whose export trend is declining in G-20 countries.

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