

# INDONESIAN EXPORT PERFORMANCE AND COMPETITIVENESS IN THE ASEAN-CHINA FTA

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*Abstract:* - The ASEAN-China Free Trade Agreement (ACFTA) is a regional trade agreement that attracts the most attention among various FTAs between ASEAN and third parties. This study aims to analyze the influence of ACFTA on export performance and the competitiveness of Indonesian exports. The study revealed that (i) ASEAN-China FTA increased the penetration of Indonesian export products in the Chinese market, marked by the increasing number of sectors in the category of rising stars and lagging opportunities from 19 sectors before ACFTA to 52 sectors after 2010, (ii) similarity trade index between ASEAN and China since 2011 decreased sharply from 43 to 14 in 2016 indicating the export profile between ASEAN and China is increasingly divergent (increasingly dissimilar), and (iii) high competition between Indonesian and China export consistently decreased measured in similarity trade index from 69 in 2011 to 58 in 2016. Consequently, Indonesia's export development potential is still open to ASEAN and China (specifically to the ASEAN market) because 38 sectors of export are in the lost opportunity category and almost half (42%) of these sectors possess competitiveness ( $RCA > 1$ )

*Key-Words:* - Economic Integration; ASEAN-China FTA; Dynamic Revealed Comparative Advantage; Similarity Trade Index)

## 1. Introduction

The millennium transition, between the end of the 1990s and early 2000s, was marked by the rampant establishment of regional economic integration in the form of Regional Trade Agreements (RTAs). Crawford/Fiorentina (2005) mentioned, between January 2004 and February 2005, 43 RTAs have been notified to the WTO, making this the most prolific RTA period in history. This number reached 612 RTAs in April 2015, and East Asia Countries alone had formed more than 40 FTAs (Okabe, 2015). One reason for this phenomenon is the sluggish progress in multilateral trade negotiations under the Doha Development Round of WTO (Kawai / Wignaraja, 2014). ASEAN (the Association of Southeast Asian Nations) established on August 8, 1967, as an organization of economic and political cooperation reached an agreement to form an RTA at the December 1997 summit in Kuala Lumpur. Initially agreed upon, the ASEAN Economic Community will be achieved in 2020, but later through the Bali Summit in October 2003, its implementation accelerated to 2015 (ASEAN Secretary, 2008). At the same time, the wave of

Free Trade Agreement between ASEAN and third parties is also negotiated, agreed and implemented (Okabe, 2015; Taguchi / Lee, 2016). One of the various FTAs agreed upon by ASEAN, the effective ASEAN-China FTA (ACFTA) in 2010 (ASEAN Secretariat, 2004), is an economic integration that gets the most attention from the positive side because of the magnitude of the gain of trade between the two sides and from the negative side in the form of concerns that the FTA is intended to deteriorate the economy of certain ASEAN members. In addition to economic reasons, the view that both for ASEAN and for China the establishment of regional economic integration against political motivations has raised its concerns (Benardino, 2004; Taguchi / Lee, 2016). Specifically, Song / Yuan (2012), argues that the assertions that for China the primary objective of ACFTA is more geopolitical than economic have aroused fears among ASEAN to varying degrees. Recent tensions in the South China Sea exacerbated some of these fears stem from a historical mistrust.

Various studies show that the trade creation effects are found in almost all sectors under

ACFTA, whereas the trade diversion effect has limited adverse effects (including Shujiro / Misa, 2007; Sheng / Tang / Xu, 2012; Okabe, 2015; Taguchi / Lee, 2016). From the negative side of ACFTA, Yihong / Weiwei (2006), Park / Park / Estrada (2009) and Aslam (2012: 61) indicated that the structure of trade for ASEAN and China are similar that China and ASEAN are competing in the same category of goods. Although China's rapid economic growth and expansion are welcome by most members of ASEAN, the growing Chinese economy (power) produced a negative impact on ASEAN. Also, lower production costs in China have diverted FDI (foreign direct investment) from ASEAN countries to China (Bernardino, 2004).

ASEAN members states are highly diverse regarding economic and institutional development and capacity, economic structures and resource endowments, and economic specialization. So that some authors concluded that ASEAN is likely to be the most diverse region in the world (Kleiman, 2013: 9). Therefore, any study to explore the country specific effects of ACFTA is necessary (Park / Park / Estrada, 2009: 106). In line with the country-specific study, this paper has the objective to investigate the impact of ACFTA on Indonesia's export sector, specifically in export performance and competitiveness.

## 2. Literature Review

Theoretically, RTA formation (in international economics textbook is better known as the Preferential Trade Agreement, e.g., Krugman/Obstfeld/Melitz, 2012 and Salvatore, 2013) lead to trade creation and increased welfare when several domestic products in a member country are replaced by imports at a cost lower production of other member countries. However, trade reversing can occur. Trade diversion implies that partner country production displaces lower cost imports from third countries. Further, this trade diversion effect can be considered as a trade creation when compared to the domestic product. Besides trade creation, there are still dynamic benefits of RTA formation (Park/ Park/ Estrada, 2009; Salvatore, 2013), namely: (i) increased competition and, hence, an improvement in efficiency, (ii) economies of scale enlarged market, (iii) stimulated market and increased competition, (iv) better utilization of the economic resources of the entire community, (v) reduction of intra-regional transaction costs, (vi) some protection in the world market and (vii) bargaining power vis-à-vis industrialized countries.

From the political and economic point of view, there are three other reasons for the formation of RTA according to Shams (2002) and Pokrivcak (2007): (i) inflow of FDI. Even countries can attract significant FDI when they form an RTA with other countries, (ii) regional integration as a means to realize a gradual integration of the country 's industry into a liberalized international system. The regional integration improve market access for the country in partner countries' market, but limits increase in international competition to manageable proportions, since liberalization is only with the partner countries (often complimentary with 'sensitive lists' that have similar effects as protection for 'infant industry'), and (iii) regional integration serve to lock-in the reform commitment (self-discipline). Regional integration can be used to lock in the domestic trade reforms as a commitment mechanism. The regional agreement reduces the probability of reversing the trade reform because it is reneging on the commitment invites retaliation by trade partners. Trade liberalization requires increased efficiency in production to be able to compete, which among others is pursued by good governance and the elimination of corruption (World Bank, 2012). On the import side, to allow price transmission can take place to villages far from price borders, then trade reform must be followed by domestic policies such as infrastructure development that facilitates transportation and institutions that guarantee market functioning (Hertel / Winters, 2005: 28). Bretschger / Steger (2004: 9) find out that the integrated economy grows at a rate greater than the growth rate under autarky. Not in goods, but in the fact that the integrated economy can use the common pool of the public goods. The higher the number of economies joining an integration and the larger the spillover effect, the stronger is the growth-enhancing effect of economic integration. The influence of economic integration on the openness index (total trade to GDP ratio) depends on the degree of integration. According to Reyes / Schiavo / Fagiolo (2008: 699), the lower economic growth of Latin America is in line with a constant of the degree of integration, compared with high economic growth (high-performing of Asian economies).

Various studies reveal that the formation of ACFTA is economically beneficial because it produces large and dominant trade creations for trade diversions that may arise. Shujiro / Misa (2007: 18) finds that there is the trade creation effect for the ACFTA and no little evidence for the trade diversion. The same thing was stated by

Sheng / Tang / Xu (2012) who said the trade creation effects dominate trade diversion effect after the establishment of ACFTA and Okabe (2015), concluded that the formation of ACFTA raises trade creation as measured by the positive and significant trade creation. Taguchi / Lee (2016) and Nugraheni / Widodo (2018) expand the study by comparing ACFTA with other ASEAN FTAs concluding that trade creation effects in ACFTA were much larger than those in ASEAN-Korea FTA and ASEAN-Japan FTA as well as ASEAN-ANZ FTA.

Among the few studies that looked negative were Aslam (2012) and Aslam (2018), which highlighted two things, namely (i) ASEAN's economies were more protective in contrast to China. The average tariff rate in China was much lower than ASEAN, and on the other hand, the non-tariff barriers (NTB) rate in ASEAN was very much higher as compared to China. Thus, tariff liberalization and NTB tariff under ACFTA Framework will benefit China with domestic market penetration of ASEAN member countries, and (ii) ASEAN and China engage in similar sectors of commodity production and exports (see also Yihong / Weiwei, 2006). In a group of countries or regions that have a similar structure of production and commodity, theoretically, only countries that have the lowest cost of production will gain in trading. China's relative lower cost of production compared to ASEAN members has decreased the export competitiveness of ASEAN. At this point, it is worth noting to mention that strong competitiveness of China's production is global because it also occurs in the European Union (Athanasoglou / Backinezos / Georgiou, 2010) and 18 OECD countries (Thewissen / van Vliet, 2017). The competition between China and ASEAN on trade in goods and competition in seizing FDI is not too worrying about Park/Park/Estrada (2009) because the economic integration holds out the promise of a win-win partnership with substantial tangible benefits for both sides. ASEAN can help China's growing need for imports, especially intermediate and capital goods, agricultural products, and raw materials. Also, the sizeable collective economic size of ASEAN offers China a meaningful opportunity to diversify both its export markets and its import source. Furthermore, even though ACFTA is economically detrimental to China, but from the perspective of China's economic politics, it still benefits in the broad sense as they stated, the ACFTA may reduce rather than increase China's welfare, although the welfare loss would be very small. However, substantial geopolitical benefits in

the form of closer relationships with smaller countries that are concerned about the growing power of their neighbors may exceed the narrowly defined welfare losses. Closer ties will help China to expand its influence both in Asia and the world, leading to broad welfare gains.

ASEAN has proven to be one of the most successful regional groups regarding regional cooperation (Yihong / Weiwei, 2006). ACFTA has trade creation effects on the import of food, transport equipment, and capital goods in almost all ASEAN members, especially Indonesia, Malaysia, Philippines, and Thailand. Trade liberalization under ACFTA promotes regional trade-based regional production and sales networks among the precedent ASEAN members. At the same time, emerging countries of ASEAN (CLMV = Cambodia, Lao PDR, Myanmar, and Vietnam) have boosted their trade in the export of consumption goods (food and industrial supplies). Growth trade among countries is greater than that with other countries (Shujiro / Misa, 2007; Okabe, 2015). Ibrahim/Permata/Wibowo (2010: 54) revealed that Indonesian and other ASEAN countries exports to China have relatively low competitiveness. Also, the degree of homogeneity of export commodities to ACFTA is lower than overall exports to world markets. Meanwhile, the exports to ASEAN countries show a more complementary relationship between exported goods China with ASEAN countries. According to Kleiman (2013), as one of the poorer ASEAN-6 members, Indonesia is the most cautious regarding the market opening to ASEAN + 1 external partners with an average lower rate of tariff reduction as low as ASEAN (82.3%) from Myanmar and Vietnam. Also, when Singapore was involved in 32 FTAs (implemented, under negotiation and proposed), Indonesia was only involved in 16 FTA less than Thailand (24) and Malaysia (19) respectively (Chia, 2010 and Kleiman, 2013).

### 3. DATA AND METHODS

A competitiveness analysis of certain commodity in one country/region in a given year can be measured with the Revealed Comparative Advantage (RCA) approach. This analyze was introduced by Balassa in 1965 and underwent development of up to nine variations by Utkulu/Seymen (2004). Likewise, the Balassa model is most widely used (e.g.,

Athanasoglou/Backinezos/Georgiou, 2010). In this study, the model used refers to Balassa with the following equation:

$$RCA = \frac{(X_{ij}/X_{it})/(X_{nj}/X_{nt})}{(X_{ij}/X_{nj})/(X_{it}/X_{nt})} \dots\dots\dots (1)$$

Where X represents exports, *i* is a country, *j* is a commodity, *t* is a set of commodity and *n* is a set of country. In other words,

*X<sub>ij</sub>* = Country *i*'s export of commodity *j*.      *X<sub>nj</sub>* = World export of commodity *j*.

*X<sub>it</sub>* = Country *i*'s export of all goods.      *X<sub>nt</sub>* = World export of all goods.

All values of greater than 1 revealed comparative advantage in the production of that product in that country. Furthermore, Edwards/Shoer (2001) introduced dynamic RCA (DRCA), to make the indicator more suitable for analysis of changing competitiveness over time. By comparing the growth in the share of certain commodities in total Indonesian export and the growth in the commodity share in the world imports or country/region partner, six possible categories determine the position of the commodity. The categories are (i) rising stars, (ii) falling stars, (iii) lagging retreat, (iv) leading retreat, (v) lagging opportunity and (vi) lost opportunity (the possible scenarios presented in table 1).

**Table 1. Dynamic Market Position of Export**

Share of commodity Jin country i's export		Share of commodity Jin world export	Market Position
↑	>	↑	Rising star
↑		↓	Falling star
↓	>	↓	Lagging retreat
↓	<	↓	Leading retreat
↑	<	↑	Lagging

		opportunity
↓	↑	Lost opportunity

Source: Edwards/Schoer (2001: 20).

The Export Similarity Index (ESI) approach with a statistical similarity model first introduced by Finger-Kreinin (DFAT-Australia, 2003) can analyze whether China's presence in FTA becomes a competitor for Indonesia and ASEAN member countries as following,

$$S_{jk} = \left\{ \sum_i \min \left[ \frac{X_j^i}{X_j}, \frac{X_k^i}{X_k} \right] \right\} \cdot 100 \dots\dots\dots (2)$$

The index measures the similarity of the export profiles of economies *j* and *k*, where *X<sub>j</sub><sup>i</sup>* denotes the exports of product *i* from economy *j*. Thus, the formula calculates the share of total product exports of economies and takes the minimum number of products across all exports. The index will take the value 100 if the export profiles of *j* are identical and the value is entirely dissimilar. Massively interlinked trade relations in the context of 'factory economy' of East Asia ((Baldwin, 2008), bring about increasing exports and imports in the same products, causing increasing similarity between the exports and imports of economies involved in the production chains. Here, DFAT-Australia (2003) introduced a modified approach in order to focus on where economies are exporting added. Similarity indices based on the net exports and net imports of economies by calculating the trade balance in each product and separating them into net exports and net imports, enable analysis based on the reliance of economies on certain products for export revenue in order to pay for the import of other products. Data used in this study were taken from the double-digit Comtrade UN Harmonized Systems (HS), consist of 97 sectors.

**4. EMPIRICAL FINDINGS**

**1. Overview of Indonesian Exports**

Indonesia's international trade shows rapid growth since the post-Asian financial crisis of 1998. Exports experienced high growth with an average of 15% per year between 2001 - 2011 than experienced negative growth after the 2008 economic crisis with an average - 6% per year between 2011 - 2016. The same pattern occurs on the import side with an average value of 22% and -

5% respectively. In line with export and import performance, the trade balance showed a surplus that continued to increase until 2008 and after that fluctuated with a downward trend and in 2012 - 2014 Indonesia experienced a deficit in its trade balance. The top five Indonesian export destinations are ASEAN, Japan, China, US, and EU-15. Two-thirds of the total export value is obtained from the five countries and regions. The same pattern applies in import. In general, since 2001 Indonesia's export destinations have been increasingly varied, marked by a consistent decline in the Herfindahl Index figure to the top five export destinations. Globally, Indonesia posted a rapid increase in exports and imports. Between 2001 and 2011 exports increased nearly fourfold (361.34%) while imports increased more than sixfold (619.11%) between 2001 and 2012, then exports and imports continued to decline. Increased trade between Indonesia and its main trading partners, showed the highest increase in exports and imports with China, followed by ASEAN, Japan, EU-15 and US. Exports to China increased more than eightfold (821.42%) between 2001 and 2012 while imports increased nearly 14 times (1,377.42%) between 2001 and 2014. The dynamics of Indonesian international trade show a typical turning point in 2008. In that year, ASEAN took over Japan as Indonesia's leading export destination (in 2011 China replaced Japan in second place). The top five export by sector with significant contributions to the total export value of Indonesia include: mineral fuels, mineral oils and products of their distillation (code number 27 in double-digit harmonized systems, HS), animal and vegetable oils and their cleavage products (HS code 15), electrical machinery and equipment and thereof parts (HS code 85), vehicles other than railway or tramway rolling stock, and thereof parts and accessories (HS code 87) and machinery, mechanical appliances and parts thereof (HS code 84). These five sectors generate around 50% of the total export value.

## **2. Indonesia in the ASEAN-China Free Trade Area**

Since the transition of the millennium, the world has experienced a rapid increase in trade. Between 2001 and 2014 there has been an increase in the

value of exports and the value of imports globally by three times, even though the decline continues in 2015 and 2016. In line with that, ASEAN exports also tripled between 2001 and 2016. Likewise, intra-ASEAN trade increased more rapidly compared to trading with third parties. Intra-ASEAN exports increased nearly fourfold between 2001 and 2014 (371%) with an average growth of 10.5% per year, however in the last two years (2015 and 2016) the value of this growth was negative. Of the ten ASEAN member countries, six countries jointly contributing 98% of ASEAN's total exports. These six countries are Singapore, Malaysia, Thailand, Indonesia, Philippines, and Vietnam. Singapore always records the highest export value, far above the other five countries. Meanwhile, in the past five years, Thailand and Vietnam (especially Vietnam) have shown a high export performance that has exceeded the value of Malaysian exports. As developments in global trade, ASEAN member countries (the big six) also show the same pattern in a trade with China but in a different order. In a trade with China, Malaysia and Thailand as the leading exporters, while Vietnam showed rapid growth and competed with Thailand in second place. For Indonesia, ASEAN and China developed into its main export destinations. The contribution of export value to ASEAN increased from 17% in 2001 to 23% in 2016. The contribution of export value to China increased from 7% in 2001 to 17% in 2013 and then decreased to 14% in 2016. Increased exports to China is the diversification rather than an increase (intensification) of certain commodities. Only three sectors are equal to Indonesia's top ten exports to each country, namely oil minerals (HS code 27), vegetable oils (HS code 15) and ores, slag and ash (HS code 26). Of Indonesia's top ten exports globally, six have similarities with top ten exports to ASEAN and only four have similarities to China. Thus, ACFTA made Indonesia's export composition more varied.

## **3. Dynamic Revealed Comparative Advantage of Indonesian Export**

In general, Indonesia has export competitiveness in the ASEAN and China markets with higher competitiveness in ASEAN than in China. Out of 97 export sectors, Indonesia has the

global competitiveness and also in ASEAN and China for 19 sectors. There are four global competitive sectors, but not in the ASEAN, and China market. The four sectors in ASEAN are not competitive but very competitive in China and the World. Also, there are ten ASEAN competitive sectors but not in China and the World. Overall Indonesia has a global comparative advantage for its 29 export commodity sectors. Agro-based products and minerals dominate Indonesian export to China while the manufactured product is limited to commodities in the low-tech to medium low-tech industries (Kilavuz / Topcu, 2012) or labor-intensive to labor-intensive intermediate products according to Aslam, (2012). Exports in China's market revealed comparative advantage in 29 sectors and 17 sectors out of them (58.62%) shows the trend of increasing competitiveness between 2001 and 2016. But after ACFTA, the trend of increasing RCA was experienced by 23 commodity groups so that the percentage of sectors with positive RCA trend became 79.31%. Overall, there are 49 sectors of Indonesian export with  $RCA > 1$  either simultaneously in the world market, ASEAN and China or only limited to at least one of the region/country destinations. These 49 commodity groups contributed 75% of the total export value of Indonesia. However, there are anomalies over two sectors with a significant share in the total export value of Indonesia (always included in the top 10 exports) but without a comparative advantage in the ASEAN, China and world markets, namely machinery (HS code 84) and Electrical machinery and equipment (HS code 85). These two sectors known as manufacturing industries become ASEAN's advantages in the world.

The results of the dynamic comparative advantage analysis show, the ASEAN-China FTA increased the penetration of Indonesian export products in the Chinese market, marked by an increasing number of sectors with rising star categories and lagging opportunity from 19.59% before ACFTA to 52.58% after 2010. The increase applies both categories, where rising star increases from 11.34% to 29.90% and lagging opportunity from 8.25% to 22.68% respectively. Accordingly, the proportion of export commodities in the retreat product category dropped drastically from 42.27% to 18.56% (table 5). In this context, Indonesia's

participation in regional economic integration becomes a vital source of competitiveness.

**Table 5. Dynamic Market Positioning of Indonesian Export to ASEAN and China All Sectors, 2001-2016**

Dynamic Position	Market	ASEAN Market 2001-2016	China's Market	
			2001-2010	2011-2016
Rising star	%	17.53	11.34	29.90
	Sectors	6, 9, 11, 15, 16, 19, 21, 27, 33, 38, 58, 65, 67, 71, 87, 89, 96	8, 15, 19, 26, 27, 28, 0, 63, 74, 75, 80	, 4, 8, 9, 13, 16, 18, 19, 21, 23, 32, 34, 38, 41, 42, 44, 46, 47, 61, 62, 63, 64, 66, 69, 79, 83, 92, 94, 95
	Sectors, $RCA > 1$	9, 15, 19, 21, 27, 33, 38, 67, 87, 89, 96	15, 19, 27, 40, 63, 74, 75, 80	3, 9, 13, 16, 18, 19, 21, 23, 34, 38, 44, 46, 47, 61, 62, 63, 64, 92
Falling star	%	4.12	25.77	7.53
	Sectors	3, 14, 24, 95	2, 5, 6, 13, 20, 21, 24, 32, 38, 41, 51, 53, 56, 62, 64, 67, 69, 73, 84, 88, 89, 91, 92, 95, 96	5, 28, 31, 39, 48, 50, 51, 52, 58, 67, 72, 74, 75, 76, 84, 89, 99
	Sectors, $CA > 1$	3, 14, 24	6, 13, 21, 38, 41, 64, 89	5, 48, 52, 72
Lagging retreat		10.31	19.59	.28

	Sectors	32, 37, 49, 50, 51, 53, 79, 82, 91, 99	10, 17, 23, 31, 37, 43, 45, 49, 50, 58, 59, 60, 61, 71, 72, 83, 86, 93, 97	7, 36, 43, 45, 54, 60, 78, 86, 91
	Sectors, CA > 1	none	none	78
		<b>16.49</b>	<b>22.68</b>	<b>.28</b>
Leading retreat	Sectors	4, 29, 34, 36, 41, 44, 45, 47, 48, 52, 55, 61, 62, 84, 85, 92	1, 3, 11, 14, 18, 29, 35, 39, 44, 46, 48, 52, 54, 55, 57, 65, 66, 68, 70, 76, 82, 85	4, 25, 26, 27, 29, 40, 55, 59, 80
	sectors, CA > 1	34, 44, 45, 48, 55, 62, 92	3, 11, 14, 18, 29, 44, 46, 48, 55, 65, 68	4, 26, 27, 29, 40, 55, 80
		<b>12.37</b>	<b>8.25</b>	<b>2.68</b>
Lagging opportunity	Sectors	8, 12, 17, 22, 23, 30, 35, 60, 78, 83, 93, 97	4, 12, 22, 34, 42, 78, 87, 90	1, 2, 5, 10, 12, 20, 22, 30, 33, 35, 37, 49, 65, 68, 71, 82, 85, 87, 90, 93, 96, 97
	Sectors, CA > 1	8, 83	34	none
		<b>39.18</b>	<b>12.37</b>	<b>1.34</b>
Lost Opportunity	Sectors	38 sectors	7, 9, 16, 25, 30, 33, 36, 47, 79, 81, 94, 99	6, 7, 11, 24, 53, 56, 57, 70, 73, 81, 88
	Sectors, CA > 1	1, 13, 18, 25, 26, 40, 46, 54, 57, 63, 64, 69,	7, 9, 36, 47, 94	6, 53, 56

		70, 74, 80, 94		
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Source: Author's calculation

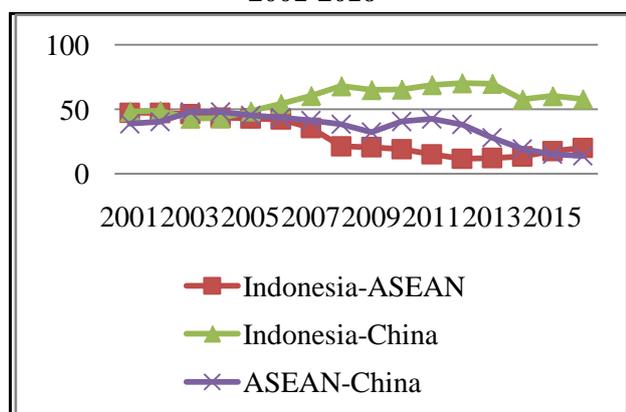
There are 20 sectors of Indonesian export in China and 12 sectors in ASEAN in the lagging opportunity category. The import share of these commodities globally increases in the destination countries as well as export shares but with a lower rate of increase. The strategy implemented to take advantage of existing market opportunities is the export promotion. The result of dynamic comparative advantage analysis also shows that there are still opportunities for developing Indonesian exports to ASEAN and China. There are 11 sectors of export in the Chinese market and 38 sectors in the ASEAN market in the lost opportunity category. It means that the import share of the commodity increases in the destination country but the export share decreases. Also, almost half (42%) among these sectors are commodities with competitiveness (RCA > 1). Manufacturing industry products such as textiles, footwear, metal-based product and transportation/automotive are in this category. Regarding this situation, the policy choices available to Indonesia are to improve domestic industries so that they focus on developing an export-oriented industry. It is not only efficient to improve competitiveness, but also increases output and quality to serve increasing international demand (detailed strategies can be seen in the World Bank, 2012).

#### 4. Indonesian Export Competition with ASEAN and China

Similarity trade index analysis shows high competition between Indonesian export and Chinese export with index values between 43 and 70 in 2001 to 2016. Since 2011 the level of similarity between the two has significantly decreased, but still at a high level. While competition between ASEAN and China shows a significant downward trend with the index value 48 in 2003 to 14 in 2015. The sharpest decline was experienced since 2011 (thus, after ACFTA implementation). While the competition between Indonesia and ASEAN is at a low to moderate level with an index value of 12 and 47 with a consistent rate of decline (figure 1). Therefore, the

concern that ACFTA will harm ASEAN because of competition with China is indicated to be invalid. Indeed, competition between Indonesia and fellow ASEAN countries shows an increase, although at a low level, marked by a trend of increasing similarity trade index between 2011 and 2016.

**Figure 1. The Development of Similarity Trade Index between Indonesia, ASEAN and China, 2001-2016**



Source: Author's calculation

## CONCLUSION

Indonesian exports have competitiveness in almost all sectors in ASEAN except for animal and animal products. China as the next export destination is diversifying commodities rather than intensifying certain commodities, because from the top ten of Indonesian export to ASEAN and as well as to China, there are only three sectors have similarities. ASEAN and China are also complementary markets for Indonesian exports with commodity groups experiencing retreat positions in China at the same time rising star positions and lagging opportunities in ASEAN and conversely commodity groups retreating in ASEAN show rising star and lagging opportunity position in China. The Similarity trade index analysis does not support the concern that ACFTA will increase competition between ASEAN member countries and China. The results revealed that similarity trade index between ASEAN and China is below 50 and since 2011 decreased

sharply from 43 to 14 in 2016 indicating the export profile between ASEAN and China regarding commodities is increasingly divergent (increasingly dissimilar). The high competition between Indonesian and that of China export, consistently decreasing measured in the similarity trade index from 69 in 2011 to 58 in 2016.

Anomalies in Indonesian exports, where the machinery and electronics sector has a high share in export value globally but low competitiveness more a domestic problem, not the influence of ACFTA as well as the dominant contribution of the mineral fuel and oil sector in the export composition.

For Indonesia, the ASEAN-China FTA increased the penetration of Indonesian export products in the Chinese market, marked by an increase in the number of sectors with an increased share in the Chinese market (rising star category and lagging opportunity) from 19 sectors before ACFTA to 52 sectors after 2010. The increase applies both categories, where rising star increases from 11.34% to 29.90% and lagging opportunity from 8.25% to 22.68% respectively. Accordingly, the proportion of export sectors categorized as retreat product dropped drastically from 42.27% to 18.56%. The result of dynamic comparative advantage analysis also shows the potential for the development of Indonesian exports to ASEAN and China (specifically to the ASEAN market) due to 38 sectors are in the lost opportunity category, meaning that the import share of the commodity increases in the country destination but the export share decreases. Almost half (42%) among these sectors are commodities which possess competitiveness ( $RCA > 1$ ). To increase exports to the Chinese market within the framework of ACFTA, there is a strategy available to Indonesia, namely revamping domestic industries to focus on product development in high demand in the Chinese market (products in the lost opportunity category) by supporting the export orientation of the industry and export promotion for products categorized as lagging opportunity.

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