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**Welfare Impact of ASEAN Economic Integration:
“ASEAN Way” Versus Theory**

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Abstract

The ASEAN Economic Community (AEC) has been implemented since the beginning of 2016 and expected to be completed in 2025. The ASEAN member countries preserve their value and norms highly even in the condition of integrated ASEAN, particularly in state's sovereignty, resulting “ASEAN Way” of integration. This research is conducted to compare the ASEAN Way of integration and theoretical kinds of economic integration (Balassa, 1961). Using GTAP 9 Migration database with 2007 and 2011 base year, the comparative examination of ASEAN Way of integration impact on ASEAN member countries divided into five scenarios: (1) implementation of the ASEAN Free Trade Area, (2) ASEAN customs union, (3) ASEAN Economic Community, (4) ASEAN common market and (5) fully liberalized ASEAN trade. The welfare gains of ASEAN member countries in (1) implementation of ASEAN free trade area is higher than (2) ASEAN customs union, and the welfare gains of ASEAN member countries in implementation of (3) ASEAN Economic Community is higher than (4) ASEAN common market.

Keywords: Economic Integration, “ASEAN Way”, GTAP.
JEL: F02, F15, F53.

1. INTRODUCTION

Integration of the world economy has been accelerating rapidly in the last few decades. According to Balassa (1994), the integration among countries is initially triggered by the political motives, or it may be also triggered by economic motives. Whether the motives is political or economic, integration between countries are likely to brought impacts in both politics and economies. The prominent role of economic integration is asserted by Balassa (1994), as his state:

“Considerations such as the avoidance of depressions, the maintenance of full employment, the problems of regional development, the regulation of cartels and monopolies, and so forth, require state intervention in

economic life, and any attempts to integrate national economies would necessarily lead to harmonization in various policy areas”.

Balassa's theory of economic integration (Balassa, 1961) distinguishes various types of economic integration, representing the degrees of the integration within countries. Balassa (1961) reveals five degrees of economic integration: free trade area, custom unions, common market, economic union, and total economic integration. The lowest degree of economic integration is a *free trade area* (FTA), where tariffs and other quantitative restrictions are abolished within participating countries and tariffs against external countries are still varied in accordance with the trade policy of each participating country. The integration degree intensifies when a FTA becomes a customs union (CU). In a CU, not only are there abolishments of tariffs and other types of discrimination in the CU area, but also harmonized tariffs against external countries implemented within the participating countries. Higher forms of economic integration, according to Balassa (1961), are attained when a CU forms a common market (CM). When the participating countries agreed to establish a CM, the abolishment of discrimination is much wider in range as the trade restrictions and factor movement restrictions are abolished. The more advanced degree of economic integration, economic union, combines the abolishment of trade and factor movement restrictions with some degree of harmonization in economic, monetary, fiscal, social and counter-cyclical policies within participating countries. The highest degree of economic integration, Total Economic Integration, is achieved when several countries agreed to unify their

economic, fiscal, and other policies along with the existence of supranational authority whose decisions binds all of the participating countries.

Historically, the Association of Southeast Asian Nations (ASEAN) was established concerning the regional stability and political issues. However, parallel with the proliferation of economic regionalism in the world and the period of active trade liberalization in the 1980s and 1990s, the ASEAN has pushed economic cooperation forward. The first effort on it was the establishment of the ASEAN Preferential Trading Arrangements (ASEAN-PTA). However, this initiative of forming the ASEAN-PTA was disappointing due to some factors such as the limited coverage of the PTA, the nature of intra-regional structure, which was competitive rather than complementary, and the diminishing urgency of pursuing the task because of the continued growth and development in the region. The further concrete effort toward regionalism was the ASEAN Free Trade Area (AFTA) launched in 1992 by the ASEAN. The AFTA will be created through the Common Effective Preferential Tariff (CEPT) Scheme. The schedule is flexible managed depending on the preferences of different countries over range of sectors.

The relative similarities in natures of the ASEAN's members, to some extent, give positive and negative implications. Brunei Darussalam and Singapore are the richest members in terms of GDP per capita but they do not have many labors, natural resources, etc. In contrast, Indonesia is the biggest member in term of population but she does not have much capital, good services and so on. As result, there is no dominant member which may be the 'core' member steering dominantly the institution. The ASEAN has frequently been criticized as an

indulgent institution directed by weak peer pressure. However, it has proved to be a very successful model of economic cooperation and economic integration for developing countries. The establishment of the AFTA at least shows the spirit of economic integration among the members. It also creates another economic power in the East Asian region. The AFTA as single entity becomes relatively as big as the other main players in the East Asia i.e. Japan, China and Korea. Therefore, as the first de jure economic integration in the East Asia, the ASEAN plays important roles in the future further economic integration.

The ASEAN Economic Community (AEC) has been implemented since the beginning of 2016 and expected to be completed in 2025. The ASEAN member countries preserve their value and norms highly even in the condition of integrated ASEAN, particularly in state's sovereignty, resulting "ASEAN Way" of integration that is different with what theory of economic integration suggests (Balassa, 191). This paper aims to critically discuss the ASEAN Way of integration and theoretical kinds of economic integration (Balassa, 1961) and its welfare impact. The rest of this paper is organized as follow. Part 2 describes the ASEAN way. Part 3 represents the economic performances of the ASEAN countries. Critical discussion on the differences between the theory of economic integration and the ASEAN way is presented in Part 4. Using the Global Trade Analysis Project (GTAP), welfare impacts are simulated and presented in Part 5. Finally, Part 6 shows the concluding remarks.

2. ASEAN ECONOMIC INTEGRATION: ASEAN WAY

The ASEAN is “the most durable and successful regional association in the developing world” (Hill and Menon, 2010). It was established in 1967 by five countries in the region: Indonesia, Malaysia, the Philippines, Singapore and Thailand, with the signing of Bangkok Declaration. Some countries later joined i.e. Brunei Darussalam in 1984, Vietnam in 1995, Laos and Myanmar in 1997 and Cambodia in 1999, resulting the total of 10 ASEAN participating countries, or the ASEAN 10. In its early establishment, the political and security concerns are the top of the policy priorities in the ASEAN (Berkofsky, 2005). The main objective of ASEAN establishment was to create a “prosperous and peaceful community of South East Asia Nations” (Kim Min-hyung, 2011) through the cooperation in the economic, social, cultural, technical, educational and other fields, and in the promotion of regional peace and stability.

Although economic cooperation was one of the objective of ASEAN establishment, the economic cooperation of the ASEAN was not the priority issue of ASEAN until 1977, when the ASEAN implemented selective trade liberalization under the ASEAN Preferential trade Agreement (ASEAN-PTA). ASEAN-PTA was the first attempt to promote intra-ASEAN trade through institutional integration and regional trade preferences (Hill and Menon, 2010). However, this attempt didn't have any significant impact on the ASEAN regional economic relations (Imada and Naya, 1992 in Hill and Menon, 2010) as the effect of ASEAN-PTA to the intra-regional trade was small. In 1992, the ASEAN announced the ASEAN Free Trade Area (AFTA), emphasizing “free trade” as the

ASEAN regional objective. In the AFTA scheme, the ASEAN leaders agreed to reduce the Common Effective Preferential Tariff (CEPT) rates to 0% - 5% by 2008, then accelerated to 2005 and later to 2003. The AFTA establishment marked a big step of the ASEAN evolution toward economic integration. By the mid of 1990's, the ASEAN began to develop arrangements for trade in services and investments, as the ASEAN Framework Agreement on Services (AFAS) signed in 1995, and the ASEAN Investment Areas (AIA) signed in 1998.

In the mid of 1997, the ASEAN financial crisis occurred. The crisis was seriously injured the ASEAN member countries such as Indonesia, Malaysia, Thailand and the Philippines, disrupted most of the major economies in the region. The adversity of ASEAN financial crisis has brought the ASEAN leaders into considering deeper economic cooperation in the ASEAN, in the form of economic community, as a way to avoid similar crisis threatening the region in the future. The arrangement of ASEAN community later signed on 2007 by the ASEAN charter, symbolizing the ASEAN efforts to become a regional community consisting three different community: ASEAN economic community (AEC), ASEAN Political Security Community, and ASEAN Socio-Cultural Community, starting from the beginning 2016.

The ASEAN establishment is different of European Union (EU), where in the establishment of EU, economic integration was the means to achieve the goal of national sovereignty transfer to a supranational authority (Baldwin, 2008). the ASEAN government, up until today, don't seem to have plans to pool country's sovereignty. Baldwin (2008) claims that the EU-style supranationality, even in a

limited form, is not for Asia. He also states that the type of regional arrangement like the North American Free Trade Area (NAFTA), where the success is far from regional institutional arrangements, is not suitable for Asia. The large differences in market size in the NAFTA, where the US has the largest market size, far away from Canada and Mexico, has made the US negotiating power (about 90% of the negotiating power) compelling to the other NAFTA countries and that is, according to Baldwin (2008), how the NAFTA works. Harmonious with Baldwin's (2008) notion, the ASEAN is more highly structured than the NAFTA in terms of the institutional arrangement since the ASEAN has a permanent secretariat.

“ASEAN way” is the term to describe the development and practices of ASEAN (Kim Hyung Jong, 2007). The ASEAN way refers to the ASEAN culture, norms and identity. Apart from EU-style institutional economic and political integration, the ASEAN countries have strength in keeping the integration process flexible and preserves its legally non-binding status (Berkofsky, 2005). Cockerham (2010) regards regionalism in the ASEAN as a regionalism with “strong concern of national sovereignty and narrow self-interests among participating countries”. The ASEAN is established under the principle of non-interference in participating countries' internal affairs, as national sovereignty is a respected aspect in the ASEAN regional cooperation. The ASEAN represent itself as a model in institutional design, with more flexible, network like institutionalisation instead of formal institutionalisation and bureaucracy (Jetschke

and Murray, 2012). The nature of ASEAN way described by Amitav Acharya and Jurgen Haacke (2003), as cited in Beeson (2009):

“ASEAN Way usually described as a decision-making process that favours a high degree of consultation and consensus. It is a claim about the process of regional cooperation and interaction based on discreteness, informality, consensus-building and nonconfrontational bargaining styles which are often contrasted with the adversarial posturing, majority vote and other legalistic decision-making procedures in Western multilateral negotiations”

3. ASEAN ECONOMIC PERFORMANCES

The ASEAN adopted some fundamental principles in the relationships within its member countries: mutual respect for the independence, sovereignty, equality, territorial integrity, and national identity of all nations; the right of every state to lead its national existence free from external interference, subversion or coercion; non-interference in the internal affairs of one another; settlement of differences or disputes by peaceful manner; renunciation of the threat or use of force; and effective cooperation among themselves.

Almost all of the ASEAN member countries (with an exception of Thailand) once experienced colonialism, and since they gained their own independence not long ago, state sovereignty is a sensitive aspects among the ASEAN member countries. That is one possible reason why the ASEAN member countries are now still reluctant to pool each other’s state sovereignty to be integrated. The ASEAN way of implementing integration arrangement could also be caused by the various differences of the ASEAN economies. Not only differences in economic indicators, the ASEAN member states also lack of any

significant previous experience in multilateral cooperation (Acharya, 2001). Tables 1 shows the ASEAN differences in some macroeconomic indicators. The ASEAN economic performance are inharmonious, varies from high economic performance countries (Singapore and Brunei Darussalam) until low economic performance countries (Cambodia, Laos, Myanmar and Vietnam). Aside from the inharmonious performance, the average of ASEAN economic performance is high, even though the ASEAN was hit by crisis in 1998.

Table 1. ASEAN Macroeconomic Indicators

Country	Total land area	Total population	Total labor force	GDP at current price	Average GDP Growth
	2015	2015	2014	2015	1995 - 2015
	km ²	thousand	person	US\$ million	percent
Brunei Darussalam	5,769.00	417.20	203,304	12,909.03	1.18
Cambodia	181,035.00	15,405.16	8,623,857	18,462.98	7.60
Indonesia	1,913,578.68	255,461.70	124,061,112	857,603.30	4.44
Lao PDR	236,800.00	6,902.38	3,377,525	12,639.34	7.08
Malaysia	330,290.00	30,485.30	13,300,027	294,389.63	5.13
Myanmar	676,577.00	52,476.00	30,217,049	65,391.77	9.81
Philippines	300,000.00	101,562.30	43,807,158	289,502.82	4.76
Singapore	719.10	5,535.00	3,110,343	291,937.62	5.46
Thailand	513,119.54	68,979.00	40,055,849	395,726.32	3.48
Viet Nam	330,951.10	91,713.30	54,206,654	193,406.66	6.67
ASEAN	4,488,839.42	628,937.34	320,962,878.00	2,431,969.48	5.56

Source: ASEAN.org, World Development Index (WDI) 2016

Table 1. (continued) ASEAN Macroeconomic Indicators

Country	International merchandise trade			Foreign direct investments inflow	
	Exports	Imports	Total trade		
	2015			2015	
	US\$ million	US\$ million	US\$ million	US\$ million	US\$ million
Brunei Darussalam	6,350.09	3,042.26	9,392.35	568.18	171.32
Cambodia	8,838.53	10,837.64	19,676.17	1,726.53	1,700.97
Indonesia	150,282.26	142,694.80	292,977.06	21,810.42	16,072.81
Lao PDR	3,714.27	3,049.20	6,763.48	913.24	1,079.15
Malaysia	199,869.23	175,961.05	375,830.27	10,875.31	11,289.60
Myanmar	11,431.79	16,843.60	28,275.39	946.22	2,824.48
Philippines	58,648.44	70,295.32	128,943.75	5,814.57	5,724.22
Singapore	366,344.33	296,764.92	663,109.25	74,420.30	61,284.80
Thailand	214,396.23	202,751.16	417,147.40	3,720.21	8,027.49
Viet Nam	162,013.85	165,729.90	327,743.75	9,200.08	11,800.00
ASEAN	1,181,889.00	1,087,969.85	2,269,858.90	129,995.07	119,974.83

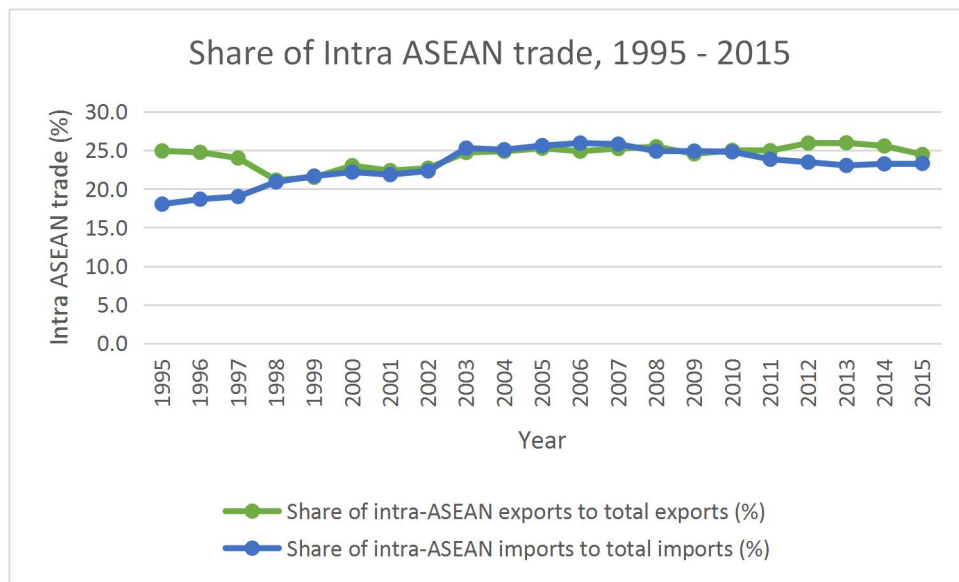
Source: ASEAN.org, World Development Index (WDI) 2016

Along with various differences in the ASEAN macroeconomic indicators and economic performance, the ASEAN has not achieved much in economic integration, particularly in the area of economic interdependence. Economic interdependence of the ASEAN member countries can be seen from the intra-regional share of trade and investment within the ASEAN. Figure 1 shows the trend of ASEAN intra-regional trade. The share of intra-regional exports and imports of ASEAN, from 1995-2015, is the highest and tend to be constant around 25% of total ASEAN exports and imports. As for 2015, the ASEAN share of total intra-ASEAN exports and imports were 24.5% and 23.5% from the ASEAN total trade.

The rank followed by China, with 11.4% share of the ASEAN trade for exports and 19.4% share of the ASEAN trade for imports; United States; European Union; and Japan. Even though the ASEAN intra-trade ranks first as the highest share of ASEAN total trade, notice that it stands for the ASEAN trade within 10 countries in the region. Twenty five percent share of intra-regional trade is relatively low if, for example, we compare it with the share of China alone. If we compare it with the share of intra-regional trade in EU which has average of approximately 67% intra-regional trade share of the total trade (EuroStat, 2016), 25% share of ASEAN intra-regional trade is a small number. As for intra-ASEAN investment, according to the ASEAN Investment Report 2016, intra-ASEAN FDI has the largest share of FDI flows in the ASEAN. In fact, the share had risen from 17% in 2014 to 18.5% in 2015. But once more, notice that it stands for ASEAN FDI within 10 countries in the region. The ASEAN Investment Report 2016 state

that seven ASEAN member countries (Malaysia, the Philippines, Thailand and CLMV) receive higher levels of intra-regional investment.

Figure 1. Intra ASEAN Trade



Source: UNCTAD Stat, 2016

On the bright side, Venables et al. (2008) found complementarities between Asian Economies, meaning that there are benefits from regional integration. Plus, greater heterogeneity of Asian economies could create more scope for gains from comparative advantage than what was the case in EU. As integration in Asia is fundamentally different from the EU, Venables et al. (2008) state that the possibility following the European model is limited to the Asia.

The principle of ASEAN way, is why the ASEAN now implementing AEC that claims to be a *single market*, but has no plan to set up a common external tariffs against non-participating countries. Berkofsky (2005) states that ASEAN is implementing Asian “*open regionalism style*”, with loose and

pragmatic integration, excluding legally binding decisions that constrain action in key policy areas. State sovereignty preserves at its best for all ASEAN countries. Is this identity of ASEAN the best way for ASEAN economy?

4. QUESTIONS FOR AEC: THEORY VS ASEAN WAY

The establishment of AEC marked the ASEAN member countries effort towards deeper economic integration within South East Asia. The objectives of the AEC, as stated in AEC Blueprint 2025, are “free movement of goods, services, investment, skilled labour, and freer flow of capital”. AEC is built on five ambitious strategic pillars: a highly integrated and cohesive economy through a single market and production base; a competitive, innovative and dynamic ASEAN; enhanced connectivity and sectoral cooperation; a resilient, inclusive and people-oriented, people centred ASEAN; and a global ASEAN. Those five strategic pillars are contained in the key actions of 17 core elements and 176 priority actions. The AEC blueprint sets explicit implementation sub-periods within the overall 2008-2015 and projected to be fully achieved in 2025. In 2025, “ASEAN Community” consisting ASEAN Economic Community, ASEAN Political-Security Community and ASEAN Socio-cultural Community is projected to be fully achieved.

The primary goal of economic integration in the ASEAN, according to Lee and Plummer (2010), is “reducing transaction cost associated with economic interchange and making the region more attractive to multinational corporations

wishing to take advantage of its diversity and openness in rationalizing production networks”. According to the ASEAN secretariat (2006), ASEAN problem is not one of lack of vision, ideas, or action plans. The problem is ensuring compliance and effective implementation. Many Asian scholars and politicians argue that Asia is too culturally diverse to achieve deeper level of political and economic integration. Berkofsky (2005) state that the ASEAN is too heterogeneous in terms of size, economic development, level of democracy and standard living, to achieve EU-style integration.

The ASEAN has unique feature that distinguish the type of its economic integration to other regional blocs. According to Balassa (1961), the sequence of economic integration should be free trade area (FTA), custom unions (CU), common market (CM), economic union, and total economic integration. But, this sequence of integration seems to be rigid. the ASEAN, realizing the need of deeper integration, jumps the integration sequence from the lowest level, free trade area, right into the common market. The ASEAN did not go through customs union integration sequence where the member countries harmonized its tariffs to external countries. We can see here that the ASEAN is reluctant to pool its members’ sovereignty but determined to deepen its integration process. Thus, AEC is implemented as the effort to deepen the ASEAN integration and preserving state’s sovereignty.

The problem is, implementation of AEC is implementation of FTA with free flows of goods and capital. Since there are no harmonization of external tariffs among the ASEAN member countries, probability for external countries

outside the ASEAN to do “moral hazards” arise, as countries outside the ASEAN could export goods to one of the ASEAN country with the lowest tariffs rate and then distribute the goods within the ASEAN countries with almost zero tariffs. Even though there are probabilities of moral hazards occur in the region, the ASEAN member countries still agreed to implement AEC. On the other hand, the ASEAN does not have a strong institutionalization. The representative body of ASEAN, the ASEAN Secretariat power, is not binding the ASEAN member countries, as it functions is “initiating, coordinating and facilitating” ASEAN stakeholders. That is why the implementation of AEC is viewed by many as an overly ambitious project for the ASEAN countries.

A unique feature of the ASEAN economic integration is the preserved identity of the ASEAN integration. The ASEAN even declare itself as a model representation of economic integration with *network-like* institutionalization and *flexible* integration process. the ASEAN is persistent in preserving its member countries’ sovereignty, causing large political and economic difference which could be an advantage also be a disadvantage for the ASEAN economic integration. Integration is expected to foster growth of economies (Balassa, 1961). This is because according to Balassa (1961), integration will lead to wider market access, decreasing uncertainty and rapid rate of technological change.

According to Baldwin (1995), geographical discriminatory trade policy is the distinguishing characteristic of a regional integration agreement. Harmonious with Balassa (1961), Baldwin (1995) states sequences of regional integration arrangement such as *free trade area (FT)*, *customs union (CU)* and *common*

market (CM). He found that regional integration arrangements, or *regionalism*, generate welfare gains for member countries with the possibility of negative spillovers to the rest of the world. The importance of geographical proximity in regionalism believed by Frankel and Wei (1997) to be advantageous since three different categories of cost (shipping cost, time-related cost, and cost of unfamiliarity) associated with “doing business at a distance”.

In *the Causes of Regionalism* (1997), Baldwin mentioned two schemes of regional trade arrangements: *deep integration scheme and shallow integration scheme*. Deep integration scheme marked with member countries’ sovereignty pooling, and sometimes the presence of a supranational authority. Shallow integration scheme usually has the form of a free trade area agreements or a little more than that. Baldwin (1997) tried to explain the rampant phenomenon of regionalism with “domino effects” –*the announcement of a regional arrangement affect other countries to join the regionalism*, but the theory could not be proven.

Bowles (1997) claim the ASEAN region as “a region where formal regional trading agreements met with less enthusiasm than in other areas of the world, during the previous wave of regionalism”. Nevertheless, the ASEAN managed to be one of the *new regionalism* region, with regional arrangements in which the member countries have different levels of per capita GNP, consist of developed and developing countries, and which members are engaged in the multiple international trade arrangements. The new regionalism arises from the desire to be participant in the global economy, as stated by Bowles (1997), and that is one of the reason why the ASEAN established Free Trade Area back then:

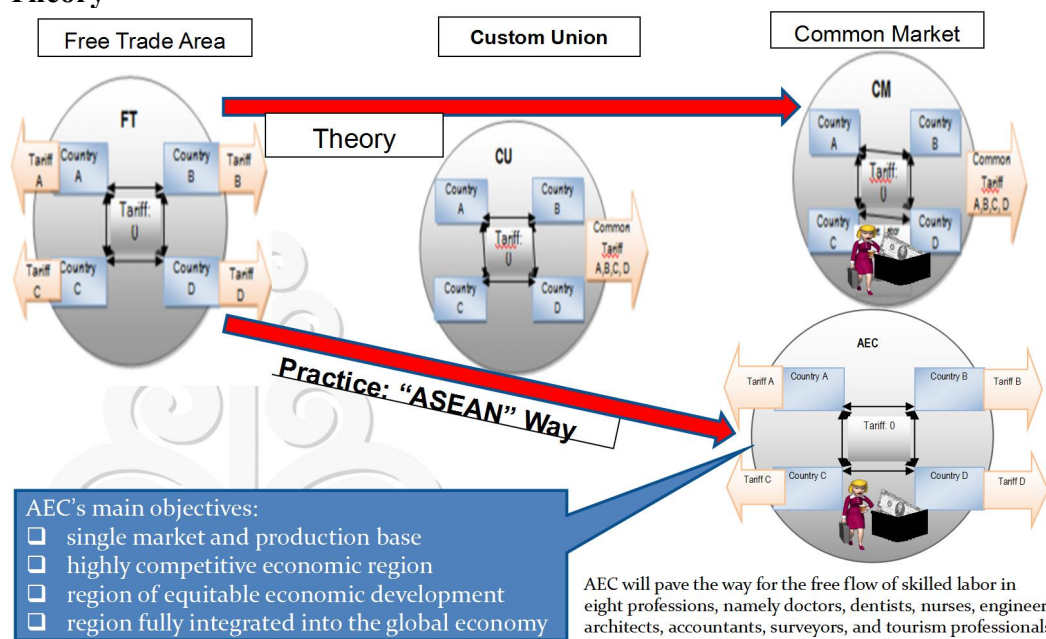
the fear of investment diversion and desire to continue attracting FDI. According to Berkofsky (2005), free trade agreements in Asia will encourage the complementarity between the developed and less developed countries.

In *Managing the Noodle Bowl Fragility of East Asian Regionalism* (2008), Baldwin explained three phases of East Asian (consist of East Asia and South East Asia countries) Regionalism: *Phase I (rampant unilateralism phase) from the mid of 1980's to 1990, phase II (regionalism delayed and unilateralism accelerated) from 1990 to 2000, and phase III (rampant regionalism) starting from 2000*. Rampant unilateralism phase in East Asia related to “Factory Asia” phenomenon and East Asian countries’ competition of expanding each country’s “company”, thus held back the regional arrangement that already set back then. The rampant regionalism phase in the 2000’s explained as “domino effect” created by China-ASEAN Free Trade Area (FTA). Baldwin (2008) state that European Union style supranationality does not fit for Asia, not for now and for the foreseeable future.

Theoretically, there are five successive stages of economic integration i.e. Free Trade Area (FTA), Customs Union (CU), Common Market (CM), Economic Union (EU), and Complete Economic Integration (CEI) (Balassa, 1961; McCarthy, 2006) (See Figure 1). In FTA, tariffs (and other quantitative restrictions) among the participating countries are abolished. However, each country still maintains its own tariffs against the nonmembers. In CU, besides introduction of the free movements of commodities within the union, the common external tariffs in trade with the nonmember countries are set up. In CM, not only trade restrictions but

also restrictions on factor movements are abolished. In EU, the countries combine the suppression of restrictions on commodity and factor movements with some degree of harmonization of national economic policies, in order to remove discrimination due to disparities in these policies. In CEI, unification of monetary, fiscal, social and countercyclical policies will be observed. It also requires the setting-up of a supra-national authority whose decisions are binding for the member states.

Figure 2. Different Stages of Economic Integration: ASEAN Way versus Theory



The direction currently followed by the ASEAN Economic Community in 2015 seems to be different from the theory of economic integration. The only one *de jure* economic integration in the East Asia is the ASEAN Free Trade Area (AFTA). The ASEAN will establish ASEAN Economic Community (AEC) in 2015. It would be argued the AEC has the similar characteristics with those of

Common Market (CM) in third successive stage of the theoretical economic integration. Currently, the ASEAN has ASEAN-Free Trade Area (AFTA) in the first stage of economic integration, and it want to be AEC in 2015. Therefore, Custom Union (CU) the second succeeding stage of economic integration has not been considered by the governments of ASEAN countries. Harmonization of the common external tariffs in trade with the nonmember countries has not been discussed intensively yet.

It seems the policy makers of ASEAN do not want to consider Custom Union, because once signing the Custom Union the member countries do not have opportunity to form the FTA with other non member countries. Could AEC work without the common external tariffs in trade with the nonmember countries? Could the free movement of production factors (capital and labor) work smoothly without the common external tariffs? Theoretically, could Common Market been created without the common external tariffs? In other words, is the common external tariff a sufficient condition for Common Market? It was argued that in the AEC, issue of rule of origin (ROO) will still exist because each member county still maintain their own tariffs against non-member countries. Flow of production factors (capital and labor), trade diversion and trade creation could not be optimized in AEC due to the absence of common external tariffs. However, the ASEAN countries have their own way in integrating their economy, “ASEAN way”. So, the governments of ASEAN have been obviously eager to realize the AEC on schedule.

5. WELFARE IMPACT OF AEC: GTAP MODEL

The Global Trade Analysis Project (GTAP) is a global network of researchers and policymakers conducting qualitative analysis of international policy issues and global economy (Terrie, Agiar and Narayanan, 2012). GTAP established in 1992, with the objective of lowering the cost of entry for those seeking to conduct quantitative analyses of international economic issue in an economywide framework. As Hertel states in the *Global Trade Analysis: Modelling and Applications* (1997):

“GTAP aims to facilitate multicountry, economywide analyses, addressing a great variety of issues including trade policy reform, regional integration, energy policy, global climate change, technological progress, and historical analysis of economic growth and trade. The database of GTAP contains bilateral trade, transport, and protection data characterizing economic linkages among regions, together with individual-country-input-output data bases that account for intersectoral linkages within each region.”

GTAP Structure and Database

GTAP is one of the application of general equilibrium (GE) analysis. The regional databases of GTAP are derived from individual country input-output tables (IOTs). The global economic database of GTAP records the annual flows of goods and services for the entire world economy in the benchmark years, consisting bilateral trade, transport, and protection matrices that link individual country/regional economic data bases. The GTAP database, according to Terrie, Agiar and

Narayanan (2012) is a globally consistent database. This means that all the data are internally consistent, despite coming from different sources. Hertel (2013) states that the GTAP database must also be accompanied by behavioural parameters, and these parameters depend on the data structure as well as the underlying model.

The GTAP database, according to Aguiar, Narayanan and McDougall (2016), comprises a comprehensive set of accounts measuring the value of annual flows of goods and services with regional and sectoral detail for the entire world economy. Newest version of GTAP, GTAP 9, disaggregates 140 regions, 57 sectors, 8 factors of production, for 3 base years (2004, 2007 and 2011). The database includes bilateral trade in goods and services, immediate inputs among sectors, as well as taxes and subsidies imposed by governments. The GTAP database presents globally consistent data on consumption, production, and international trade (including transportation and protection data), energy data and CO₂ emissions.

The GTAP database is composed of Input Output Tables statistics, providing the inter-sectoral linkages within each country. The GTAP 9 database includes separate IOTs for 120 individual countries representing 98% of global gross domestic product (GDP) and 92% of the world's population, along with 20 composite regions which are mainly aggregations of smaller economies. GTAP 9 also provided with satellite data extension such as climate and energy data, migration data, land use data, dynamic database, power data and non-commission

database, in order to make the database more relevant to contemporary policy issues.

The objective of the simulation is to examine whether the "ASEAN Way", the distinguishing feature of integration in South East Asia, is the right choice for ASEAN economic integration. The simulation consist of five scenarios of different economic integration arrangement in ASEAN. The scenarios are:

1. *SCENARIO 1: ASEAN-AFTA*

Full implementation of the ASEAN Free Trade Area.

2. *SCENARIO 2: ASEAN- CU*

Implementation of customs union in the ASEAN where member countries agreed to harmonized its tariffs to external countries.

3. *SCENARIO 3: AEC*

Implementation of the ASEAN Economic Community with free movement of labour and capital within the ASEAN Free Trade Area.

4. *SCENARIO 4: ASEAN-CM*

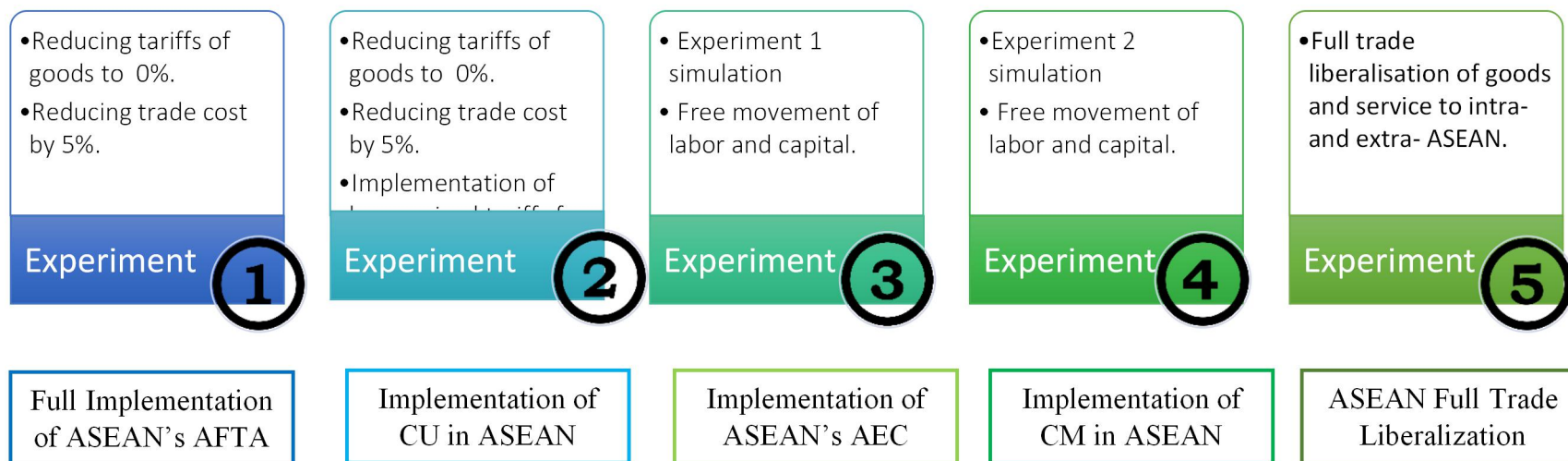
Implementation of a common market in the ASEAN, with harmonized tariffs to external countries and free movement of labour and capital among the ASEAN member countries.

5. *SCENARIO 5: Fully liberalized ASEAN trade*

Tariff abolishment of the ASEAN member countries to each other and to the external countries.

The design of the simulation summarized by figure 3.1 below.

Figure 3.1
Simulation Design



Source: Author's documentation

Simulation Results

The welfare effect of the five scenarios summarized in Table 2 and Table 3. Deviations on equivalent variation (EV) variable measure the welfare changes is US\$ billions. In 2007, the implementation of five scenarios for the ASEAN integration arrangement result in rises of real income (welfare gains) in the ASEAN, in each scenarios. The highest welfare gains is found in the Experiment 4, implementation of the ASEAN common market, with \$24.02 billion gains in welfare then followed by the Experiment 3, implementation of the ASEAN Economic Community (AEC), with \$23.71 billion gains in welfare.

The 2011 base year results are not far away from the 2007 results. Real income in the ASEAN as a whole rise in each scenarios. Different from 2007 base year results, the highest welfare gains is found in the Experiment 3, implementation of the ASEAN Economic Community, with \$40.13 billion gains in welfare and followed by the Experiment 4, implementation of the ASEAN common market, with \$39.18 billion gains in welfare. Notice that in 2011 base year, the total welfare gains in “ASEAN way” integration arrangement (AFTA and AEC) are relatively higher in comparison to the implementation of Balassa’s theory of integration sequence arrangement (ASEAN-CU and ASEAN-CM).

Table 2 Welfare Gains relative to the Baseline Year of 2007

EV, US\$ billion (in 2007 prices)

No.	Countries	EXP 1	EXP 2	EXP 3	EXP 4	EXP 5
		AFTA	ASEAN-CU	AEC	ASEAN-CM	LIB
	ASEAN	20.03	20.43	23.71	24.02	3.45
1	Brunei Darussalam	0.17	0.21	0.15	0.19	0.11
2	Cambodia	0.14	0.16	0.13	0.16	-0.01
3	Indonesia	2.38	2.36	3.31	3.27	-0.23
4	Lao PDR	0.09	0.09	0.10	0.10	-0.01
5	Malaysia	3.95	4.35	4.29	4.67	0.62
6	Philippines	1.20	1.17	1.50	1.46	0.14
7	Singapore	7.00	5.82	7.76	6.60	1.44
8	Thailand	3.24	3.28	4.10	4.10	0.17
9	Vietnam	1.60	2.68	2.04	3.12	1.22
10	RestofSouthEastAsia	0.27	0.30	0.33	0.36	0.00
	Partners					
11	China	-1.50	-2.08	-1.70	-2.28	-0.91
12	Japan	-2.13	0.26	-2.47	-0.04	2.49
13	South Korea	-0.75	-0.25	-0.80	-0.30	0.49
14	India	-0.50	-0.55	-0.62	-0.67	-0.14
15	Australia	-0.47	-0.49	-0.54	-0.57	-0.01
16	New Zealand	-0.07	-0.11	-0.07	-0.11	-0.04
17	USA	-1.57	-1.73	-3.24	-3.44	-0.66
18	EU 28	-2.08	-1.81	-2.99	-2.72	-0.96
19	RestoftheWorld	-1.87	-1.58	-1.84	-1.56	0.25
	World (Total)	9.11	12.10	9.43	12.35	3.96

Source: Author's model simulation

The smallest welfare gains of all ASEAN countries, both in 2007 and 2011 base year experienced in Experiment 5, implementation of fully liberalized ASEAN trade (\$3.45 billion in 2007 base year and \$2.12 billion in 2011 base year). In fact, according to the simulation results, full liberalization of tariffs does not generate welfare gains for all ASEAN member countries, as Cambodia, Laos and Indonesia and Thailand experience welfare losses. Country with the most welfare gains in all scenarios in both 2007 and 2011 base year is Singapore and

followed by big economies in the ASEAN: Malaysia, Thailand and Indonesia (with exception of Indonesia and Thailand has welfare losses in Experiment 5 of 2007 base year result and 2011 base year result). Vietnam has unexpectedly high welfare gains in all scenarios in both 2007 and 2011, in comparison with other CMLV countries.

Table 3. Welfare Gains relative to the Baseline Year of 2011

EV, US\$ billion (in 2011 prices)

No.	Countries	EXP 1	EXP 2	EXP 3	EXP 4	EXP 5
		AFTA	ASEAN-CU	AEC	ASEAN-CM	LIB
	ASEAN	31.23	30.55	40.13	39.18	2.12
1	Brunei Darussalam	0.20	0.23	0.19	0.22	0.14
2	Cambodia	0.24	0.28	0.22	0.26	-0.06
3	Indonesia	4.12	3.87	6.56	6.27	-0.58
4	Lao PDR	0.22	0.22	0.24	0.25	0.00
5	Malaysia	5.50	5.97	6.18	6.59	0.24
6	Philippines	2.50	2.22	3.48	3.18	0.05
7	Singapore	8.97	7.55	10.25	8.84	1.18
8	Thailand	5.35	5.20	6.84	6.56	-0.67
9	Vietnam	3.67	4.45	5.41	6.17	1.80
10	RestofEastAsia	0.47	0.56	0.74	0.84	0.02
	Partners					
11	China	-2.89	-3.56	-3.92	-4.59	-1.10
12	Japan	-3.16	1.35	-4.05	0.59	4.84
13	South Korea	-1.15	-0.35	-1.34	-0.52	0.98
14	India	-0.98	-0.70	-1.59	-1.30	0.32
15	Australia	-0.59	-0.86	-0.73	-1.00	-0.19
16	New Zealand	-0.09	-0.17	-0.10	-0.18	-0.06
17	USA	-2.47	-3.07	-5.20	-5.84	-1.23
18	EU 28	-2.87	-1.45	-5.00	-3.55	0.20
19	RestoftheWorld	-3.03	-3.91	-3.53	-4.43	-0.24
	World (Total)	13.99	17.84	14.67	18.37	5.64

Source: Author's model simulation

The ASEAN trade partners experience welfare losses in almost all of the scenarios, in both 2007 and 2011. However, those welfare losses are small compared to the ASEAN's welfare gains, resulting net global benefit (with the highest benefit in Experiment 4 – ASEAN CM and Experiment 2 – ASEAN CU in both 2007 and 2011).

Although the result of 2007 base year and 2011 base year in welfare gains patterns are somewhat resembling, the comparison of 2007 base year results and 2011 base year results in terms of welfare gains generate interesting result. The ASEAN seems “more prepared” towards full implementation of the ASEAN free trade area and the ASEAN Economic Community in 2011. The welfare gains of ASEAN in implementation of the ASEAN free trade area is higher than the ASEAN customs union, and the welfare gains of ASEAN in implementation of the ASEAN Economic Community is higher than the ASEAN common market. This could imply that since the signing of ASEAN Economic Community arrangement in 2007, the ASEAN do move toward the ASEAN Economic Community, and it is very likely that the ASEAN member countries are moving towards deeper economic interdependence, as the result in 2011 shows highest welfare gain in implementation of the ASEAN Economic Community.

6. CONCLUDING REMARKS

The ASEAN Economic Community (AEC) has been implemented since the beginning of 2016 and expected to be complete in 2025. Although the AEC

has been implemented for almost two years, the topic about ASEAN decision to deeper its integration via AEC is still be controverted. The ASEAN member countries preserve their value and norms highly even in the condition of integrated ASEAN, particularly in state's sovereignty, resulting "ASEAN Way" of integration. This research is conducted to compare the ASEAN Way of integration and other style of integration. The objective is to examine whether the ASEAN Way is the right choice for the ASEAN integration scheme. Using GTAP 9 Migration database with 2007 and 2011 base year, the comparative examination of ASEAN Way of integration impact on the ASEAN member countries divided into five scenarios: implementation of the ASEAN Free Trade Area, the ASEAN customs union, the ASEAN Economic Community, the ASEAN common market and fully liberalized ASEAN trade.

The implementation of five different scenarios of integration scheme generate welfare gains/losses. The implementation of all five scenarios of ASEAN integration scheme yield welfare gains in all ASEAN member countries and results net global benefit, both in 2007 and 2011. The difference is that in 2007, the highest welfare gains experienced in the ASEAN common market scheme, whereas in 2011 the highest welfare gains experienced in the ASEAN Economic Community scheme. The welfare gains of ASEAN member countries in implementation of ASEAN free trade area is higher than the ASEAN customs union, and the welfare gains of ASEAN member countries in implementation of the ASEAN Economic Community is higher than the ASEAN common market. It is very likely that the ASEAN member countries are moving towards deeper

economic interdependence, and the ASEAN member countries seems more prepared towards full implementation of the ASEAN free trade area and the ASEAN Economic Community.

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