

INDONESIAN TRADE PERFORMANCE WITHIN ASEAN FREE TRADE AREA (AFTA): INTRAINDUSTRY TRADE ANALYSIS

KINERJA PERDAGANGAN INDONESIA DALAM KAWASAN PERDAGANGAN BEBAS ASEAN: ANALISIS PERDAGANGAN INTRAINDUSTRI

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ABSTRAK

ASEAN memasuki babak baru dalam kerja sama ekonominya dengan melaksanakan Kawasan Perdagangan Bebas ASEAN (ASEAN Free Trade Area, AFTA) dengan ditandatanganinya Singapore Declaration 28 Januari 1992. AFTA didirikan dengan tujuan untuk mempromosikan keunggulan kompetitif negara-negara anggota ASEAN dengan menghilangkan hambatan tarif dan nontarif berdasarkan skema tarif umum yang disepakati (CEPT). Partisipasi Indonesia dalam forum AFTA menarik untuk dicermati disebabkan skema CEPT melibatkan nilai transaksi perdagangan antara Indonesia dan negara-negara ASEAN yang cukup besar. Studi ini dimaksudkan untuk menginvestigasi kinerja perdagangan Indonesia dalam forum AFTA dengan menggunakan analisis perdagangan intra-industri. Data yang digunakan adalah SITC 3 digit yang diunduh dari UN COMTRADE. Hasil studi menunjukkan bahwa dalam periode 1992–2010, perdagangan antara Indonesia dan negara-negara ASEAN didominasi oleh tipe perdagangan intraindustri dibanding interindustri, terutama untuk komoditas manufaktur. Analisis lebih lanjut berdasarkan pendekatan intertemporal mengonfirmasi hasil studi yang telah diperoleh dengan kecenderungan meningkatnya perdagangan intraindustri untuk komoditas nonmanufaktur. Hal lain yang ditemukan adalah lebih rendahnya kinerja sektoral Indonesia dibanding negara-negara ASEAN lainnya. Studi ini mengindikasikan prospek Indonesia untuk memaksimalkan manfaat forum AFTA, misalnya dengan menciptakan iklim investasi yang lebih kondusif bagi investor.

Kata kunci: Kawasan Perdagangan Bebas ASEAN, Perdagangan intra-industri, Indonesia.

ABSTRACT

ASEAN has moved forward by establishing the ASEAN Free Trade Area (AFTA) in 28 January 1992. The main objective of AFTA is to promote ASEAN countries competitive advantages by eliminating tariff and non-tariff barrier under AFTA's Common Effective Preferential Tariff (CEPT) scheme. Indonesia participation in AFTA is worth noting since CEPT covers significant amount of Indonesian exports and imports. This paper investigates Indonesia trade performances under AFTA employing intraindustry trade analysis. It uses three digit SITC derived from UN COMTRADE. The results show that during 1992–2010, Indonesia and ASEAN trade was highlighted by intra rather than inter-industry trade, particularly for manufacture commodity. Further intertemporal analysis confirms this finding with increasing trend of intra-industry trade for nonmanufactured commodity. Nonetheless, Indonesian sectoral performance was less competitive compare to other ASEAN countries. This study suggests that Indonesia may enhance the advantage of being AFTA's member by, for example, creating a conducive investment environment.

Keywords: ASEAN Free Trade Area, Intraindustry trade, Indonesia.

INTRODUCTION

Indonesia, together with Malaysia, Philippines, Singapore, and Thailand, established Association of South East Asian Nations (ASEAN) in 8 August 1967 in Bangkok, Thailand. The objective of ASEAN are: “(1) to accelerate economic growth, social progress and cultural development in the region and (2) to promote regional peace and stability through abiding respect for justice and the rule of law in the relationship among countries in the region and adherence to the principles of the United Nations Charter”.¹ At present, ASEAN has ten members since Brunei Darussalam has joined on 8 January 1984, Vietnam on 28 July 1995, Lao PDR and Myanmar on 23 July 1997, and Cambodia on 30 April 1999.

ASEAN has moved forward by establishing ASEAN Free Trade Area (AFTA). The objective of AFTA is to promote ASEAN countries competitive advantage and to improve production efficiency by eliminating tariff and nontariff barrier under AFTA's Common Effective Preferential Tariff (CEPT) Scheme. This far reaching scheme requires ASEAN members to reduce tariff of commodities traded between them no more than 5% in 2008 (now being brought forward to 2002).² There are exceptions, however, for the newly ASEAN countries. They are expected to materialize AFTA in the later year, such as Vietnam in 2006, Laos and Myanmar in 2008, and Cambodia in 2010. Up to 21 August 2006, 99.77% of the products in the CEPT Inclusion List (IL) of ASEAN-6 (Brunei, Indonesia, Malaysia, Philippines, Singapore, and Thailand) have been brought down to the 0–5% tariff band.³

Indonesia has actively participated in AFTA. However, this needs to be cautiously interpreted as it covers 35% of Indonesian exports and 52% of its imports.⁴ The significant proportion of Indonesian commodities under CEPT has raised concern as AFTA may deteriorate domestic industries. Lower tariff and non-tariff barriers may decrease the competitiveness of domestic industries.⁵ Furthermore, this argument implies that intra-ASEAN trade is more preferable to be based on country's abundant endowments since each country trades different commodities (interindustry trade). However, referring to the experiences of Benelux countries (Belgium, Netherlands, and Luxemburg)

and European Economic Community (EEC), it is fair to say that AFTA's agreement may intensify intra-industry trade (IIT) between Indonesia and ASEAN rather than interindustry trade type. It is because reduction of trade barriers (tariff and non-tariff barriers) through economic integration will encourage concentration and reallocation of industries near their markets.⁶ For that reason, it is therefore, important to investigate Indonesian trade performances under AFTA agreement based on intra-industry trade analysis. The study encompasses period from 1992 to 2010.

In order to pursue the above objective, this study is organised as follow. Section 2 describes historical perspective of AFTA. It is followed by a brief discussion on theoretical framework of IIT and its measurements, including both static and inter-temporal approaches in Section 3. Then, Section 4 discusses the result. Finally, the concluding remarks and policy implications are drawn in Section 5.

The AFTA was initiated in October 1991 during ASEAN Economic Summit. Then, the AFTA agreement was signed in 28 January 1992 in Singapore that was known as Singapore Declaration. Bowles and MacLean⁷ argues that AFTA is a respond to global political economy changes, result of businessmen intervention throughout ASEAN regions, and willingness of ASEAN leaders to maintain ASEAN identity. Soesastro,⁸ in addition, contends that AFTA is expected to boost trade and investment into the region, particularly foreign direct investment (FDI), that increasingly flowing into China and India.

The formation of AFTA apparently enlarges market size for its constituents. It creates market of approximately 598.5 million people (in 2010) with heterogeneous characteristics as well as transforming the Southeast Asian countries into a single production base.⁹ Among ASEAN countries, Indonesia is the largest in terms of population with 234 millions people, while the smallest one is Brunei Darussalam with 0.4 millions people. In 2010, Lao recorded the highest population growth in ASEAN with 5.2%, whilst Brunei was the second with 2.2%. In terms of income per capita, Singapore is the richest country within ASEAN. Its per capita income was US\$43,929 in 2010, whereas Myanmar is

the poorest with US\$592 (74 times lower than Singapore). Detail of macroeconomic indicators of ASEAN countries can be seen at Table 1.

In terms of intra-ASEAN trade, Singapore and Malaysia were the first and second largest contributors. As shown in Table 2, Singapore share to total intra-ASEAN trade, on average, was 25.7% for the period of 1993, 1998, 2006, and 2010 while Malaysia's was 25.3% during the same period. Large share of Singapore and Malaysia within intra-ASEAN trade mainly driven by entrepot trade.¹⁰

The establishment of AFTA offers some advantages. AFTA prepares its members to encounter in the broader competitive global

market by gradually opening up their economy for regional competitors.¹¹ In addition, political stability and peace within the region are expected to attract investors to invest their money in ASEAN rather than in China and India. Despite its advantages, problems that embedded to AFTA need to be resolved, for example various tariff imposed by ASEAN countries that directly need to be harmonised, different treatments and measures undertaken by ASEAN countries for their non-ASEAN partners, and the Rules of Origin for CEPT (ASEAN content of 40% for both single country and cumulative ASEAN content) that might easily violated by non-ASEAN countries to penetrate ASEAN market using free port entry such as Singapore.

Table 1. Selected ASEAN Indicators, 2006 and 2010

Country	Total land area	Total population	Annual population growth		Gross domestic product at current prices		Gross domestic product per capita at current prices	
	km ²	Thousand	Percent	Percent	US\$ million	US\$ million	US\$	US\$
	2010	2010	2006	2010	2006	2010	2006	2010
Brunei Darussalam	5,765	415	3.5	2.2	11,460.2	11,952.0	29,922.2	28,830.0
Cambodia	181,035	15,269	2.5	2.1	7,256.5	11,168.0	512.2	731.0
Indonesia	1,860,360	234,181	1.3	1.2	364,400.1	708,032.0	1,640.0	3,023.0
Lao PDR	236,800	6,230	2.5	5.2	3,521.8	6,508.0	645.4	1,045.0
Malaysia	330,252	28,909	2.1	2.1	156,924.2	238,849.0	5,890.5	8,262.0
Myanmar	676,577	60,163	2.3	1.1	12,030.4	35,646.0	210.0	592.0
Philippines	300,000	94,013	2.0	1.9	118,083.0	189,326.0	1,355.7	2,014.0
Singapore	710	5,077	3.3	1.8	132,273.4	223,015.0	29,499.6	43,929.0
Thailand	513,120	67,312	0.7	0.6	206,951.5	318,709.0	3,293.9	4,735.0
Viet Nam	331,051	86,930	1.3	1.2	60,965.2	107,650.0	724.4	1,238.0
ASEAN	4,435,670	598,498	1.5	1.1	1,073,866.2	1,850,855.0	1,901.7	3,092.5

Source: ASEAN Secretariat (www.aseansec.org), 2012.

Table 2. Intra-Extra ASEAN Trade

Country	Intra-ASEAN trade				Extra-ASEAN trade			
	Share to total trade (%)				Share to total trade (%)			
	1993	1998	2006	2010	1993	1998	2006	2010
Brunei Darussalam	100.0	25.4	28.9	20.6	-	74.6	71.1	79.4
Cambodia	-	-	19.1	22.8	-	-	80.9	77.2
Indonesia	11.8	18.3	23.4	27.4	88.2	81.7	76.6	72.6
Lao PDR	-	-	79.8	57.1	-	-	20.2	42.9
Malaysia	24.1	25.0	25.7	26.2	75.9	75.0	74.3	73.8
Myanmar	-	-	59.0	48.6	-	-	41.0	51.4
Philippines	9.2	13.9	18.6	25.4	90.8	86.1	81.4	74.6
Singapore	23.3	23.5	28.6	27.2	76.7	76.5	71.4	72.8
Thailand	13.8	15.6	20.3	22.5	86.2	84.4	79.7	77.5
Viet Nam	-	-	24.2	17.0	-	-	75.8	83.0
ASEAN	19.2	21.0	25.1	25.4	80.8	79.0	74.9	74.6

Source: ASEAN Secretariat, 2012.

RESEARCH METHOD

The existence of IIT was not predicted by traditional trade theory suggested by Ricardo,¹² Heckscher and Ohlin,¹³ and their extensions. They argue that the main driver of trade is factor endowment differences that lead to different comparative advantage among countries.¹⁴ Nonetheless, their arguments failed to explain recent development in international trade, particularly post second World War II, with regard to increasing export and import between similar goods that only different in terms of brand or other subtle differences.

IIT has been argued to have several advantages. It does not require countries to have comparative advantages. IIT is also more convenience compare to inter-industry trade since it creates only “fewer adjustment problem”.¹⁵ Furthermore, IIT needs lower labour market-adjustment cost since an industry shares relatively similar skills of labour.¹⁶ Finally, IIT can exploit economies of scale at various stage of production.¹⁷

Several methods have been proposed to measure IIT, for example Balassa index¹⁸ and Grubel and Lloyd index¹⁹. This paper investigates Indonesian IIT using GL index as the most popular measurement. It is formulated as follows.

$$GL_{it} = \frac{(X_{it} + M_{it}) - |X_{it} - M_{it}|}{(X_{it} + M_{it})}; i = 1, \dots, N; t = 1, \dots, T$$

where X_{it} and M_{it} stand for the exports and imports of sector i in period t , respectively. GL_{it} index is bounded between 0 and 1. The closer GL index to 1 represents greater degree of IIT.

Analysis of IIT can be extended into inter-temporal analysis to observe the pattern of trade flows. Brühlhart²⁰ proposed the concept of marginal IIT (MIIT) to measure the degree of intra-sectoral trade changes.

$$MIIT_i = A_i = 1 - \frac{|(X_i - X_{i,t-n}) - (M_i - M_{i,t-n})|}{|X_i - X_{i,t-n}| + |M_i - M_{i,t-n}|},$$

where X_{it} and M_{it} is export and import of sector i at period t . The value of A_i index lies between 0 and 1. 0 indicates that marginal trade in the particular industry is predominantly inter-industry type; whereas, 1 represents marginal trade to be entirely IIT. The A_i index represents symmetrical degree of

cross-country export and import pattern changes.

The A_i index assumed an identical adjustment cost in terms of job creation and job lost in expanding and destroying sectors as the result of IIT. This assumption is impractical considering the rigidity of labour market with regard of skills required at different industries. For this reason, Brühlhart¹³ suggests B index.

$$B_i = \frac{\Delta X_i - \Delta M_i}{|\Delta X_i| + |\Delta M_i|}, \text{ where it is related to the}$$

A index as $|B_i| = 1 - A_i$

The B_i index value lies between -1 and 1 with value close to zero indicates higher IIT. If $\Delta X_i > \Delta M_i$, then $B_i > 0$. It means that domestic industries perform better than its foreign competitors and *vice versa*.

Data are extracted from United Nations Commodity Trade Statistics Database (UN-COMTRADE) for SITC Revision III since it contains comprehensive data on international trade for many countries.²¹ An individual IIT index for each sector i was calculated based on three-digit SITC (from SITC 001 to SITC 899, excluding SITC 9 since it refers to residual classification) in one particular year t (from year 1992 to 2010). Data is based on Indonesian reported export and import in current US dollar values, instead of ASEAN's trading partners reported data. This method is employed to maintain consistency and to avoid statistical discrepancy.

RESULTS AND DISCUSSIONS

The Development of Indonesian Trade within AFTA

Prior to economic crisis in mid-1997, Indonesia underwent remarkable trade performance. During 1992–1996, export Indonesia to ASEAN grew by 20.6% and import grew by 16.5%. The impressive Indonesian trade performance, however, discontinued following Asian economic crisis in 1997. During 1997–1999, growth of export dropped to 1.0% due to the collapse of export prices, while import even contracted by 1.9%.²²

The reversal happened in 2000 when Indonesian export to ASEAN increased by 35.2%

while import grew by 36.5% as the result of massive depreciation and contraction of domestic demand for tradables.²³ In 2005, Indonesian trade to ASEAN was invigorated due to high commodity prices in the world market. This has been supported by various trade liberalisation measures that significantly reduce trade restrictions and tariff. Detail of Indonesian trade with other ASEAN countries, in terms of nominal and its share to total Indonesia trade, is presented in Figure 1.

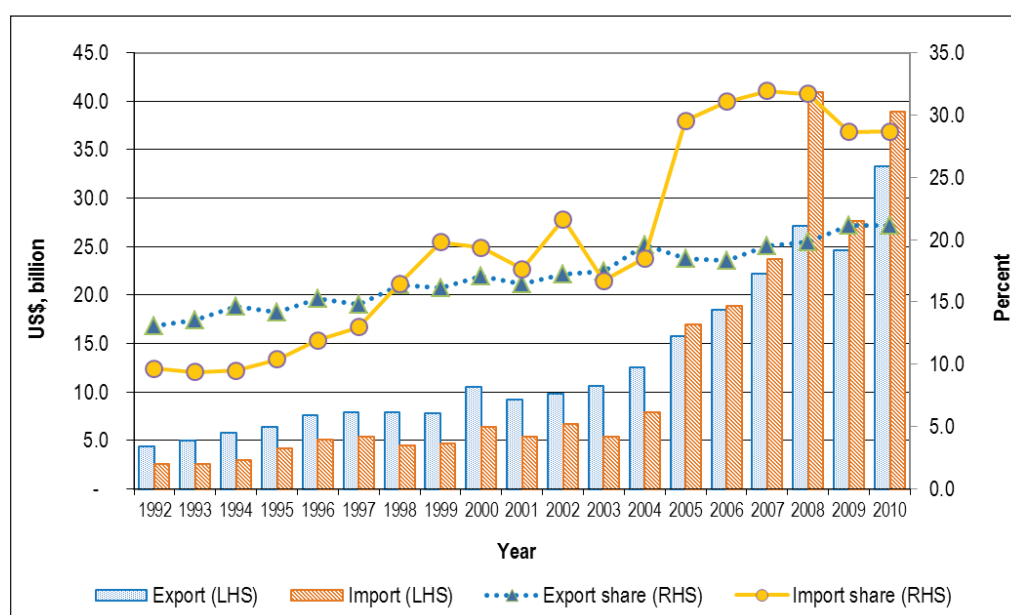
Increasing trade between Indonesia-ASEAN was highlighted by substantial changes in traded commodities. In 1993, Indonesian export to ASEAN was dominated by SITC 6 (manufactured goods classified chiefly by material), SITC 7 (machinery and transport equipment), and SITC 8 (miscellaneous manufactured articles). However, in 2010, export share of SITC 8 was dropped from 16.08% in 1993 to 4.21% in 2010. On the other hand, share of SITC 7 markedly increased from 14.81% to 34.02% for the same period.

In 2010, export share of SITC 6, SITC 7 and SITC 8 was accounted for 59.1% of Indonesian export to ASEAN, while in 1993 their share was 63.1%. On the other hand, export share of SITC 0–4 to total export was slightly increased from 30.2% in 1993 to 31% in 2010. This suggests a shift from manufactured commodities to the

natural resources-based ones. These can be seen in Table 3.

In terms of Indonesian import from ASEAN countries, there were no distinct commodities differences. Most of Indonesian imports are SITC 5, SITC 6, and SITC 7. Indonesian import for machinery and transport equipment (SITC 7) increased from 23.4% in 1992 to 47.0% in 2010. On the other hand, share of imported SITC 3 decreased in 2006. Decreasing imported fuel in that year was an effect of Indonesian government policy to increase domestic fuel price in March and October 2005.²⁴ By doing so, it was expected that escalating fuel subsidies could be contained as volume of subsidised oil products decreased. Thus, budget deficit could be managed at a sustainable level.

The negative effect of soaring international crude oil price toward Indonesian economy confirms Indonesian current position as a net-oil importer. As stated by Watkins,²⁵ Indonesia has withdrawal from OPEC in September 2008 after its oil production fell below 1 billion barrel per day in 2004. In addition, there was also argument from Indonesian opponent parliament members that OPEC's membership fee (Euro 2 million/year) was too expensive and Indonesia might get nothing from OPEC as a net-oil importer country.



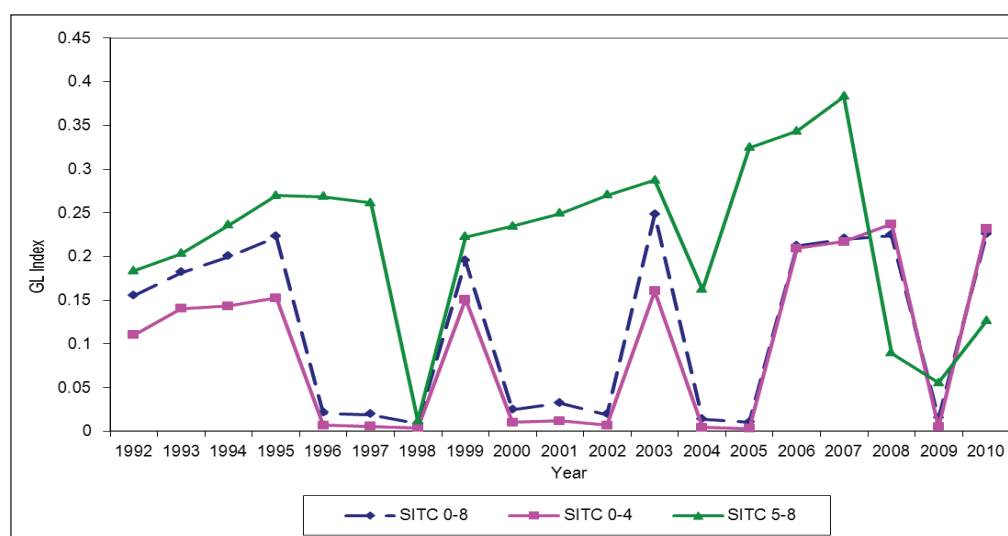
Source: UN COMTRADE, 2012.

Figure 1. Indonesia - ASEAN Trade

Table 3. Share of Indonesia-ASEAN Trade by SITC

SITC	Description	1993		1999		2006		2010	
		Export	Import	Export	Import	Export	Import	Export	Import
0	Food and live animals	9.37	4.25	8.99	23.34	6.03	8.37	9.68	6.84
1	Beverages and tobacco	2.09	0.25	1.09	0.46	0.92	0.76	1.35	0.53
2	Crude Materials, inedible, except fuels	8.56	6.00	4.46	2.60	4.51	3.83	4.05	3.61
3	Mineral fuels, lubricants and related materials	6.88	29.04	10.44	30.65	11.39	7.94	11.76	4.24
4	Animal, vegetable oils, fats, and waxes	3.28	3.27	2.32	0.31	5.03	0.38	4.13	0.49
5	Chemicals and related products, n.e.s.	6.74	14.00	9.71	19.73	7.93	27.03	9.72	19.49
6	Manufactured goods classified chiefly by material	32.19	8.34	22.19	6.35	25.01	11.01	21.07	13.55
7	Machinery and transport equipments	14.81	31.10	32.14	14.95	34.64	37.89	34.02	46.98
8	Miscellaneous manufactured articles	16.08	3.74	8.54	1.60	4.52	2.79	4.21	4.27
9	Goods not classified by kind	-	-	0.13	-	0.00	-	-	-
Total		100	100	100	100	100	100	100	100

Source: UN COMTRADE, 2012.



Source: Author's calculation, derived from UN COMTRADE, 2012.

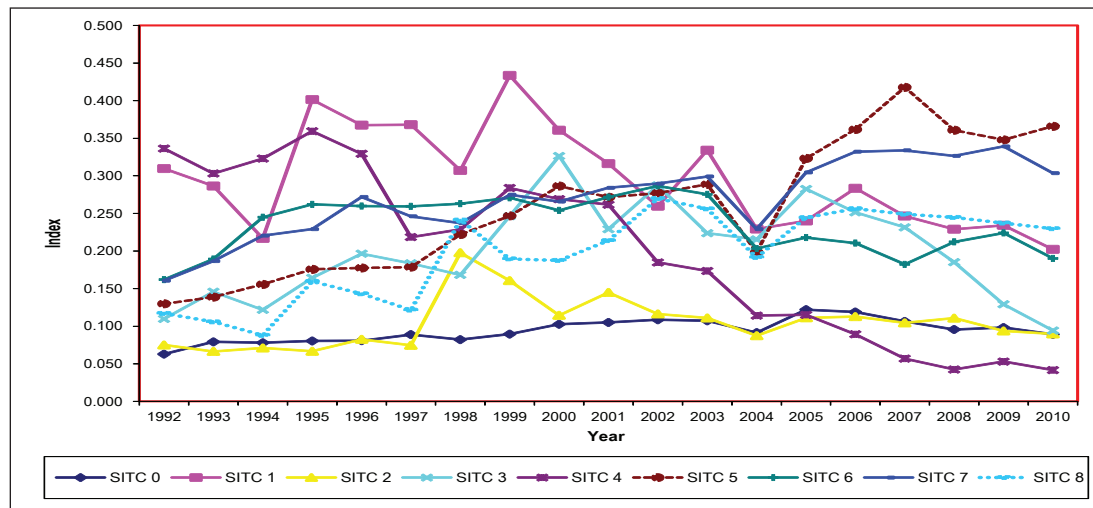
Figure 2. GL Indices Indonesia-ASEAN, 1992–2010

The Pattern of Intra-Industry Trade between Indonesia and ASEAN

Increasing trade between Indonesia-ASEAN was characterised by IIT as confirmed by high GL index over time. This seems a continuation of previous trend with regard to growing importance of IIT in ASEAN as observed by Menon during 1981–1991,²⁶ particularly for manufactured commodities (SITC 5–8). Trade of non-manufactured commodities (SITC 0–4) shows similar trend although at the lower level. Figure 2 presents the calculated GL index from 1992 to 2010 that reveals a number of interesting features on Indonesian trade with ASEAN.

Increasing IIT for manufactured goods post-AFTA is not unforeseen since manufactured goods are relatively less dependent on country's comparative advantages. Athukorala and Menon²⁷ argue that it is because manufactured industries have flexibility in exploring economic of scale at different stages of production amongst countries in proximity as shown in Figure 3.

With respect to trading partners, as Table 4 shown, intra-industry trade between Indonesia and ASEAN is more pronounced with ASEAN original member (Malaysia, Philippines, Singapore, Thailand) rather than with the late-comer ASEAN (Cambodia, Myanmar, and Lao), except with Viet Nam. This may represent economies of



Notes: SITC 0 = Food and animal; SITC 1 = Beverages and tobacco; SITC 2 = Crude materials, inedible, exc. fuels; SITC 3 = Mineral Fuels, lubricant and related materials; SITC 4 = Animals and vegetable oils; SITC 5 = Chemicals; SITC 8 = Miscellaneous manufactures.

Source: Author's calculation, derived from UN COMTRADE, 2012.

Figure 3. Indonesia-ASEAN GL Indices by SITC, 1992–2010

Table 4. GL Index of Indonesia - ASEAN, 1995, 2002, and 2010

Trading Partners	SITC 0-8			SITC 0-4			SITC 5-8		
	1995	2002	2010	1995	2002	2010	1995	2002	2010
Brunei		0.000	0.000		0.000	0.000		0.012	0.014
Cambodia	0.013	0.000	0.000	0.000	0.000	0.000	0.127	0.000	0.000
Lao, PDR	0.047	0.010	0.043	0.013	0.000	0.343	0.146	0.017	0.013
Malaysia	0.007	0.014	0.118	0.002	0.004	0.117	0.257	0.346	0.314
Myanmar	0.006	0.017	0.002	0.001	0.023	0.001	0.010	0.014	0.004
Philippines	0.128	0.171	0.069	0.043	0.090	0.030	0.220	0.213	0.101
Singapore	0.007	0.010	0.114	0.002	0.003	0.141	0.101	0.148	0.025
Thailand	0.159	0.223	0.233	0.102	0.147	0.105	0.184	0.259	0.288
Vietnam	0.062	0.124	0.068	0.021	0.091	0.045	0.101	0.153	0.085
Total	0.222	0.019	0.225	0.153	0.007	0.231	0.270	0.270	0.126

Note: GL index is aggregated from three digit SITC.

Source: Author's calculation, derived from UN COMTRADE, 2012.

scale, market size, and multinational companies (MNCs) concentration.

Furthermore, ASEAN–4 is relatively more developed than the late-comer ASEAN member. Different level of development affects availability of infrastructures and factors of production that required by multinational companies (MNCs) to operate at their economies of scale. Indonesia and ASEAN–4 also own large market size, in terms of GDP and population, compare to other ASEAN countries. In 2007, their population altogether is

approximately 71.5% of total ASEAN population, while their GDP is 91.5%.

Further examination using IIT decomposition method, it is found that increasing IIT between Indonesia and ASEAN has been accompanied by changes in the commodities that was traded as shown in Table 5. It should be noted, however, that discussion result may vary depend on the reference years that were used. For instance, comparing GL index in 1995 and 2010, the result shows increasing IIT between Indonesia and her

trade partners, namely Malaysia, Philippines, Singapore, and Thailand.

High IIT index between Indonesia and Malaysia in 1995 and 2010 suggests that both countries traded the same commodities. This is an interesting phenomena since Indonesia and Malaysia share relatively similar natural endowments, such as agricultural products and raw materials. In addition, IIT between both countries for manufacturing commodities was high that suggests global production fragmentation.²⁸ Production and assembly units are distributed into several countries, with a particular country specialising into a certain stage of production process. Consequently, there is high dependency among countries which vertically integrated to produce a certain manufactuIIT between Indonesia and the Philippines, however, has different feature. It mostly comprised of non-manufactured commodities, particularly food and live animals commodity (SITC 0) and beverages and tobacco (SITC 1). Lower GL index between Indonesia

and the Philippines in 2010 suggests that trade tend to rely on different comparative advantages between them.

Inter-Temporal Trade Analysis between Indonesia and ASEAN

The GL index has shortcoming, namely it is static nature since it only describes IIT patterns at one particular time only.¹⁷ Thus, it cannot describe information regarding adjustment costs of structural changes in exports and imports between different time periods. In order to examine the structural transformation in terms of trade as postulated by the smooth adjustment hypothesis, this study employs marginal intra-industry trade (MIIT) approach.

MIIT index confirms increasing IIT between Indonesia and ASEAN countries within AFTA framework between 1993 and 2010 (Table 6). Employing MIIT index, it is found that increasing IIT during 1993–2010 was mostly contributed

Table 5. GL Index Indonesia-ASEAN by Trading Partners and Commodity, 1993 and 2010

1995									
SITC	Malaysia	Philippines	Singapore	Thailand	Lao, PDR	Brunei	Cambodia	Myanmar	Vietnam
0	0.289	0.142	0.087	0.017	0.000		0.001	0.001	0.011
1	0.612	0.247	0.315	0.002	0.013		0.000	0.002	0.029
2	0.311	0.010	0.040	0.145	0.000		0.000	0.001	0.144
3	0.001	0.074	0.231	0.274	0.016		0.000	0.000	0.000
4	0.349	0.035	0.510	0.344	0.000		0.053	0.003	0.134
5	0.240	0.362	0.107	0.250	0.218		0.139	0.007	0.053
6	0.279	0.145	0.270	0.299	0.070		0.063	0.059	0.171
7	0.255	0.120	0.276	0.105	0.206		0.140	0.052	0.100
8	0.228	0.219	0.148	0.153	0.000		0.019	0.002	0.187
SITC 0-8	0.007	0.128	0.007	0.159	0.093		0.013	0.006	0.062
SITC 0-4	0.002	0.043	0.002	0.102	0.000		0.000	0.001	0.021
SITC 5-8	0.257	0.220	0.101	0.184	0.094		0.127	0.010	0.101
2010									
SITC	Malaysia	Philippines	Singapore	Thailand	Lao, PDR	Brunei	Cambodia	Myanmar	Vietnam
0	0.108	0.088	0.089	0.089	0.295	0.001	0.000	0.004	0.052
1	0.314	0.068	0.068	0.008	0.029	0.000	0.000	0.000	0.061
2	0.258	0.017	0.058	0.261	0.188	0.001	0.000	0.017	0.099
3	0.085	0.006	0.341	0.100		0.000	0.000	0.234	0.031
4	0.359	0.168	0.036	0.091		0.001	0.000	0.000	0.001
5	0.466	0.107	0.442	0.366	0.000	0.002	0.000	0.006	0.078
6	0.142	0.060	0.376	0.177	0.015	0.011	0.000	0.002	0.067
7	0.336	0.109	0.331	0.320	0.008	0.016	0.000	0.010	0.102
8	0.180	0.250	0.235	0.291	0.001	0.025	0.000	0.077	0.235
SITC 0-8	0.118	0.069	0.114	0.233	0.043	0.000	0.000	0.002	0.068
SITC 0-4	0.117	0.030	0.141	0.105	0.291	0.000	0.000	0.001	0.045
SITC 5-8	0.268	0.101	0.025	0.288	0.013	0.014	0.000	0.004	0.085

Note: GL index based on three digits SITC.

Source: Author's calculation, derived from UN COMTRADE.

by non-manufactured commodities (SITC 0–4) rather than manufactured ones (SITC 5–8). Increasing IIT for non-manufactured commodity, namely SITC 0 (foods and live animals), SITC 1 (beverages and tobacco), SITC 2 (crude materials, inedible, except fuels) is interesting since Indonesia and ASEAN has relatively similar non-manufactured resources.

Furthermore, the pattern of IIT between Indonesia and ASEAN countries has substantially shifted. Almost all of IIT for each SITC has increased with SITC 6 (manufactured goods classified chiefly by material) was championed the changes. Table 6 exhibits MIIT index of 1993 to 2010.

Despite suggestive interpretation of MIIT analysis in describing inter-temporal trade performance, it has a shortcoming, namely it assumes that there is symmetrical adjustment cost between expanding and contracting sectors, particularly in the job market. Thus, MIIT approach ignores the fact that labour market

is relatively rigid. The rigidity of labor market associates with skills and knowledges that vary among sector of industries. Brühlhart¹³ suggests to employ sectoral performance analysis to observe domestic industries competitiveness.

Table 7 shows that during 1993–2010, 60.8% of Indonesian-ASEAN trade for SITC 0–8 was dominated by inter-industry type. However, Indonesian domestic industries under inter-industry trade type are relatively less competitive compare to their ASEAN competitors since number of industries with $B > 0$ are less than that of $B < 0$. It is shown by ratio between good performance sector to poor one (0.44). Those commodities, among other things, are cheese and curd (SITC 024), rice (SITC 042), silk (SITC 261), petroleum products (SITC 334), dyeing, tanning materials (SITC 532), and watches and clocks (SITC 885). On the contrary, approximately 39.2% of Indonesian industries under IIT perform better than their competitors, for example animal food stuff (SITC 081), fuel wood, wood charcoal (SITC 245),

Table 6. MIIT by Industry, 1993–2010

SITC	Industry	A Index
0	Food and live animals	0.86
1	Beverages and tobacco	0.73
2	Crude materials, inedible, except fuels	0.80
3	Minerals, fuels, lubricants and related materials	0.23
4	Animal and vegetable oils, fats, and waxes	0.10
5	Chemicals and related products, n.e.s.	0.61
6	Manufactured goods classified chiefly by materials	0.94
7	Machinery and transport equipments	0.82
8	Miscellaneous manufactured articles	0.35
SITC 0-8	All commodities	0.65
SITC 0-4	Non-manufactured	0.57
SITC 5-8	Manufactured	0.26

Source: Author's calculation, derived from UN COMTRADE, 2012.

Table 7. Sectoral Performance Analysis, 1993–2010

Trade Type	Number of Commodities	(%)	Number of $B > 0$	(%)	Number of $B < 0$	(%)	$(B > 0)/(B < 0)$
Intra	96	39.2	32	13.1	64	26.1	0.500
Inter	149	60.8	43	17.6	106	43.3	0.406
Total	245	100.0	75	30.6	170	69.4	0.441

Note: SITC 0 to 8 only.

Source: Author's calculation, derived from UN COMTRADE, 2012.

petroleum oils, crude (SITC 333), plastic tube, pipe, hose (SITC 581), mineral manufactures, nes (SITC 663), and cycles, motorcycles, etc. (SITC 785).

CONCLUSIONS

ASEAN countries have strengthened their cooperation by establishing AFTA in 1992. It successfully maintains the significant role of ASEAN in both political and economic ground as a prerequisite to attract investment. However, the road of AFTA to create an ideal free trade area for countries in the Southeast Asia is still far from end. It is because the advantage of intra-ASEAN trade has not been evenly distributed among AFTA member. At present, Singapore and Malaysia are those which benefit most from intra-ASEAN trade.

Indonesia gains advantage from its participation in AFTA in terms of increasing trade with other ASEAN countries. Tariff reduction and the implementation of other measures within AFTA's framework have assisted to boost trade between Indonesia and ASEAN as confirmed by higher IIT, particularly for manufactured commodities.

Indonesia may advance the benefit of its active participation in AFTA. This can be done, among others, by: *first*, formulating better trade and investment regulations in order to improve global competitiveness. This will close gap with Singapore and Malaysia that currently are the first and twenty first most competitive country in the world. *Second*, simplifying investment licensing procedures to reduce sunk-cost, particularly in decentralisation era that delegates authority to regional government to issue various investment licences. *Third*, improving the infrastructures, such as roads, ports, and electricity. This will contribute towards improving Indonesian competitiveness in attracting investment. Lastly, the efforts to create a conducive investment climate in Indonesia is a prerequisite to transform Indonesia into the foremost exporter in Southeast Asia region rather than the biggest market for others.

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