2 Trade and the Global Value Chains
The Challenging Trade Environment and Changing Global Value Chain Landscape

Recent Trends in Asia's Trade

Asia's trade growth was hit hard by the pandemic amid contracting global demand; nevertheless, recent high frequency data indicate a tempered yet gradual recovery.

Having peaked in 2017, Asia's trade growth began to slow in the second half of 2018 (Figure 2.1).[6] This came in the wake of rising trade tensions between the United States (US) and the People's Republic of China (PRC) along with continued moderation in global economic growth. Trade volume has since declined, although positive growth returned toward mid-2019 and was recovering by the end of 2019 until January 2020. It fell steeply negative beginning February 2020 as the coronavirus disease (COVID-19) pandemic greatly affected the PRC—a main driver of Asia's trade growth. By May 2020, trade volume contracted by -10.1%, has bottomed out since, returning to positive growth at 5.3% by September 2020.

Trade value growth moved in parallel with trade volume growth, although it has not been positive since February 2019 amid low inflation rates globally.[7] It followed a steep downward trajectory since the pandemic hit, prompting all major economies to impose stringent containment measures, including economic lockdowns and strict social distancing, among others. A steep oil price plunge, due to demand side concerns (a potential disruptive economic "sudden stop"), added to the downside pressure on trade value growth.

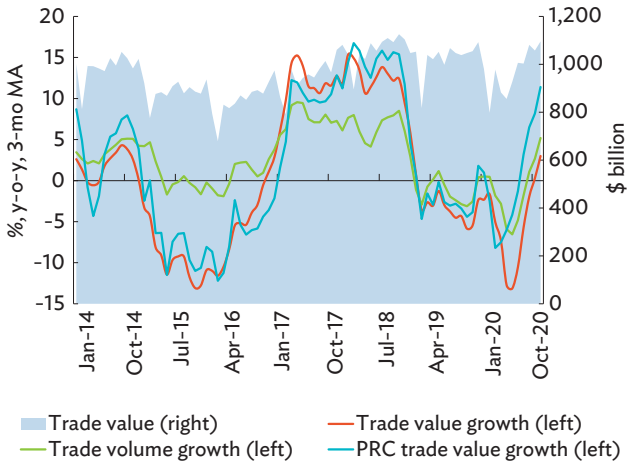
Temporary export and import bans on essential medical equipment and further trade restrictions of critical food supplies worsened trade performances both globally and regionally. Port closures—air, sea, and land—along with strengthened border crossing and quarantine procedures impeded the seamless flow of goods, along with temporary disruptions of supply chain networks due to bottlenecks in sourcing resources and deploying key personnel on sites.

With containment policies continuing to disrupt air and sea transport, supply chains, and consumption and investment, global trade value and volume growth rates are expected to continue to trend downward. But as economies began to exit lockdowns, resume economic activity and the mobility of people and goods, some recovery in trade growth is expected—already evident in some economies. First was the PRC, which entered lockdown near the beginning of the year. In contrast to the regional trend, PRC trade value began to rise again beginning April 2020 as it began lifting lockdowns (Figure 2.1). Throughout the second quarter, the PRC's trade value growth steadily recovered from –8.2% in March 2020, its lowest since 2018, to 11.4% growth in November 2020.

[6] Asia refers to the 49 members of the Asian Development Bank (ADB) within Asia and the Pacific, which includes Japan and Oceania (Australia and New Zealand) in addition to the 46 developing Asian economies.

[7] Crude oil prices had fallen by as much as 75% in June 2020 from their January level. It has partly recovered since, as governments began to lift quarantine measures and global oil supply fell after successful production cuts were coordinated by OPEC+. Moreover, oil price volatility has diminished recently. The Brent crude oil price is forecast to increase slowly, resulting in an average $42.50/barrel in 2020. And as economic activity normalizes and the oil market rebalances, it is forecast to average $50/barrel in 2021 (ADB 2020b).

Figure 2.1: Monthly Trade, by Value and Volume—Asia



mo = month, MA = moving average, PRC = People's Republic of China, y-o-y = year-on-year.

Notes: Trade volume growth rates were computed using volume indexes. For each period and trade flow type (i.e., imports and exports), available data include indexes for Japan and the PRC, and aggregate indexes for selected Asian economies: (i) advanced economies (excluding Japan) include Hong Kong, China; the Republic of Korea; Singapore; and Taipei,China; and (ii) emerging economies (excluding the PRC) include India; Indonesia; Malaysia; Pakistan; the Philippines; Thailand; and Viet Nam. To come up with an index for Asia, trade values were used as weights for the computations. Trade value levels and growth rates were computed by aggregating import and export values of the same Asian economies.

Sources: ADB calculations using data from CEIC; and CPB Netherlands Bureau for Economic Policy Analysis. World Trade Monitor. https://www.cpb.nl/en/data (accessed January 2021).

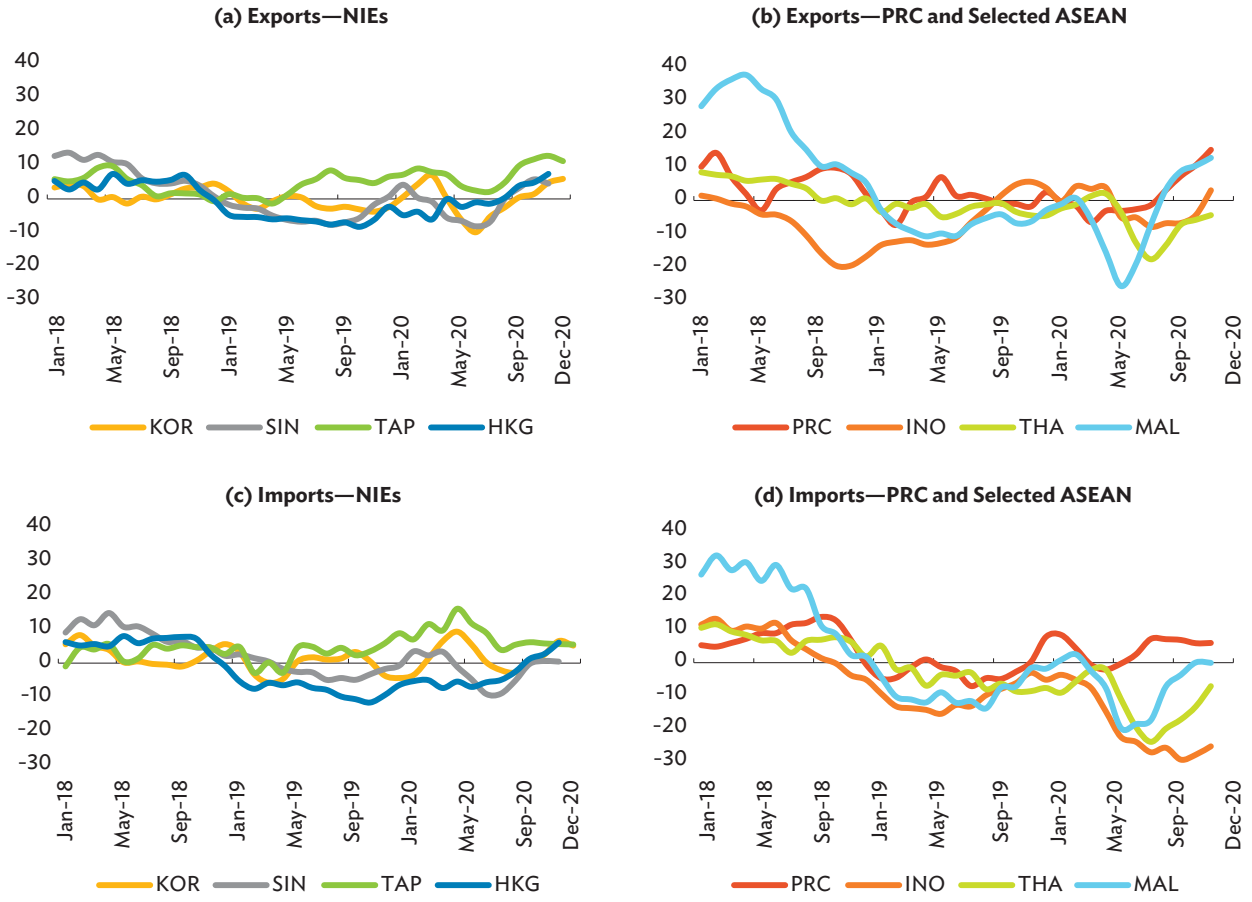
The pandemic adversely affected trade growth for all economies in the region, but to varying degrees and at different paces. Changes in the patterns of import and export volumes are similar to the trade value growth trends since the pandemic began (Figure 2.2). Taipei,China continues to stand out as its export and import volume growth were least hurt by the pandemic. Volume growth rates certainly slowed significantly, especially import volumes, but never contracted—export volume growth was 12.7% and import growth was 5.6% in November 2020—with export growth the highest among newly industrialized economies (NIEs). The other NIEs—Hong Kong, China; the Republic of Korea; and Singapore—saw trade volumes contract during the early pandemic period. But their export volume growth rates were already on a recovery trajectory beginning June 2020 for Hong Kong, China; and in July 2020 for the Republic of Korea and Singapore. Compared with export volume growth, import volumes took longer due to deeper declines across the region partly reflecting a tepid recovery in domestic demand.

Asia's export and import volume and value growth trends have generally followed the trajectory of global business confidence until October 2020 (Figure 2.3). The significant uncertainties associated with health risks and economic activities pose constant downside risks to global trade, including Asia's. Although maritime and land transport has been resilient during the pandemic, air freight has been fragile, and various types of travel restrictions and voluntary travel restraints will likely hamper the recovery in international trade. With the COVID-19 pandemic suppressing business confidence and consumer sentiment, the outlook for the region's external demand remains bleak for 2020 (ADB 2020a). Although economies have begun to lift restrictions, without a clear sign of worldwide containment, the global pandemic is expected to continue to upend production, trade, and tourism, both within the region and externally—resulting in suppressed trade growth.[8]

Standardized high frequency indicators—such as global shipping and packaging indexes and port calls—and some monthly indicators suggest global trade bottomed out during the first half of the year. For instance, the Bloomberg and Dow Jones indexes, which declined to as low as below 3 standard deviations below average toward the end of March 2020, recovered steeply during the second quarter, suggesting global trade growth could recover faster than anticipated (Figure 2.4).

[8] In a press release on 20 April 2020, the World Trade Organization (WTO) forecasts that world trade was expected to fall by 13%–32% in 2020 (WTO 2020a). On 22 June, it announced that the volume of merchandise trade shrank by 3% year-on-year in the first quarter (WTO 2020b). Subsequently, the trade growth forecast for 2020 was revised to –9.2% (WTO 2020c). However, looking ahead to 2021, adverse developments, including a second wave of COVID-19 outbreaks, weaker than expected economic growth, or widespread return to trade restrictions, could cause the trade recovery to fall short of projections.

Figure 2.2: Monthly Trade Volume Growth—NIEs, PRC, and Selected ASEAN
(%, y-o-y, 3-month moving average)



ASEAN = Association of Southeast Asian Nations; HKG = Hong Kong, China; INO = Indonesia; KOR = Republic of Korea; MAL = Malaysia; NIE = newly industrialized economy; PRC = People's Republic of China; SIN = Singapore; TAP = Taipei,China; THA = Thailand; y-o-y = year-on-year.

Notes: Latest data are September 2020 for all economies, except TAP and KOR (October 2020). Data for the PRC refer to the export and import volume index from CPB Netherlands Bureau for Economic Policy Analysis. For the rest, export and import volume is computed by deflating export and import values by their corresponding price indexes.

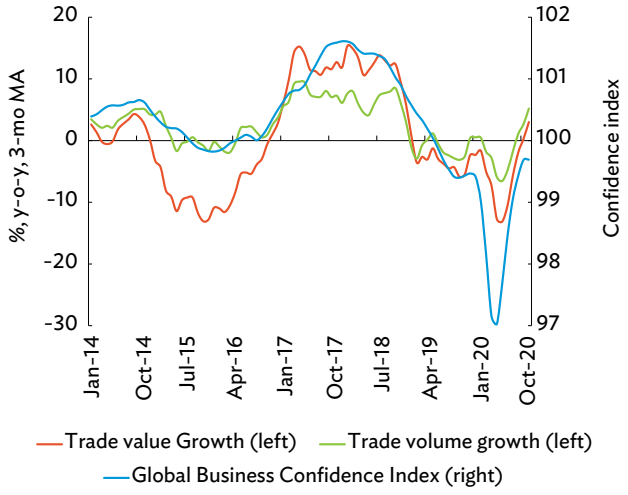
Sources: ADB calculations using data from CPB Netherlands Bureau for Economic Policy Analysis. World Trade Monitor. https://www.cpb.nl/en/data; and Haver Analytics (accessed January 2021).

Looking at the number of port calls, all regions saw a drop at the beginning of the first quarter—in January and February for Asia and in February for the rest of the world—as major ports in the PRC; Singapore; the Republic of Korea; and Hong Kong, China halted operations during lockdowns (Figure 2.5). The trend recovered for all regions since March. By mid-September, the number of port calls were already around 86% of their pre-pandemic levels.

For the first time since the financial crisis of 2008–2009, Asia's trade contracted in 2019 as external demand declined amid a persistent uncertain trade environment.

Asia's merchandise trade volume declined by –0.5% in 2019 from 4.1% growth in 2018 (Figure 2.6a). Rising trade tensions between the US and the PRC along with the continued slowdown in global economic growth resulted in the decline of the region's trade volume growth. The region's output, on the other hand, continued to grow at 4.6% in 2019, though below the 5.3% in 2018.

Figure 2.3: Global Business Confidence and Asia's Trade Volume Growth

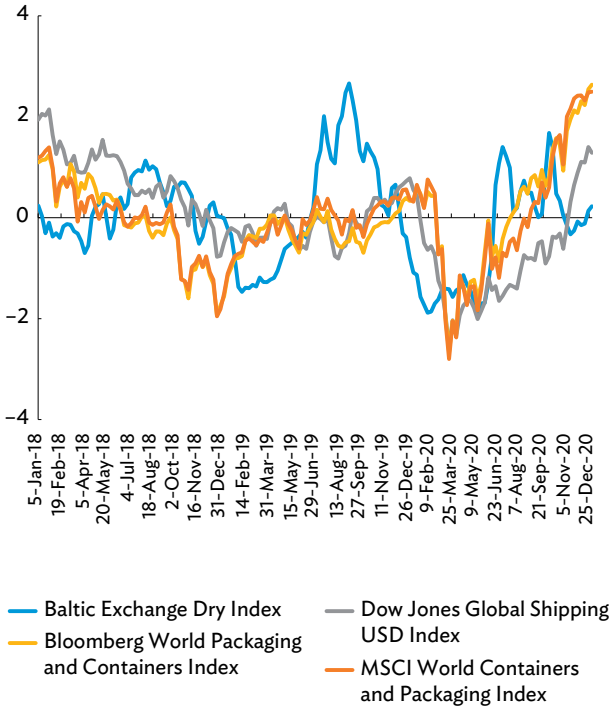


mo = month, ma = moving average, y-o-y = year-on-year.

Notes: Trade volume growth rates were computed using volume indexes. For each period and trade flow type (i.e., imports and exports), available data include indexes for Japan and the People's Republic of China (PRC), and aggregate indexes for selected Asian economies: (i) advanced economies (excluding Japan) include Hong Kong, China; the Republic of Korea; Singapore; and Taipei,China; and (ii) emerging economies (excluding the PRC) include India; Indonesia; Malaysia; Pakistan; the Philippines; Thailand; and Viet Nam. To come up with an index for Asia, trade values were used as weights for the computations. Trade value levels and growth rates were computed by aggregating import and export values of the same Asian economies. Global business confidence index covers Organisation for Economic Co-operation and Development economies.

Sources: ADB calculations using data from CEIC; CPB Netherlands Bureau for Economic Policy Analysis. World Trade Monitor. https://www.cpb.nl/en/data; and OECD. Business confidence index indicator. doi: 10.1787/3092dc4f-en (accessed January 2021).

Figure 2.4: Global Trade—Weekly Indicators (Z-scores)

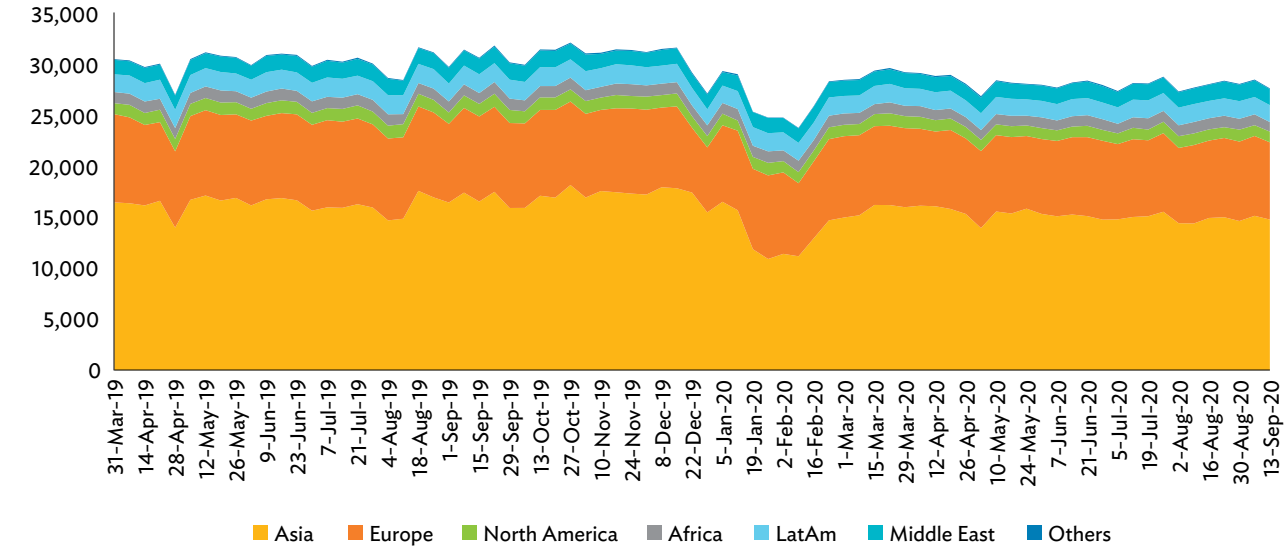


USD = United States dollar.

Notes: The indexes have been normalized using z-scores. Calculated mean and standard deviation of the indexes were for 1 May 2018 to 25 December 2020, except for Baltic Exchange Dry Index, which is only up to 11 November 2020.

Sources: ADB calculations using data from Bloomberg; CEIC; and Freights Baltic Index. https://fbx.freightos.com/ (accessed December 2020).

Figure 2.5: Number of Port Calls by Region

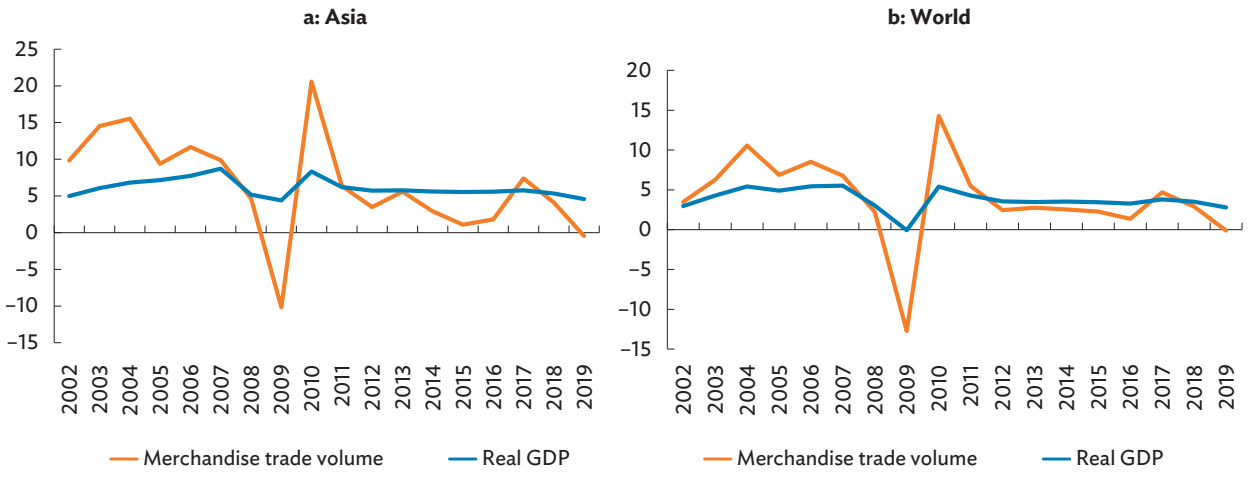


LatAm = Latin America.

Note: Composition of regions follows Asia Regional Integration Center's integration indicators country groupings at https://aric.adb.org/integrationindicators/groupings.

Source: United Nations. Commodity Trade Database: AIS Weekly Port Calls. https://comtrade.un.org/data/monitor#AISPort (accessed November 2020).

Figure 2.6: Merchandise Trade Volume and Real GDP Growth—Asia and World (%, year-on-year)



GDP = gross domestic product.

Note: Real GDP growth is weighted using purchasing power parity.

Sources: ADB calculations using data from International Monetary Fund. World Economic Outlook October 2020 Database. https://www.imf.org/en/Publications/WEO/weo-database/2020/October (accessed October 2020); and World Trade Organization. Statistics Database. http://data.wto.org/en (accessed October 2020).

Global trade volume also declined (–0.1%) in 2019 after growing 2.9% in 2018—also the first contraction in global trade since 2009. Despite falling trade volumes, global economic output continued to grow, but at lower rate of 2.8%, compared to 3.5% in 2018 (Figure 2.6b).

The region's export volume barely grew at 0.05% in 2019, a significant drop from the 2018 growth rate of 3.5%. Most major exporter economies in Asia had either negative or decelerating growth rates. Those with negative growth rates included Hong Kong, China (–7.3%); Indonesia (–3.3%); Thailand (–3.0%); Japan (–1.9%); Malaysia (–2.0%); the Republic of Korea (–1.8%); and Singapore (–3.0%). Economies that continued to grow, although at lower rates than in 2018 were Australia (0.5% in 2019 from 5.1% in 2018), the PRC (2.0% from 4.1%), Pakistan (13.7% from 15.9%), Viet Nam (8.6% from 12.3%), India (2.8% from 3.6%), and New Zealand (2.1% from 2.2%). Some economies accelerated growth or recovered from 2018, such as Taipei,China (3.9% from 3.4%); the Philippines (4.3% in 2019 from –1.8% in 2018); Sri Lanka (7.2% from 0.4%); Cambodia (14.9% from 12.3%); Kazakhstan (3.1% from 2.3%); and the Kyrgyz Republic (5.1% from 1.2%).

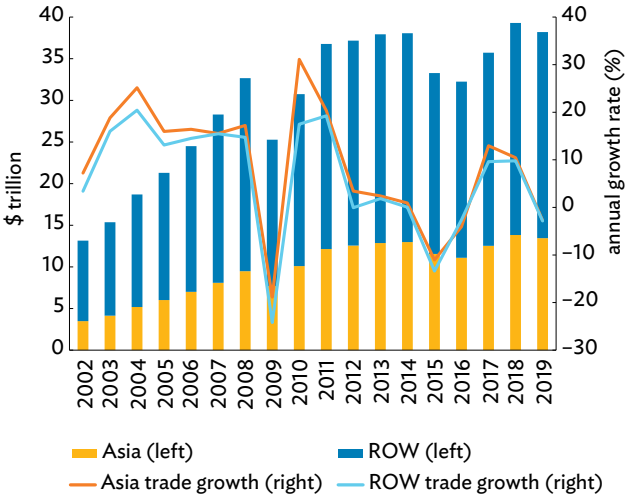
Compared with exports, Asia's import volume declined by –1.1% in 2019—significantly below 2018 growth of 4.9%. Also similar to export volumes, many major importers in the region contracted: Hong Kong, China (–9.3%); Sri Lanka (–6.0%); Indonesia (–6,4%); Thailand (–5.0%); Malaysia (–3.0%); the Philippines (–2.8%); India (–1.6%); Australia (–1.4%); the Republic of Korea (–1.3%); Singapore (–1.2%); and Pakistan (–0.7%). Import volumes for the PRC (0.2% from 6.4% in 2018), Japan (0.4% from 1.9%), and New Zealand (0.4% from 6.4%), barely grew. Viet Nam had positive growth but at a lower rate of 7.2% (from 9.3% in 2018); while a few economies accelerated like Taipei,China (4.4% from 3.1% in 2018) and Cambodia (19.5% from 15.9% in 2018).

Asia's trade values fell more than trade volumes.

The trade value of the region fell at a rate of –2.8% in 2019, a large turnaround from 10.4% in 2018 (Figure 2.7). The region's trajectory is mirrored by the trend of global trade value, which also fell to –2.8% in 2019 compared with 10.0% in 2018. Whereas global export and import

values fell at the same rate (–2.8%), in Asia, imports value declined at –3.7%, larger than the decline of export values at –1.9%.

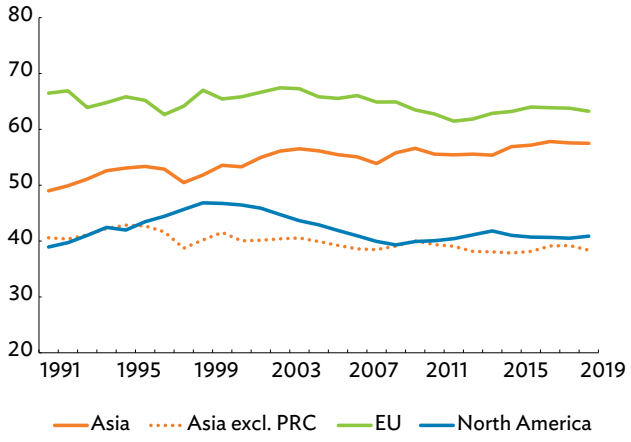
Figure 2.7: Trade Value—Asia and World



ROW = rest of the world.

Source: ADB calculations using data from World Trade Organization. Statistics Database. http://data.wto.org/en (accessed October 2020).

Figure 2.8: Intraregional Trade Shares—Asia, European Union, and North America (%)



EU = European Union, PRC = People's Republic of China.

Notes: Values expressed as percentage of the region's total merchandise trade (sum of exports and imports). EU refers to the aggregate of 28 members including the United Kingdom. North America covers Canada, Mexico, and the United States.

Source: ADB calculations using data from International Monetary Fund. Direction of Trade Statistics. http://data.imf.org/DOT (accessed December 2020).

Asia's Intraregional Trade

Despite the deteriorating global trade environment, Asia continues to show strong intraregional trade linkages.

The region's intraregional trade share remained stable at 57.5% in 2019, still above the 56.5% average for 2012–2018 (Figure 2.8). This remains higher than North America (40.9%) and lower than the European Union (EU) (63.2%).[9] The strong trade linkages among the Asian economies could serve as a buffer for a potential trade growth slowdown or decline. The pandemic, which could diminish the rationale for further expanding globalization or prompt a rationalization or diversification of existing supply chains—optimizing regional trade linkages and strengthening regional trade integration—could help the region's economies navigate the challenges to sustain trade growth. The region needs to embrace stronger trade liberalization and facilitation regimes, including engaging in regional and bilateral trade agreements and improving trade logistics to continue this momentum.

After 2 years of recovery in 2017 (14.0%) and 2018 (10.4%), Asia's intraregional trade values contracted by –2.7% in 2019. Similarly, Asia's extraregional trade values also fell at a rate of –2.4% in 2019 after having grown by 11.5% in 2018. Taken together, these two factors pulled down the region's intraregional trade share slightly in 2019.

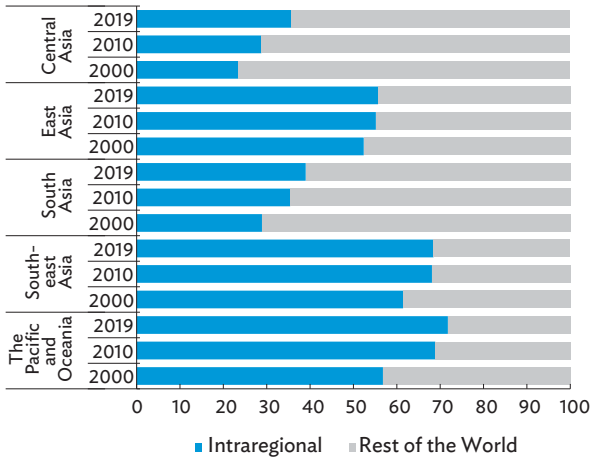
The importance of the PRC as the region's major trading partner has also grown substantially—as shown by the increasing gap of intraregional trade share between Asian economies excluding the PRC and Asia including the PRC (Figure 2.8). By 2019, Asia's trade relations with the PRC contributed about a third to the region's intraregional

[9] The EU refers to the 28 members that include the United Kingdom (UK) in this analysis. (The UK formally withdrew from the EU on 31 January 2020 with the transition effective at the end on 31 December 2020. See Eddington (2020).

trade share. While intraregional trading within Asia excluding the PRC remained relatively stable over the past 30 years—within a 38% to 43% range—the dynamics of the extent of its trade linkages with other regions have changed considerably. The most important trading partner of Asia (excluding the PRC) outside the region was North America in 1990 (24.8%), followed by the EU (17.6%). In the past 3 decades, the share of Asia's (excluding the PRC) regional trade with North America and the EU gradually fell by 2019 to 12.4% and 11.0%, respectively, as the region diversified to other trading partners, mainly the PRC: the regional trade share with the PRC has grown to 24.4% (from 5.8% in 1990) with the share to the rest of the world up modestly to 13.8% (from 13.0% in 1990).

By April 2020, intraregional trade for the EU and North America fell relatively sharply, whereas Asia (including the PRC) remained stable.

Figure 2.9: Intraregional Trade Shares by Asian Subregions *(%)*



Note: Timor-Leste was recently classified under Southeast Asia, previously it was under the Pacific and Oceania.

Source: ADB calculations using data from International Monetary Fund. Direction of Trade Statistics. http://data.imf.org/DOT (accessed December 2020).

Intraregional trade linkages deepened across subregions over the past decade.

From 2010 to 2019, intraregional trade shares increased across all subregions, albeit at varying rates. Central Asia had the highest increase, from 28.7% in 2010 to 35.7% in 2019—a 24% or 7 percentage point increase. This was followed by the Pacific and Oceania with intraregional share growth of 4.2% or 2.9 percentage points from 68.9% in 2010 to 71.8% in 2019. The intraregional share for East Asia barely changed, from 55.2% in 2010 to 55.7% in 2019.

By magnitude, the Pacific and Oceania continued to hold the highest intraregional share in 2019 (71.8%), followed by Southeast Asia (68.4%) and East Asia (55.7%) (Figure 2.9). Despite having increased the most over the past decade, the intraregional trade share for Central Asia and South Asia remained below 40%.

Across subregions, East Asia continues to have the highest intra-subregional trade share (34.7%), followed by Southeast Asia (22.4%). The other subregions all recorded intra-subregional trade shares below 10%—Central Asia (7.8%), the Pacific and Oceania (3.9%), and South Asia (5.6%).

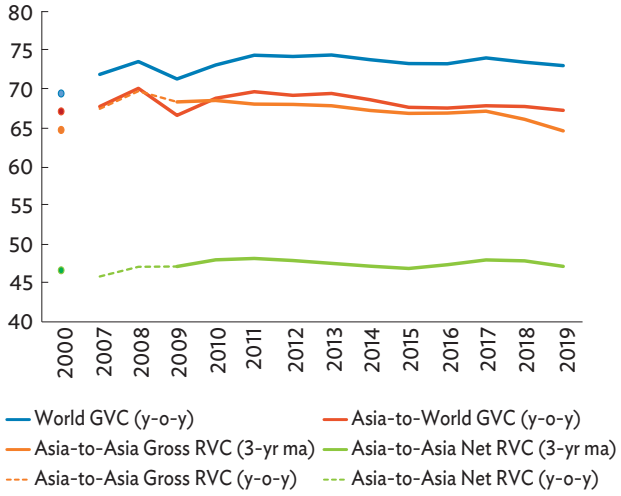
Progress of Global and Regional Value Chains

The expansion of global value chains continued to stagnate with regional value linkages within Asia following a similar trend.

Globally, the rapid increase in cross-border production networks since 2000 slowed significantly in the 2010s, following the recovery from the 2008–2009 global financial crisis (Figure 2.10). Global value chain (GVC) participation peaked between 2011 and 2013 when the share of value-added content comprised three-quarters of the world's gross exports, surpassing the pre-financial crisis rate. Asia's GVC participation, while remaining strong, continues to slow and even declined the past 2 years, mirroring the general global trend of stagnating overall GVC participation. Asia-to-Asia value chains declined in 2018 and 2019. Still, the share of traded intermediate goods for further processing through cross-border production networks remains high at 67.4% of the region's gross exports in 2019, or about the level in 2000 (67.2%).

Asian economies' participation of 47.2% (3-year moving average) in the regional value chain (RVC) has nearly

Figure 2.10: GVC and RVC Participation Rates *(%)*

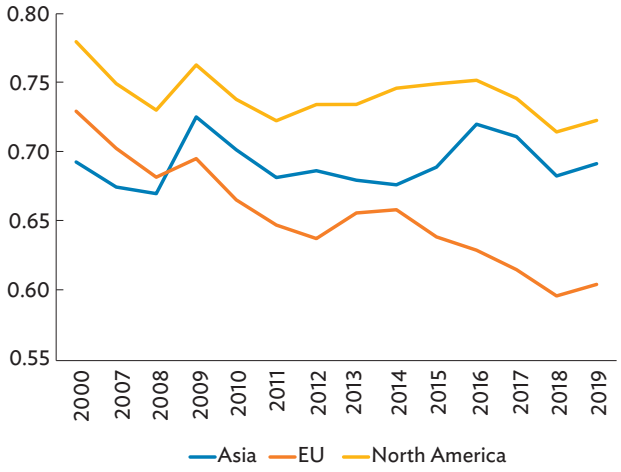


3-yr ma = 3-year moving average, GVC = global value chain, RVC = regional value chain, y-o-y = year-on-year.

Notes: The GVC participation rate is the share of gross exports that involves production in at least two economies using cross-border production networks. The RVC participation rate, on the other hand, is the same as that of GVC, except that it only involves economies of the same region.

Sources: ADB calculations using data from ADB. Multi-Regional Input–Output Tables; and methodology by Wang, Wei, and Zhu (2013).

Figure 2.11: RVC–GVC Intensity—Asia, European Union, and North America



EU = European Union, GVC = global value chain, RVC = regional value chain.

Notes: RVC–GVC intensity is the ratio of RVC participation and GVC participation rates. The EU refers to the aggregate of 28 members including the United Kingdom. North America consists of United States, Canada, and Mexico.

Sources: ADB calculations using data from ADB Multi-Regional Input-Output Tables; and methodology by Wang, Wei, and Zhu (2013).

returned to its 2000 rate (46.7%) after falling from a peak of 48% in 2017. GVC participation is higher than RVC participation. Moreover, the region's intensity of participation in RVCs against GVC participation (the ratio of the two) has been volatile (returning to its 2000 level of 0.69 in 2019) (Figure 2.11).

Asia has relatively strong regional value chain linkages—as measured by the regional value chain to global value chain intensity ratio (Figure 2.11). Asia's RVC-to-GVC participation remains much lower than in North America, but higher than the EU.[10] Asia is gradually closing the gap with North America in terms of RVC–GVC intensity. The EU's RVC–GVC intensity has sharply declined over the past 2 decades while the region's trade networks expanded outside the region.[11]

Cross-border production networks in Asia remain stronger in primary goods, leaving RVC opportunities in higher value-added sectors.

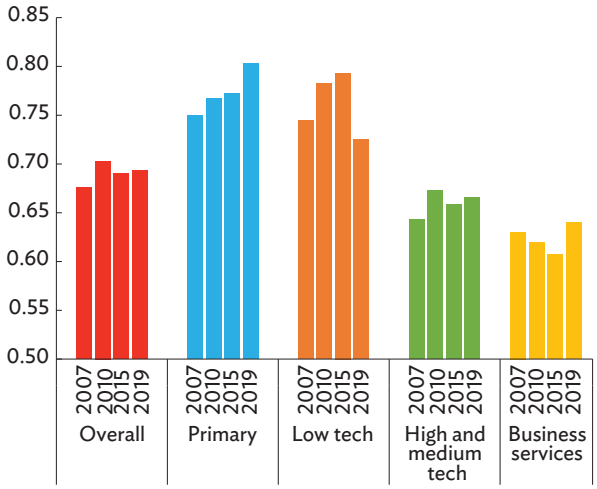
Asia had its highest GVC participation rate (86.6%) in the primary sector—which includes agriculture, mining, and quarrying. Most of this value-added trading is done within the region with an RVC rate of 69.5%, hence the high intensity ratio (Figure 2.12). The low-technology sector also has a relatively high intensity ratio, although it has the lowest GVC participation (50.1%) and RVC participation (36.3%) rates in 2019.[12] Its RVC, however, is high relative to GVC, reflecting a faster increase in value-added factor content trading within the region than outside the region.

[10] The EU includes the UK in this analysis (see footnote 6).

[11] For instance, a network analysis that maps the evolution of the topology of global production network structure between 2000 and 2017 by Li, Meng, and Wang (2019) shows how the supply hub in Europe, in particular Germany, developed direct linkages to Asia supply hubs like the PRC, especially in the information and communication technology (ICT) and services sector. To a certain extent, this is also observed in the resulting network analysis of demand hubs of trade in value-added for the ICT sector.

[12] The low-tech sector consists of the following industries: food, beverages, and tobacco; textiles and textile products; leather, leather products, and footwear; wood and products of wood and cork; pulp, paper, paper products, printing, and publishing; rubber and plastics; manufacturing; recycling; electricity, gas, and water supply; and construction.

Figure 2.12: RVC–GVC Trade Intensity, by Major Sector—Asia



GVC = global value chain, RVC = regional value chain.

Note: Sectoral classification is based on ADB (2015).

Sources: ADB calculations using data from ADB Multi-Regional Input-Output Tables; and methodology by Wang, Wei, and Zhu (2013).

In contrast, intermediate trade linkages within the region relative to the region's GVC trade linkages rose slowly in the medium and high technology and business services sectors. Their GVC participation rates were higher than the low-technology sector at 69.9% and 68.6% in 2019, respectively (although still below primary sector levels). On the other hand, much less intermediate trading in these industries was done within the region, with RVC participation rates in 2019 at 46.6% and 43.9%, respectively, resulting in relatively lower RVC–GVC intensity. These regional trade linkage patterns imply that Asian economies still have room to strengthen their RVC in higher value goods and services. Policies that can improve capacity and relax trade and investment restrictions would help further deepen an economy's participation in global and regional value chains beyond the primary and low tech sectors.

National RVC and GVC participation levels have a high degree of heterogeneity.

In general, economies with higher GVC participation rates also have higher RVC participation rates, while some economies show deeper regional value linkages within the region (Figure 2.13). Economies, such as Hong Kong, China; Mongolia; Pakistan; Nepal; and Brunei Darussalam, have higher RVC participation rates than GVC participation rates.

For Asia, RVC–GVC intensity declined slightly between 2015 and 2019. Cambodia had the biggest decline and the lowest RVC–GVC intensity in 2019. This is partly because its GVC participation rate rose faster than its RVC participation rate.

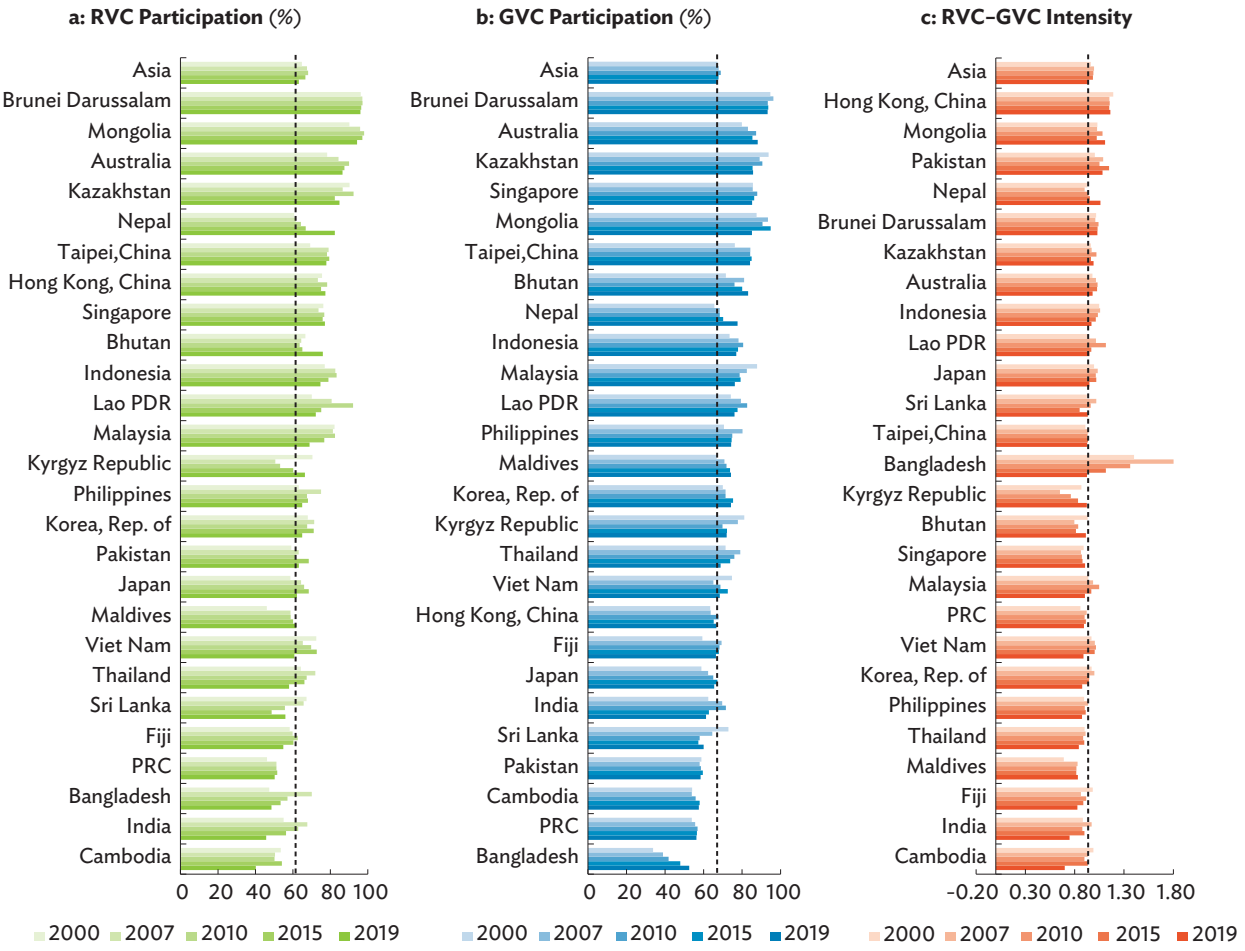
Other economies—such as Nepal, Bhutan, Sri Lanka, the Kyrgyz Republic, and Mongolia—had stronger RVC participation growth relative to GVC as their intensity ratios rose by at least 8% between 2015 and 2019. But dynamics differ across economies. Nepal, Bhutan, and Sri Lanka had RVC participation rates growing faster than GVC linkages. Singapore and the Kyrgyz Republic had rising RVCs, while GVC participation rates fell. For Mongolia, GVC participation fell more than RVC participation.

Commodity-exporting economies—such as Australia, Brunei Darussalam, Kazakhstan, and Mongolia—tend to have high GVC and RVC participation rates. Most commodity-exports are used as raw materials for producing intermediate and final goods, which is why these economies have high upstream value chain participation. For example, Brunei Darussalam exports most of its fuel and natural gas to Malaysia and Singapore for further processing and export. This also applies to Mongolia, which exports minerals to the PRC, the Lao People's Democratic Republic (Lao PDR) (which exports electricity to Thailand), and Kazakhstan (which exports fuel and metals to the PRC).

Complex regional and global value chains show a different picture.[13] By 2019, complex global value chain participation for the region reached 41.1% of gross exports, still below its pre-financial crisis level but higher than

[13] Complex value-added linkages are exports that cross borders two or more times.

Figure 2.13: Overall RVC and GVC Participation—Selected Asian Economies



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

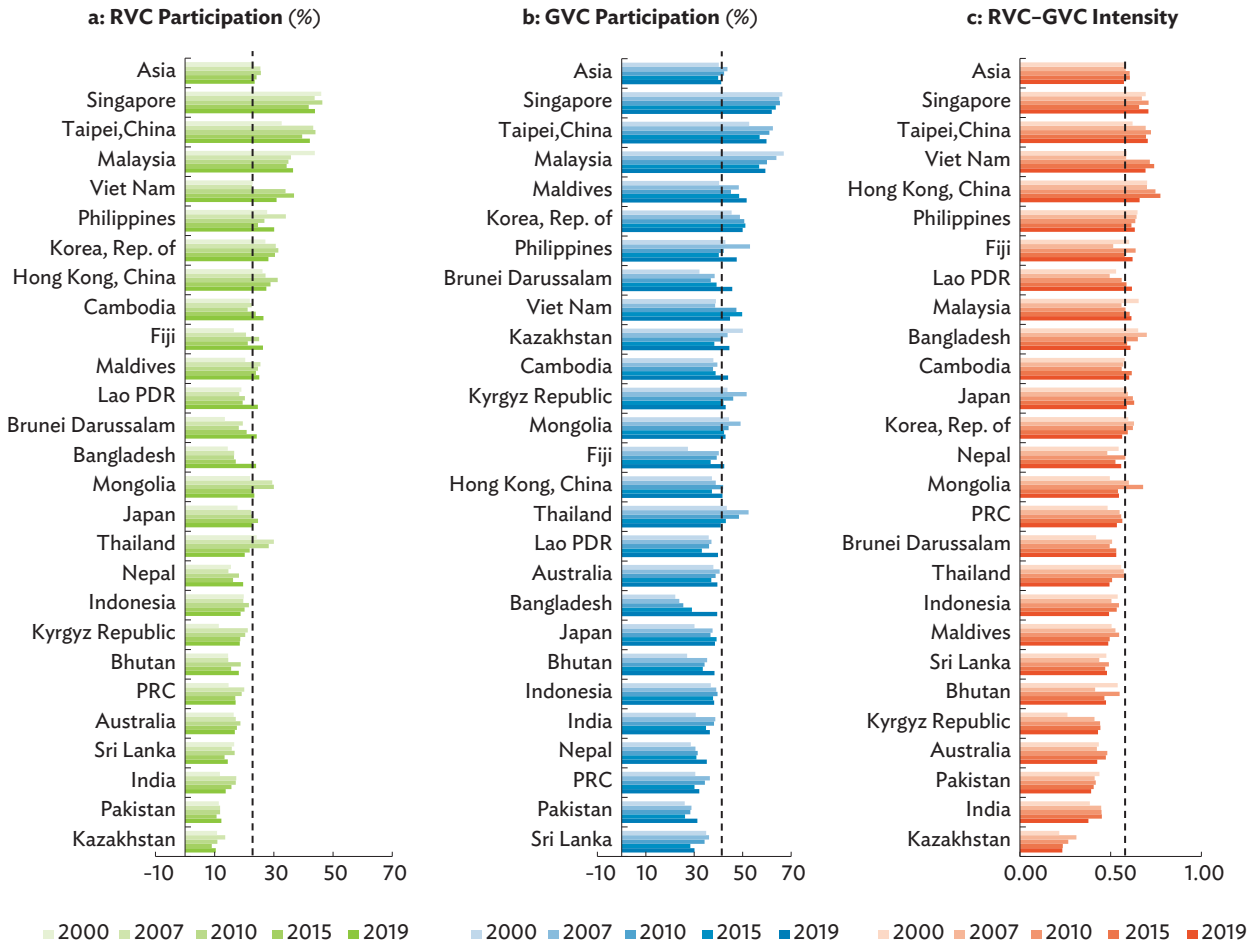
Notes: RVC–GVC intensity is the ratio of RVC participation and GVC participation rates. The overall GVC participation rate is the share of gross exports that involves production in at least two economies using cross-border production networks. The overall RVC participation rate is the same concept as that of overall GVC, except that it only involves economies of the same region and that the denominator excludes third and fourth partner economies. Economies are ordered by 2019 values from highest to lowest. Vertical line represents the value for Asia for 2019.

Sources: ADB calculations using data from ADB Multi-Regional Input-Output Tables; and methodology by Wang, Wei, and Zhu (2013).

the 2015 slump. In 2019, for economies like Singapore; Taipei,China; Malaysia; Maldives; and the Republic of Korea, at least 50% of global gross exports involve intermediate goods crossing borders more than once (Figure 2.14b). Complex gross regional value-added linkages, however, have been either stagnant or declining since 2010, and now comprise 23.6% of regional gross exports (excluding exports to third and fourth partner economies). Economies such as Taipei,China; and many in Southeast Asia—Singapore, Viet Nam, Malaysia, and the Philippines, have at least 30% of their regional gross exports part of complex value chains (Figure 2.14a). Bangladesh had a large increase in complex GVC and complex gross RVC participation rates between 2015 and 2019. This can be attributed mostly to (i) the rise in intermediate goods exports used to produce intermediate exports for final use exports in third economies, and (ii) the rise in foreign value-added in final use exports.

Complex RVC–GVC intensity ratios increased for some Asian economies since 2000. The highest increase was in the Kyrgyz Republic, which had one of the lowest intensity

Figure 2.14: Complex RVC and GVC Participation—Selected Asian Economies



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

Notes: RVC–GVC intensity is the ratio of RVC participation and GVC participation rates. The complex GVC participation rate is the share of gross exports that involves production in at least two economies using cross-border production networks but includes only part of the gross exports for which the production entails border-crossing twice or more. The complex RVC participation rate, on the other hand, is the same concept as complex GVC, except that it only involves economies of the same region and that the denominator excludes third and fourth partner economies. Economies are ordered by 2019 values from highest to lowest. Vertical line represents the value for Asia for 2019.

Sources: ADB calculations using data from ADB Multi-Regional Input-Output Tables; and methodology by Wang, Wei, and Zhu (2013).

ratios (0.26) in the region in 2000. Other economies with notable increases were Brunei Darussalam; Viet Nam; the Lao PDR; and Taipei,China. In contrast, economies such as Thailand; Bhutan; Pakistan; Bangladesh; Hong Kong, China; Malaysia; and the Republic of Korea were lower. As of 2019, those with the highest RVC–GVC intensity, at least 0.60, were mostly Southeast Asian and East Asian economies plus Fiji (Figure 2.14c). Most of these are highly embedded into deeper manufacturing production networks in electrical and optical equipment, and transport and transport equipment, which involve complex global and regional value chains.

The Impact of GVC Reshoring

The risk of GVC bottlenecks became clear during the pandemic. Thus, some countries could use reshoring as a means to transfer production back home. However, many could not compensate for all imported intermediate goods over a short span of time due to constraints in domestic production capacity, thus leading to a decline in overall production.

GVC Snapshot

Exported products are either produced using local content or imported intermediate goods (Figure 2.15a). Some intermediate goods used by the exporter come directly from the partner. Of those imported, some are finally consumed by the importer; some eventually return to the exporter; while others are used by the importer to produce goods sold to other countries. Importing countries either consume them domestically or process them further for later export (Figure 2.15b).

GVC Reshoring

When reshoring, the exporter decreases outsourced goods, processing them locally instead. In the backward linkages, the exporter could reshore the production of intermediate goods to be imported. In the forward, the exporter also can reshore the production of goods outsourced to foreign economies.

The success of any reshoring strategy relies on the exporting country's capacity to substitute for its reduction of imported intermediate goods and outsourced production. At best, where the substitution rate is 100%, the country maintains its level of exports. However, if all countries use this strategy, even if all theoretically reach 100%, global exports will decline as demand for intermediate goods decreases.

When the supply chains are reshored by 10%–20%, global exports, imports, and total trade are estimated to decrease by 13%–22%.

The impact of reshoring is estimated under three scenarios: when the capacity of local manufacturers to compensate for the reduction of imported intermediate goods is 100%, 50%, and 30% (Tables 2.1, 2.2, and 2.3). These were then estimated with reshoring at 10%, 20%, and 40%.

The reshoring of supply chain networks to domestic economies, while only partial, could significantly reduce international trade. Based on simulations using ADB's Multi-Regional Input-Output Tables—which can trace spillover impacts across trade supply chains—global trade is estimated to contract by 13%–22% when 10%–20% of overseas supply chains are reshored, and the capacity of the economies to substitute for the reshored products is 50% (Table 2.3).

The Asian subregion with the largest decline is Southeast Asia (14%–25%), followed by Central Asia (13%–23%) and the Pacific and Oceania (12%–21%) (Table 2.3). Central Asia participates heavily in the EU value chain, while Southeast Asia and the Pacific and Oceania connect primarily with Asia's value chain. The Asian economies most affected include Malaysia; Kazakhstan; Brunei Darussalam; Taipei,China; Singapore; Australia; Maldives; and the Republic of Korea.

Figure 2.15a: Backward Global Value Chain Linkages

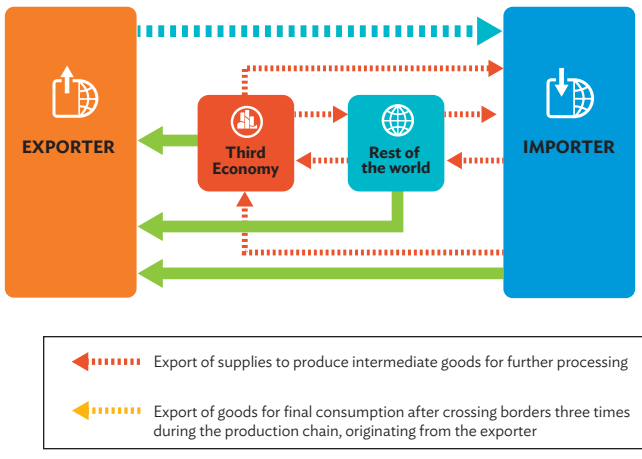
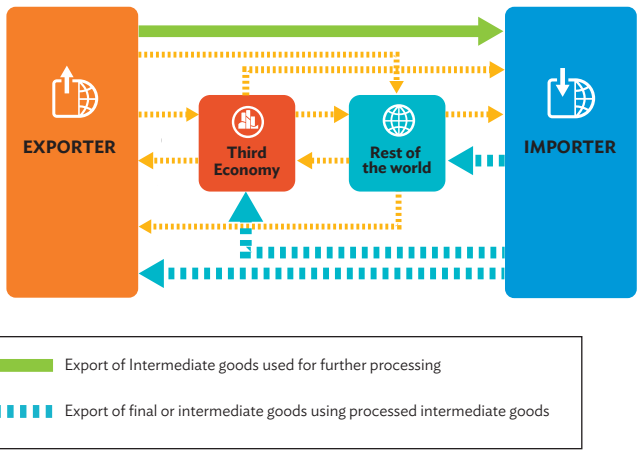
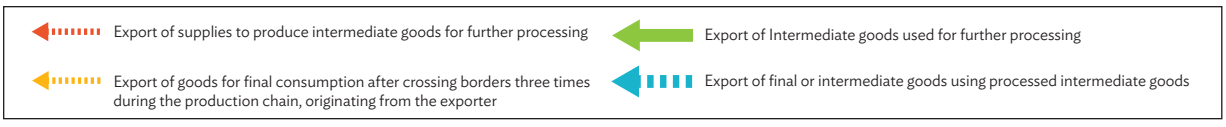


Figure 2.15b: Forward Global Value Chain Linkages





Source: ADB staff.

Table 2.1: Impact of Reshoring on Exports (%)

Region/Subregion	100% Substitution Rate			50% Substitution Rate			30% Substitution Rate		
	10% Reshoring	20% Reshoring	40% Reshoring	10% Reshoring	20% Reshoring	40% Reshoring	10% Reshoring	20% Reshoring	40% Reshoring
Asia and the Pacific	**–8.79**	**–14.64**	**–29.29**	**–12.30**	**–20.50**	**–41.01**	**–13.71**	**–22.85**	**–45.70**
Central Asia	–15.60	–26.01	–52.01	–17.68	–29.47	–58.94	–18.51	–30.85	–61.70
East Asia	–8.56	–14.26	–28.53	–11.80	–19.66	–39.32	–13.09	–21.82	–43.64
South Asia	–8.36	–13.93	–27.86	–11.24	–18.74	–37.48	–12.40	–20.66	–41.32
Southeast Asia	–8.31	–13.85	–27.71	–13.31	–22.19	–44.37	–15.31	–25.52	–51.04
The Pacific and Oceania	–13.20	–21.95	–43.90	–15.08	–25.13	–50.26	–15.84	–26.40	–52.81
European Union	**–8.14**	**–13.56**	**–27.12**	**–13.82**	**–23.03**	**–46.07**	**–16.09**	**–26.82**	**–53.64**
Latin America	**–8.89**	**–14.81**	**–29.62**	**–14.12**	**–23.54**	**–47.08**	**–16.22**	**–27.03**	**–54.06**
North America	**–11.11**	**–18.51**	**–37.02**	**–14.08**	**–23.47**	**–46.93**	**–15.27**	**–25.45**	**–50.89**
Rest of the World	**–8.96**	**–14.94**	**–29.88**	**–13.50**	**–22.51**	**–45.01**	**–15.32**	**–25.53**	**–51.06**
World	**–8.92**	**–14.86**	**–29.72**	**–13.34**	**–22.24**	**–44.48**	**–15.11**	**–25.19**	**–50.38**

Notes: Reshoring rate refers to the share of imported intermediate goods and outsourced production that the main exporter will cut off. Substitution rate refers to the capacity of local manufacturers to produce enough intermediate goods to compensate for the cut off of imported intermediate goods and outsourced production.

Sources: ADB calculations using data from ADB. Multi-Regional Input–Output Tables; and methodology by Wang, Wei, and Zhu (2013).

Table 2.2: Impact of Reshoring on Imports (%)

Region/Subregion	100% Substitution Rate			50% Substitution Rate			30% Substitution Rate		
	10% Reshoring	20% Reshoring	40% Reshoring	10% Reshoring	20% Reshoring	40% Reshoring	10% Reshoring	20% Reshoring	40% Reshoring
Asia and the Pacific	**–7.49**	**–12.48**	**–24.96**	**–11.82**	**–19.70**	**–39.39**	**–13.55**	**–22.58**	**–45.17**
Central Asia	–4.86	–8.11	–16.21	–8.89	–14.81	–29.62	–10.50	–17.49	–34.99
East Asia	–6.89	–11.48	–22.95	–11.09	–18.49	–36.97	–12.77	–21.29	–42.58
South Asia	–4.67	–7.79	–15.58	–8.84	–14.74	–29.48	–10.51	–17.52	–35.03
Southeast Asia	–11.42	–19.04	–38.07	–16.21	–27.01	–54.02	–18.12	–30.20	–60.40
The Pacific and Oceania	–4.81	–8.02	–16.04	–9.25	–15.41	–30.83	–11.02	–18.37	–36.75
European Union	**–12.50**	**–20.83**	**–41.67**	**–17.53**	**–29.22**	**–58.44**	**–19.54**	**–32.57**	**–65.15**
Latin America	**–10.35**	**–17.25**	**–34.50**	**–15.32**	**–25.53**	**–51.07**	**–17.31**	**–28.85**	**–57.69**
North America	**–5.00**	**–8.34**	**–16.68**	**–9.42**	**–15.70**	**–31.39**	**–11.18**	**–18.64**	**–37.28**
Rest of the World	**–8.59**	**–14.32**	**–28.65**	**–12.48**	**–20.80**	**–41.60**	**–14.03**	**–23.39**	**–46.78**
World	**–8.92**	**–14.86**	**–29.72**	**–13.34**	**–22.24**	**–44.48**	**–15.11**	**–25.19**	**–50.38**

Notes: Reshoring rate refers to the share of imported intermediate goods and outsourced production that the main exporter will cut off. Substitution rate refers to the capacity of local manufacturers to produce enough intermediate goods to compensate for the cut off of imported intermediate goods and outsourced production.

Sources: ADB calculations using data from ADB. Multi-Regional Input–Output Tables; and methodology by Wang, Wei, and Zhu (2013).

Table 2.3: Impact of Reshoring on Total Trade (%)

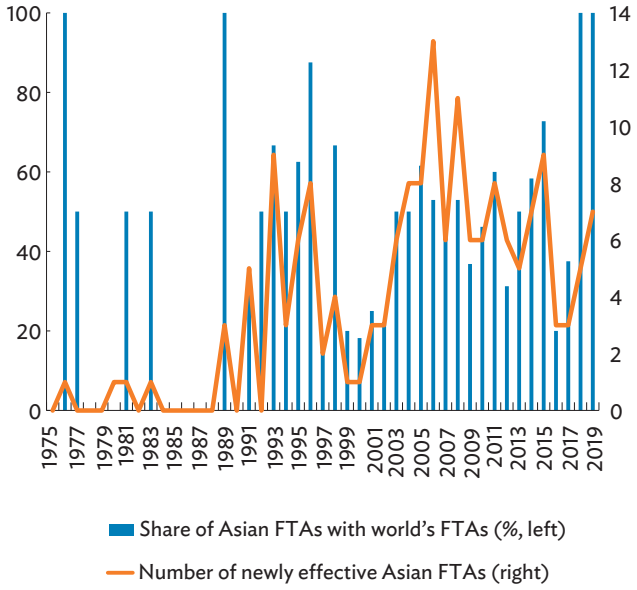
Region/Subregion	100% Substitution Rate			50% Substitution Rate			30% Substitution Rate		
	10% Reshoring	20% Reshoring	40% Reshoring	10% Reshoring	20% Reshoring	40% Reshoring	10% Reshoring	20% Reshoring	40% Reshoring
Asia and the Pacific	**–8.15**	**–13.59**	**–27.18**	**–12.07**	**–20.11**	**–40.22**	**–13.63**	**–22.72**	**–45.44**
Central Asia	–10.62	–17.70	–35.41	–13.60	–22.67	–45.34	–14.79	–24.66	–49.31
East Asia	–7.74	–12.91	–25.81	–11.45	–19.09	–38.18	–12.94	–21.56	–43.12
South Asia	–6.30	–10.50	–21.01	–9.90	–16.51	–33.01	–11.34	–18.91	–37.81
Southeast Asia	–9.78	–16.31	–32.61	–14.68	–24.47	–48.94	–16.64	–27.74	–55.47
The Pacific and Oceania	–9.44	–15.73	–31.47	–12.48	–20.80	–41.59	–13.69	–22.82	–45.64
European Union	**–10.23**	**–17.04**	**–34.09**	**–15.60**	**–25.99**	**–51.99**	**–17.75**	**–29.58**	**–59.15**
Latin America	**–9.63**	**–16.05**	**–32.10**	**–14.73**	**–24.55**	**–49.11**	**–16.77**	**–27.95**	**–55.91**
North America	**–7.79**	**–12.99**	**–25.97**	**–11.55**	**–19.25**	**–38.49**	**–13.05**	**–21.75**	**–43.50**
Rest of the World	**–8.77**	**–14.62**	**–29.25**	**–12.98**	**–21.63**	**–43.26**	**–14.66**	**–24.43**	**–48.87**
World	**–8.92**	**–14.86**	**–29.72**	**–13.34**	**–22.24**	**–44.48**	**–15.11**	**–25.19**	**–50.38**

Notes: Reshoring rate refers to the share of imported intermediate goods and outsourced production that the main exporter will stop. Substitution rate refers to the capacity of local manufacturers to produce enough intermediate goods to compensate for the difference. Total trade includes imports and exports.

Sources: ADB calculations using data from ADB. Multi-Regional Input–Output Tables; and methodology by Wang, Wei, and Zhu (2013).

Post-pandemic, economies may consider diversifying upstream production—economies decrease their dependency on their primary source of intermediate goods, acquiring them from other sources. Similarly, they may also diversify downstream production by decreasing dependency on demand from their top importer and export intermediate products to other economies. This strategy could involve different scenarios, such as regionalizing or nearshoring supply chains (Annex 3b). While the trade distribution effect among economies could be minimal under this modest assumption, the exercise could work when analyzing diverse supply chain diversification scenarios.

Figure 2.16: Number of Newly Effective Free Trade Agreements—Asia



FTA = free trade agreement.

Sources: ADB calculations using data from ADB. Asia Regional Integration Center FTA Database. https://aric.adb.org/fta; and World Trade Organization. Regional Trade Agreement Information System. http://rtais.wto.org (both accessed July 2020).

Updates on Regional Trade Policy

New free trade agreements continue as economies use online conferencing for negotiations.

In the months prior to the COVID-19 pandemic, the number of signed Asian free trade agreements (FTAs) surged. According to the World Trade Organization (WTO) Regional Trade Agreements database, all FTAs that came into force in 2018 and 2019 involved Asian economies (Figure 2.16). This was a huge jump compared with the 38% share of Asian FTAs in 2017. Between August 2019 and October 2020, nine FTAs entered into force. These included the (i) Indonesia–Chile FTA (10 August 2019); (ii) Republic of Korea–Central America (1 November 2019); (iii) Singapore–EU FTA (21 November 2019); (iv) Japan–US FTA (1 January 2020) (v) Australia–Hong Kong, China FTA (17 January 2020); (vi) Australia–Peru FTA (11 February 2020); (vii) PRC–US Economic and Trade Agreement (14 February 2020); (viii) Australia–Indonesia Comprehensive Economic Partnership Agreement (5 July 2020); and (ix) Viet Nam–EU FTA (1 August 2020).

During that time, several FTAs were signed or concluded negotiations. The Republic of Korea–United Kingdom FTA, Indonesia–Mozambique Preferential Trade Agreement (PTA), and Cambodia–PRC FTA were signed, while five FTAs concluded negotiations: (i) Indonesia–Republic of Korea FTA; (ii) Republic of Korea–Israel FTA; (iii) Hong Kong, China–Maldives FTA; (iv) the Regional Comprehensive Economic Partnership Agreement (RCEP); and (v) Bangladesh–Bhutan Preferential Trade Agreement. The accession of Mongolia to the Asia-Pacific Trade Agreement (APTA) on 30 September 2020 was the first expansion of APTA after the accession of the PRC in 2001, a milestone in the progress of APTA toward becoming a modern regional agreement.

Several key trends continue. The region's push for stronger trade ties and greater market access to non-Asian economies was largely unhampered by the ongoing COVID-19 pandemic. While extraregional FTAs dominate Asia's FTA landscape, the region continues to strengthen intraregional trade ties.

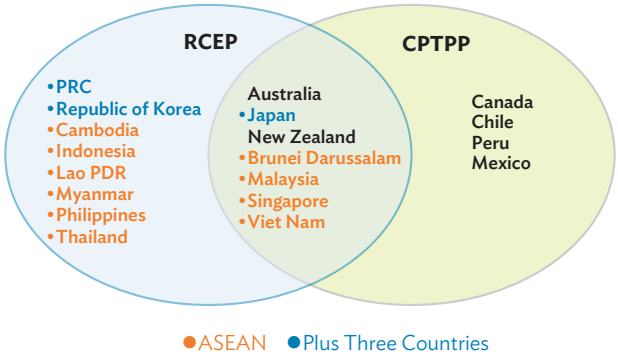
FTA negotiations continued despite the imposition of travel restrictions and physical distancing due to the COVID-19 pandemic. In a videoconference in June 2020, Bangladesh and Bhutan concluded negotiations for a preferential trade

agreement that aims to liberalize trade in 100 products from Bangladesh and 34 products from Bhutan. The PRC and Cambodia concluded "virtual" trade talks in July 2020, just 6 months after negotiations were launched in January. Several FTAs were also launched, including an Australia–UK FTA and Cambodia–Republic of Korea FTA.

Regional Comprehensive Economic Partnership[14]

After 8 years of negotiations, RCEP was signed on 15 November 2020. RCEP unifies existing FTAs between the Association of Southeast Asian Nations (ASEAN)[15] and existing partners, the so-called "+ 3 economies"—Japan, the PRC, and the Republic of Korea—and Australia and New Zealand (Figure 2.17). Together, these economies account for about 29% ($25.8 trillion) of global gross domestic product (GDP), 30% (2.3 billion) of the world's population, and 25% ($12.7 trillion) of global trade in goods and services.[16]

Figure 2.17: Regional Trade Groupings Involving ASEAN+3



ASEAN = Association of Southeast Asian Nations (includes Brunei Darussalam, Cambodia, Indonesia, the Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam); ASEAN+3 = ASEAN plus Japan, the People's Republic of China and the Republic of Korea; CPTPP = Comprehensive and Progressive Agreement for Trans-Pacific Partnership; Lao PDR = Lao People's Democratic Republic; PRC = People's Republic of China; RCEP = Regional Comprehensive Economic Partnership.

Source: Asian Development Bank.

RCEP will be the world's largest FTA measured by GDP, bigger than the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), the EU, the MERCOSUR trade bloc in South America, and the United States–Mexico–Canada Free Trade Agreement. RCEP is the PRC's first multilateral agreement, the first FTA between the PRC and Japan, and Japan and the Republic of Korea. As the region's economies continue to recover from the unprecedented economic turmoil caused by the COVID-19 pandemic, RCEP is expected to boost growth by ensuring markets remain open and regional supply chains function.

RCEP will enter into force once ratified by at least six ASEAN economies and three non-ASEAN signatories, a process that will take months to start and years to complete. It is open for accession by any economy 18 months after entry into force. India, as an original negotiating state, is exempted from this rule; it can immediately rejoin once the agreement enters into force.

Rules of Origin and Regional Value Chains

One of RCEP's key features is a commitment to common rules of origin for all goods traded (Box 2.1). This means a product that meets RCEP originating criteria is subject to the same rules across all 15 member economies. RCEP's common rules of origin could foster contemporary production processes and trade logistics arrangements. The ease of movement of goods across the region through RCEP members and the use of regional distribution hubs will be enhanced (DFAT 2020).

Following usual practice, the RCEP rules of origin chapter lists the minimal operations and processes considered insufficient to confer originating status on goods using non-originating materials. If a good does not satisfy a change in the tariff classification rule in the annex on product-specific rules, the chapter lays down certain de minimis rules through which the good could still acquire originating status (ASEAN Secretariat 2020).

[14] This section draws from Kang et al. (2020).

[15] ASEAN includes Brunei Darussalam, Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam.

[16] Based on 2019 data for GDP and population, and 2018 for trade in goods and services. Source: ADB staff calculations using data from World Bank. World Development Indicators. https://databank.worldbank.org/source/world-development-indicators (accessed December 2020).

Box 2.1: Regional Comprehensive Economic Partnership Rules of Origin

Rules of origin for the Regional Comprehensive Economic Partnership (RCEP) will bring under one umbrella countries that until now have had diverse sets of rules. Given the nature of the free trade agreements (FTAs), each RCEP country uses different sets of rules of origin enshrined in its own FTAs with other countries. In other words, not only does the Association of Southeast Asian Nations (ASEAN) apply different rules of origin with each of its dialogue partners, but Australia, Japan, the People's Republic of China (PRC), the Republic of Korea, and New Zealand also rely on diverse sets of rules of origin to trade with FTA partners. While this network of FTAs will continue, RCEP is the first to apply a common trade platform on rules of origin among members.

Thus, the potential to unravel the "spaghetti bowl" of rules governing origin in existing FTAs is among RCEP's key achievements. The agreement does this by expanding the geographic scope of cumulation due to its wider membership. This allows the treatment of intermediate products and inputs from *all participating countries*—including the PRC, Japan, and the Republic of Korea—as originating for defining the origin of the final goods regionally exported.

Empirical research finds that less restrictive cumulation systems in rules of origin (such as diagonal or full cumulation) promote sharing of the production value chain and expand trade in the cumulation zone, which generates greater trade gains than in more restrictive systems such as bilateral cumulation, as explained by Kim, Park, and Park (2013), and Hayakawa (2014). Yet, whereas RCEP provides for diagonal/regional cumulation (paragraph 1 of Article 3.4 of the RCEP Chapter 3), allowance of full cumulation will be negotiated upon RCEP's entry into force (paragraph 2 of Article 3.4 of Chapter 3). Under full cumulation, all operations carried out in the RCEP region are considered in determining whether the origin criterion is fulfilled. In contrast, under diagonal cumulation, only inputs that have already acquired originating status (fulfilled the origin criterion) in the RCEP region can be considered for cumulation purposes when used in further manufacturing processes (World Customs Organization 2017).

RCEP has embraced the concepts of product-specific rules of origin (PSROs) and regional value chain in the same spirit as other trading agreements.[a] Accordingly, goods are recognized as originating in RCEP if they meet product-specific rules of origin listed in the agreement's Annex 3(a). The main criteria used in the annex in determining rules of origin for a product are the regional value content and change of tariff classification (CTC). Depending on the PSROs contained in Annex 3(a), the criteria could be a CTC or an alternative between an regional value chain and a CTC. The formula for regional value content allows as much as 60% of the materials used in production of a good to be non-originating (materials from outside RCEP) and, due to diagonal cumulation, all materials[b] originating in RCEP will not be counted against this threshold. The formula for determining regional value chain is similar to that used in the ASEAN Trade in Goods Agreement, but under RCEP materials from the PRC, Japan, and the Republic of Korea will no longer be counted as non-originating (against the threshold of 60%), making it easier for members to meet the agreement's PSROs.

Given its wider geographic coverage, the possibility for cumulation within RCEP holds the potential to foster significant regional integration and value-chain creation by providing strong incentives to source intermediates within the RCEP region. Yet, turning potential success into reality depends on the timing of tariff phase-outs and, most importantly, the nature of administrative requirements related to origin, including certification, direct consignment, third-country invoicing, and how back-to-back certificates will be handled.

[a] The Comprehensive and Progressive Agreement for Trans-Pacific Partnership and ASEAN Trade in Goods Agreement.

[b] This only refers to materials originating in RCEP (diagonal cumulation), not to the working or processing operations in other RCEP countries (full cumulation).

Source: Kang et al. (2020).

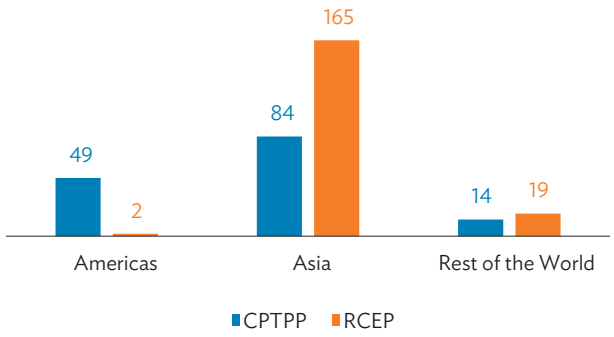
Economic Impact of the RCEP Agreement

The major regional trade groupings involving ASEAN economies are RCEP and the CPTPP. While both are mega trade deals, their breadth and depth are different. Overall, the degree of liberalization within RCEP is not as deep as in the CPTPP, and the coverage is less comprehensive. However, in terms of economic size, RCEP is much bigger. As mentioned, the 15 nations in RCEP account for 29% of global GDP, 25% of global trade, and a population of 2.3 billion, while the 11 nations in CPTPP account for 13% of global GDP, 14% of global trade, and a population of 507.7 million.[17] Further, RCEP is expected to spur renewed momentum for intraregional trade and strengthen value chains among the +3 countries, as well as between them and other members. While RCEP is the first FTA covering the PRC, Japan, and the Republic of Korea at the same time, it is also the first to include two of the world's three largest economies. Unlike the CPTPP, RCEP does not include provisions to harmonize regulatory standards on the environment or labor markets.

Petri and Plummer (2020) estimated economic gains for the global economy from the combination of the CPTPP and RCEP using a computable general equilibrium model. In a business-as-usual scenario which assumed a return to pre-trade warpath, they added the CPTPP and RCEP agreements in sequence, estimating their respective incremental effects. The CPTPP is estimated to increase world real income by $147 billion by 2030 with RCEP adding $186 billion. The potential benefits from these two mega-regional trade agreements for Asia (including nonmembers) far exceed gains the agreements are expected to generate for the rest of the world (Figure 2.18).

RCEP members are projected to gain $174 billion in real income by 2030, equivalent to 0.4% of members' aggregate GDP. The +3 countries will benefit the most, with likely gains of $85 billion for the PRC, $48 billion for Japan, and $23 billion for the Republic of Korea. Other significant RCEP gains will accrue to Indonesia, Malaysia, Thailand, and Viet Nam. RCEP will also create sizable new trade among the +3 countries. ASEAN countries' FTAs with non-ASEAN member economies precede RCEP, and ASEAN's already-significant economic integration means that any marginal benefit RCEP creates for trade among them would be limited.

Figure 2.18: Potential Benefits of Regional Trade Agreements—Real Income Increases in 2030 ($ billion)



CPTPP = Comprehensive and Progressive Agreement for Trans-Pacific Partnership; RCEP = Regional Comprehensive Economic Partnership.

Notes: Estimates include income effects to non-members of CPTPP and RCEP. Asia includes Oceania (Australia and New Zealand), following ADB definition. Americas and the rest of the world are based on Petri and Plummer (2020).

Source: Petri and Plummer (2020).

Traditional economic modeling exercises forecast that RCEP members, particularly the +3 countries, will gain the most. The largest gains will be due to their sheer economic size and comparative advantage in higher-end, richer value-added segments of industrial production. However, other economies also gain significantly from larger regional trade, stronger regional value-chain linkages, and the opening of more opportunities for foreign investment. As well as reaping benefits from deeper regional economic integration, members could take the regional trading bloc as a springboard to deepen economic reforms and improve industrial competitiveness. These dynamic gains, difficult to capture through economic modeling, more often than not far exceed the numerical economic gains forecast (Kang 2020).

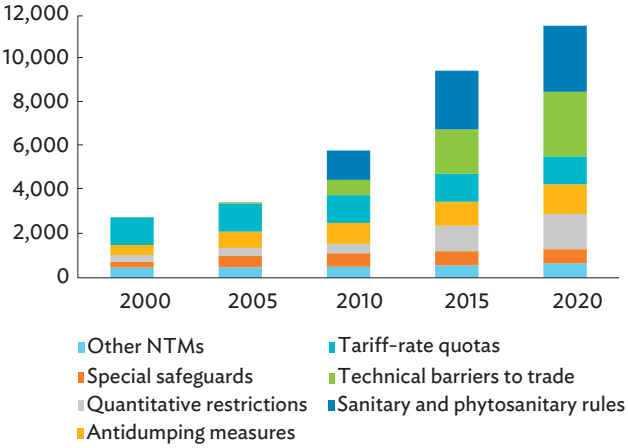
As more detailed information about country and sectoral level market access and tariff concessions is released, further analyses and assessments of RCEP's economic impact are expected to become available in the coming months.

[17] Based on 2019 data for GDP and population, and 2018 for trade in goods and services. Source: ADB staff calculations using data from World Bank. World Development Indicators. https://databank.worldbank.org/source/world-development-indicators (accessed December 2020).

The number of nontariff measures imposed on Asia increased significantly over the years, even before the onset of the COVID-19 pandemic (Figure 2.19).

As of 24 August 2020, Asia enacted 36.4% of COVID-19-related trade measures. Some 45.3% of these liberalize trade, while 54.7% are trade restrictive. India leads the region with the greatest number of COVID-19-related trade measures, reflecting its rising number of COVID-19 cases (Figure 2.20). Meanwhile, 63.67% of COVID-19-related trade measures were imposed by non-Asian economies. More than half of these (51.71%) are trade restrictive while 48.29% are trade liberalizing. Outside Asia, Brazil imposes the highest number of COVID-19-related trade measures, given the South American country's recent attempt to contain the rise of COVID-19 cases (Figure 2.21).

Figure 2.19: Number of Nontariff Measures Imposed on Asia

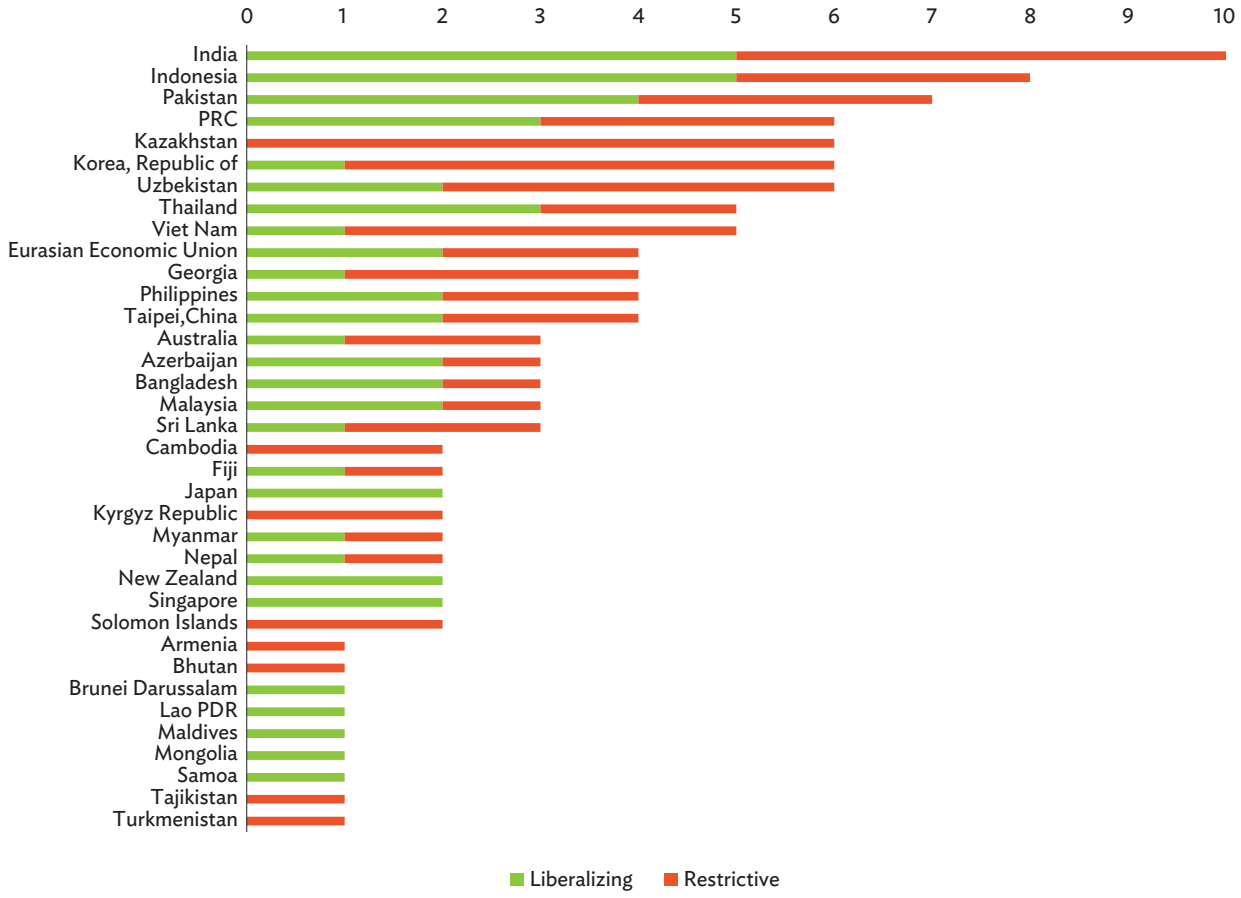


NTM = nontariff measure.

Note: Data cover NTMs in force until December 2020.

Source: ADB calculations using data from World Trade Organization. Integrated Trade Intelligence Portal. https://www.wto.org/english/res_e/statis_e/itip_e.htm (accessed September 2020).

Figure 2.20: Number of COVID-19-Related Measures Imposed by Asia, by Effect on Trade (as of 24 August 2020)



COVID-19 = coronavirus disease, Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.

Source: ADB calculations using data from International Trade Centre. https://www.intracen.org (accessed August 2020).

Figure 2.21: Number of COVID-19-Related Measures Imposed by Non-Asian Economies, by Effect on Trade
(as of 24 August 2020)

COVID-19 = coronavirus disease.

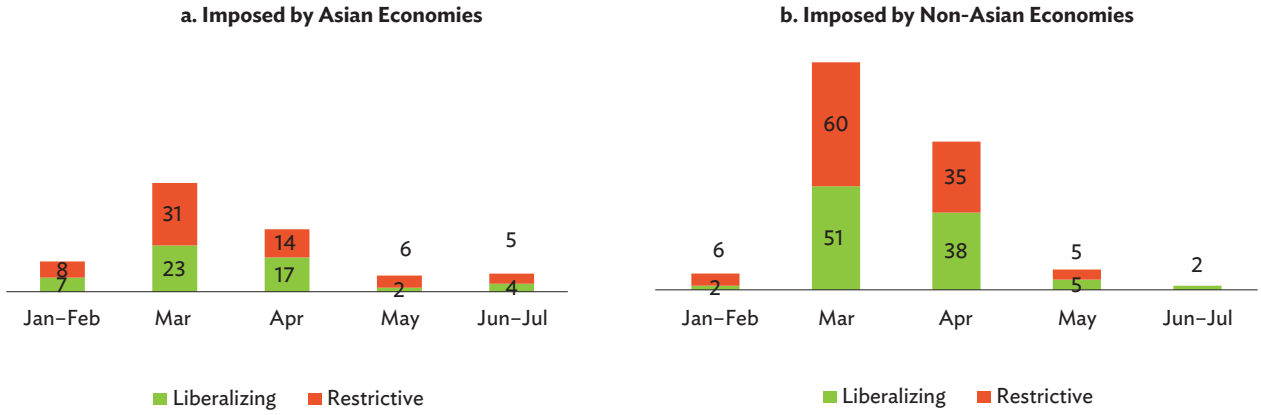
Source: ADB calculations using data from International Trade Centre. https://www.intracen.org (accessed August 2020).

Both Asian and non-Asian economies enacted the highest number of COVID-19-related trade measures in March 2020 or at the same period the World Health Organization officially declared COVID-19 a pandemic—and numerous economies worldwide started implementing lockdowns or stay-at-home orders (Figure 2.22). More than 50% of COVID-19-related trade measures enacted are restrictive. The number of COVID-19-related measures enacted began to slow in April 2020 until July 2020.

Medical goods had the highest number of COVID-19-related trade measures (Figure 2.23). About 53% were liberalizing while 47% were trade restrictive. For the rest of the world, the majority of COVID-19-related trade measures imposed on medical goods are trade restrictive. For both Asia and non-Asian economies, agricultural products had the largest share of trade restrictive COVID-19 measures.

Tariff reductions constitute 34.2% of COVID-19-related trade measures enacted in Asia while export prohibition was 31.6%. The same trend is seen in non-Asian economies, with tariff reductions representing 33.7% while export prohibition 26.3%. This shows that both Asia and non-Asian economies relied more on tariff reductions to ensure adequate access to essential goods (Figure 2.24).

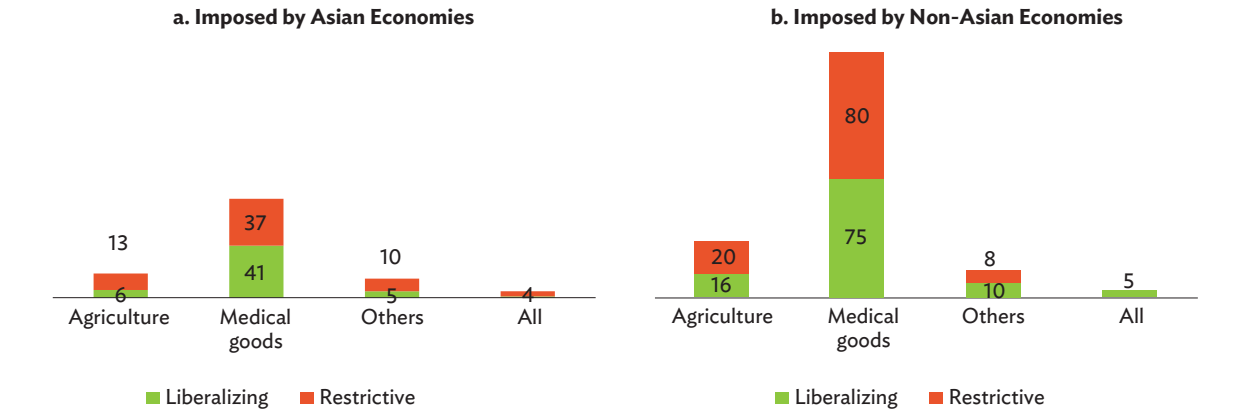
Figure 2.22: 2020 Timeline of COVID-19-Related Trade Measures, by Effect on Trade (as of 24 August 2020)



COVID-19 = coronavirus disease.

Source: ADB calculations using data from International Trade Centre. https://www.intracen.org (accessed August 2020).

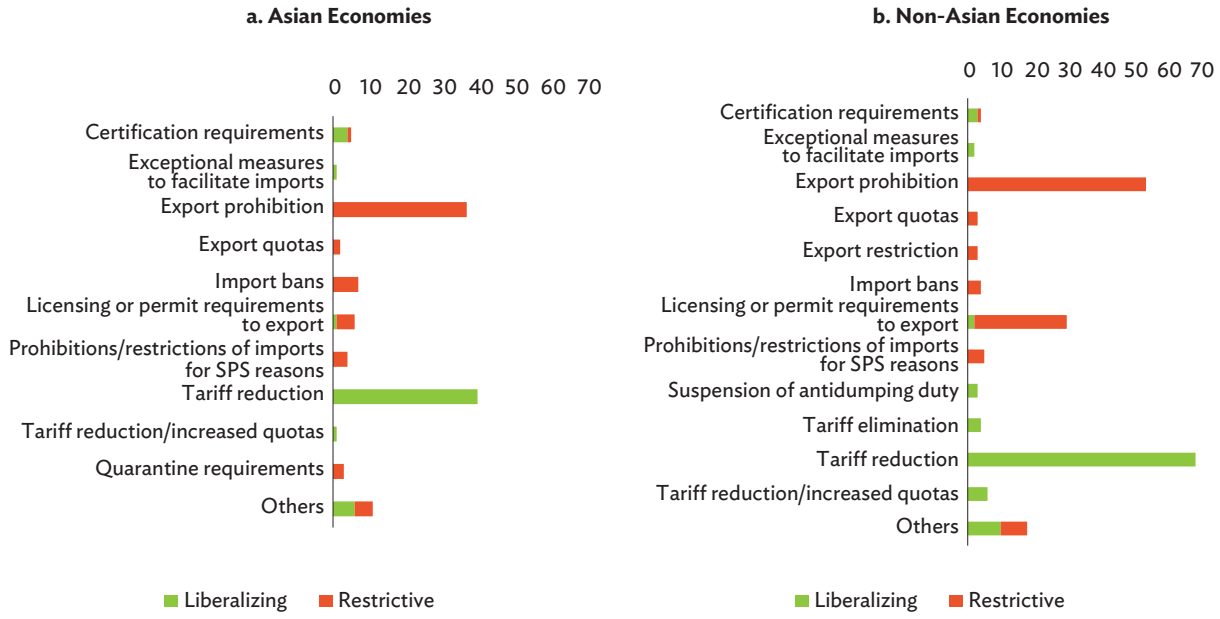
Figure 2.23: Products Affected by COVID-19-Related Trade Measures, by Effect on Trade (as of 24 August 2020)



COVID-19 = coronavirus disease.

Source: ADB calculations using data from International Trade Centre. https://www.intracen.org (accessed August 2020).

Figure 2.24: Type of Measures Imposed, by Effect on Trade (as of 24 August 2020)



SPS = sanitary and phytosanitary.

Source: ADB calculations using data from International Trade Centre. https://www.intracen.org (accessed August 2020).

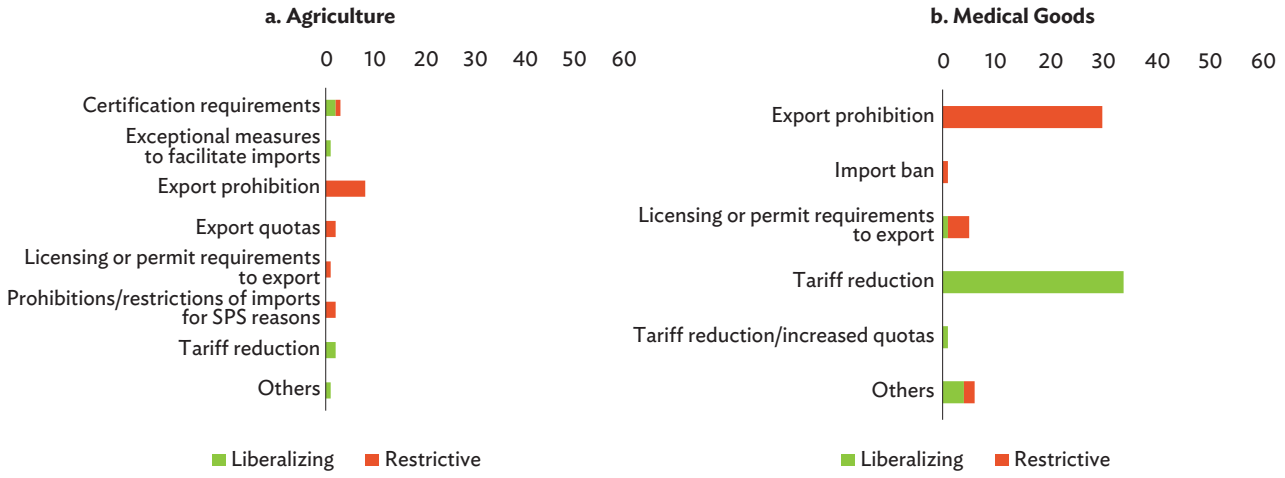
Asian economies largely resorted to export prohibition measures to ensure a stable supply of agricultural products (Figure 2.25). The region also used a combination of tariff reduction and export prohibition to ensure adequate access to, and supplies of, medical goods—including protective equipment (such as masks, gloves, and garments), medical equipment (like ventilators), and pharmaceuticals. Non-Asian economies also used both export prohibition and tariff reduction measures to achieve food security during the pandemic (Figure 2.26). The rest of the world also took a trade restrictive approach to meet domestic supply needs for medical goods by implementing many measures prohibiting exports and export licensing or permit requirements.

An agreement is needed to institutionalize international cooperation in securing the trade of essential goods during a pandemic should the world want to ensure undisrupted supplies of key products.

In general, Article XI of the General Agreement on Tariffs and Trade (GATT) 1994 provides the regulatory framework on prohibitions on quantitative restrictions such as export/import bans and export quotas. However, it allows members to use them temporarily to prevent or relieve critical shortages of foodstuff or other essential products. The WTO Agreement on Agriculture requires that members imposing temporary restrictions on foodstuff should accord due consideration to the food security needs of others. WTO rules also contain more general exceptions, which could be used to justify restrictions if they are not a means of arbitrary or unjustifiable discrimination between countries, or a disguised restriction on international trade.

FTAs are another means to regulate quantitative restrictions. They provide a regulatory framework that specifically addresses trading concerns of FTA partners better than the multilateral WTO framework. Fewer economies are involved in FTA negotiations compared with multilateral agreements, creating the possibility for stronger commitments, and devising alternate ways to improve the regulation of quantitative restrictions. Also, recent FTAs respond better to the challenges of a rapidly evolving international trade landscape than WTO laws, which came into force more than 25 years ago.

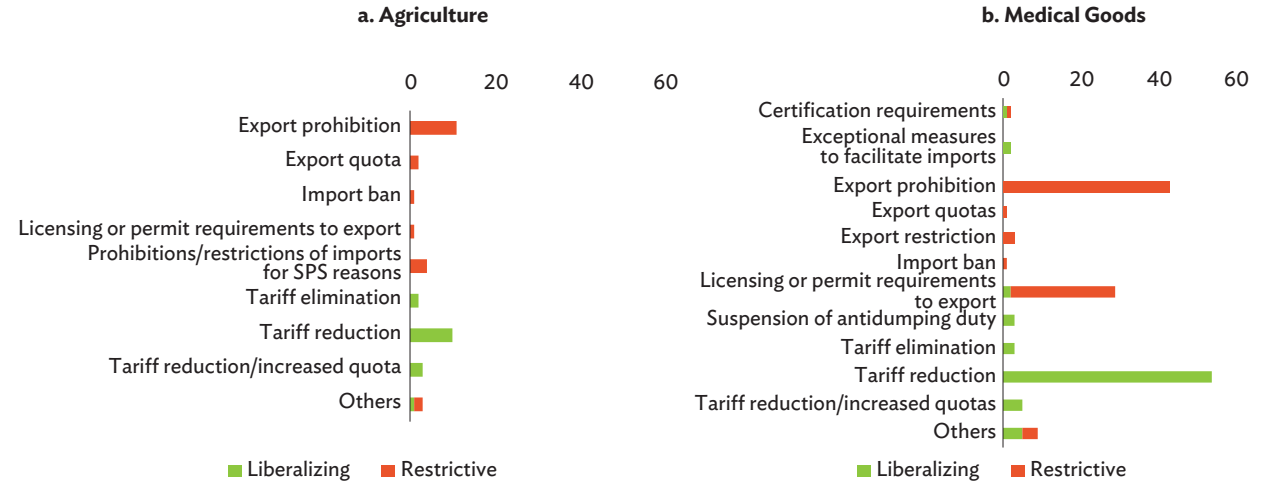
Figure 2.25: Type of Measures Imposed by Asia, by Product Group and Effect on Trade (as of August 2020)



SPS = sanitary and phytosanitary.

Source: ADB calculations using data from International Trade Centre. https://www.intracen.org (accessed August 2020).

Figure 2.26: Type of Measures Imposed by Non-Asia, by Product Group and Effect on Trade (as of August 2020)

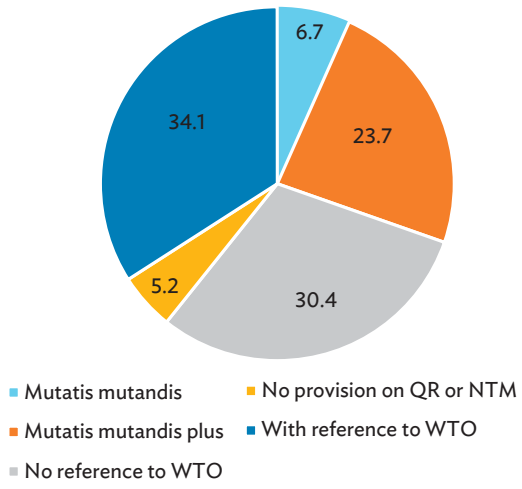


SPS = sanitary and phytosanitary.

Source: ADB calculations using data from International Trade Centre. https://www.intracen.org (accessed August 2020).

An analysis of Asian FTAs in force (with available full texts) shows that 128 of the 135 FTAs (94.8%) contain provisions on quantitative restrictions. However, these provisions are largely heterogeneous and can be grouped into four broad strands (Figure 2.27). First, 41 Asian FTAs (30.4%) contain provisions on quantitative restrictions without reference to WTO laws. Second, stipulations on quantitative restrictions in 46 Asian FTAs (34.1%) explicitly mention relevant WTO laws and agreements without the expression mutatis mutandis. Third, nine Asian FTAs (6.7%) incorporate Article XI based on mutatis mutandis with the last category including other commitments in addition to incorporating Article XI using mutatis mutandis or mutatis mutandis plus provisions (32 Asian FTAs or 23.7%). The plus provisions include stipulations on advance notification, transparency, and consultation, among others.

Figure 2.27: Types of Provisions on Quantitative Restrictions in Asian FTAs (%)



FTA = free trade agreement, NTM = nontariff measure, QR = quantitative restriction, WTO = World Trade Organization.

Note: Mutatis mutandis incorporates relevant WTO laws on quantitative restrictions into the FTA while mutatis mutandis plus provisions include other commitments beyond WTO obligations such as advance notification, transparency, consultation, among others.

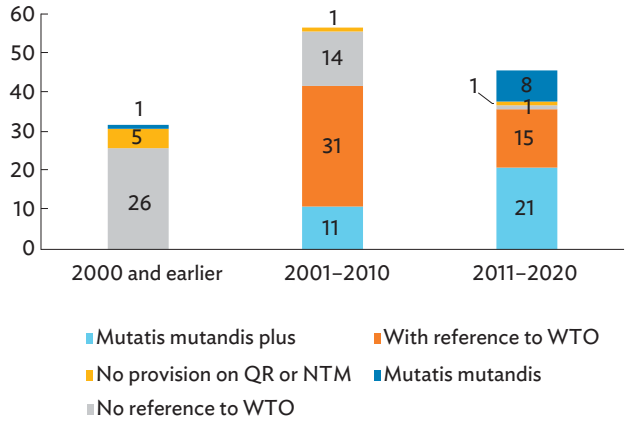
Source: ADB calculations using official FTA full texts.

Overall, there is no norm governing the provisions on quantitative restrictions in Asian FTAs. However, this has not always been the case. Of the 32 FTAs in force up to 2000, 26 (or 81.3%) contain provisions on quantitative restrictions without referencing WTO laws—this implies it was the norm prior to 2000 (Figure 2.28). Almost the same number of extraregional and intraregional FTAs contains this type of provision (Figure 2.29). The first decade of the 21st century saw a paradigm shift with the majority of Asian FTA provisions on quantitative restrictions referencing WTO laws. This was driven by a sudden increase in the number of intraregional Asian FTAs with this type of provision. Meanwhile, extraregional FTAs had started incorporating Article XI based on mutatis mutandis together with other commitments beyond WTO obligations, marking the divergence between extra-regional and intraregional Asian FTAs with respect to provisions on quantitative restrictions.

The last decade saw a surge in FTAs containing mutatis mutandis expressions. Some 29 of 46 Asian FTAs (63%) that came into force since 2010 invoke Article XI based on mutatis mutandis (Figure 2.28). Of these, 21 include commitments beyond WTO obligations. This trend is due to a move by extraregional Asian FTAs toward greater harmonization of FTA provisions on quantitative restrictions with WTO law (Figure 2.29). This leads to several conclusions. The evolution of provisions on quantitative restrictions in Asian FTAs shows that the use of Article XI based on mutatis mutandis is a new phenomenon which only gained traction in the last 10 years. This reflects economies' desire to make their FTAs consistent with existing multilateral trade agreements, increasing the institutional relationship with the WTO.

The widespread use of quantitative restrictions as a policy response to secure adequate access to—and supply of—essential goods during the COVID-19 pandemic shows that these measures are under-regulated in WTO law. As shown above, COVID-19-related quantitative restrictions take the form of export restrictions, export licenses, or export quotas. Although Article XI of the GATT stipulates a general prohibition of quantitative export restrictions to trade, the parameters of valid exceptions are not clearly defined—with no

Figure 2.28: Evolution of Provisions on Quantitative Restrictions in Asian FTAs

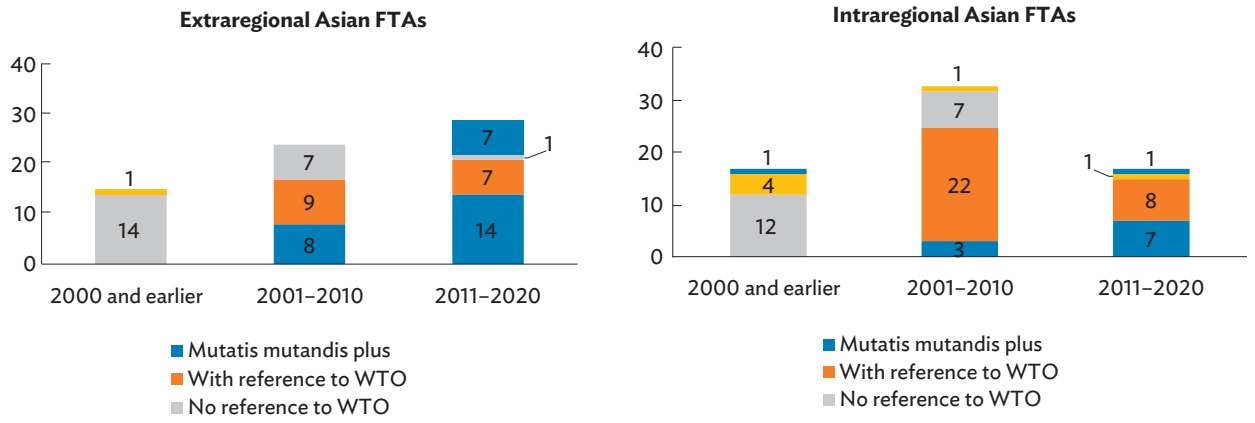


FTA = free trade agreement, NTM = nontariff measure, QR = quantitative restriction, WTO = World Trade Organization.

Note: Mutatis mutandis incorporates relevant WTO laws on quantitative restrictions into the FTA while mutatis mutandis plus provisions include other commitments beyond WTO obligations such as advance notification, transparency, consultation, among others.

Source: ADB calculations using official FTA full texts.

Figure 2.29: Evolution of Provisions on Quantitative Restrictions in Asian FTAs, by Region



FTA = free trade agreement, WTO = World Trade Organization.

Note: Mutatis mutandis incorporates relevant WTO laws on quantitative restrictions into the FTA while mutatis mutandis plus provisions include other commitments beyond WTO obligations such as advance notification, transparency, consultation, among others.

Source: ADB calculations using official FTA full texts.

definitive WTO case law shedding light on this legal uncertainty. In effect, it remains unclear whether the COVID-19-related quantitative restrictions imposed are inconsistent with WTO law, which might lead to a rise in future trade disputes. While countries have explored other alternatives in improving WTO-based regimes in the context of FTAs, this has contributed to the heterogeneity of approaches in regulating quantitative restrictions.

A plurilateral agreement among like-minded economies to ensure free flow of essential products during a pandemic can help optimize any crisis response. Toward this end, several economies—such as Australia, Brunei Darussalam, Canada, Chile, the Lao PDR, Myanmar, New Zealand, Singapore, and Uruguay—recently signed a Joint Ministerial Statement on Supply Chain Connectivity (JMS). The JMS commits signatories to (i) refrain from imposing export restrictions, tariffs, and nontariff barriers; (ii) remove existing trade restrictive measures on essential goods; and (iii) ensure that critical infrastructure remains open. Since its issuance, New Zealand and Singapore began work on a Declaration on Trade in Essential Goods for Combating the COVID-19 Pandemic. The declaration, which was launched on 15 April 2020, contains commitments to be unilaterally undertaken on a most-favored nation (MFN) basis by New Zealand and Singapore for a list of specified essential goods.

Further, a plurilateral agreement ensuring the free flow of essential goods in times of pandemics or natural disasters could be conceived following the modality of the WTO Information Technology Agreement (Box 2.2). An agreement could also create a homogenous regulatory framework on quantitative restrictions which boosts transparency in applying these measures, strengthening enforcement of existing obligations, and upgrading monitoring mechanisms. It can also include stipulations that clearly define the scope of exception contained in Article XI:2(a) GATT, requiring specific temporal limits and defining parameters for the concept of "essential goods" to achieve an effective solution that will prevent future trade conflicts on the use of quantitative restrictions.

Box 2.2: World Trade Organization Information Technology Agreement

The Information Technology Agreement (ITA) was originally signed on 13 December 1996 by 29 participants at the Singapore Ministerial Conference. It went into effect on 13 March 1997. The ITA is a seminal plurilateral tariff liberalization arrangement negotiated by the World Trade Organization (WTO) after its establishment in 1995. The signatories commit to eliminate tariffs and binding customs duties at zero for all products specified in the Agreement. The ITA covers 97% of world trade in information technology products—such as computers, telecommunication equipment, semiconductors, semiconductor manufacturing and testing equipment, software, scientific instruments, as well as most of the parts and accessories of these products. An expansion of the agreement was concluded by over 50 members at the Nairobi Ministerial Conference in December 2015. The ITA includes an additional 201 products valued at over $1.3 trillion per year. Moreover, the inclusion of ITA concessions in the signatories' WTO schedules of concessions means that tariff eliminations are implemented on a most-favored nation (MFN) basis. This creates a positive spillover effect because even non-ITA signatories can benefit from the trade opportunities generated by ITA tariff elimination.

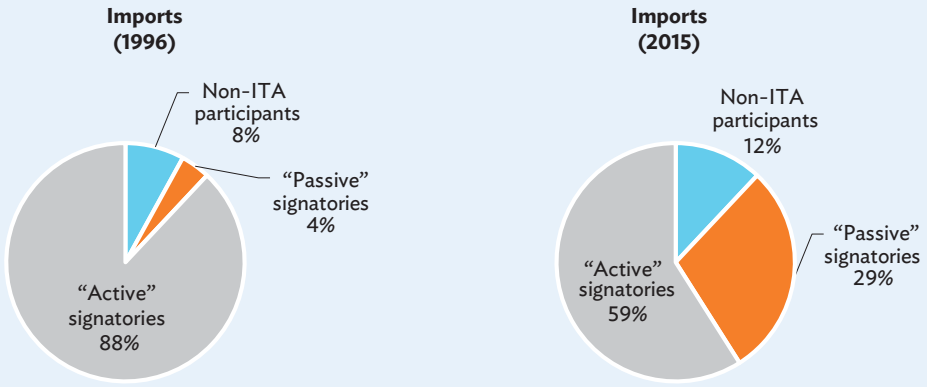
In the context of value chain integration, ITA-induced tariff reductions simultaneously affect both imports and exports, creating opportunities for ITA signatories to integrate into global value chains (Henn and Gnutzmann-Mkrtchyan 2015). Variations on the ITA impact across economies are driven by differences in reasons for joining the ITA, indicating to a certain extent the initial state of a country's ITA sector. Positions of ITA members along vertically fragmented information and communication technology (ICT) value chains, whether upstream (exporting intermediates) or downstream (importing intermediates/exporting final goods), also help explain why the impact of ITA varies across economies.

The ITA has also shifted trade patterns and market shares of its members (Henn and Gnutzmann-Mkrtchyan 2015). The rise of Asian economies led by the People's Republic of China, and the growing importance of developing economies in ICT global value chains have altered the ITA trade landscape. Several economies with disparate trade and economic backgrounds acceded to the ITA after 1997. This cohort of "late signatories" is grouped into "passive" or "active" signatories. Passive signatories are economies with less developed ITA sector that joined after 1997, largely motivated by policy objectives such as accession to the European Union, WTO, or other trade agreements. All non-passive signatories are grouped into "active" signatories (Henn and Gnutzmann-Mkrtchyan 2015).

Largely attributed to their ITA membership, passive signatories—mostly developing and emerging economies—saw a rapid expansion of global trade in ITA goods during 1996–2015, encroaching on the trade share of developed "active" signatories (box figure).

Overall, by helping lower the price of ITA goods through tariff reductions and elimination, the agreement has spurred the adoption and diffusion of key ICT goods—such as mobile phones, particularly in developing economies. While trade liberalization of ICT products can also come either unilaterally or through free trade agreements, legally binding, WTO-enforceable tariff concessions makes ITA product liberalization harder to reverse than if it were achieved outside the plurilateral agreement. This "commitment effect" creates a stable and predictable trading environment that draws multinational firms to enter and invest in ITA member economies, thereby enhancing their competitiveness and capacity to innovate.

World Market Shares in ITA Products by Type of Accession *(%)*



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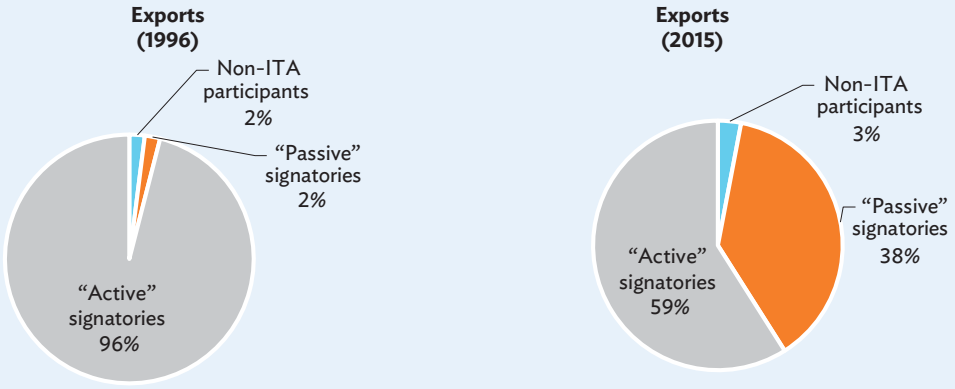
Box 2.2: World Trade Organization Information Technology Agreement *(continued)*



ITA = Information Technology Agreeement.

Notes: "Passive" signatories are economies that signed the ITA after it came into force in 1997 and motivated by an encompassing policy objective. "Active" signatories include ITA original members and/or driven by other considerations.

Source: WTO (2017).

Source: ADB staff based on Henn and Gnutzmann-Mkrtchyan (2015) and WTO (2017).

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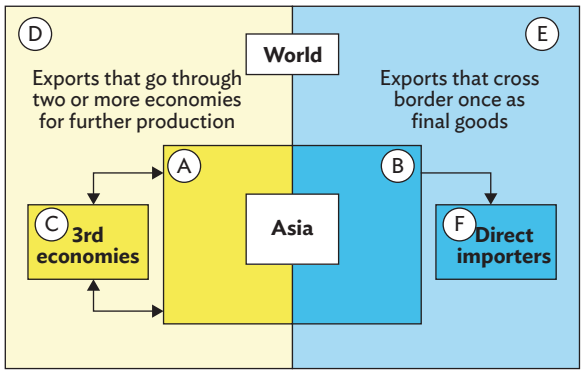
Annex 2a: Analytical Framework of GVC and RVC

A new framework for understanding global value chain (GVC) and regional value chain (RVC) participation is introduced here to better track Asia's progress in its global and regional trade linkages. The world's gross exports can be divided into two: (i) exports that cross borders once as final goods (represented by the blue area in Annex Figure 2a); and (ii) exports that go through two or more economies for further production (yellow area in Annex Figure 2a). World-to-world GVC is the share of the world's total GVC terms to its gross exports. Asia-to-world GVC is the share of Asia's total GVC terms to its gross exports. Asia-to-Asia gross RVC is the share of Asia's intraregional GVC terms to its intraregional gross exports, excluding all non-Asian third economies.[1] Asia-to-Asia net RVC is similar to gross RVC, except that its denominator, total intraregional exports, includes non-Asian third economies.

Annex Figure 2a: Analytical Framework of GVC and RVC



Participation Rates:

$$(1)\quad \text{World GVC} = \frac{A + C + D}{A + B + C + D + E + F}$$

$$(2)\quad \text{Asia-to-World GVC} = \frac{A + C}{A + B + C + F}$$

$$(3)\quad \text{Asia-to-Asia Gross RVC} = \frac{A}{A + B}$$

$$(4)\quad \text{Asia-to-Asia Net RVC} = \frac{A}{A + B + C}$$

GVC = global value chain, RVC = regional value chain.

Source: ADB (2019).

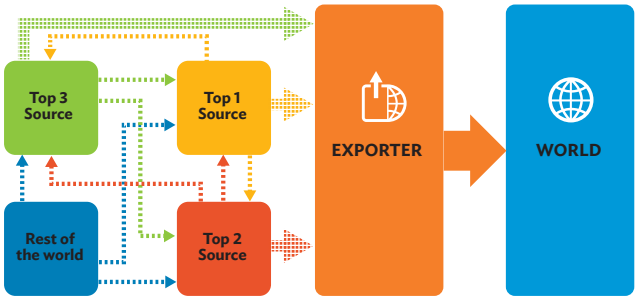
[1] Third economies are those that indirectly participate in a GVC transaction. For example, Singapore exports intermediate goods used by the People's Republic of China (PRC) to produce and export final goods to Malaysia. From Singapore's point of view, the PRC is the direct partner, while Malaysia is the third economy.

Annex 2b: GVC Diversification—Backward Linkages

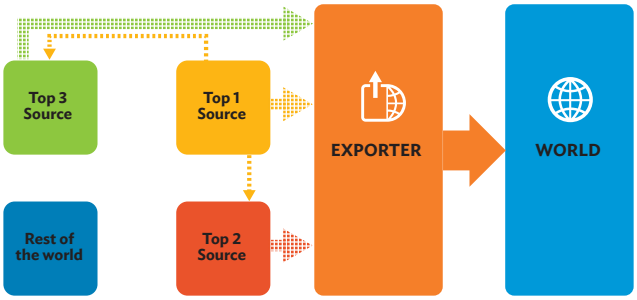
Under the diversification scenario, the exporter decides to increase its import of intermediate goods from its secondary sources, while it simultaneously decreases its imports from its top source. In this case, the exporter reduces its import of intermediate goods from its top source by 30% and then sources it instead from its top 2 and top 3 sources equally (Annex Figure 2b.1a). Going further upstream, the top sources of intermediate goods are interconnected with one another (Annex Figure 2b.1b). The top source indirectly supplies the exporter through the top 2 and top 3 sources (Annex Figure 2b.1c). Likewise, some of the intermediate goods exported by the top 2 and top 3 sources are used by the top source to produce supplies needed by the exporter (Annex Figure 2b.1d and Annex Figure 2b.1e). Aside from the top sources, which are affected by the exporter's diversification strategy, other economies which supply goods to those countries will be affected as well (Annex Figure 2b.1f).

Annex Figure 2b.1a: Direct Impact of Diversification to Backward Linkages

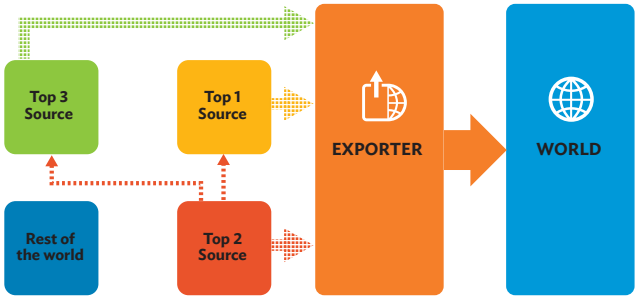
Annex Figure 2b.1b: Direct and Indirect Impact of Diversification to Backward Linkages



Annex Figure 2b.1c: Impact to Top Source



Annex Figure 2b.1d: Impact to Top 2 Source



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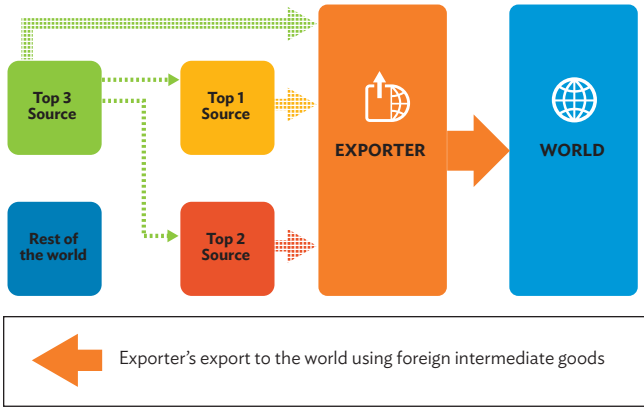
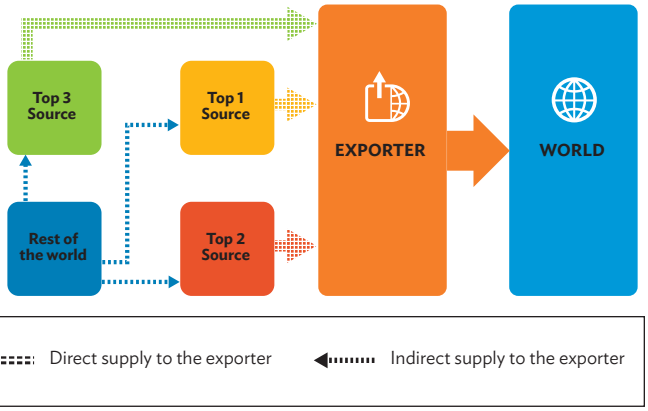
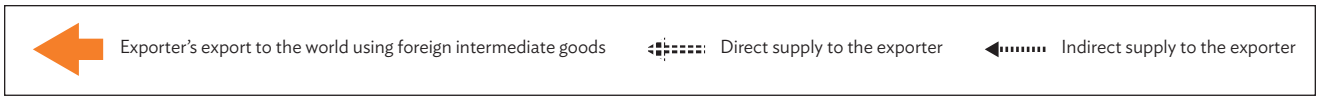
Figures continued

Annex Figure 2b.1e: Impact to Top 3 Source



Annex Figure 2b.1f: Impact to the Rest of the World





Notes: Indirect supply refers to the exported intermediate goods that goes through further processing by a middle country before reaching its destination. Direct supply refers to the exported intermediate goods which go straight to its destination.

Source: ADB staff.

When all economies decrease their dependency from their primary source by 30%, and then import intermediate goods from the next two sources, total trade for Asia gains by 1.2%, while total trade for the EU and North America declines.

This diversification scenario in backward linkages is applied on a global scale using the 62-country data set from the ADB Multi-Regional Input–Output Tables (MRIO) for 2019. The main contributor for Asia's increase in trade is East Asia, specifically Japan and the People's Republic of China (PRC). Japan sees increase in trade with Asia and Latin America, while the PRC sees increasing trade with the European Union (EU). The EU trade declines as economies decrease trading with their primary partners within their region and increase trade with Asia instead. North America also sees a decline as its primary partners in the EU and Latin America diversify to Asia as well. The world's total trade does not change as the magnitude of the decline in exports by primary sources is offset by the increase in exports from secondary sources (Annex Table 2b.1).

Annex Table 2b.1: Impact of Diversification on Backward Linkages (%)

Region	Impact on Exports		Impact on Imports	Impact on Total Trade
	Direct	Adjusted		
Asia and the Pacific	**1.23**	**1.17**	**1.29**	**1.23**
Central Asia	1.37	1.48	1.04	1.28
East Asia	1.75	1.65	1.84	1.74
South Asia	0.06	0.04	0.05	0.04
Southeast Asia	0.06	0.07	0.13	0.10
The Pacific and Oceania	1.28	1.37	1.28	1.33
European Union	**–0.41**	**–0.36**	**–0.34**	**–0.35**
Latin America	**0.79**	**0.66**	**0.79**	**0.73**
North America	**–4.37**	**–4.25**	**–3.90**	**–4.06**
Rest of the World	**0.98**	**0.94**	**0.94**	**0.94**
World	**0.00**	**0.00**	**0.00**	**0.00**

Notes: The direct impact on total exports includes only the top sources which were directly impacted by the exporter's diversification strategy. The adjusted impact on total exports includes all the economies which have contributed to the top sources' supply of intermediate goods to the exporter.

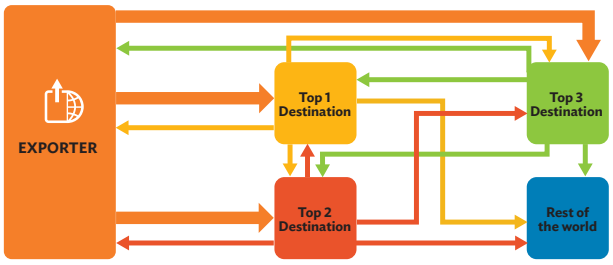
Sources: ADB calculations using data from ADB. Multi-Regional Input–Output Tables; and methodology by Wang, Wei, and Zhu (2013).

GVC Diversification—Forward Linkages

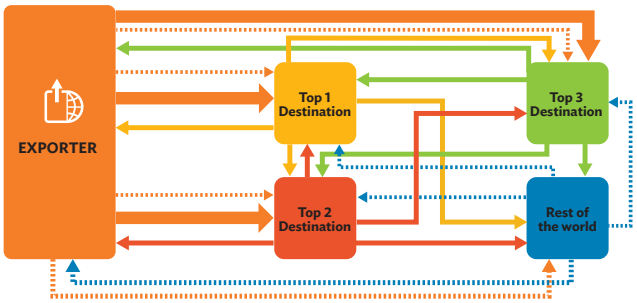
In this strategy, the exporter decreases its export of intermediate goods to its primary destination and exports those goods instead to its secondary destinations, the top 2 and top 3, equally (Annex Figure 2b.2a). This will create a ripple effect for the downstream production until it affects the final consumers (Annex Figure 2b.2b).

The decreasing supply of intermediate goods to the top destination will affect its exports (Annex Figure 2b.2c), as well as top 2 and 3's downstream production of exported goods (Annex Figure 2b.2d). Likewise, the increase of supply to the top 2 and top 3 destinations (Annex Figures 2b.2e and 2b.2g) may also increase the top destination's downstream production (Annex Figures 2b.2f and 2b.2h).

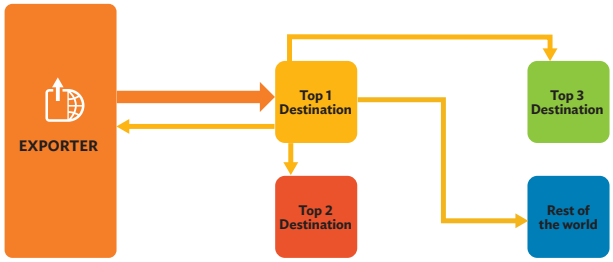
Annex Figure 2b.2a: Direct Impact of Diversification to Forward Linkages



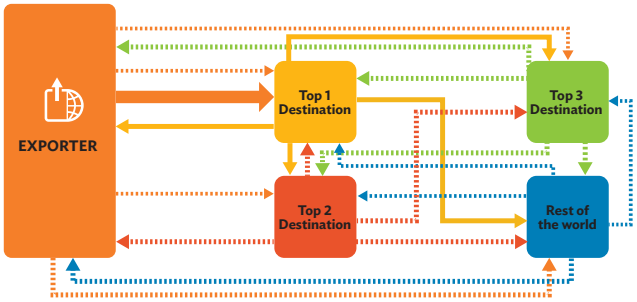
Annex Figure 2b.2b: Direct and Indirect Impact of Diversification to Forward Linkages



Annex Figure 2b.2c: Impact to Top Destination

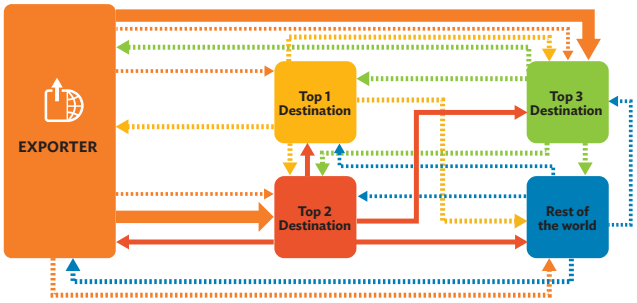


Annex Figure 2b.2d: Spillover of Impact to Top Destination



Annex Figure 2b.2e: Impact to Top 2 Destination

Annex Figure 2b.2f: Spillover of Impact to Top 2 Destination



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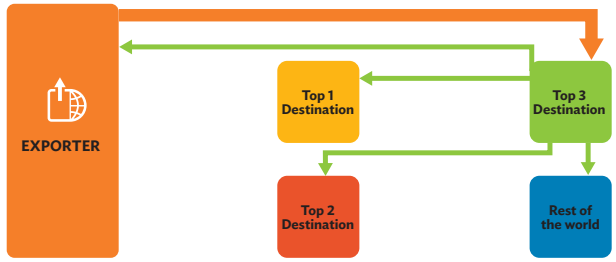
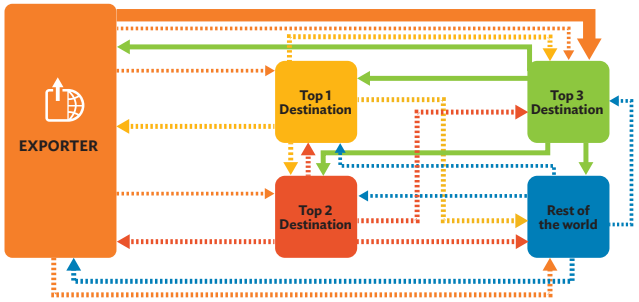
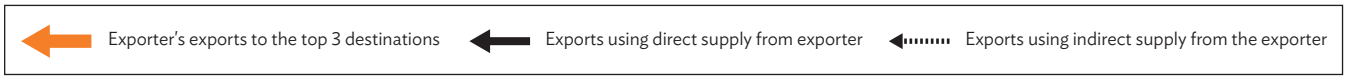
Annex Figure 2b.2g: Impact to Top 3 Destination



Annex Figure 2b.2h: Spillover of Impact to Top 3 Destination





Notes: Indirect supply refers to the exported intermediate goods that goes through further processing by a middle country before reaching its destination. Direct supply refers to the exported intermediate goods which go straight to its destination.

Source: ADB staff.

Applying this diversification strategy on forward linkages globally using data from ADB's MRIO shows that Asia's total trade decreases both from the direct and adjusted impact on exports.

Some economies such as Japan and Viet Nam see exports increasing as their supply of intermediate goods coming from Asia increases as well. However, the magnitude is greater for the decrease in exports of economies such as the Republic of Korea, the PRC, and Malaysia. Latin America's exports also decrease as North America decreases its supply of intermediate goods to Mexico. The EU's exports increase as it gains more supplies from North America and Asia, while North America gains more supplies from Asia. The impact of this strategy, however, is not as significant compared with the impact of trade diversification in the backward linkages (Annex Table 2b.2).

Annex Table 2b.2: Impact of Diversification on Forward Linkages *(%)*

	Exports		Imports		Total Trade	
Country	**Direct**	**Adjusted**	**Direct**	**Adjusted**	**Direct**	**Adjusted**
Asia and the Pacific	**–0.13**	**–0.12**	**–0.13**	**–0.04**	**–0.13**	**–0.08**
Central Asia	0.00	0.00	–0.01	–0.01	0.00	–0.01
East Asia	–0.22	–0.19	–0.20	–0.04	–0.21	–0.12
South Asia	0.00	–0.01	0.00	–0.05	0.00	–0.03
Southeast Asia	0.04	0.03	0.03	–0.04	0.03	0.00
The Pacific and Oceania	–0.01	0.00	–0.01	0.00	–0.01	0.00
European Union	**0.25**	**0.23**	**0.26**	**0.10**	**0.25**	**0.17**
Latin America	**–2.91**	**–2.76**	**–2.67**	**–0.18**	**–2.79**	**–1.45**
North America	**0.22**	**0.21**	**0.18**	**–0.22**	**0.20**	**–0.02**
Rest of the World	**0.08**	**0.08**	**0.07**	**0.07**	**0.08**	**0.08**
World	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Notes: The direct impact on total exports includes only the top destinations which were directly impacted by the exporter's diversification strategy. The adjusted impact on total exports includes all the economies which have contributed to the top sources' supply of intermediate goods to the exporter.
Sources: ADB calculations using data from ADB. Multi-Regional Input–Output Tables; and methodology by Wang, Wei, and Zhu (2013).