



## PART III

# Global Value Chains



# The Implications of the Global Chip Shortage in Asia

Semiconductors or microchips play an important role in the modern world. They are an essential input to many of today's electronics, including personal computers and handheld devices, medical equipment, robotics, transport technologies, and advanced manufacturing machinery. In a 2022 report, Asian Development Bank (ADB) estimates suggest that about 65% of total world exports rely, either directly or indirectly, on semiconductors (ADB 2022a).

However, global events—including trade conflicts, geopolitical tensions, and the coronavirus disease (COVID-19) pandemic—have threatened the world supply of semiconductors. At the same time that there has been a surge in demand for electronic products, cloud computing, and other new technologies during the pandemic, associated lockdowns and quarantining of manufacturing enterprises in the People's Republic of China (PRC) and other Asian economies have placed further strain on the limited capacity of semiconductor manufacturers. Climate change and natural disasters also continue to hamper semiconductor production, with typhoons, floods, and earthquakes disrupting logistics and supply networks and posing various other challenges to producers.

In 2022, Part III of *Key Indicators for Asia and the Pacific* focuses on analyzing the global chip shortage and its implications for 26 economies in the region, focusing on the electrical and optical equipment sector. It makes use of data for 2000 to 2020 from the Observatory of Economic Complexity (OEC) and for 2000 to 2021 from ADB's Multiregional Input-Output Tables (MRIOTs) to understand the changes that have taken place in the international trade for semiconductors and the subsequent effects of these changes on economies in the region.<sup>1</sup>

For the purposes of this analysis, the 26 economies assessed are Australia; Bangladesh; Bhutan; Brunei Darussalam; Cambodia; Fiji; Hong Kong, China; India; Indonesia; Japan; Kazakhstan; the Kyrgyz Republic; the Lao People's Democratic Republic; Malaysia; Maldives; Mongolia; Nepal; Pakistan; the PRC; the Philippines; the Republic of Korea; Singapore; Sri Lanka; Taipei, China; Thailand; and Viet Nam.

Part III demonstrates that the impacts of the semiconductor shortage on the selected economies can depend on several things, including their participation in global value chains (GVCs), their competitive advantage in the electrical and optical equipment sector, and the level of diversity of their exports. A clear assessment of these indicators is important in mitigating the consequences of the global chip shortage and helping with economic recovery.



<sup>1</sup> Product exports data from the OEC are based on the BACI dataset, which reconciles data from the United Nations Statistical Division's Comtrade dataset. As of the time of writing, data available from the OEC are only up to 2020.



**Chips are integral to servers.** An IT specialist at ADB's Tajikistan Resident Mission ensures the bank's mainframes can cater for the rise in digitalization and cloud computing (photo by Nozim Kalandarov/ADB).

## Asia's Role in Semiconductor Production and Electrical and Optical Equipment Exports

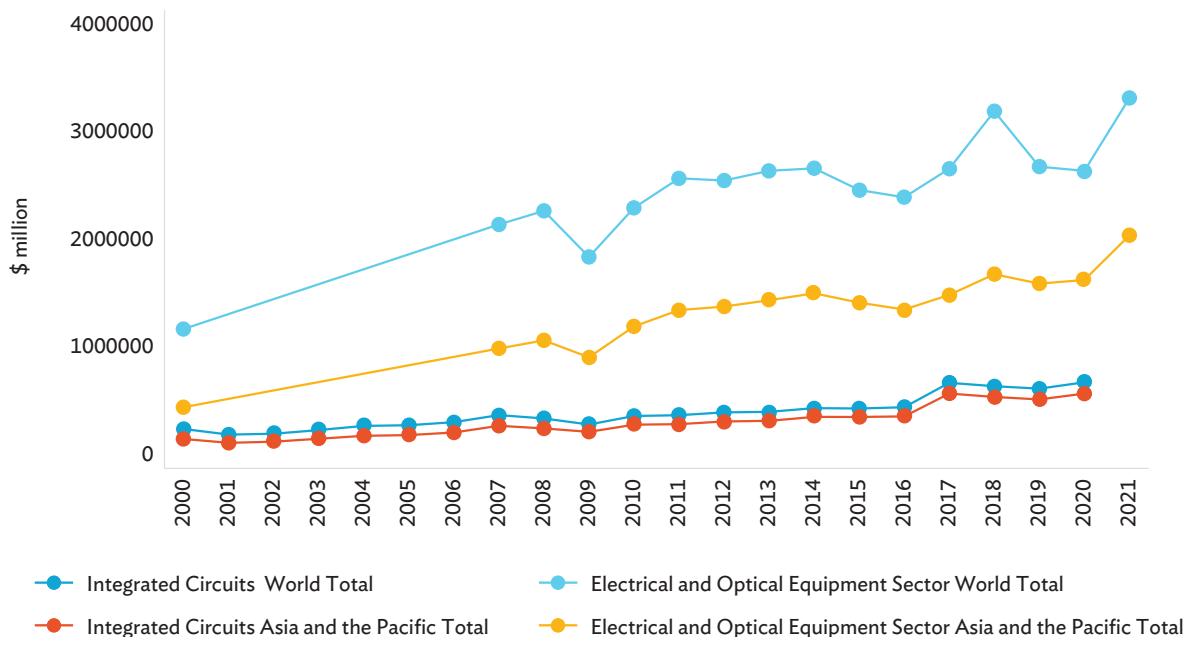
Among the most complex GVCs is the chain for semiconductors. Many economies participate in various stages of semiconductor production; from research and development to design, manufacturing, assembly, testing, and packaging. Ultimately, these chips are used as inputs in electronic devices and transport equipment for final consumption in the modern world. This significant role of semiconductors in international trade has allowed economies to participate in, and reap the benefits of integrating into, GVCs.

The Asia and Pacific region plays a significant role in the GVC for semiconductors in general and the electrical and optical equipment sector in particular (Figure 3.1). Estimates from the OEC show that, in 2016–2020, the 26 reporting economies of the region contributed 83.7% of the world's total exports of integrated circuits, up from only 60.4% in 2000.

Among these 26 economies, the five biggest contributors were Taipei, China, which contributed 22.7% of the region's exports of integrated circuits in 2016–2020, followed by the PRC (18.7%), the Republic of Korea (18.0%), Singapore (13.3%), and Malaysia (11.0%). Following these five were Japan (6.0%), the Philippines (4.7%), Viet Nam (2.6%), Thailand (1.9%), and Hong Kong, China (1.0%). These economies have specialized tasks

within the GVCs for integrated circuits. For instance, Taipei, China is considered a leader in wafer foundry; the Republic of Korea specializes in the manufacture of advanced chips; and the Philippines focuses on product testing and packaging.

**Figure 3.1: Exports of Integrated Circuits and Electrical and Optical Equipment**



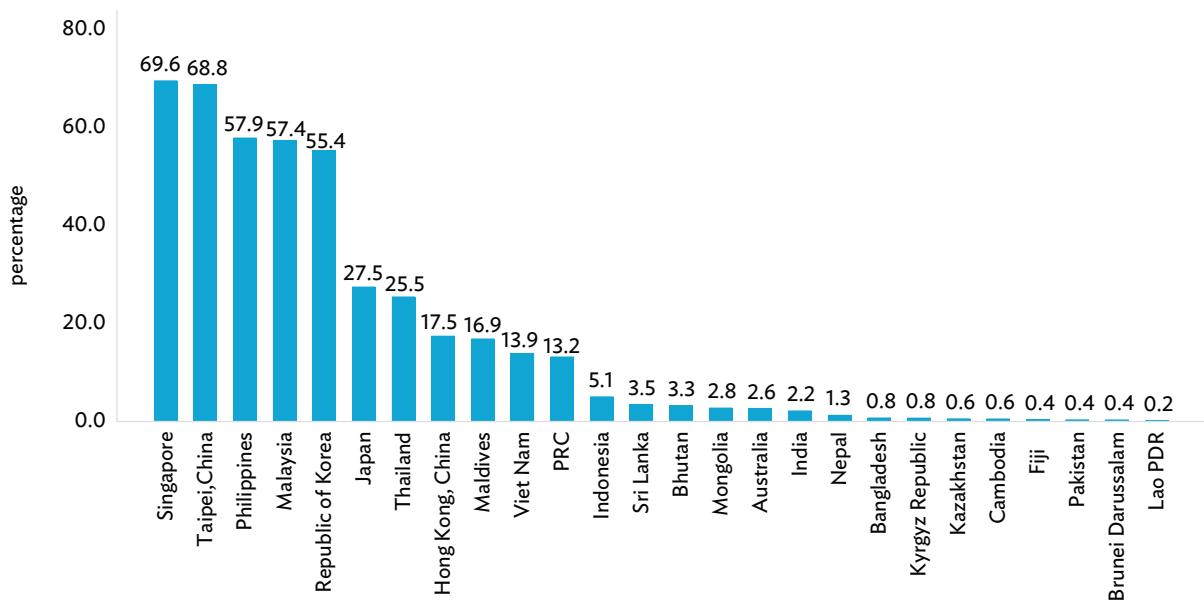
- Note: The graphic covers 26 economies of Asia and the Pacific: Australia; Bangladesh; Bhutan; Brunei Darussalam; Cambodia; Fiji; Hong Kong, China; India; Indonesia; Japan; Kazakhstan; the Kyrgyz Republic; the Lao People's Democratic Republic; Malaysia; Maldives; Mongolia; Nepal; Pakistan; the People's Republic of China; the Philippines; the Republic of Korea; Singapore; Sri Lanka; Taipei, China; Thailand; and Viet Nam. All products under HS Rev. 92 ID 8542 from the Observatory of Economic Complexity were considered in calculating for integrated circuits exports. Electrical and optical equipment sector exports were derived from the Asian Development Bank's Multiregional Input-Output Tables. Data from the Observatory of Economic Complexity are available only up to 2020.
- Source: Asian Development Bank calculations using estimates from the Observatory of Economic Complexity and the Asian Development Bank Multiregional Input-Output Tables.

[Click here for figure data](#)

The importance of integrated circuits in electronics manufacturing for a given economy can be indicated by the proportion of integrated circuits (HS4 Rev. 92 ID 8542) in total electrical equipment and machineries (HS2 Rev. 92 ID 85) exports (Figure 3.2). In 2016–2020, Singapore had the highest share of integrated circuits in total electrical equipment and machinery exports at 69.6%, followed by Taipei, China at 68.8%. Over half of electrical equipment and machinery exports are integrated circuits in the Philippines (57.9%), Malaysia (57.4%), and the Republic of Korea (55.4%).

As with the exporting of integrated circuits, Asia and the Pacific also claims an increasing share of the world's exports in the electrical and optical equipment sector. Data from the MRIOTs show that, in 2000, the region made up only 37.5% of the total world exports in the sector. By 2021, that share had increased to 61.5%.

Figure 3.2: Share of Integrated Circuits in Electrical Equipment and Machinery Exports, 2016–2020



Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.

Note: All products under HS Rev. 92 ID 8542 from the Observatory of Economic Complexity were considered in calculating for integrated circuits exports, while all products under HS Rev. 92 ID 85 were considered in calculating for electrical equipment and machinery exports.

Source: Asian Development Bank calculations using estimates from the Observatory of Economic Complexity.

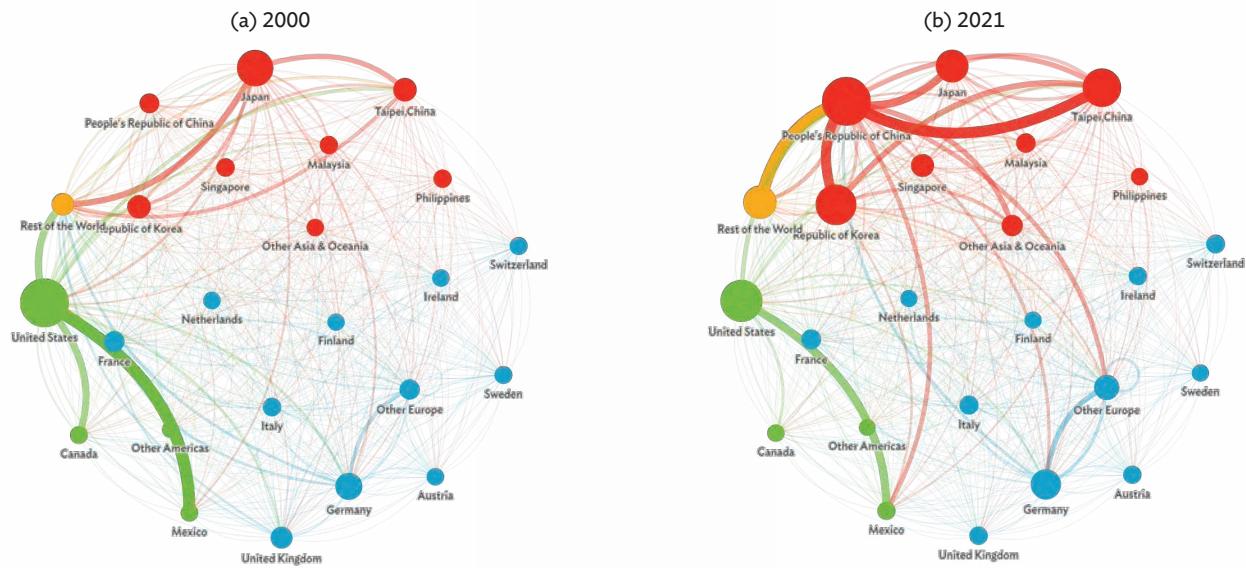
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Focusing on GVCs, the role of Asia and the Pacific in the electrical and optical equipment sector has increased since the start of the millennium. An increasing portion of value-added in GVC intermediates has increasingly originated from the region, up from only 37.1% in 2000 to 56.3% in 2021. Meanwhile, within the region, there has also been an evolution in the roles that economies play in the trade of electrical and optical intermediates.

In 2000, the United States exported the most value-added in GVC intermediates in the electrical and optical sector, accounting for over 27.0% of the world total (Figure 3.3.a). Its biggest exports to Asia and the Pacific went to Taipei, China, followed by the Republic of Korea, Malaysia, Japan, and Singapore. Within the region, the biggest player in 2000 was Japan, which contributed about 16.8% of total world domestic value-added exports in GVC intermediates in the electrical and optical equipment sector. Japan's biggest ties were with other Asian economies, namely Taipei, China and the Republic of Korea.

By 2021, the landscape of electrical and optical equipment GVCs had changed. The PRC was by then the biggest contributor to total world domestic value-added in GVC intermediates in the sector, with a share of 16.6% (Figure 3.3.b). The shares of the Republic of Korea and Taipei, China also grew, from less than 6% each to 12.5% and 11.3%, respectively. On the other hand, Japan's share had fallen to 8.3% by 2021. GVC ties within Asia and the Pacific were also more prominent in 2021 compared to 2000.

**Figure 3.3: Exports of Domestic Value-Added in Global Value Chain Intermediates in the Electrical and Optical Equipment Sector**



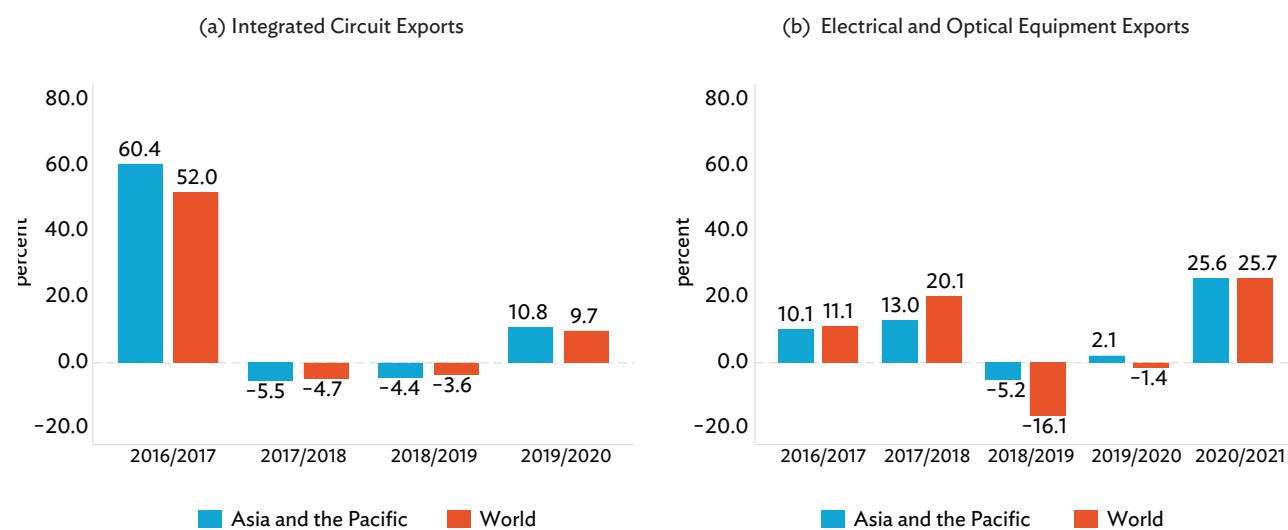
Note: Nodes and edges are determined using the REX and REF components of the Borin and Mancini (2019) exports decomposition framework by origin sector. REX refers to domestic value-added re-exported by a second economy  $r$  and eventually reabsorbed by  $r$  or a third economy. REF refers to domestic value-added re-exported by a second economy  $r$  and eventually reabsorbed by the economy of origin.

Source: Asian Development Bank (ADB) calculations using the ADB Global Value Chain Indicators and the ADB Multiregional Input-Output Tables.

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Compared to the whole world, Asia and the Pacific saw a larger year-on-year increase in integrated circuit exports in 2017 (60.4%), but the region experienced slightly sharper declines in 2018 (-5.5%) and 2019 (-4.7%) as shown in Figure 3.4.a. This was partly due to interregional and intraregional trade conflicts and slower demand for electronic goods. A stronger rebound in integrated circuit exports can be seen in the region compared to the world in 2020, as demand for electronics, particularly personal computers and handheld devices, increased during COVID-19 lockdowns. This faster rebound in Asia and the Pacific's exports of integrated circuits led to an overall increase of 4.9 percentage points in the region's share of global exports from 2016 to 2020.

The pattern of growth in the electrical and optical equipment sector in 2016–2021 is different (Figure 3.4.b). Growth from 2016 to 2017 was only 1.0 percentage point slower in Asia and the Pacific compared to the world (at 10.1% and 11.1%, respectively). From 2017 to 2018, there was a more significant increase in electrical and optical equipment sector exports for both Asia and the Pacific and the world, although this growth was 7.1 percentage points higher for the world as a whole. Conversely, from 2018 to 2019, Asia and the Pacific experienced a relatively milder decline of 5.2%, while the world decline was 16.1%. The region also enjoyed a stronger rebound from 2019 to 2020, with electrical and optical equipment sector exports growing by 2.1%, while the world total shrank by 1.4%. In 2021, the region's exports from the electrical and optical equipment sector continued to grow by 25.6%, less than 0.1 percentage point slower than world average growth.

**Figure 3.4: Year-on-Year Growth in Exports of Integrated Circuits and Electrical and Optical Equipment**

**Note:** The graphic covers 26 economies of Asia and the Pacific: Australia; Bangladesh; Bhutan; Brunei Darussalam; Cambodia; Fiji; Hong Kong, China; India; Indonesia; Japan; Kazakhstan; the Kyrgyz Republic; the Lao People's Democratic Republic; Malaysia; Maldives; Mongolia; Nepal; Pakistan; the People's Republic of China; the Philippines; the Republic of Korea; Singapore; Sri Lanka; Taipei,China; Thailand; and Viet Nam. All products under HS Rev. 92 ID 8542 were considered in calculating for integrated circuits exports.

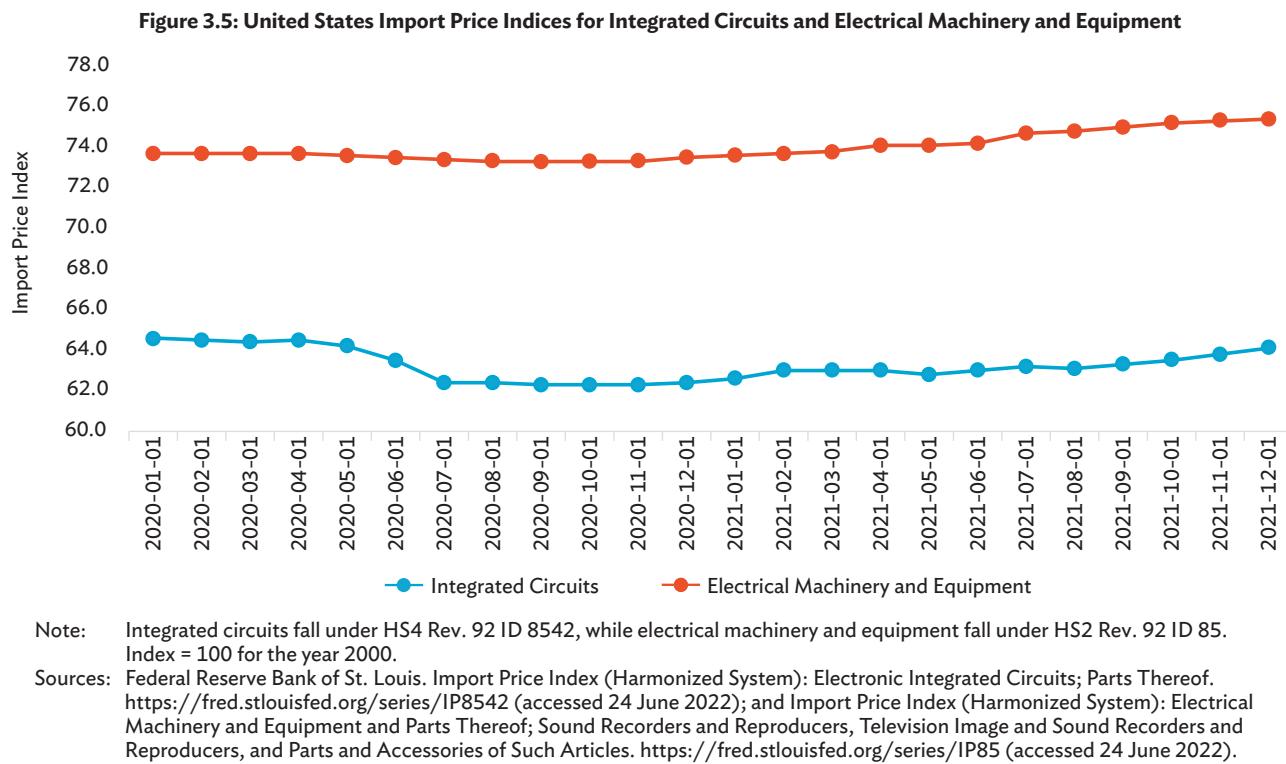
**Source:** Asian Development Bank calculations using estimates from the Observatory of Economic Complexity and the Asian Development Bank Multiregional Input-Output Tables.

[Click here for figure data](#)

The two growth patterns shown in Figure 3.4.a and 3.4.b suggest that, despite COVID-19 lockdowns in 2020, electronics exports continued to surge for economies in Asia and the Pacific. This suggests that demand-side factors played a significant role as the lockdowns placed strong emphasis on, and drove the adoption of, digital technologies for remote connectivity, leading to stronger demand for chips and other electronics. This growth continued through 2021. Furthermore, Burkacky et al. (2022) show that, throughout 2020 and 2021, forecast demand for most electronics exceeded pre-pandemic forecasts for most industries. After declining trends in 2020, the import price index for semiconductor and other electronics manufacturing also continuously increased in the United States, indicating rising demand as well as supply constraints in 2021 (Figure 3.5).

In general, exports of integrated chips partially move in line with exports from the electrical and optical equipment sector, although integrated chips exports show less volatility and a slower upward momentum (Figure 3.1). Chips also act as inputs to the production of other electrical and optical equipment sector goods, so a shortage in the supply of chips can have an impact on the output of this sector.

Among the 26 economies assessed in the MRIOTs, there were eight economies where the shares of their electrical and optical equipment sectors made up over 14.0% of their total economy exports in 2019–2021. These economies included Taipei,China (48.9%), the Republic of Korea (31.4%), the PRC (30.3%), the Philippines (26.4%), Malaysia (23.7%), Singapore (21.0%), Japan (19.5%), and Viet Nam (14.2%).



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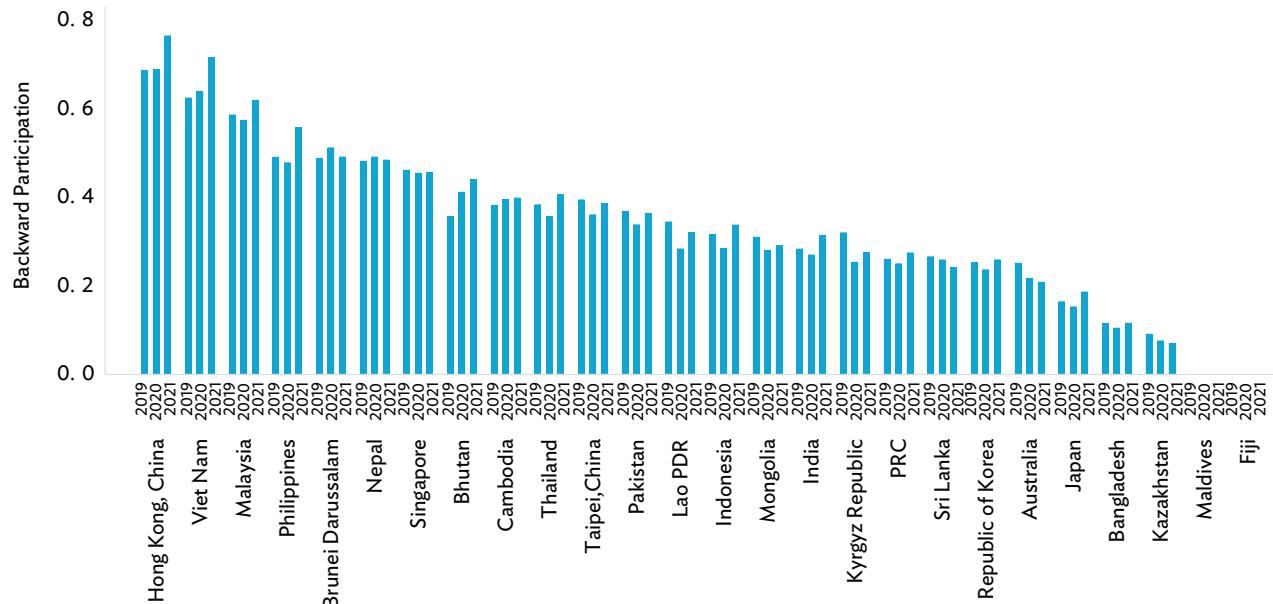
## How Exposed are Asia and the Pacific's Economies to Semiconductor Supply Shortages?

While GVC participation offers the chance to create greater economic activity, it can also create vulnerabilities for economies whenever shocks are experienced throughout the chain. With GVCs, economies perform specialized tasks within production chains, making them reliant on both upstream suppliers and downstream customers. Thus, disruption in any part of the chain can have impacts on other segments of the chain. From a backward perspective, constraints from suppliers can lead to production delays. From a forward perspective, economic downturns in recipient economies can create production limitations or shutdowns.

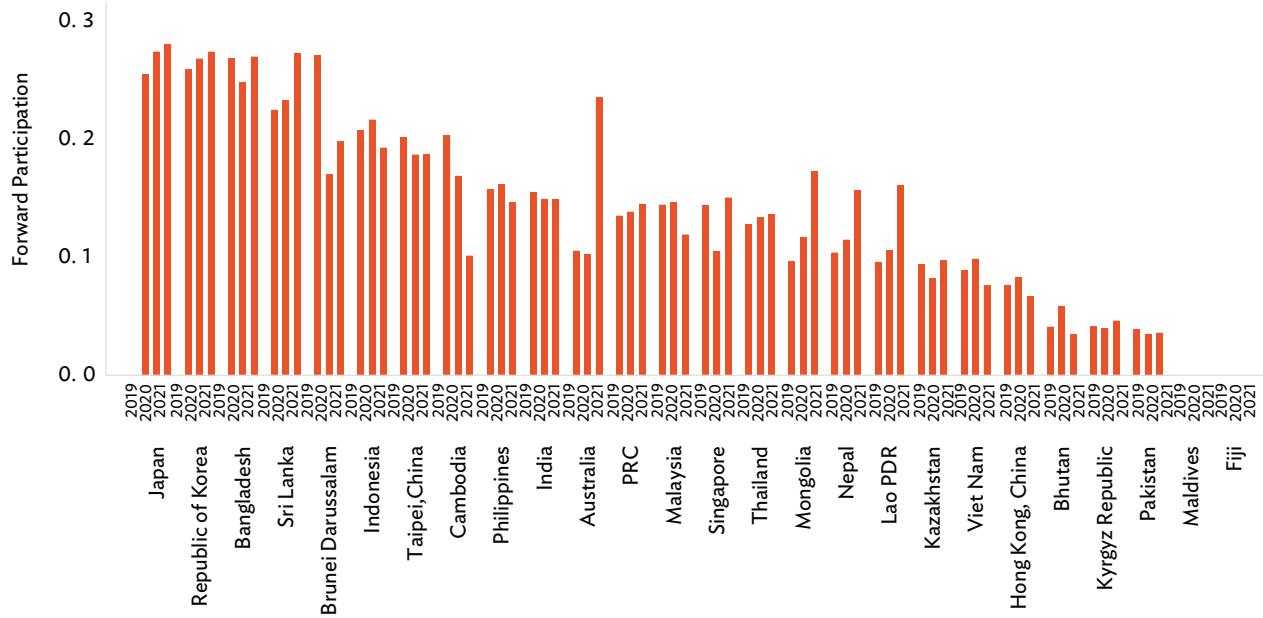
How vulnerable economies of the Asia and Pacific region are to the global chip shortage can be explored using GVC indicators. First, GVC participation indices can indicate what proportion of exports rely on backward and forward linkages (Figure 3.6). Backward participation in GVCs tells us what proportion of a sector's exports rely on foreign value-added, while forward participation in GVCs tell us what proportion of a sector's exports is domestic value-added in intermediates that undergo more than two border crossings. The Borin and Mancini (2019) trade decomposition framework allows us to calculate trade-based participation indices for the 26 economies assessed in the MRIOTs for 2019–2021 (Figure 3.6).

Figure 3.6: Trade-Based Global Value Chain Participation Rates

(a) Backward Participation in GVCs of the Electrical and Optical Equipment Sector



(b) Forward Participation in GVCs of the Electrical and Optical Equipment Sector



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

Note: Participation rates are calculated based on the Borin and Mancini (2019) trade decomposition by exporting sector.

Source: Asian Development Bank (ADB) calculations using the ADB Global Value Chain Indicators and the ADB Multiregional Input-Output Tables.

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Among the economies of the region where the share of the electrical and optical equipment sector in total exports was over 14.0% for 2019–2021, Viet Nam showed the highest backward participation at over 66.0%. Viet Nam is known for the assembly of electronics that are closer to finished products, such as mobile phones, household

appliances, and computers. Thus, it can be expected that Viet Nam's electrical and optical equipment sector exports will have a high share of foreign value-added content, making it vulnerable to the chip supply shortage.<sup>2</sup> At the other end of the spectrum is Japan, an established semiconductor chip producer, where backward participation for 2019–2021 was at just over 16.8% of exports. Compared to Viet Nam, a significant portion of Japan's electronics exports are semiconductor chips, explaining why backward participation is relatively low for the economy.<sup>3</sup> It is also interesting to note that, for many of the 26 reporting economies, backward participation in the electrical and optical equipment sector declined from 2019 to 2020, but many reporting economies also saw strong rebounds in backward participation in 2021.

Among the eight Asian economies with 14.0%+ shares of exports contributed by the electrical and optical equipment sector, Japan showed the highest forward GVC participation for 2019–2021 (at 25.5% to 28.0%), followed by the Republic of Korea (at 25.9% to 27.4%), implying relatively high content of domestic value-added in GVC intermediates in the total sector exports of the two economies. These economies are known producers of semiconductor chips and other electronic parts that are used as inputs in downstream production. On the other hand, Viet Nam, which showed the highest backward participation, registered the lowest forward participation among the eight economies, posting less than 9.8% for 2019–2021.

Economies with high forward GVC participation in the electrical and optical equipment sector and large contributions of semiconductor chips to their total exports may benefit from the global chip shortage if the price of semiconductor chips rises, holding all else equal. However, production bottlenecks within these economies can cause a ripple effect that will impact upstream suppliers and economies further downstream that rely on their production of semiconductor chips.

Another indicator that can be used to assess vulnerability is revealed comparative advantage (RCA) and its indices as represented in Figure 3.7. RCA tells us whether an economy is competitive in a given sector, but it can also inform us if an economy relies more heavily on a sector for exports (compared to the world average). For economies where RCA is greater than 1 in the electrical and optical equipment sector, the contribution of the sector to total exports and to total domestic value-added generation in these economies is larger compared to the world average.

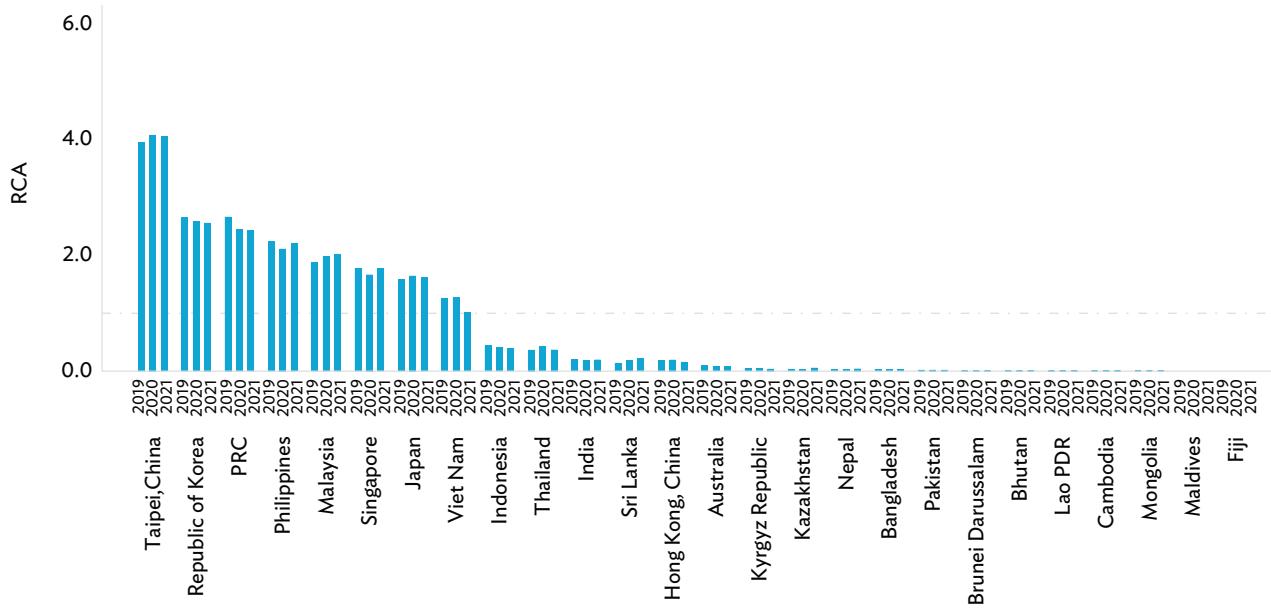
Using both gross exports and domestic value-added to calculate for RCA shows that the same eight economies that rely heavily on electrical and optical equipment sector exports have RCA in that sector. Moreover, data from the OEC reveal that these eight

<sup>2</sup> Data from the OEC show that, among products classified using HS4, integrated circuits made up the largest share of imports in Viet Nam.

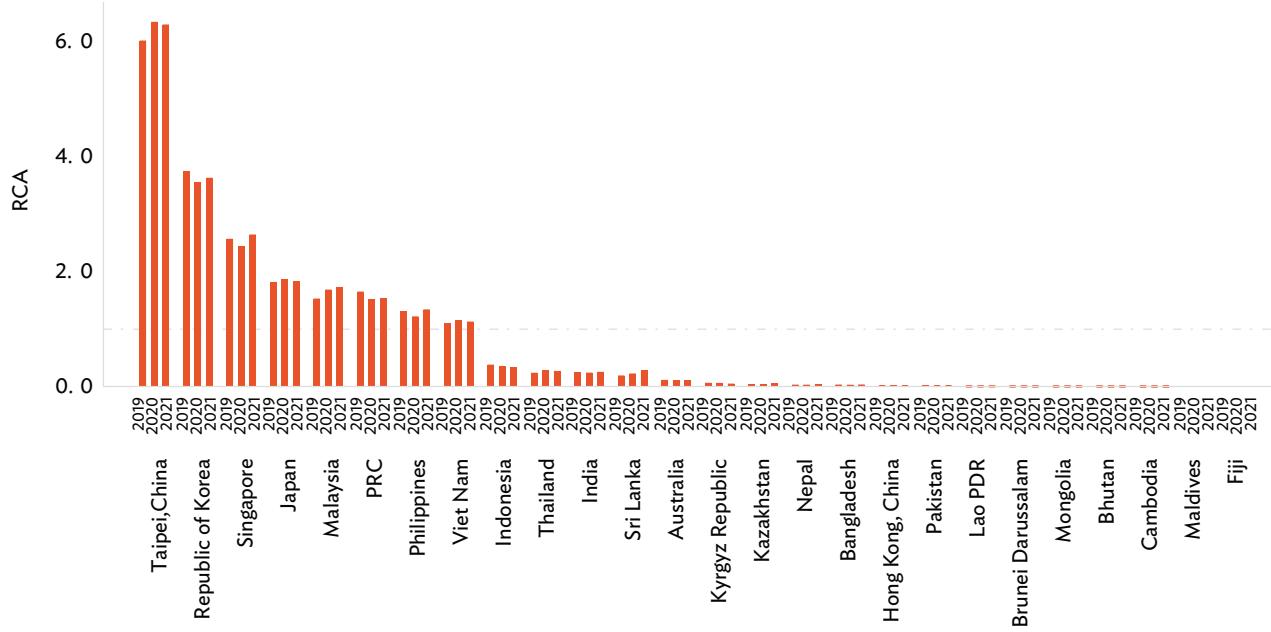
<sup>3</sup> Japan's vulnerability to the chip shortage is exacerbated by its transport equipment industry, which also relies on semiconductor chips.

**Figure 3.7: Revealed Comparative Advantage in the Electrical and Optical Equipment Sector**

(a) Revealed Comparative Advantage Based on Exports



(b) Revealed Comparative Advantage Based on Value-Added



Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China, RCA = revealed comparative advantage.

Note: Revealed comparative advantage based on value-added is calculated using the Borin and Mancini (2019) exports decomposition by origin sector.

Source: Asian Development Bank (ADB) calculations using the ADB Global Value Chain Indicators and the ADB Multiregional Input-Output Tables.

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economies were in the top 10 exporters of integrated circuits in 2020, making up 81.9% of total exports for the product category. For some of these economies, integrated circuits also made up a large portion of electrical equipment and machineries exports.

Across the 26 economies assessed for 2019–2021, Taipei,China showed the highest RCA using both gross exports and domestic value-added exports. Estimates from the OEC show that, in 2020, 20.7% of integrated circuit exports came from Taipei,China, highlighting the large and direct role of Taipei,China in the production of chips. Moreover, the OEC shows that integrated circuits made up 36.9% of Taipei,China’s product exports and 71.1% of their electrical machinery and equipment exports.<sup>4</sup> In turn, electrical machinery and equipment made up some 51.8% of Taipei,China’s product exports. The large role of semiconductors and the electrical and optical equipment sector in Taipei,China makes it vulnerable to disruptions in chip production. However, the economy also stands to benefit from an increased demand for semiconductor chips if it can meet this demand.

While the eight economies with 14.0%+ shares of total exports coming from the electrical and optical equipment sector appear to have a strong footing in the exporting of integrated circuits and for RCA in the sector, it is important to know where the bottlenecks in chip production are. It is also important to consider whether the electrical and optical equipment sector relies heavily on semiconductor chips production and assembly or on downstream sectors that make use of these chips, such as in the production of smartphones, computers, and other electronic devices.

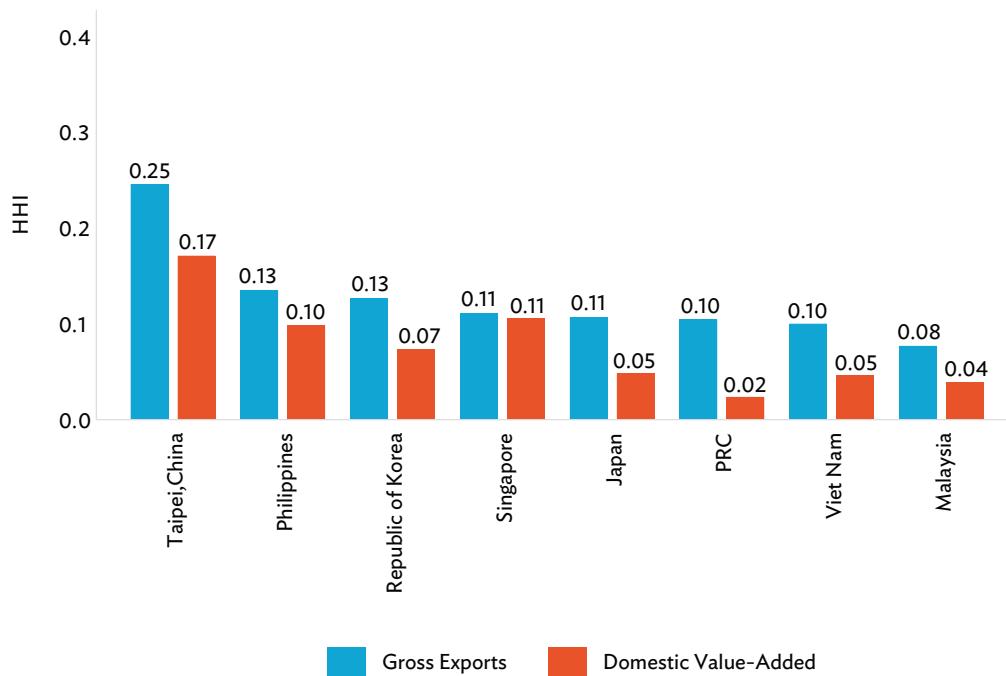
For economies where RCA is driven by chip production, an economy may benefit in the short to medium run on the increased prices of semiconductors, if that economy is readily able to address bottlenecks in production and external sources of delay while meeting the growing demand for chips. Meanwhile, economies where RCA in the electrical and optical equipment sector is driven by the production of electronics that make use of chips may be negatively hit by the supply crunch.

A final measure of vulnerability in this assessment is the use of diversification indices. These can tell us whether economies’ exports and production are too dependent on the electrical and optical equipment sector, implying a higher vulnerability to the global chip shortage. Figure 3.8 highlights the eight economies that have over 14.0% of total exports coming from the electrical and optical equipment sector and shows their average Hirschman Herfindahl Indices (HHIs) for 2019–2021. Note that a higher HHI value implies higher specialization or concentration, while a lower HHI value implies greater diversification.

Among the eight economies, Taipei,China showed the highest HHI values for both gross exports and domestic value-added for 2019–2021, implying that it was the least diversified. This high reliance on electrical and optical equipment using both gross exports and domestic value-added exports indicates that a shortage affecting Taipei,China’s electrical and optical equipment sector can have large impacts on the economy. A large part of Taipei,China’s domestic value-added was exported through

<sup>4</sup> The share of integrated circuits in electrical machinery and equipment exports is calculated by dividing the value of integrated circuits (HS4 ID 8542) from the value of electrical machinery and equipment (HS2 ID 85) exports.

Figure 3.8: Average Hirschman Herfindahl Indices on Exports Diversification, 2019–2021



HHI = Hirschman Herfindahl Index, PRC = People's Republic of China.

Note: Hirschman Herfindahl Index based on value-added is calculated using the Borin and Mancini (2019) exports decomposition by origin sector.

Source: Asian Development Bank (ADB) calculations using the ADB Global Value Chain Indicators and the ADB Multiregional Input-Output Tables.

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its gross exports in the electrical and optical equipment sector, which means that bottlenecks in its electronics exports may negatively impact economic activity within its other domestic sectors. The lower HHI when using domestic value-added implies that many domestic sectors were actually contributing to support Taipei, China's exports in the electrical and optical equipment sector. On the other hand, the increase in demand for integrated circuits could benefit Taipei, China in the short run through increased revenues, holding all things equal, and these short-run benefits have the potential to spill over to the other domestic sectors linked to the electrical and optical equipment sector.

Meanwhile, Japan showed a relatively more diverse economy both in terms of gross exports and domestic value-added for 2019–2021. Japan's gross exports were dominated by their electrical and optical equipment sector and their transport equipment sector, but the economy also had large contributions from other manufacturing sectors. It must be noted, however, that while Japan showed a relatively diverse economy, with different sectors participating more equally to exports and production, the two largest sectors rely on semiconductor chips, lending the economy a certain degree of vulnerability to the global chip shortage. The higher prices in semiconductors and the lower supply available to the automotive sector, given

competing demand from electronics manufacturing, could cause a slowdown in Japan's economic growth despite higher prices and stronger demand for chips and chip-dependent products.

Malaysia and Viet Nam had the lowest HHIs in terms of gross exports and relatively low HHIs in terms of domestic value-added. While exports in the electrical and optical equipment sector of the two economies made up a sizeable share of total gross and value-added exports, other sectors also contributed significant shares to total gross and value-added exports. How much impact a shortage in semiconductor chips may have on the two economies will depend on several things, including the role of chips in the electrical and optical equipment sector and on the ability of other sectors to absorb or compensate for a supply crunch in the electrical and optical equipment sector and other chip-dependent sectors. With over half of Malaysia's electronics exports coming from integrated circuits, the economy may partly benefit from the chip shortage through increased prices, but, at the same time, may suffer from a shortage in supply for its other electronic products. In Viet Nam, integrated circuits exports play a smaller role, as the economy's electrical and optical equipment sector is known mostly for near-final goods production, which is highly dependent on the supply of chips. Thus, the impact of a shortage on Viet Nam's electrical and optical equipment sector may be larger. However, for these two economies, other sectors with sizeable shares appear to be less dependent on chip production, creating a buffer against the global shortage. The higher diversification in these two economies can reduce the negative impacts of the chip shortage because their economies are not highly dependent on any one sector.

## Conclusion

The Asia and the Pacific region has been playing an increasingly large role in the GVCs for the electrical and optical equipment sector and in the exporting of semiconductor chips and electronic products. Most economies in East Asia and several in Southeast Asia show greater participation in the GVCs and exports of integrated circuits and electrical and optical equipment sector, making them vulnerable to the global shortage in chips. However, depending on which segment of the chain these economies are in, they can also benefit from the shortage in the immediate term.

Given the region's participation in the GVCs for semiconductors and the electrical and optical equipment sector, addressing the global chip shortage could benefit many economies in Asia and the Pacific. Policies to address such supply shortages in the face of excess demand should create resilient supply chains, especially in light of production bottlenecks induced by natural disasters, increased political instability across the world, and ever-growing scarcity of resources.

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## Global Value Chain Tables for Economies of Asia and the Pacific

**Table 3.1.1: Value-Added Decomposition of Exports**

ADB Regional Member	Exports	DAVAX	REX	REF	FVA	PDC
	(\\$ million)			(% share in exports)		
<b>Australia</b>						
2010	274,868.26	60.89	25.55	0.70	12.69	0.17
2019	327,004.59	65.38	21.74	0.75	11.93	0.20
2020	326,951.25	66.81	21.27	0.67	11.08	0.17
2021	344,536.72	64.81	24.40	0.64	10.00	0.15
<b>Bangladesh</b>						
2010	18,348.86	73.96	11.49	0.04	14.50	0.02
2019	45,530.63	74.11	3.64	0.02	22.23	0.01
2020	38,764.93	75.67	4.21	0.02	20.10	0.01
2021	43,979.86	74.48	4.27	0.02	21.23	0.01
<b>Bhutan</b>						
2010	520.74	66.13	17.75	0.01	16.11	0.00
2019	860.58	71.15	7.71	0.01	21.13	0.00
2020	689.69	74.21	6.82	0.01	18.97	0.00
2021	866.85	64.20	15.35	0.02	20.43	0.00
<b>Brunei Darussalam</b>						
2010	9,239.73	47.21	42.90	0.09	9.77	0.03
2019	7,804.89	52.24	26.05	0.03	21.68	0.01
2020	6,886.06	54.37	24.35	0.02	21.26	0.01
2021	6,382.65	54.57	25.47	0.02	19.97	0.00
<b>Cambodia</b>						
2010	4,040.54	61.64	11.11	0.01	27.23	0.00
2019	16,549.26	54.58	12.74	0.08	32.56	0.03
2020	15,793.23	52.89	12.88	0.10	34.09	0.04
2021	17,417.33	48.36	15.41	0.07	36.14	0.03
<b>Fiji</b>						
2010	1,159.77	58.88	12.69	0.01	28.42	0.00
2019	2,645.44	63.25	11.64	0.00	25.10	0.00
2020	1,235.39	62.60	14.58	0.01	26.52	0.00
2021	1,350.03	61.20	14.12	0.00	28.49	0.00
<b>Hong Kong, China</b>						
2010	143,433.66	57.46	12.06	0.13	30.16	0.20
2019	142,570.39	63.51	12.68	0.14	23.60	0.07
2020	119,725.93	64.92	12.63	0.14	22.26	0.06
2021	141,542.59	62.57	13.89	0.13	23.35	0.06
<b>India</b>						
2010	315,327.88	63.00	17.31	0.66	18.88	0.16
2019	532,827.28	66.45	13.73	0.48	19.21	0.12
2020	499,939.89	68.60	13.53	0.47	17.29	0.12
2021	665,757.86	65.39	13.81	0.52	20.14	0.15
<b>Indonesia</b>						
2010	183,521.00	59.89	24.41	0.65	14.89	0.16
2019	208,057.76	64.12	20.06	0.41	15.32	0.09
2020	182,850.63	65.72	20.24	0.36	13.61	0.07
2021	255,731.34	63.33	21.01	0.35	15.22	0.09

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Table 3.1.1: continued

Table 3.1.1: Value-Added Decomposition of Exports

ADB Regional Member	Exports	DAVAX	REX	REF	FVA	PDC
	(\$ million)			(% share in exports)		
<b>Japan</b>						
2010	835,356.24	63.21	19.84	1.25	15.29	0.41
2019	893,209.12	63.66	18.01	0.93	17.13	0.27
2020	784,375.78	64.09	19.36	1.04	15.25	0.27
2021	909,153.13	61.18	19.25	0.92	18.34	0.30
<b>Kazakhstan</b>						
2010	64,075.60	55.85	33.94	0.16	10.02	0.04
2019	63,749.95	55.80	32.18	0.19	11.78	0.05
2020	51,786.61	60.17	28.86	0.19	10.74	0.04
2021	65,583.88	56.07	33.93	0.18	9.78	0.04
<b>Kyrgyz Republic</b>						
2010	2,289.01	54.68	12.54	0.01	32.76	0.00
2019	3,125.60	51.51	21.79	0.03	26.66	0.01
2020	2,435.84	53.04	22.04	0.01	24.90	0.01
2021	3,661.41	49.84	22.78	0.02	27.36	0.01
<b>Lao People's Democratic Republic</b>						
2010	2,307.70	68.55	18.21	0.07	13.16	0.01
2019	6,474.52	61.21	25.61	0.11	13.05	0.02
2020	5,887.62	63.74	26.70	0.11	9.44	0.01
2021	8,049.97	60.91	27.99	0.10	10.98	0.02
<b>Malaysia</b>						
2010	221,762.42	43.87	17.56	0.35	37.63	0.58
2019	238,379.77	49.64	16.15	0.26	33.68	0.27
2020	207,035.98	48.08	17.36	0.26	34.05	0.25
2021	256,784.35	46.12	16.42	0.22	36.95	0.29
<b>Maldives</b>						
2010	1,790.11	54.89	14.29	0.00	30.81	0.00
2019	3,894.41	57.25	15.08	0.01	27.66	0.00
2020	1,786.51	61.91	14.08	0.00	24.00	0.00
2021	3,443.18	58.58	15.09	0.00	26.41	0.00
<b>Mongolia</b>						
2010	2,954.96	55.63	20.14	0.01	24.21	0.00
2019	8,047.16	55.54	16.53	0.01	27.91	0.01
2020	7,656.53	56.11	17.00	0.01	26.87	0.01
2021	9,019.02	54.35	17.54	0.01	28.09	0.01
<b>Nepal</b>						
2010	1,560.12	65.68	11.19	0.03	23.10	0.00
2019	2,666.05	58.37	13.11	0.05	28.47	0.00
2020	2,236.15	60.00	13.23	0.05	26.72	0.00
2021	1,834.54	61.14	12.77	0.05	26.03	0.00
<b>Pakistan</b>						
2010	23,586.96	73.89	15.83	0.05	10.24	0.00
2019	25,609.98	77.92	11.76	0.04	10.28	0.00
2020	25,758.77	79.41	11.22	0.04	9.34	0.00
2021	29,058.04	77.76	12.17	0.04	10.03	0.00
<b>People's Republic of China</b>						
2010	1,697,752.15	65.47	13.07	1.91	18.56	0.99
2019	2,641,283.02	66.51	13.65	2.52	16.47	0.85
2020	2,723,263.84	67.14	13.61	2.68	15.69	0.88
2021	3,553,522.92	64.96	13.90	2.88	17.16	1.10

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Table 3.1.1: continued

Table 3.1.1: Value-Added Decomposition of Exports

ADB Regional Member	Exports	DAVAX	REX	REF	FVA	PDC
	(\$ million)			(% share in exports)		
<b>Philippines</b>						
2010	52,542.26	56.50	22.13	0.16	21.11	0.10
2019	82,157.70	58.48	17.96	0.17	23.34	0.06
2020	70,004.95	59.06	18.52	0.13	22.24	0.05
2021	78,018.17	55.96	17.03	0.13	26.82	0.06
<b>Republic of Korea</b>						
2010	518,902.44	49.09	14.91	0.36	35.17	0.47
2019	648,610.58	50.23	18.06	0.57	30.75	0.39
2020	596,945.09	53.11	18.86	0.58	27.10	0.35
2021	750,439.11	48.82	19.37	0.57	30.82	0.41
<b>Singapore</b>						
2010	304,907.06	36.67	13.24	0.20	49.06	0.84
2019	452,197.06	40.16	12.27	0.14	46.90	0.54
2020	423,639.04	41.31	10.98	0.12	47.08	0.51
2021	484,268.17	40.03	12.57	0.11	46.76	0.54
<b>Sri Lanka</b>						
2010	11,091.20	65.35	14.18	0.03	20.44	0.01
2019	19,426.21	65.82	10.80	0.02	23.36	0.01
2020	13,031.63	68.07	10.63	0.01	21.28	0.00
2021	15,370.75	67.02	9.87	0.01	23.09	0.00
<b>Taipei, China</b>						
2010	315,573.89	38.77	17.39	0.23	43.01	0.60
2019	385,509.36	42.45	17.49	0.26	39.29	0.51
2020	388,430.01	46.62	17.41	0.28	35.21	0.48
2021	513,719.17	44.05	17.60	0.31	37.42	0.62
<b>Thailand</b>						
2010	152,231.46	50.98	15.19	0.27	33.37	0.20
2019	323,768.89	57.15	11.89	0.18	30.63	0.15
2020	257,700.84	55.88	12.51	0.19	31.26	0.15
2021	294,554.35	52.25	12.72	0.20	34.67	0.16
<b>Viet Nam</b>						
2010	83,473.61	45.34	9.94	0.08	44.54	0.10
2019	279,720.22	44.58	6.55	0.10	48.57	0.20
2020	286,206.89	43.77	6.45	0.11	49.43	0.23
2021	335,869.10	38.80	5.91	0.09	54.97	0.23

\$ = United States dollars, ADB = Asian Development Bank, DAVAX = domestic value-added immediately absorbed by direct importer, FVA = foreign value-added, PDC = pure double-counted terms, REF = re-exported domestic value-added absorbed by home economy, REX = re-exported domestic value-added absorbed abroad.

Source: Asian Development Bank. Multiregional Input-Output Tables. <https://mrio.adbx.online/> (accessed 05 July 2022)

**Table 3.2.1: Value-Added Decomposition of Exports—Primary Sector**

ADB Regional Member	By Export Sectors				By Origin Sectors			
	Total (\$ million)	DAVAX	REX+REF	FVA+PDC	Total (\$ million)	DAVAX	REX+REF	FVA+PDC
	(% share in total)				(% share in total)			
<b>Australia</b>								
2010	138,753.90	58.00	31.80	10.21	113,373.83	59.81	31.02	9.17
2019	169,411.19	64.31	26.25	9.44	135,242.77	67.49	27.00	5.51
2020	167,570.63	66.37	25.29	8.34	136,886.50	69.31	26.31	4.38
2021	182,245.51	63.90	28.59	7.51	154,522.38	66.12	29.27	4.61
<b>Bangladesh</b>								
2010	483.48	78.31	15.71	5.98	3,258.73	67.19	11.35	21.46
2019	320.92	67.12	22.74	10.14	6,074.09	62.13	2.54	35.33
2020	182.74	70.90	19.86	9.23	5,048.88	61.89	2.41	35.70
2021	208.84	72.89	17.25	9.86	5,832.67	58.52	2.44	39.04
<b>Bhutan</b>								
2010	72.77	81.23	12.49	6.27	86.44	73.06	11.21	15.74
2019	121.85	87.38	4.69	7.93	146.69	79.05	5.76	15.19
2020	64.86	89.42	7.69	2.89	84.15	74.85	6.44	18.71
2021	80.04	91.06	5.84	3.10	107.68	72.45	5.08	22.47
<b>Brunei Darussalam</b>								
2010	4,888.53	62.68	30.51	6.82	5,970.73	56.16	41.91	1.93
2019	4,212.97	49.02	31.03	19.95	4,349.70	58.90	33.31	7.80
2020	3,369.61	53.80	25.67	20.53	3,608.15	62.11	28.86	9.03
2021	2,931.77	52.42	27.42	20.16	3,489.88	60.79	30.03	9.18
<b>Cambodia</b>								
2010	221.32	55.22	34.86	9.92	703.53	54.94	18.46	26.60
2019	3,476.50	48.06	36.91	15.04	4,246.31	46.55	29.58	23.87
2020	4,015.44	50.97	33.03	16.01	4,543.37	49.50	28.45	22.05
2021	4,563.76	40.85	42.66	16.49	5,160.62	39.34	36.40	24.26
<b>Fiji</b>								
2010	85.34	64.27	8.29	27.44	194.25	45.02	6.58	48.40
2019	260.43	72.07	10.27	17.66	374.06	67.89	8.32	23.79
2020	155.47	68.52	12.59	19.04	194.52	71.09	10.90	18.01
2021	174.00	65.50	13.41	21.24	222.94	66.58	10.64	22.77
<b>Hong Kong, China</b>								
2010	87.98	33.49	16.10	50.41	3,526.13	0.69	0.30	99.01
2019	245.40	66.03	3.07	30.90	3,105.87	3.88	0.20	95.92
2020	204.09	71.97	4.20	23.83	2,465.13	4.79	0.30	94.91
2021	259.24	68.13	5.99	25.88	3,590.20	4.06	0.37	95.57
<b>India</b>								
2010	24,905.40	73.08	22.05	4.87	59,791.32	50.52	14.90	34.58
2019	34,691.53	72.90	20.95	6.15	91,901.89	52.11	11.88	36.01
2020	35,552.48	77.16	17.07	5.77	79,557.98	60.24	11.67	28.10
2021	49,950.41	73.49	19.85	6.65	117,726.93	53.63	12.12	34.25
<b>Indonesia</b>								
2010	48,635.33	54.93	38.45	6.62	70,190.64	58.61	32.98	8.41
2019	44,359.60	69.03	26.80	4.17	65,470.64	67.69	24.23	8.09
2020	36,970.10	70.09	26.35	3.56	56,117.22	69.38	23.91	6.71
2021	64,204.12	67.91	27.87	4.22	90,182.37	66.74	25.52	7.73
<b>Japan</b>								
2010	2,588.34	48.40	19.29	32.31	47,082.04	9.48	3.65	86.87
2019	3,199.94	53.09	20.69	26.21	49,708.39	10.37	3.30	86.32
2020	3,115.34	54.26	21.51	24.22	32,987.68	14.41	4.79	80.80
2021	3,473.51	50.62	20.48	28.90	47,713.87	11.27	3.92	84.81

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Table 3.2.1: continued

Table 3.2.1: Value-Added Decomposition of Exports—Primary Sector								
ADB Regional Member	By Export Sectors				By Origin Sectors			
	Total (\$ million)	DAVAX	REX+REF	FVA+PDC	Total (\$ million)	DAVAX	REX+REF	FVA+PDC
Kazakhstan								
2010	36,138.31	50.61	38.94	10.45	30,318.58	53.85	40.20	5.95
2019	38,608.56	48.53	39.07	12.40	27,308.24	54.34	41.51	4.15
2020	28,560.23	52.83	35.81	11.37	21,360.57	58.91	37.90	3.19
2021	35,852.82	49.63	40.34	10.03	28,170.15	54.76	41.88	3.36
Kyrgyz Republic								
2010	968.93	55.99	10.27	33.75	841.84	52.94	9.70	37.37
2019	613.66	61.83	13.74	24.43	483.59	60.44	12.52	27.04
2020	380.80	62.90	14.91	22.19	313.23	63.23	12.17	24.60
2021	681.51	61.58	12.89	25.54	571.64	61.47	11.59	26.93
Lao People's Democratic Republic								
2010	1,149.98	67.36	22.24	10.40	1,183.56	72.06	22.85	5.09
2019	2,210.04	62.14	27.20	10.66	2,405.28	63.86	27.21	8.93
2020	1,954.92	63.73	28.72	7.55	2,126.94	65.07	29.13	5.80
2021	2,991.35	61.43	29.80	8.77	3,180.16	62.36	30.10	7.54
Malaysia								
2010	22,272.41	60.72	29.27	10.01	52,089.38	47.21	21.11	31.68
2019	20,607.44	63.86	27.98	8.15	44,069.78	54.58	19.66	25.76
2020	15,098.26	64.37	27.31	8.31	34,884.12	54.54	20.72	24.74
2021	21,768.83	62.34	28.67	8.99	48,517.52	51.65	20.04	28.31
Maldives								
2010	19.66	47.16	7.79	45.05	169.66	43.07	10.66	46.28
2019	21.21	77.14	0.02	22.84	347.98	37.05	8.23	54.72
2020	38.09	79.30	0.27	20.43	204.57	52.23	8.30	39.47
2021	46.29	75.47	0.37	24.21	370.05	45.54	8.98	45.48
Mongolia								
2010	2,098.21	54.18	20.89	24.93	1,551.90	62.62	23.55	13.82
2019	6,567.25	55.96	16.40	27.64	4,224.72	72.96	21.32	5.72
2020	6,296.59	56.48	16.74	26.78	3,831.16	72.98	21.48	5.54
2021	7,526.61	54.76	17.18	28.07	4,578.95	71.27	22.22	6.51
Nepal								
2010	164.81	89.12	3.64	7.24	327.48	65.13	4.79	30.08
2019	132.97	87.00	5.07	7.93	440.60	45.85	4.21	49.94
2020	138.96	86.73	5.76	7.51	386.87	57.02	5.60	37.37
2021	141.17	86.08	6.68	7.23	359.76	59.11	6.35	34.54
Pakistan								
2010	1,066.91	84.14	11.85	4.01	7,372.38	72.98	14.63	12.38
2019	1,688.74	83.99	11.73	4.29	8,559.21	79.88	10.43	9.69
2020	1,134.73	78.29	18.12	3.59	8,629.70	80.90	11.01	8.09
2021	1,207.01	77.40	18.56	4.04	9,940.05	79.54	11.31	9.15
People's Republic of China								
2010	22,608.99	69.27	21.09	9.64	264,218.87	58.05	12.74	29.21
2019	24,485.76	73.59	19.23	7.18	322,381.54	57.97	13.47	28.55
2020	26,498.21	75.70	17.61	6.69	333,229.24	60.36	13.64	26.00
2021	33,242.98	73.35	19.13	7.51	472,387.18	57.28	14.08	28.64
Philippines								
2010	1,265.16	67.75	24.10	8.15	7,284.04	55.59	14.21	30.20
2019	1,535.24	78.41	13.23	8.36	7,292.35	44.67	9.13	46.20
2020	1,668.54	79.97	12.46	7.57	6,563.32	53.99	10.25	35.76
2021	1,994.51	76.80	13.93	9.26	8,430.16	46.53	9.94	43.54

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Table 3.2.1: continued

ADB Regional Member	Table 3.2.1: Value-Added Decomposition of Exports—Primary Sector							
	By Export Sectors				By Origin Sectors			
	Total (\$ million)	DAVAX	REX+REF	FVA+PDC	Total (\$ million)	DAVAX	REX+REF	FVA+PDC
Republic of Korea								
2010	775.91	72.51	10.84	16.65	60,832.49	6.23	1.55	92.22
2019	754.04	73.06	10.86	16.07	52,453.99	5.87	1.36	92.77
2020	780.83	73.76	11.63	14.62	35,635.42	9.21	2.06	88.73
2021	927.48	71.05	12.99	15.96	59,973.34	6.12	1.52	92.36
Singapore								
2010	85.90	59.40	14.67	25.93	25,490.07	0.19	0.05	99.76
2019	115.41	54.27	15.68	30.06	19,606.93	0.30	0.08	99.63
2020	110.27	55.14	15.28	29.59	12,180.07	0.44	0.11	99.45
2021	126.29	57.50	12.81	29.69	16,549.85	0.38	0.09	99.53
Sri Lanka								
2010	392.44	65.83	22.53	11.64	1,504.86	48.46	11.51	40.03
2019	417.91	73.32	15.42	11.25	2,194.96	43.96	7.12	48.93
2020	404.87	75.56	14.87	9.57	1,519.26	54.10	8.05	37.84
2021	557.13	75.41	15.55	9.04	2,072.12	50.79	8.63	40.58
Taipei, China								
2010	1,651.57	65.71	8.71	25.58	33,449.08	4.54	1.03	94.43
2019	890.85	68.15	12.17	19.68	28,964.18	6.40	1.41	92.19
2020	896.46	69.13	13.07	17.80	21,402.86	8.66	1.84	89.50
2021	1,067.25	67.05	13.70	19.25	32,618.98	6.69	1.52	91.79
Thailand								
2010	4,913.82	55.63	31.24	13.14	20,197.43	37.45	12.07	50.47
2019	19,370.52	70.61	14.20	15.19	50,430.46	44.91	7.06	48.03
2020	18,416.62	72.17	14.75	13.08	40,332.42	51.46	8.42	40.12
2021	18,950.09	67.76	17.32	14.92	48,791.42	44.32	8.52	47.16
Viet Nam								
2010	13,065.86	48.47	15.57	35.97	20,224.43	47.69	11.12	41.19
2019	16,357.87	49.75	12.52	37.74	51,258.46	44.88	5.86	49.27
2020	16,230.36	51.71	10.97	37.32	51,156.60	46.37	5.13	48.50
2021	21,633.81	48.75	11.29	39.96	67,440.08	40.86	4.53	54.61

\$ = United States dollars, ADB = Asian Development Bank, DAVAX = domestic value-added immediately absorbed by direct importer, FVA = foreign value-added, PDC = pure double-counted terms, REF = re-exported domestic value-added absorbed by home economy, REX = re-exported domestic value-added absorbed abroad.

Source: Asian Development Bank. Multiregional Input-Output Tables. <https://mrio.adbx.online/> (accessed 05 July 2022).

**Table 3.2.2: Value-Added Decomposition of Exports—Low-Technology Manufacturing Sector**

ADB Regional Member	By Export Sectors				By Origin Sectors			
	Total (\$ million)	DAVAX	REX+REF	FVA+PDC	Total (\$ million)	DAVAX	REX+REF	FVA+PDC
<b>Australia</b>								
2010	25,502.55	76.17	10.43	13.40	25,958.53	66.40	19.69	13.91
2019	30,097.25	77.26	7.82	14.92	28,790.67	68.83	16.41	14.76
2020	31,435.15	78.10	7.00	14.89	28,908.93	70.26	15.75	13.99
2021	31,921.58	76.57	9.59	13.84	29,292.26	67.33	18.30	14.38
<b>Bangladesh</b>								
2010	15,825.13	73.09	11.20	15.71	7,188.26	78.48	11.98	9.55
2019	38,756.14	74.26	1.14	24.60	19,478.85	86.10	1.51	12.39
2020	32,402.15	75.99	1.59	22.42	16,294.98	86.45	2.08	11.47
2021	36,978.84	74.62	1.80	23.59	18,379.83	85.21	2.31	12.49
<b>Bhutan</b>								
2010	210.42	60.18	27.96	11.86	228.70	65.24	25.21	9.55
2019	350.84	73.76	0.79	25.44	294.48	82.45	2.15	15.40
2020	345.00	80.79	0.49	18.72	305.23	90.33	1.57	8.10
2021	430.97	65.93	13.94	20.12	372.02	76.31	16.12	7.57
<b>Brunei Darussalam</b>								
2010	29.64	46.54	6.65	46.81	126.92	20.76	15.54	63.71
2019	94.73	43.44	4.21	52.35	264.39	18.92	4.05	77.03
2020	99.38	41.71	3.61	54.69	241.35	22.69	4.93	72.39
2021	81.13	42.80	4.49	52.72	206.15	17.45	3.10	79.45
<b>Cambodia</b>								
2010	2,124.18	59.96	4.05	35.98	1,467.60	73.16	5.16	21.67
2019	7,198.29	50.88	1.65	47.47	4,833.95	67.88	2.69	29.43
2020	7,200.42	48.59	2.03	49.37	4,636.70	65.53	3.15	31.32
2021	8,784.63	47.20	2.21	50.60	5,346.16	66.48	3.36	30.16
<b>Fiji</b>								
2010	207.66	66.37	9.80	23.83	164.94	67.24	10.97	21.78
2019	497.50	69.72	6.36	23.92	351.11	71.49	8.26	20.25
2020	238.49	70.59	7.65	21.91	165.13	69.84	9.82	20.34
2021	294.79	67.07	6.99	26.11	192.02	68.70	9.32	21.98
<b>Hong Kong, China</b>								
2010	10,503.80	43.74	8.65	47.61	8,498.59	43.65	8.89	47.45
2019	6,989.62	44.90	8.84	46.25	7,398.83	36.40	6.77	56.82
2020	4,982.97	48.25	7.48	44.27	6,047.14	36.99	5.98	57.03
2021	6,024.46	42.32	7.34	50.34	7,634.08	33.40	6.04	60.56
<b>India</b>								
2010	50,210.11	68.88	12.55	18.57	30,064.99	65.87	15.38	18.75
2019	83,816.13	74.67	10.19	15.14	57,353.42	68.72	12.87	18.41
2020	75,581.76	75.22	10.40	14.38	51,463.27	69.76	13.08	17.16
2021	103,519.55	72.57	10.47	16.95	69,849.31	65.99	12.78	21.23
<b>Indonesia</b>								
2010	61,583.24	65.93	18.04	16.03	33,623.86	70.32	19.02	10.65
2019	74,722.45	66.43	13.30	20.27	42,711.83	73.34	15.04	11.61
2020	67,958.20	68.58	13.85	17.58	38,627.92	74.40	15.43	10.17
2021	86,070.29	65.25	14.32	20.43	48,883.88	71.80	15.89	12.31
<b>Japan</b>								
2010	48,927.35	59.78	26.99	13.23	80,192.82	62.71	24.11	13.18
2019	48,371.14	63.79	23.33	12.88	83,517.81	63.78	20.53	15.69
2020	45,271.44	65.09	23.26	11.65	74,256.27	64.27	21.57	14.16
2021	51,256.85	62.89	22.81	14.30	88,887.46	61.43	21.39	17.17

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Table 3.2.2: continued

**Table 3.2.2: Value-Added Decomposition of Exports—Low-Technology Manufacturing Sector**

ADB Regional Member	By Export Sectors				By Origin Sectors			
	Total (\$ million)	DAVAX	REX+REF	FVA+PDC	Total (\$ million)	DAVAX	REX+REF	FVA+PDC
<b>Kazakhstan</b>								
2010	993.75	64.31	20.72	14.97	1,872.96	48.34	21.71	29.95
2019	1,932.26	72.01	11.79	16.21	2,597.37	54.88	18.29	26.84
2020	1,824.75	74.81	11.27	13.92	2,140.55	60.31	15.63	24.06
2021	3,202.07	72.89	14.27	12.83	3,107.36	62.28	18.42	19.29
<b>Kyrgyz Republic</b>								
2010	221.19	46.65	6.39	46.96	170.74	45.30	6.76	47.94
2019	406.05	65.24	4.52	30.24	296.66	64.15	7.43	28.42
2020	332.95	68.69	3.63	27.68	252.42	69.13	7.74	23.14
2021	438.88	64.81	4.71	30.48	357.27	60.36	10.13	29.51
<b>Lao People's Democratic Republic</b>								
2010	600.65	76.36	8.82	14.82	407.57	84.37	7.85	7.78
2019	3,111.61	60.49	26.41	13.10	2,384.01	64.93	30.09	4.98
2020	3,049.61	62.45	27.62	9.93	2,431.46	66.64	30.10	3.26
2021	3,874.05	59.53	28.76	11.71	2,944.74	64.17	31.99	3.84
<b>Malaysia</b>								
2010	65,036.85	43.95	15.76	40.29	23,776.93	48.14	16.20	35.66
2019	56,413.69	53.57	14.07	32.36	27,308.22	55.61	15.83	28.56
2020	53,808.97	51.95	16.94	31.12	24,524.78	54.57	18.50	26.93
2021	70,243.43	50.42	15.82	33.76	31,750.67	52.63	17.42	29.94
<b>Maldives</b>								
2010	30.89	47.04	9.27	43.69	168.36	38.06	9.25	52.69
2019	71.19	61.99	4.02	33.99	282.44	28.55	6.55	64.90
2020	77.76	66.72	3.33	29.94	123.13	34.93	5.88	59.18
2021	107.61	62.98	2.65	34.92	234.64	26.97	5.18	67.85
<b>Mongolia</b>								
2010	125.72	64.95	11.82	23.23	184.29	48.46	14.86	36.68
2019	231.15	57.62	9.41	32.97	509.87	42.59	11.08	46.32
2020	234.32	60.77	9.35	29.88	613.10	49.31	13.62	37.07
2021	250.89	58.83	10.30	30.87	617.39	42.18	12.10	45.72
<b>Nepal</b>								
2010	343.28	63.21	9.15	27.64	226.21	66.18	10.77	23.04
2019	541.67	71.24	7.30	21.46	303.59	61.18	7.68	31.14
2020	481.98	72.24	7.46	20.30	264.44	63.17	8.11	28.72
2021	503.51	71.83	8.56	19.61	248.35	66.00	9.19	24.81
<b>Pakistan</b>								
2010	12,497.72	74.13	16.06	9.82	4,436.24	76.64	16.31	7.06
2019	15,131.69	79.59	10.09	10.32	5,218.75	82.71	10.41	6.88
2020	16,157.32	80.64	9.81	9.56	5,549.73	83.66	10.03	6.31
2021	18,707.51	79.82	10.14	10.04	6,294.19	82.91	10.49	6.60
<b>People's Republic of China</b>								
2010	373,984.43	78.05	8.54	13.41	272,183.27	76.19	11.90	11.91
2019	606,343.82	77.61	10.96	11.43	419,932.90	75.31	13.57	11.11
2020	623,086.55	77.83	11.33	10.84	428,346.91	75.16	13.77	11.08
2021	816,803.96	75.70	12.31	11.99	574,982.29	73.23	14.70	12.07
<b>Philippines</b>								
2010	10,611.31	72.61	13.35	14.04	8,516.89	68.52	17.13	14.34
2019	11,052.85	73.03	11.96	15.02	9,452.76	66.64	13.76	19.60
2020	10,963.88	74.57	11.84	13.59	8,615.42	68.14	14.01	17.85
2021	12,328.52	70.37	13.38	16.26	9,448.67	64.03	14.39	21.57

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Table 3.2.2: continued

**Table 3.2.2: Value-Added Decomposition of Exports—Low-Technology Manufacturing Sector**

ADB Regional Member	By Export Sectors				By Origin Sectors			
	Total (\$ million)	DAVAX	REX+REF	FVA+PDC	Total (\$ million)	DAVAX	REX+REF	FVA+PDC
<b>Republic of Korea</b>								
2010	36,177.69	52.46	18.94	28.60	47,340.91	46.51	15.84	37.66
2019	39,193.22	51.16	22.65	26.20	61,348.48	49.22	19.50	31.28
2020	39,388.03	54.35	21.41	24.24	60,174.76	53.09	20.01	26.90
2021	43,488.92	52.04	21.68	26.29	72,584.83	48.13	19.90	31.97
<b>Singapore</b>								
2010	11,793.32	39.25	6.51	54.24	18,218.36	34.43	9.95	55.63
2019	13,638.42	49.36	7.90	42.73	23,935.39	33.16	7.36	59.48
2020	11,538.27	49.68	7.15	43.18	20,694.97	33.17	6.76	60.07
2021	12,309.97	48.35	8.90	42.75	23,687.69	30.18	7.45	62.37
<b>Sri Lanka</b>								
2010	5,779.00	69.47	8.89	21.65	3,778.44	77.14	10.80	12.07
2019	8,054.06	66.15	5.76	28.10	5,620.56	76.16	6.94	16.90
2020	6,707.38	69.84	5.24	24.92	4,291.30	79.47	6.29	14.24
2021	10,000.37	69.54	5.80	24.65	6,199.24	79.92	6.43	13.65
<b>Taipei, China</b>								
2010	22,044.54	41.44	16.00	42.56	25,438.91	37.02	15.21	47.77
2019	30,841.91	45.57	19.23	35.20	33,128.62	42.12	17.55	40.33
2020	29,755.56	49.61	19.49	30.90	33,675.11	45.58	17.64	36.78
2021	39,216.44	46.97	20.20	32.83	43,600.99	42.02	17.71	40.27
<b>Thailand</b>								
2010	32,265.52	59.72	14.16	26.11	23,438.04	62.75	17.92	19.32
2019	81,048.40	63.63	9.95	26.41	48,785.07	66.08	12.74	21.18
2020	75,259.22	66.04	9.98	23.98	41,869.92	66.62	13.23	20.15
2021	82,075.46	61.25	10.51	28.24	46,428.39	62.87	13.66	23.47
<b>Viet Nam</b>								
2010	42,158.30	46.48	5.63	47.89	20,082.67	65.55	8.59	25.86
2019	161,943.33	49.99	3.34	46.67	70,923.50	65.94	5.64	28.42
2020	161,108.28	49.61	3.17	47.23	70,677.81	64.26	5.41	30.33
2021	190,188.97	43.73	2.64	53.62	81,356.28	59.54	5.04	35.42

\$ = United States dollars, ADB = Asian Development Bank, DAVAX = domestic value-added immediately absorbed by direct importer, FVA = foreign value-added, PDC = pure double-counted terms, REF = re-exported domestic value-added absorbed by home economy, REX = re-exported domestic value-added absorbed abroad.

Source: Asian Development Bank. Multiregional Input-Output Tables. <https://mrio.adbx.online/> (accessed 05 July 2022).

Table 3.2.3: Value-Added Decomposition of Exports—Medium- and High-Technology Manufacturing Sector

ADB Regional Member	By Export Sectors				By Origin Sectors			
	Total (\$ million)	DAVAX	REX+REF	FVA+PDC	Total (\$ million)	DAVAX	REX+REF	FVA+PDC
<b>Australia</b>								
2010	53,320.57	52.65	23.70	23.65	30,418.37	50.06	21.27	28.67
2019	50,831.01	52.68	23.43	23.89	29,251.65	44.75	17.16	38.09
2020	52,404.01	53.68	24.90	21.42	28,497.25	46.48	17.76	35.76
2021	53,351.24	51.39	28.35	20.27	28,676.49	44.35	20.97	34.67
<b>Bangladesh</b>								
2010	428.51	76.47	8.74	14.79	1,033.21	47.14	6.41	46.45
2019	783.29	67.81	16.90	15.29	3,151.38	33.32	3.31	63.37
2020	723.04	69.59	15.73	14.68	2,628.21	40.01	3.89	56.10
2021	890.78	67.58	16.27	16.15	3,198.75	41.89	4.16	53.95
<b>Bhutan</b>								
2010	103.79	75.02	3.79	21.19	52.60	63.30	4.57	32.13
2019	84.52	58.92	15.67	25.41	77.63	44.02	9.76	46.22
2020	65.48	57.32	11.05	31.64	61.65	41.52	6.83	51.65
2021	82.84	49.70	10.10	40.20	73.36	37.92	7.80	54.29
<b>Brunei Darussalam</b>								
2010	3,613.84	25.87	65.18	8.95	1,939.41	29.20	61.19	9.61
2019	2,879.38	58.97	21.45	19.57	1,767.71	59.37	22.63	18.00
2020	3,073.38	56.53	24.22	19.24	1,792.68	59.88	25.95	14.16
2021	2,959.42	58.13	25.06	16.81	1,780.69	59.10	25.98	14.92
<b>Cambodia</b>								
2010	26.33	52.27	11.56	36.16	224.95	10.62	2.26	87.11
2019	263.07	52.41	7.61	39.98	1,085.59	15.44	2.79	81.76
2020	327.02	49.70	8.28	42.02	1,139.99	17.66	3.34	79.00
2021	413.55	49.87	7.23	42.89	1,252.04	19.67	3.89	76.44
<b>Fiji</b>								
2010	24.77	54.92	7.52	37.57	94.98	18.66	2.96	78.38
2019	63.28	49.12	16.35	34.54	153.62	23.51	6.28	70.22
2020	27.18	55.09	11.85	33.49	77.50	24.00	5.43	70.57
2021	35.96	50.07	11.91	38.47	90.31	22.95	5.65	71.40
<b>Hong Kong, China</b>								
2010	11,308.48	15.25	7.12	77.63	7,809.99	5.21	2.59	92.19
2019	9,815.22	22.39	6.37	71.24	6,301.25	5.77	1.72	92.51
2020	9,725.61	22.41	7.62	69.97	5,768.64	5.62	1.99	92.39
2021	10,068.82	16.33	6.35	77.33	6,782.72	4.66	1.88	93.46
<b>India</b>								
2010	100,793.88	47.35	18.04	34.61	53,860.37	57.79	20.48	21.73
2019	190,637.85	49.45	15.65	34.90	100,170.07	62.48	19.28	18.23
2020	175,502.68	52.35	15.80	31.86	102,019.84	64.66	19.06	16.28
2021	240,257.49	47.72	15.05	37.23	138,862.26	62.09	19.24	18.67
<b>Indonesia</b>								
2010	58,384.31	55.38	22.53	22.09	38,255.53	55.73	21.87	22.40
2019	60,063.35	56.28	23.55	20.17	39,596.00	55.69	21.22	23.09
2020	52,934.48	57.81	23.94	18.24	34,996.49	56.84	21.79	21.36
2021	72,752.02	55.30	23.29	21.41	47,682.29	54.39	21.30	24.31
<b>Japan</b>								
2010	591,965.90	61.07	20.77	18.16	353,505.53	67.67	22.34	9.99
2019	648,406.01	60.46	18.68	20.86	375,103.85	68.71	21.42	9.87
2020	586,971.46	61.59	20.18	18.22	350,653.46	68.06	22.49	9.45
2021	671,104.46	57.38	20.49	22.14	384,955.00	64.70	23.32	11.98

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Table 3.2.3: continued

Table 3.2.3: Value-Added Decomposition of Exports—Medium- and High-Technology Manufacturing Sector								
ADB Regional Member	By Export Sectors				By Origin Sectors			
	Total (\$ million)	DAVAX	REX+REF	FVA+PDC	Total (\$ million)	DAVAX	REX+REF	FVA+PDC
		(% share in total)				(% share in total)		
Kazakhstan								
2010	12,807.45	53.66	35.90	10.44	10,023.65	49.09	32.60	18.31
2019	12,012.13	61.80	27.26	10.94	10,042.19	49.80	24.17	26.03
2020	11,272.12	64.15	25.34	10.51	9,381.50	55.03	23.31	21.66
2021	20,676.72	59.85	30.72	9.43	13,786.75	54.40	28.41	17.19
Kyrgyz Republic								
2010	791.22	55.58	15.57	28.84	711.58	60.45	16.95	22.60
2019	1,377.96	34.42	34.51	31.07	1,184.63	36.27	37.31	26.42
2020	1,107.99	36.07	34.87	29.06	970.21	38.27	38.08	23.65
2021	1,597.71	32.01	36.91	31.08	1,299.55	32.53	38.65	28.82
Lao People's Democratic Republic								
2010	8.85	42.28	22.38	35.34	113.78	10.26	3.51	86.22
2019	20.43	38.35	29.53	32.12	231.01	12.19	5.20	82.62
2020	26.17	43.12	31.65	25.23	183.48	16.43	7.38	76.19
2021	36.89	39.66	31.48	28.86	286.52	16.27	7.83	75.90
Malaysia								
2010	74,578.51	28.19	16.72	55.08	62,320.88	33.63	17.23	49.15
2019	85,362.59	32.15	14.83	53.01	66,181.95	37.16	15.69	47.15
2020	80,544.49	32.80	14.91	52.29	61,257.73	37.11	16.01	46.88
2021	101,519.96	30.79	13.01	56.20	77,932.84	35.77	14.48	49.75
Maldives								
2010	0.78	57.50	3.77	38.74	61.02	4.52	1.03	94.45
2019	1.64	57.37	14.55	28.08	125.04	2.99	0.74	96.27
2020	2.05	57.03	18.14	24.83	57.38	4.45	1.04	94.51
2021	3.29	63.43	8.67	27.99	114.14	3.98	0.76	95.26
Mongolia								
2010	57.57	48.13	17.24	34.63	284.85	11.64	4.22	84.13
2019	206.47	36.83	35.29	27.89	732.94	8.61	6.85	84.54
2020	209.97	35.74	38.30	25.96	705.65	10.24	8.10	81.66
2021	236.23	33.84	39.98	26.18	860.28	8.45	7.71	83.84
Nepal								
2010	172.75	47.61	9.43	42.95	140.45	36.20	6.93	56.86
2019	336.40	49.07	7.38	43.55	275.39	40.55	6.31	53.14
2020	294.09	49.78	6.78	43.44	241.90	40.20	5.81	54.00
2021	298.43	47.89	9.94	42.17	224.19	41.62	8.57	49.81
Pakistan								
2010	1,470.11	56.22	17.06	26.72	1,503.73	53.39	13.55	33.06
2019	1,428.13	60.80	14.07	25.13	1,612.63	54.54	10.70	34.76
2020	973.02	62.55	14.61	22.84	1,345.88	51.05	9.55	39.40
2021	1,128.75	57.46	16.50	26.03	1,576.32	49.21	10.78	40.01
People's Republic of China								
2010	1,012,324.70	59.87	15.34	24.79	592,153.63	65.35	16.01	18.64
2019	1,638,989.82	61.59	16.62	21.79	893,998.95	65.72	17.32	16.96
2020	1,696,018.20	62.52	16.56	20.92	926,718.42	66.18	17.17	16.65
2021	2,224,310.53	59.76	17.29	22.95	1,204,862.19	63.93	18.06	18.01
Philippines								
2010	21,597.88	36.60	26.40	37.00	12,460.43	38.78	26.54	34.68
2019	30,927.51	38.73	15.36	45.91	17,740.23	40.94	15.78	43.28
2020	26,739.00	40.19	15.57	44.24	15,066.17	40.94	15.65	43.40
2021	31,085.86	34.39	13.81	51.80	18,264.58	36.88	14.72	48.40

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Table 3.2.3: continued

Table 3.2.3: Value-Added Decomposition of Exports—Medium- and High-Technology Manufacturing Sector								
ADB Regional Member	By Export Sectors				By Origin Sectors			
	Total (\$ million)	DAVAX	REX+REF	FVA+PDC	Total (\$ million)	DAVAX	REX+REF	FVA+PDC
Republic of Korea								
2010	427,862.23	47.31	14.37	38.31	246,379.44	59.62	18.26	22.12
2019	513,811.10	47.91	18.49	33.60	298,744.48	58.41	22.82	18.77
2020	467,004.12	50.92	19.42	29.66	281,440.83	59.32	22.92	17.75
2021	596,758.50	46.23	19.92	33.85	347,620.52	56.32	24.60	19.08
Singapore								
2010	146,471.99	27.13	12.86	60.01	76,898.67	37.20	17.54	45.25
2019	158,867.13	36.21	13.30	50.49	94,420.12	46.43	16.85	36.71
2020	151,450.02	39.46	11.53	49.00	88,274.20	50.68	14.58	34.74
2021	181,192.83	36.87	14.26	48.87	106,502.08	47.56	18.18	34.26
Sri Lanka								
2010	928.69	49.20	9.63	41.17	978.90	47.45	9.51	43.04
2019	1,672.66	46.74	10.36	42.90	1,768.83	44.65	9.28	46.07
2020	1,333.90	50.10	12.25	37.65	1,217.78	48.55	11.13	40.31
2021	1,918.50	48.07	13.72	38.21	1,672.43	48.05	12.78	39.16
Taipei,China								
2010	240,938.23	34.37	17.15	48.48	150,968.93	45.49	23.02	31.49
2019	309,890.91	39.48	17.28	43.25	200,247.38	48.66	21.70	29.64
2020	321,583.58	44.34	17.09	38.58	217,483.09	52.74	20.62	26.64
2021	422,257.77	41.64	17.23	41.13	280,234.33	49.98	20.93	29.09
Thailand								
2010	79,185.74	41.23	14.37	44.39	44,066.27	47.68	16.00	36.31
2019	116,188.81	42.27	11.62	46.11	70,728.33	52.29	12.36	35.35
2020	118,116.06	44.17	12.36	43.47	68,513.73	52.51	13.12	34.37
2021	121,989.04	38.95	10.85	50.20	69,133.62	49.77	12.37	37.86
Viet Nam								
2010	17,018.58	33.51	13.47	53.02	17,618.47	29.94	10.89	59.16
2019	86,088.15	31.30	9.98	58.72	73,335.44	30.00	8.24	61.76
2020	93,849.60	30.23	9.80	59.97	79,894.04	29.20	8.36	62.44
2021	104,954.36	24.99	8.79	66.23	92,888.97	26.10	8.36	65.54

\$ = United States dollars, ADB = Asian Development Bank, DAVAX = domestic value-added immediately absorbed by direct importer, FVA = foreign value-added, PDC = pure double-counted terms, REF = re-exported domestic value-added absorbed by home economy, REX = re-exported domestic value-added absorbed abroad.

Source: Asian Development Bank. Multiregional Input-Output Tables. <https://mrio.adbx.online/> (accessed 05 July 2022).

**Table 3.2.4: Value-Added Decomposition of Exports—Business Services Sector**

ADB Regional Member	By Export Sectors				By Origin Sectors			
	Total (\$ million)	DAVAX	REX+REF	FVA+PDC	Total (\$ million)	DAVAX	REX+REF	FVA+PDC
<b>Australia</b>								
2010	50,135.67	67.10	23.56	9.34	93,297.07	62.90	24.57	12.53
2019	61,681.68	69.09	21.59	9.31	117,890.45	65.53	21.23	13.24
2020	60,535.27	69.56	20.92	9.52	116,926.49	66.29	20.49	13.22
2021	61,819.37	68.62	23.16	8.22	116,400.99	65.62	23.42	10.96
<b>Bangladesh</b>								
2010	1,427.57	80.16	14.48	5.36	5,076.26	73.69	11.68	14.62
2019	5,199.41	74.55	17.57	7.87	13,917.22	69.25	6.66	24.09
2020	4,897.75	74.42	17.97	7.61	12,014.56	72.18	7.39	20.43
2021	5,293.40	74.66	17.44	7.90	13,477.37	71.89	7.21	20.90
<b>Bhutan</b>								
2010	123.96	59.70	15.25	25.05	141.37	64.16	14.89	20.96
2019	274.41	64.14	14.71	21.15	317.51	63.80	12.85	23.35
2020	186.23	62.51	15.54	21.95	213.58	60.79	13.68	25.53
2021	240.71	55.66	23.03	21.31	283.36	51.63	20.60	27.77
<b>Brunei Darussalam</b>								
2010	676.52	48.70	17.54	33.75	1,054.08	32.57	20.05	47.37
2019	525.52	42.19	17.39	40.42	1,307.23	27.52	11.99	60.49
2020	293.47	42.09	19.54	38.37	1,121.32	27.72	12.00	60.28
2021	350.35	44.70	19.27	36.41	839.29	28.80	11.89	59.30
<b>Cambodia</b>								
2010	1,597.60	64.97	16.84	18.19	1,556.98	61.14	14.40	24.46
2019	5,463.60	63.38	12.56	24.06	6,099.05	56.61	11.10	32.29
2020	4,161.52	62.11	13.05	24.84	5,244.97	52.52	10.54	36.94
2021	3,580.07	60.22	14.46	25.32	5,432.61	46.15	10.48	43.37
<b>Fiji</b>								
2010	824.07	56.17	14.12	29.71	674.51	66.35	16.43	17.23
2019	1,760.47	59.96	13.30	26.74	1,642.29	63.58	13.82	22.60
2020	785.46	58.45	17.49	29.79	779.49	58.39	16.95	24.66
2021	808.55	57.66	17.31	31.28	825.74	57.53	16.59	25.88
<b>Hong Kong, China</b>								
2010	120,938.90	62.58	12.91	24.51	118,546.96	63.72	13.42	22.86
2019	122,121.25	67.44	13.66	18.90	119,557.17	69.47	14.17	16.36
2020	102,812.77	69.43	13.60	16.97	100,803.69	71.12	14.15	14.73
2021	121,280.56	66.85	15.19	17.96	117,494.74	69.08	15.77	15.15
<b>India</b>								
2010	128,576.96	68.55	20.61	10.84	155,362.83	67.42	19.88	12.70
2019	210,943.32	76.10	13.94	9.97	262,481.79	71.87	13.82	14.31
2020	204,234.53	77.67	13.64	8.69	251,354.89	72.39	13.23	14.38
2021	258,799.71	76.17	14.56	9.27	317,851.23	70.67	13.73	15.60
<b>Indonesia</b>								
2010	12,909.05	67.52	21.36	11.12	38,109.33	56.99	19.75	23.26
2019	23,739.19	65.21	23.70	11.09	54,208.30	58.39	19.82	21.79
2020	20,218.72	65.42	25.41	9.17	47,720.74	60.16	20.46	19.38
2021	26,562.69	65.32	23.80	10.88	62,159.49	58.12	19.94	21.93
<b>Japan</b>								
2010	188,197.35	70.70	20.71	8.59	333,935.56	66.26	21.51	12.23
2019	188,759.93	74.27	18.92	6.81	361,303.29	65.50	18.22	16.28
2020	145,556.12	73.54	20.62	5.84	307,282.55	64.69	19.49	15.82
2021	179,208.37	74.60	18.53	6.87	364,452.70	63.70	18.76	17.54

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Table 3.2.4: continued

ADB Regional Member	Table 3.2.4: Value-Added Decomposition of Exports—Business Services Sector							
	By Export Sectors				By Origin Sectors			
	Total (\$ million)	DAVAX	REX+REF	FVA+PDC	Total (\$ million)	DAVAX	REX+REF	FVA+PDC
Kazakhstan								
2010	13,483.76	70.18	21.61	8.21	21,103.99	62.37	27.70	9.92
2019	10,781.67	71.28	18.63	10.10	23,184.85	60.27	27.29	12.44
2020	9,867.48	73.51	17.62	8.87	18,486.74	64.33	23.76	11.91
2021	5,718.63	72.74	18.95	8.31	20,145.81	58.32	29.95	11.72
Kyrgyz Republic								
2010	239.78	52.40	16.05	31.55	509.30	51.93	12.50	35.57
2019	428.40	61.74	14.75	23.51	897.40	54.96	13.39	31.65
2020	331.21	60.70	14.10	25.20	648.13	53.87	12.03	34.10
2021	558.71	55.26	16.15	28.58	1,092.92	51.57	17.08	31.35
Lao People's Democratic Republic								
2010	525.67	62.52	20.60	16.88	581.67	61.91	19.42	18.67
2019	1,127.86	61.70	20.94	17.36	1,434.72	59.00	19.59	21.41
2020	855.55	68.96	19.42	11.62	1,132.84	63.22	18.79	17.98
2021	1,145.85	64.86	21.28	13.86	1,619.44	60.53	20.93	18.55
Malaysia								
2010	58,382.07	56.35	17.92	25.73	78,512.67	49.44	17.76	32.80
2019	73,524.06	62.03	17.07	20.90	95,202.01	55.31	16.24	28.46
2020	55,200.86	60.93	19.91	19.15	81,919.94	52.07	17.81	30.12
2021	60,926.03	59.81	19.60	20.59	93,310.59	50.48	17.03	32.49
Maldives								
2010	1,707.68	55.10	14.41	30.49	1,348.60	60.81	15.95	23.24
2019	3,734.00	56.62	15.45	27.93	2,968.53	64.02	17.34	18.64
2020	1,617.11	60.68	15.05	24.27	1,283.15	67.29	16.35	16.36
2021	3,196.73	57.58	15.86	26.63	2,537.91	64.72	17.57	17.71
Mongolia								
2010	667.77	58.91	19.77	21.32	886.62	59.10	20.56	20.34
2019	996.89	55.77	15.50	28.74	2,436.78	43.32	12.81	43.87
2020	875.41	56.53	16.25	27.21	2,370.07	45.18	13.76	41.07
2021	960.96	54.48	17.20	28.32	2,783.12	44.15	14.56	41.29
Nepal								
2010	780.53	64.42	13.56	22.02	795.84	70.07	14.42	15.51
2019	1,581.83	52.71	17.08	30.21	1,547.41	63.76	17.88	18.37
2020	1,250.95	53.79	17.91	28.31	1,252.74	63.12	18.01	18.88
2021	846.12	54.54	17.33	28.13	934.96	64.46	17.06	18.47
Pakistan								
2010	7,061.63	72.65	17.80	9.55	8,965.98	74.74	18.29	6.96
2019	5,710.26	75.12	15.30	9.58	8,631.63	76.92	13.89	9.20
2020	5,875.76	76.87	14.30	8.83	8,687.86	78.34	13.04	8.62
2021	6,247.73	73.48	16.91	9.60	9,566.85	76.20	14.76	9.04
People's Republic of China								
2010	276,698.17	68.17	21.96	9.87	535,048.38	63.96	16.56	19.49
2019	352,710.76	69.46	22.80	7.74	934,087.72	66.22	17.11	16.67
2020	360,192.19	69.18	23.68	7.14	965,398.59	66.76	17.46	15.79
2021	457,902.75	69.81	22.33	7.86	1,215,439.69	64.95	17.56	17.49
Philippines								
2010	18,372.71	69.22	22.66	8.12	23,204.98	61.75	24.62	13.63
2019	37,111.56	69.09	22.63	8.28	45,462.94	65.57	21.50	12.93
2020	29,571.50	68.55	24.48	6.97	38,138.56	64.86	22.44	12.70
2021	31,491.78	69.62	22.24	8.14	40,184.00	64.50	20.51	14.99

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Table 3.2.4: continued

ADB Regional Member	Table 3.2.4: Value-Added Decomposition of Exports—Business Services Sector							
	By Export Sectors				By Origin Sectors			
	Total (\$ million)	DAVAX (% share in total)	REX+REF (% share in total)	FVA+PDC (% share in total)	Total (\$ million)	DAVAX (% share in total)	REX+REF (% share in total)	FVA+PDC (% share in total)
<b>Republic of Korea</b>								
2010	50,284.70	60.01	20.16	19.83	150,065.83	49.36	15.57	35.07
2019	92,356.55	61.77	18.06	20.17	224,077.09	50.31	17.15	32.54
2020	87,439.12	63.35	19.03	17.62	208,936.07	52.52	17.83	29.65
2021	106,591.01	61.09	19.69	19.22	257,451.07	49.16	18.27	32.57
<b>Singapore</b>								
2010	139,924.89	45.09	14.55	40.35	175,221.79	41.47	14.04	44.48
2019	269,657.60	41.01	12.08	46.91	299,552.12	41.05	12.33	46.62
2020	251,400.60	41.07	10.98	47.95	289,801.94	40.58	10.92	48.51
2021	280,685.06	40.74	11.80	47.46	322,990.05	40.12	12.03	47.85
<b>Sri Lanka</b>								
2010	3,968.35	63.06	22.16	14.78	4,584.15	65.20	18.72	16.09
2019	9,066.18	68.46	15.20	16.34	9,295.70	68.70	14.26	17.04
2020	4,562.05	70.03	17.73	12.24	5,755.95	67.64	14.45	17.91
2021	2,891.76	69.27	20.35	10.38	5,188.23	64.58	13.65	21.76
<b>Taipei, China</b>								
2010	49,626.00	57.07	21.18	21.75	98,920.64	40.38	15.88	43.74
2019	43,539.94	60.62	20.21	19.16	115,904.33	41.11	15.22	43.67
2020	35,898.02	63.76	21.71	14.53	109,153.54	42.53	15.10	42.37
2021	50,817.10	61.17	21.88	16.94	148,697.66	42.00	16.01	41.99
<b>Thailand</b>								
2010	31,849.89	62.70	17.68	19.63	59,903.56	52.52	15.53	31.95
2019	92,144.07	65.02	13.65	21.33	139,939.95	59.80	13.20	26.99
2020	44,870.43	62.58	17.30	20.12	102,571.26	55.90	13.91	30.19
2021	66,019.87	59.67	18.27	22.06	122,218.40	52.51	14.59	32.90
<b>Viet Nam</b>								
2010	10,830.04	54.78	15.13	30.09	24,398.53	38.59	9.90	51.51
2019	14,227.31	55.66	17.48	26.87	80,049.31	39.59	6.72	53.69
2020	13,796.31	56.44	19.13	24.43	80,367.04	39.26	6.83	53.91
2021	17,009.40	53.22	19.84	26.95	89,156.93	32.11	5.71	62.18

\$ = United States dollars, ADB = Asian Development Bank, DAVAX = domestic value-added immediately absorbed by direct importer, FVA = foreign value-added, PDC = pure double-counted terms, REF = re-exported domestic value-added absorbed by home economy, REX = re-exported domestic value-added absorbed abroad.

Source: Asian Development Bank. Multiregional Input-Output Tables. <https://mrio.adbx.online/> (accessed 05 July 2022).

**Table 3.2.5: Value-Added Decomposition of Exports—Personal and Public Services Sector**

ADB Regional Member	By Export Sectors				By Origin Sectors			
	Total (\$ million)	DAVAX	REX+REF	FVA+PDC	Total (\$ million)	DAVAX	REX+REF	FVA+PDC
	(% share in total)				(% share in total)			
<b>Australia</b>								
2010	7,155.56	80.39	13.16	6.45	11,820.46	71.14	21.11	7.75
2019	14,983.46	81.44	9.97	8.59	15,829.07	78.10	14.29	7.61
2020	15,006.19	82.85	9.59	7.56	15,733.35	79.51	13.65	6.84
2021	15,199.03	82.64	11.01	6.35	15,645.33	78.65	15.44	5.91
<b>Bangladesh</b>								
2010	184.17	83.02	11.99	4.99	1,792.40	84.33	12.56	3.11
2019	470.87	71.81	22.27	5.93	2,909.09	86.18	6.48	7.34
2020	559.25	77.81	16.81	5.38	2,778.33	86.35	6.75	6.91
2021	608.00	75.03	19.27	5.70	3,091.26	85.76	6.97	7.27
<b>Bhutan</b>								
2010	9.81	68.85	17.61	13.54	11.64	68.97	14.45	16.58
2019	28.96	73.36	14.93	11.72	24.27	69.27	13.43	17.30
2020	28.12	75.06	14.91	10.02	25.09	70.43	13.59	15.98
2021	32.29	75.31	14.35	10.34	30.42	67.38	12.09	20.53
<b>Brunei Darussalam</b>								
2010	31.20	63.03	16.95	20.02	148.59	48.92	35.38	15.70
2019	92.30	55.57	15.93	28.51	115.86	48.65	16.14	35.21
2020	50.21	56.96	15.19	27.85	122.56	52.23	20.18	27.59
2021	59.97	56.98	16.28	26.76	68.18	45.84	14.17	40.00
<b>Cambodia</b>								
2010	71.12	60.50	19.68	19.82	87.48	62.37	16.49	21.14
2019	147.80	67.13	9.25	23.62	284.36	54.40	9.95	35.65
2020	88.83	67.68	8.33	23.99	228.21	47.86	9.08	43.06
2021	75.31	67.47	9.58	22.96	225.93	37.70	8.67	53.64
<b>Fiji</b>								
2010	17.93	76.23	9.37	14.40	31.10	61.94	9.01	29.05
2019	63.76	81.54	8.27	10.19	124.38	70.82	9.15	20.03
2020	28.79	84.68	6.24	9.26	64.60	71.26	10.08	18.65
2021	36.73	82.48	6.89	10.82	70.52	71.02	9.88	19.10
<b>Hong Kong, China</b>								
2010	594.50	64.56	21.68	13.76	5,051.99	54.07	11.77	34.16
2019	3,398.91	79.29	10.17	10.54	6,207.29	69.58	11.59	18.83
2020	2,000.49	80.83	8.69	10.48	4,641.59	72.28	11.56	16.16
2021	3,909.51	79.67	8.45	11.88	6,041.12	72.54	11.89	15.57
<b>India</b>								
2010	10,841.53	92.44	1.57	5.99	16,248.37	78.66	7.39	13.94
2019	12,738.45	89.68	5.39	4.93	20,920.13	74.38	8.77	16.84
2020	9,068.43	89.92	5.08	5.00	15,544.58	71.96	8.15	19.89
2021	13,230.70	88.56	5.66	5.78	21,468.91	70.98	8.38	20.64
<b>Indonesia</b>								
2010	2,009.07	76.45	13.98	9.57	3,341.63	62.29	16.94	20.77
2019	5,173.18	74.53	19.55	5.92	6,071.01	66.70	19.40	13.90
2020	4,769.13	80.14	14.59	5.26	5,388.40	72.19	16.50	11.31
2021	6,142.22	75.14	18.65	6.21	6,823.47	67.44	18.93	13.62
<b>Japan</b>								
2010	3,677.31	79.65	15.28	5.08	20,640.29	61.84	21.04	17.12
2019	4,472.10	84.66	9.32	6.03	23,575.86	66.91	17.91	15.18
2020	3,461.42	85.91	8.66	5.42	19,198.00	66.59	19.01	14.40
2021	4,109.95	84.40	8.84	6.76	23,146.67	64.92	19.17	15.91

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Table 3.2.5: continued

Table 3.2.5: Value-Added Decomposition of Exports—Personal and Public Services Sector								
ADB Regional Member	By Export Sectors				By Origin Sectors			
	Total (\$ million)	DAVAX	REX+REF	FVA+PDC	Total (\$ million)	DAVAX	REX+REF	FVA+PDC
<b>Kazakhstan</b>								
2010	652.33	79.94	8.46	11.60	756.43	62.15	18.24	19.61
2019	415.33	80.10	10.81	9.09	617.29	53.73	12.28	33.98
2020	262.02	84.16	7.78	8.06	417.27	54.37	9.43	36.20
2021	133.63	83.27	9.09	7.64	373.83	43.46	12.21	44.33
<b>Kyrgyz Republic</b>								
2010	67.89	59.84	17.74	22.42	55.55	61.46	17.80	20.73
2019	299.53	75.78	13.53	10.69	263.31	77.76	14.11	8.13
2020	282.89	78.85	12.47	8.68	251.84	79.03	12.74	8.23
2021	384.60	78.11	12.01	9.88	340.05	79.81	12.69	7.50
<b>Lao People's Democratic Republic</b>								
2010	22.55	71.78	12.58	15.64	21.12	63.48	11.25	25.26
2019	4.58	88.24	4.66	7.10	19.50	24.29	3.05	72.67
2020	1.37	87.17	6.81	6.02	12.90	17.70	3.62	78.68
2021	1.84	81.87	10.79	7.33	19.10	18.03	4.88	77.09
<b>Malaysia</b>								
2010	1,492.57	84.17	1.55	14.28	5,062.56	29.22	3.92	66.86
2019	2,471.98	77.19	8.26	14.55	5,617.83	33.10	5.15	61.75
2020	2,383.40	76.32	10.00	13.68	4,449.69	39.19	7.17	53.64
2021	2,326.11	75.62	9.05	15.33	5,272.98	32.00	5.48	62.52
<b>Maldives</b>								
2010	31.09	56.00	17.44	26.55	42.46	53.39	15.17	31.44
2019	66.37	81.11	11.15	7.74	170.42	67.95	14.37	17.69
2020	51.50	80.58	10.10	9.33	118.28	76.23	14.44	9.33
2021	89.26	80.22	10.50	9.34	189.40	73.00	14.54	12.45
<b>Mongolia</b>								
2010	5.69	77.78	7.06	15.16	47.31	54.31	17.38	28.31
2019	45.40	64.38	11.15	24.47	142.85	35.56	8.46	55.98
2020	40.24	67.50	9.79	22.71	136.56	39.90	9.67	50.44
2021	44.34	65.67	10.47	23.85	179.29	42.49	10.76	46.76
<b>Nepal</b>								
2010	98.74	76.71	15.68	7.61	70.15	75.87	14.93	9.21
2019	73.18	76.21	12.91	10.88	99.06	70.89	15.01	14.10
2020	70.17	76.46	12.89	10.65	90.20	73.21	15.75	11.03
2021	45.31	75.15	13.99	10.85	67.28	72.90	16.05	11.05
<b>Pakistan</b>								
2010	1,490.58	87.80	6.96	5.24	1,308.63	87.31	7.50	5.19
2019	1,651.16	80.92	13.39	5.69	1,587.76	80.86	13.47	5.68
2020	1,617.95	87.22	7.84	4.93	1,545.60	86.48	8.47	5.06
2021	1,767.04	84.29	10.39	5.32	1,680.63	83.66	10.80	5.53
<b>People's Republic of China</b>								
2010	12,135.87	76.58	12.75	10.68	34,148.00	63.32	14.16	22.51
2019	18,752.86	73.77	16.62	9.61	70,882.04	67.20	16.94	15.86
2020	17,468.68	79.59	12.50	7.91	69,575.83	68.50	16.43	15.07
2021	21,262.69	78.43	12.83	8.74	85,857.52	66.33	16.73	16.93
<b>Philippines</b>								
2010	695.20	72.68	18.20	9.12	1,075.92	59.72	18.40	21.87
2019	1,530.55	75.03	14.42	10.55	2,209.43	63.92	15.99	20.09
2020	1,062.03	76.87	14.17	8.96	1,621.56	63.21	16.09	20.70
2021	1,117.50	74.96	14.63	10.42	1,690.84	61.15	15.39	23.46

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Table 3.2.5: continued

ADB Regional Member	Table 3.2.5: Value-Added Decomposition of Exports—Personal and Public Services Sector							
	Total (\$ million)	By Export Sectors			By Origin Sectors			
		DAVAX (% share in total)	REX+REF (% share in total)	FVA+PDC (% share in total)	Total (\$ million)	DAVAX (% share in total)	REX+REF (% share in total)	FVA+PDC (% share in total)
Republic of Korea								
2010	3,801.91	67.78	17.32	14.90	14,283.77	55.71	17.06	27.23
2019	2,495.66	77.76	8.74	13.50	11,986.63	43.93	13.02	43.05
2020	2,333.00	78.92	8.88	12.20	10,759.78	47.43	13.96	38.61
2021	2,673.21	78.13	8.81	13.06	12,811.25	42.65	13.59	43.76
Singapore								
2010	6,630.96	64.78	14.74	20.48	9,078.18	46.32	11.48	42.20
2019	9,918.50	67.48	12.89	19.63	14,682.91	46.39	9.90	43.71
2020	9,139.87	67.83	12.12	20.05	12,694.51	45.38	8.71	45.90
2021	9,954.02	66.79	13.38	19.83	14,543.32	43.88	9.56	46.56
Sri Lanka								
2010	22.73	68.52	21.66	9.83	244.85	61.50	17.80	20.70
2019	215.40	75.97	9.80	14.23	546.17	66.71	11.88	21.41
2020	23.43	75.16	15.20	9.65	247.36	62.19	11.23	26.58
2021	2.99	75.31	13.10	11.59	238.77	58.99	8.34	32.67
Taipei,China								
2010	1,313.56	76.94	7.36	15.70	6,796.34	41.30	13.61	45.09
2019	345.74	73.25	15.94	10.81	7,264.86	37.92	15.34	46.74
2020	296.39	75.49	15.53	8.97	6,715.83	40.99	15.36	43.65
2021	360.61	74.71	15.77	9.52	8,567.73	38.52	15.55	45.93
Thailand								
2010	4,016.49	74.13	10.31	15.56	4,626.16	61.72	11.57	26.71
2019	15,017.09	71.66	14.52	13.82	13,885.12	68.30	14.98	16.72
2020	1,038.51	72.79	14.42	12.79	4,414.46	46.26	12.26	41.48
2021	5,519.87	70.46	15.19	14.36	7,984.10	56.54	14.53	28.93
Viet Nam								
2010	400.82	70.11	5.11	24.78	1,149.50	30.17	4.07	65.76
2019	1,103.56	66.58	6.08	27.35	4,153.54	29.60	4.16	66.24
2020	1,222.35	66.38	5.57	28.05	4,111.93	30.75	4.10	65.15
2021	2,082.57	62.61	4.69	32.70	5,027.45	28.42	2.91	68.67

\$ = United States dollars, ADB = Asian Development Bank, DAVAX = domestic value-added immediately absorbed by direct importer, FVA = foreign value-added, PDC = pure double-counted terms, REF = re-exported domestic value-added absorbed by home economy, REX = re-exported domestic value-added absorbed abroad.

Source: Asian Development Bank. Multiregional Input-Output Tables. <https://mrio.adbx.online/> (accessed 05 July 2022).

**Table 3.3.1: Global Value Chain Participation Rates**

ADB Regional Member	Trade-Based (%) (export-sector breakdown)				Production-Based (%) (origin sector breakdown)			
	2010	2019	2020	2021	2010	2019	2020	2021
Australia								
Aggregate	39.11	34.62	33.19	35.19	16.55	18.63	18.61	17.71
Primary	42.00	35.69	33.63	36.10	63.35	74.12	73.66	68.36
Low-technology manufacturing	23.83	22.74	21.90	23.43	8.30	9.64	9.80	9.14
Medium- to high-technology manufacturing	47.35	47.32	46.32	48.61	30.35	32.55	31.90	29.91
Business services	32.90	30.91	30.44	31.38	10.90	12.14	12.02	11.09
Personal and public services	19.61	18.56	17.15	17.36	3.46	3.39	3.23	2.85
Bangladesh								
Aggregate	26.04	25.89	24.33	25.52	4.61	1.93	1.79	1.89
Primary	21.69	32.88	29.10	27.11	4.67	1.19	0.92	1.06
Low-technology manufacturing	26.91	25.74	24.01	25.38	9.31	1.40	1.55	1.82
Medium- to high-technology manufacturing	23.53	32.19	30.41	32.42	2.95	1.65	1.58	1.70
Business services	19.84	25.45	25.58	25.34	3.54	3.07	2.79	2.83
Personal and public services	16.98	28.19	22.19	24.97	2.39	1.15	1.05	1.05
Bhutan								
Aggregate	33.87	28.85	25.79	35.80	20.24	12.29	8.30	19.74
Primary	18.77	12.62	10.58	8.94	16.21	13.94	4.74	4.32
Low-technology manufacturing	39.82	26.24	19.21	34.07	31.79	4.94	3.38	36.72
Medium- to high-technology manufacturing	24.98	41.08	42.68	50.30	12.51	26.97	26.13	33.86
Business services	40.30	35.86	37.49	44.34	18.24	18.69	16.17	19.38
Personal and public services	31.15	26.64	24.94	24.69	2.67	3.67	3.29	3.52
Brunei Darussalam								
Aggregate	52.79	47.76	45.63	45.43	57.10	36.94	40.45	34.36
Primary	37.32	50.98	46.20	47.58	79.66	58.00	63.86	53.94
Low-technology manufacturing	53.46	56.56	58.29	57.20	8.39	5.23	6.47	3.19
Medium- to high-technology manufacturing	74.13	41.03	43.47	41.87	80.07	50.80	70.67	56.20
Business services	51.30	57.81	57.91	55.30	20.65	14.22	13.68	9.42
Personal and public services	36.97	44.43	43.04	43.02	5.04	2.23	3.24	1.26
Cambodia								
Aggregate	38.36	45.42	47.11	51.64	10.85	18.67	17.07	17.68
Primary	44.78	51.94	49.03	59.15	7.42	36.85	31.51	34.99
Low-technology manufacturing	40.04	49.12	51.41	52.80	8.66	4.79	4.66	4.94
Medium- to high-technology manufacturing	47.73	47.59	50.30	50.13	7.03	14.59	14.40	15.29
Business services	35.03	36.62	37.89	39.78	19.18	23.80	22.30	21.45
Personal and public services	39.50	32.87	32.32	32.53	3.88	3.99	2.84	2.17
Fiji								
Aggregate	41.12	36.75	41.11	42.61	16.78	24.01	15.67	16.03
Primary	35.73	27.93	31.63	34.65	14.47	17.23	13.60	13.41
Low-technology manufacturing	33.63	30.28	29.56	33.10	13.78	18.35	12.70	12.74
Medium- to high-technology manufacturing	45.08	50.88	45.35	50.38	13.83	34.37	20.25	22.02
Business services	43.83	40.04	47.28	48.58	22.44	36.28	24.73	25.52
Personal and public services	23.77	18.46	15.50	17.71	2.22	5.49	3.34	3.53
Hong Kong, China								
Aggregate	42.54	36.49	35.08	37.43	24.04	17.52	15.61	17.25
Primary	66.51	33.97	28.03	31.87	19.95	8.44	7.89	12.66
Low-technology manufacturing	56.26	55.10	51.75	57.68	15.50	9.13	7.37	8.33
Medium- to high-technology manufacturing	84.75	77.61	77.59	83.67	67.59	58.71	57.91	62.60
Business services	37.42	32.56	30.57	33.15	29.03	21.67	19.62	21.43
Personal and public services	35.44	20.71	19.17	20.33	4.58	4.22	3.17	3.95

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Table 3.3.1: continued

ADB Regional Member	Table 3.3.1: Global Value Chain Participation Rates							
	Trade-Based (%) (export-sector breakdown)				Production-Based (%) (origin sector breakdown)			
	2010	2019	2020	2021	2010	2019	2020	2021
<b>India</b>								
Aggregate	37.00	33.55	31.40	34.61	9.60	8.41	8.79	9.32
Primary	26.92	27.10	22.84	26.51	8.14	6.42	6.14	7.62
Low-technology manufacturing	31.12	25.33	24.78	27.43	5.00	4.93	5.29	5.11
Medium- to high-technology manufacturing	52.65	50.55	47.65	52.28	14.38	16.39	17.91	18.25
Business services	31.45	23.90	22.33	23.83	13.92	10.87	11.56	12.06
Personal and public services	7.56	10.32	10.08	11.44	1.31	1.71	1.32	1.47
<b>Indonesia</b>								
Aggregate	40.11	35.88	34.28	36.67	16.08	11.43	10.88	13.90
Primary	45.07	30.97	29.91	32.09	31.14	22.66	20.40	26.94
Low-technology manufacturing	34.07	33.57	31.42	34.75	11.47	8.14	7.92	9.50
Medium- to high-technology manufacturing	44.62	43.72	42.19	44.70	24.62	19.85	20.85	24.43
Business services	32.48	34.79	34.58	34.68	8.68	7.45	7.34	8.64
Personal and public services	23.55	25.47	19.86	24.86	2.41	2.99	2.69	3.20
<b>Japan</b>								
Aggregate	36.79	36.34	35.91	38.82	7.55	8.05	7.78	8.91
Primary	51.60	46.91	45.74	49.38	5.03	6.07	5.86	6.93
Low-technology manufacturing	40.22	36.21	34.91	37.11	5.89	5.84	5.38	6.06
Medium- to high-technology manufacturing	38.93	39.54	38.41	42.62	24.03	28.16	29.33	34.53
Business services	29.30	25.73	26.46	25.40	6.62	6.74	6.27	7.25
Personal and public services	20.35	15.34	14.09	15.60	0.84	0.94	0.82	0.99
<b>Kazakhstan</b>								
Aggregate	44.15	44.20	39.83	43.93	38.49	30.64	25.84	30.64
Primary	49.39	51.47	47.17	50.37	72.42	69.87	64.07	71.98
Low-technology manufacturing	35.69	27.99	25.19	27.11	6.71	9.07	7.28	11.17
Medium- to high-technology manufacturing	46.34	38.20	35.85	40.15	63.91	53.99	48.12	67.44
Business services	29.82	28.72	26.49	27.26	26.92	19.47	15.97	17.22
Personal and public services	20.06	19.90	15.84	16.73	3.67	1.77	0.87	0.75
<b>Kyrgyz Republic</b>								
Aggregate	45.32	48.49	46.96	50.16	19.10	19.89	18.06	21.69
Primary	44.01	38.17	37.10	38.42	27.36	14.36	10.74	11.32
Low-technology manufacturing	53.35	34.76	31.31	35.19	6.35	6.05	5.59	7.71
Medium- to high-technology manufacturing	44.42	65.58	63.93	67.99	48.37	82.09	81.46	89.54
Business services	47.60	38.26	39.30	44.74	13.43	11.21	9.66	14.67
Personal and public services	40.16	24.22	21.15	21.89	4.21	11.20	10.59	13.73
<b>Lao People's Democratic Republic</b>								
Aggregate	31.45	38.79	36.26	39.09	21.26	25.21	23.26	32.07
Primary	32.64	37.86	36.27	38.57	38.17	48.61	43.55	65.30
Low-technology manufacturing	23.64	39.51	37.55	40.47	8.80	33.55	31.63	37.71
Medium- to high-technology manufacturing	57.72	61.65	56.88	60.34	7.46	8.97	8.01	12.66
Business services	37.48	38.30	31.04	35.14	15.20	12.94	11.56	17.30
Personal and public services	28.22	11.76	12.83	18.13	1.08	0.08	0.05	0.09
<b>Malaysia</b>								
Aggregate	56.13	50.36	51.92	53.88	41.35	29.40	28.72	31.76
Primary	39.28	36.14	35.63	37.66	59.70	45.34	44.14	46.35
Low-technology manufacturing	56.05	46.43	48.05	49.58	38.51	25.87	27.34	32.22
Medium- to high-technology manufacturing	71.81	67.85	67.20	69.21	52.34	43.42	44.59	45.14
Business services	43.65	37.97	39.07	40.19	40.07	27.73	26.63	28.71
Personal and public services	15.83	22.81	23.68	24.38	1.85	2.44	2.39	2.42

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Table 3.3.1: continued

ADB Regional Member	Table 3.3.1: Global Value Chain Participation Rates							
	Trade-Based (%) (export-sector breakdown)				Production-Based (%) (origin sector breakdown)			
	2010	2019	2020	2021	2010	2019	2020	2021
Maldives								
Aggregate	45.11	42.75	38.09	41.42	30.29	27.88	18.92	28.73
Primary	52.84	22.86	20.70	24.53	36.26	29.64	16.03	31.11
Low-technology manufacturing	52.96	38.01	33.28	37.02	19.34	8.28	5.82	9.54
Medium- to high-technology manufacturing	42.50	42.63	42.97	36.57	14.74	9.63	8.41	7.93
Business services	44.90	43.38	39.32	42.42	39.37	36.05	26.55	36.93
Personal and public services	44.00	18.89	19.42	19.78	3.99	7.25	6.37	8.36
Mongolia								
Aggregate	44.37	44.46	43.89	45.65	28.82	40.88	41.96	43.20
Primary	45.82	44.04	43.52	45.24	47.34	72.30	71.46	71.54
Low-technology manufacturing	35.05	42.38	39.23	41.17	11.20	12.10	18.09	14.61
Medium- to high-technology manufacturing	51.87	63.17	64.26	66.16	32.34	50.38	57.46	55.10
Business services	41.09	44.23	43.47	45.52	23.95	28.31	32.53	34.38
Personal and public services	22.22	35.62	32.50	34.33	3.39	2.84	2.98	4.07
Nepal								
Aggregate	34.32	41.63	40.00	38.86	4.44	4.14	3.63	2.97
Primary	10.88	13.00	13.27	13.92	1.36	1.57	1.95	1.91
Low-technology manufacturing	36.79	28.76	27.76	28.17	5.02	3.55	3.48	3.56
Medium- to high-technology manufacturing	52.39	50.93	50.22	52.11	14.12	10.24	9.89	12.05
Business services	35.58	47.29	46.21	45.46	7.42	6.49	5.58	3.91
Personal and public services	23.29	23.79	23.54	24.85	2.18	1.09	0.91	0.69
Pakistan								
Aggregate	26.11	22.08	20.59	22.24	6.09	3.63	3.74	3.60
Primary	15.86	16.01	21.71	22.60	5.59	3.55	3.90	3.61
Low-technology manufacturing	25.87	20.41	19.36	20.18	7.05	3.85	4.33	4.32
Medium- to high-technology manufacturing	43.78	39.20	37.45	42.54	6.31	4.15	3.81	3.63
Business services	27.35	24.88	23.13	26.52	6.54	3.75	3.82	3.67
Personal and public services	12.20	19.08	12.78	15.71	3.44	2.82	2.41	2.48
People's Republic of China								
Aggregate	34.53	33.49	32.86	35.04	10.56	7.04	7.34	7.91
Primary	30.73	26.41	24.30	26.65	9.44	7.30	7.42	8.75
Low-technology manufacturing	21.95	22.39	22.17	24.30	7.49	5.89	6.21	6.90
Medium- to high-technology manufacturing	40.13	38.41	37.48	40.24	16.01	12.82	13.62	14.07
Business services	31.83	30.54	30.82	30.19	11.83	7.21	7.52	7.87
Personal and public services	23.42	26.23	20.41	21.57	2.04	1.21	1.17	1.23
Philippines								
Aggregate	43.50	41.52	40.94	44.04	14.29	11.17	10.22	10.07
Primary	32.25	21.59	20.03	23.20	10.54	5.92	5.90	6.59
Low-technology manufacturing	27.39	26.97	25.43	29.63	8.77	4.40	4.67	4.74
Medium- to high-technology manufacturing	63.40	61.27	59.81	65.61	34.30	23.86	24.86	25.62
Business services	30.78	30.91	31.45	30.38	17.48	15.72	13.88	13.39
Personal and public services	27.32	24.97	23.13	25.04	2.77	2.46	1.87	1.71
Republic of Korea								
Aggregate	50.91	49.77	46.89	51.18	17.63	18.76	17.82	20.44
Primary	27.49	26.94	26.24	28.95	9.38	6.79	6.37	6.97
Low-technology manufacturing	47.54	48.84	45.65	47.96	13.75	13.13	12.79	14.58
Medium- to high-technology manufacturing	52.69	52.09	49.08	53.77	35.66	42.91	40.99	46.53
Business services	39.99	38.23	36.65	38.91	14.65	15.95	15.48	17.27
Personal and public services	32.22	22.24	21.08	21.87	2.82	1.37	1.30	1.36

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Table 3.3.1: continued

ADB Regional Member	Table 3.3.1: Global Value Chain Participation Rates							
	Trade-Based (%) (export-sector breakdown)				Production-Based (%) (origin sector breakdown)			
	2010	2019	2020	2021	2010	2019	2020	2021
Singapore								
Aggregate	63.33	59.84	58.69	59.97	50.14	43.42	43.88	45.27
Primary	40.60	45.73	44.86	42.50	46.40	40.69	39.46	37.98
Low-technology manufacturing	60.75	50.64	50.32	51.65	24.07	21.83	23.54	23.37
Medium- to high-technology manufacturing	72.87	63.79	60.54	63.13	63.89	52.18	44.35	50.91
Business services	54.91	58.99	58.93	59.26	55.61	48.91	51.27	51.26
Personal and public services	35.22	32.52	32.17	33.21	15.10	12.26	11.47	11.96
Sri Lanka								
Aggregate	34.65	34.18	31.93	32.98	7.90	8.41	5.52	5.30
Primary	34.17	26.68	24.44	24.59	7.16	5.66	4.35	5.47
Low-technology manufacturing	30.53	33.85	30.16	30.46	8.13	6.15	4.73	5.93
Medium- to high-technology manufacturing	50.80	53.26	49.90	51.93	9.96	17.21	14.88	17.79
Business services	36.94	31.54	29.97	30.73	11.54	13.49	8.22	6.30
Personal and public services								
Taipei, China								
Aggregate	31.48	24.03	24.84	24.69	1.04	1.27	0.50	0.34
Primary	61.23	57.55	53.38	55.95	28.38	27.90	25.54	28.96
Low-technology manufacturing	34.29	31.85	30.87	32.95	11.41	10.58	10.12	11.33
Medium- to high-technology manufacturing	58.56	54.43	50.39	53.03	24.08	26.65	24.61	26.05
Business services	65.63	60.52	55.66	58.36	59.82	63.13	56.09	60.71
Personal and public services	42.93	39.38	36.24	38.83	20.89	16.81	15.09	18.24
	23.06	26.75	24.51	25.29	2.74	2.68	2.39	2.77
Thailand								
Aggregate	49.02	42.85	44.12	47.75	20.14	22.40	20.07	22.19
Primary	44.37	29.39	27.83	32.24	18.52	31.53	29.22	32.44
Low-technology manufacturing	40.28	36.37	33.96	38.75	19.36	25.90	24.42	26.51
Medium- to high-technology manufacturing	58.77	57.73	55.83	61.05	32.79	30.59	35.36	32.61
Business services	37.30	34.98	37.42	40.33	20.82	21.28	18.52	21.80
Personal and public services	25.87	28.34	27.21	29.54	4.42	9.53	2.13	4.71
Viet Nam								
Aggregate	54.66	55.42	56.23	61.20	21.88	22.83	23.92	23.39
Primary	51.53	50.25	48.29	51.25	33.62	29.00	27.67	27.20
Low-technology manufacturing	53.52	50.01	50.39	56.27	15.24	17.46	18.10	16.84
Medium- to high-technology manufacturing	66.49	68.70	69.77	75.01	33.25	44.50	48.33	54.01
Business services	45.22	44.34	43.56	46.78	21.27	23.64	25.22	23.82
Personal and public services	29.89	33.42	33.62	37.39	1.57	2.00	2.06	1.70

ADB = Asian Development Bank.

Note: Export sector breakdown accounts the value added to the exporting sector where it is embedded. Origin sector breakdown accounts the value added to the sector where it originated from.

Source: Asian Development Bank. Multiregional Input-Output Tables. <https://mrio.adbx.online/> (accessed 05 July 2022).

**Table 3.4.1: Revealed Comparative Advantage Indices—Primary Sector**

ADB Regional Member	Gross		Value-Added			
	Exports (\$ million)	RCA (ratio)	By Export Sectors		By Origin Sectors	
			VAX (\$ million)	RCA (ratio)	VAX (\$ million)	RCA (ratio)
<b>Australia</b>						
2010	138,753.90	4.71	123,426.13	4.18	102,032.40	2.78
2019	169,411.19	5.59	151,607.74	4.90	126,377.97	3.60
2020	167,570.63	5.80	152,095.29	5.15	129,661.62	3.98
2021	182,245.51	5.35	167,041.24	4.71	146,122.44	3.71
<b>Bangladesh</b>						
2010	483.48	0.25	454.14	0.23	2,558.01	1.06
2019	320.92	0.08	288.02	0.07	3,927.34	0.90
2020	182.74	0.05	165.66	0.05	3,245.89	0.93
2021	208.84	0.05	188.05	0.05	3,554.73	0.80
<b>Bhutan</b>						
2010	72.77	1.30	68.19	1.26	72.82	1.08
2019	121.85	1.53	112.17	1.52	124.39	1.49
2020	64.86	1.06	62.98	1.10	68.40	1.08
2021	80.04	0.93	77.55	0.98	83.48	0.94
<b>Brunei Darussalam</b>						
2010	4,888.53	4.94	4,554.92	4.41	5,851.12	4.55
2019	4,212.97	5.82	3,371.35	5.08	4,009.27	5.33
2020	3,369.61	5.54	2,677.04	4.81	3,281.58	5.35
2021	2,931.77	4.65	2,340.25	3.97	3,168.83	4.84
<b>Cambodia</b>						
2010	221.32	0.51	198.98	0.55	516.03	1.14
2019	3,476.50	2.27	2,941.00	2.43	3,220.62	2.35
2020	4,015.44	2.88	3,357.37	3.15	3,527.15	3.00
2021	4,563.76	2.65	3,800.56	2.97	3,898.46	2.74
<b>Fiji</b>						
2010	85.34	0.69	61.91	0.60	100.22	0.78
2019	260.43	1.06	214.44	1.00	285.06	1.17
2020	155.47	1.42	126.11	1.29	159.48	1.48
2021	174.00	1.30	137.29	1.17	172.17	1.32
<b>Hong Kong, China</b>						
2010	87.98	0.01	43.51	0.00	34.95	0.00
2019	245.40	0.02	169.50	0.01	126.57	0.01
2020	204.09	0.02	155.39	0.02	125.39	0.01
2021	259.24	0.02	192.06	0.02	158.92	0.01
<b>India</b>						
2010	24,905.40	0.74	23,532.81	0.75	38,838.20	0.99
2019	34,691.53	0.70	32,294.41	0.70	58,419.42	1.11
2020	35,552.48	0.80	33,324.83	0.79	56,911.08	1.22
2021	49,950.41	0.76	46,189.98	0.76	76,819.52	1.14
<b>Indonesia</b>						
2010	48,635.33	2.47	44,857.21	2.33	63,636.04	2.67
2019	44,359.60	2.30	42,257.99	2.22	59,854.76	2.77
2020	36,970.10	2.29	35,486.81	2.20	52,132.60	2.93
2021	64,204.12	2.54	61,191.31	2.46	82,830.04	2.99

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Table 3.4.1: continued

ADB Regional Member	Table 3.4.1: Revealed Comparative Advantage Indices—Primary Sector					
	Gross		Value-Added			
	Exports (\$ million)	RCA (ratio)	By Export Sectors		By Origin Sectors	
			VAX (\$ million)	RCA (ratio)	VAX (\$ million)	RCA (ratio)
Japan						
2010	2,588.34	0.03	1,710.37	0.02	6,070.07	0.06
2019	3,199.94	0.04	2,314.19	0.03	6,698.91	0.07
2020	3,115.34	0.04	2,317.13	0.03	6,243.52	0.08
2021	3,473.51	0.04	2,425.52	0.03	7,148.13	0.08
Kazakhstan						
2010	36,138.31	5.27	32,320.15	4.52	28,472.88	3.21
2019	38,608.56	6.53	33,777.18	5.55	26,135.37	3.78
2020	28,560.23	6.24	25,278.63	5.35	20,647.06	3.95
2021	35,852.82	5.53	32,209.99	4.73	27,181.57	3.59
Kyrgyz Republic						
2010	968.93	3.95	641.79	3.36	527.15	2.22
2019	613.66	2.12	463.47	1.86	352.67	1.25
2020	380.80	1.77	296.16	1.58	236.07	1.14
2021	681.51	1.88	507.31	1.65	417.55	1.22
Lao People's Democratic Republic						
2010	1,149.98	4.65	1,029.18	4.14	1,121.99	3.63
2019	2,210.04	3.68	1,971.93	3.23	2,187.78	3.16
2020	1,954.92	3.76	1,805.93	3.31	2,002.00	3.32
2021	2,991.35	3.76	2,726.55	3.30	2,937.75	3.20
Malaysia						
2010	22,272.41	0.94	19,923.28	1.18	35,365.70	1.68
2019	20,607.44	0.93	18,804.09	1.10	32,548.87	1.68
2020	15,098.26	0.82	13,769.08	0.99	26,140.75	1.70
2021	21,768.83	0.86	19,711.64	1.06	34,637.16	1.68
Maldives						
2010	19.66	0.10	10.80	0.07	91.14	0.48
2019	21.21	0.06	16.37	0.05	157.56	0.45
2020	38.09	0.24	30.31	0.22	123.82	0.81
2021	46.29	0.14	35.11	0.12	201.74	0.62
Mongolia						
2010	2,098.21	6.63	1,574.82	5.66	1,337.16	3.87
2019	6,567.25	8.80	4,751.24	7.54	3,982.24	5.58
2020	6,296.59	9.30	4,609.72	8.03	3,618.31	5.71
2021	7,526.61	8.44	5,413.31	7.24	4,280.26	5.15
Nepal						
2010	164.81	0.99	152.82	1.03	228.89	1.24
2019	132.97	0.54	122.38	0.59	220.41	0.94
2020	138.96	0.70	128.46	0.76	242.10	1.31
2021	141.17	0.78	130.90	0.84	235.33	1.35
Pakistan						
2010	1,066.91	0.42	1,023.68	0.39	6,456.74	1.98
2019	1,688.74	0.71	1,615.48	0.65	7,727.46	2.73
2020	1,134.73	0.50	1,092.88	0.46	7,929.22	3.00
2021	1,207.01	0.42	1,157.28	0.38	9,027.70	2.69

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Table 3.4.1: continued

ADB Regional Member	Table 3.4.1: Revealed Comparative Advantage Indices—Primary Sector					
	Gross		Value-Added			
	Exports (\$ million)	RCA (ratio)	By Export Sectors		By Origin Sectors	
			VAX (\$ million)	RCA (ratio)	VAX (\$ million)	RCA (ratio)
People's Republic of China						
2010	22,608.99	0.12	19,875.40	0.12	182,923.21	0.89
2019	24,485.76	0.10	22,021.25	0.10	223,751.23	0.86
2020	26,498.21	0.11	23,937.65	0.11	239,238.76	0.96
2021	33,242.98	0.09	29,678.67	0.09	325,979.35	0.91
Philippines						
2010	1,265.16	0.22	1,158.21	0.23	5,076.06	0.80
2019	1,535.24	0.20	1,403.34	0.21	3,915.04	0.51
2020	1,668.54	0.27	1,539.02	0.28	4,208.67	0.68
2021	1,994.51	0.26	1,805.56	0.27	4,750.62	0.65
Republic of Korea						
2010	775.91	0.01	644.31	0.02	4,709.97	0.09
2019	754.04	0.01	629.20	0.01	3,772.11	0.07
2020	780.83	0.01	663.58	0.02	3,994.80	0.08
2021	927.48	0.01	775.34	0.01	4,557.46	0.07
Singapore						
2010	85.90	0.00	63.42	0.00	61.25	0.00
2019	115.41	0.00	80.64	0.00	73.00	0.00
2020	110.27	0.00	77.58	0.00	67.34	0.00
2021	126.29	0.00	88.73	0.00	77.49	0.00
Sri Lanka						
2010	392.44	0.33	346.46	0.32	902.08	0.66
2019	417.91	0.23	370.70	0.23	1,120.62	0.61
2020	404.87	0.35	366.04	0.35	944.13	0.81
2021	557.13	0.37	506.62	0.37	1,230.94	0.81
Taipei, China						
2010	1,651.57	0.05	1,227.21	0.06	1,858.19	0.07
2019	890.85	0.02	713.98	0.03	2,255.83	0.08
2020	896.46	0.03	735.32	0.03	2,242.03	0.08
2021	1,067.25	0.02	860.07	0.02	2,671.37	0.07
Thailand						
2010	4,913.82	0.30	4,240.02	0.34	9,957.91	0.64
2019	19,370.52	0.65	16,388.46	0.68	26,153.48	0.95
2020	18,416.62	0.81	15,969.55	0.88	24,101.72	1.21
2021	18,950.09	0.65	16,078.09	0.73	25,720.51	1.05
Viet Nam						
2010	13,065.86	1.46	8,340.60	1.46	11,869.25	1.67
2019	16,357.87	0.63	10,152.40	0.65	25,951.40	1.47
2020	16,230.36	0.64	10,138.18	0.69	26,287.52	1.61
2021	21,633.81	0.65	12,937.26	0.75	30,543.21	1.59

0.00 = magnitude is less than half of unit employed, \$ = United States dollars, ADB = Asian Development Bank, RCA = revealed comparative advantage, VAX = value-added exports.

Source: Asian Development Bank. Multiregional Input-Output Tables. <https://mrio.adbx.online/> (accessed 05 July 2022).

**Table 3.4.2: Revealed Comparative Advantage Indices—Low-Technology Manufacturing Sector**

ADB Regional Member	Gross		Value-Added			
	Exports (\$ million)	RCA (ratio)	By Export Sectors		By Origin Sectors	
			VAX (\$ million)	RCA (ratio)	VAX (\$ million)	RCA (ratio)
<b>Australia</b>						
2010	25,502.55	0.60	22,011.44	0.59	22,209.42	0.73
2019	30,097.25	0.57	25,552.29	0.54	24,398.12	0.65
2020	31,435.15	0.57	26,703.53	0.55	24,738.27	0.64
2021	31,921.58	0.56	27,440.71	0.53	24,953.82	0.59
<b>Bangladesh</b>						
2010	15,825.13	5.55	13,334.32	5.39	6,499.59	3.22
2019	38,756.14	5.23	29,221.76	4.99	17,064.74	3.66
2020	32,402.15	5.00	25,133.72	4.78	14,424.37	3.45
2021	36,978.85	5.07	28,254.48	4.84	16,082.97	3.36
<b>Bhutan</b>						
2010	210.42	2.60	185.46	2.69	206.86	3.68
2019	350.84	2.50	261.57	2.33	249.13	2.79
2020	345.00	2.99	280.43	2.95	280.49	3.71
2021	430.97	3.00	344.12	2.96	343.72	3.61
<b>Brunei Darussalam</b>						
2010	29.64	0.02	15.76	0.01	46.02	0.04
2019	94.73	0.07	45.14	0.04	60.71	0.08
2020	99.38	0.09	45.03	0.05	66.63	0.09
2021	81.13	0.08	38.36	0.04	42.35	0.06
<b>Cambodia</b>						
2010	2,124.18	3.38	1,359.82	2.93	1,149.51	3.04
2019	7,198.29	2.67	3,780.95	2.05	3,411.14	2.32
2020	7,200.42	2.72	3,644.91	2.07	3,184.15	2.27
2021	8,784.63	3.04	4,339.37	2.32	3,733.55	2.43
<b>Fiji</b>						
2010	207.66	1.15	158.17	1.21	129.01	1.21
2019	497.50	1.16	378.49	1.16	279.98	1.07
2020	238.49	1.15	186.60	1.15	131.54	1.02
2021	294.79	1.32	218.30	1.27	149.81	1.07
<b>Hong Kong, China</b>						
2010	10,503.80	0.47	5,496.72	0.35	4,459.81	0.35
2019	6,989.62	0.30	3,753.66	0.21	3,190.68	0.22
2020	4,982.97	0.25	2,775.07	0.18	2,595.81	0.21
2021	6,024.46	0.26	2,989.95	0.16	3,007.62	0.20
<b>India</b>						
2010	50,210.11	1.02	40,690.30	1.02	24,271.99	0.75
2019	83,816.13	0.97	70,889.85	1.00	46,563.42	0.83
2020	75,581.76	0.90	64,496.13	0.92	42,427.47	0.76
2021	103,519.55	0.94	85,676.68	0.96	54,739.01	0.75
<b>Indonesia</b>						
2010	61,583.24	2.16	51,510.62	2.11	29,917.31	1.50
2019	74,722.45	2.21	59,417.24	2.05	37,640.27	1.63
2020	67,958.20	2.22	55,885.26	2.09	34,612.53	1.63
2021	86,070.29	2.03	68,321.30	1.88	42,757.87	1.44

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Table 3.4.2: continued

ADB Regional Member	Table 3.4.2: Revealed Comparative Advantage Indices—Low-Technology Manufacturing Sector					
	Gross		Value-Added			
	Exports (\$ million)	RCA (ratio)	By Export Sectors		By Origin Sectors	
			VAX (\$ million)	RCA (ratio)	VAX (\$ million)	RCA (ratio)
Japan						
2010	48,927.35	0.38	41,664.08	0.38	68,471.52	0.77
2019	48,371.14	0.33	41,514.10	0.34	69,543.01	0.72
2020	45,271.44	0.34	39,400.97	0.35	62,892.71	0.71
2021	51,256.85	0.34	43,340.40	0.35	72,721.91	0.72
Kazakhstan						
2010	993.75	0.10	842.65	0.09	1,309.16	0.18
2019	1,932.26	0.19	1,609.96	0.17	1,892.65	0.26
2020	1,824.75	0.21	1,565.07	0.20	1,620.50	0.26
2021	3,202.07	0.29	2,781.68	0.28	2,500.15	0.31
Kyrgyz Republic						
2010	221.19	0.62	117.28	0.48	88.86	0.45
2019	406.05	0.80	283.11	0.75	212.21	0.70
2020	332.95	0.82	240.72	0.77	193.96	0.78
2021	438.88	0.72	305.02	0.68	251.78	0.69
Lao People's Democratic Republic						
2010	600.65	1.67	511.22	1.62	375.63	1.46
2019	3,111.61	2.95	2,699.32	2.90	2,260.91	3.05
2020	3,049.61	3.10	2,742.01	3.03	2,347.62	3.26
2021	3,874.05	2.90	3,415.20	2.83	2,826.80	2.86
Malaysia						
2010	65,036.85	1.89	38,670.08	1.80	15,229.59	0.87
2019	56,413.69	1.45	38,043.53	1.47	19,448.58	0.94
2020	53,808.97	1.55	36,969.71	1.61	17,867.24	0.98
2021	70,243.43	1.65	46,413.51	1.72	22,184.50	1.00
Maldives						
2010	30.89	0.11	17.39	0.09	79.65	0.50
2019	71.19	0.11	46.99	0.10	99.14	0.27
2020	77.76	0.26	54.48	0.24	50.26	0.27
2021	107.61	0.19	70.62	0.17	75.44	0.22
Mongolia						
2010	125.72	0.27	96.51	0.27	116.67	0.41
2019	231.15	0.18	154.92	0.16	273.62	0.36
2020	234.32	0.18	164.28	0.17	385.75	0.51
2021	250.89	0.17	173.42	0.16	335.08	0.37
Nepal						
2010	343.28	1.41	248.25	1.31	173.97	1.13
2019	541.67	1.25	424.94	1.35	208.83	0.83
2020	481.98	1.29	383.74	1.38	188.34	0.85
2021	503.51	1.65	404.41	1.77	186.58	1.00
Pakistan						
2010	12,497.72	3.41	11,266.14	3.38	4,121.50	1.51
2019	15,131.69	3.63	13,568.35	3.57	4,858.58	1.61
2020	16,157.32	3.75	14,611.02	3.68	5,198.87	1.65
2021	18,707.51	3.88	16,827.03	3.82	5,877.47	1.63

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Table 3.4.2: continued

**Table 3.4.2: Revealed Comparative Advantage Indices—Low-Technology Manufacturing Sector**

ADB Regional Member	Gross		Value-Added			
	Exports (\$ million)	RCA (ratio)	By Export Sectors		By Origin Sectors	
			VAX (\$ million)	RCA (ratio)	VAX (\$ million)	RCA (ratio)
<b>People's Republic of China</b>						
2010	373,984.43	1.42	321,120.04	1.53	236,159.18	1.38
2019	606,343.82	1.41	528,781.94	1.51	365,098.46	1.31
2020	623,086.55	1.37	546,670.74	1.46	372,058.06	1.25
2021	816,803.96	1.38	705,363.82	1.49	492,319.30	1.27
<b>Philippines</b>						
2010	10,611.31	1.30	9,113.57	1.40	7,285.98	1.37
2019	11,052.85	0.83	9,380.62	0.90	7,587.82	0.92
2020	10,963.88	0.94	9,461.41	1.03	7,067.46	0.96
2021	12,328.52	0.95	10,310.56	1.07	7,399.21	0.94
<b>Republic of Korea</b>						
2010	36,177.69	0.45	25,681.53	0.49	29,343.44	0.69
2019	39,193.22	0.37	28,616.86	0.39	41,776.30	0.72
2020	39,388.03	0.39	29,551.87	0.40	43,610.24	0.75
2021	43,488.92	0.35	31,755.22	0.37	48,957.32	0.69
<b>Singapore</b>						
2010	11,793.32	0.25	5,379.57	0.22	8,048.09	0.41
2019	13,638.42	0.19	7,793.54	0.20	9,675.86	0.31
2020	11,538.27	0.16	6,545.97	0.17	8,247.09	0.28
2021	12,309.97	0.15	7,034.10	0.16	8,894.64	0.25
<b>Sri Lanka</b>						
2010	5,779.00	3.35	4,527.29	3.26	3,321.88	2.93
2019	8,054.06	2.55	5,789.72	2.35	4,669.70	2.38
2020	6,707.38	3.08	5,034.97	2.89	3,679.78	2.65
2021	10,000.37	3.92	7,533.75	3.78	5,352.06	3.28
<b>Taipei, China</b>						
2010	22,044.54	0.45	12,628.21	0.45	13,243.52	0.58
2019	30,841.91	0.49	19,924.46	0.52	19,699.54	0.65
2020	29,755.56	0.46	20,499.36	0.49	21,217.22	0.63
2021	39,216.44	0.46	26,258.70	0.49	25,946.78	0.59
<b>Thailand</b>						
2010	32,265.52	1.36	23,781.76	1.50	18,846.74	1.46
2019	81,048.40	1.54	59,530.63	1.61	38,367.27	1.30
2020	75,259.22	1.75	57,120.59	1.91	33,359.44	1.40
2021	82,075.46	1.68	58,788.73	1.82	35,448.16	1.34
<b>Viet Nam</b>						
2010	42,158.30	3.25	21,957.91	3.02	14,880.44	2.51
2019	161,943.33	3.56	86,302.61	3.65	50,721.04	2.69
2020	161,108.28	3.36	84,948.53	3.48	49,185.84	2.53
2021	190,188.97	3.41	88,131.11	3.48	52,490.24	2.53

\$ = United States dollars, ADB = Asian Development Bank, RCA = revealed comparative advantage, VAX = value-added exports.

Source: Asian Development Bank. Multiregional Input-Output Tables. <https://mrio.adbx.online/> (accessed 05 July 2022).

**Table 3.4.3: Revealed Comparative Advantage Indices—Medium- and High-Technology Manufacturing Sector**

ADB Regional Member	Gross		Value-Added			
	Exports (\$ million)	RCA (ratio)	By Export Sectors		By Origin Sectors	
			VAX (\$ million)	RCA (ratio)	VAX (\$ million)	RCA (ratio)
<b>Australia</b>						
2010	53,320.57	0.41	40,327.13	0.41	21,509.39	0.33
2019	50,831.01	0.34	38,446.92	0.33	17,995.58	0.24
2020	52,404.01	0.35	40,902.92	0.35	18,190.80	0.24
2021	53,351.24	0.34	42,245.03	0.34	18,612.33	0.23
<b>Bangladesh</b>						
2010	428.51	0.05	364.91	0.06	553.03	0.13
2019	783.29	0.04	662.82	0.05	1,153.67	0.12
2020	723.04	0.04	616.28	0.05	1,153.31	0.14
2021	890.78	0.04	746.02	0.05	1,472.41	0.16
<b>Bhutan</b>						
2010	103.79	0.43	81.78	0.45	35.69	0.30
2019	84.52	0.22	63.00	0.23	41.72	0.24
2020	65.48	0.21	44.75	0.20	29.80	0.20
2021	82.84	0.21	49.53	0.18	33.53	0.18
<b>Brunei Darussalam</b>						
2010	3,613.84	0.84	3,282.12	0.95	1,749.17	0.77
2019	2,879.38	0.81	2,314.72	0.93	1,448.83	0.91
2020	3,073.38	0.98	2,481.63	1.12	1,538.54	1.06
2021	2,959.42	1.01	2,461.74	1.18	1,514.78	1.12
<b>Cambodia</b>						
2010	26.33	0.01	16.79	0.01	28.97	0.04
2019	263.07	0.03	157.83	0.03	197.84	0.07
2020	327.02	0.05	189.47	0.04	239.19	0.09
2021	413.55	0.05	236.09	0.05	294.75	0.10
<b>Fiji</b>						
2010	24.77	0.05	15.46	0.05	20.53	0.09
2019	63.28	0.05	41.41	0.05	45.75	0.09
2020	27.18	0.05	18.19	0.05	22.81	0.09
2021	35.96	0.06	22.29	0.05	25.83	0.10
<b>Hong Kong, China</b>						
2010	11,308.48	0.17	2,516.69	0.06	606.36	0.02
2019	9,815.22	0.15	2,819.80	0.06	471.20	0.02
2020	9,725.61	0.18	2,917.21	0.08	438.27	0.02
2021	10,068.82	0.15	2,280.47	0.05	442.94	0.02
<b>India</b>						
2010	100,793.88	0.68	65,298.43	0.62	41,780.11	0.60
2019	190,637.85	0.79	123,122.38	0.71	81,280.32	0.73
2020	175,502.68	0.77	118,685.68	0.71	84,782.25	0.77
2021	240,257.49	0.79	149,541.12	0.70	112,004.77	0.80
<b>Indonesia</b>						
2010	58,384.31	0.68	45,117.23	0.70	29,456.49	0.70
2019	60,063.35	0.63	47,637.01	0.67	30,270.59	0.66
2020	52,934.48	0.63	43,038.63	0.67	27,376.85	0.65
2021	72,752.02	0.62	56,876.92	0.65	35,914.39	0.63

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Table 3.4.3: continued

ADB Regional Member	Table 3.4.3: Revealed Comparative Advantage Indices—Medium- and High-Technology Manufacturing Sector					
	Gross		Value-Added			
	Exports (\$ million)	RCA (ratio)	By Export Sectors		By Origin Sectors	
Japan						
2010	591,965.90	1.51	477,271.86	1.66	313,572.19	1.66
2019	648,406.01	1.59	507,331.77	1.71	334,186.84	1.75
2020	586,971.46	1.64	473,976.28	1.77	313,485.68	1.79
2021	671,104.46	1.61	516,251.28	1.73	334,695.91	1.72
Kazakhstan						
2010	12,807.45	0.43	11,440.49	0.48	8,168.47	0.52
2019	12,012.13	0.41	10,660.89	0.47	7,404.94	0.51
2020	11,272.12	0.48	10,055.21	0.53	7,327.76	0.60
2021	20,676.72	0.69	18,677.52	0.78	11,387.75	0.73
Kyrgyz Republic						
2010	791.22	0.74	562.96	0.88	550.72	1.31
2019	1,377.96	0.97	949.62	1.02	871.39	1.46
2020	1,107.99	1.00	785.91	1.05	740.68	1.52
2021	1,597.71	0.95	1,100.92	1.02	924.83	1.31
Lao People's Democratic Republic						
2010	8.85	0.01	5.72	0.01	15.66	0.03
2019	20.43	0.01	13.83	0.01	40.10	0.03
2020	26.17	0.01	19.52	0.01	43.63	0.03
2021	36.89	0.01	26.16	0.01	68.96	0.04
Malaysia						
2010	74,578.51	0.72	33,145.76	0.59	31,433.37	0.85
2019	85,362.59	0.79	39,944.23	0.62	34,842.77	0.85
2020	80,544.49	0.85	38,252.75	0.69	32,397.80	0.90
2021	101,519.96	0.86	44,283.83	0.68	39,013.28	0.91
Maldives						
2010	0.78	0.00	0.48	0.00	3.39	0.01
2019	1.64	0.00	1.18	0.00	4.66	0.01
2020	2.05	0.00	1.54	0.00	3.15	0.01
2021	3.29	0.00	2.37	0.00	5.41	0.01
Mongolia						
2010	57.57	0.04	37.62	0.04	45.19	0.07
2019	206.47	0.06	148.87	0.06	113.28	0.07
2020	209.97	0.06	155.46	0.07	129.37	0.09
2021	236.23	0.06	174.35	0.07	139.01	0.08
Nepal						
2010	172.75	0.24	98.39	0.20	60.49	0.18
2019	336.40	0.28	189.65	0.24	128.89	0.26
2020	294.09	0.29	166.18	0.25	111.18	0.25
2021	298.43	0.35	172.33	0.31	112.37	0.31
Pakistan						
2010	1,470.11	0.13	1,076.05	0.12	1,005.70	0.17
2019	1,428.13	0.12	1,068.33	0.11	1,051.38	0.18
2020	973.02	0.08	750.36	0.08	815.23	0.13
2021	1,128.75	0.08	834.41	0.08	945.09	0.14

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Table 3.4.3: continued

ADB Regional Member	Table 3.4.3: Revealed Comparative Advantage Indices—Medium- and High-Technology Manufacturing Sector					
	Gross		Value-Added			
	Exports (\$ million)	RCA (ratio)	By Export Sectors		By Origin Sectors	
People's Republic of China						
2010	1,012,324.70	1.27	739,513.05	1.34	468,859.25	1.29
2019	1,638,989.82	1.36	1,237,381.91	1.43	717,580.23	1.30
2020	1,696,018.20	1.36	1,290,664.80	1.43	744,514.06	1.27
2021	2,224,310.53	1.36	1,643,270.53	1.44	948,713.38	1.27
Philippines						
2010	21,597.88	0.88	13,557.42	0.79	8,110.54	0.72
2019	30,927.51	0.83	16,681.18	0.65	10,034.70	0.61
2020	26,739.00	0.84	14,879.93	0.67	8,510.35	0.59
2021	31,085.86	0.87	14,947.15	0.64	9,400.89	0.62
Republic of Korea						
2010	427,862.23	1.76	262,496.81	1.91	190,826.80	2.11
2019	513,811.10	1.74	338,192.90	1.87	240,523.76	2.08
2020	467,004.12	1.71	325,698.40	1.85	229,487.47	2.00
2021	596,758.50	1.73	391,326.42	1.88	278,783.99	2.05
Singapore						
2010	146,471.99	1.03	58,180.87	0.92	41,824.35	1.01
2019	158,867.13	0.77	78,450.84	0.81	59,594.26	0.96
2020	151,450.02	0.78	77,084.63	0.85	57,493.34	0.97
2021	181,192.83	0.81	92,433.76	0.89	69,854.76	1.03
Sri Lanka						
2010	928.69	0.18	546.12	0.15	557.38	0.23
2019	1,672.66	0.19	954.75	0.16	953.56	0.25
2020	1,333.90	0.22	831.37	0.20	726.59	0.27
2021	1,918.50	0.27	1,184.99	0.25	1,017.11	0.32
Taipei,China						
2010	240,938.23	1.63	123,596.47	1.68	102,984.98	2.13
2019	309,890.91	1.77	175,047.63	1.86	140,207.26	2.32
2020	321,583.58	1.81	196,608.39	1.93	158,784.42	2.39
2021	422,257.77	1.79	247,234.68	1.91	197,600.29	2.35
Thailand						
2010	79,185.74	1.11	43,791.19	1.05	27,920.15	1.02
2019	116,188.81	0.79	62,371.68	0.68	45,563.05	0.78
2020	118,116.06	1.00	66,522.67	0.92	44,805.97	0.95
2021	121,989.04	0.90	60,517.46	0.78	42,805.09	0.84
Viet Nam						
2010	17,018.58	0.44	7,978.87	0.42	7,181.28	0.57
2019	86,088.15	0.68	35,378.49	0.61	27,940.64	0.75
2020	93,849.60	0.72	37,376.00	0.64	29,876.75	0.78
2021	104,954.36	0.68	35,276.81	0.58	31,875.68	0.80

0.00 = magnitude is less than half of unit employed, \$ = United States dollars, ADB = Asian Development Bank, RCA = revealed comparative advantage, VAX = value-added exports.

Source: Asian Development Bank. Multiregional Input-Output Tables. <https://mrio.adbx.online/> (accessed 05 July 2022).

**Table 3.4.4: Revealed Comparative Advantage Indices—Business Services Sector**

ADB Regional Member	Gross		Value-Added			
	Exports (\$ million)	RCA (ratio)	By Export Sectors		By Origin Sectors	
			VAX (\$ million)	RCA (ratio)	VAX (\$ million)	RCA (ratio)
<b>Australia</b>						
2010	50,135.67	0.73	45,163.80	0.68	81,009.26	0.84
2019	61,681.68	0.70	55,619.98	0.67	101,554.43	0.80
2020	60,535.27	0.69	54,460.49	0.64	100,807.90	0.78
2021	61,819.37	0.70	56,444.97	0.64	103,016.96	0.77
<b>Bangladesh</b>						
2010	1,427.57	0.31	1,350.36	0.31	4,332.05	0.68
2019	5,199.41	0.43	4,785.36	0.46	10,560.08	0.67
2020	4,897.75	0.47	4,520.67	0.50	9,555.96	0.69
2021	5,293.40	0.47	4,870.50	0.49	10,656.06	0.71
<b>Bhutan</b>						
2010	123.96	0.95	92.91	0.76	111.74	0.63
2019	274.41	1.19	216.35	1.09	243.34	0.81
2020	186.23	1.01	145.34	0.88	159.04	0.64
2021	240.71	1.09	189.41	0.96	204.65	0.69
<b>Brunei Darussalam</b>						
2010	676.52	0.29	448.11	0.19	554.40	0.16
2019	525.52	0.25	313.00	0.17	516.30	0.19
2020	293.47	0.16	180.80	0.11	445.23	0.18
2021	350.35	0.21	224.05	0.15	341.45	0.15
<b>Cambodia</b>						
2010	1,597.60	1.58	1,306.92	1.58	1,176.03	0.98
2019	5,463.60	1.23	4,148.55	1.27	4,128.71	0.83
2020	4,161.52	0.99	3,127.40	1.02	3,306.32	0.71
2021	3,580.07	0.80	2,673.07	0.84	3,075.65	0.64
<b>Fiji</b>						
2010	824.07	2.84	579.17	2.48	558.25	1.65
2019	1,760.47	2.48	1,289.67	2.22	1,271.02	1.44
2020	785.46	2.38	596.49	2.13	587.19	1.37
2021	808.55	2.34	606.13	2.09	611.98	1.39
<b>Hong Kong, China</b>						
2010	120,938.90	3.37	91,139.00	3.25	91,285.98	2.25
2019	122,121.25	3.20	98,839.70	3.11	99,800.38	2.07
2020	102,812.77	3.21	85,209.46	3.12	85,800.12	2.06
2021	121,280.56	3.35	99,314.40	3.22	99,515.28	2.13
<b>India</b>						
2010	128,576.96	1.63	113,542.13	1.59	134,419.06	1.30
2019	210,943.32	1.48	188,855.12	1.51	223,650.02	1.18
2020	204,234.53	1.53	185,474.76	1.54	214,049.15	1.16
2021	258,799.71	1.52	233,384.66	1.55	266,692.94	1.17
<b>Indonesia</b>						
2010	12,909.05	0.28	11,412.31	0.26	29,064.09	0.46
2019	23,739.19	0.43	20,985.10	0.41	42,174.78	0.54
2020	20,218.72	0.41	18,257.57	0.40	38,289.66	0.54
2021	26,562.69	0.41	23,556.90	0.38	48,313.63	0.52

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Table 3.4.4: continued

ADB Regional Member	Table 3.4.4: Revealed Comparative Advantage Indices—Business Services Sector					
	Gross		Value-Added			
	Exports (\$ million)	RCA (ratio)	By Export Sectors		By Origin Sectors	
			VAX (\$ million)	RCA (ratio)	VAX (\$ million)	RCA (ratio)
Japan						
2010	188,197.35	0.90	169,661.72	0.87	288,806.57	1.02
2019	188,759.93	0.79	174,082.02	0.81	299,204.02	0.92
2020	145,556.12	0.69	135,598.69	0.70	255,681.13	0.87
2021	179,208.37	0.77	165,427.33	0.79	297,433.23	0.94
Kazakhstan						
2010	13,483.76	0.84	12,353.14	0.76	18,974.76	0.81
2019	10,781.67	0.63	9,662.48	0.59	20,248.06	0.81
2020	9,867.48	0.71	8,966.90	0.66	16,245.24	0.79
2021	5,718.63	0.34	5,232.05	0.31	17,747.44	0.70
Kyrgyz Republic						
2010	239.78	0.42	164.10	0.38	328.05	0.52
2019	428.40	0.51	327.56	0.49	613.09	0.60
2020	331.21	0.51	247.70	0.46	427.01	0.52
2021	558.71	0.60	398.95	0.53	750.12	0.65
Lao People's Democratic Republic						
2010	525.67	0.91	436.91	0.78	472.98	0.58
2019	1,127.86	0.65	932.03	0.57	1,127.25	0.45
2020	855.55	0.54	756.15	0.48	928.89	0.39
2021	1,145.85	0.56	987.00	0.48	1,318.72	0.43
Malaysia						
2010	58,382.07	1.05	43,222.71	1.13	52,537.58	0.95
2019	73,524.06	1.15	57,944.27	1.26	67,860.53	0.97
2020	55,200.86	1.00	44,431.80	1.12	57,013.19	0.94
2021	60,926.03	0.93	48,217.11	1.05	62,785.20	0.90
Maldives						
2010	1,707.68	3.81	1,186.96	3.41	1,035.18	2.05
2019	3,734.00	3.58	2,690.91	3.26	2,415.06	1.93
2020	1,617.11	3.39	1,224.63	3.07	1,073.17	1.76
2021	3,196.73	3.63	2,347.56	3.25	2,088.24	1.90
Mongolia						
2010	667.77	0.90	525.32	0.83	706.16	0.77
2019	996.89	0.46	710.30	0.42	1,367.61	0.53
2020	875.41	0.43	637.12	0.39	1,396.57	0.56
2021	960.96	0.42	688.75	0.37	1,633.79	0.58
Nepal						
2010	780.53	2.00	608.59	1.80	672.22	1.38
2019	1,581.83	2.21	1,103.42	1.98	1,262.42	1.49
2020	1,250.95	2.09	896.42	1.86	1,015.65	1.38
2021	846.12	1.80	607.84	1.57	761.78	1.30
Pakistan						
2010	7,061.63	1.20	6,382.50	1.07	8,336.12	0.97
2019	5,710.26	0.83	5,158.11	0.77	7,832.46	0.77
2020	5,875.76	0.85	5,351.35	0.78	7,932.98	0.76
2021	6,247.73	0.84	5,642.10	0.76	8,695.98	0.77

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Table 3.4.4: continued

ADB Regional Member	Table 3.4.4: Revealed Comparative Advantage Indices—Business Services Sector					
	Gross		Value-Added			
	Exports (\$ million)	RCA (ratio)	By Export Sectors		By Origin Sectors	
People's Republic of China						
2010	276,698.17	0.65	242,214.67	0.65	419,618.86	0.77
2019	352,710.76	0.50	312,605.58	0.50	753,065.03	0.80
2020	360,192.19	0.49	321,960.64	0.50	785,957.84	0.80
2021	457,902.75	0.50	404,998.20	0.51	966,404.45	0.80
Philippines						
2010	18,372.71	1.40	16,857.37	1.45	20,005.63	1.19
2019	37,111.56	1.69	33,965.61	1.85	39,497.82	1.41
2020	29,571.50	1.58	27,464.85	1.72	33,240.33	1.37
2021	31,491.78	1.58	28,878.91	1.78	34,099.00	1.38
Republic of Korea						
2010	50,284.70	0.39	40,070.06	0.43	96,894.78	0.72
2019	92,356.55	0.53	73,343.04	0.57	150,082.93	0.76
2020	87,439.12	0.55	71,644.95	0.57	145,947.44	0.76
2021	106,591.01	0.56	85,619.06	0.59	172,338.54	0.78
Singapore						
2010	139,924.89	1.83	83,284.64	1.95	97,001.28	1.56
2019	269,657.60	2.23	142,808.25	2.06	159,494.48	1.51
2020	251,400.60	2.22	130,546.34	2.00	148,883.43	1.50
2021	280,685.06	2.27	147,171.55	2.03	168,106.70	1.53
Sri Lanka						
2010	3,968.35	1.43	3,380.29	1.36	3,845.21	1.07
2019	9,066.18	1.74	7,583.05	1.74	7,709.97	1.16
2020	4,562.05	1.31	4,002.84	1.33	4,724.33	1.03
2021	2,891.76	0.74	2,591.14	0.77	4,058.31	0.79
Taipei, China						
2010	49,626.00	0.63	38,687.26	0.78	55,438.56	0.77
2019	43,539.94	0.42	35,082.49	0.52	65,058.73	0.63
2020	35,898.02	0.35	30,571.41	0.42	62,669.93	0.56
2021	50,817.10	0.39	42,054.99	0.47	85,902.92	0.63
Thailand						
2010	31,849.89	0.84	25,523.02	0.90	40,614.88	0.99
2019	92,144.07	1.06	72,313.25	1.10	101,899.67	1.03
2020	44,870.43	0.65	35,729.99	0.69	71,403.75	0.90
2021	66,019.87	0.88	51,276.72	0.94	81,745.17	0.99
Viet Nam						
2010	10,830.04	0.52	7,562.53	0.58	11,817.05	0.63
2019	14,227.31	0.19	10,387.13	0.25	37,009.07	0.58
2020	13,796.31	0.18	10,406.57	0.25	36,967.72	0.57
2021	17,009.40	0.20	12,399.11	0.29	33,662.56	0.52

\$ = United States dollars, ADB = Asian Development Bank, RCA = revealed comparative advantage, VAX = value-added exports.

Source: Asian Development Bank. Multiregional Input-Output Tables. <https://mrio.adbx.online/> (accessed 05 July 2022).

**Table 3.4.5: Revealed Comparative Advantage Indices—Personal and Public Services Sector**

ADB Regional Member	Gross		Value-Added			
	Exports (\$ million)	RCA (ratio)	By Export Sectors		By Origin Sectors	
			VAX (\$ million)	RCA (ratio)	VAX (\$ million)	RCA (ratio)
<b>Australia</b>						
2010	7,155.56	1.36	6,675.38	1.22	10,843.40	1.24
2019	14,983.46	2.13	13,662.71	1.89	14,563.54	1.30
2020	15,006.19	2.25	13,838.19	1.99	14,601.82	1.38
2021	15,199.03	2.25	14,203.66	1.97	14,670.06	1.34
<b>Bangladesh</b>						
2010	184.17	0.52	174.92	0.49	1,735.98	3.01
2019	470.87	0.48	442.35	0.49	2,694.49	1.94
2020	559.25	0.71	528.69	0.71	2,585.50	2.28
2021	608.00	0.71	572.58	0.71	2,865.45	2.32
<b>Bhutan</b>						
2010	9.81	0.98	8.48	0.85	9.71	0.60
2019	28.96	1.57	25.57	1.49	20.07	0.75
2020	28.12	2.00	25.30	1.87	21.08	1.03
2021	32.29	1.90	28.95	1.79	24.18	0.98
<b>Brunei Darussalam</b>						
2010	31.20	0.18	24.95	0.13	125.15	0.41
2019	92.30	0.55	65.97	0.43	75.05	0.31
2020	50.21	0.36	36.20	0.28	88.71	0.45
2021	59.97	0.48	43.89	0.37	40.88	0.22
<b>Cambodia</b>						
2010	71.12	0.92	57.02	0.84	68.98	0.64
2019	147.80	0.42	112.89	0.40	182.90	0.42
2020	88.83	0.28	67.52	0.27	129.86	0.34
2021	75.31	0.22	58.02	0.22	104.69	0.26
<b>Fiji</b>						
2010	17.93	0.81	15.35	0.80	22.06	0.72
2019	63.76	1.12	57.26	1.14	99.46	1.28
2020	28.79	1.14	26.17	1.13	52.54	1.50
2021	36.73	1.39	32.83	1.38	57.04	1.58
<b>Hong Kong, China</b>						
2010	594.50	0.22	511.10	0.22	3,319.91	0.91
2019	3,398.91	1.11	3,036.93	1.10	5,030.75	1.18
2020	2,000.49	0.82	1,789.36	0.80	3,886.88	1.14
2021	3,909.51	1.41	3,442.07	1.36	5,094.17	1.32
<b>India</b>						
2010	10,841.53	1.79	10,186.39	1.75	13,940.71	1.50
2019	12,738.45	1.11	12,082.98	1.12	17,331.57	1.03
2020	9,068.43	0.89	8,596.06	0.86	12,407.50	0.82
2021	13,230.70	1.02	12,436.60	1.01	16,972.79	0.90
<b>Indonesia</b>						
2010	2,009.07	0.57	1,811.70	0.51	2,635.13	0.46
2019	5,173.18	1.16	4,845.16	1.09	5,202.10	0.76
2020	4,769.13	1.28	4,508.65	1.19	4,765.27	0.83
2021	6,142.22	1.23	5,742.39	1.14	5,872.90	0.76

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Table 3.4.5: continued

**Table 3.4.5: Revealed Comparative Advantage Indices—Personal and Public Services Sector**

ADB Regional Member	Gross		Value-Added			
	Exports (\$ million)	RCA (ratio)	By Export Sectors		By Origin Sectors	
			VAX (\$ million)	RCA (ratio)	VAX (\$ million)	RCA (ratio)
<b>Japan</b>						
2010	3,677.31	0.23	3,466.89	0.22	16,854.58	0.66
2019	4,472.10	0.23	4,182.64	0.23	19,791.95	0.69
2020	3,461.42	0.22	3,259.22	0.21	16,249.26	0.68
2021	4,109.95	0.23	3,815.97	0.22	19,261.34	0.74
<b>Kazakhstan</b>						
2010	652.33	0.53	576.38	0.44	607.54	0.29
2019	415.33	0.30	377.41	0.27	406.90	0.18
2020	262.02	0.25	240.10	0.22	265.36	0.16
2021	133.63	0.10	123.33	0.09	207.67	0.10
<b>Kyrgyz Republic</b>						
2010	67.89	1.54	52.66	1.49	44.03	0.78
2019	299.53	4.46	267.47	4.61	241.87	2.69
2020	282.89	5.69	258.33	5.84	231.10	3.44
2021	384.60	5.37	346.61	5.56	314.53	3.32
<b>Lao People's Democratic Republic</b>						
2010	22.55	0.51	19.02	0.41	15.79	0.21
2019	4.58	0.03	4.26	0.03	5.33	0.02
2020	1.37	0.01	1.29	0.01	2.75	0.01
2021	1.84	0.01	1.71	0.01	4.38	0.02
<b>Malaysia</b>						
2010	1,492.57	0.35	1,278.72	0.41	1,674.29	0.33
2019	2,471.98	0.48	2,108.15	0.53	2,143.52	0.35
2020	2,383.40	0.56	2,053.44	0.63	2,057.81	0.41
2021	2,326.11	0.46	1,966.71	0.52	1,972.66	0.34
<b>Maldives</b>						
2010	31.09	0.90	22.84	0.80	29.11	0.64
2019	66.37	0.79	61.23	0.86	140.27	1.27
2020	51.50	1.41	46.69	1.42	107.25	2.15
2021	89.26	1.32	80.98	1.36	165.80	1.84
<b>Mongolia</b>						
2010	5.69	0.10	4.82	0.09	33.91	0.41
2019	45.40	0.26	34.29	0.23	62.87	0.28
2020	40.24	0.26	31.10	0.23	67.67	0.33
2021	44.34	0.25	33.76	0.22	95.44	0.41
<b>Nepal</b>						
2010	98.74	3.29	91.19	3.31	63.67	1.44
2019	73.18	1.28	65.21	1.35	85.06	1.14
2020	70.17	1.54	62.69	1.58	80.22	1.33
2021	45.31	1.26	40.39	1.27	59.82	1.24
<b>Pakistan</b>						
2010	1,490.58	3.29	1,412.05	2.90	1,240.37	1.59
2019	1,651.16	3.00	1,556.67	2.68	1,497.07	1.66
2020	1,617.95	3.08	1,537.64	2.72	1,466.95	1.71
2021	1,767.04	3.11	1,672.52	2.73	1,587.10	1.71

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Table 3.4.5: continued

ADB Regional Member	Table 3.4.5: Revealed Comparative Advantage Indices—Personal and Public Services Sector					
	Gross		Value-Added			
	Exports (\$ million)	RCA (ratio)	By Export Sectors		By Origin Sectors	
			VAX (\$ million)	RCA (ratio)	VAX (\$ million)	RCA (ratio)
People's Republic of China						
2010	12,135.87	0.37	10,725.06	0.35	25,887.71	0.53
2019	18,752.86	0.33	16,496.03	0.31	57,791.75	0.70
2020	17,468.68	0.31	15,790.91	0.30	57,256.03	0.71
2021	21,262.69	0.31	18,994.02	0.29	68,888.76	0.69
Philippines						
2010	695.20	0.69	631.25	0.66	839.61	0.55
2019	1,530.55	0.87	1,366.99	0.86	1,762.36	0.72
2020	1,062.03	0.74	965.70	0.73	1,284.10	0.64
2021	1,117.50	0.73	999.77	0.75	1,292.21	0.64
Republic of Korea						
2010	3,801.91	0.38	3,216.79	0.42	10,334.51	0.85
2019	2,495.66	0.18	2,153.46	0.19	6,780.36	0.39
2020	2,333.00	0.19	2,043.27	0.20	6,562.14	0.42
2021	2,673.21	0.18	2,318.59	0.19	7,157.33	0.39
Singapore						
2010	6,630.96	1.13	5,258.40	1.50	5,231.93	0.94
2019	9,918.50	1.02	7,940.58	1.32	8,236.26	0.89
2020	9,139.87	1.06	7,284.11	1.36	6,847.42	0.84
2021	9,954.02	1.05	7,956.20	1.33	7,750.75	0.85
Sri Lanka						
2010	22.73	0.11	20.49	0.10	194.10	0.60
2019	215.40	0.52	184.73	0.49	429.12	0.73
2020	23.43	0.09	21.17	0.09	181.57	0.48
2021	2.99	0.01	2.64	0.01	160.73	0.38
Taipei, China						
2010	1,313.56	0.22	1,105.97	0.27	3,719.86	0.57
2019	345.74	0.04	307.88	0.05	3,855.08	0.43
2020	296.39	0.04	269.37	0.04	3,770.27	0.41
2021	360.61	0.04	325.75	0.04	4,612.81	0.41
Thailand						
2010	4,016.49	1.37	3,386.41	1.46	3,382.71	0.91
2019	15,017.09	2.16	12,925.30	2.28	11,545.86	1.32
2020	1,038.51	0.20	904.30	0.21	2,576.21	0.40
2021	5,519.87	0.96	4,720.30	1.05	5,662.37	0.83
Viet Nam						
2010	400.82	0.25	301.37	0.28	393.26	0.23
2019	1,103.56	0.18	801.35	0.22	1,399.82	0.25
2020	1,222.35	0.21	878.97	0.25	1,430.42	0.27
2021	2,082.57	0.32	1,400.70	0.40	1,573.31	0.29

\$ = United States dollars, ADB = Asian Development Bank, RCA = revealed comparative advantage, VAX = value-added exports.

Source: Asian Development Bank. Multiregional Input-Output Tables. <https://mrio.adbx.online/> (accessed 05 July 2022).

