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Abstract

This paper asks how the formation of the Association of Southeast Asian Nations' (ASEAN's) Economic Community (AEC) in 2015 (AEC2015) will affect industries in Kitakyushu and Shimonoseki. First, ASEAN's rapid economic during the past five decades has made ASEAN a large market for Japanese goods, services, and firms. ASEAN has supported this growth by facilitating important economic and political dialogue in Southeast Asia and AEC2015 will likely reinforce this important role. Second, although ASEAN has made efforts to promote economic integration among member economies and AEC2015 is another step in this direction, substantial barriers to intra-ASEAN transactions remain and will persist after AEC2015. The ASEAN Free Trade Area (AFTA) was initiated in 1992 and facilitated elimination of tariffs on most intra-ASEAN trade by 2010, but the share of intra-ASEAN trade remains relatively low at about one-quarter of all ASEAN trade and has not changed much since 2005. Most importantly, like AFTA, AEC2015 is not likely to increase preferential margins for intra-ASEAN trade, largely because ASEAN retains strong comparative advantages with respect to major external trading partners and firms in ASEAN are deeply involved in region- or world-wide production networks. Third, despite proclamations that AEC2015 marks the advent of a "single" ASEAN market, progress toward achieving most of AEC2015's specific goals is likely to be slow, especially with respect to key non-tariff barriers and restrictions on trade in services. Fourth, Japan's multinational enterprises (MNEs) in ASEAN are likely to be the largest conduit through which AEC2015 affects Japan, Kitakyushu, and Shimonoseki. To the extent that AEC2015 affects Japan, Kitakyushu, and Shimonoseki, AEC2015 is likely to affect Japan's services' industries such as trading, logistics (trade, transportation, and communication), and business services, more than commonly appreciated. The proliferation of production networks in machinery industries, which are the source of most of Japan's gross exports, is a major reason for this.

Keywords: Economic integration, ASEAN, Japan, Kitakyushu, Shimonoseki

JEL Categories: F15, F55, L60, L80, L90, O53

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1. Introduction and Summary

This paper attempts to answer one apparently simple question: how will the formation of the Association of Southeast Asian Nations' (ASEAN's) Economic Community (AEC) in 2015, often known as AEC2015, affect industries in Kitakyushu and Shimonoseki, and what are the implications of AEC2015 for firms and local governments in the region? An intelligent guess at the answer question requires consideration of at least four dimensions of ASEAN's economic and political performance and ASEAN's interaction with Japan.

First, ASEAN's economies were relatively small and most were poor when ASEAN was founded in 1967. Because most of them have grown rapidly in the following decades, ASEAN is now an important market for Japanese goods, services, and firms. Section 2 emphasizes that ASEAN's rapid growth has probably been the single most important reason for increased interaction between Japan and ASEAN. The persistence of strong comparative advantages, or the ability of ASEAN economies to cheaply produce goods and services which are relatively expensive to produce in Japan, and vice versa, is another important cause. In recent years, the proliferation of production networks, which are facilitated the ability to segment production of certain goods and services into resource-intensive, labor-intensive, capital-intensive, and knowledge-intensive stages, is yet another factor connecting ASEAN, Japan, and other economies in the region (e.g., China, Hong Kong, Korea, and Taiwan). ASEAN the institution has also facilitated important economic and political dialogue in Southeast Asia, which in turn

contributed to decades of relative peace and open economic policies, which were key reasons for ASEAN's relatively rapid growth.

Second, although ASEAN has made important efforts to promote economic integration among member economies and AEC2015 is another important step in this direction, substantial barriers to intra-ASEAN transactions remain and will likely persist after AEC2015 (Section 3). The most substantial step toward formal integration was the agreement to form the ASEAN Free Trade Area (AFTA) in 1992 and its gradual implementation. By 2010 most tariffs on goods imported from other ASEAN members were eliminated, but the share of intra-ASEAN trade remains relatively low at about one-quarter of all ASEAN trade and has not changed much since 2005. Although casual observation might suggest that AFTA has therefore been relatively ineffective at promoting intra-regional trade, more sophisticated analyses suggest AFTA has promoted intra-regional trade to some degree, though its effects have been relatively small. Most importantly, AFTA has not substantially weakened ASEAN's comparative advantages with respect to major external trading partners, and if anything, strengthened production networks involving ASEAN. Thus, transactions with major external partners remain relatively large.

Third, Section 4 details the relatively slow progress of AEC-related negotiations. In short, despite proclamations that AEC2015 marks the advent of a "single" ASEAN market, progress toward achieving most of AEC2015's specific goals is likely to be slow. AEC2015 is in many

ways a natural continuation of the AFTA process, and most AEC-related negotiations have focused on removing substantial non-tariff barriers (NTBs) and other measures designed to reduce intra-ASEAN transactions costs. However, these negotiations have made relatively slow progress in removing several key, remaining barriers and, the advent of AEC2015 is unlikely to increase preference margins for intra-regional transactions. AEC2015 will thus have a relatively weak influence on transactions in ASEAN, especially when compared to similar efforts in the European Union or the North American Free Trade Area, for example. Moreover, negotiations about many key elements of AEC2015, especially removal of NTBs and barriers to trade in services, are likely to proceed slowly, with substantive agreements and implementation occurring after 2015.

Fourth, Section 5 emphasizes the important roles of Japan's multinational enterprises (MNEs) in ASEAN and transactions between Japan and ASEAN, arguing that Japan's MNEs are likely to be the largest conduit through which AEC2015 affects Japan, Kitakyushu, and Shimonoseki. To the extent that AEC2015 affects Japan, Kitakyushu, and Shimonoseki, the section also emphasizes that AEC2015 is likely to affect Japan's services' industries such as trading, logistics (trade, transportation, and communication), and business services, more than commonly appreciated. The proliferation of production networks in machinery industries, which are the source of most of Japan's gross exports, is a major reason for this. Finally, section 6 briefly reviews the conclusions of the study and offers a few suggestions about how

firms and policy makers in Kitakyushu and Shimonoseki might best help the region's industries take advantage of the opportunities AEC2015 is likely to present.

2. Recent Trends in ASEAN Economies and Their Interaction with Japan

ASEAN was originally founded in 1967 by five economies, Indonesia, Malaysia, the Philippines, Singapore, and Thailand. Brunei joined in 1984, and four relatively poor economies (often referred to as CLMV economies: Cambodia, Laos, Myanmar, and Vietnam) joined in 1995-1999. In 1967, ASEAN economies were relatively small and poor, but most of them grew rapidly in the subsequent 25 years. By 1995, the 10 ASEAN economies had a combined GDP, a common measure of economic size, that was 12% of Japan's GDP if measured in current US\$, and 2/3 of Japan's if measured at purchasing-power-parity (Table 1). Per capita GDP, a common measure of living standards, remained substantially lower than in Japan in 1995 if measured in U.S. dollars (e.g., 59% of Japanese levels in Singapore, 10% in Malaysia, 7% in Thailand, and 1% each in Cambodia, Laos, and Vietnam, Table 2). If evaluated at purchasing power parity, per capita GDP was substantially higher relative to Japan's in all ASEAN economies, and Singapore's per capita GDP exceeded Japan's by 43%.¹

After decades of relatively good performance, many ASEAN economies contracted

¹ Although any measure of living standards is imprecise, the difference between the US\$ and purchasing power parity calculations primarily reflect the fact that many non-traded items (especially services) are substantially cheaper in ASEAN economies than in Japan, which means that the same amount of US\$ income can buy more in ASEAN economies than in Japan.

sharply after the Asian financial crisis in 1998 (Tables 1, 2). Contractions were largest in Indonesia, Thailand, and Malaysia, where real GDP measured in local currency fell 13%, 11%, and 7.4%, respectively.² Growth was also negative in Brunei, the Philippines, and Singapore (International Monetary Fund 2014). Further external shocks related to the dot.com crash led to and slowdown of GDP growth to under 1% in Malaysia and Singapore in 2001, and the world financial crisis led to similar or larger slowdowns in Brunei, Cambodia, Malaysia, Singapore, and Thailand in 2009. On top of these cyclical problems, structural issues are also thought to have contributed to reduced long-term growth in many of the region's economies.

Nonetheless, by 2015, ASEAN is projected to have grown to over half (55%) of Japan's size if measured in current US\$ or over one-third (38%) larger than Japan if measured at purchasing power parity (Table 1). Although recent growth has been relatively slow compared to their performance during the boom preceding the Asian financial crisis or the recent performance of China, ASEAN economies have grown more rapidly than most economies worldwide during 1995-2015 (International Monetary Fund 2014c). Thus, ASEAN is now large market for Japanese products, services, and firms. And although ASEAN economies face many challenges, the ASEAN market is likely to continue growing relatively rapidly for many years to come, unless growth is interrupted by a prolonged war, for example.

Reflecting the effects of the Asian financial crisis and the dot.com shock, the US\$ value

² The growth rate of real GDP in domestic currency is the most common measure of economic performance over time in individual economies.

of ASEAN's imports from the world grew relatively slowly (59%) in 1995-2005, but growth was much more rapid in 2005-2013 (124%; Table 3). In 1995, China was a much smaller import market than ASEAN, but China's imports grew much more rapidly and in 2005 China was a larger import market than ASEAN, though not by much. By 2013, China's imports exceeded ASEAN's by 50%, while ASEAN's imports exceeded Japan's by 57%.

Imports from Japan grew more slowly than imports from the world in both ASEAN and China, but growth was again slower in ASEAN than in China (Table 3). ASEAN's imports from Japan shrank in 1995-2005, partially because the financial crises reduced demand for many machinery items such as autos and factory equipment, which are among Japan's largest exports. Thus, between 1995 and 2005, China's imports from Japan increased from about 1/3 of ASEAN's imports from Japan to 1.2-fold their size. In 2005-2013, China continued to be a more rapidly growing market for imports from Japan than ASEAN was, but both markets grew rapidly, 62% and 45%, respectively. By 2013, imports from Japan amounted to US\$41 billion in Thailand, US\$18-20 billion each in Singapore, Indonesia, and Malaysia, US\$12 billion in Vietnam, and \$5.7 million in the Philippines. These six large economies (hereafter the ASEAN-6) accounted for over 98% of ASEAN's imports from Japan, though imports by several of the four smaller economies have grown relatively rapidly in recent years.

Here it should also be emphasized that ASEAN has provided an important forum for economic and political dialogue among its members. This dialogue has in turn made

important contributions to open economic policies, conflict resolution, and the maintenance of peace, which have been important key necessary conditions for sustained economic growth and international trade expansion in ASEAN and elsewhere. Although the extent of ASEAN's contribution to this process is difficult or impossible to measure, it has probably been large in the original five ASEAN economies since 1967 and in Cambodia, Laos, and Vietnam since the 1970s or 1980s.

3. AFTA, Intra-ASEAN Economic Transactions, and the Goals of AEC2015

Although ASEAN was founded in 1967, it made relatively little progress toward formal economic integration until the ASEAN Free Trade Area (AFTA) was established by a 1992 agreement signed by the six older, richer ASEAN economies. The CLMV economies joined AFTA in 1995-1999, but these poorer economies have been allowed to pursue a somewhat slower pace of import liberalization than the older, richer six. According to a recent evaluation by the ASEAN Secretariat and the World Bank (2013, pp. 1-8), Singapore and Brunei have completely eliminated tariffs on intra-ASEAN trade. Indonesia, Malaysia, and to a lesser extent, the Philippines and Thailand have eliminated most tariffs on imports from other AFTA members, except on few other products not subject to liberalization under the ASEAN Trade in Goods Agreement (ATIGA), which was signed in 2009 and designed to strengthen the legal foundations of AFTA. As a result, the average intra-ASEAN tariff for the six older members

was only 0.05% in 2012, which compares favorably with other customs unions and free-trade areas. The CLMV economies also made large reductions in intra-regional tariffs, their intra-ASEAN average declining from 7.3% in 2000 to 2.1% in 2010-2012.

Although preferential tariffs declined to low levels and the value of intra-regional trade expanded rapidly (Figure 1, Table 3), the share of intra-regional trade remained relatively low at 25-26% of exports or 22-24% of imports in 2005-2013. Casual observers often point to the relatively low level of intra-ASEAN shares as evidence that AFTA has been relatively ineffective. However, this simplistic view is naïve because it ignores other factors that determine the direction and composition of trade flows, and several more sophisticated studies (Bun et al. 2009; Elliot and Ikemoto 2004; Nguyen 2009; Okabe and Urata 2014) suggest that AFTA has made relatively small contributions to intra-regional trade in ASEAN.

One of the most important reasons for the low levels of intra-regional trade shares is the fact that ASEAN economies supply large import partners in high-income markets such as Europe, Japan, and North America with relatively large amounts of resource- and labor-intensive products such as apparel, footwear, rubber products, plastics, and electronic parts, while those partners are important sources of chemicals and capital goods such as factory machinery, core components of electronic products, and motor vehicles and key parts like engines. In short, ASEAN and several its major extra-regional trading partners have strong comparative advantages relative to each other, leading to low intra-regional shares.

A second reason is increasing reliance on China, both as a source of imports and as an export market, which mainly results from China's relatively rapid economic growth. Another cause is the proliferation of production networks involving substantial trade in intermediate products among ASEAN and Chinese suppliers, which are often used in final products sold in advanced markets such as Europe, Japan, and North America (Asia-Pacific Research and Training Network on Trade, ed., 2011). It is thus important to emphasize that both extra- and intra-regional trade has grown rapidly in recent years, and that the growth of trade has been largely consistent with the evolution of comparative advantage and production networks.

A third reason for low intra-ASEAN shares is that preferential tariff schemes are not heavily utilized by ASEAN traders. This results first and foremost because multilateral (most-favored nation or MFN) non-agricultural tariffs are quite low (Table 4).³ For example, in 2004 and 2012, over four-fifths of the value of non-agricultural imports in Indonesia, Malaysia, the Philippines, and Singapore incurred low tariffs of 5% or less. Thailand had the highest MFN tariffs of the original five ASEAN members, but the share of imports facing low tariffs was almost three-fourths, substantially higher than in China and Vietnam, for example. In other words, preferential margins for intra-regional trade are relatively low in AFTA and traders have relatively weak price incentives to use intra-regional schemes (ASEAN Secretariat and the World Bank 2013, p. 8). Correspondingly, relatively small proportions of

³ Here we focus on non-agricultural tariffs because the value of agricultural goods supplied to ASEAN by Japanese firms is small.

intra-ASEAN trade utilize preferential tariffs.⁴ One reason for low utilization rates is that the costs of utilizing intra-regional schemes can be substantial, especially for smaller firms with little experience in international trade (Wignaraja 2013).

A fourth cause is the plethora of regulations in ASEAN economies that continue to inflate the costs of both intra-regional and extra-regional transactions in a variety of goods, services, labor, and capital. Many transactions costs are also inflated by inadequate infrastructure and logistics support. Despite substantial reductions of intra-regional tariffs, a December 2013 report by the ASEAN Secretariat and World Bank (2013, p. 22), also says import tariffs are “by far the most frequent” harmful measure and the “instrument ASEAN governments have resorted to most frequently”, while import-related non-tariff measures (NTMs) are “the second most frequently used measure”.⁵ Thailand in particular was singled out for using a large number of NTMs (126), while Indonesia introduced 12 of the 17 new NTMs verified by the World Trade Organization (WTO) in October 2011-May 2012 (ASEAN Secretariat and World Bank, 2013, p. 26).

First proposed in 2002 (Hew and Soesastro 2003) and formalized in 2007’s Blueprint (ASEAN Secretariat 2008) and 2009’s Roadmap (ASEAN Secretariat 2009), the AEC consists of four pillars. The first pillar is to create a “single market and production base”,

⁴ According to Kohpaiboon and Jongwanich (2015, p. 31), the shares of trade utilizing FTA preferences increase from 21% of Thai exports to AEC economies in 2006 to 30-32% in 2009-2010 before falling to 26% in 2012; corresponding shares of imports from AEC economies rose from 12-13% in 2006-2008 to 26-27% in 2011-2012.

⁵ NTMs are defined as policy measures designed to achieve non-trade related goals, but which affect trade.

which facilitates the free intra-regional flows of goods, services, skilled labor, investment, and capital, and promotes accelerated liberalization in 12 priority integration sectors as well as food, agriculture, and forestry. The AEC's second pillar is related and aims to reduce transactions costs by improving competition policies, consumer protection, intellectual property rights, and infrastructure provision. The AEC's third and fourth pillars, promotion of equitable economic development (e.g., by promoting small and medium-sized enterprises) and more complete integration into the global economy (mainly through ASEAN's participation in many regional free trade areas), sound more grandiose, but are actually more limited in scope.

4. Implementation of AEC2015 and its Likely Effects on ASEAN

Although the ASEAN Secretariat's (2012) "scorecard" evaluated progress toward realization of specific measures being negotiated under all four pillars of the AEC agreement during 2008-2011, the scorecard itself and other studies of AEC2015's likely effects focus primarily on measures under the first pillar and related elements of the second pillar (especially infrastructure provision).⁶ Many specific measures being considered under the first pillar, as well as efforts to promote infrastructure development under the second pillar,

⁶ See ASEAN Secretariat (2013), ASEAN Secretariat and World Bank (2013), Basu Das (2012, 2013), Basu Das et al. (2013), CIMB ASEAN Research Institute (2013), and Intal et al. (2014).

are complementary to and a natural extension of AFTA.⁷ Correspondingly, the 2012 scorecard identified 173 specific goals related to the first pillar and 78 goals related to the second pillar, but far fewer specific goals related to the third and fourth pillars (12 and 14, respectively).

The 2012 scorecard for 2008-2011 (ASEAN Secretariat 2012) identifies free flows of (a) goods, (b) services, (c) investment, and (d) capital, as well as measures to promote (e) 12 priority integration sectors and (f) food, agriculture, and forestry, as major elements of the first pillar. Just under one-third of the specific measures considered under this pillar relate to free flows of goods (56), though further reductions of remaining intra-regional tariffs are not being considered. Rather many of the specific measures are designed to reduce non-tariff barriers (NTBs), which are defined as a subset of NTMs that exceed “what is needed to secure the measure’s non-trade (often safety, environmental or social) objectives” (ASEAN Secretariat and World Bank, 2013, p. 8).⁸

Most measures identified as NTBs restrict imports in sectors where governments have decided to protect national producers, often at the behest of lobbyists that influence them. Other NTBs restrict exports, and there is some taxation of exports as well, though export

⁷ Improving intellectual property protection is also thought to affect trade facilitation, which is an important goal of AEC2015, but this had yet to be an important area of negotiation.

⁸ Some studies distinguish NTMs, which are viewed as measures to achieve non-trade related policy goals, and NTBs, which are a subset of NTMs. In principle, this distinction is useful, but in practice it is difficult to define precisely. For example, when is a product labeling requirement necessary, and when is it excessive? Clearly the answers to this and many similar questions are often ambiguous in important respects.

taxes and NTBs affecting exports are relatively small and infrequent in ASEAN (ASEAN Secretariat and World Bank 2013, pp. 27-30). Free trade areas (FTAs) like ASEAN require rules of origin to insure that a certain percentage of imports qualifying for intra-regional trade do indeed originate from within the trade area. However, rules of origin can be very complicated and improving AFTA's rules of origin is another important element of AEC's efforts to reduce NTBs. Similarly, the AEC seeks to improve the efficiency of customs procedures through the ASEAN Single Window and ASEAN e-customs procedures.

The 2007 Blueprint identified NTBs as the “main protectionist instrument” (ASEAN Secretariat and World Bank, 2013, p. 9) impeding intra-ASEAN trade in many ASEAN economies. Negotiations have thus focused on establishing a schedule for the eventual of all NTBs affecting intra-ASEAN trade and making remaining NTMs more transparent. However, according to a December 2013 report by the ASEAN Secretariat and World Bank (2013, p. 10), “there has been little real progress in the elimination ... of ... NTBs”. The conclusion to Austria's (2013, p. 79) detailed analysis echoes this sentiment, saying “Achievements to date have not matched the commitments made in 2009 in the Roadmap for the AEC”, and that difficulties in reducing NTBs result from difficulties with (a) “identifying the NTBs from among the NTMs”, (b) achieving consensus about how to identify and eliminate NTBs, and (c) “supply-side capacity constraints” (e.g., the ability to harmonize standards).

ASEAN's efforts to improve trade facilitation and logistics are generally evaluated more

favorably than efforts to reduce NTBs (ASEAN Secretariat and World Bank 2013, pp. 44-91). Progress has been uneven, but substantial in areas such as the modernization of customs and the implementation of national single windows, which will form the basis of the ASEAN single window, especially in Malaysia, Indonesia, and the Philippines. Steps toward the construction of national single windows are also moving forward in Thailand, Brunei, and Vietnam, but progress is slower in Cambodia, Laos, and Myanmar. Singapore, with its TradeNet system, already has one of the most efficient single windows worldwide and is a natural reference country for other ASEAN economies. Measures related to improving infrastructure, especially transport infrastructure (39 of the 78 measures identified by ASEAN Secretariat 2012), under the second pillar are also numerous and related to trade facilitation, but national governments and firms are the main actors in this sphere and the influence of AEC2015 is likely to be limited.

Specific measures relating to the free flows of services constitute another major category accounting for about one-fourth (43) of the measures related to the first pillar in the 2012 scorecard (ASEAN Secretariat 2012). Removal of restrictions on services' transactions, and related restrictions on the movement of skilled labor, has been prioritized. However, as with NTBs, there has been little tangible progress (ASEAN Secretariat and World Bank, 2013, pp. 92-120). Moreover, according to Nikomborirak and Jitdumrong (2013, p. 137), "the service sector liberalization goals established in the AEC are far from ambitious", "liberalization

parameters specified under the AEC Blueprint are not binding, as they are not subject to the dispute settlement mechanism”, and “actual implementation is far behind the milestones established in the AEC”. They further conclude that “the AEC is unlikely to make any meaningful difference to ASEAN services trade in the foreseeable future” even though “very few people recognize this fact and still anticipate a massive tide of cross-border investment and movement of labor in 2015”. The fact that many aspects of AEC2015 are not binding and the lack a credible dispute mechanism for many disputes are important, fundamental problems that affect not only services, but many other areas of AEC2015.

Measures to promote free movement of investment (mainly foreign direct investment or FDI) and capital (mainly portfolio investment) overlap in important respects. Because most ASEAN economies now have relatively open investment regimes governing FDI in most manufacturing industries, there is substantial overlap between efforts to liberalize restrictions on FDI and on trade in services. ASEAN Secretariat and World Bank (2013, p. 121) identify “telecom, electricity and banking” as particularly important inputs affected by FDI restrictions in several ASEAN economies. However, because many remaining restrictions are designed to protect vested interests, progress on removing restrictions is likely to be slow for the foreseeable future. On the other hand, the same study (p. 155) concludes that “Investment integration has been progressing quite well in ASEAN, which is driven concurrently by ASEAN growing economies and the ASEAN investment integration policy”. It is also clear

that ASEAN's stock and bond markets have become more open since the Asian financial crisis, though most of them remain relatively small by international standards. However, there is little likelihood that AEC2015 will result in large changes in these markets.

The first pillar also contains a relatively large number of measures related to 12 priority integration sectors (agro-based goods, air transport, automotive products, e-ASEAN, electronics and electrical goods, fisheries, health care services, rubber-based goods, textiles and clothing, tourism, logistics services and wood-based products; ASEAN Secretariat 2012, p. 7), as well as food, agriculture, and forestry. Japanese firms and products are important competitors in many of these industries, for example electronics and electrical goods, automotive products, tourism, and logistic services. However, because trade in electronics and electrical goods is already relatively unrestricted, the effects of these efforts are likely to be largest in automotive goods, tourism, and logistics. Because automotive goods and logistics are important to the Northern Kyushu economy, we will focus on these and a few other industries when examining the potential effects of AEC2015 on the region in the next section.

5. AEC2015 and Industries in Kitakyushu and Shimonoseki

The previous sections emphasize that AFTA has not resulted in large increases of intra-regional policy biases or in shares of intra-regional trade, and that AEC2015 is similarly unlikely to create large intra-regional policy biases. However, in sectors like automobiles and

logistics, there is a potential for AEC2015 to have relatively large effects, especially if AEC-related measures gradually become more effective after 2015, as expected by many analysts. What are the implications for industries in Kitakyushu and Shimoseki?

The first step to answering this question is to realize that a relatively few, large multinational enterprises (MNEs) account for a very large portion of all transactions between Japan and ASEAN. For example, sales by affiliates of Japanese MNEs operating in the largest ASEAN-6 economies were 1.8 times larger than imports of those economies from Japan in 1995, and because sales of those affiliates subsequently grew much more rapidly than imports from Japan, this ratio rose to 3.4-fold in 2005 and 4.0-fold in 2012 (Table 5).⁹ Sales by affiliates in ASEAN were much (15 times) larger than sales by affiliates in China in 1995 but the sales by affiliates in China grew relatively rapidly thereafter and were roughly equal to sales by affiliates in ASEAN in 2010-2011.¹⁰ Within ASEAN, affiliates in Singapore had by the largest sales in 1995 and 2005, but sales by affiliates in Thailand became largest in 2012. Affiliates in these two economies accounted for roughly two-thirds of sales by all affiliates in ASEAN (69-71% in 1995 and 2005, and 64-67% in 2010-2012). Sales by affiliates in the four smaller economies (Brunei, Cambodia, Laos, Myanmar) are so small that Japan, Ministry of

⁹ Because sales of MNE affiliates are measured on a fiscal year basis and imports from Japan on a calendar year basis, these ratios are not precise. However, these data clearly show affiliate sales to be larger much larger than imports for these six economies combined and that affiliate sales have grown relatively rapidly.

¹⁰ More recently, sales by affiliates in China fell sharply in 2012, largely because of increased political tensions between China and Japan.

Economy Trade and Industry (various years) does not report them.

In 1995, manufacturing affiliates accounted for about half (52%) of affiliate sales in the ASEAN-6 and this share grew to about three-fifths (58-62%) in 2005 and thereafter (Table 5). Sales by trade affiliates, of which the vast majority (95% in 2012) is by wholesale trade affiliates, accounted for almost two-fifths of ASEAN-6 sales in 1995, but this share fell to 36% in 2005 and 28-31% in 2010-2012. Sales by manufacturing affiliates in Thailand accounted for about one-quarter of all ASEAN-6 sales (24-28%) in recent years (2010-2012). Trade affiliates in Singapore (17-22% of the ASEAN-6 total) and manufacturing affiliates in Indonesia (12-14% of the total) were also large. This pattern contrasts to 1995 when Singapore trade affiliates (26% of the total) were largest, followed by manufacturing affiliates in Thailand, Singapore, and Malaysia (13-15% of the total each).

Although most ASEAN affiliates of Japanese MNEs buy most of their inputs in host ASEAN markets, it is also important to recognize that they buy and sell substantial proportions to Japanese parents and to other Japanese affiliates operating in ASEAN. For example, affiliates in the four largest developing economies in ASEAN (the ASEAN-4: Indonesia, Malaysia, Philippines, Thailand) bought 65% of their inputs and sold 63% of their output during 2012 in the host ASEAN economy they were operating (Table 6).¹¹ Nonetheless, purchases from parents amounted to over half (52%) of the value of imports from Japan and

¹¹ This discussion focuses on the ASEAN-4 because the data source groups Singapore with Korea and Taiwan, and provides no similar data for Brunei or the CLMV economies.

imports from other Japanese firms were 7% of imports from Japan. In other words, about three fifths of the ASEAN-4's imports from Japan were purchased by affiliates of Japanese MNEs operating in these economies. Moreover, about two-fifths of the purchases from local firms in the ASEAN-4 were made from other Japanese affiliates operating in the same local economy. Sales to Japanese parents and other Japanese firms in the same local economy were smaller than corresponding purchases, but still substantial. On the other hand, sales to firms in the local economy, mainly Japanese firms and local firms, but also to other foreign firms, were larger than corresponding purchases from these groups.

Affiliates in transport machinery manufacturing (mainly automotive goods), followed by affiliates in wholesale trade and electric and electronic machinery manufacturing, were by far the largest, these three industries accounting for 72% of all purchases and 68% of all sales by ASEAN-4 affiliates (Table 6). The combined shares of these three industries in purchases from Japan (80%) and Japanese parents (81%) were even larger. In short, intra-firm trade by MNEs in these three industries is a very large portion of Japan's trade with the ASEAN-4. Correspondingly, if AEC2015 is to have a large impact on transactions with Japan, it will be through its effects on the behavior of the large MNEs that dominate these industries and their networks with smaller Japanese firms.

According to Toyo Keizai (2014), in 2013 there were only 18 Japanese MNE parents with affiliates abroad in which the parent had ownership shares of 20% or more with

headquarters in Kitakyushu and two in Shimonoseki (Table 7). Nine of the Kitakyushu firms are manufacturers and five of them are rather large, having over 1,000 employees each. These nine firms employ at least 14,646 workers, which is about one quarter of the 53,984 workers in manufacturing plants in Kitakyushu in 2012 (Table 8). However, most of the large firms have plants in several locations, and many of the parent employees reported in Table 8 probably work outside Kitakyushu, and many also probably work in non-manufacturing plants. Employment data are only available for three of the nine non-manufacturers in Kitakyushu and neither of the two Shimonoseki firms.¹²

The nine Kitakyushu manufacturers have investments in 78 affiliates abroad, 49 in manufacturing and 29 in non-manufacturing. Only 13 of these are located in ASEAN, 8 in manufacturing and 5 in non-manufacturing. Nine of the 13 ASEAN affiliates, 7 of which are involved manufacturing are controlled by two relatively large firms, Toto and Mitsui High-Tec. Yaskawa Electric is another large firm with presence in ASEAN, but it has only one non-manufacturing affiliate in the region and 11 manufacturing affiliates and 3 non-manufacturers in other regions. Krosaki Harima is the other large firm with substantial foreign presence (13 manufacturers and 5 non-manufacturers) but none of these are in

¹² According to Kyushu Economic Research Center (2014), there are several other Kitakyushu and Shimonoseki firms with presence in ASEAN and other regions. For example, this source reports Sankyu to be another large Kitakyushu-based transportation firm with 8 affiliates reported in ASEAN and 25 worldwide, but Toyo Keizai (2014) and the firm's home page list its headquarters as Tokyo, though it does have strong historical ties to Kitakyushu (as does Nippon Steel and Sumitomo Metals [especially the former Nippon Steel], for example).

ASEAN. Together these four large manufacturers have 69 of the 78 affiliates controlled by manufacturers. Relatively small non-manufacturers have concentrated their affiliates in ASEAN (which was the location of 9 of their 16 affiliates) to a much greater degree than the manufacturers. However, all of their ASEAN affiliates belonged to only four firms, Takada, Nitco Business Solutions, Toyo, and Ikeda Kogyo.

As mentioned above, AEC2015 prioritizes liberalization of trade in automotive goods, and a large portion of ASEAN trade utilizing intra-regional preferences is related to autos and parts.¹³ Thus, AEC2015 might be expected to have relatively large impacts on the three Toyota Motor Kyushu factories and two Nissan Motor Kyushu factories that operate in the greater Kitakyushu region. However, these factories concentrate on the production of high-end vehicles and parts, not for on the relatively low-end vehicles and parts that dominate the ASEAN market. Thus, the direct effect of AEC2015 may be weak on these factories as well. In short, although Japan's large MNEs and their Japanese suppliers in ASEAN are more likely to be affected by AEC2015 than other Japanese firms, these MNEs appear to have a relatively small presence in Kitakyushu and Shimoseki compared to other regions of Japan.

The second step to understanding the effects of AEC2015's potential in Kitakyushu and Shimonoseki is to understand that effects may be relatively large in services' industries that

¹³ For example, of the 15 largest 6-digit HS categories of Thai preferential exports to AEC economies in 2012, six were auto-related and they accounted for over half of the export value for the top 15 categories combined (Kohpaiboon and Jongwanich 2015, p.68).

support trade and manufacturing in ASEAN. According to the 2012 economic census, employment in four key supporting service industries (information & communication, transport & post, trade [including retail], finance & insurance, and research & technical services) was double or more that of manufacturing employment in both cities (Table 8). Of course, a large number of these jobs serve only local customers and are unlikely to be affected. However, a substantial portion are related to trade through ports in the region and to the activities of Japanese MNEs abroad. It is very difficult to evaluate just how large the indirect effects on these industries will be, but they may well be larger than the direct effects on the manufacturing MNEs involved in ASEAN.

Here it is important to consider how production networks involving Japanese MNEs and other firms operating in Japan, China, and ASEAN, for example, affect Japan. For example, if one calculates the ratio of the domestic value added (gross exports less related intermediate purchases) embodied in Japan's exports to the gross value of those exports (including related intermediate purchases), the ratio fell from 93% in 1995 to 85% in 2009 for exports to the world and to ASEAN, with a similar decline for exports to China (Table 9). Because the majority of value added is also accounted for by wage income and profits, the domestic value added measure provides a much better estimate of the value of exports that accrues to Japanese workers and firms than the gross export measure.¹⁴ And because Japan produces

¹⁴ Value added is the value of gross output less the value of intermediate inputs or equivalently the wage payments plus profits (operating surplus) plus depreciation plus indirect taxes less subsidies. In the latter

relatively large portions of its intermediate inputs, its ratios for all industries combined were substantially higher than in many ASEAN-6 economies or China, for example.¹⁵

The industry distribution of Japan's domestic value added is markedly different than for gross exports. Most importantly, domestic value added is much smaller than gross exports for most manufacturing industries, especially in the three (general, electric and electronic, and transportation) machinery industries that accounted 68% of Japan's gross exports to the world in 1995 and 57% in 2009; corresponding shares of domestic value added were only 35% and 31%, respectively. Conversely, the shares of services industries in domestic value added (38% and 41%, respectively) were much larger than shares of gross exports (11% and 15%, respectively). Differences in the industry distributions of domestic value added and gross exports were similar for exports to the ASEAN-6 and China.

The key point here is that the proliferation of production networks, which is particularly conspicuous in machinery industries, results in substantially lower domestic value added share for those machinery industries than in gross exports. In other words, workers and firms in services' industries generate a much larger portion of the value added earned from exports than normally understood. This is also true transactions involving firms with a large

definition wage payments and profits are usually by far the biggest components.

¹⁵ Reflecting high dependence on imported intermediate goods, these ratios were among the lowest in the region in both 1995 and 2009 in Singapore (53% and 50%, respectively), Malaysia (60% and 62%), the Philippines (69% and 62%), and Thailand (70% and 65%). In 1995-2009, corresponding ratios also fell sharply to low levels in China (from 88% to 67%) and Vietnam (76% to 63%). Ratios remained relatively high in Indonesia (85% and 86%), reflecting relatively low import dependence. Data come from OECD-WTO (2013).

manufacturing presence in Kitakyushu such as Nippon Steel and Sumitomo Metals, Toto, Yaskawa Electric, Toshiba, Toyota, and Nissan. Thus, to the extent that AEC2015 will have an influence on industries in Japan, Kitakyushu, and Shimonoseki, the influence will be much stronger in service industries than commonly perceived.

6. Conclusions and Policy Implications

Section 2 first highlighted how ASEAN economies have performed relatively well over the last two decades, despite severe disruptions related to the Asian financial crisis, the Dot.com crash, and the World financial crisis. Performance has not been as stellar as China's for example, but ASEAN has grown relatively rapidly to be a large market for Japanese firms and products. Section 3 also highlighted how ASEAN's extra-regional and intra-regional trade have both grown quite rapidly, but intra-regional shares of ASEAN trade have not changed much since 2005. If one focuses on changes in intra-regional shares, and their relatively low levels, one might conclude that ASEAN and AFTA have not been very effective at promoting intra-regional trade. However, the most important economic causes of stagnant intra-ASEAN shares are (1) ASEAN's strong comparative advantages relative to large extra-regional economic partners including Japan and (2) ASEAN's relatively low unilateral barriers to trade, which make intra-regional preferences relatively unimportant.

Will AEC2015 change these key economic factors that limit intra-regional shares?

Section 4 suggests that the simple answer is no; intra-regional shares of international transactions are likely to remain limited in ASEAN for the foreseeable future. Does that mean that AEC2015 is irrelevant? The more complicated and perhaps contradictory answer to that question is also no. AEC2015 is best viewed as another incremental step in ASEAN's long path toward intra-regional economic and political integration and may have important impacts in a few key industries such as automotive goods and logistics. Section 5 also suggests that most effects will be felt by large MNEs and their suppliers, and that effects are likely to be larger in services' industries than often perceived.

On the other hand, as an economic and political organization, ASEAN is very likely to continue to become increasingly important for its members, Japan, and many other economies worldwide. In particular, ASEAN has been very successful in promoting conflict resolution, as well as the maintenance of peace and political dialogue among its members. This peace and political dialogue has also been a key necessary condition for the relatively good performance of the original five ASEAN economies since 1967, more recently ASEAN's newer members. The ability of ASEAN to facilitate dialogue and conflict resolution is likely to continue to remain ASEAN's most important political and economic contributions, especially in relation to territorial disputes involving Southeast Asia and maybe even Northeast Asia.

Correspondingly, it is important for the national government and local governments in Japan to remain engaged with ASEAN and to help private firms and private sector

organizations such as Chambers of Commerce to be effective conduits for information about ASEAN, AEC2015, and related efforts to promote intra-regional integration. The most likely beneficiaries are likely to be in the AEC's priority integration sectors such as automotive goods and logistics services. Because local governments cannot easily favor one firm or one industry over another, and because fiscal resources are limited in Japan, it is probably best to focus existing resources on information provision. Costs of such activity can be minimized by close coordination with Japan's national agencies as well as with Japanese Chambers of Commerce and other, similar organizations operating in ASEAN.

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Table 1: Alternative Measures of GDP in ASEAN, China, and Japan

Economy	1995	2005	2013	2015
At current US\$ exchange rates (100 million US\$)				
ASEAN	6,598	9,262	24,104	26,655
Brunei Darussalam	47	95	161	175
Cambodia	34	63	155	184
Indonesia	2,021	2,858	8,703	9,150
Lao PDR	19	27	108	128
Malaysia	888	1,435	3,132	3,756
Myanmar	-	138	568	736
Philippines	821	1,031	2,721	3,303
Singapore	879	1,274	2,979	3,202
Thailand	1,680	1,764	3,873	3,975
Vietnam	208	576	1,706	2,045
China	7,570	22,873	94,691	112,851
Japan	53,339	45,719	48,985	48,819
At current purchasing-power-parity exchange rates (100 million International \$)				
ASEAN	18,854	33,764	59,195	67,627
Brunei Darussalam	169	244	300	337
Cambodia	86	233	461	549
Indonesia	8,212	13,012	23,890	27,444
Lao PDR	67	147	316	377
Malaysia	2,132	4,126	6,936	8,002
Myanmar	-	1,068	2,215	2,700
Philippines	2,016	3,671	6,431	7,518
Singapore	1,150	2,344	4,253	4,672
Thailand	3,973	6,363	9,645	10,550
Vietnam	1,050	2,557	4,750	5,479
China	21,956	64,563	161,491	192,303
Japan	28,557	38,585	46,676	49,168
At constant local currency (index, 2005=100)				
Brunei Darussalam	84	100	106	115
Cambodia	45	100	171	196
Indonesia	77	100	158	176
Lao PDR	56	100	185	213
Malaysia	63	100	145	161
Myanmar	-	100	179	210
Philippines	67	100	151	170
Singapore	60	100	156	166
Thailand	76	100	131	138
Vietnam	50	100	160	178
China	42	100	216	248
Japan	90	100	104	106

Notes: - = not available; 2013 data are estimates and 2015 data are forecasts; the ASEAN subtotal excludes Myanmar for 1995.

Source: International Monetary Fund (2014c).

Table 2: Alternative Measures of Per Capita GDP in ASEAN, China, and Japan

Economy	1995	2005	2013	2015
At current US\$ exchange rates (US\$)				
ASEAN	1,518	1,676	3,939	4,243
Brunei Darussalam	16,478	26,587	39,659	41,833
Cambodia	317	471	1,028	1,181
Indonesia	1,038	1,291	3,510	3,587
Lao PDR	386	469	1,594	1,824
Malaysia	4,295	5,421	10,457	12,127
Myanmar	-	288	1,113	1,420
Philippines	1,200	1,209	2,791	3,256
Singapore	24,937	29,870	55,182	58,146
Thailand	2,826	2,708	5,676	5,772
Vietnam	289	700	1,902	2,233
China	625	1,749	6,959	8,211
Japan	42,516	35,781	38,468	38,522
At current purchasing-power-parity exchange rates (International \$)				
ASEAN	4,337	6,112	9,673	10,764
Brunei Darussalam	58,698	68,004	73,823	80,335
Cambodia	794	1,743	3,056	3,534
Indonesia	4,217	5,877	9,635	10,759
Lao PDR	1,381	2,543	4,666	5,357
Malaysia	10,307	15,582	23,160	25,833
Myanmar	-	2,223	4,345	5,208
Philippines	2,947	4,306	6,597	7,412
Singapore	32,616	54,951	78,762	84,821
Thailand	6,682	9,770	14,136	15,320
Vietnam	1,459	3,103	5,295	5,983
China	1,813	4,938	11,868	13,993
Japan	22,763	30,198	36,654	38,797
At constant local currency (index, 2005=100)				
Brunei Darussalam	105	100	94	98
Cambodia	56	100	151	169
Indonesia	88	100	141	152
Lao PDR	66	100	158	175
Malaysia	81	100	128	138
Myanmar	-	100	168	195
Philippines	84	100	132	143
Singapore	72	100	124	128
Thailand	84	100	125	131
Vietnam	57	100	147	160
China	45	100	207	236
Japan	92	100	105	107

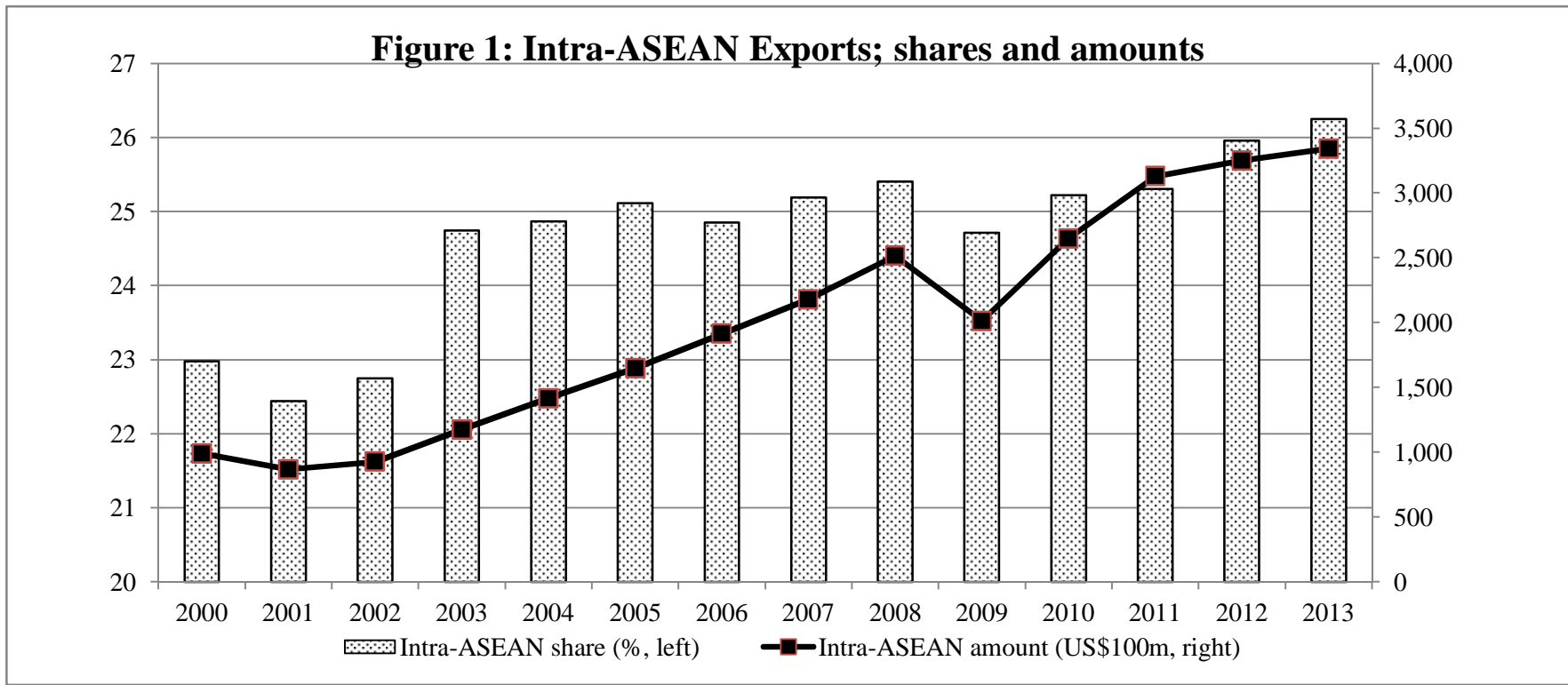
Notes: - = not available; 2013 data are estimates and 2015 data are forecasts; the ASEAN subtotal excludes Myanmar for 1995.

Source: International Monetary Fund (2014c).

Table 3: Imports from the World, Japan, and ASEAN in ASEAN, Japan and China (importing economy estimates, US\$100 millions)

Importing Economy	1995	2005	2010	2011	2012	2013
ASEAN from World	3,673	5,829	9,615	11,683	12,443	13,043
ratio to GDP, %	56%	63%	50%	53%	53%	54%
Brunei Darussalam	30	16	31	64	65	85
Cambodia	16	25	49	126	153	170
Indonesia	406	577	1,357	1,774	1,917	1,866
Lao PDR	6	13	36	46	63	73
Malaysia	776	1,136	1,647	1,876	1,966	2,061
Myanmar	23	36	99	137	170	203
Philippines	283	474	602	662	679	680
Singapore	1,244	2,002	3,109	3,661	3,800	3,731
Thailand	805	1,181	1,851	2,291	2,515	2,500
Vietnam	84	368	834	1,045	1,116	1,674
China from World	1,322	6,600	13,962	17,435	18,184	19,503
Japan from World	3,363	5,152	6,941	8,550	8,860	8,323
ASEAN from Japan	861	813	1,176	1,279	1,372	1,176
Brunei Darussalam	3	1	2	2	2	2
Cambodia	1	1	2	2	3	2
Indonesia	92	69	170	194	228	193
Lao PDR	0	0	1	1	2	1
Malaysia	212	166	207	214	202	179
Myanmar	2	1	3	6	14	12
Philippines	63	81	74	72	71	57
Singapore	263	192	245	262	236	204
Thailand	216	260	383	423	499	410
Vietnam	9	41	90	104	116	116
China from Japan	290	1,004	1,767	1,946	1,778	1,623
ASEAN from ASEAN	659	1,419	2,326	2,740	2,877	2,906
(% of total imports)	18%	24%	24%	23%	23%	22%
Brunei Darussalam	15	11	18	26	28	37
Cambodia	12	8	17	72	90	97
Indonesia	60	170	389	511	537	539
Lao PDR	3	10	26	34	45	46
Malaysia	135	283	446	522	549	549
Myanmar	10	18	43	55	63	82
Philippines	30	89	169	157	155	148
Singapore	277	521	746	782	798	779
Thailand	93	216	307	372	406	416
Vietnam	24	93	164	209	208	213
China from ASEAN	99	750	1,543	1,925	1,957	1,989
Japan from ASEAN	484	726	1,010	1,249	1,292	1,177

Source: Asian Development Bank (various years); International Monetary Fund (2014a, 2014c).



Source: World Trade Organization (2014).

Table: 4: Percentages of Non-Agricultural Tariff Lines and Imports with Low, Moderate, and High Tariff Rates

Country	MFN Applied Tariff Rates			Imports by Tariff Rate				
	Year	Low	Moderate	High	Year	Low	Moderate	High
Brunei Darussalam	2006	86	14	0	na	na	na	na
	2011	87	13	0	na	na	na	na
Cambodia	2006	6	78	17	2004	6	83	11
	2012	16	78	6	2011	24	72	5
Indonesia	2006	65	35	0	2005	80	18	2
	2013	68	32	1	2012	80	19	2
Lao PDR	2005	59	38	3	na	na	na	na
Malaysia	2006	64	28	8	2004	86	8	6
	2013	73	23	4	2012	85	12	4
Myanmar	2006	70	30	1	na	na	na	na
	2013	69	30	1	na	na	na	na
Philippines	2006	63	37	1	2005	87	12	2
	2013	62	38	1	2012	82	14	4
Singapore	2006	100	0	0	2005	100	0	0
	2013	100	0	0	2012	100	0	0
Thailand	2006	64	26	10	2005	73	23	4
	2013	66	22	12	2012	73	22	5
Vietnam	2006	53	15	32	na	na	na	na
	2013	58	38	4	2012	63	36	1
China	2006	27	71	2	2005	66	33	1
	2013	26	73	1	2012	68	32	0
Japan	2006	82	18	0	2005	88	11	0
	2013	82	18	0	2012	93	7	0

Note: Low tariffs rates are defined as rates of 5% or less; high rates are defined as rates above 25%; moderate rates are greater than 5% and less than or equal to 25%.

Source: World Trade Organizaion (various years).

Table 5: Sales of Japanese MNE Affiliates Operating in ASEAN's 6 largest economies and China (US\$100 millions and ratios in %, fiscal years beginning 1 April)

Host economy, industry	1995	2005	2010	2011	2012
ASEAN, 6 largest, all industries	1,547	2,774	3,914	4,380	5,408
ratio to imports from Japan, %	181%	343%	335%	345%	400%
Manufacturing	809	1,602	2,409	2,565	3,250
Trade or wholesale trade	597	1,001	1,099	1,350	1,554
Services	65	17	173	190	221
Indonesia, all industries	174	370	658	790	918
ratio to imports from Japan, %	188%	536%	388%	407%	403%
Manufacturing	126	281	513	597	652
Trade or wholesale trade	11	62	101	121	158
Services	2	4	1	4	3
Malaysia, all industries	236	312	404	413	404
ratio to imports from Japan, %	111%	187%	195%	193%	200%
Manufacturing	201	264	285	285	296
Trade or wholesale trade	25	26	44	46	51
Services	2	1	50	54	35
Philippines, all industries	42	136	195	224	264
ratio to imports from Japan, %	66%	168%	263%	313%	372%
Manufacturing	37	116	146	172	188
Trade or wholesale trade	1	11	7	7	8
Services	0	1	1	2	3
Singapore, all industries	692	1,021	1,005	1,345	1,507
ratio to imports from Japan, %	263%	530%	411%	513%	637%
Manufacturing	210	258	262	306	434
Trade or wholesale trade	406	693	655	949	973
Services	60	6	18	12	11
Thailand, all industries	403	882	1,513	1,446	2,098
ratio to imports from Japan, %	186%	339%	395%	342%	420%
Manufacturing	233	634	1,083	1,060	1,483
Trade or wholesale trade	154	208	282	221	355
Services	1	5	103	117	168
Vietnam, all industries	0.4	54	138	161	217
ratio to imports from Japan, %	4%	132%	153%	155%	187%
Manufacturing	0.1	48	120	145	197
Trade or wholesale trade	-	1	10	6	9
Services	-	0	0	1	1
China	103	2,109	3,957	4,360	3,477
ratio to imports from Japan, %	36%	210%	224%	224%	196%
Manufacturing	78	1,133	2,381	2,665	2,412
Trade or wholesale trade	17	877	1,385	1,445	835
Services	1	11	34	60	59

Notes: - = not available (too few firms to disclose); trade includes wholesale and retail trade for 1995, wholesale trade only for other years; ASEAN totals for trade and services in 1995 exclude very small sales (<0.22) by affiliates in Vietnam.

Sources: Japan, Ministry of Economy Trade and Industry (various years); Table 3.

Table 6: Purchases & sales of Japanese MNEs in the ASEAN-4 (Indonesia, Malaysia, Philippines, and Thailand) by Transaction Partner, Region, and Industry, 2012 (US\$100 millions and ratios in %, fiscal years beginning 1 April)

Purchases or sales, industry	From/to Japan		From/to local markets			From/to other markets
	Parent firms	Other firms	Japan firms	Local firms	Other firms	
Purchases, all industries	523.9	65.4	721.0	913.9	83.3	343.1
ratios to imports from Japan, %	52%	7%	72%	91%	8%	34%
Chemicals & non-metallic mineral pr.	19.3	5.4	13.4	48.2	1.3	41.3
Basic metals & metal products	39.5	6.0	18.3	46.4	2.0	16.9
General machinery	17.7	1.2	4.1	27.9	0.6	4.1
Electric & electronic machinery	58.9	17.2	68.2	47.0	15.0	83.1
Transport machinery	272.2	18.3	370.3	378.7	8.0	83.1
Other manufacturing	14.7	5.1	20.8	50.3	4.9	21.2
Construction	1.2	0.4	11.2	48.1	0.3	0.2
Wholesale trade	92.0	11.7	207.0	62.2	18.4	84.4
Services	3.4	0.0	2.3	174.2	2.3	0.4
Other non-manufacturing	5.0	0.3	5.4	30.9	30.7	8.5
Sales, all industries	390.3	42.3	1,132	1,053	151.2	915.2
Chemicals & non-metallic mineral pr.	17.9	3.2	58.2	77.5	1.7	62.5
Basic metals & metal products	15.7	13.2	91.7	24.3	5.9	27.9
General machinery	12.5	1.0	21.2	37.9	0.2	15.3
Electric & electronic machinery	147.4	13.3	89.6	44.3	15.9	136.0
Transport machinery	87.6	2.1	527.9	386.7	28.0	466.0
Other manufacturing	58.9	5.8	36.6	43.2	3.7	37.8
Construction	1.2	0.4	11.2	48.1	0.3	0.2
Wholesale trade	20.7	1.9	178.6	214.9	19.1	135.9
Services	14.5	0.3	35.5	145.5	11.1	3.0
Other non-manufacturing	13.9	1.1	81.2	30.6	65.3	30.4

Sources: Japan, Ministry of Economy Trade and Industry (various years); Table 3.

Table 7: Japanese MNE parents with headquarters in Kitakyushu and Shimonoseki, their equity, employees, and affiliates abroad by location in 2013

Location, parent firm	Parent industry, equity (US\$), and employees (number)			Manufacturing affiliates (number)		Non-manufacturing affiliates (number)	
	Industry	Equity	Employees	World	ASEAN	World	ASEAN
KITAKYUSHU	Manufacturing subtotal	904,897	>14,646	49	8	29	5
OHISHI SANGYO CO.,LTD.	Paper products	4,764	341	0	0	3	2
ZENRIN CO.,LTD.	Printing, publishing	67,031	2,022	0	0	2	0
Shinryo Corporation	Chemicals	5,111	-	1	0	1	0
HAMADA HEAVY INDUSTRIES LTD.	Ferrous metals	3,333	-	1	1	0	0
KROSAKI HARIMA CORPORATION	Non-metallic mineral products	56,604	1,192	13	0	5	0
TOTO LTD.	Non-metallic mineral products	363,719	6,982	15	4	10	1
EIM ELECTRIC CO.,LTD.	General machinery	889	-	0	0	1	0
YASKAWA Electric Corporation	Electric machinery	235,760	2,731	11	0	4	1
Mitsui High-tec,Inc.	Electric machinery	167,686	1,378	8	3	3	1
KITAKYUSHU	Non-manufacturing subtotal	49,356	>3,389	0	0	16	9
TAKADA CORPORATION	Construction	37,232	1,685	0	0	3	3
Daikou Co.,Ltd.	Wholesale trade	245	-	0	0	1	0
FUJI BOEKI CO.,LTD.	Wholesale trade	981	193	0	0	2	0
K.K.Fusho Art	Wholesale trade	0	-	0	0	1	0
Nitco Business Solutions Co.,Ltd.	Wholesale trade	204	-	0	0	3	2
TOYO CORPORATION	Wholesale trade	460	-	0	0	1	1
Ikeda Kogyo Co.,Ltd.	Shipping	1,022	1,511	0	0	3	3
Tsurumaru Shipping Co.,Ltd.	Shipping	2,045	-	0	0	1	0
WORLDINTEC CO., LTD.	Business services	7,166	-	0	0	1	0
SHIMONOSEKI	All industries, subtotal	115,120	-	1	1	1	0
Hayashikane Sangyo Co.,Ltd.	Food & beverages manufact.	34,911	-	1	1	0	0
HARAKOSAN CO.,LTD.	Real estate	80,209	-	0	0	1	0

Notes: Data refer to parents with affiliates in which they had a 20% or greater equity share in October 2013.

Source: Toyo Keizai (2014); International Monetary Fund (2014b).

Table 8: Number of establishments and employees and value of sales or revenue (US\$100 millions) by industry in Kitakyushu and Shimonoseki, 2012

Industry	Kitakyushu			Shimonoseki		
	Plants	Employ-ees	Sales	Plants	Employ-ees	Sales
All industries	34,767	360,558	-	10,219	92,288	-
Primary industries	43	469	0.26	56	783	0.82
Secondary industries	5,224	88,277	-	1,587	22,942	-
Mining	20	154	0.59	3	9	0.07
Construction	3,374	32,703	-	942	6,511	-
Manufacturing	1,819	53,984	221.00	634	16,103	58.58
Utilities	31	1,590	-	11	328	-
Tertiary industries (services)	29,500	271,812	-	8,576	68,563	-
Information & communication	318	6,164	-	55	565	-
Transport & post	1,254	26,019	-	281	6,911	-
Wholesale & retail trade	9,672	71,155	253.71	2,990	19,238	58.28
Financial & insurance	650	9,759	-	215	3,851	-
Real estate & rental	2,911	9,272	19.01	664	2,050	3.13
Research & technical services	1,325	9,149	11.63	319	1,637	3.05
Accommodation & restaurants	4,261	27,226	11.79	1,144	7,579	3.60
Lifestyle & recreation	3,164	14,375	20.57	946	3,376	4.02
Educational services	918	10,615	-	309	2,046	-
Medical services	2,780	53,526	41.70	743	13,399	9.57
Other services	2,247	34,552	-	910	7,911	-

Note: - = not available or not disclosed.

Sources: Japan, Statistics Bureau (2014), International Monetary Fund (2014b).

Table 9: Japan's Domestic Value Added in Exports and Gross Exports by Source Industry and Desitination (US\$100 millions)

Industry	World				ASEAN-6				China			
	Value Added		Gross Exports		Value Added		Gross Exports		Value Added		Gross Exports	
	1995	2009	1995	2009	1995	2009	1995	2009	1995	2009	1995	2009
JAPAN, ALL INDUSTRIES	4,377	5,266	4,698	6,180	631	620	676	730	223	1,058	241	1,255
ratio, value added/gross exports, %	93%	85%	-	-	93%	85%	-	-	92%	84%	-	-
Manufacturing	2,570	2,896	4,152	5,225	380	335	613	609	142	655	232	1,198
Chemicals & non-metallic mineral products	451	479	466	814	63	55	64	91	23	110	24	188
Basic metals & metal products	355	481	299	583	59	65	60	92	25	107	32	135
General machinery	301	334	606	666	46	38	93	76	20	84	43	172
Electric & electronic machinery	818	671	1,575	1,499	127	84	243	191	43	153	82	336
Transport machinery	423	608	994	1,341	50	53	118	116	7	107	17	235
Other manufacturing	220	323	211	322	34	40	35	44	24	94	34	132
Services	1,647	2,163	537	946	227	260	62	120	72	359	9	56
Trade, hotels & restaurants	393	631	179	310	58	77	28	41	14	94	0	2
Transport, storage, communication	371	687	260	513	47	88	27	71	14	100	5	35
Financial intermediation	208	264	39	35	27	30	2	2	10	48	2	1
Business services	595	492	52	80	84	55	5	5	29	101	2	19
Other services	81	90	6	7	11	10	0	1	4	17	0	0
Agriculture, mining, utilities, construction	159	206	10	9	24	25	1	1	9	43	1	1

Notes: gross exports are the sales value of exports; value added is an estimate of the domestic value added (sales less intermediate inputs) embodied in exports (see text for a detailed explanation).

Source: OECD-WTO (2013).

Appendix Table 1: Domestic Value Added Shares of Gross Exports by Exporting Industry and Export Market (percent)

Industry	World		Indonesia		Malaysia		Philippines		Singapore		Thailand		Vietnam		China	
	1995	2009	1995	2009	1995	2009	1995	2009	1995	2009	1995	2009	1995	2009	1995	2009
TOTAL	93	85	85	86	60	62	69	62	53	50	70	65	76	63	88	67
Agriculture, hunting, forestry and fishing	96	92	96	95	77	79	92	92	73	66	90	89	87	76	95	95
Mining and quarrying	96	88	95	96	71	74	82	87	44	..	91	89	90	85	92	72
Food products, beverages and tobacco	92	90	93	91	72	75	86	91	63	49	86	84	79	64	92	75
Textiles, textile products, leather and footwear	91	86	77	76	59	62	51	71	60	46	76	74	50	37	86	79
Wood, paper, paper products, printing and publi	94	91	89	85	77	78	69	80	70	59	69	68	75	58	88	65
Chemicals and non-metallic mineral products	90	79	79	85	60	66	57	64	43	44	68	67	59	48	87	59
Basic metals and fabricated metal products	89	81	80	84	50	51	64	61	62	49	68	63	48	36	88	65
Machinery and equipment, nec	95	89	60	61	45	44	56	65	66	44	66	56	54	45	86	63
Electrical and optical equipment	92	82	67	72	43	44	49	50	42	39	53	45	46	36	87	57
Transport equipment	95	86	79	83	53	53	50	66	75	56	62	55	53	43	88	67
Manufacturing nec; recycling	92	86	73	86	55	55	71	78	62	49	70	65	53	42	88	76
Electricity, gas and water supply	93	..	88	84	70	73	..	..	77	57	89	90	..	..	..	75
Construction	..	..	..	83	67	69	77	..	76	62	74	73	..	..	90	74
Wholesale and retail trade; Hotels and restauran	97	95	93	92	82	82	86	92	78	68	93	93	80	72	92	91
Transport and storage, post and telecommunicat	94	93	89	84	62	64	74	77	65	47	78	75	75	67	93	83
Financial intermediation	96	97	92	96	81	84	92	92	77	73	96	95	85	81	93	94
Business services	98	96	91	87	73	75	87	90	71	59	90	88	83	77	90	89
Other services	98	95	88	87	79	78	89	..	85	77	82	80	84	79	90	83

Notes: .. = gross exports = 0; gross exports are measured as sales value; value added are adjusted measures of sales less intermediate inputs (see text for explanation).

Source: OECD-WTO (2013).