CHAPTER

Policy developments and potential impacts of trade tensions in Asia and the Pacific

INTRODUCTION

The relatively dynamic global trade recovery that began in late 2016 is now threatened by trade tensions between the United States and other economies, particularly China. Increasing protectionism does not sit well with the universally accepted 2030 Agenda for Sustainable Development, in which trade is an important means of implementation and one of the 17 goals is to promote global partnership. The possible escalation of trade conflicts, as economies retaliate over each other's protectionist measures, has become an important impediment to foreign trade and investment as engines of sustainable development, both in Asia and the Pacific and globally.

The impacts of trade wars depend largely on their scale and scope as well as the policy uncertainties they generate. While the direct impacts of trade wars are largely limited to those economies involved, there is the possibility of spillover effects for third parties. Some spillover effects could be positive for some economies. For example, some economies may see market opportunities because of the redirection of trade and investment. Some economies may see terms of trade improvements if the loss of demand due to trade wars decreases the global price level of their imports more than their exports. However, economies are most likely to see negative spillover effects on their trade because of the loss of global demand. The adverse impacts will be even more disastrous if trade wars extend their scope – for example, from bilateral tit-for-tat actions to global protectionism, from goods to goods and services, etc. In addition to direct trade effects, trade wars have additional detrimental effects on aggregate demand as they increase uncertainties. In particular, consumers may delay spending and businesses may defer their investments while they are waiting for a more predictable policy environment.

Against this backdrop, this chapter reviews the current tensions and their implication for the Asia-Pacific region. The chapter consists of the following sections. Section A describes the current state of trade tensions. Section B reviews recent changes in trade and investment policies in the region in the context of these tensions. Section C, taking into account the interdependence of Asia-Pacific economies participating in global value chains (GVCs), identifies highly vulnerable economies and potential beneficiaries from the growing tensions between the United States and China. Section D then presents a computable general equilibrium (CGE) analysis of the potential economic, social and environmental impacts of different trade war and regional integration scenarios, followed by conclusions in section E.

A. TRADE TENSIONS BETWEEN THE UNITED STATES AND CHINA: WHAT HAS HAPPENED SO FAR?

Growing scepticism of globalization is increasingly reflected in the policy agendas of developed economies. The trend started with "Brexit" in the United Kingdom, political campaigns of other major European economies such as Germany and France, and – more importantly – the trade policy and actions of the new administration of the United States. An important indication is the United States Trade Representative (USTR) trade policy agenda for 2017 that sets out the principles that will drive policy actions by the United States administration. The agenda explicitly focuses on reducing trade deficits, renegotiating existing agreements and tackling perceived unfair practices (USTR, 2017).

The United States, which is attempting to reduce merchandise trade deficits with targeted economies, has a services-trade surplus, but a large deficit of trade in goods (figure 4.1). In addition to China, in 2017 the other major trading partners of the United States with large merchandise-trade surpluses were Germany, Mexico, the Republic of Korea and Japan. Some of these economies have been alleged to have used unfair trade practices in certain sectors, and the United States has consequently imposed trade-remedy measures, arguably as a negotiating tactic (*Economist*, 2018a; Kravchenko and Mikic, 2018).

"Tariff increases by the United States in 2018 have focused mainly but not solely on China."

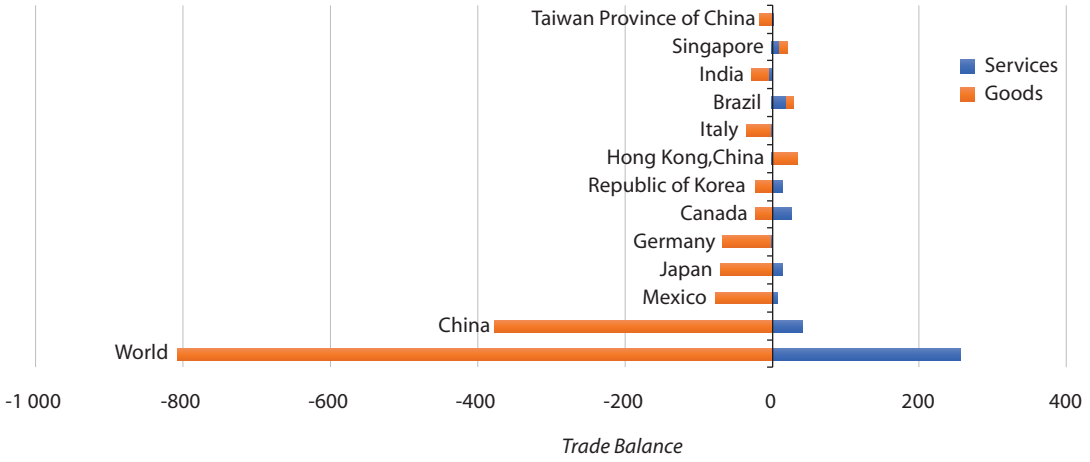
In 2018, the United States invoked a series of unilateral tariffs on a targeted list of imported goods as trade remedy procedures. The first official action began in early 2018 with the global safeguard measures (Section 201 of the Trade Act of 1974) on solar panels and washing machines which imposed 20% and 30% tariffs, respectively, in the first year with the tariffs scheduled to be reduced by a half within four years. Although these safeguard measures affect essentially all economies exporting to the United States, China is among the largest exporters to the United States. In March 2018, tariffs on steel at 25% and aluminium at 10% – which affect all economies – came into force following an investigation into the national security concerns of such imports (Section 232 of the Trade Expansion Act of 1962).

The steel and aluminium measures as well as measures on solar panels and washing machines have affected other economies in addition to China. Although the steel and aluminium measures were seen as targeting China's excess capacity, only 6% of the imports by the United States came from China in 2017 following the previous imposition by the United States of anti-dumping and countervailing

Figure 4.1

Merchandise and services trade balances of the United States with major trading partners, 2017

(Billions of United States dollars)

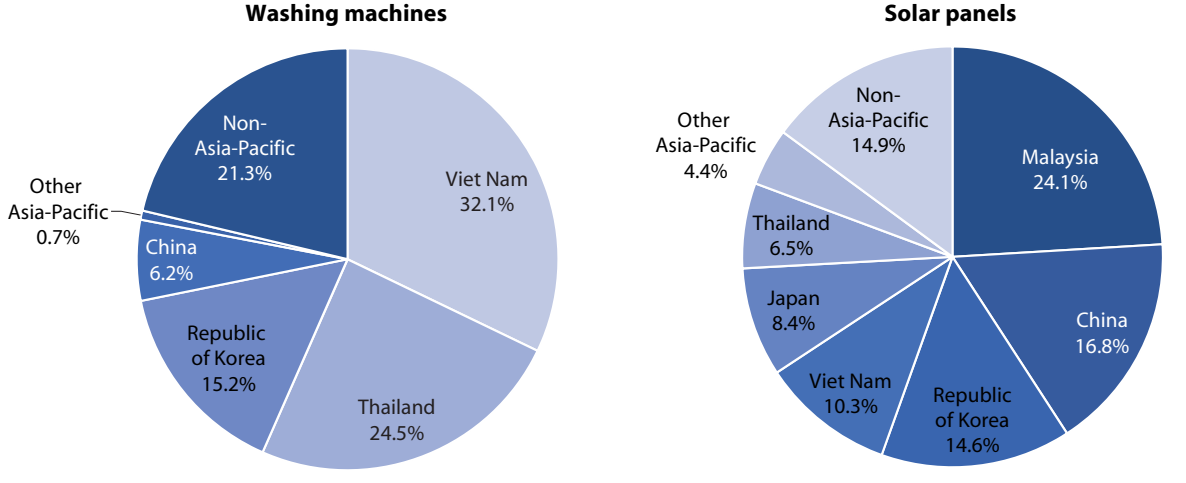


Sources: ESCAP compilation based on data from the United States Department of Commerce; and Bureau of Economic Analysis "U.S. International Trade in Goods and services", August 2018. Available at https://www.bea.gov/news/2018/us-international-trade-goods-and-services-august-2018.

duties on imports from China. The measures then affected other major exporters of steel and aluminium to the United States, including Canada, the European Union and Mexico. Those economies accounted for about 50% of the imports by the United States in 2017. In the case of solar panels and washing machines, the largest exporters to the United States are from Asia and include Japan, the Republic of Korea, Malaysia, Thailand, and Viet Nam (figure 4.2).

Figure 4.2

Major exporters of washing machines and solar panels to the United States, 2017



Source: ESCAP calculations using data from the International Trade Centre (accessed July 2018).
Note: The washing machines in this chart refer to products under the subheading 845020. The solar panels in this chart refer to products under the subheading 854140.

Similarly to the action on steel and aluminium, the United States announced its national security investigation of the automotive sector in May 2018. The investigation is ongoing, and is expected to reach completion by early 2019. Tariffs on imported automobiles and auto parts will be increased to 25% if the investigation concludes that automotive sector imports impair national security. The potential tariffs on automobiles would cover imports of car and trucks valued at more than $200 billion, not including auto parts. Any auto tariffs would affect the major exporters of automobiles to the United States such as Canada, the European Union, Japan, Mexico and the Republic of Korea. Despite the fact that the plan to impose tariffs has temporarily been put on hold, the looming tariffs on car imports have given the United States some leverage to negotiate bilateral trade agreements with those car exporting economies (see, for example, King, 2018, and Stearns, 2018).

"Tensions escalated with retaliations from China and other economies affected by the tariff increase."

During the second half of 2018, trade tensions between the United States and China escalated. The United States imposed 25% tariffs on imports of goods from China specifically under the unfair trade practices related to technology transfer, intellectual property and innovation (Section 301 of the Trade Act of 1974). Major products affected by the tariff implementation thus far include: computers, telephones and machinery, computer parts, electrical machinery, furniture, and car parts. The current implementation of 25% tariffs on imports from China covers about half of the Chinese exports entering the United States.[1]

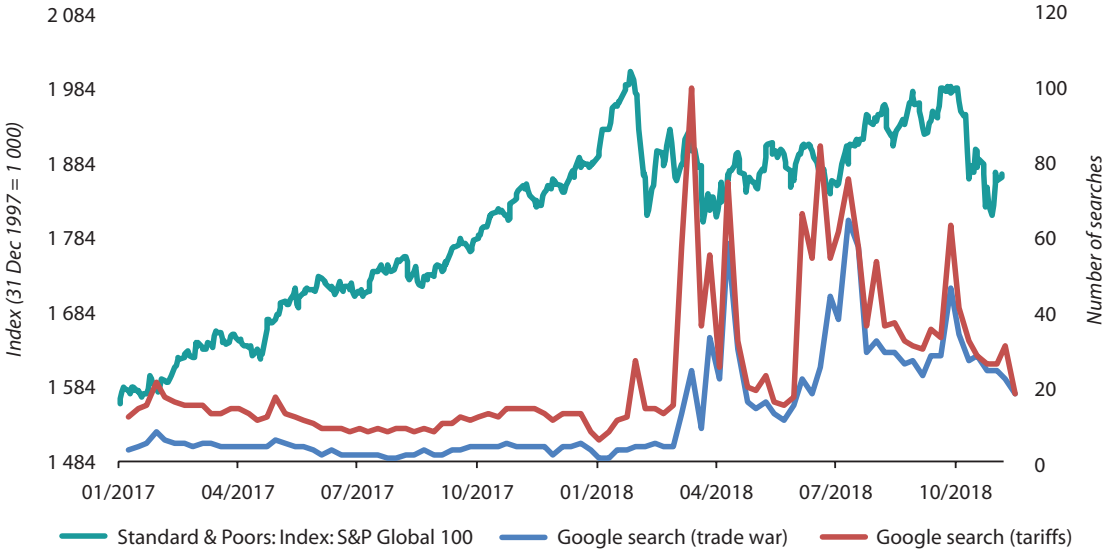
In response to the tariff increases by the United States, many of economies affected have begun implementing retaliatory actions, while also turning to WTO for dispute resolutions. For example, China and the Republic of Korea have filed a WTO Dispute case against solar panel tariffs imposed by the United States. The aluminium and steel tariffs have prompted retaliation from several economies including Canada, China, the European Union, India, Mexico and Turkey. In the case of retaliation by China, as of November 2018, China has implemented a "tit-for-tat" strategy by imposing tariffs ranging from 5% to 25% on $100 billion out of $130 billion worth of merchandise imports from the United States. According to China's trade statistics, its retaliatory lists covered about two thirds of its imports from the United States in 2017. The goods mainly affected by retaliatory actions of trade partners were initially agricultural products, especially soybeans, pork, fruits and nuts. Intermediate and capital equipment were included in the list of tariff retaliation after trade tensions have escalated in the second half of 2018. Retaliatory tariffs by Canada, the European Union and Mexico mainly target steel and aluminium, as well as symbolic American products such as whisky, motorcycles and pork. Tariffs by India focus on almonds, chemicals, aluminium and steel, and apples, while Turkey directs its higher tariffs at coal, nuts, paper, and plastics (*Economist*, 2018a). Notably not all notified retaliatory tariffs have been implemented thus far.[2]

"Although the trade war is currently bilateral, the real danger is the policy uncertainty that will eventually result in the loss of demand from the economies subject to the restrictions as well as globally."

The "tit-for-tat" protectionist actions have created concerns worldwide. Uncertainty arising from policy changes can have a sizeable negative impact on global investment and economic activity. Firms may defer their investments because of the growing uncertainty over prospective trade and investment policies in their investment destinations and global markets. Similarly, households may increase precautionary savings and postpone consumption. An indication of the decreasing confidence was the flurry in Google searches for terms "trade war" and "tariff" in 2018. After April 2018, the search for the term "trade war" increased five-fold (figure 4.3).

Another indication is the higher volatility in the global stock markets seen during 2018. Part of the reason for the volatile stock market was the concern that further escalation of the trade conflicts between the United States and China could derail the momentum of global economic recovery. The volatility in stock markets, in response to the growing concern over the protectionist actions as well as deterioration of the global trade and investment environment, could amplify the negative effects on consumption and investment. The agreement by the United States and China on the sidelines of the G20 summit on 1 December 2018 to temporarily delay any further bilateral tariff increases to negotiate a solution to their trade dispute is welcome news in that context.

Figure 4.3 **Growing concern over trade wars**



Source: ESCAP compilation based on data from Google trends (https://trends.google.com/trends/?geo=US) and CEIC.

B. REGIONAL POLICY DEVELOPMENTS IN THE WAKE OF TRADE WARS

"Tariff increases are just a small part of a whole array of protectionist actions."

Although the trade policy environment has been increasingly characterized by a steady rise in the frequency of targeted protectionist measures, the scope of the measures remains narrow thus far. In general, on average the applied tariff levels in the Asia-Pacific economies have remained stable in recent years (figure 4.4).[3] However, tariffs are not the only forms of protectionist actions. The general rise in trade protectionism can be driven by successive waves of technical barriers to trade, special safeguards, and a whole array of other non-tariff measures (NTM). Therefore, tracking all implemented trade measures provides better information on policy stands.

1. Trade policy measures affecting goods: A rapid increase of trade restrictiveness

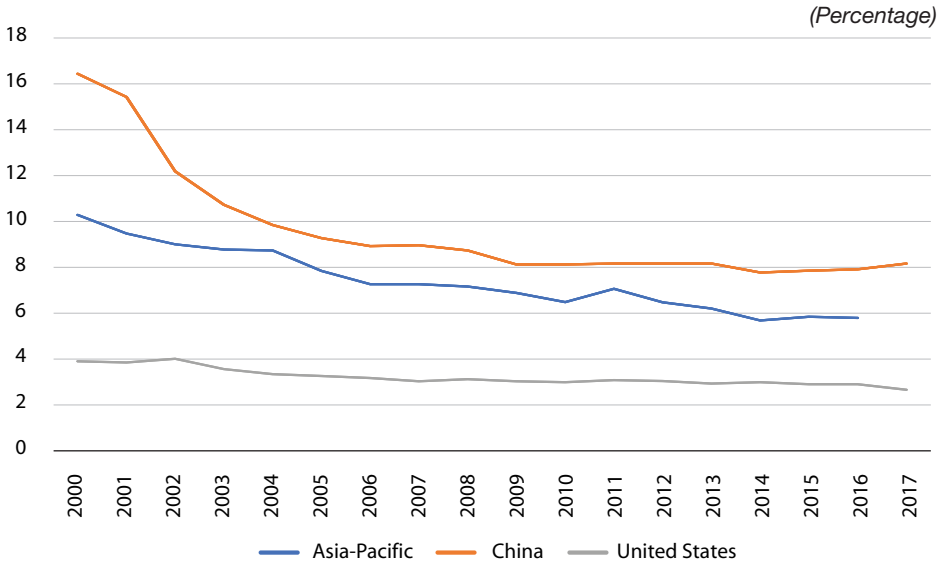
The drastic increase in newly implemented trade measures in 2018 is a cause for concern. These measures include subsidies, government procurement regulations, NTMs, etc. Worldwide average number of new trade-discriminatory measures introduced from 1 January to 1 November 2018 was 88 per month, the highest level since the 2009 economic crisis (figure 4.5).[4] The number of these new discriminatory measures significantly surpassed the 32 new liberalizing measures per month in the same period[5, 6] Asia and the Pacific followed a similar trend, with the introduction of 33 discriminatory measures and 15 liberalizing measures per month, on average, in the first 10 months of 2018. Although many of these measures could be WTO compatible, their increasing use by an economy could lead to a protectionism spiral as other economies also find them acceptable to use.

"Alleged subsidies are the most important form of trade distortions."

Among the different categories of discriminatory measures, subsidies were the most frequent, both globally and in Asia and the Pacific. In 2018, about 30% of the discriminatory measures were subsidies provided to producers, and another 12% were subsidies to exporters. Import tariffs accounted for only 17%, while contingent trade-protective measures

Figure 4.4

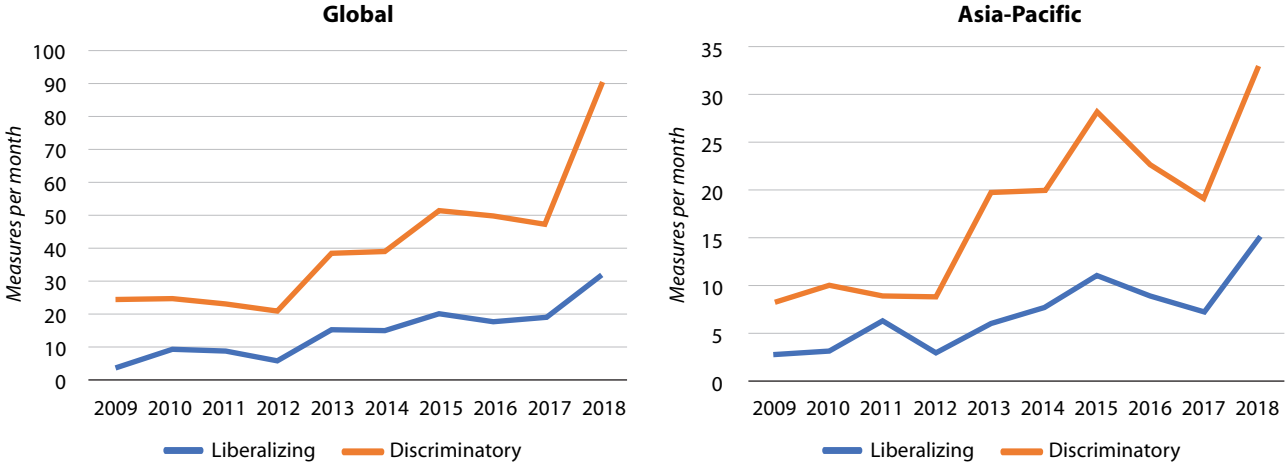
Simple-average effectively applied tariffs in the Asia-Pacific region, China, and the United States, 2000-2017



Source: ESCAP calculations based on data from the World Bank, World Integrated Trade Solutions (WITS) (accessed September 2018).

Figure 4.5

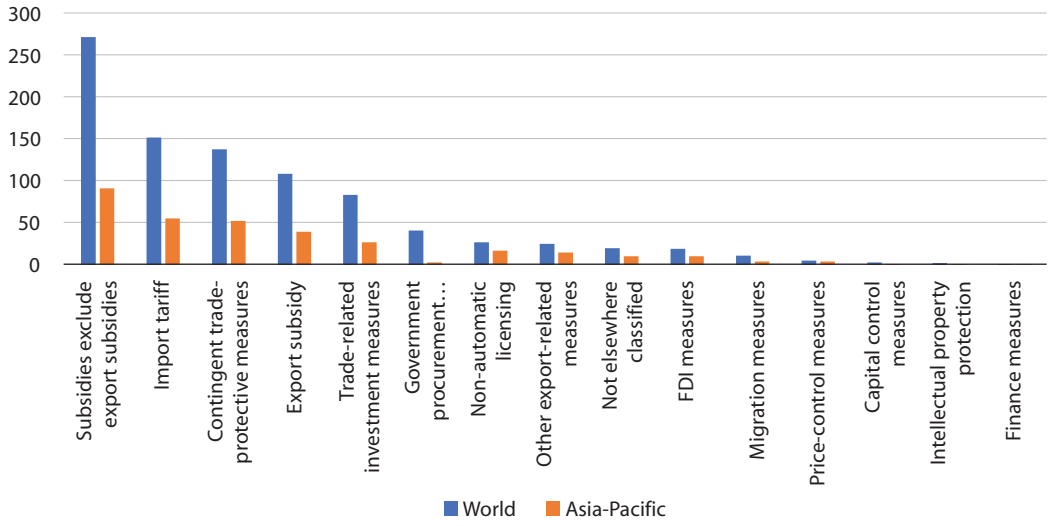
The average monthly number of new trade measures introduced globally, 2009-2018



Source: ESCAP calculations based on data from the Global Trade Alert database (accessed 1 November 2018).
Note: The data are based on the policy changes implemented and documented before 1 November in each year.

Figure 4.6

Discriminatory measures introduced globally and in the Asia-Pacific region, by type, 2018



Source: ESCAP calculations based on data from the Global Trade Alert database (accessed 1 October 2018).

represented about 15%. The pattern in the Asia-Pacific region was similar. Contrary to the global worries on import restrictions, the distribution of discriminatory measures suggests that economies are using trade distortions in the form of subsidies more often than import restrictions.[7]

"Asia-Pacific economies are targets but also active contributors of discriminatory trade measures."

Globally, the United States is the highest contributor of new discriminatory measures. The share of the United States increased drastically from 9% of new measures in 2016 to 22% in 2018. Some Asian and Pacific economies are also significant initiators of discriminatory measures. India, the second-largest initiator after the United States, contributed 8% of new discriminatory measures in 2018. In addition, China, Indonesia and Australia are among the top 10 largest contributors of discriminatory measures (table 4.1). Overall, about 23% of discriminatory measures introduced in 2018 were from Asia and the Pacific.

Asia and the Pacific are an important target of the discriminatory measures, because the region includes important exports of products under scrutiny. About one third of the newly implemented discriminatory trade measures affected Asia-Pacific economies. China, Japan, the Republic of Korea, India and Thailand were more affected by the discriminatory measures than other Asia-Pacific economies (table 4.2). These economies are major exporters of products under dispute, such as aluminum and steel, automotive products, solar panels and washing machines.

Table 4.1

Top 10 contributors of discriminatory trade measures in the world, 2016-2018

Rank	Economy	2016	2017	2018
1	United States	8.9	12.6	22.2
2	India	4.3	5.9	8.3
3	Canada	1.6	2.7	5.2
4	Brazil	3.1	3.7	3.7
5	China	3.0	3.3	3.6
6	Germany	4.9	3.6	3.6
7	Argentina	2.7	3.3	3.0
8	Indonesia	1.7	2.8	2.5
9	Australia	1.5	2.4	2.3
10	South Africa	2.2	2.0	2.1

Source: ESCAP calculations using the Global Trade Alert database (accessed 1 October 2018).

Table 4.2 **Top 10 targets of discriminatory trade measures globally, 2016-2018**

Rank	Economy	2016	2017	2018
1	China	3.1	3.7	3.7
2	United States	2.2	2.5	2.4
3	Germany	2.5	2.8	2.4
4	Japan	1.9	2.5	2.3
5	Italy	2.4	2.5	2.3
6	Republic of Korea	1.9	2.4	2.3
7	France	2.3	2.5	2.2
8	India	1.9	2.1	2.1
9	Mexico	1.3	1.8	2.0
10	Thailand	1.6	1.8	2.0

Source: ESCAP calculations using the Global Trade Alert database (accessed 1 October 2018).

"A third of discriminatory measures affecting Asia-Pacific economies in 2018 were introduced by other economies in the region."

However, about one third of discriminatory measures affecting Asia-Pacific economies in 2018 were introduced by economies within the region. This is a relative decrease from previous years, as the share of intraregional discriminatory measures stood at more than 40% on average between 2015 and 2017.[8] The increasing importance of extra-regional discriminatory measures tend to be consistent with the dynamic of current trade tensions, which potentially increase barriers to trade with developed economies outside the region.

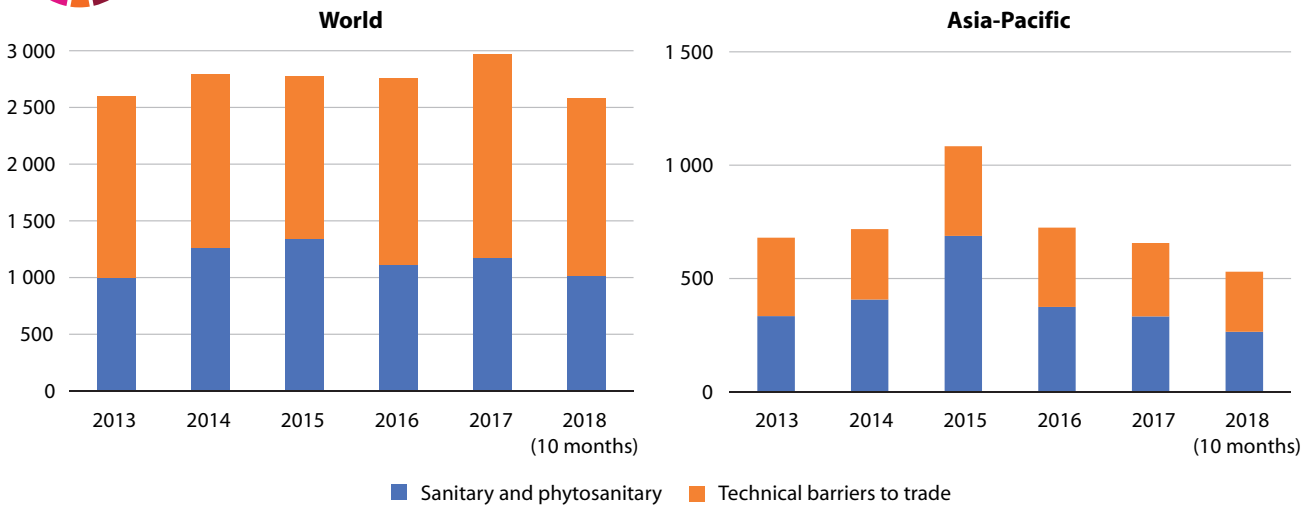
Technical non-tariff measures (NTMs), such as product-labelling standards and sanitary and phytosanitary (SPS) measures, have also increased rapidly. Although they often have legitimate non-trade policy objectives, NTMs are more complex, less transparent and more difficult to monitor than tariffs. They therefore provide a convenient means for governments to discriminate against imported products while avoiding disputes with their partners over trade policy. This may harm trade significantly, especially in developing and least developed economies, where testing or certification facilities to ensure compliance are often lacking or inadequate. Developing economies consequently have to resort to outsourcing services such as laboratory testing or certification in order to meet standards, which can erode any cost advantages they have. NTMs are now believed to pose a greater impediment to trade and to be the cause of higher trade costs than tariffs – the traditional barriers to trade. Most notably affected are the agricultural and food sectors. This is particularly disadvantageous for developing economies, which often have comparative advantages in those sectors.

"Since 2013, about 3,000 new NTMs have been introduced every year. Most of them have been technical barriers to trade and sanitary and phytosanitary measures."

During the past five years, more than 3,000 newly-initiated NTMs were notified annually and notified to WTO under the WTO transparency mechanism.[9] Technical barriers to trade (TBT) account for about a half of NTMs initiated globally, while SPS captured about 30% of total NTMs reported to WTO.[10] The number of SPS and TBT measures initiated globally increased in 2017. Based on the data about new measures during the first 10 months of 2018, the trend of new SPS and TBT measures in 2018 maintain the same pace (figure 4.7). Asia and the Pacific represented about 28% of SPS and 22% of TBT initiated globally in 2017. The region's contribution to those measures decreased to 26% and 20.5%, respectively, during the first 10 months of 2018. Efforts to reduce technical barriers and enhance market access through standards and conformance are ongoing in the region. For example, the APEC Sub-Committee on Standards and Conformance instituted working groups to look at establishing a compendium of export certificate requirements for APEC economies. ASEAN has developed an NTM database and incorporated it into the ASEAN Trade Repository (ATR) and National Trade Repositories (NTR).

Overall, available data implies that the use of trade-restrictive measures rapidly increased in 2017-2018. Such measures add frictions to the flows of trade in goods. The rising trade restrictions came in terms of tariffs and NTMs. Some non-tariff measures are discriminatory, such as subsidies and trade remedy actions. Non-discriminatory NTMs such as SPS and TBT can restrict trade, although many of them have legitimate non-trade objectives. Part of the trade distortions originated within the region; however, the

Figure 4.7 The number of SPS and TBT initiated globally and in the Asia-Pacific region, 2013-2018



Source: ESCAP calculations based on data from the WTO Integrated Trade Intelligence Portal (I-TIP) database (accessed October 2018).

recent trend shows that the rapid increase of distortion measures originated from economies outside the region. The drastic increase in trade restrictiveness measures adds more concern to the potential spread of discriminatory impacts from protectionisms and trade tensions.

2. Trade policies affecting commercial services: Services are not subject to new trade tensions but remain persistently restricted

Trade in commercial services has not been a direct target of the current trade tensions between developed and developing economies. One possible reason is that advanced economies tend to have service trade surpluses. Another reason is that, when compared to trade in goods, trade restrictions in services are much more difficult to detect and have remained high. Trade in services is predominantly affected by "beyond the border" measures not necessarily related to trade policies. For example, these measures can range from restrictions on foreign ownership to the degree of competition or the movement of people that affects different modes of service delivery to varying degrees.

"Several Asia-Pacific economies raised the restrictiveness of trade in services from the already high level."

The chance of spreading trade wars from goods to services cannot be ruled out. Given the fact that developing economies currently affected by the tariff frictions have services trade deficits with the United States, they might make use of trade-restrictiveness regulations in services as a tool for retaliation. To explore the possible tendency towards increasing services-trade restrictiveness, this report uses the OECD Services Trade Restrictiveness Index (STRI) to monitor changes in policies affecting trade in services.[11] There was an indication of rising trade restrictiveness in a small group of economies, including major economies in Asia and the Pacific. In 2017, the share of trade-restrictive measures increased to 32%, up from 24% of all measures in 2016. This was due to the introduction, by a few economies, of more stringent conditions across the economy, particularly those limiting the temporary movement of natural persons providing services.

In 2017, of 44 economies in the OECD STRI database, 15 economies showed an increase in trade restrictiveness among the 22 sectors analysed. Among those 15 economies, six are in Asia and the Pacific. In the Asia-Pacific region, most economies captured in the database took trade-restrictive actions in at least one of the services sectors. Japan, India and the Russian Federation adopted trade-restrictive measures that resulted in an increase in STRI in a number of sectors, while China increased trade restrictiveness in the motion pictures sector

Table 4.3

Trend in STRI of selected economies, 2016-2017

	Logistics cargo-handling	Logistics storage and warehouse	Logistics freight forwarding	Logistics customs brokerage	Accounting	Architecture	Engineering	Legal	Motion pictures	Broadcasting	Sound recording
Australia	0.23	0.18	0.19	0.19	0.22	0.17	0.14	0.14	0.15	0.20	0.14
Japan	0.22	0.18	0.19	0.16	0.20	0.16	0.12	0.58	0.10	0.27	0.11
Republic of Korea	0.16	0.09	0.12	0.11	1.00	0.18	0.14	0.44	0.15	0.28	0.11
New Zealand	0.30	0.23	0.23	0.23	0.17	0.20	0.19	0.22	0.17	0.17	0.15
China	0.44	0.33	0.32	0.31	0.39	0.24	0.23	0.47	0.59	0.68	0.26
India	0.39	0.38	0.29	0.30	0.88	0.65	0.29	0.91	0.33	0.43	0.27
Indonesia	0.42	0.35	0.33	0.26	0.44	0.30	0.27	0.88	0.29	0.39	0.20
Russian Federation	1.00	1.00	0.29	0.33	0.32	0.28	0.27	0.22	0.30	0.39	0.25
United Kingdom	0.18	0.17	0.16	0.16	0.32	0.25	0.20	0.18	0.21	0.20	0.16
United States	0.24	0.21	0.22	0.24	0.17	0.19	0.22	0.20	0.16	0.26	0.17

	Telecom	Air transport	Maritime transport	Road freight transport	Rail freight transport	Courier	Distribution	Banking	Insurance	Computer	Construction
Australia	0.19	0.30	0.19	0.14	0.14	0.37	0.12	0.18	0.18	0.17	0.17
Japan	0.20	0.40	0.21	0.15	0.19	0.26	0.12	0.21	0.18	0.17	0.13
Republic of Korea	0.30	0.42	0.25	0.11	1.00	0.36	0.09	0.15	0.11	0.10	0.13
New Zealand	0.21	0.36	0.21	0.16	0.21	0.24	0.14	0.18	0.13	0.18	0.17
China	0.44	0.47	0.41	0.24	0.29	0.88	0.26	0.41	0.45	0.31	0.30
India	0.48	0.56	0.40	0.28	1.00	0.56	0.44	0.52	0.56	0.36	0.35
Indonesia	0.51	0.46	0.50	0.40	0.32	0.43	0.62	0.48	0.48	0.29	0.40
Russian Federation	0.44	0.57	0.40	0.27	0.99	0.37	0.22	0.31	0.44	0.33	0.33
United Kingdom	0.17	0.41	0.21	0.21	0.19	0.19	0.13	0.18	0.16	0.20	0.17
United States	0.12	0.53	0.37	0.17	0.16	0.37	0.16	0.22	0.29	0.18	0.25

Source: ESCAP calculations based on data from the OECD STRI database, available at http://stats.oecd.org/ (accessed October, 2018).
Notes: STRI is an index defined over 0 and 1, while 1 is most restrictive and 0 is least. The colour of each cell indicates the degree of change in STRI in 2017 compared with 2016. Green = liberalization; red = increase in restrictiveness; no colour = no increase in restrictiveness. The numbers in the table show values of STRI in 2017.

only (table 4.3). There is no evidence that the regulations resulting in increased trade restrictiveness in those economies discriminate against any particular economy. Outside the region, the United Kingdom took actions resulting in an increase of the average STRI in all the sectors analysed. In contrast, the United States did not introduce any measures resulting in an increased STRI in 2017. The increase of services trade restrictions in 2017 in Asia-Pacific economies has raised the already high levels of protection of services sectors in the region to a higher level.

3. Policies affecting investment: Increasing restrictions and reservations towards FDI

Despite ambiguous evidence, the perception that foreign direct investment (FDI) outsourced manufacturing jobs from developed to developing economies has created anti-globalization sentiment in the former group of economies.[12] As a reflection, the momentous tax reforms under the Tax Cuts and Job Act of the United States include features that offer incentives for companies to keep their intangible

property in the economy while penalizing multinational companies that have shifted intangible property and earnings out of the territory (Gravelle and Marples, 2018).

"Increased concerns over foreign acquisitions of stragetic companies and by state-owned enterprises has contributed to a rise in investment restrictions."

As mentioned in chapter 3 of this report, investment restrictions are showing a tendency to rise, both globally and in the Asia-Pacific region. These restrictions are often to protect industries deemed strategic in host economies, or to control transactions with economies and entities that have political issues with the host economy. A common concern is that foreign acquisitions of strategic domestic companies might give foreign investors access to critical infrastructure, technology or sensitive data. Many economies have expanded restrictions on FDI based on national security concerns. For example, the recent expansion of the scope of the Committee on Foreign Investment in the United States (CFIUS), an inter-agency body able to block deals that may threaten national security. Germany also intends to introduce new measures to restrict FDI, while the European Union is developing an overarching screening framework for its members (*Economist*, 2018a). In addition, various economies have voiced concerns over anti-competitive effects created by incoming investment from state-owned enterprises (SOEs) receiving direct and indirect government subsidies.

The remarkable decrease in the number of new bilateral investment treaties (BITs) as well as the increase in termination of existing ones is further evidence of increasing reservations towards foreign investors. By their nature, bilateral agreements mostly contain binding investor-State dispute settlements (ISDS) to increase levels of predictability and certainty by ensuring that the host economy (receiving the investment) abides by obligations specified in the BIT. Motivated partly by the high numbers of investor-State disputes being filed and the regularity with which some of these governments face claims, some developing economies have turned against ISDS. Some developed economies are also challenging the existing ISDS system, and are pushing for reform. However, reforming the arbitration system for global investment protection has progressed only slowly, due to a divergence of the views between the European Union and the United States in this area. The European Union put forward proposals for a permanent investment court, but the United States has so far resisted this notion. In the renegotiation of the North American Free Trade Agreement (NAFTA), the United States considered an "opt-in" system under which NAFTA member States would individually choose whether or not to allow investors of other States to bring about ISDS claims (Trehearne, 2017). These changes related to investment policy suggest that uncertainties in international investment governance are increasing.

4. Dynamics of RTA architecture in Asia and the Pacific

Although Asia-Pacific economies have contributed to the overall increase in the protectionism trend discussed earlier, they have remained very active in engaging in preferential trade agreements to cut tariffs and other trade barriers with selected partner economies. They are currently participating in a wide variety of trade agreements, both at the bilateral and the plurilateral levels. As of October 2018, there were 283 trade agreements in force, signed or under negotiations, which had at least one member from the Asia-Pacific region. Of those, 194 agreements are already in force or have been signed, but 47 of these have yet to be notified to WTO under the Transparency Mechanism for RTAs.[13]

"2018 marked progress on several mega-trade agreements including signature of the CPTPP and the EU-Japan FTA."

During 2017-2018, Asia and the Pacific signed 18 new free trade agreements (FTAs). This includes a large plurilateral agreement, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP),[14] the successor to the Trans-Pacific Partnership after the United States withdrew in January 2017. CPTPP is a cross-regional trade agreement covering 11 economies (seven of which are in Asia and the Pacific) that represent around 16% of the world gross domestic product (GDP) and 7% of the world population. Expected to enter into force on 30 December 2018, the agreement is designed around high standards of human rights, labour practices, and environmental standards.

CPTPP deviates only partly from TPP essentially in terms of regulatory matters rather than market access. Examples of the difference include a suspension of the intellectual property provisions and the provisions on investor-State dispute settlement; CPTPP has narrowed the mechanisms' availability for foreign investors to sue a host member State, and shortened the terms of copyright protection in cases such as innovative medicine and written material. Another plurilateral agreement signed during the same period is the Pacific Agreement on Closer Economic Relations (PACER) Plus.[15]

In addition, several bilateral agreements have been signed with economic blocs and individual economies during 2017-2018. Japan and Singapore signed bilateral FTAs with their large trading partner, the European Union, in 2018. ASEAN signed a bilateral FTA with Hong Kong, China, while the Republic of Korea signed bilateral FTAs with all five members of Central American Free Trade Area (CAFTA). Eight bilateral agreements signed during the same period include Australia-Peru, China-Georgia, China-Maldives, China-EAEU, Islamic Republic of Iran-EAEU, Hong Kong, China-Macao, China, Indonesia-Chile and Singapore-Sri Lanka FTAs.

The Regional Comprehensive Economic Partnership (RCEP) has also gathered pace with its signature expected in 2019. RCEP involves 16 economies, including China, India, Japan and all the ASEAN members. The member States of RCEP represent 30% of the world GDP and 45% of the world population. The negotiations of this mega-plurilateral agreement have missed several deadlines, but the momentum has increased since 2016. This comprehensive agreement covers the liberalization of goods, services, investment, economic and technical cooperation, intellectual property rights, rules of origin, competition and dispute settlement (ESCAP, 2016).

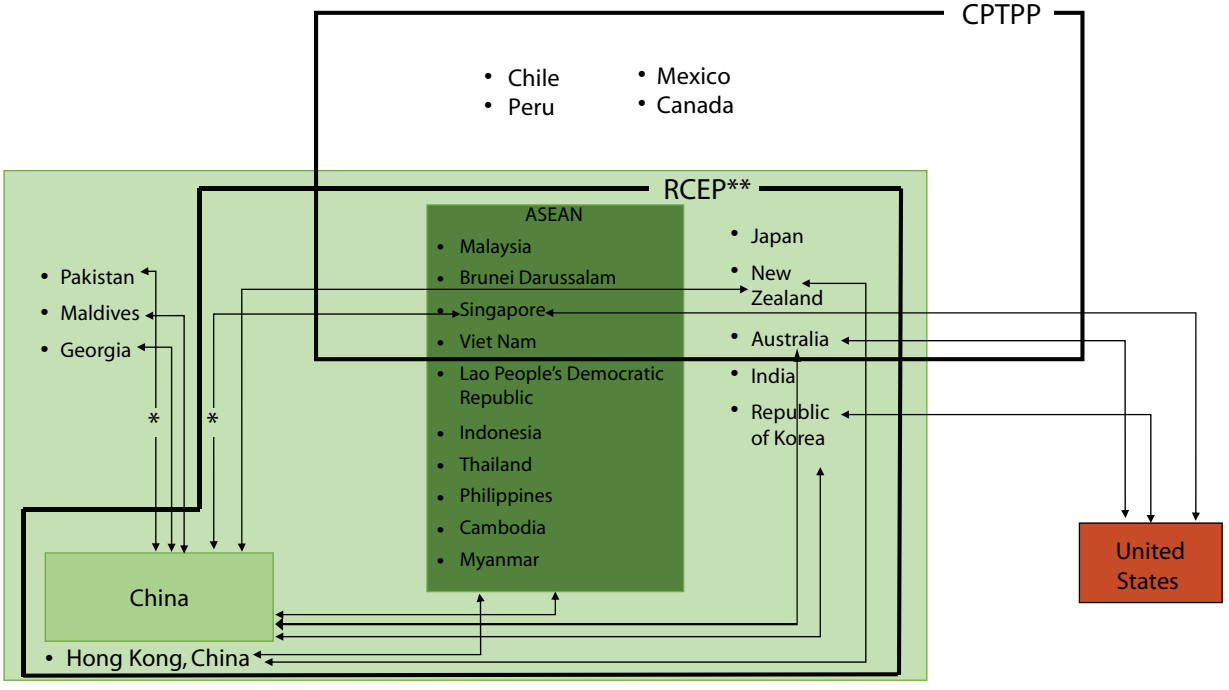
"Asia-Pacific economies are currently more connected with China than the United States through a network of RTAs."

Trade tensions between the two powerful trade partners could affect the RTA architecture of the Asia-Pacific region. Based on the existing network of trade agreements in the region, Asia-Pacific economies are more connected with China than the United States through FTAs (figure 4.8).[16] This is in part because China is engaged in RCEP negotiations with 15 other economies of the region. China is also driving the mega cross-regional connectivity project, the Belt and Road Initiative (BRI). The project aims to increase international connectivity between 65 economies, across Asia, Europe, Africa and the Pacific, covering 60% of the world's population.

In contrast, the United States has trade agreements with a small number of Asia-Pacific economies, including bilateral FTAs with three Asia-Pacific economies, i.e. the Republic of Korea, Australia and Singapore. The United States completed renegotiation of the Korea-United States Trade Agreement (KORUS) with the Republic of Korea. An updated version of KORUS was signed in September 2018, leading to the removal of steel tariffs imposed on steel exports from the Republic of Korea in exchange for voluntary export restraints at 70% of its average export volume during the past three years, and increased benefits for the United States in sectors such as automobiles (Tankersley, 2018). In addition, the United States is pursuing a potential FTA with Japan.[17] New Zealand is also aiming at having an FTA with the United States by 2030 (International Trade Administration, 2018). Other developing economies in Asia and the Pacific have not been included in new FTA initiatives by the United States.

Given the existence of the trade tensions with the United States, China appears to be speeding up the implementation of its regional trade agreement policy. There have been several developments in China's regional trade agreement policies since 2017. To begin with, China signed FTAs with Maldives and Georgia in 2017.[18] China has also signed its FTA with the Eurasian Economic Union (EAEU), which will constitute an important regulatory achievement for BRI expansion in North and Central Asia.[19] China is also expediting its negotiations for a possible FTA with Israel as well as a trilateral FTA with Japan and the Republic of Korea.[20] In addition, China is upgrading some of its existing trade agreements, which include renegotiation of the China-Singapore Free Trade Agreement (CSFTA), which aims to increase trade facilitation and protection of Singaporean businesses, and the China-Pakistan FTA.[21] China is also looking to strengthen trade relations beyond the Asia-Pacific region; it has upgraded its FTA with Chile and is currently negotiating FTAs with Panama and Moldova.[22]

Figure 4.8 **Network of signed FTAs between Asia-Pacific economies and China and the United States**



Source: Based on FTA information from the ESCAP, Asia-Pacific Trade and Investment Agreement Database (APTIAD) (accessed November 2018).
Notes: * Existing FTAs being renegotiated.
** RCEP is expected to be signed by 2019.

Moreover, the economy is forming potential FTAs with Africa, having already concluded negotiations for an FTA with Mauritius.[23] In addition, China has become more active in shaping the agendas of the Asia-Pacific Economic Cooperation (APEC) grouping and Group of 20 (G20) summits that it hosted in 2014 (Daojiong, 2017).

"As trade tensions accelerate bilateral and plurilateral negotiations, the future of the rule-based multilateral trading system becomes more uncertain than ever."

In contrast, the new United States administration has diverged from the path followed by previous administrations. An important change is its policy stance on multilateralism. The 2017 USTR trade policy agenda stated that the administration would not be bound by the WTO rulings that "undermine the ability of the United States and other WTO Members to respond effectively to these real-world unfair trade practices" (USTR, 2017, p. 4). Following the agenda, the United States refused to approve new judges for the appellate body of the WTO dispute settlement system. The shifting role of the United States in WTO, including its threat to exit the organization, has created serious concern about the stability of global trade governance. As highlighted by WTO Director-General Roberto Azevedo, "the scenarios are not going to be good for anyone. The United States is responsible for about 11% of global trade. So, leaving the organization would be a blow to the organization".[24] As part of the calling for WTO reform, on 25 September 2018, the United States, the European Union and Japan issued a trilateral statement aimed at negotiating new rules to address concerns regarding coercive technology transfers, industrial subsidies and SOEs, and other "non-market-oriented policies and practices of third economies" (Caporal, 2018).[25]

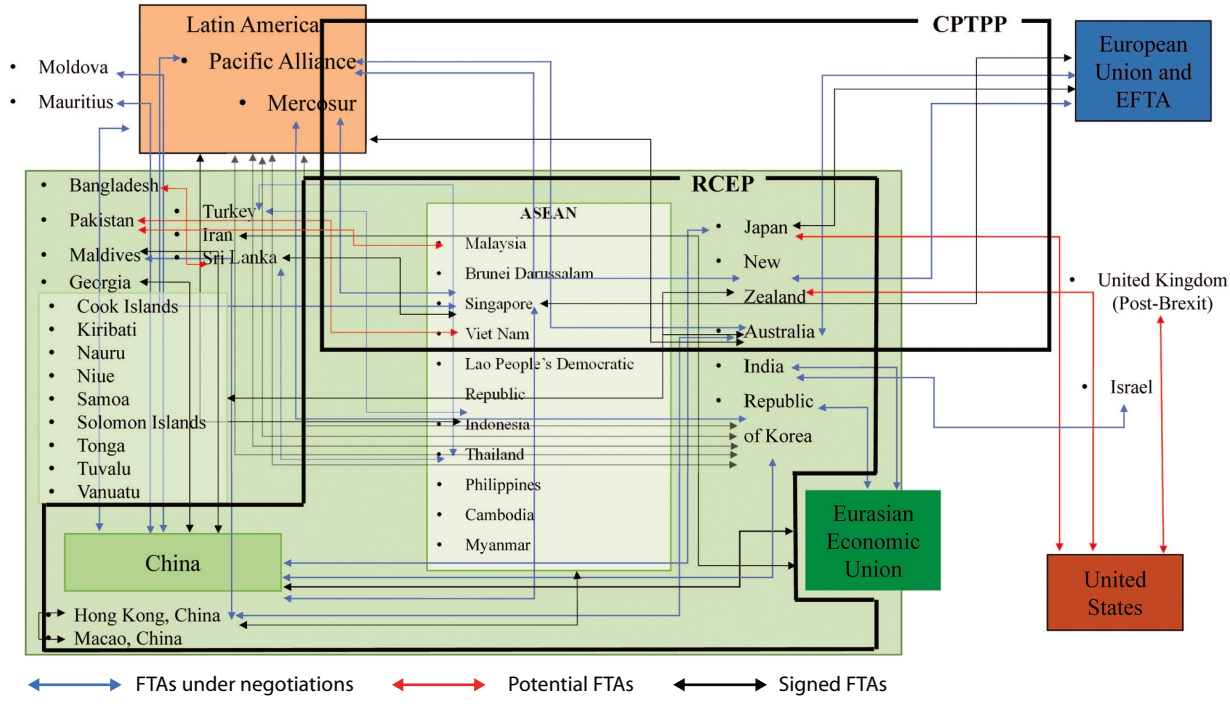
Regarding the trade agreement policy of the United States, the major developments are reduced participation in multi-party FTAs and renegotiation of bilateral FTAs. The future of trade agreements

involving the United States has become unclear. The economy has withdrawn from TPP and has refrained from moving forward with the Transatlantic Trade and Investment Partnership (TTIP).[26] Leveraging its dominant economic power, the United States has renegotiated existing trade agreements such as NAFTA. The United States-Mexico-Canada Agreement (USMCA), which is replacing NAFTA, entails increased protection of intellectual property rights in the pharmaceutical sector. It has increased the threshold for duty-free United States retail exports to Canada and has expanded United States export access to the Canadian dairy and poultry sectors, but remains to be ratified by each economy's legislature (Reuters, 2018a). Notably, USMCA included new provisions from NAFTA. Among others, a controversial provision allows a party to withdraw from the agreement if another party enters into an FTA with an economy it deems to be a non-market economy (e.g. China) (Congressional Research Service, 2018). In addition, it appears that labour provisions in USMCA will increase the average costs in Mexico's exporting sectors. These new provisions may be indicative of the type of trade agreements that will be pursued by the United States administrations in the coming years.

"Asia-Pacific economies tend to deepen their intraregional integration as well as interregional economic cooperations."

Tensions between China and the United States may provide a new incentive for Asia-Pacific economies to deepen trade relations intraregionally as well as with other economies outside the region.[27] This is evidenced by the number of new agreements initiated since 2017. Newly-initiated agreements include both potential intraregional agreements and potential agreements with trade partners outside the region, particularly with economies in Europe and Latin America (figure 4.9).

Figure 4.9 **Potential FTAs initiated in the Asia-Pacific region since 2017**



Source: Based on FTA information from the ESCAP APTIAD database, available at https://www.unescap.or/content/optiod/ (accessed November 2018).

For the potential intraregional agreements, eight new initiatives commenced during 2017-2018. These eight potential intraregional FTAs include: Thailand-Turkey; Indonesia-Turkey; Sri Lanka-Thailand; Australia-Hong Kong, China; India-EAEU; Republic of Korea-EAEU; China-Japan-Republic of Korea; and Hong Kong, China-Maldives. In addition, there are potential bilateral FTAs between Bangladesh and Sri Lanka, Pakistan and Malaysia, and Pakistan and Viet Nam.[28]

At the same time, Asia-Pacific economies are discussing potential FTAs with trade partners outside the region. As the most important trading partner outside the Asia-Pacific region, the European Union and the European Free-Trade Association (EFTA) become natural partners for potential FTAs. Several economies have recently signed agreements with the European Union. In 2018, Japan and Singapore signed FTAs with the European Union, while the Philippines recently ratified its FTA with EFTA.[29] In addition, since 2017, several initiatives for potential FTAs with economies have been developed. For example, Australia and New Zealand began FTA negotiations with the European Union in 2017.[30] ASEAN is putting back FTA with the European Union on the agenda after suspending its negotiations since 2009. Similarly, India, Malaysia, the Philippines, Thailand, Malaysia and Viet Nam are continuing their FTA negotiations with the European Union. At the same time, India, Indonesia and Malaysia are negotiating FTAs with EFTA.[31]

During 2017-2018, new FTAs were also developed between Asia-Pacific economies and economies in Latin America. Australia and Indonesia have signed bilateral FTAs with Peru and Chile, respectively,[32] while the Republic of Korea has signed bilateral FTAs with five Central American economies.[33] In addition, Australia and New Zealand are working towards FTAs with the Pacific Alliance,[34] while the Republic of Korea has initiated discussions for an FTA with Mercosur[35] and Singapore is pursuing potential FTAs with both of these Latin American trading blocs.[36]

Trade tensions are expected to continue shaping the dynamics of the RTA architecture of the region. Ensuring that new RTAs are consistent with established rules under WTO and that they serve as building blocks towards a new and stronger multilateral trading system will be important.

C. VULNERABILITY AND OPPORTUNITIES OF ASIA-PACIFIC ECONOMIES FROM THE CHINA-UNITED STATES TRADE CONFLICT

This section considers consequential impacts from trade tensions between the United States and China on the rest of the Asia-Pacific region. Taking into account economic linkages through regional production networks, the analysis highlights direct and indirect exposures of Asian and Pacific economies to the impacts from the imposition of tariffs by the United States on a wide variety of imports from China. The direct exposure to protectionist actions is captured by exports affected by tariffs when entering the United States. Indirect exposure is reflected in the exports of raw materials, intermediate goods and semi-finished products to China and other economies that may be subject to higher tariffs, which are used in the exports by these economies of manufactured products to the United States.

It should be noted that the economies not subject to higher unilateral United States tariffs could leverage their indirect exposure, i.e. their existing involvement in a GVC, to attract redirected trade and investment if trade conflicts persist in the medium to long term. Indeed, to avoid tariffs imposed by a major source of final demand, such as the United States, multinational corporations might adjust the structure of their GVCs. Some of the GVC activities currently performed in China might move to the United States to serve the domestic demand there. Some may also be relocated from China to other economies not targeted by tariff increases. This section therefore also evaluates opportunities from GVC restructuring for Asia-Pacific economies.

1. Direct exposure

"The direct exposure of the Asia-Pacific region other than China to the current tariff war is limited, but the indirect exposure is much more significant."

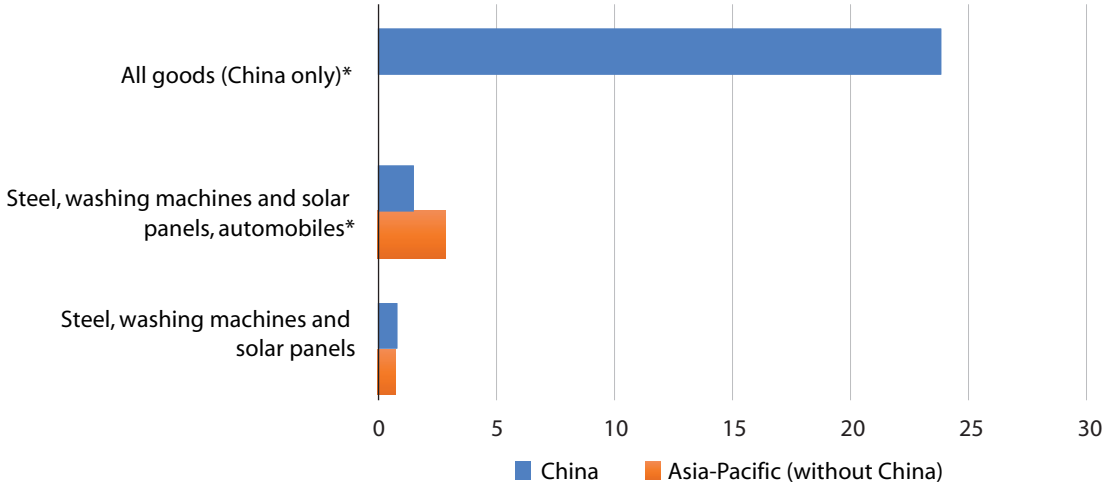
Given the current scope of tariff imposition by the United States, the direct exposure of Asia-Pacific economies, beyond China, is limited. Tariffs apply on a wide variety of imports from China, but for other economies only tariffs on steel and aluminium, solar

panels and washing machines are currently relevant. There has been a threat to impose tariffs on imports of automobiles and auto parts under national security concerns (Section 232 of the Trade Expansion Act of 1962), but the investigation is still ongoing.

For the Asia-Pacific region as a whole, exports of steel and aluminium, solar panels and washing machines count marginally in the region's total exports. Exports of steel and aluminium, solar panels and washing machines to the United States represented only 0.8% of total exports by the Asia-Pacific region in 2017 (figure 4.10). If the automobiles and parts become subject to new tariffs, the share of tariff-affected exports by the Asia-Pacific region will rise to only 2.3%. However, some economies would be disproportionately affected. Japan and the Republic of Korea, as major automotive exporters to the United States, would have the highest exposure as their share of total exports hit by the increased tariffs stand at 8% and 5%, respectively. New Caledonia and Georgia are also vulnerable because steel and aluminium tariffs may affect 4% to 5% of their total exports.

Figure 4.10 **Potential direct exposure to tariffs imposed by the United States**

(Percentage of total exports)



Source: ESCAP calculations using data from the United Nations Comtrade database downloaded from WITS (accessed September 2018).
Note: The calculations are based on trade value in 2017. Mirror data have been used.
* Potenetial targets

China's direct exports to the United States accounted for about 24% of its total merchandise exports in 2017. While economies other than China are only minimally exposed to the tariff increases by the United States at this time, most are heavily engaged in indirect exports to the United States via China. More than 17% of total exports from the Asia-Pacific region went directly to the United States. Some small economies in the region, such as Fiji, French Polynesia, Sri Lanka and Tonga, depend heavily on the United States for their exports. Cambodia, India, Japan, Pakistan and Viet Nam are less dependent on trade with the United States, but still almost 20% of their exports currently going to the American market.

2. Indirect exposure through integrated value chains

The region has indirect exposure to the tariff imposition on goods exported from China because of the regional integration through GVCs. As highlighted in chapter 1 of this report, many economies in the Asia-Pacific region are integrated deeply with China through value chains that ultimately export to markets outside the region, especially the European Union and the United States. Exports of raw material, and intermediate and capital goods accounted for 69% of total exports by the Asia-Pacific region in 2017.[37] Exports to China

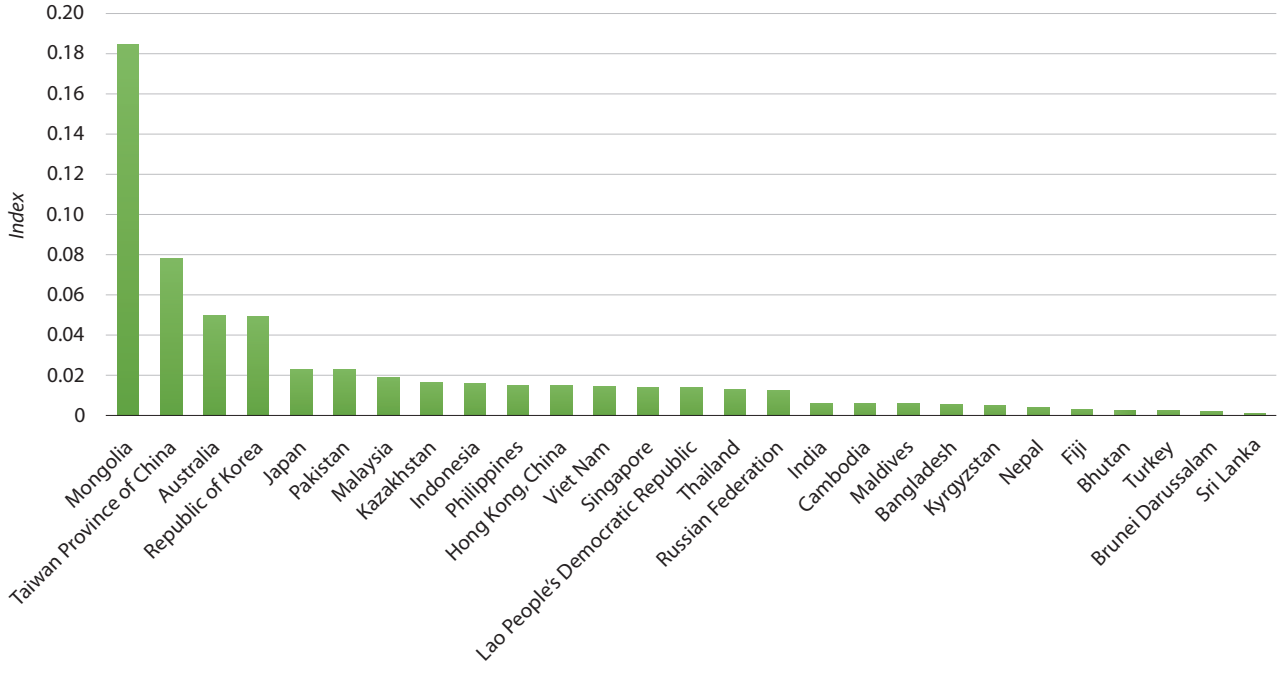
represented 27% of these exports by other Asia and the Pacific economies. Some of those exports were used by China as inputs in the production of exports to the United States and the rest of the world. The substantial shares of these GVC-related exports imply that trade conflicts between the United States and China could have ripple effects on the rest of the region. The indirect effects could be particularly strong for sectors and economies that are deeply integrated with China and the United States through GVCs.

To identify vulnerable economies, ESCAP has constructed an indirect-exposure indicator identifying economies in the Asia-Pacific region that are highly vulnerable to the consequential loss of intermediate demand from China due to the protectionism actions against China's exports. The analysis is based on an input-output analysis using data from the Asian Development Bank Multi-Region Input-Output (MRIO) Database.[38] Constructing the index of economy vulnerability is based on the following two assumptions: (a) an economy would have high indirect exposure if the share of indirect exports through China in their total exports is significant; and (b) an economy's exposure is high if its exports to China tend to be used as inputs in the production of China's exports more than in China's domestic consumption.[39] In other words, the index of economy vulnerability combines the risks arising from an economy's export concentration on vulnerable sectors and its heavy reliance on indirect exports through China.[40]

"Economies exporting raw materials and intermediate products used in China's exports are most vulnerable."

The economy-level analysis reveals that Mongolia is the most vulnerable economy in the region, followed by Taiwan Province of China,[41] Australia and the Republic of Korea (figure 4.11). These economies have relatively high reliance on indirect exports through China. The high vulnerability of Mongolia is not surprising, given the fact that China is almost

Figure 4.11 **Indirect exposure, by economy**



Source: ESCAP calculations using Asian Development Bank multi-regional input-output tables.

a single gateway for Mongolia to export to the world market. Exports to China accounted for 76% of total value-added exports to the world by Mongolia in 2017, 91% of which were mining and quarrying exports. About 24% of Mongolia's mining exports would be at immediate risk from the tariffs hitting China's exports, while the remainder would suffer from slower domestic demand in China. Other economies exporting raw materials, such as Kazakhstan and Kyrgyzstan, face less risks than Mongolia because they are less dependent on exports to China.

In contrast, Taiwan Province of China and the Republic of Korea are highly vulnerable because of their GVC-related exports of electrical and optical intermediate products to China. For Taiwan Province of China, 6% of its total domestic value-added exports end up in China's export production, and come from the electrical and optical sector. The Republic of Korea, faces vulnerability in the same sector with exposure of approximately 3%. Australia, on the other hand, has 3.5% of its total domestic value-added exports to the world directed towards China's export production, all of which is concentrated in the mining and quarrying sector.

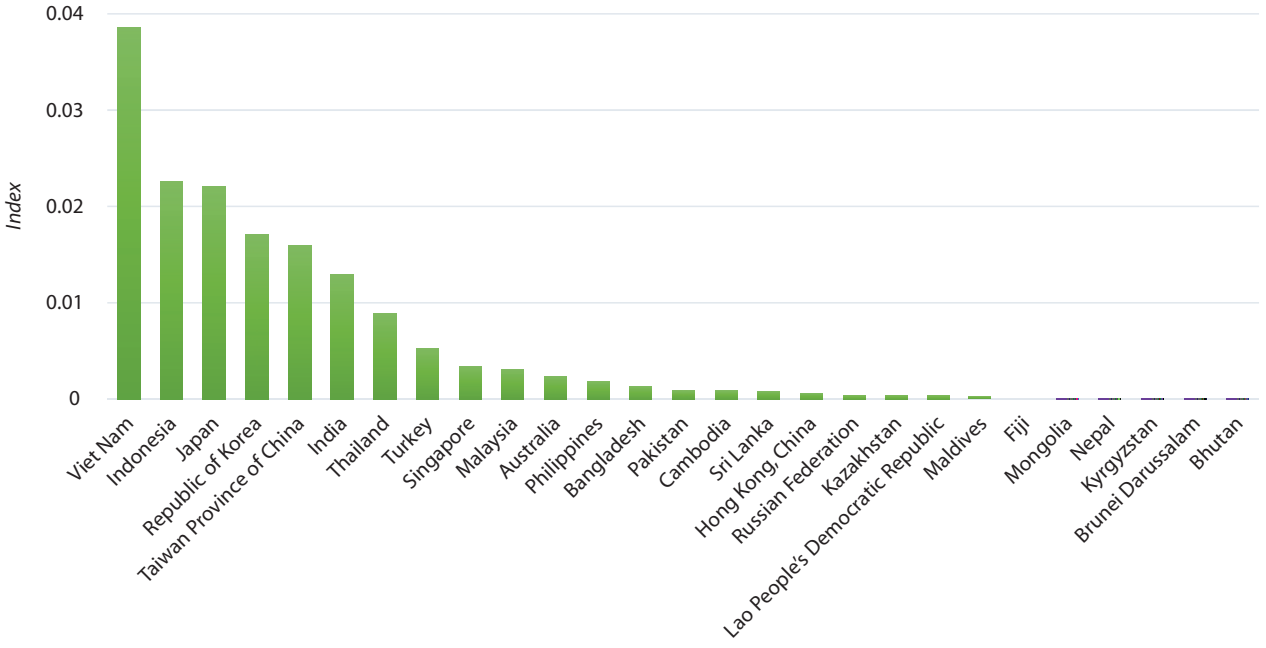
A number of South-East Asian economies such as Singapore, Malaysia, Thailand and the Philippines face a moderate degree of vulnerability. Although these economies' exports of electrical and optical equipment are at risk, their relatively high diversification in intermediate export markets explain their moderate levels of vulnerability. South and South-West Asian as well as North and Central Asian economies face low risks for other reasons. First, these subregions are not significantly integrated into GVCs linked with China's exports. Second, these economies have a diverse portfolio of trade partners, thus limiting their exposure to volatilities faced by China. In addition, part of their exports to China, such as textiles and textile products, agriculture, hunting, forestry and fishing, end up in domestic consumption more than in China's export production. The results highlight potential ripple effects on economies exporting intermediate goods in GVCs. These results also underline the need for the diversification of exports and markets, and the need to improve the balance of regional integration strategies.

3. Potential opportunities arising from the redirection of trade and production in GVCs

To avoid the United States tariffs, multinational operations could reorganize their GVCs. Given that the United States remains the dominant market for the final products of GVCs, final production would move from China to other economies, including back to the United States (see box 4.1). Therefore, despite the immediate downside risks and vulnerabilities from indirect exposure, some Asia-Pacific economies might gain opportunities arising from the redirection of trade and investment away from China.

The opportunity index identifies economies potentially taking up market opportunities. Again, the analysis is based on the input-output analysis using data from the Asian Development Bank's MRIO Database. Index construction here is based on the assumption that the United States limits its tariffs to only goods from China. The opportunity index consists of three sub-components representing factors determining the potential of an economy to attract the redirected investment and become a new assembly centre instead of China.[42] The first component captures the fact that an economy having greater access to final demand in the United States would have a higher advantage. The second component addresses the fact that an economy having a higher degree of integration into regional and global production networks would have a higher potential to become a new assembly centre. This is because it needs to have cost efficiency in importing goods and required services, assembling them or adding value and then re-exporting.[43] The third component captures the fact that the opportunity of an economy also depends on the sectoral composition of its exports. The redirection of trade and investment would more likely happen in sectors where China has large market shares in the United States.

Figure 4.12 **Opportunity index, by economy**



Source: ESCAP calculation using Asian Development Bank multi-regional input-output tables.

"Some economies could see positive spillovers because of trade and investment moving away from China."

The analysis indicates that Viet Nam has high potential for replacing China as a new assembly centre for GVCs. A major factor for Viet Nam's high potential is its strong links to final demand in the United States (figure 4.12). The fact that Viet Nam has already integrated into GVCs of some sectors makes its potential to become a new assembly centre highly probable. The economy has particularly high potential for attracting labour-intensive manufacturing sectors, such as the leather and leather footwear industry. These sectors are also facing new tariffs in the United States. Indonesia's relatively high opportunity index is driven by its manufacturing sectors and raw-material exports. Opportunities for Japan, the Republic of Korea and Taiwan Province of China are driven by their competitiveness in hi-tech electronics, concentrated in the electrical and optical equipment sector. These sectors are likely to be more exposed to United States tariffs.

The above analysis is a partial equilibrium analysis limited to tariff increases by the United States on China and does not take into account the effect of retaliation by China and other economies to the United States' protectionist actions. For example, China has increased tariffs on a wide variety of products from the United States, creating potential opportunities for other economies to export to China instead. The impacts on GVC-related trade from China's tariffs are not likely to be as significant as the impacts from the United States tariffs. The current share of China, as a source of final demand for products in GVCs, remains at only 5% of global imports of GVC-related final products; the share of the United States is more than 20%. Nevertheless, the retaliatory tariffs imposed by China on the United States' exports of agricultural and industrial commodities could increase market opportunities for commodity-based economies to expand exports to China. In addition, some of these commodity exporting economies could potentially become high-opportunity economies if China decides to actively support the development of their capacity to engage in GVCs through foreign direct investment and knowledge transfers.

Box 4.1

Supply chain adjustments in response to a growing trade war could boost FDI to South-East, and South and South-West Asia

As the trade war between the United States and China escalates, businesses operating in both economies are experiencing parallel pressure to rethink and adjust supply chains in order to remain competitive. High tariffs between the two economies stand to penalize producers and consumers in both economies by triggering a rise in the cost of industrial inputs and other goods. Moreover, the consequences of trade tensions are likely to spillover beyond exports and imports, and could spark investment diversions from China and the United States to South-East, and South and South-West Asia as businesses look to adjust their supply chains and shift production to mitigate tariffs on both sides of the Pacific. Such shifts in FDI can be leveraged in both subregions to further stimulate inclusive and sustainable growth.

Enterprises beyond the United States and China have already reported significant headwinds from the tariffs, noting that their price competitiveness and revenue streams are being directly threatened. Some auto firms, including BMW and Tesla, plan to transfer the costs of the tariffs to consumers by raising the prices of their vehicles being imported from the United States and sold in China. Other firms are exploring contingency plans that could have significant implications for FDI flows in the future. These options include: limiting the sourcing of inputs from China while simultaneously beginning to source from other economies; relocating some or all production lines; and relocating to the United States.

> *"Production shifts to maintain competitive advantage amid trade tensions are real. They are already happening."*

Production shifts may become an increasingly compelling business strategy for maintaining a competitive advantage as uncertainty grows amid trade tensions. Anecdotal evidence[a] confirms that manufacturing firms operating in the electronics, chemicals, furniture, toys and medical device sectors are seriously considering relocating or reshoring to trim their exposure. Media reports and official press releases collected between June and October 2018 reveal that at least 25 firms are currently considering or have already made concrete plans to shift parts or all of their production outside of China. Conversely, only three firms have indicated that they will or are likely to shift part of their production from the United States, while six firms, largely concentrated in the electronics sector, have confirmed they are exploring, or have already initiated, plans to reshore production to the United States. Firms that have already formally confirmed relocation include: Harley Davidson, which plans to move part of its production from the United States to Thailand; Kayamatics, a company which sells Internet of Things devices, will move production from China to Malaysia; and Luxshare, an electronics manufacturing firm, will move parts of its production to a new site in Viet Nam. Those firms that have officially announced plans to reshore include Foxconn, an electronics component manufacturer for Apple that will open its first international plant in the United States, and Premier Guard, a medical device manufacturer that plans to transfer 60% of its production from China to the United States.

Surveys of American and European businesses in China further illustrate the tariff war's potentially looming effects on future investments. Of 430 American firms surveyed, 61% reported that the tariffs would result in them readjusting their supply chains to source and/or assemble either outside China (30.2%) or the United States (30.9%). Another 27% disclosed that they were considering relocating outside China (18.3%) or the United States (9%), while 31% cited that they were putting future investments on hold. In comparison, of the 193 European firms surveyed, nearly 12% are considering moving all or part of their production out of China (6.7%) or the United States (5.2%), while 5% have already changed suppliers and no longer source from China, and 14% are putting investments on hold. While comparable surveys of the tariff war's impact on Chinese firms are not available, initial reports point to a geographical shift in Chinese outbound investments that favoured Europe over North America in the first two quarters of 2018. Chinese divestments in North America are the result of escalating trade tensions as well as the tightening of regulations in China on outward FDI.

Box 4.1 *(continued)*

While most firms are hesitant to act prematurely, they have nonetheless initiated a number of official business scouting missions to Malaysia, Myanmar, Thailand and Viet Nam. In the survey of American firms, 18.5% were considering moving production to ASEAN, while 6.3% were considering South and South-West Asia. Both subregions have been cited as the preferred destination for potential moves because of their low production costs and ability to accommodate large-scale shifts of production from China. Within ASEAN, Malaysia and Viet Nam have a competitive advantage compared to other economies in the subregion as both are a party to the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). Recognizing the potential of their economies to capitalize on the trade war through the redirection of FDI flows, Viet Nam's Deputy Minister of Industry and Trade was quoted as emphasizing the attractiveness and openness of Viet Nam in a statement made to high-level officials and businesses in Brussels, just after the third round of tariffs was announced. Malaysia's Deputy Minister of International Trade and Industry also recently confirmed that interest in investing in Malaysia has risen directly as a result of the trade war and of CPTPP, which allows Malaysia to attract more FDI of this type.

> *"There are huge uncertainties in the relocation strategy, depending on how trade tensions will be evolving."*

Relocation and reshoring are, however, not easy and require time to get the right staff and train them, the right permits, the right location, and get the right logistics and distribution networks in place. Moreover, China is not easily replaceable as it is able to boast having some of the best infrastructure, supply chain networks and engineering talent in Asia and the Pacific; as many firms rethink their calculations about making goods in China and exporting to the United States, they are taking this into consideration. For China, relocation and reshoring moves triggered by the tariff war come at a time when it has already been targeting a move into high-end manufacturing. Thus, tariffs of the United States on China could hasten the upgrading of Chinese companies into middle- and high-range products, while low-end manufacturing is shifted elsewhere and Chinese companies are pushed into upgrading to offset any negative effects.

A time lag between the relocation and reshoring moves of firms and their appearance in official FDI figures is to be expected. Moreover, the full effects on FDI from the trade war will also depend on whether the United States imposes any additional tariffs and how China responds. In addition to increased tariffs from either side, there is a possibility that the United States could extend tariffs to South-East, and South and South-West Asia. Tariff extension could subsequently deter supply chain adjustments and related investment redirection to these subregions.

The dynamics of investment flows in Asia and the Pacific are changing, and the trade war provides new opportunities for economies in South-East, and South and South-West Asia to attract FDI, particularly in the manufacturing sector. Such investment flows could generate more opportunities for small and medium-sized enterprises in those economies to integrate into GVCs. However, in capitalizing on these opportunities, it is essential that host economies ensure investments deliver sustainable benefits. Doing so critically depends on the ability of Governments in the region to assess and evaluate the sustainability characteristics of FDI, and to implement the appropriate investment policy and regulatory frameworks. To this end, ESCAP is developing economy-specific FDI sustainability indicators, and has already developed a Handbook on FDI Policies (ESCAP, 2017a) to support its member States in promoting and attracting sustainable FDI. It is hoped that policymakers in Asia and the Pacific will utilize these resources in harnessing investment flows that generate maximum sustainable development benefits for the region.

Source: Taylor-Strauss (2018).

[a] Anecdotal evidence is being used as basis given that the recent nature of the topic combined with the fact that it is still unfolding has meant that rigorous empirical evidence on it has yet to be developed on this phenomenon. ESCAP will continue to monitor these developments and provide additional empirical evidence in support of these claims as they are developed.

D. THE POTENTIAL IMPACTS OF TRADE TENSIONS AND REGIONAL INTEGRATION

In order to gain more comprehensive insights on the potential impacts of trade tensions on the Asia-Pacific region, a computable general equilibrium (CGE) model is used to evaluate the economic, social, and environmental impacts of: (1) tariffs and retaliatory tariffs already notified or implemented at the time of preparing this report; (2) implementation of further tariff threats; (3) a potential decline in investment rate of return and a reduction in global consumer confidence as the trade wars and associated policy uncertainties persist. In addition, the CGE model is used to evaluate the impacts of implementation of RCEP, CPTPP and the European Union-Japan FTA, and how their implementation could help mitigate the impacts from worsening trade conflicts.

The economic impacts of the policy changes are captured through: (a) changes in GDP and trade levels; (b) the social impact through changes in levels of inequality and employment; and (c) the environmental impact through changes in CO_2 emissions. The baseline year is 2017 and the results are generated using an extended comparative static GTAP model to capture the effect of real wages on labour supply and examine employment outcomes. The model estimates presented total economic impacts from a specific set of policy changes. The economic losses or benefits estimated may not happen instantaneously. It may take some time for them to materialize, with the ultimate outcome influenced in practice by other policies and mitigation measures that affected economies may put in place. Model details are available in Annex B.[44]

The policy changes are modelled as follows:

Scenario 1 – Current tariff hikes by the United States and retaliations that have either already occurred or been notified to WTO in 2018 ("implemented tariffs").[45] In this scenario, Canada, China, the European Union, India, Indonesia, Japan, Mexico, the Republic of Korea, Turkey and the United States raise their tariffs as per their official notifications to WTO. The additional tariff rates range from 10% to 140%.

Scenario 2 – All tariffs implemented up to date (from scenario 1) as well as all threatened tariffs ("threatened tariffs"). The threatened tariffs are those mentioned in the economies' official communiques, news, etc. but not yet notified to WTO or implemented. These include potential tariffs on cars and car parts (as a consequence of the United States Section 232 Auto Investigation – discussed earlier), as well as further escalating retaliatory tariffs between China and the United States.

Scenario 3 – In addition to all implemented and threatened tariffs, a 5% negative shock to expected rate of return on investment in economies experiencing declines in GDP, and a further worldwide 0.5% demand shock ("doomsday scenario"). The 0.5% demand shock is in line with modelling conducted by the World Bank (2018).[46] Furthermore, following Malcolm (1998),[47] investment risk increased uniformly to the extent of a 5% lower expected rate of return on investment in China, the United States, Canada and Mexico – economies that see their GDP decline under scenarios 1 and 2.

Scenario 4 – Baseline RTAs: RCEP, CPTPP, European Union-Japan ("regional integration"). This scenario simulates the removal of all tariffs within upcoming/potential trade agreements in the region, i.e. RCEP, CPTPP and European Union-Japan FTA.

Scenario 5 – Doomsday scenario + RTAs ("doomsday with integration"). The "doomsday" scenario is combined with the "regional integration" scenario.

> *"The current trade war is having detrimental impacts globally. Global GDP could fall by nearly $150 billion with tariffs already implemented. In the Asia-Pacific region, the adverse impacts on China could drive the regional GDP down by $43 billion. The adverse impacts could more than double in the worst-case scenario."*

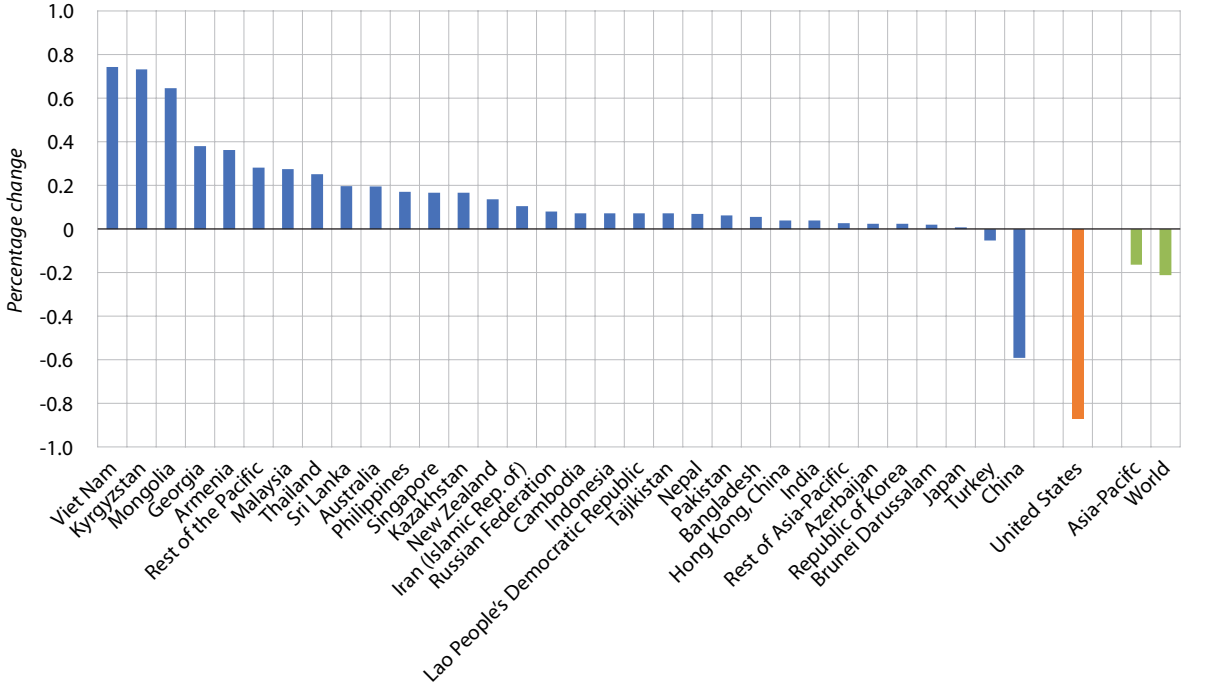
As a result of the implemented tariffs so far (scenario 1, "implemented tariffs"), global GDP is estimated to fall by 0.16%, or nearly $150 billion. This is just $10 billion short of the total official development assistance (ODA) given by the developed economies in 2016. In Asia and the Pacific alone, the decline is 0.12% of GDP, or $43 billion. Notably, in absolute and relative terms, the United States experiences the largest decline, with an estimated decline of 0.65% of GDP, at more than $120 billon. The United States loses the most because it has engaged in trade conflicts not only with China, but also with other significant trade partners, most of whom retaliated. The largest

sectors to experience a decline in the United States in relative terms are oil seeds, plant fibres, construction, manufacturing, and mining of metal ores, uranium, gems and others. These sectors decline by an estimated 15%, 6.1%, 6.0%, 3.5% and 3.0%, respectively. In absolute terms, the declines in construction, other services, retail trade, motor vehicles and parts, and recreation services are expected to fall by $84 billion, $28 billion, $26 billion, $12 billion, and $8 billion, respectively. In Asia and the Pacific, the biggest loser is China, with a 0.48% loss of GDP under scenario 1, at $60 billion. Chinese sectors of electronic equipment, lumber, construction, fabricated metal products and other services are estimated to fall by 4.8%, 3.1%, 0.8%, 0.7% and 0.7%, respectively. In absolute terms, electronic equipment, construction, other services, lumber and non-metallic minerals fall by an estimated $78 billion, $24 billion, $14 billion, $12 billion and $8 billion, respectively.

If all the tariff hikes threatened but not yet undertaken in 2018 are indeed implemented (scenario 2), global GDP losses reach $214 billion. If we take into account the higher risks faced by investors and the loss of consumer confidence associated with an uncertain policy environment (scenario 3), global GDP losses rise to nearly $400 billion. Asia-Pacific GDP losses rise from $59 billion under scenario 2 to $117 billion under scenario 3. Most of these losses are accounted for by economic losses in China and the United States, as in scenario 1 – see figure 4.13. Indeed, all other economies in the Asia-Pacific region see a rise in GDP, with the exception of Turkey, which records a slight decline. Viet Nam, Kyrgyzstan and Mongolia are all expected to benefit from the trade war to the tune of more than 0.5% of their respective GDPs. Importantly and somewhat paradoxically, these GDP gains come as net exports actually decrease in all economies except the United States, China, Mexico and Canada.

To demonstrate the effects of trade disruptions, for example, Viet Nam's exports to the European Union, Japan, China and the Republic of Korea experience the most significant declines. However, Viet Nam's exports to the United States grow, with lumber, electrical machinery and electronic equipment, and

Figure 4.13 **Change to GDP if threatened tariffs are implemented (Scenario 2)**



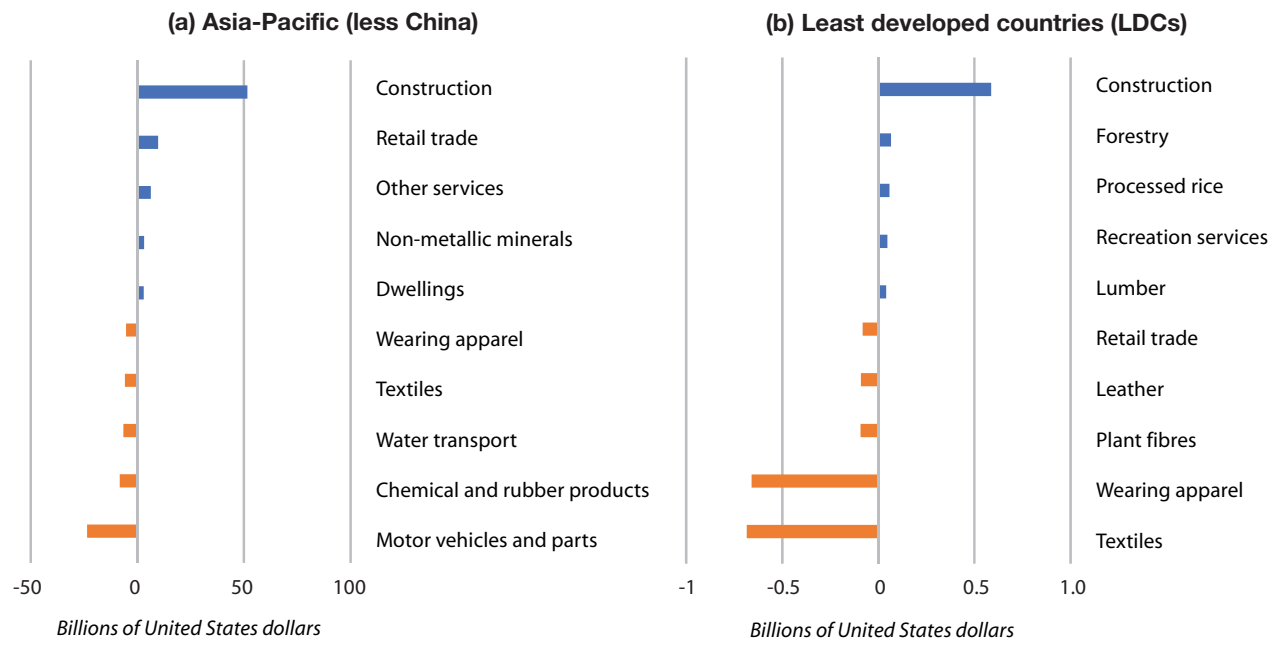
Source: ESCAP calculations.

textiles all expected to show significant increases. Imports to Viet Nam increase overall, most notably from China and, to a lesser degree, the United States, particularly by the electrical machinery and equipment sectors (from China) and plant fibres and electrical machinery (from the United States).

The impact of trade tensions at the sectoral level vary widely at the regional level. Figure 4.14.a shows the top 5 growing and top 5 declining sectors in the region, excluding China, when both "implemented" and "threatened" tariffs are applied (scenario 2). Figure 4.14.b shows the same, but only for Asia-Pacific least developed economies (LDCs). Construction is expected to be the big winner in LDCs and the Asia-Pacific region whereas potential motor-vehicle tariffs are expected to affect the automotive and parts sectors the most in the region as a whole. Since LDCs are not large automotive or parts producers, sectors experiencing the most declines there are textiles, wearing apparel and plant fibres. Although the sectoral declines observed in LDCs are small, it may be noted that the sectors concerned are labour-intensive sectors characterised by a particularly high proportion of female workers.

Figure 4.14 **Sectors most affected by implemented and threatened tariffs (Scenario 2)**

(Change in billions of United States dollars)



Source: ESCAP calculations.

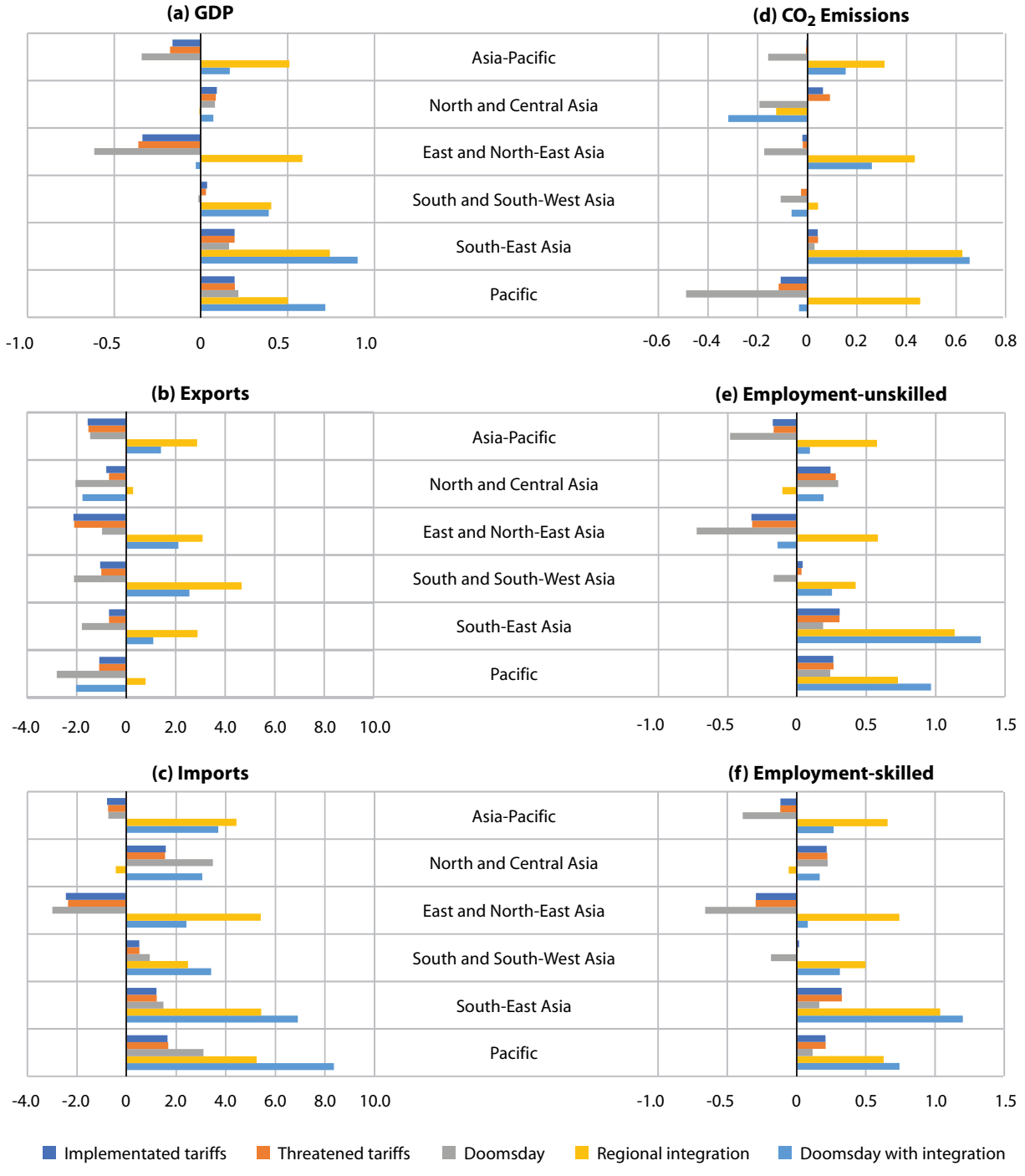
Figure 4.15.a summarizes the impact of all of the scenarios on GDP in subregions as well as Asia and the Pacific as a whole. While the overall effect on the Asia-Pacific region becomes progressively worse with severity of the trade frictions, the negative impact is primarily driven by East and North-East Asia which, in turn, is driven by the estimated results for China. All other subregions are actually better off in aggregate in scenarios 1 ("implemented tariffs") and 2 ("threatened tariffs"); only the South and South-West Asia subregion experiences a slight decline in GDP under the third scenario ("doomsday").

As already noted, the results themselves are not directly trade-driven – most economies experience declining real trade balances under scenarios 1, 2 and 3, meaning real net exports decrease. The increase in GDP and, subsequently, welfare is conveyed through three mechanisms, although they vary in significance among the individual economies.

Figure 4.15

Simulated results of trade tensions, regional integration and combined scenario

(Percentage change from baseline)[48]



Source: ESCAP calculations.

First, there are "allocative gains" where governments collect more consumer, producer and import tax revenues. Next, there are "endowment gains" where higher economic activities lead to higher income, both for skilled and unskilled labour. Most significantly, this is all enhanced through improvements in terms of trade. As producers in the United States and China experience oversupply (due to blocked markets), this leads to declines in the prices of their exports to third markets. As such, prices for most imported products fall, benefitting both consumers and intermediate producers in third economies. In addition, exporters in economies not blocked by increasing tariffs experience increases in their export prices, as they fill in the gaps opened by the exclusion of China and the United States in respective markets.

"Asia and the Pacific can weather the escalating trade war, if negotiation and implementation of regional trade integration initiatives are accelerated."

Significantly, regional integration (scenario 4) promises a substantial boost to regional GDP and, even when combined with the "doomsday" trade war scenario, more than offsets regional GDP loses. This, however, is only true at the regional and subregional levels, with some economies in the region still experiencing negative GDP growth, most significantly China. As expected, regional integration boosts exports and imports in all scenarios to a great extent. Regional exports and imports increase by 2.9% (1.3% in combination with the doomsday trade war scenario), and 4.4% (3.8% in combination with the with doomsday trade war scenario), respectively. Significantly, in Asia and the Pacific as a whole as well as in most subregions, trade gains from implementation of the mega RTAs are enough to offset negative effects on trade from even the worst trade war scenario considered (scenario 5). Notably, under the regional integration scenario, the North and Central Asia subregion actually experiences a small decline, as its economies are not part of any regionalization efforts considered under the scenario. This highlights the need to accord priority to integration efforts in order to ensure that trade is not diverted by forthcoming mega trade agreements. Emerging RTAs between the Eurasian Economic Union (EAEU) and a number of economies in East and South-East Asia noted earlier in the chapter are welcome in this regard.

"Social and environmental impacts depend on the level and pattern of economic activity. Hence, complementary policies must be implemented at all times."

Turning to impacts on the environment, the effects of the first two scenarios (implemented and threatened tariffs) are CO_2 neutral in the region. Due to declining trade levels and a significant economic contraction in China, the effects of the doomsday scenario (3) are actually positive, meaning that CO_2 levels decline. In contrast, regional integration is expected to boost emissions as regional trade increases, even if the trade conflicts with the United States worsen ("doomsday with integration" scenario). As such, higher economic activity with no emission mitigation policies will inevitably lead to higher emissions; thus, complementary environmental policies will remain essential in channelling trade into sustainable development.

In terms of social impacts, both skilled and unskilled employment changes largely follow the overall pattern of economic activity described by GDP at subregional levels. A net loss of at least 2.7 million jobs can be expected in the Asia-Pacific region if threatened tariffs are implemented (scenario 2). If the continued trade conflicts impact investor and consumer confidence significantly, as modelled in scenario 3, net job losses rise to 8.9 million in the region. Regional job losses are primarily driven by losses in China, but other economies also experience total job losses, including Turkey and Bangladesh. Thirteen economies experience net job losses under the worst case scenario. Sectors where unemployment rises in China include in particular the electrical equipment sector. Under scenarios 2 and 3, the sector, and consequently employment, in economies other than China that experiences the most precipitous decline is motor vehicles and parts, whereas construction (including building of houses, factories, offices and roads) experiences the most gains. The current tariff war (scenario 1) seems to affect disproportionately more unskilled workers, as the rate of job losses for unskilled workers is 66% higher than that for skilled workers under scenario 1. However, as the trade conflicts deepen under scenarios 2 and 3, the rate of job losses among skilled and unskilled workers narrows to 23%. It is notable that regional integration can add as many as 12.5 million jobs in the region, and when combined

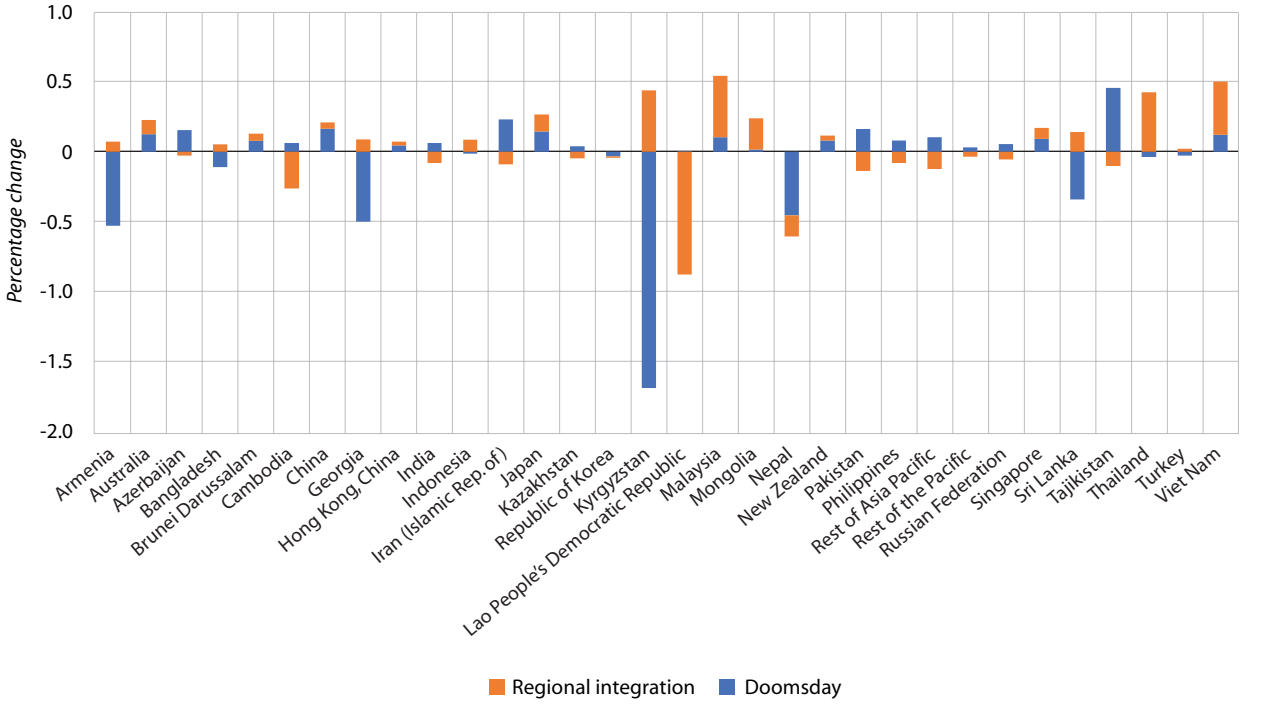
with the worst trade war scenario considered, overall, region adds more than 3.5 million jobs.

"While escalating trade war can put almost 9 million people out of work in the region, regional integration can add 12.5 million new jobs."

While net job losses are not very large, millions of workers can expect their jobs to be displaced as global value chains are reshaped and economies restructured under the impact of the trade conflicts; as well as of regional integration. On average for the region as a whole, the overall effect of the doomsday and regional integration scenarios on inequality are largely insignificant, bringing about only a 0.01% increase in both cases.[49] The effect on inequality for most economies in the Asia-Pacific region is confined to a +/- 0.5% change band (figure 4.16). At the individual economy level, however, the effect is more pronounced in some economies that are more susceptible to production redistribution in the sectors affected, both by trade frictions and the trade integration effect. For example, electrical machinery and equipment – a sector that employs comparatively more skilled labour – experiences a significant decline in Kyrgyzstan under the doomsday scenario, while the retail trade sector (low-skill intensive) experiences gains, ultimately reducing inequality. At the same time, under the regional integration scenario the Lao People's Democratic Republic experiences a surge in the construction sector (low-skill intensive), and marginal declines in a number of sectors employing high-skill labour. As such, integration efforts – as noted in the APTIR 2017 (ESCAP, 2017b, chapter 6) – must also be accompanied by social policies to ensure inequality does not widen due to significant changes in affected sectors.

Overall, the results show that Asia and the Pacific can weather the escalating trade war if the negotiation and implementation of regional trade integration initiatives are accelerated. The United States, a key party to trade frictions, stands to lose the most from

Figure 4.16 **Effect of trade tensions and regional integration on inequality**



Source: ESCAP calculations.

these frictions – even if its trade deficit falls by an estimated 42%. At the same time, even with the implementation of RCEP and other RTAs considered, China will still stand to lose more than $100 billion of its GDP and the region will see net export losses of over $170 billion. As noted in the APTIR 2017 (ESCAP, 2017b), trade facilitation is one area that can bring significant gains. Annual figures suggest that for the Asia-Pacific region an additional 4.2% could potentially be added to the regional GDP by 2030 through trade facilitation and digitalization of trade procedures. Furthermore, the environmental impact analysis highlights the need for mitigation by complementary environmental policies.

E. CONCLUSION

Heightened trade tensions between the two largest economies in the world could have important implications for economies in the Asia-Pacific region. By reviewing policy developments globally and in the region, the trend of increasing restrictions is evident across the board from the rapid increase of restrictions on trade in goods, a persistently high restrictiveness on trade in services, and increasing reservations over investment. In addition, trade tensions also affect the dynamic of regional integration. On the one hand, the tensions are prompting Asia-Pacific economies to become closer as China and other economies appear to speed up their implementation of regional trade agreements. On the other hand, Asia-Pacific economies are enhancing trade integration with economies outside the region as a means of diversifying their trade partners, and balancing the dominance of the United States and China in the trade architecture of the region.

Although the United States-China trade war has an adverse impact on the world economy, the direct exposure of the Asia-Pacific region, except China, to the current tariff wars are generally limited. The indirect impacts from the tariff wars could, however, be much more significant. The conflict has already had ripple effects through backward and forward linkages in GVCs. For the immediate term, global trade flows are set to slow, as the United States-China tensions disrupt existing supply chains and dampen investor confidence. In the medium term, trade frictions between the world's two largest economies may significantly affect the configuration and expansion of GVCs, which have been the major driver for the economic success of many economies in the region during the past three decades.

The CGE analysis presented in this chapter confirms that the overall economic impact of the trade tensions on the region is negative, although moderate in aggregate terms. Tariff increases already implemented only reduce regional GDP by 0.12%, or about $40 billion. However, if the trade tensions worsen and investor confidence falls as envisaged in some of the scenarios, the adverse impacts could reach nearly $400 billion at the global level, and exceed $115 billion in Asia and the Pacific. In all cases, most of the regional GDP decline is driven by the adverse impacts on China, although net exports also fall in almost all other Asia-Pacific economies.

Winners and losers are expected to emerge if higher tariffs between the United States and China persist. As importers in the United States and China look for alternative suppliers, new opportunities will open up for exporters in third-party markets. A significant share of the gains from the trade war may fall to economies in Asia and the Pacific. But these gains are not expected to be equally distributed across the Asia-Pacific region. Some of the largest beneficiaries will be ASEAN members. Viet Nam, in particular, has a high potential for attracting assembly activities from China. Labour costs and existing integration into GVCs are both giving Viet Nam an advantage over other economies in the region.

At the aggregate level, there is still a potentially serious downside in GVC redirection induced by trade tensions. Given that the location optimization in GVCs was driven by cost efficiency, any distortion affecting relocation decisions of multinational enterprises could create inefficiency-related losses both at the regional and global levels. In addition, the relocation of production will not be completed overnight, and short-term pains may be expected at the firm level in many economies as GVC maps are redrawn. Even if net job losses in the Asia-Pacific region from increasing trade tensions are moderate, millions of workers may be forced to move to different sectors as the trade architecture is transformed. Finally, effects of trade tensions on the environment and CO_2 emissions could also be negative, e.g. if assembly activities were to move from China to economies with lower environmental standards. As such, emission mitigation strategies as well as income re-distribution strategies for people

negatively affected by trade frictions must be placed high on the policymakers' agenda.

Overall, it is important to recognize how difficult it is to accurately estimate the impact of current trade tensions on sustainable development. Besides limitations inherent to the data and models, the policy changes associated with the trade tensions have been relatively unpredictable and constantly evolving. This policy uncertainty is probably what is most damaging for the region as a whole.

In this context, a key finding of the analysis presented in this report is that deepening market integration in the region is an effective strategy for minimizing the adverse consequences of current and future trade tensions. Taking the Asia-Pacific region as a whole, positive trade impacts from regional integration could more than offset the negative effects from potentially worsening externally driven trade tensions. Asia-Pacific economies may therefore strive to complete negotiations of existing regional trade agreements as soon as possible. They may also consider proactive engagement in other potentially complementary trade-related regional cooperation and integration initiatives, such as the Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific[50] and the Belt and Road Initiative, among others. Finally, they may work together on the pending WTO reform towards a universal, rule-based, open, non-discriminatory and equitable multilateral trading system, as already envisaged in SDG target 17.10 of the 2030 Agenda for Sustainable Development.

Endnotes

1 The first round of tariff imposition took effect in July 2018, covering $50 billion of imports from China in 2017. The second round covering $200 billion of imports from China became effective in September. The United States has also threatened to include all imports from China. The President of the United States announced in September 2018 that the remaining $267 billion of merchandise imports from China may also be included in the next tariff round.

2 As of December 2018, not all retaliatory measures notified to WTO have been implemented. For example, the retaliatory tariffs notified to WTO by India (see WTO notification G/L/1239, G/SG/N/12/IND/1), have not yet been implemented as per India Customs notification No. 77/2018 dated 1 November 2018, which postponed the implementation of retaliatory tariffs to 17 December 2018.

3 The definition of tariffs includes only most-favoured-nation (MFN), non-MFN and preferential tariffs, and excludes anti-dumping and countervailing duties, which as classified as non-tariff measures (NTMs).

4 The term "discriminatory measures", also sometimes referred to as "harmful measures", is based on evaluations by the Global Trade Alert, and is defined as an intervention that is likely or almost certainly discriminates against foreign commercial interest (Evenett and Fritz, 2018). Improved recording of measures through the Global Trade Alerts (GTA) database in the recent years may also partially affect the trend.

5 The numbers are based on data from GTA database. The data include all "state measures" that affect the commercial interests of a trading partner. The scope of measures captured here go beyond border measures to include measures such as domestic regulations, stimulus packages and subsidies that affect commercial interests of a trading partner. Some of these measures need not be subject to WTO discipline. The numbers presented in this report differ from the numbers in WTO reports because WTO reporting does not capture all potential trade-distorting measures, as members merely notify measures that fall within the WTO ruling coverage or disciplines set by WTO agreements.

6 The data on WTO-notified measures in the WTO database show a worrying trend that, globally as well as regionally, there was an increase in the number of trade restrictive measures adopted per month from mid-October 2017 to mid-May 2018 compared with the overall reporting period.

7 However, welfare effect of export subsidies are potentially theoretically ambiguous and can vary by industry and economy. In the presence of markets characterised by imperfect competition, subsidies could potentially shift oligopoly rents from one economy to another (Brander and Spencer, 1985).

8 Calculations are based on non-discriminatory red measures reported in the GTA database (accessed 8 November 2018).

9 The enforcement of those measures does not take immediate effect. In the case of NTMS originating in the Asia-Pacific region, the enforcement ratio went beyond 50% only after adjusting for a time-lag of five years.

10 The calculation is based on NTMs notified to WTO that are available from the WTO Integrated Trade Intelligence Portal (I-TIP) database (accessed October 2018).

11 OECD STRI is an aggregate index categorized under five policy areas: (a) barriers to competition and public ownership; (b) regulatory transparency and administrative requirements; (c) restrictions on foreign ownership and other market entry conditions; (d) restrictions on the movement of people; and (e) other discriminatory measures and international standards. The 2017 database include 22 sectors: computer services; construction; professional services, comprising accounting, architecture, engineering and legal services; and telecommunications. The analysis in this section uses data for the nine Asia-Pacific economies currently available in the database, as described in table 4.4. This list includes the major performers in terms of total trade in the commercial service sector, i.e. China, Japan, India and the Republic of Korea.

12 By using the data on parent and affiliate employment of United States multinationals from the United States Bureau of Economic Analysis, Slaughter (2004) shows that outsourced jobs and parent jobs are not substitutes, but complements.

13 For RTAs not notified to WTO, official information that is available online was used to register them in APTIAD.

14 Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore and Viet Nam.

15 Australia, Cook Islands, Kiribati, Nauru, New Zealand, Niue, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu are the 11 signatories of PACER Plus. Fiji, Papua New Guinea, Marshall Islands, Micronesia and Palau were initially part of Pacer Plus talks but refrained from signing the agreement, although Fiji is now in negotiations with Australia, and Papua New Guinea is reconsidering its stance (RNZ, 2018).

16 Twenty-seven economies in the region are currently participating or negotiating trade agreements with China, while there are only three economies in the region that have trade agreements or are negotiating agreements with the United States.

17 Bryan (2018).

18 Reuters (2017a) and based on FTA data obtained from APTIAD Database (accessed October 2018).

19 China Briefing (2018).

20 Hayom (2018), and International Centre for Trade and Sustainable Development (2018a).

21 Lim (2018) and Khan (2018).

22 China FTA Network (2017a, 2017b, 2018a).

[23] Tabeta, Nagai and Tobita (2018) and China FTA Network (2018b).

[24] Donnan (2018).

[25] Caporal (2018).

[26] The United States has recently taken steps to initiate a new trade deal with the European Union. Entering into trade talks has led both sides to hold off on further tariffs and to work towards dropping existing ones. The trade deal aims to eliminate tariff and non-tariff barriers, and subsides on industrial goods, excluding autos (Landler and Swanson, 2018). There is also indication of a possible FTA with the United Kingdom post its exit from the European Union (Fox, 2018).

[27] For example, the Government of Indonesia is seeking the completion of 13 trade agreements with other economies and trade organizations in an attempt to boost its exports amid the trade war between China and the United States that has seen a trend towards global trade protectionism (*Jakarta Post*, 2018).

[28] Based on FTA data obtained from APTIAD database (accessed November 2018), *Bangkok Post* (2018) and Korea.net (2017).

[29] White (2018), Kit (2018) and Manila Bulletin (2018).

[30] European Commission (2018a and 2018b).

[31] Based on FTA data obtained from APTIAD Database (accessed October 2018).

[32] Australia, Department of Foreign Affairs and Trade (2018) and Indonesia, Ministry of Foreign Affairs (2017).

[33] Reuters (2018b).

[34] Reuters (2017b).

[35] International Centre for Trade and Sustainable Development (2018b).

[36] Singapore, Ministry of Trade and Industry (2018a and 2018b).

[37] Calculations are based on mirror data from United Nation Comtrade database, accessed through WITS (November 2018).

[38] The input-output analysis is partial in nature. It does not take account of general equilibrium trade reallocations following a change in bilateral tariffs.

[39] See the technical note in annex A for an explanation of the economy vulnerability index.

[40] For further details and analysis, see Anukoonwattaka and Lobo (forthcoming).

[41] Taiwan Province of China is not a member of United Nations or ESCAP.

[42] See the technical note in annex A for an explanation of the economy opportunity index.

[43] Athukorala (2017) describes China's rise to prominence in international trade through its immense integration in regional and global production networks.

[44] For further details, see also Kravchenko, Badri and Duval (forthcoming).

[45] For a technical note and a detailed list of tariff implementation simulated, see Kravchenko, Badri and Duval (forthcoming).

[46] World Bank (2018).

[47] Malcolm (1998).

[48] Baseline figures are based on the GTAP 7 database, updated to 2017 based on IMF forecasts. See annex B for baseline figures.

[49] Unweighted, excluding Kyrgyzstan as an outlier.

[50] See Ha, Khan and Duval (2017) for an introduction to the framework agreement, or visit www.unescap.org/resources/framework-agreement-facilitation-cross-border-paperless-trade-asia-and-pacific.

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Annex A

Technical note on the construction and interpretation of vulnerability and opportunity indices

This note briefly summarizes the methodology and concepts of the vulnerability and opportunity indices shown in figures 4.11 and 4.12. The vulnerability and opportunity indices are economy-specific and are calculated sector-wise.

The subscripts i and j correspond to sector i in economy j. For brevity, the following detailed discussion of the indices will no longer refer to sector i, for the most part, and its presence is to be implicitly considered. Absence of subscript j in a term implies that the term is constant across countries, and only varies across sectors.

1. Components of the composite index for economy specific vulnerability

$$\text{Vulnerability of country j} = \sum_{i=1}^{35} \left\{ \left(\frac{DVA\_INTrexChina_{ij}}{DVAX\_GWorld_j} \right) \right\} - (1)$$

Assumption: *Countries that possess stronger links with China's exports are more exposed to the impacts of United States tariffs on China.*

The vulnerability index for economy j is a ratio that measures indirect exports through China relative to its total exports. The numerator is defined as economy j's domestic value added in intermediate exports to China, used by China in production of its own exports. The denominator is economy j's total domestic value-added exports to the world. The index value shows intensity of economy j's intermediate exports to China's export production as a proportion of its total exports. It thus quantifies economy j's link with China's export production.

2. Components of the composite index for economy specific opportunity

$$\text{Opportunity of country j} = \sum_{i=1}^{35} \left\{ \left(\frac{DVAFin1_{ij}}{DVAFin2_i} \right) \times \left(\frac{FVA_{ij}}{Gross\ Exports_{ij}} \right) \times \left(\frac{DVAFin3_i}{DVAFin2_i} \right) \right\} - (2)$$

The opportunity index of economy j is the weighted average sectoral-opportunity facing economy j, comprised of three components. Component 1 considers the extent of final demand linkage with the United States, component 2 considers the level of integration in global production networks and component 3 is the weight applied to economy j's demand and production sectoral-opportunity (components 1 and 2).

$$\text{Component 1} - \left(\frac{DVAFin1_{ij}}{DVAFin2_i} \right):$$

Assumption: *Countries that possess stronger links with United States final demand are better positioned to substitute China as a potential import partner for the United States.*

Component 1 measures the market share of economy j in the United States final import-demand of sector i. The numerator, $DVAFin1_j$, measures the domestic value-added by economy j in final goods exports to the

United States. The denominator, $DVAFin2_{ij}$, on the other hand, measures the total domestic value-added by all countries in final goods exports to the United States. Therefore, the ratio of $DVAFin1_{ij}$ to $DVAFin2_i$ shows economy j's domestic value-added in final goods exports to the United States as a proportion of domestic value-added by all countries in final goods exports of the United States. This indicator quantifies economy j's access to final demand in the United States, i.e., it is an indicator of which countries are better positioned to serve United States final demand relative to other countries. Based on the assumption that countries which possess stronger links with United States final demand are better positioned to substitute China as a potential import partner for the United States, a higher value for Indicator 1 corresponds to a higher value for the opportunity index.

$$\text{Component 2} - \left(\frac{FVA_{ij}}{Gross\ Exports_{ij}}\right):$$

Assumption: *Countries that have a greater degree of involvement in regional and global production networks are more capable of being new assembly centres*

This ratio quantifies economy j's degree of integration in regional and global production networks. The numerator, i.e. FVA_{ij}, refers to the total foreign value-added in economy j's gross exports to the world. It provides the imported content in economy j's gross exports to the world. The denominator, i.e., $Gross\ Exports_{ij}$, is economy j's gross exports to the world. Therefore, the ratio of FVA_{ij} to $Gross\ Exports_{ij}$ provides the import intensity in economy j's gross exports. This component highlights the fact that countries with a higher degree of integration in global production networks need to have efficient access to parts and components made in any part of the world and be able to put them together into final products. Hence, a higher value for Indicator 2 concomitantly increases the opportunity index value.

$$\text{Component 3} - \left(\frac{DVAFin3_i}{DVAFin2_i}\right):$$

Assumption: *The level of China's sectoral link with United States final demand is an indicator of which Chinese sectors are most at risk of protectionist actions by the United States.*

This term is sectoral-specific indicator. The numerator ($DVAFin3_i$) is the domestic value-added in final goods exports from China to the United States. The denominator ($DVAFin2_i$), as already highlighted in the discussion of Indicator 1, is the total domestic value-added by all countries in final goods exports to the United States. Therefore, the ratio of these two terms reveals the market share of China in the final-import demand in the United States. A higher value of Indicator 3 in a particular sector provides higher potential for the sector to be included in the target list of the United States against China, and therefore the higher likelihood of redirection of trade to happen in these sectors. Countries that concentrate on exports from these sectors stand to substitute for China in meeting United States final demand.

Combining the three components, the opportunity index is a composite index that gives a proxy of economy opportunity arising from trade tensions, based on sector-specific links with United States final demand, sector specific integration in regional and global production networks, and corresponding focus in opportunity sectors.

Annex B

Methodology overview, baseline values and results tables

This chapter provides a computable general equilibrium (CGE) analysis using an augmented version of the standard Global Trade Analysis Project (GTAP) model and database (Hertel, 2017), which features sectoral and economy level details for Asia and the Pacific. The database is updated to 2017, using World Bank macroeconomic data and the GTAP Adjust tool (Horridge, 2011) – see annex table B1 for the 2017 baseline values. Furthermore, a number of changes in the model are made to capture the importance of some variables related to sustainable development, discussed below.

First, although a full-fledged energy-environment model like GTAP-E (McDougall and Golub, 2010) is not employed, the model used in this analysis draws inspiration from it to compute region-specific CO_2 emissions that are linked with various economic activities. Second, the differential between the growth rates of unskilled and skilled labour is used to account for inequality. Finally, the strong alternative assumptions of full employment or sticky real wages are relaxed by introducing a 45-degree labour supply elasticity curve that ensures both labour supply (employment) and real wages are endogenous in the model. This is exactly midway between the horizontal and vertical labour supply curves that are implicitly assumed in the standard GTAP model. This is consistent with the Monash model, and is supported by econometric literature on labour supply elasticities. This was also done in the APTIR 2017 analysis (ESCAP, 2017b).

The economic impacts of the policy changes are captured through: (a) changes in gross domestic product (GDP) and trade levels; (b) the social impact through changes in levels of inequality and employment; and (c) the environmental impact through changes in CO_2 emissions. Trade balance is assumed to be endogenous, as are all prices and quantities, except capital, land and natural resources, which are all fixed and exogenous. Exogenous technological change variables are not shocked. For scenario 3 ("doomsday scenario"), in addition to implemented and threatened tariffs implemented in scenario 2, the global consumer demand decline is modelled through shocking variable tp_R for each region (region-wide shock to tax on purchases by private household in region ***R***); in addition, a lower expected rate of return on investment in China, the United States, Mexico, Canada and Turkey is implemented by shocking the slack variable ***cgdslack*** to impose exogeneity restrictions on the output level of new capital goods in those economies.

While more disaggregated groups are used to run the model, the results are presented using subregional and regional groupings (annex tables B2 and B3).

Annex table B1. Absolute initial values, 2017

	GDP	Exports	Imports	CO_2 Emissions (Thousands of metric tons)
	(Billions of United States dollars)			
Asia-Pacific	**35 046**	**10 438**	**9 679**	**15 261**
Pacific	2 189	481	462	425
South-East Asia	2 945	1 737	1 668	1 140
South and South-West Asia	5 188	1 405	1 670	2 763
East and North-East Asia	21 357	5 719	5 108	9 135
North and Central Asia	3 366	1 096	771	1 799
United States	**18 778**	**2 114**	**3 183**	**5 106**
Global	**92 514**	**26 441**	**26 441**	**28 623**

Annex table B2. Asia-Pacific subregional groupings

Asia-Pacific subregions	Country groups (GTAP regions)
Pacific	Australia; New Zealand; rest of the Pacific
South-East Asia	Brunei Darussalam; Cambodia; Indonesia; Lao People's Democratic Republic; Malaysia; the Philippines; Singapore; Thailand; Viet Nam
South and South-West Asia	Bangladesh; India; Islamic Republic of Iran; Nepal; Pakistan; Sri Lanka; Turkey; rest of Asia-Pacific
East and North-East Asia	China; Hong Kong, China; Japan; Republic of Korea; Mongolia; Taiwan Province of China
North and Central Asia	Armenia; Azerbaijan; Georgia; Kazakhstan; Kyrgyzstan; Russian Federation; Tajikistan

Annex table B3. Subregional and regional results of simulations

(Percentage changes from the baseline)

(a) Gross domestic product

	Scenario 1 Implemented tariffs	Scenario 2 Threatened tariffs	Scenario 3 Doomsday	Scenario 4 Regional integration	Scenario 5 Doomsday with integration
Pacific	0.19	0.20	0.22	0.50	0.72
South-East Asia	0.19	0.19	0.16	0.74	0.90
South and South-West Asia	0.04	0.03	-0.02	0.40	0.39
East and North-East Asia	-0.34	-0.36	-0.61	0.58	-0.03
North and Central Asia	0.09	0.09	0.08	-0.01	0.07
Asia-Pacific	**-0.16**	**-0.18**	**-0.34**	**0.51**	**0.17**
United States	-0.87	-0.88	-1.32	-0.06	-1.39
World	**-0.21**	**-0.22**	**-0.42**	**0.16**	**-0.26**

(b) Exports

	Scenario 1 Implemented tariffs	Scenario 2 Threatened tariffs	Scenario 3 Doomsday	Scenario 4 Regional integration	Scenario 5 Doomsday with integration
Pacific	-1.08	-1.09	-2.80	0.79	-2.01
South-East Asia	-0.69	-0.69	-1.79	2.89	1.10
South and South-West Asia	-1.05	-1.00	-2.10	4.67	2.56
East and North-East Asia	-2.12	-2.09	-0.97	3.09	2.12
North and Central Asia	-0.80	-0.68	-2.05	0.28	-1.76
Asia-Pacific	**-1.55**	**-1.52**	**-1.46**	**2.87**	**1.41**
United States	-4.53	-4.02	1.49	0.24	1.73
World	**-1.34**	**-1.28**	**-1.38**	**1.30**	**-0.08**

(c) Imports

	Scenario 1 Implemented tariffs	Scenario 2 Threatened tariffs	Scenario 3 Doomsday	Scenario 4 Regional integration	Scenario 5 Doomsday with integration
Pacific	1.65	1.68	3.10	5.25	8.36
South-East Asia	1.21	1.21	1.49	5.43	6.91
South and South-West Asia	0.51	0.52	0.94	2.47	3.41
East and North-East Asia	-2.45	-2.36	-3.00	5.41	2.41
North and Central Asia	1.58	1.54	3.49	-0.44	3.05
Asia-Pacific	**-0.79**	**-0.74**	**-0.74**	**4.43**	**3.70**
United States	-11.02	-10.72	-13.38	-1.15	-14.53
World	**-1.34**	**-1.28**	**-1.39**	**1.29**	**-0.10**

(d) CO_2 emissions

	Scenario 1 Implemented tariffs	Scenario 2 Threatened tariffs	Scenario 3 Doomsday	Scenario 4 Regional integration	Scenario 5 Doomsday with integration
Pacific	-0.11	-0.11	-0.49	0.46	-0.03
South-East Asia	0.04	0.04	0.03	0.63	0.66
South and South-West Asia	0.00	-0.02	-0.11	0.04	-0.06
East and North-East Asia	-0.02	-0.02	-0.17	0.43	0.26
North and Central Asia	0.06	0.09	-0.19	-0.13	-0.32
Asia-Pacific	**-0.00**	**-0.00**	**-0.16**	**0.31**	**0.16**
United States	-0.49	-1.14	-1.41	-0.10	-1.52
World	**-0.11**	**-0.22**	**-0.43**	**0.15**	**-0.28**

(e) Employment-unskilled

	Scenario 1 Implemented tariffs	Scenario 2 Threatened tariffs	Scenario 3 Doomsday	Scenario 4 Regional integration	Scenario 5 Doomsday with integration
Pacific	0.26	0.26	0.24	0.73	0.97
South-East Asia	0.31	0.31	0.19	1.14	1.32
South and South-West Asia	0.04	0.03	-0.17	0.42	0.25
East and North-East Asia	-0.33	-0.32	-0.72	0.58	-0.14
North and Central Asia	0.24	0.28	0.30	-0.11	0.19
Asia-Pacific	**-0.18**	**-0.17**	**-0.48**	**0.58**	**0.09**
United States	-0.85	-0.87	-1.59	-0.12	-1.71
World	**-0.23**	**-0.23**	**-0.59**	**0.21**	**-0.38**

(f) Employment-skilled

	Scenario 1 Implemented tariffs	Scenario 2 Threatened tariffs	Scenario 3 Doomsday	Scenario 4 Regional integration	Scenario 5 Doomsday with integration
Pacific	0.21	0.21	0.12	0.63	0.74
South-East Asia	0.33	0.33	0.16	1.04	1.20
South and South-West Asia	0.02	0.01	-0.18	0.50	0.31
East and North-East Asia	-0.29	-0.30	-0.66	0.74	0.08
North and Central Asia	0.22	0.22	0.23	-0.06	0.17
Asia-Pacific	**-0.12**	**-0.12**	**-0.39**	**0.66**	**0.27**
United States	-0.68	-0.70	-1.23	-0.07	-1.30
World	**-0.23**	**-0.24**	**-0.58**	**0.15**	**-0.43**