2 Trade and Global Value Chains

Introduction

While the deepening of regional integration is due in part to the region's multiplying trade agreements, the proliferation of overlapping trade agreements has introduced challenges for implementation and created complexity for businesses.

Economies in Asia and the Pacific have engaged in extensive regional cooperation and integration over the past few decades.[12] These efforts have included broad economic cooperation programs, the largest being the Association of Southeast Asian Nations (ASEAN), Central Asia Regional Economic Cooperation (CAREC), the Greater Mekong Subregion (GMS), and the South Asian Association for Regional Cooperation (SAARC). Such programs have improved cooperation in several areas, including in private sector development, environmental sustainability and protection, and disaster planning and management. They have helped build the infrastructure, institutions, and capabilities to facilitate increased cross-border trade.

Despite these efforts, the major form of trade liberalization in the region over the past 3 decades has been the rise of bilateral and regional preferential trade agreements (PTAs). According to the World Bank's Deep Trade Agreements database, there were just four intra-Asian PTAs in 1990, with Asian economies engaged in a further three trade agreements with non-Asian economies. These tended to be partial scope plurilateral agreements, with the main intra-Asian agreements being the Asia-Pacific Trade Agreement and the South Pacific Regional Trade and Economic Cooperation Agreement. Extra-Asian agreements included agreements among a larger number of developing economies, including the Protocol on Trade Negotiations and the Global System of Trade Preferences among a larger number of developing economies. By 2023, intra-Asian agreements had risen to 77 in number. Agreements with non-Asian economies (extra-Asian agreements, hereafter) increased to 104, reflecting efforts to establish links with global export markets. Agreements involving Asian economies thus accounted for 45% of the 399 agreements in the Deep Trade Agreements database.

While the set of drivers of this increase in PTAs is broad, including aspects related to the perceived and observed benefits of trade for economic development and the rise of global value chains (GVCs) that often require a higher degree of policy coordination and certainty, the slow progress in multilateral negotiations to liberalize trade has been important in the rising trend of PTAs both in Asia and globally. The presence of an increasing set of overlapping trade agreements with different provisions creates confusion and a risk of uncertainty for firms in identifying the most appropriate ways of serving markets and sourcing inputs, which in the extreme can limit the trade-creation benefits of agreements. For policymakers, it also creates challenges in implementing overlapping agreements and negotiating new agreements.

[12] Asia refers to the 49 members of ADB in Asia and the Pacific, which include Australia, Japan, and New Zealand in addition to 46 developing economies.

This chapter takes stock of Asia's activity in developing trade agreements over the past 3 decades. The chapter takes a comparative perspective in considering the number, size, and provisions within Asian trade agreements relative to trade agreements between non-Asian economies. It also examines the drivers of Asian trade agreements and estimates their impact on trade within the region.

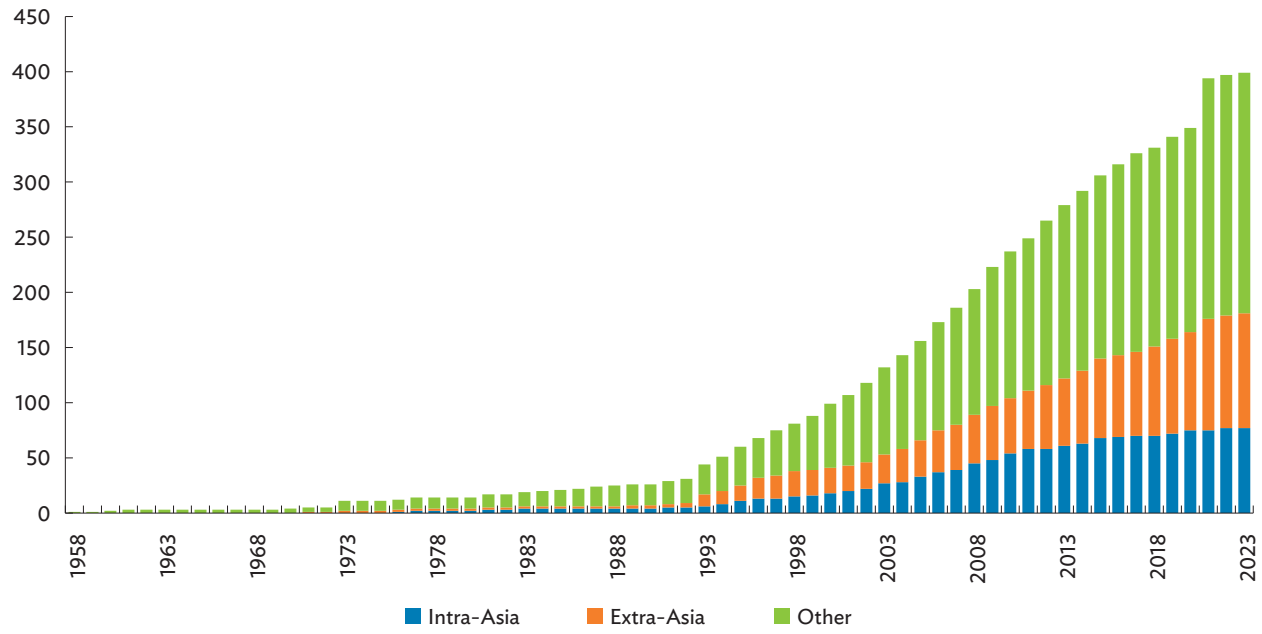
The Evolving Nature of Preferential Trade Agreements

The rise in PTAs is largely driven by free trade agreements, reflecting a shift toward bilateral and regional liberalization.

The number of PTAs has increased rapidly since the 1990s. While trade liberalization proceeded either unilaterally or multilaterally under the auspices of the General Agreement on Tariffs and Trade prior to the 1990s, the focus shifted toward bilateral, plurilateral, and regional trade agreements in the 1990s. This reflected concerns over the impact of unilateral liberalization on inclusive development, a lack of progress in multilateral trade negotiations, and the rise of GVCs that called for increased coordination of activity across GVC partner economies. According to World Bank data, over 1990–2023 the number of PTAs increased from 21 to 399 (Figure 2.1).[13] Over this period the share of agreements that are intra-Asian have risen from around 15% to 19%, with the share of extra-Asian PTAs increasing from 12% to 26%.[14]

A simple count of the number of PTAs can be misleading. Trade agreements differ in their ambition to reduce trade barriers, with partial scope agreements (PSAs) reducing tariffs on a specific group of products and free trade agreements (FTAs) eliminating tariffs in most sectors. In each case, members retain independent trade policies, with a deeper form of agreement being a customs union that harmonizes trade policy and imposes a common external tariff. Economic integration agreements (EIAs) introduce additional forms of liberalization, including of services.

Figure 2.1: Developments in the Number of Preferential Trade Agreements



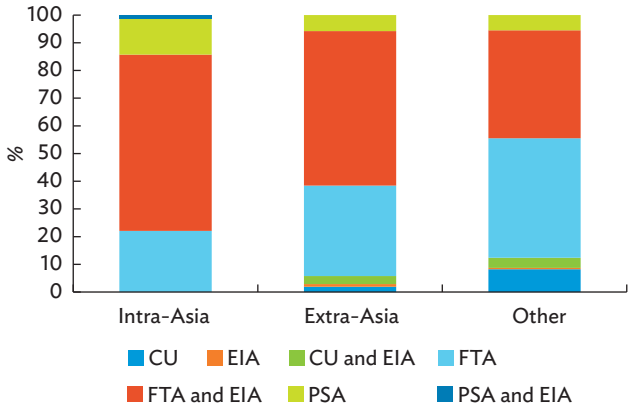
Source: ADB calculations using World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html (accessed August 2024).

[13] The World Bank's Deep Trade Agreements database lists 400 trade agreements, but 399 are in force.

[14] Intra-Asian agreements are defined as agreements that involve only ADB regional member economies, while extra-Asian agreements include at least one ADB regional member and at least one economy that is not an ADB regional member.

Most trade agreements (84%) in force at the end of 2023 were either FTAs (36%) or combined FTAs and EIAs (48%). Customs unions (with or without EIAs) accounted for about 8% of agreements, with PSAs accounting for about 7% and pure EIAs less than 1%. Agreements signed between Asian economies tend to involve FTAs (22%) or combined FTAs and EIAs (64%), with PSAs accounting for about 13% of agreements (Figure 2.2). Compared with agreements signed between Asian and non-Asian economies or between economies outside of Asia, intra-Asian agreements show a higher share of PSAs and of combined FTAs and EIAs, with lower shares of customs unions and EIAs. Although the depth of commitments can also vary substantially within a given type of agreement, such figures provide an initial suggestion that PTAs in Asia are different to those elsewhere, with a higher share of agreements that are less ambitious in the degree of liberalization and coordination.

Figure 2.2: Depth of Intra-Asian, Extra-Asian, and Other Trade Agreements



CU = customs union, EIA = economic integration agreement, FTA = free trade agreement, PSA = partial scope agreement.

Source: ADB calculations using World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html (accessed August 2024).

Beyond different ambitions on the extent of liberalization, PTAs also differ in the provisions included. Whereas early agreements tended to focus on the liberalization of tariff and nontariff barriers, particularly in industry and, to a lesser extent, agriculture over the past decades the number of provisions included in agreements has increased. Many of these provisions are targeted at reducing trade costs, either at or behind the border, while others have more ambiguous effects on trade costs. Provisions introduced into trade agreements include those related to intellectual property, technology transfer, the environment, energy, labor markets, and investment, among others. Considering the range of provisions to capture the breadth of PTAs, the evidence suggests that PTAs have become broader since the 1990s. Using both a broad and a narrower measure of provisions in trade agreements it can be observed that since the 1990s the average number of provisions included in new trade agreements has increased (Figure 2.3).[15]

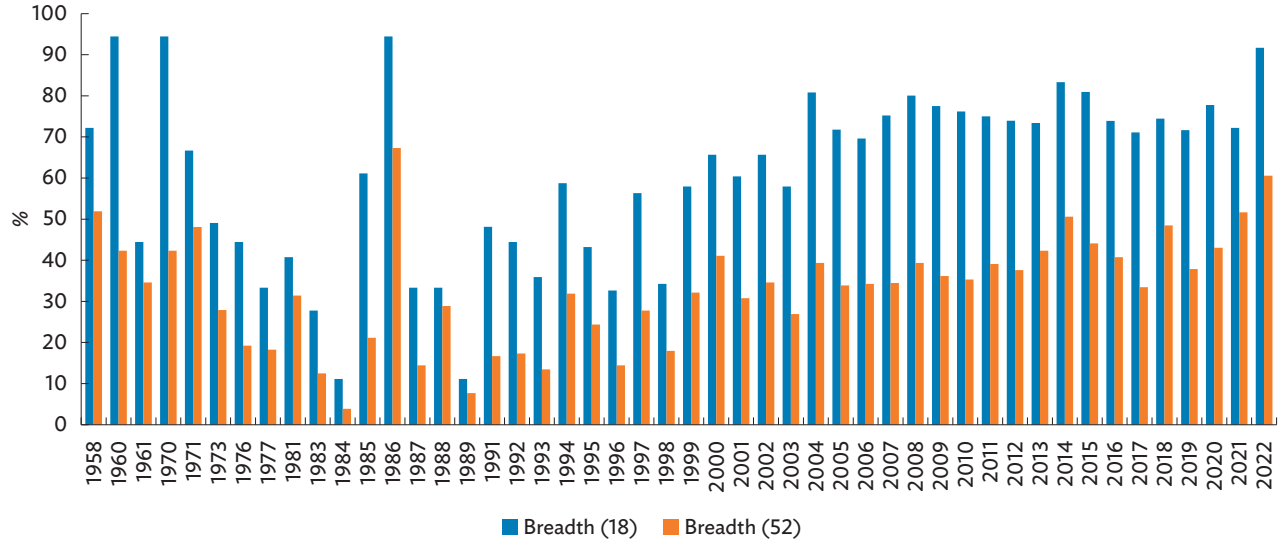
PTAs in Asia tend to include fewer provisions and less ambitious commitments than agreements involving non-Asian economies.

In 2022, and using the broad definition of trade agreement provisions, intra-Asian agreements included around 28% of the 52 provisions while extra-Asian agreements included around 35% (Figure 2.4). In contrast, this share was around 39% for agreements signed between non-Asian economies. This gap has decreased over time, however. In 1990, intra-Asian and extra-Asian agreements included 19% and 20% of the 52 provisions, with agreements between non-Asian economies including 31% of provisions.

Differences in the breadth of intra-Asian and extra-Asian agreements and others remain even after controlling for the income of trade partners and the geographic distance between them. Estimating the association between the number of provisions in PTAs and explanatory factors, including average income per capita, distance between trade partners, and geographic scope, suggests that trade agreements involving Asian economies are significantly narrower than other trade agreements (Figure 2.5). Specifically, the analysis suggests that holding the (average) level of GDP per capita and distance between trade partners constant, an intra-Asian agreement would be expected to include 17% fewer of the 52 provisions and 10% fewer of the

[15] The broad measure includes the 52 provisions identified by Hofmann, Osnago, and Ruta (2017). The narrow measure includes 18 provisions that define a set of market rules for the smooth functioning of global value chains (Hofmann, Osnago, and Ruta 2017).

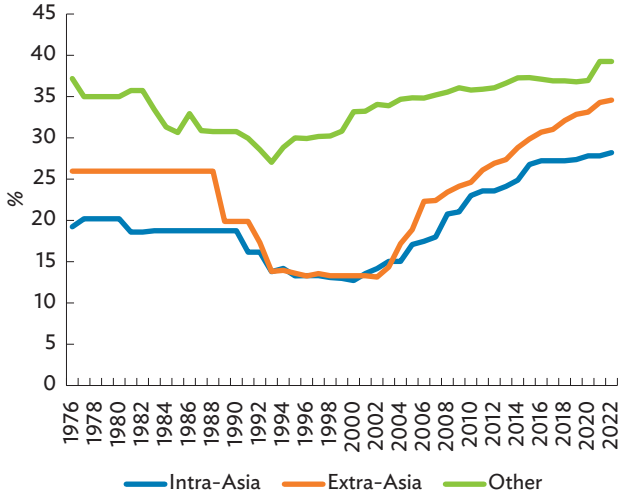
Figure 2.3: Average Number of Preferential Trade Agreement Provisions in New Trade Agreements



Notes: The left-hand axis refers to the share to the maximum number of provisions. The orange bars refer to the broad measure which includes the 52 provisions. The blue bars refer to a more streamlined 18 provisions that define a set of market rules for the smooth functioning of global value chains.

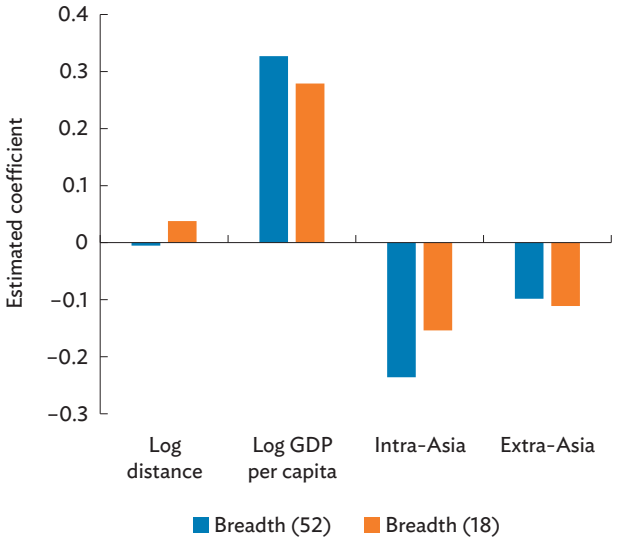
Source: ADB calculations using World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html (accessed August 2024).

Figure 2.4: Average Share of 52 Provisions in Cumulative Trade Agreements for Asian and Non-Asian Trade Agreements



Source: ADB calculations using data from World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html (accessed August 2024).

Figure 2.5: Estimated Association Between the Breadth of Trade Agreements and Potential Determinants



GDP = gross domestic product, log = logarithm.

Notes: The figure reports the estimated coefficients from a regression with the number of provisions in preferential trade agreements as the dependent variable and the log of distance and GDP per capita, a variable capturing whether the agreement is an intra-Asian agreement and a variable capturing whether the agreement is extra-Asian as explanatory variables.

Source: ADB calculations using data from World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html (accessed August 2024).

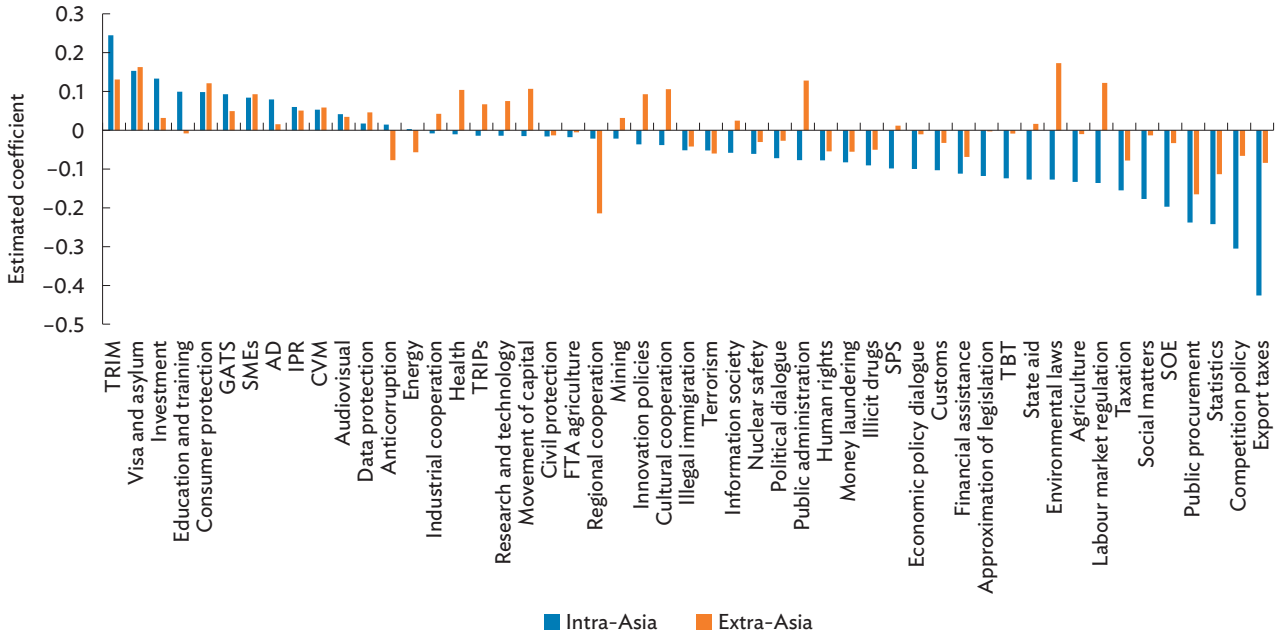
18 provisions in PTAs relative to agreements signed between non-Asian economies. For extra-Asian agreements results suggest that they have 10% fewer of the 52 provisions and 11% fewer of the 18 provisions relative to agreements signed between nonmembers. The analysis further indicates that a higher average per

capita GDP of PTA partners is associated with a broader trade agreement, while the average distance between trade partners has no significant association.

Despite intra-Asian agreements being narrower than agreements signed elsewhere, some provisions are more likely to appear in intra-Asian agreements. Using a similar set of explanatory variables and estimating the likelihood of a particular provision appearing in a PTA, it can be observed that some provisions are more likely to appear in intra-Asian agreements than in agreements signed between non-Asian economies (Figure 2.6). These differences are statistically significant for trade-related investment measures, visa and asylum, investment, education and training, and consumer protection.[16]

For 37 (out of 52) provisions, there is a lower probability of these provisions appearing in intra-Asian agreements than those between non-Asian economies.[17] The pattern for extra-Asian agreements shows some similarities to intra-Asian agreements, but also notable differences. Provisions on regional cooperation, anticorruption, and energy are substantially less likely to be included in extra-Asian agreements when compared with intra-Asian agreements. Conversely, extra-Asian agreements are more likely to include provisions on industrial cooperation, health, trade-related aspects of intellectual property rights, research and technology, the movement of capital, innovation policies, cultural cooperation, public administration, environmental laws, and labor market regulations.

Figure 2.6: Estimated Association Between the Presence of Preferential Trade Agreement Provisions and the Geographic Scope of the Agreement



AD = antidumping measures, CVM = countervailing measure, FTA = free trade agreement, GATS = General Agreement on Trade in Services, IPR = intellectual property rights, SMEs = small and medium-sized enterprises, SOE = state-owned enterprise, SPS = sanitary and phytosanitary standards, TBT = technical barrier to trade, TRIM = trade-related investment measure, TRIP = trade-related aspect of intellectual property rights.

Notes: The figure reports the estimated coefficients from a regression with the dependent variable capturing the presence of a particular provision in a trade and the log of distance and gross domestic product per capita, a variable capturing whether the agreement is an intra-Asian agreement and a variable capturing whether the agreement is extra-Asian as explanatory variables.

Source: ADB calculations using World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html (accessed August 2024).

[16] Results suggest that provisions on the General Agreement on Trade in Services, small and medium-sized enterprises (SMEs), antidumping duties, intellectual property rights, countervailing measures, audiovisual, data protection, and anticorruption and energy provisions are also more likely to appear in intra-Asian agreements than in those signed by non-Asian economies, but these differences are not statistically significant.

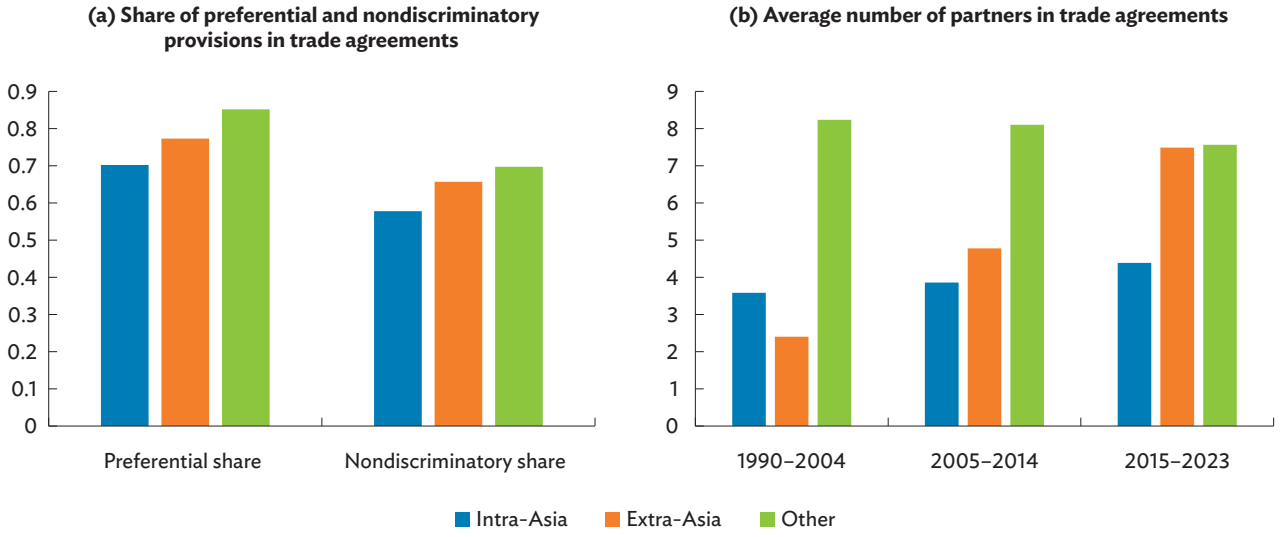
[17] Of these, 24 of the estimated coefficients are statistically significant at the 10% level or better.

Intra-Asian agreements have fewer preferential and nondiscriminatory provisions and tend to include fewer members than agreements among non-Asian economies.

Distinguishing between provisions in trade agreements that are preferential to agreement partners and those that are nondiscriminatory suggests that both intra-Asian and extra-Asian agreements have fewer of both sets of provisions relative to agreements between non-Asian economies. In general, agreements tend to include a higher share of the available preferential provisions, with this being as high as 85% in 2022 for non-Asian agreements (Figure 2.7a). For intra-Asian agreements this share was 70%, while for extra-Asian agreements the share was 78%. For nondiscriminatory provisions, the shares were similar for extra-Asian (67%) and other (69%) agreements, but somewhat lower for intra-Asian agreements (57%). Such results provide initial evidence suggesting that the construction of trade agreements within Asia does not necessarily facilitate open regionalism through the inclusion of provisions that can have a more general liberalizing effect.

The average number of trade partners in PTAs increased steadily for intra-Asian agreements, rising from 3.6 in 1990–2004 to 4.4 in the 2015–2023 period (Figure 2.7b). In contrast, the number of partners in extra-Asian agreements increased from 2.4 members in 1990–2004 to 7.5 in 2015–2023. For agreements between non-Asian economies, the average number dropped from 8.2 in 1990–2004 to 7.6 in 2015–2023. While this difference between intra-Asian agreements and the rest is expected since there are fewer potential partners within Asia than with the rest of the world, these figures highlight a further difference between intra-Asian agreements and those signed elsewhere. One reason for this is the large number of bilateral agreements that have been signed within Asia. In 2022, 75% of all intra-Asian agreements were pure bilateral agreements, a share that rose from 60% in 1991 (Figure 2.8). This compares with a share of 57% for all agreements in the database.

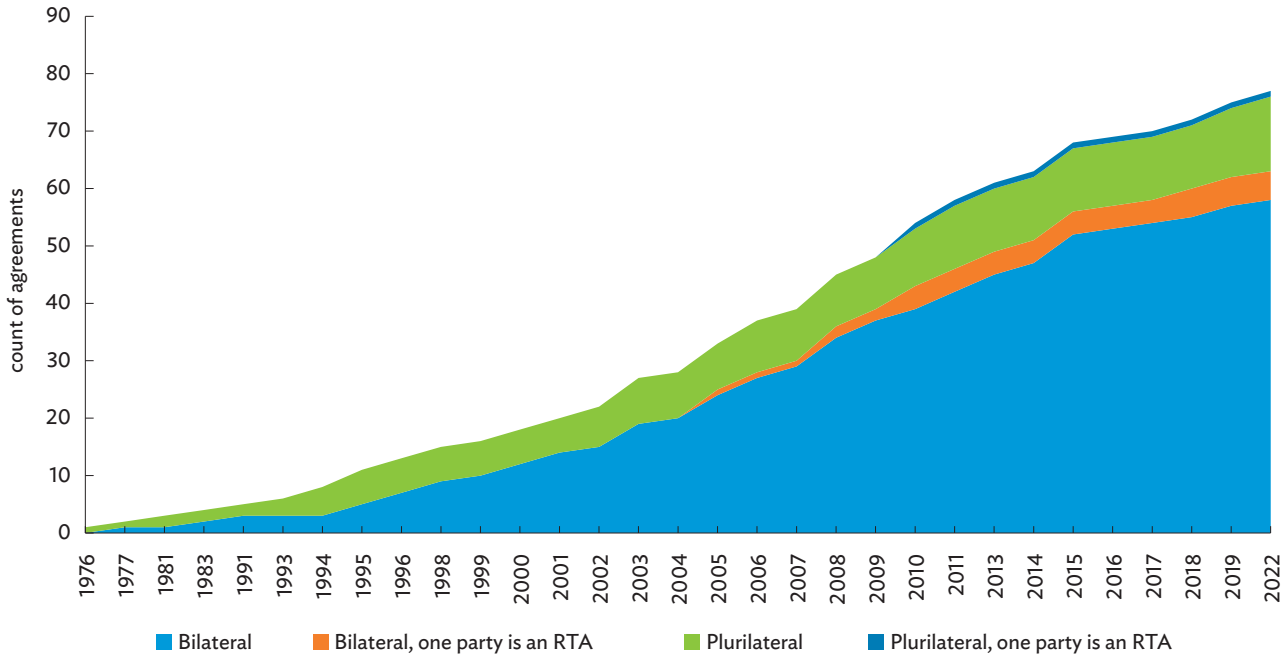
Figure 2.7: Share of Preferential and Nondiscriminatory Provisions in Trade Agreements, 2022



Notes: Preferential provisions include free trade arrangements for agriculture, free trade arrangements for industry, export taxes, anti-dumping, countervailing measures, and public procurement, while nondiscriminatory provisions are customs, sanitary and phytosanitary standards, technical barriers to trade, state aid, trade-related investment measures, general agreement on trade in services, trade-related aspects of intellectual property rights, competition policy, investment, and the movement of capital (see Falvey and Foster-McGregor 2022).

Source: ADB calculations using data from World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html (accessed August 2024).

Figure 2.8: Bilateral Versus Plurilateral Trade Agreements in Asia and the Pacific



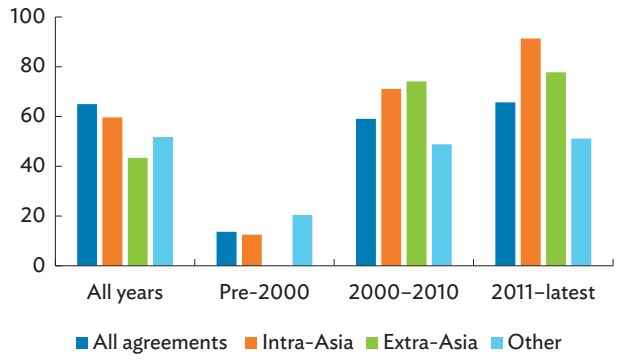
RTA = regional trade agreement.

Source: ADB calculations using data from World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html (accessed August 2024).

The increasing inclusion of services, investment, and other policy areas in intra-Asian PTAs highlights a shift toward broader economic integration, though limited commitments in goods-related provisions may constrain their impact on trade flows and regional value chains.

Figure 2.9 reports information on the share of trade agreements that cover services, further considering this share over time and by regional focus. Across time and agreements, around 65% of agreements cover services, though this hides variation across time and regions. Prior to 2000, few agreements included services. This changed in the new millennium, with 59% of agreements signed in the 2000s covering services, and 65% of agreements since 2010. Since 2000, the share of new intra-Asian and extra-Asian agreements including services has been higher than the share in agreements signed elsewhere. For intra-Asian agreements, the shares were 71% for 2000–2010 and 91% for 2011–2024, while for extra-Asian the corresponding shares were 74% and 78%. This contrasts with shares of 49% and 51% for agreements signed outside Asia.

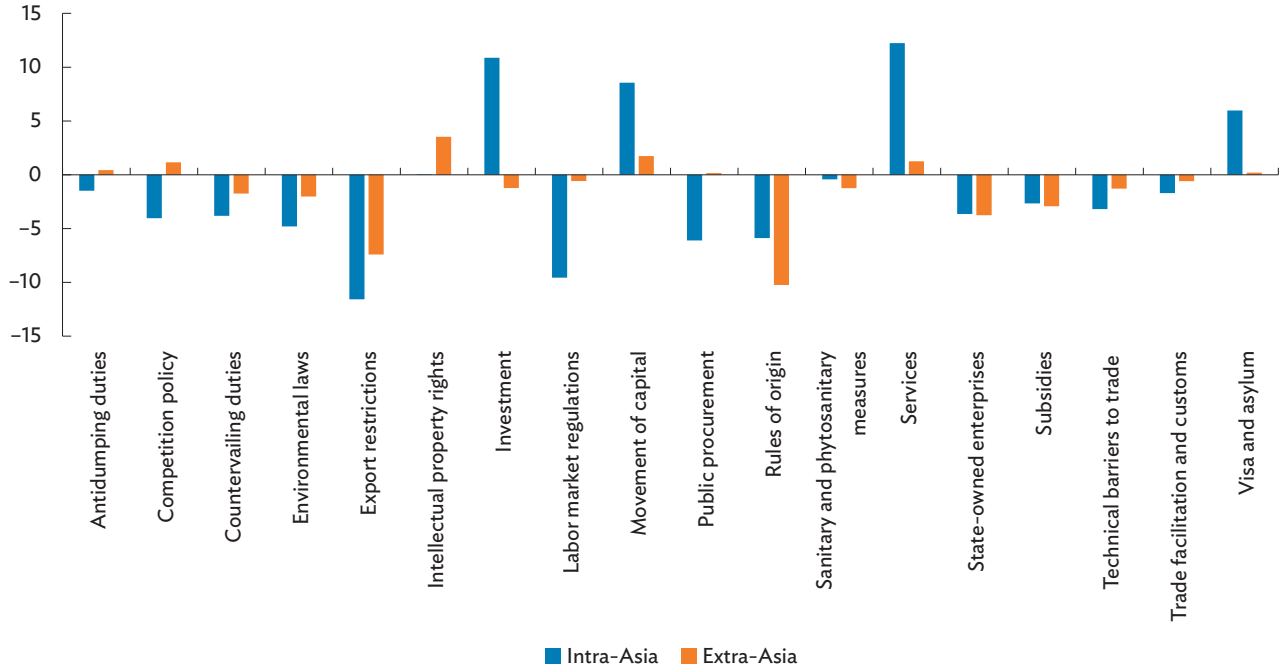
Figure 2.9: Share of Agreements with Services *(%)*



Source: ADB calculations using data from World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html (accessed August 2024).

Figure 2.10 details the depth of PTAs throughout various policy areas. In comparison to agreements between non-Asian economies, intra-Asian agreements (blue bars) are likely to be deeper in the areas of investment, movement of capital, services, and visa and asylum. Comparing between PTAs that involve at least one regional economy (that is, intra- versus extra-Asian agreements), labor market regulations, public procurement, competition policy, export restrictions, and intellectual property are, on average, deeper in extra-Asian agreements (orange bars).

Figure 2.10: Estimated Association Between the Depth of Preferential Trade Agreement Provisions and the Geographic Scope of the Agreement



Source: ADB calculations using data from World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html (accessed August 2024).

While the emphasis on services and investment liberalization signals an interest in expanding trade beyond goods, it may also require regulatory reforms and the application of higher standards that could be challenging for some member economies to meet, potentially affecting trade flows.

Both intra- and extra-Asian agreements show relatively shallower commitments in areas directly tied to market access for trade in goods, such as rules of origin and export restrictions, technical barriers to trade, and trade facilitation. These provisions are essential to foster regional value chains, ensuring that goods, whether final products or intermediates, can move across borders efficiently, with reduced costs and minimal regulatory hurdles. These linkages illustrate the strategic importance of PTAs, not only as tools for market access but also as frameworks that support regional sourcing networks essential for Asia's participation in global value chains (Box 2.1). However, the lower commitments in goods-related areas may limit the positive impact of PTAs on trade flows.

Recent Drivers of Preferential Trade Agreements

Trade relations both within Asia and beyond the region continue to expand and flourish through the creation of new preferential trade agreements.

Six trade agreements that include at least one Asian economy entered into force in 2024 (Figure 2.11 and Table 2.1). The Philippines–Republic of Korea FTA entered into force on 31 December. Under the agreement, tariffs on approximately 95% of items traded between the economies shall be removed. The FTA also includes a comprehensive chapter on economic and technical cooperation.

Three PTAs for the People's Republic of China (PRC) also entered into force throughout 2024, with Serbia, Nicaragua, and Ecuador. The agreement with Serbia aims to exempt about 90% of products traded between the PRC, where 60% of products will immediately benefit from

Box 2.1: Developments in Regional Value Chain Integration

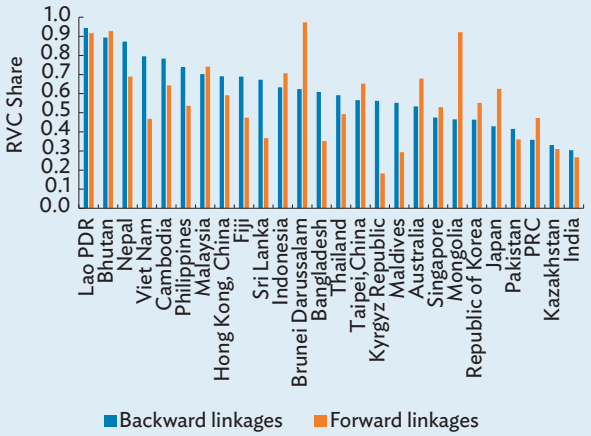
Regional value chains (RVCs) refer to production sharing activities that take place within a specific geographical region rather than globally. RVCs offer opportunities for economies to climb up value chains by using the region to boost competitiveness and move to higher value-added activities. The increased prosperity within Asia means that RVCs have a strong potential to contribute to this upgrading and competitiveness. RVCs also offer other potential benefits, including the possibility of creating more resilient value chains by shortening and reducing the complexity of value chains. To examine the relative importance of regional versus global value chain (GVC) integration, box figure 1 reports information on the share of overall GVC activity that takes place within RVCs in Asia. The approach adopts a definition of an RVC as production that takes place wholly among ADB regional members.

Many economies are heavily reliant on RVCs for their backward integration in GVCs, with Bhutan, Cambodia, the Lao People's Democratic Republic (Lao PDR), Malaysia, Nepal, the Philippines, and Viet Nam all having RVC shares above 70% (box figure 1). In contrast the People's Republic of China (PRC), India, and Kazakhstan have RVC shares below 40%. A similar range of values is reported for forward GVC linkages, with Bhutan, Brunei Darussalam, Indonesia, the Lao PDR, Malaysia, and Mongolia reporting RVC shares above 70% and Bangladesh, India, Kazakhstan, the Kyrgyz Republic, Maldives, Pakistan, and Sri Lanka reporting shares below 40%. Such patterns suggest that economies with a high RVC share in backward linkages also tend to have a high share in forward linkages, with this confirmed by a positive Spearman rank correlation of 0.47. Despite this, there are also examples of economies that show large differences in the RVC share for forward and backward linkages. Backward RVC shares tend to be substantially larger than forward RVC shares in the Kyrgyz Republic, Maldives, Sri Lanka, and Viet Nam with the reverse being the case in Australia, Brunei Darussalam, Japan, and Mongolia.

The values of RVC integration in 2023 present a snapshot of the extent of RVC integration, but changes over time have been substantial in many cases. Box figure 2 reports on changes in the RVC shares of forward and backward linkages between 2000 and 2023. It is notable that in most cases RVC integration in both forward and backward linkages increased. The average change in the RVC indicator was somewhat higher for forward linkages (0.15) than backward linkages (0.12), suggesting that the regionalization of value chains in Asia has been faster for forward linkages. There are a couple of exceptions, with Viet Nam seeing a decline in its forward RVC integration and Fiji in both backward and forward linkages. The PRC also represents an interesting example, seeing an increase in forward RVC share and a decline in backward RVC share. Such an outcome is consistent with the idea that the PRC has become a more important supplier of intermediate goods for regional partners but less reliant on regional partners for its imported intermediate inputs. This is also true for Bangladesh and Brunei Darussalam. Notably, the forward RVC share for the PRC has increased substantially since 2016 (from 0.31 to 0.47 in 2023), suggesting a reorientation of forward linkages in response to rising geopolitical tensions.

Source: ADB staff.

1: Regional Value Chain Integration by Economy in 2023

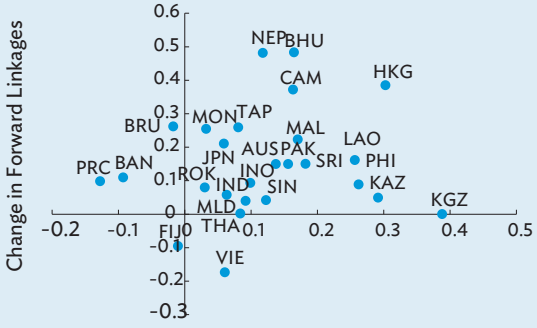


PRC = People's Republic of China, Lao PDR = Lao People's Democratic Republic, RVC = regional value chain.

Notes: The regional value chain indicators are calculated using hypothetical extraction, wherein trade in value-added with no trade in intermediates between Asian economies is compared with the scenario allowing trade in intermediates between Asian economies. Participation rates are calculated as the share of forward global value chain (GVC) activity in total value-added in the case of forward linkages and as the share of backward GVC activity in final production in the case of backward linkages.

Sources: ADB calculations using data from ADB. Multiregional Input Output Tables; and methodology by Los and Timmer (2018).

2: Change in Forward and Backward Regional Value Chain Integration by Economy, 2000–2023



AUS = Australia; BAN = Bangladesh; BHU = Bhutan; BRU = Brunei Darussalam; CAM = Cambodia; PRC = People's Republic of China; FIJ = Fiji; HKG = Hong Kong, China; IND = India; INO = Indonesia; JPN = Japan; KAZ = Kazakhstan; KGZ = Kyrgyz Republic; ROK = Republic of Korea; LAO = Lao People's Democratic Republic; MAL = Malaysia; MLD = Maldives; MON = Mongolia; NEP = Nepal; PAK = Pakistan; PHI = Philippines; SIN = Singapore; SRI = Sri Lanka; TAP = Taipei,China; THA = Thailand; and VIE = Viet Nam.

Notes: The regional value chain indicators are calculated using hypothetical extraction, wherein trade in value-added with no trade in intermediates between Asian economies is compared with the scenario allowing trade in intermediates between Asian economies. Participation rates are calculated as the share of forward global value chain (GVC) activity in total value-added in the case of forward linkages and as the share of backward GVC activity in final production in the case of backward linkages.

Sources: ADB calculations using data from ADB. Multi Region Input Output Tables; and methodology by Los and Timmer (2018).

zero tariffs upon entering into force. This is also the case for the agreement with Ecuador, where tariffs on major exports from both economies such as fruits, seafood, coffee, plastics, machines, and electrical equipment, among others, shall gradually be reduced to zero. Nicaragua also stands to benefit from tariff-free exports of key products such as meat, seafood, sugar, and rum.

Another key agreement that entered into force in 2024 is the PTA between New Zealand and the European Union (EU). The agreement is estimated to cut €140 million worth of annual duties for EU companies in the first year of application. Bilateral trade is expected to grow by 30%, while the EU's investment in New Zealand may potentially grow by 80%. The agreement also contains sustainability commitments, such as adherence to the Paris Climate Agreement and labor rights.

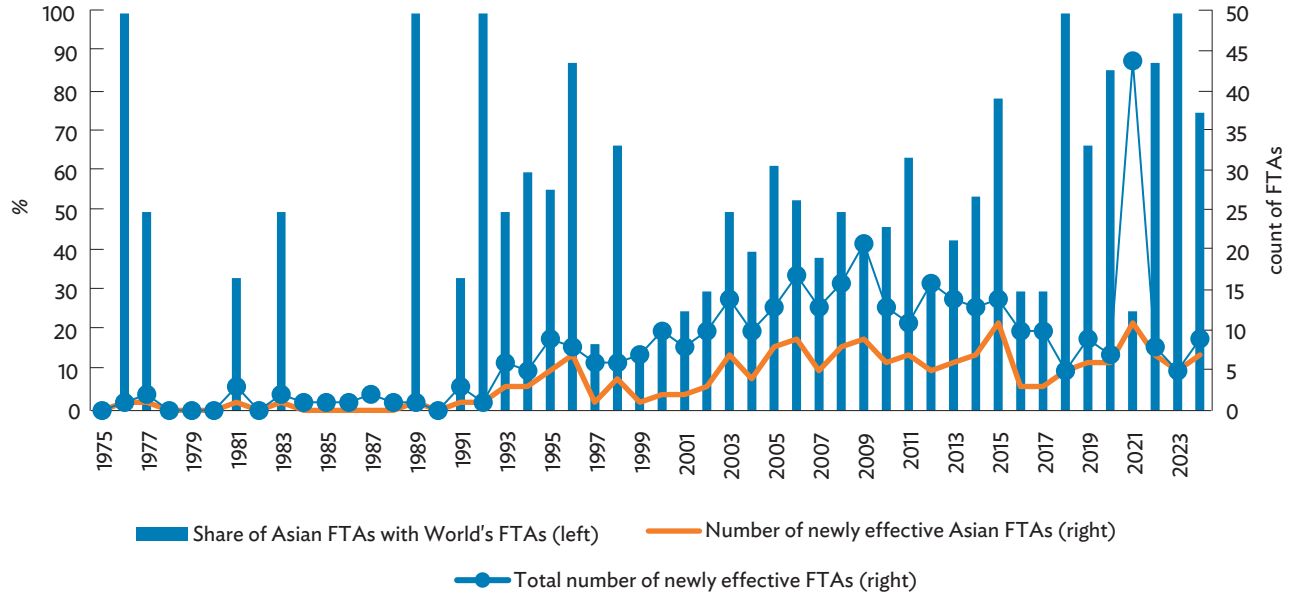
This year also marked the entry into force of the United Arab Emirates–Georgia Comprehensive Economic Partnership Agreement (CEPA), which covers about 92% of tariff lines between the two economies. This agreement is seen as an opportunity for market expansion, as well as to enhance investment, empower small and medium-sized enterprises (SMEs), and streamline trade procedures.

Within the region, three PTAs were signed: the Republic of Korea–Georgia CEPA, the Viet Nam–Lao People's Democratic Republic (Lao PDR) trade agreement, and the Thailand–Sri Lanka FTA. Asian economies have also signed eight agreements with partners beyond the region, including the Indonesia–Canada CEPA, Hong Kong, China–Peru FTA, Australia–United Arab Emirates FTA, Maldives–Türkiye, Viet Nam–United Arab Emirates CEPA, Malaysia–United Arab Emirates CEPA, India-European Free Trade Association FTA, and the Republic of Korea–Gulf Cooperation Council FTA.

Total trade turnover, most-favored nation tariff rates, and bilateral trade interventions have been significant drivers in the formation of PTAs in the past 2 decades.

The analysis of trade dynamics between economy pairs highlights several key trade factors influencing PTA

Figure 2.11: Newly Effective Free Trade Agreements—Asia and the Pacific



FTA = free trade agreement.

Notes: Trends for 1975–2022 derived using the World Trade Organization's Regional Trade Agreement Information System. The number of FTAs in 2023 is derived using the Asia Regional Integration Center FTA Database and various sources. The share of Asian FTAs is the ratio between the number of newly effective FTAs including at least one Asian economy and the total number of newly effective FTAs.

Sources: ADB calculations using data from ADB. Asia Regional Integration Center FTA Database. https://aric.adb.org/database/fta; and World Trade Organization. Regional Trade Agreement Information System. http://rtais.wto.org (both accessed December 2024).

Table 2.1: New Regional Trade Agreements in Asia and the Pacific, 2024

Name	Type	Status (Date)
Intraregional		
Philippines–Republic of Korea FTA	FTA	In force (31 December)
Republic of Korea–Georgia Economic Partnership Agreement	EPA	Signed (27 November)
Viet Nam–Lao PDR Trade Agreement	PTA	Signed (9 April)
Thailand–Sri Lanka FTA	FTA	Signed (3 February)
Extraregional		
Indonesia–Canada CEPA	CEPA	Signed (2 December)
Hong Kong, China–Peru FTA	FTA	Signed (15 November)
Australia–United Arab Emirates FTA	FTA	Signed (6 November)
Maldives–Türkiye PTA	PTA	Signed (4 November)
Viet Nam–United Arab Emirates CEPA	CEPA	Signed (29 October)
Malaysia–United Arab Emirates CEPA	CEPA	Signed (11 October)
People's Republic of China–Serbia FTA	FTA	In force (1 July)
Georgia–United Arab Emirates CEPA	CEPA	In force (27 June)
People's Republic of China–Ecuador FTA	FTA	In force (1 May)
EU–New Zealand FTA	FTA	In force (1 May)
India–EFTA FTA	FTA	Signed (11 March)
Republic of Korea–Gulf Cooperation Council FTA	FTA	Signed (2 January)
People's Republic of China–Nicaragua FTA	FTA	In force (1 January)

CEPA = comprehensive economic partnership agreement, EFTA = European Free Trade Association, EPA = economic partnership agreement, EU = European Union (27 members), FTA = free trade agreement, Lao PDR = Lao People's Democratic Republic, PTA = preferential trade agreement.

Note: All agreements cover both goods and services. Cover information available as of 31 December 2024.

Source: ADB compilation based on national sources.

formation. Table 2.2 shows that a higher average most-favored nation (MFN) tariff rate of an economy-pair is associated with a lower likelihood of PTA formation. This suggests that the higher the degree of multilateral liberalization, the more likely economies are to sign a PTA to further reduce trade barriers and enhance market access. As shown in column (3), the deterrent effect of MFN on PTA formation is insignificant in the absence of trade.

Further, the total trade volume between two economies positively correlates with PTA formation. This suggests that as economies become more interconnected through trade, they may seek PTAs to secure predictable and favorable terms for market access.

Similarly, the total number of trade interventions, including both restrictive and liberalizing measures imposed by the reporter and partner economy, are positively associated with PTA formation. This is consistent with the role of PTAs as structured frameworks to manage trade relations. By creating formalized agreements, economies can establish clear and predictable rules and guidelines for trade in sensitive or strategic sectors where interventions are implemented.

Interaction terms are incorporated to better understand how these relationships change under different conditions. Results indicate that the association between trade volumes and PTA formation is U-shaped with respect to MFN rates (Figure 2.12). Starting from a zero MFN rate, results show that the positive impact of total trade on PTA formation decreases as average MFN rates between two economies increase, but the relationship then reverses as MFN rates reach an 11.8 threshold. This suggests that economies with substantial trade volumes may seek PTAs either when (i) MFN tariffs are relatively low, as in developed economies where

PTAs could represent quick wins with high duty saving given the significant amount of trade, and moderated negotiating complexity given the degree of openness already achieved; or (ii) when MFN rates are high, as an attempt to reduce trade barriers. Conversely, interaction between trade interventions and MFN rates is positively correlated with PTA formation, while the squared term remains insignificant. This suggests that economies with complex trade relationships and high tariffs are more likely to negotiate PTAs to manage these complexities. In such cases, high tariffs combined with frequent trade interventions may create a need for more structured trade agreements to simplify and stabilize economic relations, even more so in a highly protectionist environment.

Trade Within Preferential Trade Agreements

Trade shares under intra-Asian PTAs have been significantly rising over the past decade. However, the broader context of global trade challenges—such as the recent contraction in goods trade and slowing services growth—has impacted the region's overall trade performance. While Asia remains resilient in some sectors, regional PTAs must navigate these pressures effectively. Box 2.2 offers further insights into how external factors influence Asia's trade flows and underscores the importance of adaptive strategies within PTAs. These dynamics highlight the need for PTAs that not only support existing trade flows but also bolster Asia's response to global trade disruptions.

Merchandise exports within trade agreements rose steadily in Asia, led by Southeast Asia and Oceania.

Using data from the United Nations Commodity Trade (UN Comtrade) database, Figures 2.13a and 2.13b present the share of merchandise exports in Asia that takes place under trade agreements covering goods trade. The data include all economies in the region as well as individual ADB subregions. For the region, the share of merchandise trade occurring within trade agreements rose from less than 20% in 2000 to over

Table 2.2: Panel Logistic Regression on Preferential Trade Agreeement Formation Drivers, Economy-Pair, and Year Fixed Effects

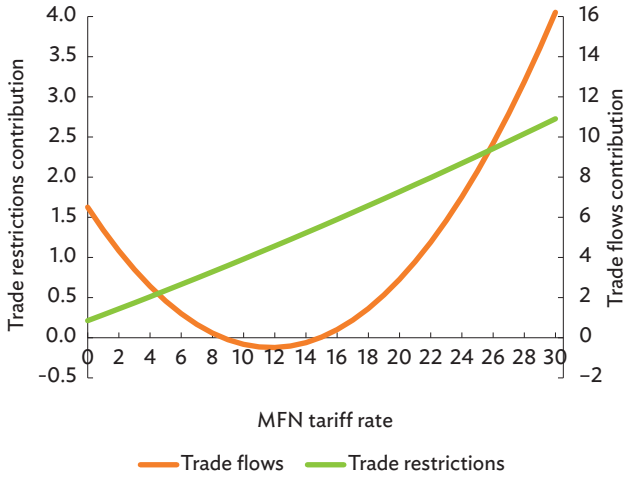
	(1)	(2)	(3)
Average MFN rates	−0.90***	−0.67***	−0.59
	(−8.32)	(−3.93)	(−0.71)
Average MFN^2			−0.03
			(−0.81)
Total Trade	0.08**	0.29***	1.63***
	−2.21	−2.77	−5.83
Total Trade # MFN		−0.02**	−0.30***
		(−2.09)	(−5.61)
Total Trade # MFN^2			0.01***
			−5.44
Trade Interventions	2.76***	1.29***	0.85**
	−23.24	−4.38	−2.09
Trade Interventions # MFN		0.22***	0.29***
		−5.06	−2.83
Trade Interventions # MFN^2			0
			−0.21
Observations	64,200	64,200	64,200

MFN = most-favored nation.

Notes: T statistics in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.
An analysis of the reporter and partner components of dependent variables is presented in Annex 2.a.

Sources: ADB calculations using World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html; International Monetary Fund. Direction of Trade Statistics. https://data.imf.org/dots; and Global Trade Alert Database. https://www.globaltradealert.org (accessed August 2024).

Figure 2.12: Contribution of Trade Flows and Trade Restrictions to the Log-Odds of Preferential Trade Agreement Formation



MFN = most-favored nation.

Note: The figure reports the results of the panel logistic regression on preferential trade agreement formation drivers, reporter-partner and year-fixed effects reported in Table 2.2, as follows:

Trade flow contribution = 1.626181-0.2967379 MFN+0.0125873 MFN^2

Trade restriction contribution = 0.8476344+0.2929988 MFN-0.0014124 MFN^2

Sources: ADB calculations using World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html; International Monetary Fund. Direction of Trade Statistics. https://data.imf.org/dots; and Global Trade Alert Database. https://www.globaltradealert.org (accessed August 2024).

Box 2.2 Recent Developments in Trade in Goods and Services

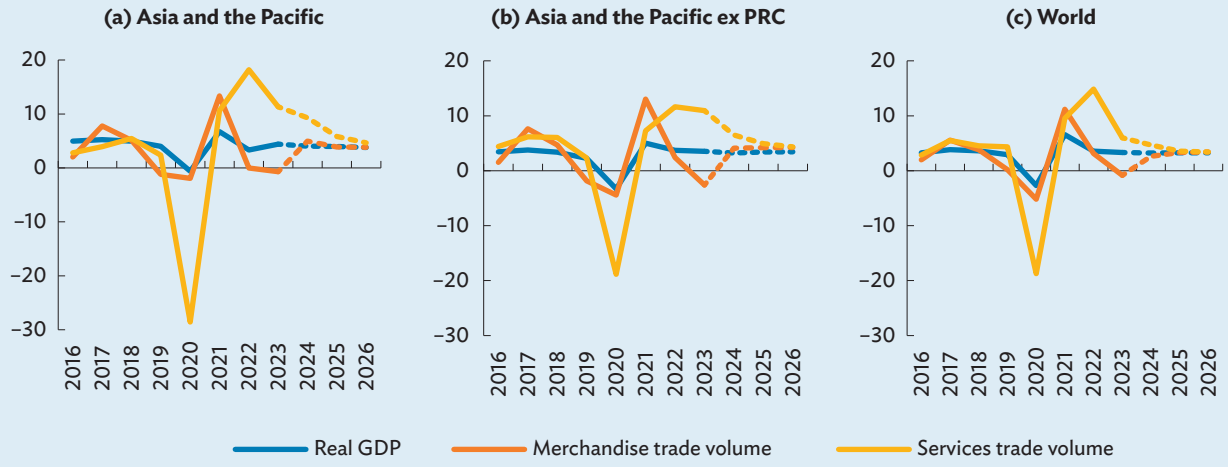
The global trade environment in 2023 was marked by a slowdown in global gross domestic product (GDP) growth, tight financial conditions, geoeconomic fragmentation, and increasing trade-distorting measures. World trade in goods contracted by 1%, while global services trade growth slowed to 4%, down from 14% in 2022 (box figure 1). Despite these headwinds and a shift in global demand from goods to services, the Asian region remained a key driver of global growth.

The Asian overall real GDP grew by 4.4% in 2023, outpacing global economic growth of 3.2%. Trade in the region also marginally outperformed global trade, owing to a 2.9% recovery in merchandise trade in the People's Republic of China (PRC) and a robust 9.8% growth in the rest of Asia's services trade. However, excluding the PRC, merchandise trade in the region contracted by 2.3%, driven by declines in goods trade in Hong Kong, China; Taipei,China; and the Association of Southeast Asian Nations (ASEAN). On the other hand, the recovery of tourism and rising demand for information and communication technology and financial services fueled strong services trade growth in economies like India and ASEAN.

Asia's trade volume posted positive year-on-year growth in the first quarter of 2024, boosted by a strong recovery in PRC trade (box figure 2). However, the faster growth in trade volume relative to its value points to deflationary pressures in the PRC, as exporters cut prices to stimulate demand.[a] This deflation, potentially linked to weak domestic demand and excess industrial capacity, could spill over into global disinflation and put downward pressure on global industrial prices, prompting trade restrictions from economies like the United States (US), the European Union (EU), and Canada to counter the surge of low-cost PRC exports. Despite positive trends early in 2024, the potential for geopolitical tensions and emerging industrial policy impacts tempered the outlook for the rest of the year (UNCTAD 2024).

The share of Asia's merchandise trade with itself, the US, and the EU and the United Kingdom (UK) (EU+UK) has been falling since 2020, coinciding with the coronavirus disease pandemic and rising geoeconomic tensions (box figure 3). The downturn in Asia's intraregional trade has been primarily driven by reduced trade with and among East Asian economies, particularly the PRC. Similarly, the diminishing role of the US and the EU+UK in Asia's trade since 2020 is due largely to reduced trade with the PRC. Nevertheless, these recent trends have opened new opportunities. Economies like the Republic of Korea and Taipei,China have seen rising trade shares with these partners, potentially benefiting from the US and the EU+UK's gradual decoupling from the PRC, while Asia's trade with the rest of the world has grown in importance, positioning the region for new trade dynamics.

1: Merchandise and Services Trade Volume and Real Output Growth—Asia and the Pacific, and the World



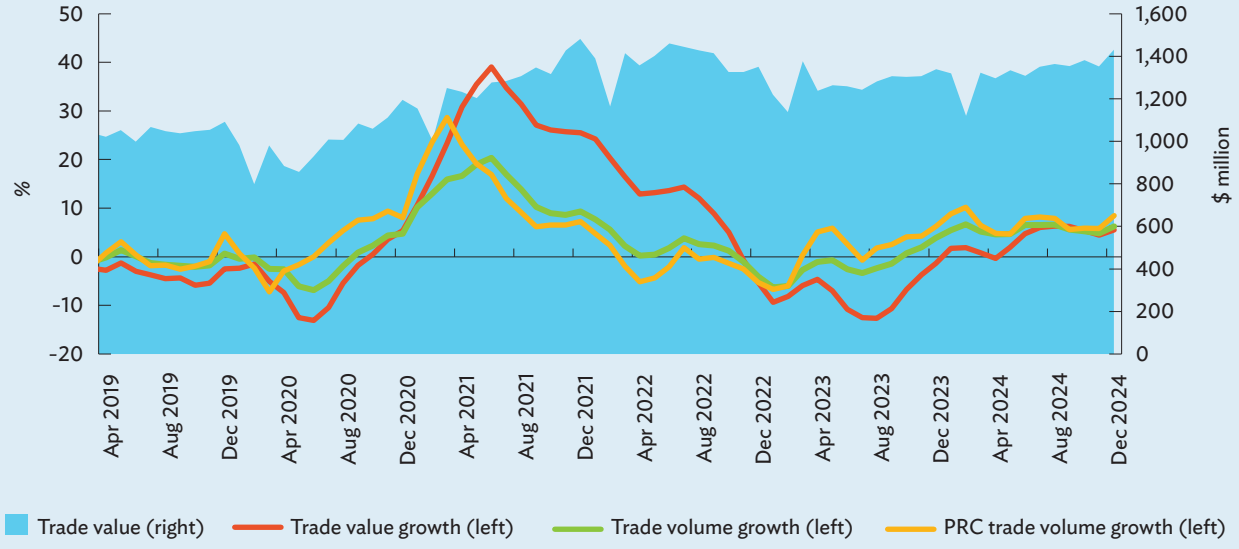
PRC = People's Republic of China, GDP = gross domestic product.

Sources: ADB calculations using data from International Monetary Fund (IMF). World Economic Outlook April 2024 Database. https://www.imf.org/en/Publications/WEO/weo-database/2024/April; IMF. Direction of Trade Statistics. https://data.imf.org/dot; and Organisation for Economic Co-operation and Development (OECD). OECD–World Trade Organization Balanced Trade in Services—BPM6. https://www.wto.org/english/res_e/statis_e/trade_datasets_e.htm (all accessed December 2024).

continued on next page

Box 2.2: continued

2: Monthly Trade by Value and Volume—Asia and the Pacific

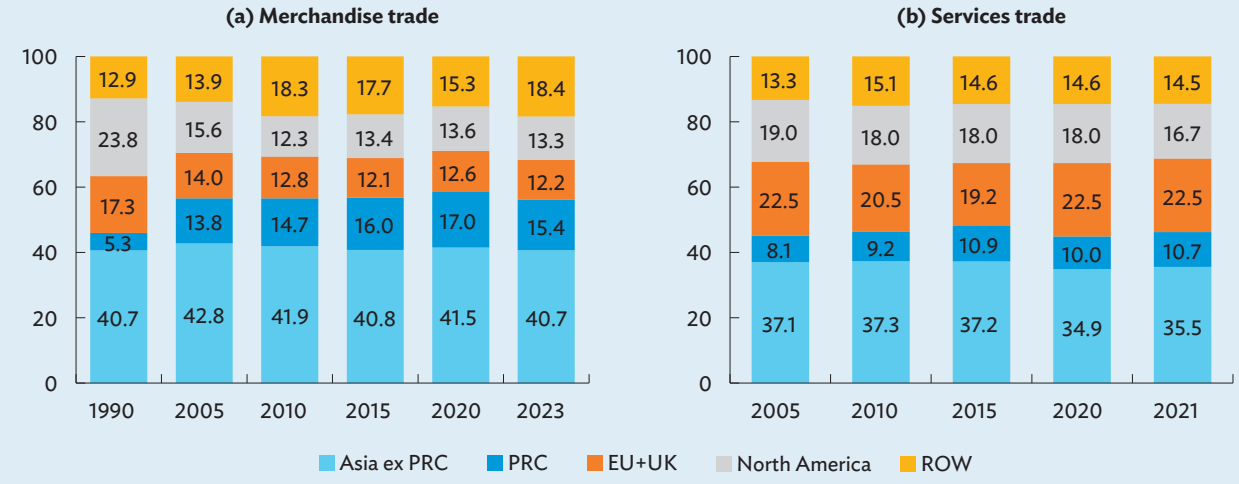


PRC = People's Republic of China.

Notes: Trade volume growth rates were computed as the 3-month moving average year-on-year growth using volume indexes. For each period and trade flow type (i.e., imports and exports), available data include indexes for the PRC and Japan, and aggregate indexes for selected economies in Asia and the Pacific: (i) advanced economies excluding Japan (Hong Kong, China; the Republic of Korea; Singapore; and Taipei,China); and (ii) emerging market economies excluding the PRC (India, Indonesia, Malaysia, Pakistan, the Philippines, Thailand, and Viet Nam). The aggregate index for Asia and the Pacific was computed using trade values as weights.

Sources: ADB calculations using data from CEIC Data Company; and CPB Netherlands Bureau for Economic Policy Analysis. World Trade Monitor. https://www.cpb.nl/en/world-trade-monitor-december-2024 (both accessed March 2025).

3: Merchandise and Services Trade of Asia and the Pacific, by Partner *(%)*



PRC = People's Republic of China, EU = European Union (27 members), ROW = rest of the world, UK = United Kingdom.

Notes: Values expressed as percentage of the region's total trade value (sum of exports and imports). North America covers Canada, Mexico, and the United States.

Sources: ADB calculations using data from International Monetary Fund. Direction of Trade Statistics. https://data.imf.org/dot; and Organisation for Economic Co-operation and Development (OECD). OECD–World Trade Organization Balanced Trade in Services—BPM6. https://www.wto.org/english/res_e/statis_e/trade_datasets_e.htm (both accessed December 2024).

[a] Currency depreciation across Asian economies and a shift toward lower-value goods may also be contributing factors.

Source: United Nations Trade and Development. Global Trade Update (July 2024). https://unctad.org/publication/global-trade-update-july-2024 (accessed August 2024).

50% by 2023. Of this trade, 21% occurred within intra-Asian agreements alone, 13% exclusively within extra-Asian agreements, and 18% between partners involved in both (and the same) intra- and extra-Asian agreements. However, there were notable variations across subregions.

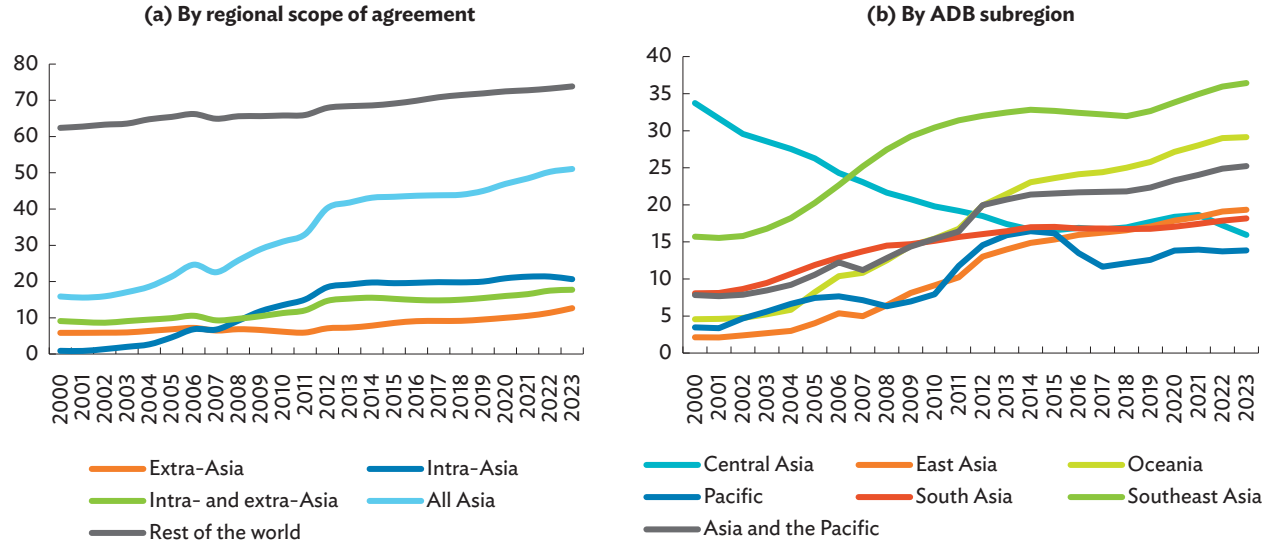
The share of services exports under trade agreements has risen across Asia, reaching the global average.

Using data from the Organisation for Economic Co-operation and Development–World Trade Organization Balanced Trade in Services database, Figures 2.14a and 2.14b report information on the share of services exports that takes place between partners with trade agreements covering services. Data are reported for all Asia and Pacific economies, as well as for ADB subregions. Considering all Asia, the figure indicates a rising share of services trade taking place with economies with which they share a trade agreement.

Between 2005 and 2021, the share of services trade taking place in trade agreements increased from below 25% to above 50%, reaching the same level as the rest of the world (Figure 2.14a). Of this trade, 31% occurs exclusively within intra-Asian agreements, 14% within extra-Asian agreements alone, and 6% within both intra- and extra-Asian agreements. Notably, services trade under the intra- and extra-Asian agreements categories saw a significant rise after 2018, spurred by the signing and enforcement of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership.

This rising trend, however, hides substantial variation within subregions (Figure 2.14b). Southeast Asia reports high shares of services within trade agreements, with a notable jump from 55% to 80% between 2018 and 2021. Oceania and Central Asia witnessed a similar jump between 2014 and 2015, with the share of services exports within trade agreements also rising rapidly in East Asia over 2005–2021. In contrast, shares have been stagnant in South Asia and the Pacific.

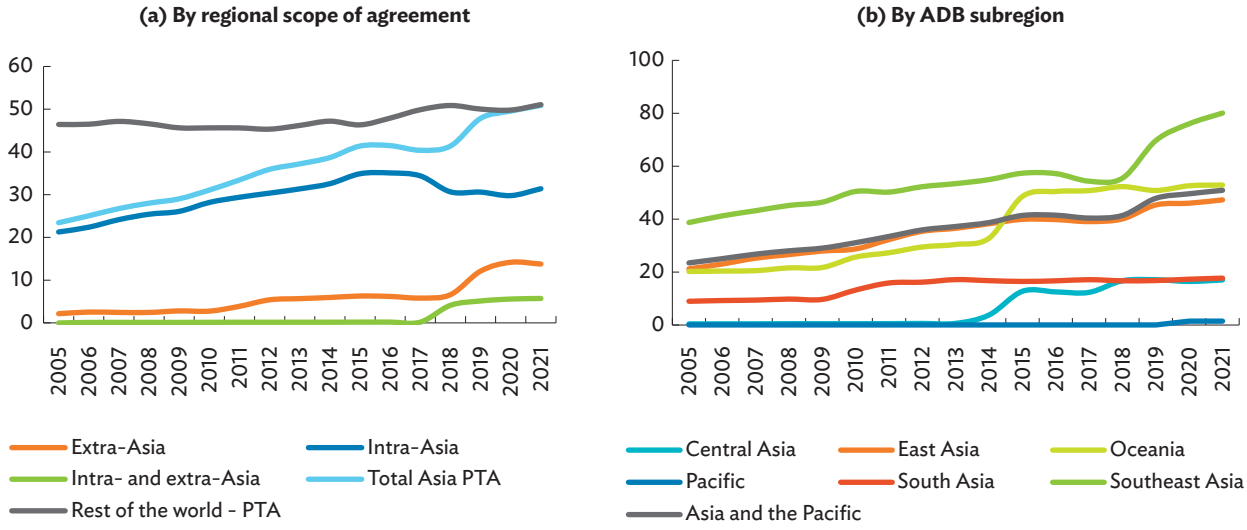
Figure 2.13: Share of Merchandise Trade Within Trade Agreements in Asia and the Pacific (%, 5-year moving average)



Notes: To reduce the volatility of the data, the figure reports data on five-year averages of the shares of exports that take place within trade agreements. Extra-Asia refers to trade covered by agreements that include both Asian and non-Asian economies, while intra-Asia refers to trade covered by agreements signed exclusively by Asian economies. "Intra- and extra-Asia" indicates trade between economy pairs covered by both intra- and extra-Asian agreements. All Asia encompasses trade under all intra-Asian and extra-Asian agreements, and rest of the world includes trade solely between non-Asian economies.

Source: ADB calculations using data from United Nations. UN Comtrade Database. https://comtrade.un.org/ (accessed September 2024).

Figure 2.14: Share of Services Trade Within Trade Agreements in Asia and the Pacific (%)



PTA = preferential trade agremeent.

Notes: Extra-Asia refers to trade covered by agreements that include both Asian and non-Asian economies, while intra-Asia refers to trade covered by agreements signed exclusively by Asian economies. "Intra- and extra-Asia" indicates trade between economy pairs covered by both intra- and extra-Asian agreements. All Asia encompasses trade under all intra-Asian and extra-Asian agreements, and rest of the world includes trade solely between non-Asian economies.

Sources: ADB calculations using data from Organisation for Economic Co-operation and Development (OECD). OECD–World Trade Organization Balanced Trade in Services. https://www.oecd-ilibrary.org/trade/data/oecd-statistics-on-international-trade-in-services/oecd-wto-balanced-international-trade-in-services-ebops-2010_08dba674-en (accessed August 2024); and World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html (accessed September 2024).

Trade Effects of Preferential Trade Agreements

The increasing breadth of trade agreements over time reflects an evolving role in fostering trade, though Asian PTAs show smaller increases in export flows compared to agreements outside the region.

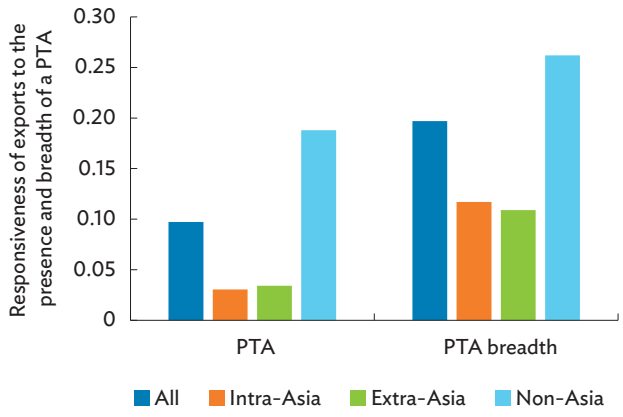
The increase in the breadth of trade agreements over time highlights that the role and purpose of trade agreements has evolved. Yet, the main rationale for trade agreements remains to increase the level of trade among partners. With PTAs signed by Asian economies—both intra- and extra-Asian agreements—shown to be different to those in other regions in various ways, the question arises as to whether trade agreements in Asia impact trade flows, and to the same extent as elsewhere. This can be evaluated using the gravity model of trade, which models bilateral trade flows between economies.[18]

Figure 2.15 indicates that the presence of a trade agreement is associated with 10% more exports between partners relative to when no trade agreement exists. Considering the breadth of agreements, the figure also shows that the broadest trade agreement—including all 52 provisions in the Deep Trade Agreements database—is associated with increased export flows between members of about 20% relative to the case of no trade agreement. Differences in effects are found between Asian agreements and those elsewhere. While the presence of an agreement outside of Asia is associated with about 20% more exports relative to no agreement, for both intra-Asian and extra-Asian agreements the effect is estimated at about 3%. Considering the breadth of agreements, the results suggest that the broadest agreement is associated with 30% more exports for non-Asian agreements relative to no agreement, with effects of about 12% for intra- and extra-Asian agreements. While the differing effects of agreements involving Asian economies relative to others cannot

[18] In the analysis, the structural gravity model is adopted (see, for example, Yotov 2024). Specifically, the analysis uses data from Feenstra et al. (2005) and UN Comtrade for 1962–2022 and the Poisson Pseudo-Maximum Likelihood approach of Santos Silva and Tenreyro (2006) with importer-time, exporter-time, and economy-pair fixed effects.

be easily determined, differences in the extent of liberalization and the membership of agreements may help explain these results.

Figure 2.15: Estimated Impact of Preferential Trade Agreements on Merchandise Trade



PTA = preferential trade agreement.

Notes: The figure reports the estimated impact of the presence of a trade agreement and the breadth of that trade agreement on exports between agreement partners. The results come from a structural gravity model using data over 1962–2022 and the Poisson Pseudo-Maximum Likelihood approach of Santos Silva and Tenreyro (2006).

Sources: ADB calculations using data from Feenstra et al. (2005); United Nations. UN Comtrade Database. https://comtrade.un.org/; and World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html (accessed September 2024).

Trade agreements involving Asian economies primarily increase the intensity of existing exports (the intensive margin) but tend to reduce the variety of goods traded (the extensive margin).

Beyond the value of exports, it is instructive to distinguish between the intensive and extensive margin of exports. The approach follows Hummels and Klenow (2005), with the extensive margin capturing the variety of goods traded and the intensive margin capturing the intensity with which existing varieties are traded. Figure 2.16 reports estimates of the effect of the presence of a trade agreement on these two margins of exports, again distinguishing between agreements signed by Asian economies and those signed by non-Asian economies.[19] Results indicate that while the presence of a trade agreement promotes exports along the intensive margin, it reduces exports along the extensive margin, consistent with the results of Falvey and Foster-McGregor (2022).[20] Similar patterns also hold for intra-Asian agreements and non-Asian agreements, while for extra-Asian agreements the effects work in the opposite direction and tend to be small (though statistically significant). The results thus suggest that intra-Asian agreements do have a substantial impact on the intensity of exports in goods (the intensive margin), but that this effect is offset by a reduction in the variety of goods traded with a trade agreement. While this pattern is consistent with results for agreements signed by non-Asian economies, the extent of the negative effect on the extensive margin is much larger for intra-Asian agreements. In contrast, agreements between Asian and non-Asian economies results in a larger variety of goods exported, but with lower intensity.

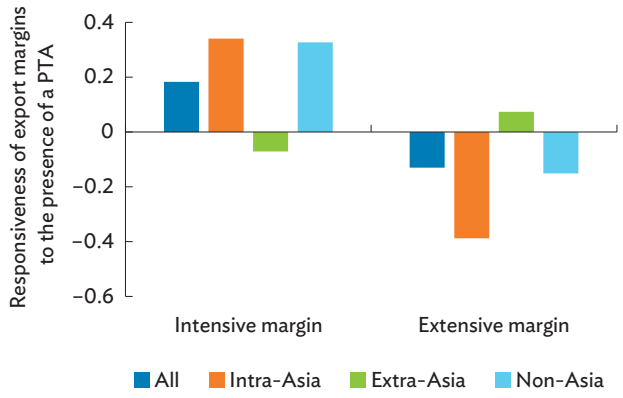
Trade agreements outside Asia boost exports across sectors, whereas intra-Asian agreements show limited impacts, especially in manufacturing, with Asian economies minor in services trade.

Considering the impact of trade agreements on sector exports also helps underline the differences in the impact of trade agreements across regions. Figure 2.17 reports the estimated impact of the presence of a trade agreement on sector exports for intra-Asian, extra-Asian, and non-Asian agreements. While variations in the size of the estimated effects are relatively large, the estimated impact of trade agreements in non-Asia is statistically significant in six of the eight sectors, with no significant effect observed in the sectors' crude materials and miscellaneous manufacturing. Effects are estimated to be large in many of the primary sectors, notably food and live animals, beverages and tobacco, and animal and vegetable oils. In contrast, effects are estimated to be smaller in manufacturing sectors. In the case of extra-Asian agreements, a significant impact of

[19] Trade data are converted to Standard International Trade Classification (SITC) Revision 1 for all years, with the margins constructed at the four-digit SITC product level.

[20] When using a linear estimator, such as ordinary least squares estimation, it is possible to decompose the overall effect of a trade agreement into an effect working along the intensive and extensive margins. The use of the nonlinear Poisson Pseudo-Maximum Likelihood approach, however, does not allow for an exact decomposition.

Figure 2.16: Estimated Impact of Preferential Trade Agreements on the Intensive and Extensive Margins of Merchandise Trade



PTA = preferential trade agreement.

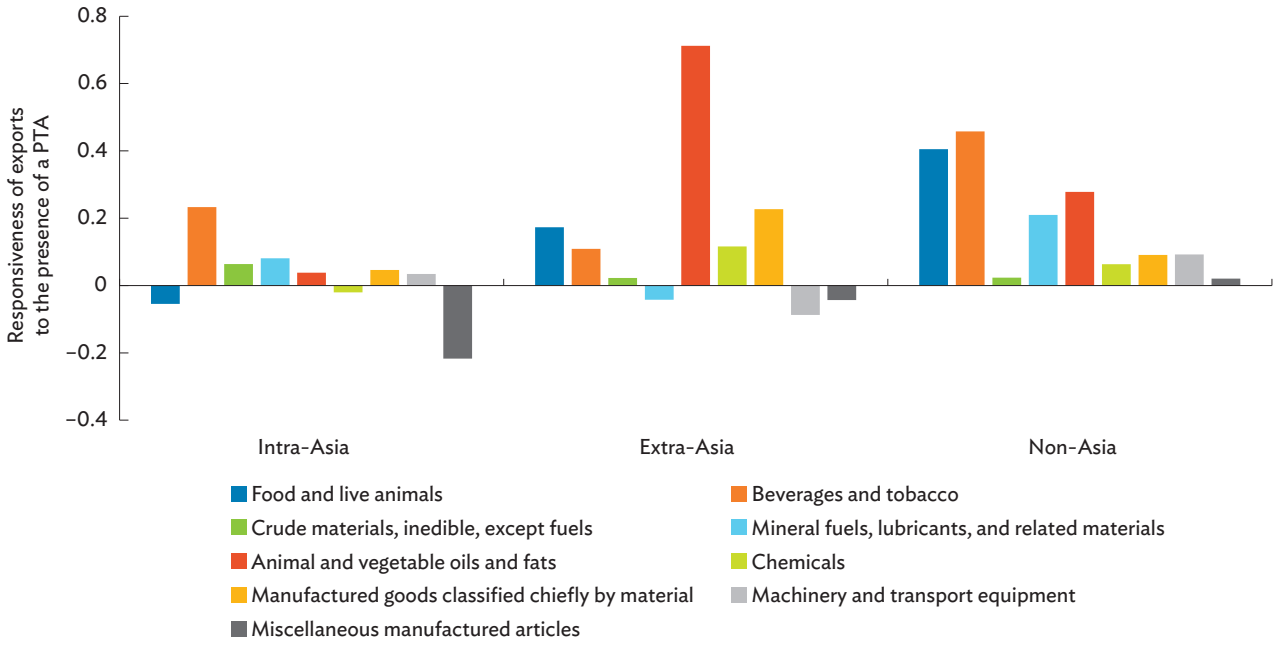
Notes: The figure reports the estimated impact of the presence of a trade agreement on the intensive and extensive margins of exports constructed according to Hummels and Klenow (2005). The results come from a structural gravity model using data over 1962–2022 and the Poisson Pseudo-Maximum Likelihood approach of Santos Silva and Tenreyro (2006).

Sources: ADB calculations using data from Feenstra et al. (2005); United Nations. UN Comtrade Database. https://comtrade.un.org/; and World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html (accessed September 2024).

a trade agreement is again found in the case of food and live animals and animal and vegetable oils, but so too for chemicals and manufactured goods. Results therefore suggest that agreements signed between Asian and non-Asian economies have succeeded in increasing manufactured exports between partners. In contrast, the effects for intra-Asian agreements are only found to be significant in one classification: beverages and tobacco. Such results confirm that intra-Asian agreements have had a limited effect on exports, with this especially so in manufactured sectors.

Considering services trade, it is notable that Asian economies account for a relatively small share of total services exports, especially when considering services trade between Asian economies (Figure 2.18).

Figure 2.17: Estimated Impact of Preferential Trade Agreements on Merchandise Trade by Sector

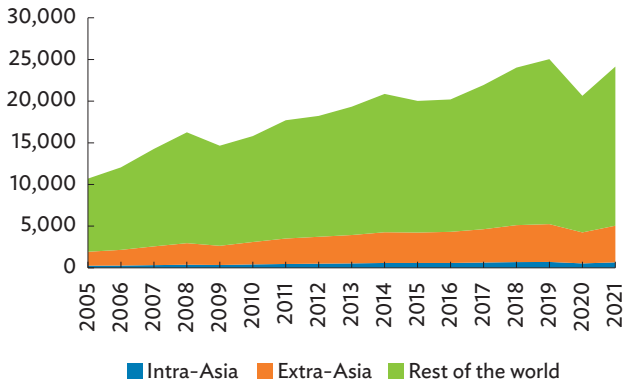


PTA = preferential trade agreement.

Notes: The figure reports the estimated impact of the presence of a trade agreement on sector exports. The results come from a structural gravity model using data over 1962–2022 and the Poisson Pseudo-Maximum Likelihood approach of Santos Silva and Tenreyro (2006).

Sources: ADB calculations using data from Feenstra et al. (2005); United Nations. UN Comtrade Database. https://comtrade.un.org/; and World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html (accessed September 2024).

Figure 2.18: Services Trade and Components Associated with Asian Economies ($ million)



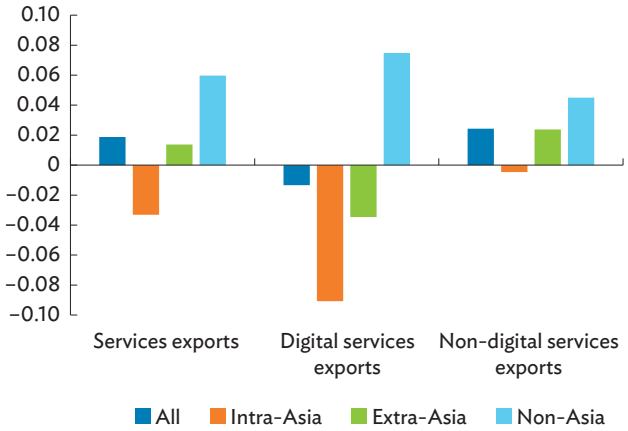
Source: ADB calculations using data from Organisation for Economic Co-operation and Development (OECD). OECD–World Trade Organization Balanced Trade in Services Database. https://www.oecd.org/en/data/datasets/oecd-balanced-trade-statistics.html (accessed August 2024).

Services trade agreements positively impact services exports for non-Asian economies but show no significant effect for Asian economies.

Estimating the effects of the presence of a trade agreement that covers services on services trade using the gravity model suggests no statistically significant impact for agreements involving Asian economies, despite evidence of a positive effect for agreements involving non-Asian economies (Figure 2.19). For non-Asian agreements, the estimated effect of the presence of a (services) trade agreement on bilateral services exports is about 6%, while for agreements involving Asian economies the effects are statistically no different from zero.

Adopting the definition of ADB (2022a) to distinguish between digital and non-digital services trade, differences are found in the effect of services trade agreements (Figure 2.19). In the case of non-digital services, the presence of a services trade agreement is estimated to increase non-digital services exports by about 2.5%. The effect is estimated to be 4.5% for non-Asian agreements, whereas there is no significant impact on non-digital services exports for either intra-Asian or extra-Asian agreements. In the case of digital services, services trade agreements have no significant impact on digital services exports. This reflects two offsetting forces, however. For non-Asian agreements, there is a strong positive association between the presence of a services trade agreement and digital services exports, with such an agreement estimated to increase services exports by just over 7.5%. For intra-Asian agreements, however, the effect is estimated to be negative, with the presence of a services agreement reducing digital services trade by nearly 9%. This could result from an additional regulatory burden imposed by PTA commitments, which may make it more difficult for businesses to deliver services in general. It is also important to keep in mind the relative nature of this figure, as services exports remain limited in Asia. For extra-Asian agreements, no significant relationship between the presence of a services trade agreement and digital exports is found.

Figure 2.19: Structural Gravity Estimates of Effects of Trade Agreement Presence on Services Trade



Note: The figure reports estimated coefficients from a structural gravity estimation of bilateral services exports using data for 2005–2021.

Source: ADB calculations using data from Organisation for Economic Co-operation and Development (OECD). OECD–World Trade Organization Balanced Trade in Services. https://www.oecd.org/en/data/datasets/oecd-balanced-trade-statistics.html (accessed August 2024).

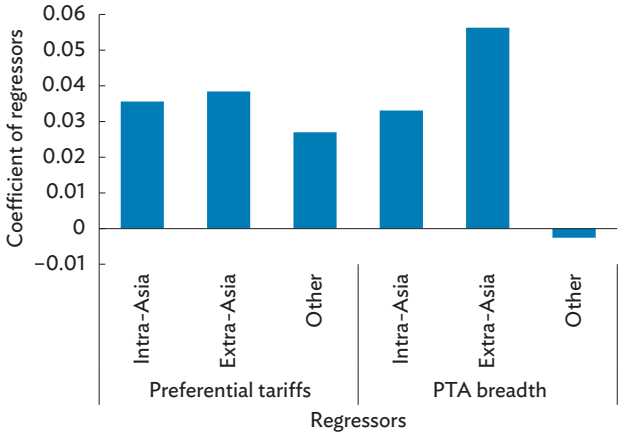
Asian PTAs show signs of "open regionalism" but the deeper PTAs are associated with stricter MFN tariffs.

Open regionalism, a key feature of economic integration in Asia, emphasizes inclusivity and nondiscrimination toward economies outside the region. This approach

seeks to maximize the benefits of regional cooperation without creating exclusive trade blocs that disadvantage nonmembers. It aligns with the "building block" theory of regional integration, where PTAs support multilateral trade liberalization, particularly in developing economies (Estevadeordal, Freund, and Ornelas 2008; Calvo-Pardo et al. 2014; Crivelli 2016).

Figure 2.20 highlights a positive relationship between preferential tariff rates negotiated under PTAs and MFN tariff rates. This association is stronger for both intra-Asian and extra-Asian PTAs compared to non-regional PTAs, reflecting the region's commitment to open regionalism. Preferential tariff reductions under PTAs appear to foster more open trade regimes. However, the broader range of provisions negotiated in these agreements may introduce complexities in implementation and policy alignment, potentially leading economies to adjust MFN tariffs upward (or reduce them more slowly) as a compensatory measure.

Figure 2.20: Estimated Impact of Preferential Tariffs and PTA Breadth on MFN Tariffs (The Open Regionalism Hypothesis)



MFN = most-favored nation, PTA = preferential trade agreement.

Notes: The figure reports estimated coefficients from a Poisson Pseudo-Maximum Likelihood regression model with the MFN tariff rates as the dependent variable, and preferential tariff rates, and PTA breadth as regressors, using data from 1996–2023. The regression includes reporter-partner-sector fixed effects, and year fixed effects.

Source: ADB calculations using data from United Nations. UN Comtrade Database. https://comtrade.un.org/; World Trade Organization. Integrated Data Base. https://tao.wto.org/site/glossary/en/IDB_-_INTEGRATED_DATA_BASE.htm; and World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html (accessed November 2024).

In contrast, broader non-regional PTAs are associated with lower MFN tariffs, suggesting that the inclusion of a wide range of provisions in these agreements complements, rather than contradicts, efforts to promote open regionalism in the rest of the world.

Rising Complexity and Compliance Costs of Trade Agreements

Preferential trade agreements in Asia look different to those in other regions. They tend to be narrower and tend to involve fewer partners than agreements signed elsewhere. They also tend to have more limited impacts on trade flows than agreements elsewhere, potentially because of the differences in the scope of the agreements. These limitations of intra-Asian trade agreements coincide with emerging trade issues that present challenges and opportunities for the future of regional integration in the region.

A key factor shaping the evolution of PTAs in Asia is the economic diversity among member economies and the growing scope of the agreements. As PTAs have grown more complex, involving broader sets of provisions such as labor standards, intellectual property, and environmental safeguards, the challenges of negotiating and ratifying these agreements have intensified. Higher-income economies in Asia are more prepared to implement comprehensive agreements, equipped with proper infrastructure and regulatory frameworks. In contrast, lower-income economies may face constraints that make adherence and enforcement of stringent provisions difficult.

This divergence can slow negotiations, as economies must balance ambitious trade liberalization goals with domestic capacity considerations. Both the Regional Comprehensive Economic Partnership (RCEP) and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership encountered these challenges, as lower-income members voiced concerns over their ability to comply with the higher standards.

Box 2.3: The Overlapping Trade Agreements Challenge in Asia: The Noodle Bowl Effect

The rise of free trade agreements (FTAs) has provided an alternative to global economic integration, as multilateral efforts under the World Trade Organization (WTO) have stalled since the Doha Round in 2001. Unlike the consensus required for WTO-led liberalization, bilateral and plurilateral FTAs allow for faster implementation among a few like-minded nations. However, this shift has led to a complex web of overlapping agreements—coined the "spaghetti bowl effect" by Bhagwati (1995)—with varied tariffs and rules that result in trade diversion, increased compliance costs, and administrative burdens that harm trade. Small firms, in particular, face challenges managing multiple FTAs, often limiting their access to preferential tariffs.

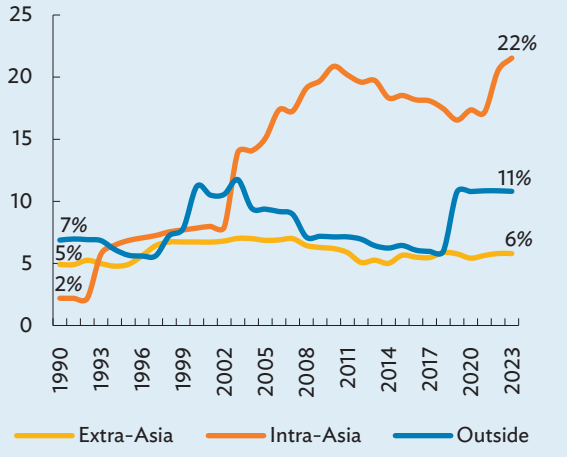
Asia has seen exponential growth in FTAs since the early 2000s, driven by economic integration and the absence of a shared economic institution. By 2023, Asian economies' engagement in overlapping FTAs was more than twice the global average, with 22% of Asian economy pairs involved in multiple agreements with the same partner (box figure 1a). Within Asia, 13% of economy pairs with a trade agreement are parties in a bilateral agreement in addition to at least one plurilateral agreement, while 59% are engaged in multiple plurilateral agreements if not engaged bilaterally (box figure 1b).

However, the surge in Asian FTAs has created a complex trade environment, posing challenges for businesses and raising concerns about the potential counterproductive effects of these agreements—dubbed the Asian "noodle bowl effect." Empirical studies highlight the costs of this trend, especially for small and medium-sized enterprises (SMEs), which often struggle to comply with complex requirements and underutilize FTA preferences. Kawai and Wignaraja (2010) found that only 28% of surveyed Asian exporting firms use FTA preferences, compared to 54% of Canadian exporters under the North American Free Trade Agreement. Larger firms in Japan and the People's Republic of China exhibit higher utilization rates, suggesting that a classic firm size effect underlies Asian FTA usage: the high fixed costs like learning FTA provisions and obtaining certificates of origin present significant barriers for Asian SMEs.

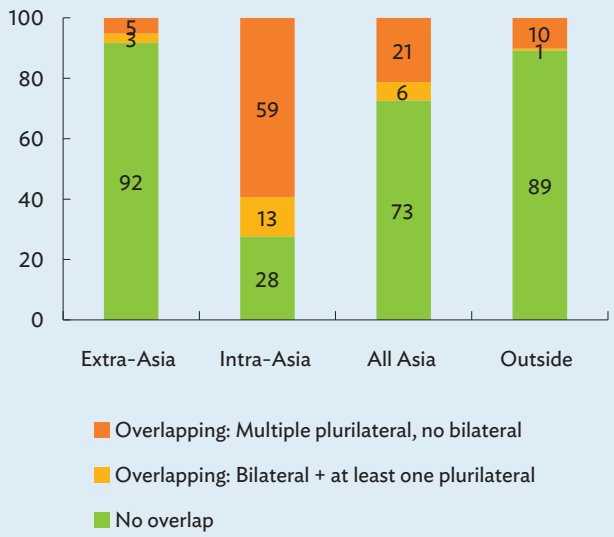
More recently, the region has witnessed the development of broader plurilateral agreement such as the Regional Comprehensive Economic Partnership (RCEP) or the Comprehensive and Progressive Agreement for Trans-Pacific Partnership. These mega-regional agreements were expected to simplify the "noodle bowl" of trade agreements by providing a common set of trade rules across multiple

1: Frequency of Overlapping Trade Agreements

(a) Economy pairs with overlapping trade agreements (%)



(b) Composition of overlapping FTAs, 2023 (%)



FTA = free trade agreement.

Notes: Extra-Asia covers economy pairs that include one Asian and one non-Asian partner, while intra-Asia involves exclusively Asian economy pairs. All Asia combines both extra-Asia and intra-Asia economy pairs. Outside refers to non-Asian economy pairs involved in at least one trade agreement. Economy pairs are classified as having overlapping agreements if both partners participate in multiple, identical trade agreements within the same year. Bilateral agreements involve only two economies, while plurilateral agreements include more than two economies and encompass agreements where at least one participant is a regional trade agreement.

Source: ADB calculations using data from World Bank. Deep Trade Agreements database (accessed September 2024).

continued on next page

Box 2.3: continued

partners. However, these agreements do not supersede the existing ones (ADB 2022b). In addition, the RCEP agreement has not been found to provide greater market access in terms of tariff commitments and rules of origin criteria and administration.

For policymakers, the challenge lies in minimizing the costs and maximizing the benefits of this network of FTAs. Key strategies to enhance Asian FTAs utilization and impact include support systems for FTA users, performance monitoring through the collection and analysis of utilization rates, and technical assistance for the renegotiations of critical provisions in view of expanding the depth of commitments and streamlining rules of origin criteria and operational certification procedures (ADB 2022b, 2022c; Crivelli and Inama 2022; Crivelli, Inama, and Pearson 2022, 2023, forthcoming).

Source: ADB calculations using data from World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html (accessed September 2024).

Economic diversity and unbalanced negotiating capacities among RCEP members can result in shallower agreements, implementation challenges, and low utilization rates of trade preferences. ASEAN utilization rates have been low (Inama, Crivelli, and Ha 2022). In the context of overlapping agreements (Box 2.3), the private sector may lack incentives to use RCEP preferences.

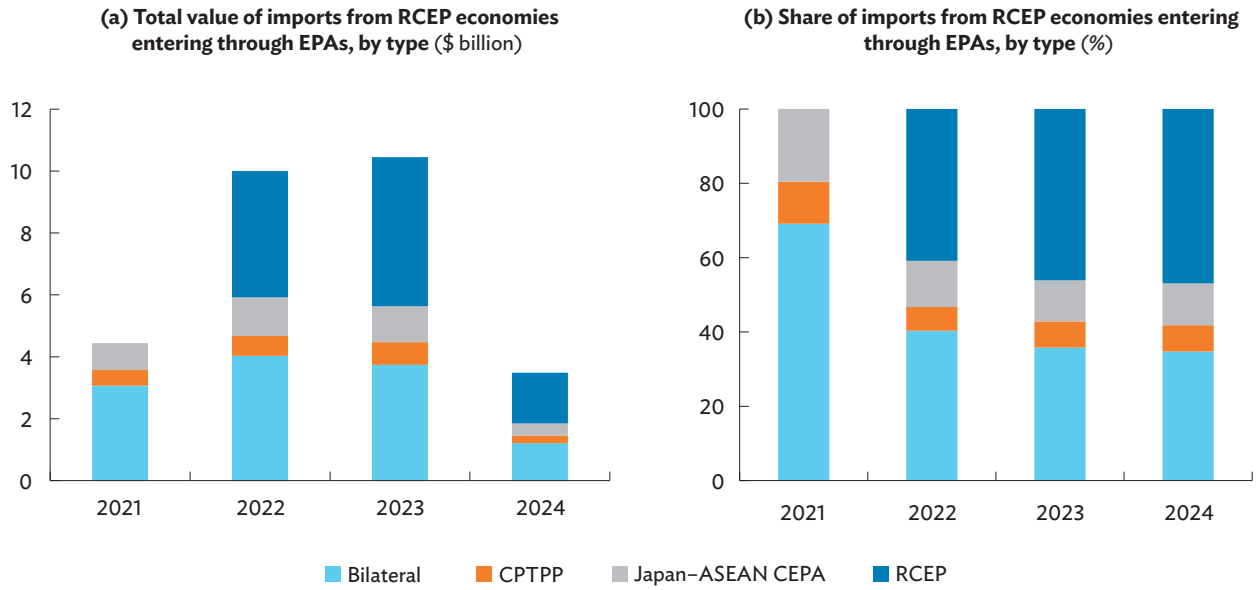
RCEP's complex rules and lengthy tariff schedules contribute to low utilization rates among ASEAN firms, which tend to prefer existing agreements with simpler compliance requirements.

Analyses by ADB (2022b), Crivelli and Inama (2022), and Crivelli, Inama, and Pearson (2022, 2023) indicate that RCEP's value for the private sector in ASEAN could be limited, particularly due to the lengthy and complex tariff phase-down schedules and rules of origin that do not bring additional benefits over existing agreements in the region. The complexity of operational certification procedures also poses significant compliance costs to firms which may prefer to continue using the ASEAN Trade in Goods Agreement rather than trying to comply with cumbersome and unpredictable proof of origin requirements under the RCEP (Crivelli, Inama, and Pearson 2024).

This trend is reflected in the most recent Japanese RCEP utilization data. Although RCEP is progressively graining shares over other agreements applied in Japan (Figure 2.21), most trade under RCEP is benefiting economies that were not part of a preexisting agreement with Japan. The PRC and the Republic of Korea are the main users of RCEP in Japan, representing together more than 90% of the Japanese imports entering under the RCEP (Figure 2.22), and amounting to $4.5 billion in 2023 (Figure 2.23). Other RCEP members continue to trade with Japan under other more favorable schemes of preferences. As an illustration, only 0.67% of exports from Viet Nam to RCEP member economies were covered by an RCEP certificate of origin in 2022, against 39% for the ASEAN Trade in Goods Agreement, 50.9% under either the Republic of Korea–Viet Nam or ASEAN–Republic of Korea FTA, and 29.3% under the ASEAN–PRC FTA (Crivelli, Inama, and Pearson forthcoming).

These limitations may stem from the compromises needed among many economies with varying capacities to negotiate effectively, leading to shallow commitments, stringent rules, and unpredictable practices in implementing procedures. Along the same lines, Crivelli, Inama, and Pearson (2023) highlight that developing RCEP members (excluding the PRC) are disadvantaged by stringent rules of origin on products where they hold a comparative advantage. These findings call for additional assistance in negotiating and implementing trade agreements in Asia (ADB 2022b).

Figure 2.21: Trade Values and Trade Shares Using Regional Comprehensive Economic Partnership in Japan

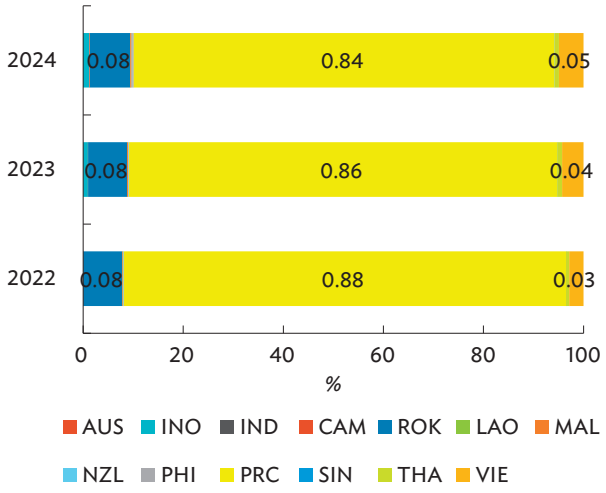


ASEAN = Association of Southeast Asian Nations, CEPA = Comprehensive Economic Partnership Agreement, CPTPP = Comprehensive and Progressive Agreement for Trans-Pacific Partnership, EPA = Economic Partnership Agreement, RCEP = Regional Comprehensive Economic Partnership.

Note: Data for 2024 cover the months of January to July only.

Source: ADB calculations using data from the Japan Customs. EPA Time Series Database. https://www.customs.go.jp/kyotsu/kokusai/toukei/index_e.htm (accessed September 2024).

Figure 2.22: Shares of Japanese Imports Entering Through Regional Comprehensive Economic Partnership, by Economy of Origin



AUS = Australia, CAM = Cambodia, PRC = People's Republic of China, IND = India, INO = Indonesia, ROK = Republic of Korea, LAO = Lao People's Democratic Republic, MAL = Malaysia, NZL = New Zealand, PHI = Philippines, SIN = Singapore, THA = Thailand, VIE = Viet Nam.

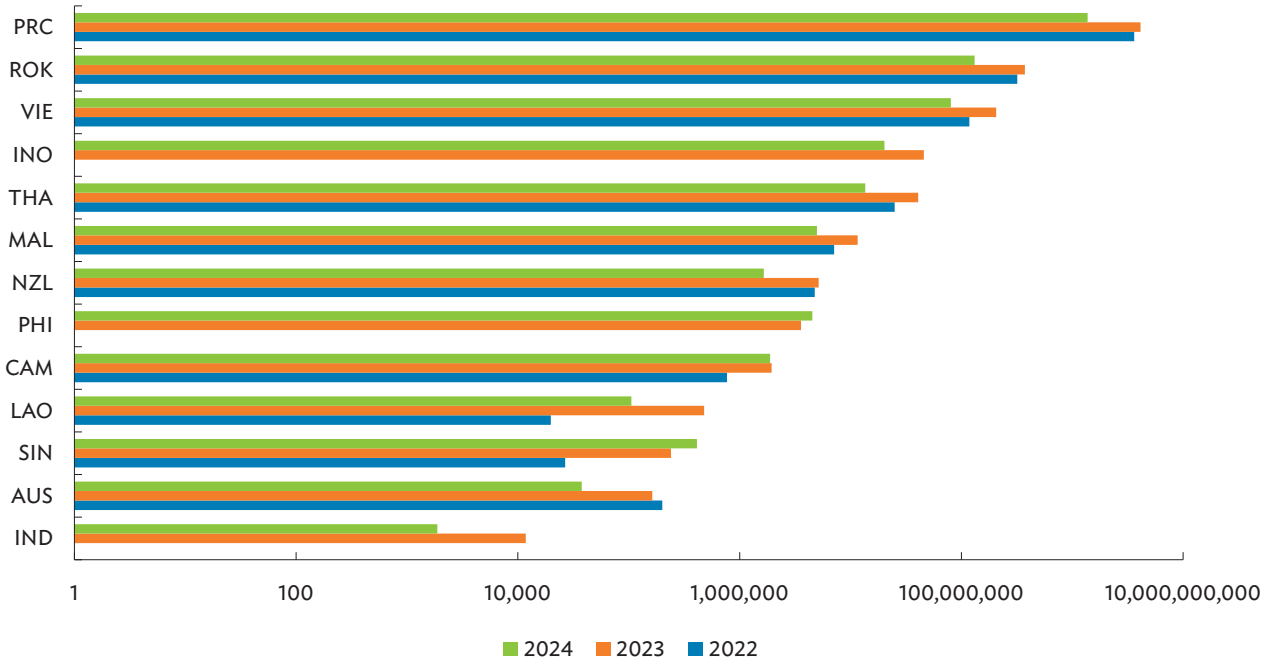
Note: Data for 2024 cover the months of January to July only.

Source: ADB calculations using data from the Japan Customs. EPA Time Series Database. https://www.customs.go.jp/kyotsu/kokusai/toukei/index_e.htm (accessed September 2024).

Challenges and Opportunities for Regional Cooperation and Integration

The findings of this chapter underscore the transformative role of PTAs in shaping trade dynamics within Asia. In recent decades, the number of PTAs has increased significantly, with the objective among Asian economies to improve market access and drive economic cooperation, particularly considering the limited progress in multilateral trade liberalization. However, the effectiveness of these agreements is constrained by shallow commitments, especially in critical market access provisions. PTAs in Asia tend to reduce tariffs but often fall short of dealing with deeper structural barriers to trade, which restricts their potential impact on trade flows and economic growth across the region. Furthermore, the overlapping network of PTAs—commonly known as the "noodle bowl" effect—creates compliance challenges and administrative costs, particularly for SMEs. These complexities discourage the use of PTAs and, in turn, lower their overall impact.

Figure 2.23: Trade Values Using Regional Comprehensive Economic Partnership in Japan, by Economy of Origin ($)



AUS = Australia, CAM = Cambodia, PRC = People's Republic of China, IND = India, INO = Indonesia, ROK = Republic of Korea, LAO = Lao People's Democratic Republic, MAL = Malaysia, NZL = New Zealand, PHI = Philippines, RCEP = Regional Comprehensive Economic Partnership, SIN = Singapore, THA = Thailand, VIE = Viet Nam.

Notes: Data are expressed in logarithmic scale, with 2024 estimates covering January to July only.

Source: ADB calculations using data from the Japan Customs. EPA Time Series Database. https://www.customs.go.jp/kyotsu/kokusai/toukei/index_e.htm (accessed September 2024).

This complexity extends beyond overlapping agreements to the scope of provisions negotiated within PTAs. While the chapter highlights signs of open regionalism—characterized by a positive association between preferential tariffs and MFN tariffs—broader PTAs are associated with higher MFN tariffs. This suggests that as the breadth of PTAs increases, the associated challenges may prompt economies to adopt more protective tariff policies, further limiting their potential to drive inclusive and open trade.

The chapter's sector analysis reveals that the benefits of PTAs are concentrated in specific industries, notably primary sectors such as food and animal products, while results in manufacturing sectors are limited. This pattern suggests that PTAs, as currently structured, may reinforce sector specialization without broadening trade across diverse industries. This concentration effect is also evident in the intensive margin of trade, where PTAs increase the quantity of goods traded but not necessarily the variety. This limited product diversity suggests that PTAs in Asia tend to promote trade within established sectors rather than foster a broader array of traded goods. This outcome aligns with the observed determinants of PTA formation: economies with high existing trade volumes are more likely to enter PTAs, reinforcing current trade patterns. To unlock the full potential of PTAs, future agreements could emphasize new sectors and prospective markets, supporting export diversification rather than merely amplifying established trade flows.

In services trade, PTAs have similarly limited impact in Asia, pointing to underlying constraints such as insufficient digital infrastructure and the need for substantial domestic reforms. Service provisions in PTAs often require regulatory standards that some members, particularly lower-income economies, may find challenging to meet. Until investments in digital infrastructure and regulatory frameworks are made,

the region's PTAs are unlikely to drive robust growth in services trade, limiting Asia's competitive position in the global services market.

Administrative burdens and the complexity of rules of origin also contribute to the limited impact of PTAs in Asia. Stringent and sometimes inconsistent requirements for rules of origin across PTAs increase compliance costs for firms, hampering their ability to access preferential tariffs. This issue is especially pronounced in RCEP, where complex tariff schedules and rules of origin discourage firms from fully utilizing available trade preferences. Streamlining rules and simplifying compliance procedures across PTAs could alleviate these burdens, enhancing the agreements' effectiveness and improving trade preference utilization.

In conclusion, while PTAs have increased intraregional trade shares in Asia, their effectiveness is hampered by shallow commitments, complex administrative requirements, and limitations in promoting export diversification and services trade. Addressing these challenges requires policy reforms aimed at simplifying trade rules, deepening commitments, and aligning rules of origin criteria with regional production patterns. In addition, fostering diversification by negotiating agreements with prospective markets rather than solely reinforcing existing trade relationships could expand the economic impact of PTAs. Providing technical support to developing economies for PTA implementation would also help ensure that all members benefit more equitably, building a cohesive and competitive trade environment across Asia.

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Annex 2a: Directional Analysis of Drivers of Preferential Trade Agreements in Asia and the Pacific

The main text reports the results of a "nondirectional" analysis where dependent variables of the reporter and the partner have been combined (ex. average most-favored nation [MFN], total trade). The analysis is further disaggregated in this annex, distinguishing between the reporter and partner components of all variables to investigate deeper nuances in drivers for preferential trade agreement (PTA) formation. This bilateral model reveals additional layers of complexity in PTA drivers, highlighting how differing policy choices between reporting and partner economies influence PTA negotiations (see table).

In terms of trade, export value remains a robust positive determinant of PTA formation, as economies with significant export flows to a partner tend to pursue PTAs to secure or expand market access. However, this effect is diminished by higher MFN rates on the reporter's side, suggesting that protectionist economies may be less inclined to rely on PTAs as a vehicle for export growth. On the other hand, partners to MFN rates exhibit no significant interaction with export values, indicating that the exporting economy's motives in forming a PTA are driven more by its own trade policies than the partner's protectionist stance.

Restrictive trade measures display a notable role in shaping PTA formation. A higher number of restrictive measures implemented by the reporter positively correlates with PTA formation, reflecting that economies with more protectionist tendencies may see PTAs as a strategic tool to balance market access commitments with domestic trade priorities. However, this positive effect is tempered by higher most-favored nation rates on the reporter's side, indicating that protectionist economies may rely more on unilateral measures than on PTAs to manage trade policies. Moreover, partner-implemented restrictive measures also show a strong association with PTA formation with a decreasing impact as the partner's MFN status is increasing.

Liberalizing measures, implemented either by the reporter or partner, remain critical in driving PTA formation, even more so when the MFN rate in other economies is increasing. This is consistent with strategies to leverage PTAs as a means to enhance trade openness and deepen integration with key partners. However, higher domestic MFN rates dampen this effect, indicating that protectionist reporting economies are less inclined to pursue further liberalization through PTAs.

MFN rates of both the reporter and partner economy negatively impact the probability of PTA formation. The relationship is however nonlinear for the MFN of the partner economy where the relationship reverses as MFN rates increase.

Panel Logistic Regression on Preferential Trade Agreement Formation Drivers, Economy-Pairs, and Year Fixed Effects

	(1)	(2)
Exports	0.22**	0.40*
	(2.17)	(1.91)
Imports	0.17	0.21
	(1.56)	(0.98)
Restrictive trade interventions (by reporter)	2.38***	12.57***
	(4.28)	(4.41)
Restrictive trade interventions (to partner)	1.76***	14.88***
	(3.06)	(4.03)
Liberalizing trade interventions (by reporter)	1.24*	15.02***
	(1.70)	(4.34)
Liberalizing trade interventions (to partner)	2.17***	14.95***
	(2.95)	(4.22)
Partner MFN	−0.76***	−1.24**
	(−4.56)	(−2.25)
Reporter MFN	−0.08	−1.26***
	(−0.57)	(−2.59)
Exports # Reporter MFN	−0.01	−0.06**
	(−1.10)	(−2.03)
Exports # Partner MFN	−0.01	−0.01
	(−1.16)	(−0.26)
Imports # Reporter MFN	−0.01	0.01
	(−0.96)	(0.46)
Imports # Partner MFN	−0.01	−0.05**
	(−0.72)	(−1.98)
Restrictive trade interventions (by reporter) # Reporter MFN	−0.14**	−1.57***
	(−2.39)	(−2.84)
Restrictive trade interventions (by reporter) # Partner MFN	0.36***	0.30
	(6.25)	(1.39)
Liberalizing trade interventions (by reporter) # Reporter MFN	−0.09	−2.83***
	(−1.42)	(−4.37)
Liberalizing trade interventions (by reporter) # Partner MFN	0.55***	0.79***
	(7.11)	(3.88)
Restrictive trade interventions (to partner) # Reporter MFN	0.43***	0.20
	(7.46)	(0.96)
Restrictive trade interventions (to partner) # Partner MFN	−0.11*	−2.00***
	(−1.69)	(−2.95)
Liberalizing trade interventions (to partner) # Reporter MFN	0.42***	0.85***
	(6.98)	(4.59)
Liberalizing trade interventions (to partner) # Partner MFN	−0.14**	−2.84***
	(−2.22)	(−4.29)
Reporter MFN^2		0.02
		(0.86)

continued on next page

Table: continued

	(1)	(2)
Partner MFN^2		0.03**
		(1.99)
Exports # Reporter MFN^2		0.00*
		(1.92)
Exports # Partner MFN^2		0.00
		(0.18)
Imports # Reporter MFN^2		−0.00
		(−0.44)
Imports # Partner MFN^2		0.00*
		(1.81)
Restrictive trade interventions (by reporter) # Reporter MFN^2		0.06**
		(2.18)
Restrictive trade interventions (by reporter) # Partner MFN^2		−0.01
		(−1.09)
Liberalizing trade interventions (by reporter) # Reporter MFN^2		0.11***
		(3.61)
Liberalizing trade interventions (by reporter) # Partner MFN^2		−0.02**
		(−2.14)
Restrictive trade interventions (to partner) # Reporter MFN^2		−0.01
		(−1.21)
Restrictive trade interventions (to partner) # Partner MFN^2		0.08**
		(2.57)
Liberalizing trade interventions (to partner) # Reporter MFN^2		−0.02***
		(−3.36)
Liberalizing trade interventions (to partner) # Partner MFN^2		0.11***
		(3.52)
Observations	57,124	57,124

MFN = most-favored nation.

Notes: T statistics in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Source: ADB calculations using World Bank. Deep Trade Agreements Database. https://datatopics.worldbank.org/dta/table.html; International Monetary Fund. Direction of Trade Statistics. https://data.imf.org/dots; and Global Trade Alert Database. https://www.globaltradealert.org (accessed 8 August 2024).