

Chapter Title: Asian economic integration: The state of play

Chapter Author(s): Mari Pangestu and Shiro Armstrong

Book Title: Asian Economic Integration in an Era of Global Uncertainty

Book Editor(s): SHIRO ARMSTRONG, TOM WESTLAND

Published by: ANU Press. (2018)

Stable URL: <https://www.jstor.org/stable/j.ctt20krz01.9>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



This book is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/>.



JSTOR

ANU Press is collaborating with JSTOR to digitize, preserve and extend access to *Asian Economic Integration in an Era of Global Uncertainty*

2

Asian economic integration: The state of play

Mari Pangestu and Shiro Armstrong¹

Introduction

Economic integration in Asia has progressed over the last 30 years through the formation of greater trade and investment linkages, which have been driven by market-led integration, underpinned by international commitments. A strategy of economic development based on export orientation and integration into regional and global value chains (GVCs) has served the countries in the region well. For most of the period during which the Asian economies experienced rapid growth, they faced a global economy that was growing and open to trade and was, therefore, conducive to their growth. East Asia experienced higher economic growth and growth in trade and investment than did other regions, even when China's growth is not taken into account. Poverty rates also declined as a result of this growth, with more people in Asia moving out of poverty than anywhere else in the world. Trade has been the engine of growth for the region, with regional economic integration acting as a key driver. Expanding global trade outpaced and buoyed global economic growth, which Asia both benefited from and contributed to—until the global financial crisis (GFC) in 2007–08.

¹ We are grateful to Matthew Jacob and Son Chu for their excellent research assistance. Any and all errors remaining are our own.

The slow recovery of the advanced industrial economies of Europe and the US since the GFC has created a challenging global situation, characterised by continued slow economic and trade growth. In addition, anti-globalisation, anti-immigration and strong nationalistic sentiments are on the rise, as seen in Brexit and the populist, anti-trade and anti-immigration outcomes of the US elections. Such dissatisfaction has arisen from the perception that globalisation and trade agreements have led to the loss of jobs, stagnating incomes and increased inequality.

East Asia's supply chains and production fragmentation deepened trade and economic integration in Asia and were an engine of global trade and economic growth, particularly prior to the GFC (see Constantinescu, Aaditya & Ruta, 2015). The global slowdown in trade growth has been attributed, in part, to a slowing in this mode of Asian economic integration since the GFC, compared with the three decades preceding it. For instance, after joining the World Trade Organization (WTO) in 2001, China became the largest goods trader in the world, and the largest trading partner for almost all countries in Asia and beyond. However, its trade grew only 3 per cent in 2014 and, in 2015, it fell 7.6 per cent.² It appears that China's rapid growth in goods trade could not be sustained because it is shifting away from an export-led growth model to a consumption and services-led model.

A further cause of the slowdown in global trade growth is that, even before the GFC, there was little progress and, seemingly, little international leadership and commitment on any major trade agreements. Multilateral trade negotiations under the WTO have stalled and there has not been any movement on the Doha Round since 2008, with the exception of the Trade Facilitation Agreement in 2013. The main game for trade liberalisation has since shifted to regional and bilateral agreements. The US-led plurilateral agreement in the Asia-Pacific, the Trans-Pacific Partnership (TPP), has been on hold since President Donald Trump withdrew the US from the agreement,³ and the US-EU Transatlantic Trade and Investment Partnership (TTIP) appears to be stalled. However, in East Asia, a number of regional agreements have progressed and continue

2 Not all countries had reported trade statistics for 2015 at the time of writing and the fall in Chinese trade may reflect this fact.

3 President Trump withdrew the US from the TPP on 23 January 2017. Since then, the remaining 11 countries have made efforts to continue their processes of ratification and to decide on the next steps. The remaining members are proceeding with an agreement that freezes some chapters until the US rejoins the agreement.

to be negotiated. Implementation of the Association of Southeast Asian Nations (ASEAN) Economic Community (AEC) and the five ASEAN+1 free trade agreements (FTAs) with China, Korea, Japan, Australia–New Zealand and India, are occurring. There is also the ongoing negotiation of the East Asian Regional Comprehensive Economic Partnership (RCEP) agreement, which is intended to consolidate the five ASEAN+1 FTAs. Bilateral agreements have proliferated since the turn of the twenty-first century and have become the major focus of trade liberalisation and international commerce.

Asia continues to grow faster than the rest of the world; therefore, it has a peculiar responsibility to protect the global system. Maintaining a robust global trading system is important to keep markets open. Much of South-East and South Asia are yet to enjoy the middle or high incomes achieved by some of their Asian neighbours. A great deal is at stake for North-East Asia as well, as the framework of national reforms in East Asia have been driven by international commitments. Deepening reforms is a much harder task in the face of a global trading system in retreat. Asia's major economies face difficult structural reform programs, including Japan's third arrow of Abenomics, China's supply-side reforms and India's 'Make in India' reforms. Having an external environment that facilitates these and other reforms in Asia and globally is important.

Given the current challenging global context for trade liberalisation, trade agreements and external economic expansion that the world faces, the important question to ask is: how will economic integration in Asia proceed and what form is it likely to take in the near future? To begin providing an answer to this question, this chapter examines the characteristics and current state of play of regional economic integration in Asia.

In the next section, we provide a summary of the trends in economic integration in the region in the last 30 years. The two following sections examine explanations for the pattern of regional economic integration observed in Asia. The first explanation relates to what is often termed market-driven integration (or the trade–investment nexus), which occurs without regional trade agreements (RTAs), as border barriers come down in response to unilateral reforms, and as production networks and GVCs evolve. The second explanation examines the effect of the RTAs in Asia on regional economic integration and explores the nature and scope of intra-regional and extra-regional trade patterns. In the fourth section, we provide a summary of the state of play regarding the mega-RTAs. In the

final section, we confront the issue of the day; given the ‘new normal’ context, in which trade (and investment) have stalled as an engine of growth, what is the future of regional economic integration?

Trends in regional economic integration in Asia

Economic integration is simply about the liberalisation and facilitation of the flow of trade in goods, services, investment and movement of people across borders. Borders involve a discontinuity in relative prices as a result of trade barriers, regulatory differences, natural and institutional impediments to trade, and differences in relative endowments. Therefore, trade within and across borders differ; however, both allow for further division of labour and specialisation in production. Economic integration is the process of removing border barriers and behind-the-border impediments to trade—whether they are regulatory or involve information asymmetries. This helps to allocate resources to their most productive uses, given the set of technologies available.

Regional economic integration means the free flow of trade in goods and services, investment, capital and financial flows, as well as the movement of people, within a region. The EU is probably close to achieving this state of integration. In Asia, regional economic integration has mainly focused on trade in goods and services and, to some extent, investment. Regarding trade in goods, most intra-ASEAN trade, or trade between ASEAN and its six FTA partners (China, Korea, Japan, Australia, New Zealand and India) already involves tariffs that are very close to zero. However, non-tariff measures (NTMs) and restrictions on services and the movement of professional people remain. Freedom of movement of people for tourism purposes already exists for the ASEAN countries, but does not yet exist between ASEAN countries and the ASEAN+1 partners.

As Figure 2.1 indicates, although the level of intra-regional trade is highest in Europe, intra-Asian trade is higher than trade within the North American Free Trade Agreement (NAFTA). Moreover, the growth rate of intra-Asian trade is much higher than for any other RTA, having grown from 45 to 55 per cent from 1990 to 2014. Intra-regional trade in North America through NAFTA peaked in 2002 at 45 per cent, declined to 35 per cent, and has remained flat since then. The highest level of intra-

regional trade within Asia is in East Asia (the 10 ASEAN countries plus South Korea, Japan and China) and also in South-East Asia (i.e. the ASEAN countries). In addition, there has been a high share of intra-regional investment in Asia, with the five largest investors being Japan, China, South Korea, Singapore and Hong Kong.

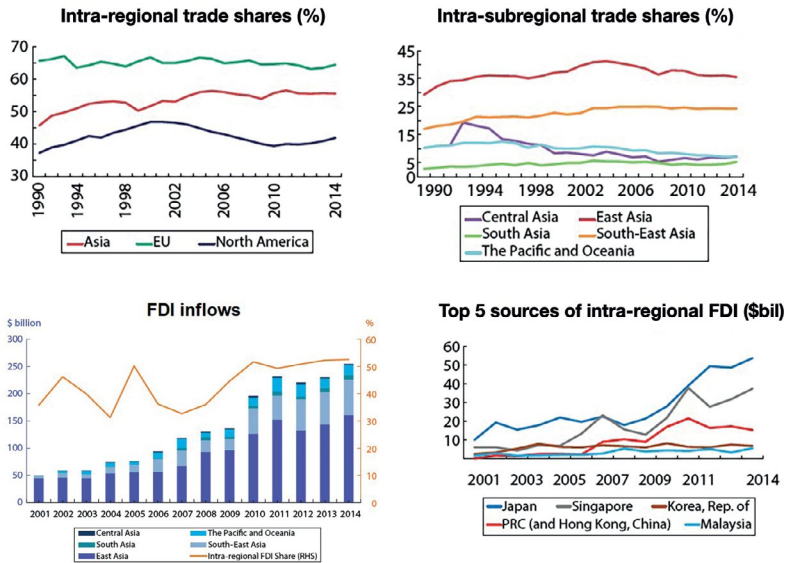


Figure 2.1: High growth in intra-regional trade and investment in Asia, especially East Asia

Source: Asian Development Bank (ADB, 2015).

In this chapter, we mainly focus on regional economic integration in the context of trade and investment. Other chapters in this volume examine financial integration issues. For the last three decades, there have been various catalysts and modes for the reduction of barriers to trade and investment in Asia that have led to greater intra- and extra-regional trade and investment. We examine the two main drivers of regional economic integration in East Asia. First, we consider the regional trade and investment integration that occurred without any RTAs—including through unilateral liberalisation, reforms and the evolution of production networks and GVCs. Second, we review and evaluate the effects of the regional integration agreements that are in place.

Market-driven integration: Reforms and production networks

In Asia, the largest episode of opening up to trade and investment occurred unilaterally from the 1980s through to the 2000s. The story is a familiar one in East Asia. In the 1980s and 1990s, there was a growing consensus among policymakers involved in integrating Asia that trade and openness were the key drivers of development. Consequently, the removal of border barriers and deeper integration were achieved without formal or binding external agreements. This process is often termed market-driven integration, as it did not involve RTAs. Competitive unilateral liberalisation in the 1980s and 1990s was followed by reforms and further liberalisation, influenced by economic crises, regional institutions such as the Asia–Pacific Economic Cooperation forum (APEC) and ASEAN, and global commitments through the General Agreement on Tariffs and Trade (GATT) and WTO processes.

South Korea had already industrialised by the mid-1980s, having followed its successful ‘Korea Inc.’ export orientation and *chaebol*-led⁴ economic development model. Outward Japanese investments had departed in waves to North-East and then South-East Asia. The trade and investment nexus led to intra-regional trade in parts and components, mainly in electronics and automotive sectors. North-East Asian companies began to move offshore to South-East Asia in search of lower labour and land costs. This pattern of development—in which the more advanced Asian countries, starting with Japan, moved production to lower cost locations—is often referred to as development in response to ‘push factors’ or ‘flying geese’ development. Japan’s outward investment started in the 1970s when Japanese labour became more expensive; it accelerated in the mid-1980s, following the Plaza Accord, when the yen rapidly appreciated. South Korea and Taiwan were next to follow this export-led development pattern. Japanese production was initially relocated to South-East Asia following the Plaza Accord. Non-Asian companies also established production in Asia as part of this trend. In the mid-1990s, the rise of China attracted significant investment; it became the hub of the production network after its accession to the WTO in 2001.

4 *Chaebol* are large industrial conglomerates in South Korea that are run and controlled by an owner or family.

In addition to these push factors, a pull factor—that is, the process of liberalisation and the reforms undertaken in South-East Asia—contributed to development from the mid-1980s. The impetus for liberalisation and reform in the 1980s varied between countries. In the case of Indonesia, the decline of oil prices in the mid-1980s led to a period of devaluation, bold reforms and deregulation to diversify exports away from oil. The changes involved customs reforms, reductions in tariffs, establishment of bonded zones and free trade zones, and duty drawback schemes, to allow exporters to access internationally priced inputs. To attract investment and foster increased trade, all Asian countries undertook deregulation and reforms based on the competitive liberalisation model. The Asian countries grew on the basis of trade, investment and a conducive global economy. Indonesia, in particular, succeeded in diversifying its exports away from oil and gas to labour and resource-intensive exports in line with its comparative advantage. As a result, the share of oil and gas exports declined from 80 per cent in 1983 to 40 per cent in 1989–90. The main non-oil and gas exports were in manufacturing, such as textiles, garments, footwear and electronics.

As Indonesia grew more confident in its export-oriented strategy, support grew for the proposed ASEAN Free Trade Area (AFTA), which envisaged the reduction of intra-ASEAN tariffs to zero in 15 years. AFTA was agreed to in 1991 and implemented on 1 January 1992. In line with the program to reduce tariffs under their AFTA commitments, many ASEAN countries aligned their most-favoured nation (MFN) tariff rates at the same time. For instance, Indonesia announced major trade reforms in 1993 to rationalise its tariffs.

In the 1990s, the impetus for reforms and trade liberalisation came from APEC and the establishment of the WTO in 1995. In the early years of APEC, countries typically pushed for concerted unilateral liberalisation when it was their turn to host APEC meetings. When Indonesia hosted APEC in 1994, and launched the APEC Bogor Goals of free trade and investment, it also announced a major deregulation of foreign investment. Other APEC host economies followed suit, including the Philippines in 1995 and China in 2001.

The creation of the WTO in 1995 led to a program of tariff reduction in accordance with the commitments made by member countries, as well as the elimination of local content regulations under the Agreement on Trade-Related Investment Measures and discipline in the use of export

subsidies. The WTO led to number of national regulations and laws being passed on customs and intellectual property under the Agreement on Trade-Related Aspects of Intellectual Property Rights, and trade remedies. A number of the East Asian countries that were not initially part of the GATT—including China, Vietnam and Cambodia—went through a process of comprehensive trade and tariff reform as a result of their accession to the WTO.

China's unilateral liberalisation on the path to accession to the GATT/WTO is a clear example of this comprehensive opening up process. Figure 2.2 shows that China's average tariff rate fell from 55 per cent in 1982 to around 15 per cent in 2001. China announced a major liberalisation package at the 1995 APEC summit in Osaka. Its 15-year march to WTO accession involved major unilateral reforms and a substantial opening up of its economy.

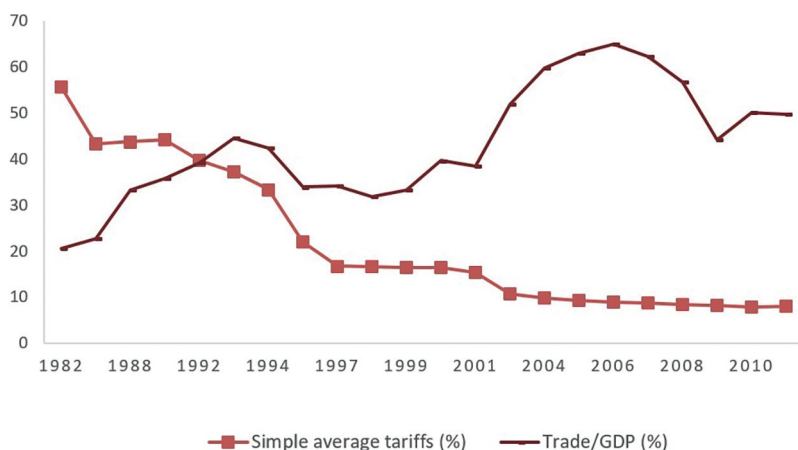


Figure 2.2: China's total trade-to-GDP ratio and average tariff rate, 1982–2011

Sources: UN Comtrade (comtrade.un.org/); World Development Indicators (data.worldbank.org/data-catalog/world-development-indicators); Ministry of Commerce, People's Republic of China (english.mofcom.gov.cn/article/statistic/).

The APEC Bogor Goals, which aimed for free, open trade and investment for developed economies by 2015 and for developing economies by 2020, provided a framework for countries to undertake unilateral liberalisation in concert, thus making it easier to sell domestically and compounding the benefits of openness.

In addition to the Bogor Goals, APEC members initiated the Information Technology Agreement (ITA) in 1997, which limited tariffs on information communications technologies—then a burgeoning, but yet to be established, industry—before they became a major factor in trade and before protectionist interests could be marshalled. Alongside reductions in transportation costs arising from technological advancements, the ITA provided a significant boost to trade in information and communication technology and the proliferation of Asian supply chains.

The Asian financial crisis of 1997–98 led to three Asian countries⁵ requiring International Monetary Fund (IMF) rescue packages, with accompanying measures of liberalisation and reforms. This provided the impetus for these countries, and others competing with them, to undertake serious reforms on trade, investment and other institutional and governance issues.

By the early 2000s, tariff rates for manufacturing in East Asia were low and production networks in manufacturing had proliferated. However, tariffs and other barriers to services and agricultural trade, which are more politically sensitive, largely remained in place. Reform of services and investment barriers, which reach deeper behind the border, is complex.

Production networks and the evolution of GVCs explain a large part of the growth in intra–East Asia trade during the 1990s to mid-2000s. As noted above, the earlier development phase, during the 1980s to mid-1990s, was characterised by the more traditional production network model, involving the flying geese development pattern, under which investments were relocated from North-East to South-East Asia as costs increased. The regional production centre developed to export to third markets, notably the markets of the advanced countries. However, in the 1990s, the rise of China and technological changes were accompanied by greater fragmentation of production; intra-regional trade became dominated by intermediate goods and components with China as the hub.

5 The three countries were Thailand, Indonesia and South Korea.

Different catalysts and modes of achieving deeper integration

There has been a proliferation of bilateral and regional FTAs in the Asian region in the last three decades. This section examines empirical analyses of these agreements in Asia, with a focus on whether they have led to trade creation or diversion, their utilisation and to what degree they have influenced intra- and extra-regional trade. Although ecommerce, trade in services and other cross-border flows are important, the focus here is on trade in goods because goods trade is the easiest to measure; it can assist in gaining an understanding of the nature of Asian economic integration more broadly, and how it might differ from patterns in the rest of the world.

Trade creation and trade diversion

Bilateral preferential trade agreements, otherwise known as free trade agreements or regional trade agreements, remove tariffs and other trade barriers between members to the agreement, but keep the trade and economic exchange barriers in place for non-members. If preferential tariff rates are utilised, they can create trade among members and divert trade away from non-members, which means that some of the trade expansion that occurs can be at the expense of non-members. For partner countries, preferential tariff rates may make the products of less efficient, member country producers cheaper compared with those of more efficient producers that are outside the arrangement and not granted preferred tariff treatment. If utilisation of preferential tariffs is low in a trade agreement—and trade occurs under the MFN rate available to all trading partners—then the trade agreement has little effect on the merchandise trade between partner countries. However, if the utilisation rate of the FTA preferences is high, there is scope for trade to be created among the members, as well as for trade to be diverted away from non-members.

Today, with trade liberalisation through the WTO stalled, and the global trading system seriously weakened and under threat by the policies of the US and Europe, bilateral agreements constitute much of the policy action in trade liberalisation. Such agreements bear the responsibility for securing current levels of openness. The net effects of FTAs on trade, investment and economic integration are not obvious. Continuing to

negotiate and sign FTAs without a broader strategy that is consistent with the international trading system will complicate trade and may introduce new distortions and trade diversion.

On balance, whether an FTA is trade creating or trade diverting is an empirical question. It is often said that agreements that are net trade creating are stepping stones to broader multilateral trade liberalisation, as they contribute more trade to the global system than they divert. FTAs that divert trade are welfare reducing and represent stumbling blocks towards multilateral trade liberalisation.

The empirical literature on the effects of RTAs has rapidly expanded as trade agreements have proliferated since the 2000s. Given the preferential and reciprocal treatment for members underlying the formation of the FTAs, a common expectation is that there will be trade creation within the trading blocs for member economies and the potential for trade diversion between FTA members and non-members. Most ex-post empirical studies are based on the gravity model—the workhorse of bilateral trade flow analysis. Empirical findings on the effects of FTAs on trade have been diverse, with the magnitude depending on a range of factors such as the types of FTAs, what countries are under study, the time periods, estimation methods and model specifications.

Although there are many bilateral FTAs, the most widely assessed FTAs are regional agreements involving more than two trade partners, including the AFTA in Asia; NAFTA in North America; the European Economic Area and the EU in Europe; and, in Latin America, the Latin American Integration Association, Mercosur and the Andean Community (see Cipollina & Salvatici, 2010).

Large and significant trade creation effects from FTAs have been found by a majority of empirical studies. By contrast, trade-diversion effects, which are not always estimated in such models, have been found to be small in magnitude and, in some cases, insignificant. This tendency was identified by Freund and Ornelas (2010) and validated by Cipollina and Salvatici (2010) in their large data analysis of empirical works on the effects of FTAs on trade flows. Cipollina and Salvatici (2010) estimated a robust and positive effect of FTAs that is associated with increasing trade by around 40 per cent. The dominance of trade creation effects can be observed from reviewing selected studies, as shown in Table A2.1 (see Appendix A). These studies show that most intra-bloc trade effects

of FTAs and RTAs are significant and large in magnitude, whereas extra-bloc trade effects are small or insignificant, despite some evidence of trade diversion.

Studies have found that ASEAN has extra-bloc creation effects, as indicated by the estimates shown in Table A2.1 (see Appendix A). Urata and Okabe (2007) concluded that the EU, NAFTA and Mercosur have created trade-diversion effects at product levels, but that ASEAN, which appears to be a more open FTA, has not.

There are two factors that could explain the substantial and significant trade creation effects of FTAs. The first is the natural trading partner hypothesis, as elaborated by Freund and Ornelas (2010), that suggests positive welfare effects result from FTAs due to highly complementary trade structures. Baier and Bergstrand's (2004) findings on the likelihood of an RTA being formed lend support to this view, with proximity and relative remoteness of the trading country pair being important determinants. The second factor is the endogeneity of FTAs. Baier and Bergstrand (2007) suggested that the positive effect of RTAs could be quintupled after controlling for the endogeneity of RTAs, which are caused by country-pair and country-specific effects that can be time varying or time invariant. Controlling for all of these effects may result in statistically insignificant effects of RTAs or a reduction in the magnitude of the estimates of trade creation effects, as shown in Magee (2008). Magee (2008) also demonstrated the importance of devising an appropriate dynamic specification for FTA dummies.

There are two different views on the small and insignificant results found for the trade-diversion effects of FTAs. One explanation, suggested by Freund and Ornelas (2010), is that strategic cost–benefit calculations by governments signing FTAs lead to lower external tariffs for extra-bloc trading partners. That explanation does not appear to fit in the case of the Australia–US FTA (AUSFTA), for which Armstrong (2015) found large trade-diversion effects and a lack of trade creation. This suggests that poorly designed and implemented FTAs, completed under time pressure and primarily for political reasons, do not further broader trade liberalisation. Another explanation is methodological in nature. Cheong, Kwak and Tang (2015) suggested that the small trade-diversion effects estimated by many empirical studies could result from a failure to utilise the appropriate model specification or variables to capture the effects of FTAs.

Urata and Okabe (2007) and Okabe (2015) did not find significant trade creation effects for the ASEAN+1 FTAs (ASEAN plus China, Japan or Korea), perhaps because the FTAs had not been in force for long enough to have generated sufficient relevant data, given that the results of gravity model studies usually estimate the cumulative effects of FTAs.

Utilisation rates of FTAs

Previous research based on survey data has found low utilisation rates, below 30 per cent, for FTAs in Asia (see Table 2.1). By way of comparison, 90 per cent of preference-eligible imports into Canada, the EU and the US take advantage of these preferences (Keck & Lendle, 2012). This suggests that the ‘noodle bowl’ of Asian FTAs has not been effective in driving trade growth.

Table 2.1: Summary of previous survey results on FTA utilisation rates in Asia

Paper	Utilisation rate	Main reason for underutilisation
Baldwin (2008)	Percentage of intra-ASEAN trade that benefited from AFTA—3%	<ul style="list-style-type: none"> • Low MFN tariffs (less than 2%) on high-volume goods, including computers and electrical goods
Kawai & Wignaraja (2010)	Asian Development Bank survey of 841 firms in 6 East Asian economies—28%	<ul style="list-style-type: none"> • Lack of information (35%) • Low margins of preference (17%) • Costs associated with rules of origin laws (15%)
Takahashi & Urata (2010)	Based on a survey of 1,688 Japanese firms by the Research Institute of Economy, Trade and Industry—22.9%	<ul style="list-style-type: none"> • Limited trade volumes with FTA partners • Small margins of preference
Ing, Urata & Fukunaga (2016)	Based on a survey of 630 manufacturing firms across 9 ASEAN economies for utilisation of AFTA by the Economic Research Institute for ASEAN and East Asia (ERIA)—15%	<ul style="list-style-type: none"> • Low margins of preference • Limited information
Hayakawa, Hiratsuka, Shiino & Sukegawa (2009)	Based on the 22nd survey by the Japan External Trade and Research Organization of 1,852 Japanese affiliates operating in 13 Asian countries—20%	<ul style="list-style-type: none"> • Incentive schemes have already eliminated tariffs (48.9%) • Importers are exempted from tariffs (37.6%) • No FTAs with main export destinations (22.9%)

Paper	Utilisation rate	Main reason for underutilisation
Wignaraja, Olfindo, Pupphavesa, Panpiemras & Ongkittikul (2010)	Survey of 221 Thai exporters in textiles, electronics and automotive sectors—24.9%	<ul style="list-style-type: none"> Rules of origin laws add to business costs (26%)
Chirathivat (2007)	Thailand Department of International Trade, Ministry of Commerce certificates of origin data—26.7%	<ul style="list-style-type: none"> Complex rules of origin laws

Source: Author's work.

In the surveys reviewed in Table 2.1, the main reason cited for the poor uptake of FTAs was low or no significant margins of preference. This can arise when the MFN tariff rate is zero, or not much higher than the FTA rate. In 2013, the average intra-ASEAN tariff rate was slightly above 1 per cent (ASEAN, 2014). To demonstrate this effect, Jongwanich and Kohpaiboon (2008) examined the utilisation of AFTA using Thai export data in 2005. They found that, for the 10 commodity lines (identified by two-digit Harmonized Commodity Description and Coding Systems, or HS) with margins of preference greater than 10 per cent, the average utilisation rate was 52.4 per cent. Other survey results have found higher rates of utilisation in the machinery and automotive industries than in electronics and textiles. This accords with the lower margins of preference in the latter sectors (ASEAN, 2015).

Surveys have also been used to identify the main costs and benefits of FTAs for businesses. Based on the Asian Development Bank (ADB) survey of 841 East Asian firms (Kawai & Wignaraja, 2010), the most cited benefits to firms were wider export markets and preferential tariffs, which encouraged imports of intermediate goods. The most frequently cited costs were increased competition from imported products and the documentation required to take advantage of existing FTAs.

Intra- and extra-regional trade patterns: Open regionalism

The EU has had intra-regional trade at 60 per cent and more, accounting for up to two thirds of total trade within the region since the 2000s (see Figure 2.3). In comparison, the intra-regional trade share of ASEAN has been at around 25 per cent over the previous decade, slowly rising since the 1990s. Intra-regional trade for North America and the RCEP grouping is roughly the same, both at 40 per cent. This indicates that

Europe's extra-regional trade share is 40 per cent and that three quarters of ASEAN's trade is with the rest of the world. South Asia is one of the least integrated regions globally, with 5 per cent intra-regional trade.

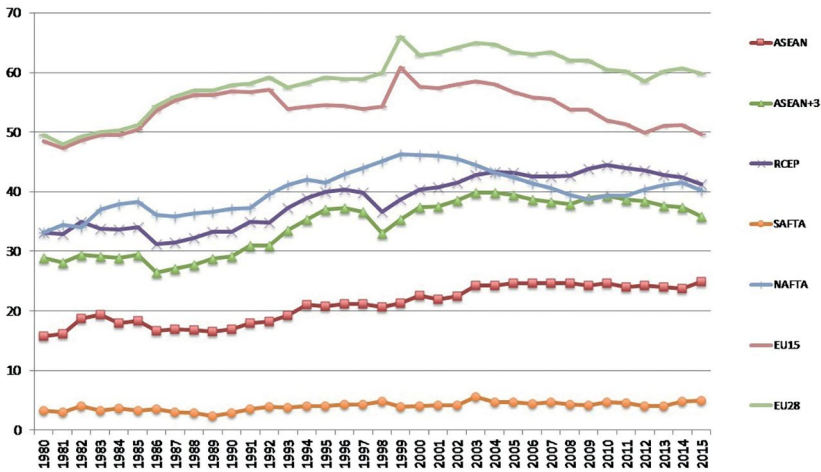


Figure 2.3: Intra-regional merchandise trade shares for regional groupings, 1980–2015

Source: UN Comtrade (comtrade.un.org/) and authors' calculations.

Is Europe's high intra-regional trade occurring at the expense of trade with the rest of the world? In other words, is Europe inward looking? Are European countries trading more with each other than we would expect, given the determinants of their trade, or the proximity and size of European economies? How much do we expect Asian economies to be trading among Asian partners and the rest of the world, given their location, proximity and scale?

A gravity model can estimate the amount of trade expected between any two countries given the key underlying determinants of trade, which are scale and distance. Comparisons of actual and predicted trade, provided in Tables 2.2 and 2.3, indicate whether trade flows more easily than 'average', controlling for the determinants. The model specification and results are explained in detail in Appendix C.

As Tables 2.2 and 2.3 indicate, intra-regional trade outperformed extra-regional trade for all country groups. ASEAN appears to have had the highest level of intra-regional trade relative to the level predicted by the model (Table 2.2), whereas NAFTA and the RCEP grouping achieved slightly more than ASEAN in potential trade (Table 2.3). Intra-EU trade

(whether calculated with 15 or 28 members) did not perform as well as North America or East Asia, once trade determinants were controlled for. This result contrasts with the pattern observed when using the simple measure of intra-regional trade shares, for which Europe had the highest level. Interestingly, ASEAN and RCEP achieved better extra-regional trade performance, which is in line with their high achievement in intra-regional trade performance. This trend is consistent with the ratio of actual to predicted trade for ASEAN. The ratio for ASEAN's intra-regional trade declined significantly between 2005 and 2015, whereas its extra-regional trade shrank much more slowly.

Table 2.2: The extent of regional trade integration: Ratios of actual trade/predicted trade values

Country group	Trade direction	1980s	1990s	2000s	2010s
ASEAN	Intra-regional	154.5	184.3	189.2	125.7
	Extra-regional	19.7	21.0	21.5	18.0
RCEP	Intra-regional	26.6	25.4	31.5	29.3
	Extra-regional	11.3	10.0	11.6	11.9
NAFTA	Intra-regional	52.2	68.1	58.3	55.3
	Extra-regional	7.1	6.3	4.8	5.1
EU28	Intra-regional	36.6	32.1	33.2	36.3
	Extra-regional	9.2	7.3	7.3	8.1
World	All	0	0	0	0

Note: This measure of trade integration is based on the conventional estimation approach using the fixed-effects (FE) estimator. The FE estimator controls for fixed effects that are specific to trading pairs, which include natural determinants such as the distance between the countries, whether they speak a common language, have a shared border or are land locked. Predicted trade values are derived using $y = xb$. With this formula, fixed effects are included in the residuals, so it is likely that trade gaps (the residuals between actual and predicted trade) are large. We use this measure of the trade gap to make the results more easily comparable with measures of the trade gap based on the stochastic frontier approach (SFA).

Source: Authors' estimation.

Table 2.3: The extent of trade integration: Achievement of actual trade compared with trade potential (simple average performance level)

Country group	Trade direction	1980s	1990s	2000s	2010s
ASEAN	Intra-regional	0.434	0.499	0.517	0.495
	Extra-regional	0.389	0.426	0.436	0.431
RCEP	Intra-regional	0.431	0.476	0.504	0.505
	Extra-regional	0.366	0.389	0.414	0.417

Country group	Trade direction	1980s	1990s	2000s	2010s
NAFTA	Intra-regional	0.455	0.496	0.516	0.533
	Extra-regional	0.303	0.301	0.293	0.313
EU	Intra-regional	0.340	0.346	0.376	0.400
	Extra-regional	0.343	0.331	0.327	0.342
World	All	0.347	0.343	0.336	0.332

Note: This measure of trade integration is based on the SFA, following Battese and Coelli (1995). The SFA is applied to the gravity model to identify the maximum trade volume (potential trade) of trading pairs and derive a measure of trade performance in terms of a ratio between actual and potential trade values.

Source: Author's estimation.

The European, North American and East Asian RTAs have promoted trade and economic integration within their respective regions. Figure 2.3 shows that European intra-regional trade shares are higher than those of Asia or North America, but Europe does not perform as well when distance, scale and other determinants are taken into account (see Tables 2.2 and 2.3). Relative to Europe and the rest of the world, and given geography and other characteristics, Asia and North America trade more within their regions. Importantly, Asia trades more with the rest of the world—that is, extra-regionally—given its characteristics, than Europe or North America. This is the case both in terms of what is expected (Table 2.2) and achievement of potential (Table 2.3). To date, Asian FTAs and arrangements regarding trade liberalisation among members have been more open to trading partners outside Asia. This is to be expected, given the open regionalism mode of integration in Asia and the inability of regional countries to conclude binding formal arrangements that favour regional partners. Asia's reform and opening up was largely undertaken in a global context and underpinned by the global trading system.

The regional architecture of mega-RTAs

There are a number of mega-regional agreements in the Asian region: the AEC, RCEP and the TPP, as well as the planned Free Trade Area of the Asia-Pacific (FTAAP). RCEP and the TPP are comparable in terms of their member countries' share of world gross domestic product (GDP) at 30 per cent and 37 per cent, respectively. They are also comparable in terms of shares of world trade at 29 per cent and 24 per cent, respectively. However, the RCEP exceeds the TPP in terms of purchasing power

(see Figure 2.4) and it comprises 48 per cent of the world's population, compared with 11 per cent for the TPP. Further, the nature of these trade agreements are very different in terms of comprehensiveness and the approach taken in negotiations.

Table 2.4: Key economic trends of regional agreements and cooperation in the Asia-Pacific

		GDP current price (US\$bn)	Population (millions)	Export of goods (US\$bn)	Export of services (US\$bn)	Trade value (US\$bn)
		2015 (%)	2015 (%)	2015 (%)	2015 (%)	2015 (%)
1	Malaysia	269.3	31.2	199.9	34.8	234.7
2	Singapore	292.7	5.5	350.5	139.6	490.1
3	Brunei Darussalam	12.9	0.4	6.4	0.6	6.9
4	Vietnam	191.5	91.7	162.1	11.2	173.3
5	Philippines	292.5	102.2	58.6	28.2	86.8
6	Thailand	395.3	68.8	214.4	60.6	275.0
7	Indonesia	859.0	255.5	150.3	21.9	172.2
8	Cambodia	17.8	15.5	12.3	3.9	16.3
9	Lao PDR	12.6	7.0	2.8	0.8	3.6
10	Myanmar	62.9	51.8	11.1	-	11.1
	ASEAN (rows 1–10)	2433.3 (3.3)	629.7 (8.6)	1,168.3 (7.1)	301.7 (6.3)	1,470.0 (6.9)
11	China	11,181.6	1,373.5	2,274.9	286.5	2,561.5
12	South Korea	1,377.9	50.6	526.8	97.9	624.6
13	Japan	4,124.2	127.0	624.9	162.2	787.1
14	Australia	1,225.3	23.9	188.4	49.1	237.6
15	New Zealand	172.3	4.6	34.4	14.3	48.7
16	India	2,073.0	1,292.7	267.1	155.8	423.0
	RCEP (ASEAN+ rows 11–16)	22,587.5 (30.2)	3,502.1 (47.7)	5,084.9 (30.7)	1,067.5 (22.1)	6,152.5 (28.8)
17	US	18,036.7	321.6	1,504.9	710.2	2,215.1
18	Canada	1,550.5	35.8	408.5	77.5	486.0
19	Mexico	1,143.8	121.0	380.8	22.6	403.4
20	Chile	240.2	18.0	63.4	9.7	73.1
21	Peru	192.1	31.1	34.2	6.2	40.4
	TPP (rows 1–4, 13–15 and 17–21)	27,478.5 (36.8)	812.0 (11.0)	3,958.3 (23.9)	1,238.1 (25.7)	5,196.4 (24.3)

		GDP current price (US\$bn)	Population (millions)	Export of goods (US\$bn)	Export of services (US\$bn)	Trade value (US\$bn)
		2015 (%)	2015 (%)	2015 (%)	2015 (%)	2015 (%)
22	Hong Kong SAR	309.2	7.3	510.6	104.2	614.8
23	Taiwan Province of China	523.0	23.5	285.4	56.8	342.2
24	Russia	1,326.0	143.5	340.3	51.8	392.1
25	Papua New Guinea	21.2	7.7	8.7	0.1	8.8
	FTAAP (rows 1–7, 11–15, 17–21 and 21–25)	43,764.1 (58.5)	2844.5 (38.7)	8,328.3 (50.3)	1,946.1 (40.3)	10,274.4 (48.1)
	WORLD	74,753.1	7,349.5	16,551.6	4,826.0	21,377.6

Source: Author's calculations, using data from IMF's International Financial Statistics and UNCTAD (unctadstat.unctad.org/EN/).

It is notable that the FTAAP grouping, which comprises the 21 APEC economies, includes close to 60 per cent of world GDP, 48 per cent of world trade and 39 per cent of the world population. The FTAAP has not been concluded, but remains in the study stage.

With global trade liberalisation stalled and unable to tackle behind-the-border barriers until the WTO is reformed—and with bilateral agreements proliferating, often with large sectoral exceptions and a lack of cohesion—regional agreements such as the AEC, RCEP and the TPP are potentially the most effective way forward in deepening integration. At a time when global trade growth is slowing and advanced economies seem to be more inward looking, it is important for regional agreements to be catalysts for broader reform and liberalisation, and—as has been the case with ASEAN (see Tables 2.2 and 2.3)—to support trade beyond the regional grouping over time.

The mega-regional agreements in Asia, the TPP and RCEP, and also the TTIP agreement between the US and Europe, present new opportunities to make progress with larger groups of countries. They have the potential to increase, and change the patterns of, trade and investment. They also raise the issue of how they might best relate to the global trading system.

The aim of the TPP was to be a high-quality, twenty-first century economic agreement that defined new rules for commerce relevant to modern business. The TPP negotiations concluded in 2015; its 12 members are Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand,

Peru, Singapore, the US and Vietnam. All TPP members are APEC members, including all of the North and Latin American members of APEC. Indonesia, China, South Korea and some other ASEAN states are not members of the TPP.

However, it is unlikely that the US-led TPP will be implemented any time soon, either with its current membership or in its current form. Without the US ratifying the TPP, it cannot come into force. A version of the TPP without the US is unlikely to eventuate, given the centrality of the US to the cost–benefit calculations and commitments of many of the members. A US withdrawal from the TPP has major adverse consequences beyond US economic engagement in Asia, as it signals a retreat from US leadership in global trade. Even worse, were the Trump administration to impose massive tariffs on China and Mexico, and across the board tariffs on the rest of the world, the world would face a potential trade war.

RCEP comprises the 10 ASEAN member states plus Australia, China, India, Japan, South Korea and New Zealand. It was initiated by Indonesia in 2011, based on the five existing ASEAN+1 FTAs, and inspired by the formation of the TPP with ASEAN at its core. At best, RCEP will expand and reinforce the AEC. It aims to bring binding targets to Asian economic cooperation, but will also build an ongoing cooperation and reform agenda. The scope of RCEP includes trade in goods, services, investment, ecommerce and other issues, including environmental, labour and competition policies. As RCEP is a consolidation of the five existing ASEAN+1 FTAs, these are the sectors that were in the different FTAs. The main problem with current RCEP negotiations is that there are no FTAs between the major ‘+6’ non-ASEAN countries; in particular, there are no FTAs between China and India or between Japan and China.

RCEP does not include any TPP or APEC members from the other side of the Pacific. The TPP also has membership gaps in Asia (see Figure 2.4). Open accession to both mega-regional FTAs, and the fate of the TPP, will be important for the expansion of membership but also for increasing the benefits of both agreements. The proposed FTAAP could encompass the best features of RCEP and the TPP and assist in keeping markets in Asia open to each other and the rest of the world.

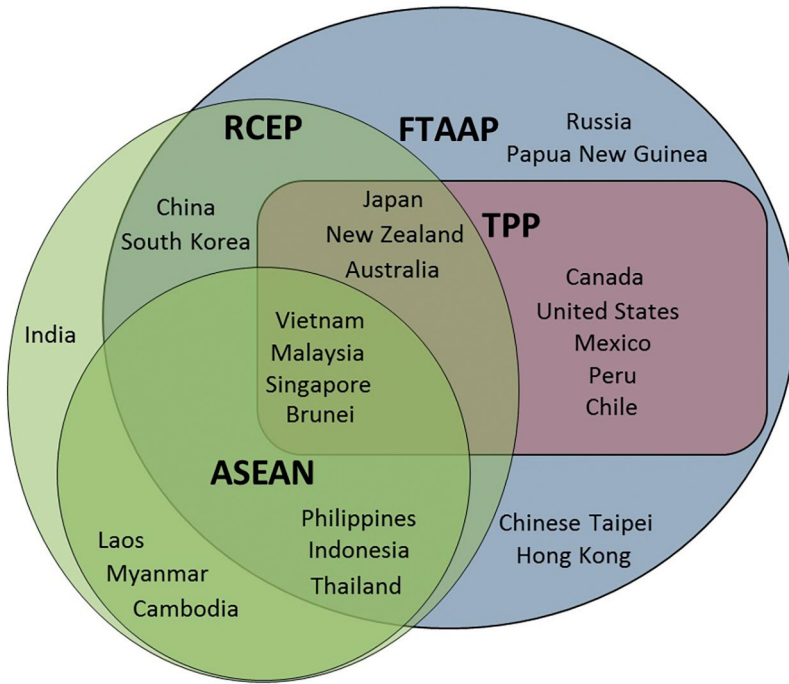


Figure 2.4: ASEAN, RCEP, TPP and possible FTAAP membership

Source: East Asian Bureau of Economic Research and China Center for International Economic Exchange (2016).

The RCEP countries already constitute a larger part of the global economy than do the TPP countries. In addition, RCEP includes some of the fastest growing countries, led by India and China, but also some of the least-developed countries in the region, including Cambodia, Laos and Myanmar, which are not members of APEC or the TPP. The GDP of the RCEP group—based on conservative projections—could be close to double that of the TPP in 15 years (Figure 2.5).

Many RCEP members are in the midst of economic transitions that will be made easier by a more open and dynamic external environment. The presence of large neighbours that are committed to serious reforms and to opening up their economies will not only benefit these individual countries but also make it easier for others in the region to implement domestic reforms. Many RCEP members, including India, are coming from behind on economic and trade reform and have economies that are relatively more protected from international competition. As a result,

the gains from opening up will be large. Given RCEP's openness to less-developed countries, and the special, differential treatment afforded to them, there are significant potential gains from assisting those countries to make and, over time, achieve ambitious commitments on trade openness and growth.

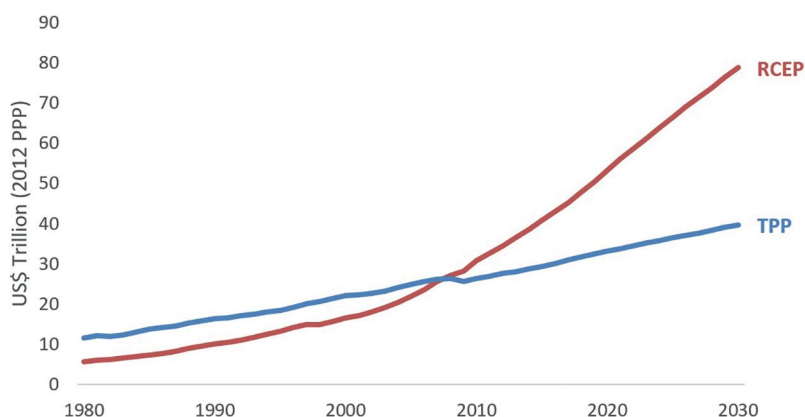


Figure 2.5: GDP projections of RCEP and TPP groups, 1980–2030 at purchasing power parity

Note: Based on IMF projections to 2020; subsequent projections based on an estimate of potential labour productivity for countries currently in transition, given institutional quality, as measured by the World Economic Forum's Global Competitiveness Index.

Source: Hubbard and Sharma (2016).

The future of Asian regional economic integration in the 'new normal'

Although it recovered from the sharp decline in trade during the GFC, growth in world trade has been slower than in the pre-crisis period. World trade grew by less than 3 per cent in both 2012 and 2013, compared with the pre-crisis average of 7.1 per cent for 1987–2007. In 2014 and 2015, it grew at less than 3 per cent and growth for 2016 was only 2.3 per cent.

Most Asian and Asia-Pacific countries experienced contractions in trade from 2015, and some experienced them earlier; contractions began in 2012 for Japan and Indonesia. Chinese merchandise trade growth has slowed dramatically. During the 1990s and 2000s, it grew, on average, 13.7 per cent per year and 20.8 per cent per year, respectively, even

accounting for the 13.9 per cent contraction during the GFC. In the decade after accession to the WTO, Chinese merchandise trade grew even faster, at 22.6 per cent per year. However, average trade growth has since slowed to 5.7 per cent up to the end of 2014 and it experienced a contraction in 2015. With the exceptions of Cambodia, Laos, Myanmar and Vietnam, all Asian countries experienced a contraction in trade in 2015 (see Appendix B, Table B2.1).

Figure 2.6 shows the decline in Asian trade growth. As trade growth is linked to GDP growth, it has more than halved since the GFC. In the heydays of the 1990s, with bold reforms providing a boost to trade and investment, the prominence of export-oriented development strategies, production networks and a world economy generally conducive to growth, growth in trade was three times the growth in GDP (or the income elasticity of trade was around three). In the late 1990s and into the 2000s, prior to the crisis, the relationship was closer to 2 to 1. Post-GFC, it is now roughly 1 to 1, though it has been estimated to be less than 1 (0.9) in 2016 (WTO, 2016).

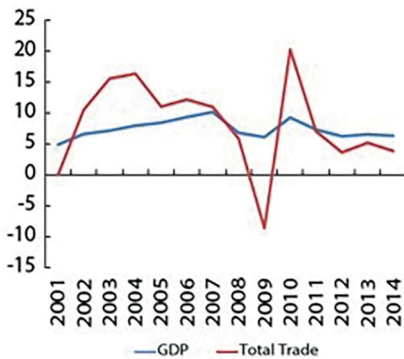


Figure 2.6: Asian trade trends

Source: ADB (2015).

The fall in trade growth is even sharper in Asia because of the China factor. The interdependence between China and Asian regional trade means that China's sharp growth slowdown—growth fell from 9–10 per cent a year prior to the crisis and, in the stimulus years after the crisis, to 6.5–7 per cent a year—has had a large effect on the other Asian trading partners (see Figure 2.7). The Asian neighbours are part of the GVC that has China at its centre; they provide the essential inputs to China's growth, including natural resources (oil, coal and rubber products) and food

(palm oil). The rebalancing of China away from exports and investment towards services and domestic consumption has influenced its trading partners. The income–trade elasticity before and after the GFC fell from 2.69 to 1.31 (ADB, 2015).

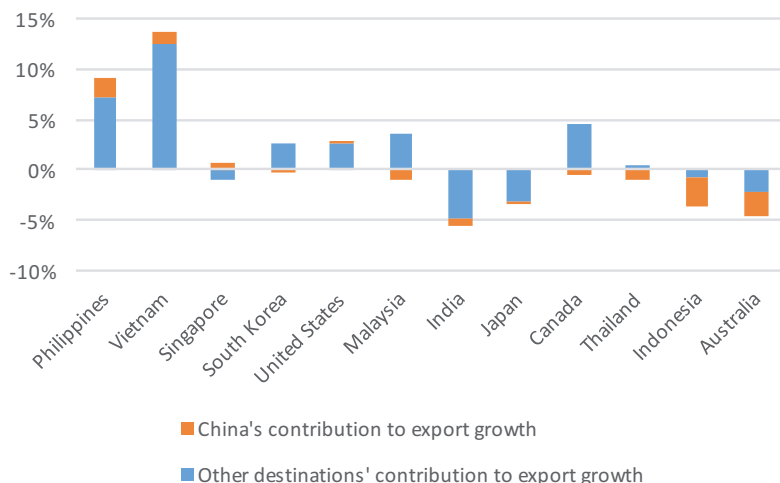


Figure 2.7: China's slowdown: Contribution of China versus other export markets to total 2014 export growth

Source: UN Comtrade (comtrade.un.org) and authors' calculations.

Of course, this places the basic premise of Asian growth during the last three decades (prior to the GFC)—that trade and investment serve as an engine of growth and development, which leads to a reduction in poverty—under question. Therefore, we ask: what are the causes for this structural slowdown?

The recent levelling off in global trade growth may be a particular trend that is reaching its limits (Krugman, 2014). Trade dependence, or trade as a share of GDP and its contribution to growth, may have reached its limits in some countries. After all, some advanced countries have had relatively steady trade-to-GDP ratios for long periods, indicating that a steady state may exist (see Figure 2.8). Perhaps the contribution of merchandise trade to growth has reached a limit in China and the drivers are now services and consumption. It is notable that the global trade in services has not slowed as much as the trade in merchandise.

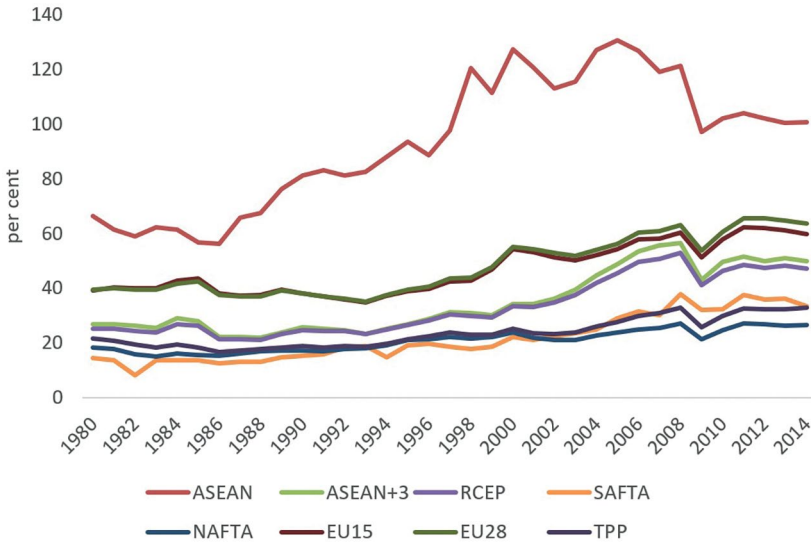


Figure 2.8: Merchandise trade as a percentage of GDP for economic groupings, 1980–2014

Source: UN Comtrade (comtrade.un.org/) and authors' calculations.

According to the most recent analysis by the IMF (2016, p. 65), about three quarters of the structural slowdown in trade is the result of slower growth, especially slower investment. The stagnation of global economic growth and low investment levels have caused a decline in the import of capital and intermediate goods; low growth also means low consumption needs. As already mentioned, the rebalancing of China away from exports and investment towards consumption and services has also had an effect on the Asian region, given China's size and role as the centre of GVCs. Prior to the GFC, growth in trade was twice the growth in GDP; after the crisis, the link between GDP growth and trade growth is closer to one.

The other factors explaining the structural slowdown in trade are shown in Figure 2.9. The first reason is the maturation of the GVC and increased import substitution in China. China is sourcing more goods domestically than before, as more and more intermediate goods and components are being produced within the country.

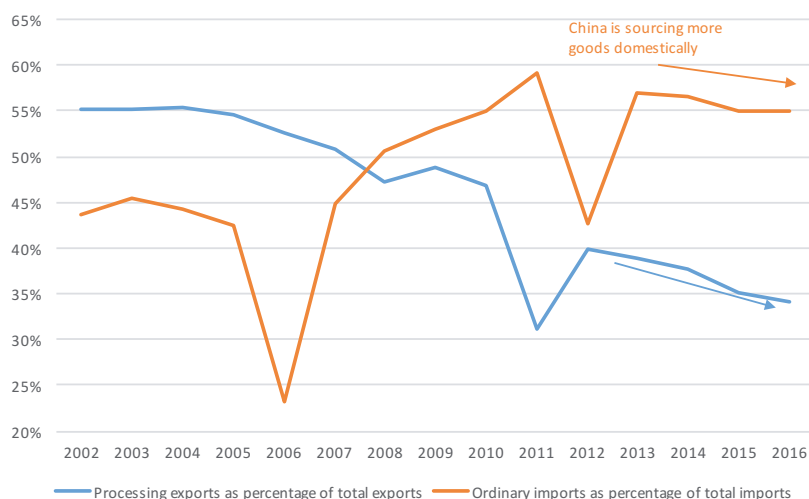


Figure 2.9: China's move to innovation and services

Source: Compiled from data from China Statistical Yearbook and China Customs Information Center.

The second reason for the structural slowdown in trade is the increased protectionism experienced by Asian exporters (see Figure 2.10). Even though there has not been an increase in tariffs, there has been an escalation of trade 'remedy actions' imposed on Asian exports, mainly those from China, and an increase in the use of NTMs. In regard to trade remedy actions, these are being imposed by non-Asian and Asian countries, against each other. The main categories of products affected are basic chemicals and metals, and fabricated metal products, which reflects excess capacity and the falling prices of metal. The main exporting countries that have faced these trade remedy actions are China, South Korea and Taiwan, with actions taken by non-Asian countries including the EU, Brazil, South Africa and Turkey. Intra-regional actions have been taken by India, Thailand, Indonesia and Australia against these exporters, especially for basic metals and fabricated metal products. Affected countries' exports of those products have fallen as a result.

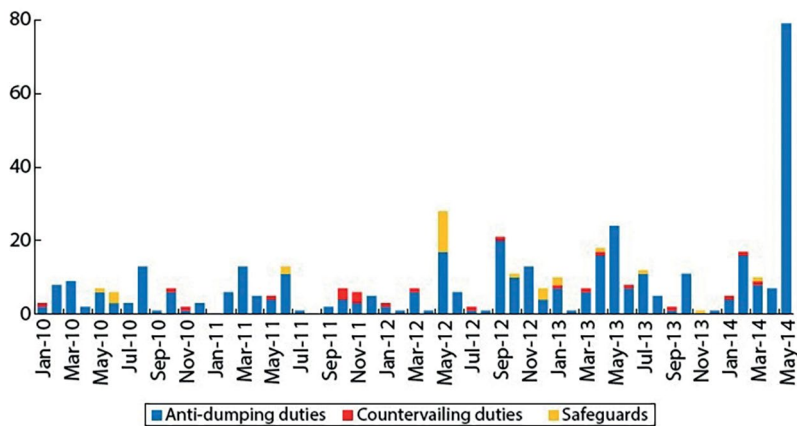


Figure 2.10: Increased protection: Number of trade remedy actions affecting Asia (by type)
Source: ADB calculations using data from the Global Trade Alert (www.globaltradealert.org/).

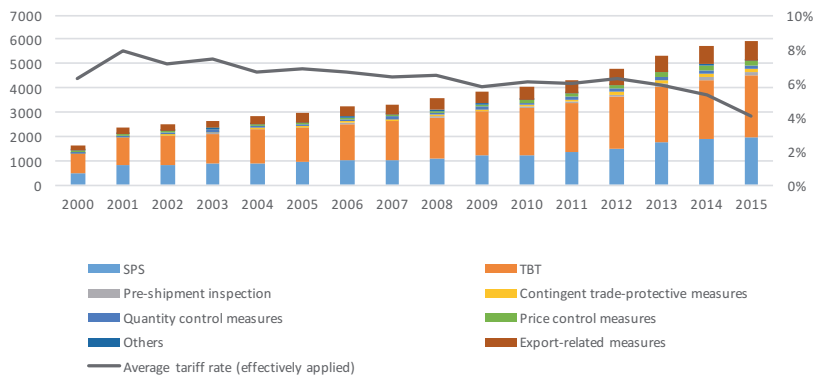


Figure 2.11: Trends in the number of NTMs versus tariffs
Note: SPS = sanity and phytosanitary; TBT = technical barriers to trade.
Source: Compiled from data from the New Database of ASEAN Non-Tariff Measures (asean.i-tip.org) and UNCTAD Stat (unctadstat.unctad.org).

Table 2.5: NTMs by type

Code	NTMs by type	Number of NTMs	%
A	Sanitary and phytosanitary (SPS) measures	125	19.7
B	Technical barriers to trade (TBT)	321	50.6
C	Pre-shipment inspection and other formalities	53	8.4
D	Contingent trade protective measures	44	6.9
E	Non-automatic licensing, quotas, prohibitions and quantity control measures, other than SPS or TBT	8	1.3
F	Price control measures, including additional taxes and charges	5	0.8
P	Export-related measures	74	11.7
G–O	Other measures	4	0.6
	Total coded NTMs	634	100

Note: The NTM classification is based on that used by UNCTAD.

Source: UNCTAD-ERIA (2015).

Although the average applied tariff rates of the ASEAN countries declined from 8.92 per cent in 2000 to 4.52 per cent in 2015, the number of NTMs increased from 1,634 to 5,975 measures over the same period (Ing, Urata & Fukunaga, 2016).

The third reason explaining the structural slowdown in trade is the lack of any bold trade reforms, such as have occurred in the past. Changes in transportation, logistics and telecommunication technology, which have substantially boosted trade growth in the past, have had more limited effects on trade in recent years.

Despite the need for structural reforms to boost trade, investment and growth, in the absence of fiscal stimulus and given the limits of monetary policy, very few countries—not just Asia but also the advanced countries—have been able to enact bold structural reform programs. China's implementation of its structural reform program has been slow, especially with regard to the state-owned sector. The situation is worsened by the strong, worldwide anti-globalisation sentiment that has led to the election of politicians running anti-globalisation, inward-looking platforms. The Brexit vote and result of the US election are evidence of this trend.

In the North Atlantic advanced countries, the source of dissatisfaction (and politics of anger and fear) lies in the stagnating incomes of the lower middle class, the loss of jobs in the rust belt, where some industries have been declining, as well as in the older, more rural and less educated segments of the population (Autor, Dorn & Hanson, 2015). In the Asian context, there is dissatisfaction regarding the distribution of the benefits of globalisation and the rising inequality between and within countries. This issue has not affected Asia uniformly as some parts of Asia lack geographical connectivity, with areas that are not connected to the main centres of economic activity missing out on the benefits of the economic boom. Other issues are the lack of participation by micro-, small- and medium-sized enterprises in the modern economy, the lack of capacity and skills in human resources and the lack of quality soft infrastructure such as institutions and other domestic settings. These issues will need to be addressed to progress the national reform agenda and push for RTAs.

Other than the slowdown in world trade, the 'new normal' includes the advent of the 'fourth industrial revolution', which has disrupted conventional trade and investment business models, and will continue to do so. One dimension of this revolution is the digital technology and ecommerce platforms that bypass normal trade channels and are growing in importance and reach. Access to the internet allows for further outsourcing of many services without labour movement, as has already occurred with call centres, software development and back-office support in India, the Philippines and China. This trend is now increasingly moving into the area of higher value-added services including animation, research and design, and development. The growth in, and declining costs of, automation, robotics, artificial intelligence, and digital and 3D printing embedded in machinery used to produce and process have meant an increase in reshoring. The replacement of unskilled labour with machines and more skilled labour is part of this trend, which presents challenges in terms of retraining and skill development.

What next for regional economic integration in Asia?

Regional economic integration in Asia in the last three decades, up to the GFC, flourished under a conducive global economy, leadership from developed countries on the openness agenda and progress being made on

various international commitments. This provided a conducive climate for Asian countries to pursue unilateral reform agendas as well as regional agreements.

The new normal is quite different now. There is structural slowdown in world trade, an absence of leadership from the US or Europe in the push for openness and international commitments are stalling. Further, the reforms that need to be undertaken now are the more difficult 'second generation' and behind-the-border reforms, as well as institutional reforms.

The difficulty of undertaking further bold unilateral reforms in developed and developing countries is clear. This is true for Asia, which faces several difficulties and challenges. The reforms that need to be implemented are more difficult than the first generation of reforms, which were largely related to tariffs and border issues. Now, the barriers that must be addressed are NTMs, services and investment dispute settlement, behind-the-border measures, such as domestic regulation and intellectual property rights, and ensuring a level playing field vis-à-vis government, through procurement and state-owned enterprises.

There are large, poor and young populations in Asia, concentrated in India and Indonesia, but also elsewhere in South-East and South Asia, which means the growth potential will be high for decades to come. In addition, China faces the challenge of becoming a high-income country. Much is at stake; whether or not Asia is ready, it can no longer rely on developed countries to show leadership in furthering international trade, investment and commerce. Integrating South and South-East Asia into GVCs would provide a large stimulus to regional and global trade. Infrastructure investment, trade and investment liberalisation, and economic cooperation are all important.

Despite the slowdown in the world economy, Asia is still growing at a higher rate than any other region. There is an opportunity and responsibility for Asia to take the leadership role in continuing necessary reforms and progressing RTAs that contribute to, and strengthen, the global economic system.

Asia needs to rise to the current challenges by championing unilateral reforms and supporting processes in the multilateral arena, such as through the WTO and the implementation of the Trade Facilitation Agreement. If the era of major, single-undertaking, multilateral rounds is past, then

plurilaterals and other initiatives that promote international commerce and the global system must be promoted from the bottom up. Asia needs to be a proactive and positive force in that arena. Most importantly, Asia can conclude ambitious regional agreements within Asia.⁶ For RCEP, the issue is leadership and whether there can be breakthroughs with bilateral issues between the ‘+6’ partners. Getting bogged down in bilateral differences risks missing the larger opportunities and failing to recognise what is at stake.

There is the risk of RCEP appearing to be too China-led. The experience in East Asia has been one of shared leadership, ASEAN centrality and benign leadership by major powers. China and Japan can play an important role in capacity building, whether in physical or soft infrastructure, to ensure connectivity, education and skills development, or to ensure that the inclusive agenda is addressed—for example, by empowering small and medium-sized enterprises. China’s Belt and Road Initiative (BRI), the Asian Infrastructure Investment Bank (AIIB), the Japanese Official Development Assistance (ODA) program and other such programs and initiatives can be positive forces in this process. Particular attention must be paid to equitable growth, so that concerns with the benefits of globalisation do not derail the process of integration in Asia. The design of the AEC, as well as of RCEP, provides potential for this balance to be achieved in the way that the agreement is conceptualised, but there needs to be a serious effort to realise it because there is still a lack of thought and political leadership in ASEAN.

The analysis in this chapter has shown that Asia’s integration has been qualitatively different from that in North America or Europe. Agreements and arrangements in Asia need to continue to be open to those outside the region. If Asia, the largest and most dynamic part of the global economy, becomes inward looking at this point in time when the US and Europe are retreating from leadership in keeping the global system open, it could be more damaging to both Asian and broader global interests than at any time in recent history. Asia needs to practise open regionalism in RCEP and other initiatives to buttress the global economic system.

6 The smaller Pacific Alliance in Latin America is another option to promote international commerce.

The combination of stagnating investments in advanced economies and development needs in Asia means that there is an urgency in mobilising infrastructure investment. The AIIB, China's BRI and Japan's ODA should be welcomed, and they should also be extended. Countries looking to boost investment in infrastructure need to undertake investment reform and work towards a more conducive investment environment. There is a major role for policy cooperation between countries and regionally, as well as for capacity building to improve policies, better coordinate cross-border investments and enhance regional connectivity.

In addition to facilitating regional investment, regional economic cooperation—whether capacity building or experience sharing—will be central to meeting the major challenges brought about by technological disruption, dealing with distributional issues, the movement of people and tackling new cross-border issues, such as energy transformation and climate change. The disruptions or shocks from these and other sources, including policies, will have both negative and positive effects across borders. Regional solutions will assist in managing cross-border or regional challenges, and economic cooperation will assist countries at different levels of development to better manage these challenges domestically.

With the main game of economic integration now in services and investment behind the border, consistent standards between countries, regulatory reform and regulatory coherence matter much more than in the past. These issues need to be dealt with collectively, not negotiated bilaterally.

The lessons of the advanced economies need to be learned and economic integration in Asia needs to proceed in combination with measures to address inequities and the sense of imbalance. National policies need to be complemented with development policies that are separate from trade and investment policies, and targeted at those who will not benefit or lose from the reforms. In the RTAs, it will be important to integrate capacity building, participation of small- and medium-sized enterprises and development programs that include the building of infrastructure. These issues must be seen as prerequisites to proceed with the regional trade agreement agenda. This is not an easy task, given constraints on government budgets and the difficulty of devising well-targeted and effective programs. However, it is the number one issue that needs to be considered and addressed for further progress on reforms at the national

or regional levels, which will ensure continued and sustained opening up for intra-regional trade and investment and enable deeper forms of integration to take place.

For sustainable economic integration, the lessons of success and failure globally need to be learned. International agreements that affect sovereignty cannot be imposed from the outside; the domestic reform battle has to be won. Coalitions for reform have to be built and the argument articulated and communicated to the public.

In the absence of leadership on global trade from the US and EU, must leadership be sought somewhere else—in Asia, perhaps? All the Asian economies have to undertake further structural reforms to address issues of productivity and innovation and to grow. Without the previous anchor in the global trading system and economy, can the impetus and leadership come from Asia? The logical platforms right now are the AEC and RCEP, particularly given that the TPP has stalled. RCEP is already relatively comprehensive, excluding the difficult behind-the-border issues that the TPP aimed to address. However, as indicated by the recent experiences in the US and Europe with externally imposed, behind-the-border reforms, or attempts at reform without the necessary domestic constituencies being established, it would have been difficult for many countries to comply because these reforms strike at sovereignty issues. Asia's regional cooperation, which is less intrusive and based instead on building consensus, appears to have avoided the difficulties of Europe since the GFC. Nevertheless, the lessons from the US and Europe should not be ignored by the rest of the world.

The stakes are too high for a lack of support for continued openness. A reversal towards protectionism or looking inward in Asia is unthinkable—it would lead to continued stagnation of the global economy and economic hardship, and the issues of balanced growth and inclusiveness would remain unaddressed.

Entering this period of uncertainty in the global economy, the region needs to consider carefully how to develop champions and leadership in Asia. Asia cannot just rely on China—leadership is too heavy a burden for a developing country to carry alone. Instead, Asia should embrace a shared leadership, with ASEAN prepared to push ahead on unilateral reforms, as well as on the RTAs that are already under negotiation. This is the challenge for the next phase of economic integration in East Asia.

References

- Armstrong, S. (2015). The economic impact of the Australia–US free trade agreement. *Australian Journal of International Affairs*, 69(5), 513–37. [dx.doi.org/10.1080/10357718.2015.1048777](https://doi.org/10.1080/10357718.2015.1048777)
- Asian Development Bank (ADB). (2015). *Asian economic integration report 2015: How can special economic zones catalyze economic development*. Manila, Philippines: Asian Development Bank.
- Association of Southeast Asian Nations (ASEAN). (2014). *ASEAN community in figures: Special edition 2014*. Singapore: ASEAN Secretariat. Retrieved from: www.asean.org/storage/images/ASEAN_RTK_2014/ACIF_Special_Edition_2014.pdf
- Association of Southeast Asian Nations (ASEAN). (2015). *ASEAN integration report 2015*. Singapore: ASEAN Secretariat. Retrieved from: asean.org/asean-integration-report-2015-4/
- Autor, D. H., Dorn, D. & Hanson, G. H. (2015, May). Untangling trade and technology: Evidence from local labor markets. *The Economic Journal*, 125, 621–46. [dx.doi.org/10.1111/ecoj.12245](https://doi.org/10.1111/ecoj.12245)
- Baier, S. L. & Bergstrand, J. H. (2004). Economic determinants of free trade agreements. *Journal of International Economics*, 64(1), 29–63. [doi.org/10.1016/S0022-1996\(03\)00079-5](https://doi.org/10.1016/S0022-1996(03)00079-5)
- Baier, S. L. & Bergstrand, J. H. (2007). Do free trade agreements actually increase members' international trade? *Journal of International Economics*, 71(1), 72–95. doi.org/10.1016/j.jinteco.2006.02.005
- Baldwin, R. (2008). Managing the noodle bowl: The fragility of East Asian regionalism. *The Singapore Economic Review*, 53(3), 449–78. [dx.doi.org/10.1142/S0217590808003063](https://doi.org/10.1142/S0217590808003063)
- Battese, G. E. & Coelli, T. J. (1995). A model for technical inefficiency effects in a stochastic frontier production function for panel data. *Empirical Economics*, 20, 325–32. doi.org/10.1007/BF01205442
- Carrère, C. (2006). Revisiting the effects of regional trade agreements on trade flows with proper specification of the gravity model. *European Economic Review*, 50(2), 223–47. doi.org/10.1016/j.euroecorev.2004.06.001

- Cheong, J., Kwak, D. W. & Tang, K. K. (2015). It is much bigger than what we thought: New estimate of trade diversion. *The World Economy*, 38(11), 1795–808. dx.doi.org/10.1111/twec.12297
- Chirathivat, S. (2007). Thailand's strategy toward FTAs in the new context of East Asian economic integration. *Chulalongkorn Journal of Economics*, 19(2), 185–214. Retrieved from: www.econ.chula.ac.th/public/publication/journal/2007/cje190204.pdf
- Cipollina, M. & Salvatici, L. (2010). Reciprocal trade agreements in gravity models: A meta-analysis. *Review of International Economics*, 18(1), 63–80. dx.doi.org/10.1111/j.1467-9396.2009.00877.x
- Constantinescu, C., Aaditya, M. & Ruta, M. (2015). The global trade slowdown: Cyclical or structural? *IMF Working Paper No. 15/6*. Washington, DC: International Monetary Fund. Retrieved from: www.imf.org/external/pubs/ft/wp/2015/wp1506.pdf
- Dai, M., Yotov, Y. V. & Zylkin, T. (2014). On the trade-diversion effects of free trade agreements. *Economics Letters*, 122(2), 321–25. doi.org/10.1016/j.econlet.2013.12.024
- East Asian Bureau of Economic Research and China Center for International Economic Exchanges. (2016). *Partnership for Change: Australia–China Joint Economic Report*. dx.doi.org/10.22459/PC.08.2016
- Egger, P., Larch, M., Staub, K. E. & Winkelmann, R. (2011). The trade effects of endogenous preferential trade agreements, *American Economic Journal: Economic Policy*, 3(3), 113–43. dx.doi.org/10.1257/pol.3.3.113
- ERIA-UNCTAD. (2016). *Non-Tariff Measures in ASEAN*. Retrieved from: unctad.org/en/PublicationsLibrary/ERIA-UNCTAD_Non-Tariff_Measures_in_ASEAN_en.pdf
- Freund, C. L. & Ornelas, E. (2010). Regional trade agreements. *World Bank Policy Research Working Paper Series No. WPS5314*. Retrieved from: documents.worldbank.org/curated/en/367221468337914543/pdf/WPS5314.pdf

- Hayakawa, K., Hiratsuka, D., Shiino, K. & Sukegawa, S. (2009). Who uses free trade agreements? *ERIA Discussion Paper Series no. ERIA-DP-2009-22*. Retrieved from: www.eria.org/ERIA-DP-2009-22.pdf
- Hubbard, P. & Sharma, D. (2016). Understanding and applying long-term GDP projections. *EABER Working Paper, 119*. Retrieved from: www.eaber.org/node/25601
- Ing, L., Urata, S. & Fukunaga, Y. (2016). How do exports and imports affect the use of free trade agreements? Firm-level survey evidence from Southeast Asia. *ERIA Discussion Paper, ERIA-DP-2016-01*. Retrieved from: www.eria.org/ERIA-DP-2016-01.pdf
- International Monetary Fund (IMF). (2016, October). Subdued demand: Symptoms and remedies. In International Monetary Fund, *World economic outlook 2016*. Washington, DC: International Monetary Fund. Retrieved from: www.imf.org/external/pubs/ft/weo/2016/02/
- Jongwanich, J. & Kohpaiboon, A. (2008). Export performance, foreign ownership, and trade policy regime: Evidence from Thai manufacturing. *ADB Economics Working Paper Series No. 140*. Retrieved from: www.adb.org/sites/default/files/publication/28379/economics-wp140.pdf
- Kawai M. & Wignaraja, G. (2010). Asian FTAs: Trends, prospects, and challenges. *ADB Economics Working Paper Series No. 226*. Retrieved from: www.un.org/esa/ffd/wp-content/uploads/2010/11/20101115_ADB_WPs.pdf
- Keck, A. & Lendle, A. (2012). New evidence on preference utilization. *World Trade Organization Staff Working Paper, ESRD-2012-12*. Retrieved from: www.wto.org/english/res_e/reser_e/ersd201212_e.pdf
- Krugman, P. (2014, 3 November). Flattening flattens. *New York Times*. Retrieved from: krugman.blogs.nytimes.com/2014/11/03/flattening-flattens/
- Magee, C. S. P. (2008). New measures of trade creation and trade diversion. *Journal of International Economics, 75*(2), 349–62. doi.org/10.1016/j.jinteco.2008.03.006
- Okabe, M. (2015). Impact of free trade agreements on trade in East Asia. *ERIA Discussion Paper Series, ERIA-DP-2015-01*. Retrieved from: www.eria.org/ERIA-DP-2015-01.pdf

- Productivity Commission. (2010). *An econometric analysis of the links between the formation of trade agreements and merchandise trade, supplement to bilateral and regional trade agreements* (Productivity Commission research report). Canberra, ACT: Productivity Commission.
- Takahashi, K. & Urata, S. (2010). On the use of FTAs by Japanese firms: Further evidence. *RIETI Discussion Paper Series, 09-E-028*. dx.doi.org/10.2202/1469-3569.1310
- UN Comtrade (United Nations Commodities Trade database), various years. comtrade.un.org/
- UNCTAD-ERIA. (2015). *TRAINS: Non-Tariff Measures (NTMs) based on official regulations*. Retrieved from: asean.i-tip.org
- Urata, S. & Okabe, M. (2007). The impacts of free trade agreements on trade flows: An application of the gravity model approach. *RIETI Discussion Paper Series No. 07-E-052*. Retrieved from: www.rieti.go.jp/en/
- Wignaraja, G., Olfindo, R., Pupphavesa, W., Panpiemras, J. & Ongkittikul, S. (2010). How do FTAs affect exporting firms in Thailand? *ADB Working Paper Series No. 190*. Retrieved from: www.adb.org/sites/default/files/publication/156045/adbi-wp190.pdf
- World Trade Organization (WTO). (2016). *Trade in 2016 to grow at slowest pace since the financial crisis*. Press release 779. Retrieved from: www.wto.org/english/news_e/pres16_e/pr779_e.htm

Appendices

Appendix A

Table A2.1: Selected studies on trade creation and trade diversion of free trade agreements

Year	Author	Dataset and time period	Dependent variable	Explanatory variables	Estimation method	FTA/RTA	Findings			
							Intra-bloc effect	Extra-bloc effect: Exports	Extra-bloc effect: Imports	Extra-bloc effect: Both sides
2006	Carrère	Panel data, 130 countries, 1962–96	Imports	GDP, multilateral resistance terms, distance, border, landlocked, infrastructure	Hausman–Taylor	ASEAN	0.88	–0.48	0.76	
						NAFTA	0.65 ⁺	0.06 ⁺	–0.5	
						CACM	0.7	–0.21	0.8	
						Mercosur	–0.9 ⁺	–0.18	–1.09	
						Andean	0.6	–0.92	–0.097	
2014	Dai, Yotov & Zylkin	Panel data at two-digit ISIC manufacturing industry, 41 trading partners, 1990–2002	Trade	Bilateral fixed effects, time-varying importer and exporter fixed effects and FTAs (structural gravity model)	Poisson pseudo-maximum likelihood (PPML) estimator	EU	0.71	0.29	0.2	
						FTA (Dummy for all FTAs signed)	0.343	–0.196	–0.852	

Year	Author	Dataset and time period	Dependent variable	Explanatory variables	Estimation method	FTA/RTA	Findings			
							Intra-bloc effect	Extra-bloc effect: Exports	Extra-bloc effect: Imports	Extra-bloc effect: Both sides
2007	Baier & Bergstrand	Panel data, every five years, 1960–2000; 47,081 observations	Trade	GDP _i , GDP _j , distance, common border, common language, FTAs (Bilateral and multilateral)	FE with pair fixed effects and year dummies	FTAs	0.68			
					FE with pair fixed effects and year dummies and MTP	FTAs	0.46			
					FE with pair fixed effects and year dummies, MTP and lagged effects	FTAs	0.76			
2011	Egger, Larch, Staub & Winkelmann	Panel data of 126 economies in period, 121 PTAs/FTAs; 15,750 country pairs	Exports	Sum of real GDPs (log), similarity of real GDP, difference in factor endowments, distance, border, language, colony, and PTAs	Two-way FE model, controlling for endogeneity of PTAs—PPML estimator	PTA (exogenous)	0.642			
						PTA (endogenous)	1.27			

Year	Author	Dataset and time period	Dependent variable	Explanatory variables	Estimation method	FTA/RTA	Findings			
							Intra-bloc effect	Extra-bloc effect: Exports	Extra-bloc effect: Imports	Extra-bloc effect: Both sides
2008	Magee	Panel data, 133 countries in period 1980–1998; 285,180 observations	Imports	GDPi, GDPj, distance, FTA dummies	PPML estimator with country-pair fixed effects	CU	0.829			–0.01+
						FTA	0.508			–0.004+
						PTA	0.169			0.039+
						RTAs (All)	0.638			–0.002+
					PPML estimator with country-pair fixed effects	ASEAN AFTA	1.165			0.624
						Andean	1.021			–0.002
2015	Okabe	Panel data at BEC sector level for 182 countries in 2000–12 with ASEAN focus	Imports	GDPi, GDPj, Distance, ASEAN+1 FTA dummies and other bilateral FTAs dummies	Fixed effects PPML with year fixed effects	NAFTA	0.829			0.189
						Mercosur	0.441			0.022+
						EU13	0.81			0.037+
						ASEAN–China	Positive (intermediate and capital goods)			
						ASEAN–Korea	Positive (intermediate and capital goods)			
						ASEAN–Japan	Small and insignificant effect			

Year	Author	Dataset and time period	Dependent variable	Explanatory variables	Estimation method	FTA/RTA	Findings			
							Intra-bloc effect	Extra-bloc effect: Exports	Extra-bloc effect: Imports	Extra-bloc effect: Both sides
2007	Urata and Okabe	Panel data of 178 countries for 1950–2005	Trade	GDP _i , GDP _j , GDP per capita, distance, adjacent, common language, dummies for FTAs of different types	Generalised method of moment estimator for general FTA dummies and FE estimation method for specific FTA dummies	General FTAs (1950–1983)	0.207			
						General FTAs (1984–2005)	0.106			
						ASEAN–AFTA	0.534			0.336
						NAFTA	0.805			0.043+
						Mercosur	0.71			–0.028+
						EU	0.544			0.063+
						ASEAN–China	0.301+			0.152
2010	Productivity Commission	Panel data of about 140 countries during 1970–2008; 1,139,283 observations	Exports and imports	GDP _i +GDP _j ; GDP similarity, Difference in GDP per capita	PPML with pair fixed effects	ASEAN AFTA	0.32	0.12	0.24	
						Andean	0.65	0.05	0.13	
						NAFTA	0.32	0.06	–0.20	
						Mercosur	0.86	0.18	–0.07	
						EU27	0.37	0.07	0.05	

Year	Author	Dataset and time period	Dependent variable	Explanatory variables	Estimation method	FTA/RTA	Findings			
							Intra-bloc effect	Extra-bloc effect: Exports	Extra-bloc effect: Imports	Extra-bloc effect: Both sides
2014	Armstrong	Panel data of about 140 countries during 1970–2012; 1,361,549 observations	Exports & imports	GDPi+GDPj; GDP similarity, difference in GDP per capita	PPML with pair fixed effects	AFTA	0.264	0.085	0.198	
						Andean	0.729	0.293	0.423	
						NAFTA	0.271	0.009	–0.156	
						Mercosur	0.87	0.161	–0.054	
						EU27	0.644	0.21	0.247	
						AUSFTA	–0.394	–0.12	–0.18	

Notes: Estimated coefficients with + are not statistically significant. PTAs = preferential trade agreements; FTAs = free trade agreements; CU = currency union; CACM = Central American Common Market; BEC = broad economic categories; MTP = multilateral price effect; FE = fixed effects; PPML = Pseudo maximum likelihood.

Source: Authors' compilation.

Appendix B

Table B2.1: Merchandise exports by country and region, 2009–15

		Merchandise exports (US\$ billions)									Growth rate	
		2009	2010	2011	2012	2013	2014	2015	2009–11	2012–15		
1	Malaysia	157	199	228	228	228	234	200	20.6	–3.9		
2	Singapore	270	352	410	408	410	410	351	23.4	–4.7		
3	Brunei Darussalam	7	9	12	13	11	11	6	31.8	–1.9		
4	Vietnam	57	72	97	115	132	150	162	30.3	12.3		
5	Philippines	38	51	48	52	57	62	59	13.9	4.3		
6	Thailand	152	193	223	229	229	228	214	21.0	–2.2		
7	Indonesia	120	158	203	190	183	176	150	30.4	–7.4		
8	Cambodia	4	5	7	8	9	11	12	26.5	16.3		
9	Lao PDR	1	2	2	2	2	3	3	45.6	7.1		
10	Myanmar	7	9	9	9	11	11	11	18.3	8.5		
	ASEAN (rows 1–10)	814	1050	1239	1254	1273	1295	1168	23.5	–2.2		
11	China	1202	1578	1898	2049	2209	2342	2275	25.8	3.7		
12	South Korea	364	466	555	548	560	573	527	23.7	–1.2		
13	Japan	581	770	823	799	715	690	625	19.7	–7.8		
14	Australia	154	213	272	257	253	241	188	32.8	–9.3		
15	New Zealand	25	31	38	37	39	42	34	23.0	–2.1		

		Merchandise exports (US\$ billions)							Growth rate	
		2009	2010	2011	2012	2013	2014	2015	2009–11	2012–15
16	India	165	226	303	297	315	323	267	35.5	–2.9
	RCEP (ASEAN+ rows 11–16)	3304	4334	5129	5240	5364	5506	5085	24.8	–0.9
17	US	1056	1278	1483	1546	1580	1621	1505	18.5	–0.8
18	Canada	316	387	451	456	458	475	408	19.5	–3.3
19	Mexico	230	298	350	371	380	397	381	23.5	1.0
20	Chile	55	71	81	78	76	76	63	21.4	–6.3
21	Peru	27	36	46	47	43	40	34	31.2	–10.3
	TPP (rows 1–4, 13–15 and 17–21)	2936	3717	4291	4353	4327	4385	3958	21.0	–3.0
22	Hong Kong SAR	329	401	456	493	535	524	511	17.7	1.3
23	Taiwan Province of China	204	275	308	306	311	320	285	23.5	–2.1
24	Russia	303	401	522	529	523	498	340	31.2	–12.5
25	Papua New Guinea	4	6	7	6	6	9	9	25.5	13.3
	FTAAP (rows 1–7, 11–15, 17–21 and 21–25)	5652	7245	8511	8756	8939	9117	8328	22.8	–1.5
	WORLD	12,556	15,302	18,339	18,497	18,939	18,996	16,552	20.9	–3.4

Source: Authors' calculations using data from UNCTAD (unctadstat.unctad.org/EN/).

Appendix C: Regression results

Fixed effects and stochastic frontier gravity models (see Appendix D, Table D2.1) are estimated to calculate the predicted and potential trade values, respectively, discussed in the chapter. The gravity model that is applied to a panel data structure is specified as follows:

$$\ln X_{ijt} = \beta_0 + \beta_1 \ln Y_{it} + \beta_2 \ln Y_{jt} + \delta_t \ln Dist_{ij} * Year + \gamma_t + u_{ij} + \varepsilon_{ijt},$$

in which X_{ijt} is the volume of exports between country i (reporter) and its trading partner (country j), Y_{it} and Y_{jt} are, respectively, the current GDPs of countries i and j , as proxies of economic mass. $Dist_{ij}$ represents geographical distance between two trading partners as the main variable of trade costs identified in the gravity model literature. The fixed-effects estimator means that other variables commonly used to explain trade between two countries, such as a common language, shared border and distance (without interacting with year) are controlled for, but cannot estimate coefficients. In this conventional gravity model, year fixed effects that are common to all trading country pairs are taken into account with γ_t . Unobservable country-pair fixed effects are accounted for by u_{ij} . In addition, an interaction variable between $\ln Dist_{ij}$ and $Year$ is included to account for changes in the effect of geographical distance over time. ε_{ijt} is the random error term.

With the same set of explanatory variables, a stochastic frontier gravity model is constructed, based on Battese and Coelli's (1995) model, with two identifying equations. The trade frontier equation is defined by the key determinants of the gravity model, including GDP_i , GDP_j and $Dist_{ij}$, and year effects are included to account for changes over time in the trade potential of a trading country pair, as follows:

$$\ln X_{ijt} = \beta_0 + \beta_1 \ln Y_{it} + \beta_2 \ln Y_{jt} + \beta_3 \ln Dist_{ij} + \gamma_t * Year + v_{ijt} + u_{ijt}$$

In this specification, v_{ijt} is the random error term and is the one-sided non-negative random variable. By construction, the term u_{ijt} is defined as trade inefficiency effects, which cause actual bilateral trade between two trading partners to deviate from the potential trade level. In the setting of an augmented gravity model, trade inefficiency is assumed to be a function of natural and socio-economic factors and policy variables, which are presented by a trade inefficiency model as follows:

$$\mu_{ijt} = \delta_0 + \delta_1 Landlocked_i + \delta_2 Landlocked_j + \delta_3 Lang_{ij} + \delta_4 Border_{ij} + \omega_{ijt}$$

$Landlocked_i$ and $Landlocked_j$ are two dummy variables accounting for a fixed country characteristic indicating whether country i and country j are landlocked. The other two dummy variables, $Lang_{ij}$ and $Border_{ij}$, take a value of one if a trading pair shares a common official language and common border.

A big panel dataset that includes information on the model variables for about 205 countries in the period 1980–2014 is constructed for empirical estimation of these two models, using different data sources. Exports data are taken from the United Nations Comtrade database, using the World Bank's World Integrated Trade Solution platform. Data on the GDP of trading pairs are obtained from the World Bank's World Development Indicators Database. Data on distance and other country or country-pair characteristics, such as being landlocked, possessing a common language and a common border, are obtained from the Centre d'Études Prospectives et d'Informations Internationales (CEPII) database.

Appendix D

Table D2.1: Fixed effects and stochastic frontier gravity models

Dependent variable ln(exports)	Fixed effects gravity model	Stochastic frontier gravity model
$\ln GDP_i$	0.82*** (-0.009)	1.089*** (0.0017)
$\ln GDP_j$	0.72*** (-0.007)	0.822*** (0.00133)
$\ln Dist_{ij}$		-1.274*** (0.00374)
Year dummies	Yes	Yes
$Year * \ln Dist_{ij}$	Yes	
Constant	-7.91*** (-0.1)	1.631*** (-0.04)
Non-negative residual estimation		
$Landlocked_i$		2.782*** (-0.11)
$Landlocked_j$		4.711*** (-0.16)
Common language		-5.734*** (-0.22)
Shared border		-18.944*** (-0.91)

2. ASIAN ECONOMIC INTEGRATION

Dependent variable ln(exports)	Fixed effects gravity model	Stochastic frontier gravity model
Constant		-10.082*** (-0.51)
Observations	486,955	486,955
Country pairs	27,876	27,876

*** denotes significance at the 1 per cent level.

Source: Authors' estimation.

