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Comparison of the Regional Comprehensive Economic Partnership (RCEP) and Other Free Trade Agreements (FTAs)*

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Abstract: *This study evaluates the desirability of RCEP by comparing it with other mega-lateral FTAs. Evaluating the member-specific scale effects of the FTAs, we find that RCEP will generate significantly larger gains compared with the CPTPP. Evaluation of the provision-specific depth effects of RCEP suggests the possibility of positive gains but these gains may not be significant compared with those derived from the CPTPP. The existing CGE model analyses reveal that RCEP will generate greater gains than the CPTPP. RCEP will be more desirable for China, Japan, and the Republic of Korea and the estimated gains for ASEAN will notably increase as the model explicitly specifies the diagonal ROO cumulation scheme. Considering the sequence of implementing FTAs, we find that the CPTPP will generate greater gains for dual members, but the marginal gains enjoyed by RCEP members will not be substantial.*

Keywords: Mega-lateral Free Trade Agreements; RCEP; CPTPP.

JEL Classification: F15; O53

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1. Introduction

Against the backdrop of deepening regional interdependence through trade and investment activities, as well as a realisation of the need to revitalise the regional economy in the 21st century, most East Asian countries adopted discriminatory policies for regional trade agreements (RTAs) due to the Asian financial crisis. Ever since, they have actively engaged in free trade initiatives with countries both within and outside of the region.[1] In contrast to just two RTAs in the region before 1997 (i.e. the Lao People's Democratic Republic [Lao PDR]–Thailand Preferential Trade Agreement and Association of Southeast Asian Nations [ASEAN] Free Trade Area [AFTA]), 14 bilateral RTAs between each of the ASEAN+6 countries on average and 6 plurilateral RTAs were established as of November 2021.[2] Accordingly, East Asia has become a highly integrated region, following in the footsteps of the European Union (EU) and North America (ADB, 2021).

The increasingly competitive formation of bilateral RTAs and hub-and-spoke plurilateral RTAs have produced a complicated web of overlapping RTAs in East Asia. Considering the potentially harmful 'spaghetti-bowl effect' of overlapping RTAs and deepening intraregional production networks, a few 'mega-lateral' RTAs have been negotiated.[3] As an outcome of these efforts, the initially United States (US)-led Trans-Pacific Partnership (TPP), and currently the Japan-led Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP),[4] has been effective since 2018. Additionally, the ASEAN-driven

[1] This study defines East Asia to include the 10 Association of Southeast Asian Nations (ASEAN) Members, plus China, Japan, and the Republic of Korea in North-East Asia, as well as Australia, New Zealand, and India, which are commonly referred to as ASEAN+6.

[2] AFTA and five ASEAN+1 free trade agreements (FTAs), i.e. ASEAN–China Comprehensive Economic Cooperation Agreement (ACFTA), ASEAN–Japan Comprehensive Economic Partnership (AJCEP), ASEAN–Korea Comprehensive Economic Cooperation Agreement (AKFTA), ASEAN–India Comprehensive Economic Cooperation Agreement (AICECA), and ASEAN–Australia–New Zealand Free Trade Agreement (AANZFTA).

[3] Including the East Asian Free Trade Area, preferred by China and encompassing ASEAN+3 (i.e. ASEAN plus China, Japan, and Korea); Comprehensive Economic Partnership for East Asia, preferred by Japan and encompassing the ASEAN+6 countries; and Free Trade Area of Asia-Pacific (FTAAP), including 21 Asia-Pacific Economic Cooperation (APEC) member economies.

[4] This includes Brunei Darussalam, Malaysia, Singapore, Viet Nam, Japan, Australia, New Zealand, Canada, Chile, Mexico, and Peru – and excludes the US.

Regional Comprehensive Economic Partnership (RCEP), consolidating the five ASEAN+1 free trade agreements (FTAs) and comprising 15 members from ASEAN+6[5] was completed on 15 November 2020 and entered into force on 1 January 2022 amongst the 10 early signers, excluding Indonesia, the Republic of Korea, Malaysia, the Philippines, and Myanmar. The Republic of Korea ratified RCEP on 2 December 2021 and made it effective from 1 February 2022.

RCEP can be regarded as a complete consolidation of East Asian RTAs encompassing 15 countries and containing several new features, such as differential tariff concession co-sharing and the regional/diagonal cumulation of rules of origin (ROO), which are likely to increase gains. RCEP is the largest regional trading bloc worldwide, consisting of a combined population of 2.4 billion people (30.3% of the world population in 2020), regional gross domestic product (GDP) of $25.873 billion (30.6% of global GDP in 2020), and regional trade of $10.173 billion (29.1% of global trade in 2020).[6]

The significance of RCEP in both global and regional trade architecture has been widely investigated since negotiations began in 2012, but its desirability in comparison with other RTAs, such as the five ASEAN+1 FTAs, CPTPP, and Free Trade Area of Asia-Pacific (FTAAP), has not been comprehensively evaluated. This study thus examines the evolution of East Asian RTAs from competitive bilateral and plurilateral RTAs to expansionary mega-lateral RTAs, focusing on RCEP and comparing it to other RTAs, such as the CPTPP. Section 2 details the deepening interdependence amongst the RCEP members and discusses the necessity of establishing mega-lateral RTAs by investigating the effectiveness of the five ASEAN+1 FTAs. Section 3 evaluates the desirability of RCEP by member- and provision-specific characteristics compared to other RTAs, mainly the CPTPP. Section 4 surveys the existing empirical analyses on the effects of RCEP in contrast to other mega-lateral RTAs. Section 5 discusses certain practical issues to be considered and concludes this study.

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[5] Excluding India.

[6] World Bank, World Development Indicators, https://databank.worldbank.org/source/world-development-indicators (accessed 2 November 2021).

2. Regional Trade Agreements in East Asia

2.1. Proliferation and Interdependence

Unlike the proliferation of regional free trade blocs in Europe and the Americas – such as the EU and its expansion; North American Free Trade Agreement, currently the United States–Mexico–Canada Agreement (USMCA); and Southern Common Market (MERCOSUR) – there was a dearth of RTAs in East Asia, except for the AFTA in South-East Asia, until the late 1990s. The three major North-East Asian countries (i.e. China, Japan, and the Republic of Korea) favoured non-discriminatory multilateral approaches and actively drove their outward-looking industrialisation policies within the General Agreement on Tariffs and Trade (GATT) and World Trade Organization (WTO) frameworks.

Since the Asian financial crisis in 1997, efforts for regional economic cooperation made tremendous headway in forming regional free trade blocs; the number of effective RTAs increased from 1 in 1997 to 22 in 2020 for the RCEP members (Table 3-1). Particularly, North-East Asia became the most popular region for RTAs; both China and the Republic of Korea had 32, and Japan had 26.

Table 1: Regional Trade Agreements by Country, June 2021

Country	Under Negotiation		Signed but Not Yet in Effect	Signed and in Effect (before 1997)	Total
	Framework Agreements Signed	Negotiations Launched			
Australia	0	5	2	16 (2)	23
Brunei Darussalam	0	0	1	10 (1)	12
Cambodia	0	1	2	7 (1)	10
China	0	9	4	19 (0)	32
India	1	14	1	14 (1)	30
Indonesia	0	5	5	12 (1)	22
Japan	0	6	1	19 (0)	26
Rep. of Korea	0	11	4	17 (0)	32
Lao PDR	0	0	1	9 (2)	10
Malaysia	1	5	2	16 (1)	24
Myanmar	1	1	1	7 (1)	10
New Zealand	0	6	2	12 (2)	20
Philippines	0	2	1	9 (1)	12
Singapore	0	6	2	26 (1)	34
Thailand	1	8	1	14 (2)	24
Viet Nam	0	2	1	14 (1)	17
Average	0	5	2	14 (1)	21

Lao PDR = Lao People's Democratic Republic.
Source: Author's calculation based on ARIC, Free Trade Agreements, https://aric.adb.org/database/fta (accessed 2 November 2021).

Currently, East Asia is a highly integrated region, close to North America but still behind the EU (ADB, 2021). As reported in Table 3-2, the 15 countries of RCEP are mostly integrated with countries in the Asia-Pacific region in terms of trade and investment cooperation (0.51), followed by the EU (0.47). Table 3-2 shows that the deepening trade and investment cooperation between the RCEP members and their neighbouring trading partners has been driven by ASEAN's active regional cooperation (0.59), although the rather inactive regional cooperation of China, Japan, and the Republic of Korea (CJK, 0.37) and Australia and New Zealand (ANZ, 0.35) is observed. More specifically, Table 3-2 reveals that the RCEP members are highly interconnected through regional value chains (RVCs, 0.57), people and social integration (0.65), and technology and digital connectivity (0.55) but less mutually dependent in terms of money and finance (0.39) and institutional arrangements (0.39). The dimensions of infrastructure and connectivity (0.58) and environmental cooperation (0.56) are also much lower than those of the EU (0.66

and 0.67) and North America (0.75 and 0.69, respectively).

These observations support the general characterisation of East Asian regionalism: (i) East Asian RTAs have been accelerated by deepening RVCs; (ii) the lack of financial cooperation in the region could have been a major cause of the Asian financial crisis; (iii) East Asian regional cooperation has been market-driven rather than institution-driven, unlike in the EU; (iv) East Asia's transition to digitalisation has been quicker than other regions; and (v) underdeveloped infrastructure and poor environmental standards could impede the region's gains from regional cooperation.

Table 2: Regional Cooperation and Integration Index by Region, 2018

Dimension	Africa	Asia-Pacific	RCEP	ASEAN	CJK	ANZ	RCEP16	European Union	Latin America	Middle East	North America
Trade and Investment	0.19	0.45	0.51	***0.59***	0.37	0.35	0.50	0.47	0.20	0.27	0.29
Money and Finance	0.28	0.36	0.39	0.37	0.39	0.44	0.38	***0.72***	0.29	0.45	0.56
Regional Value Chains	0.41	0.54	0.57	***0.59***	0.57	0.51	0.57	0.55	0.41	0.43	0.53
Infrastructure and Connectivity	0.42	0.50	0.58	0.57	0.61	0.63	0.57	0.66	0.48	0.57	***0.75***
People and Social Integration	0.45	0.56	0.65	***0.71***	0.53	0.55	0.64	0.61	0.42	0.42	0.24
Institutional Arrangements	0.39	0.24	0.39	0.34	0.54	0.37	0.39	0.81	0.36	0.53	***0.92***
Technology and Digital Connectivity	0.34	0.52	0.55	***0.56***	0.52	0.54	0.54	0.46	0.32	0.42	0.34
Environmental Cooperation	0.39	0.52	0.56	0.50	0.64	***0.70***	0.55	0.67	0.55	0.53	0.69
Overall	0.36	0.46	0.53	0.53	0.52	0.51	0.52	***0.62***	0.38	0.45	0.54

ANZ = Australia and New Zealand; ASEAN = Association of Southeast Asian Nations; CJK = China, Japan, and Republic of Korea; RCEP = Regional Comprehensive Economic Partnership; RCEP16 = RCEP with India.
Note: Bold and italic numbers indicate the highest index value in the category.
Source: Author's calculation based on ADB, Asia-Pacific Regional Cooperation and Integration Index, https://aric.adb.org/database/arcii (accessed 2 November 2021).

In sum, the deepening regional interdependence amongst the RCEP members through market-driven trade and investment activities in a highly interconnected RVC framework has caused East Asian countries to shift their policy stance from favouring the multilateral liberalisation approach under the GATT and WTO frameworks to favouring the approach by forming discriminatory RTAs. The profit-seeking East Asian strategy of forming RTAs since the Asian financial crisis in 1997 has been catalysed by leadership competition between China and Japan, the Republic of Korea's ambition to use its geopolitical advantage to become an East Asian business hub, and ASEAN's intention to become a hub for the East Asian RTA structure (Park, 2020).

2.2. Path towards Mega-Lateral Regional Trade Agreements

The proliferation of East Asian RTAs has embarked upon an expansionary, competitive, and overlapping path from 1994, when the AFTA was implemented, until 2020, when RCEP was signed. The AFTA expanded and overlapped membership with the six individual dialogue partners by forming the five ASEAN+1 FTAs before further expanding into the region-wide, mega-lateral RCEP by consolidating the existing five ASEAN+1 FTAs. The extension of the existing Trans-Pacific Strategic Economic Partnership Agreement into the TPP and CPTPP can be regarded as another expansionary region-wide, mega-lateral RTA competing with RCEP.

The East Asian RTAs have a complicated web of overlap (Table 3). Almost all of the countries involved in mega-lateral RTAs were already connected through bilateral and/or plurilateral RTAs, even before the formation of the CPTPP and RCEP. In the case of the CPTPP, there has been some disconnected bilateral cooperation between Asian and Pacific members, but all East Asian members were already deeply connected, as the Japan–New Zealand FTA under negotiation is included. Until RCEP, Japan was not connected to the Republic of Korea and China. Table 3 indicates that filling the empty cells by launching the CPTPP and RCEP could generate significant gains for the newly connected members and meaningful gains for the other members.

Table 3: Regional Trade Agreement Map

	US	Canada	Mexico	Chile	Peru	Australia	New Zealand	Brunei Darussalam	Malaysia	Singapore	Viet Nam	Japan	Republic of Korea	China	Cambodia	Indonesia	Lao PDR	Myanmar	Philippines	Thailand	India
US		P	P	B	B	B				B			B								
Canada	P		P	B	B								B								
Mexico	P	P		B	B							B									
Chile	B	B	B		B	B	P	P	B	P	B	B	B			B				B	B
Peru	B	B	B	B		B				B		B	B	B							
Australia	B			B	B		**P B**	**P**	**P B**	**P B**	**P**	**B**	B	B	P	P B	P	P	P	P B	
New Zealand				P		**P B**		**P P**	**P B**	**P B P**	**P**		B	B	P	P	P	P	P	P B	
Brunei Darussalam				P		**P**	**P P**		**P**	**P P**	**P**	**P B**	P	P	P	P	P	P	P	P	P
Malaysia				B		**P B**	**P B**	**P**		**P**	**P**	**P B**	P	P	P	P	P	P	P	P	P B
Singapore	B			P	B	**P B**	**P B P**	**P P**	**P**		**P**	**P B**	P B	P B	P	P	P	P	P	P	P B
Viet Nam				B		**P**	**P**	**P**	**P**	**P**		**P B**	P B	P	P	P	P	P	P	P	P
Japan			B	B	B	**B**		**P B**	**P B**	**P B**	**P B**				P	P B	P	P	P B	P B	B
Republic of Korea	B	B		B	B	B	B	P	P	P B	P B			B	P	P	P	P	P	P	B
China					B	B	B	P	P	P B	P		B		P	P	P	P	P	P	
Cambodia						P	P	P	P	P	P	P	P	P		P	P	P	P	P	P
Indonesia				B		P B	P	P	P	P	P	P	P B	P	P		P	P	P	P	P

Lao PDR						P	P	P	P	P	P	P	P	P	P	P		P	P	P B	P
Myanmar						P	P	P	P	P	P	P	P	P	P	P	P		P	P	P
Philippines						P	P	P	P	P	P	P B	P	P	P	P	P	P		P	P
Thailand				B		P B	P B	P	P	P	P	P B	P	P	P	P	P B	P	P		P B
India				B				P	P B	P B	P	B	B		P	P	P	P	P	P B	

B = bilateral RTA, CPTPP = Comprehensive and Progressive Agreement for Trans-Pacific Partnership, Lao PDR = Lao People's Democratic Republic, P = plurilateral RTA, RCEP = Regional Comprehensive Economic Partnership, RTA = regional trade agreement, US = United States.

Note: The red box represents the CPTPP; the green box represents RCEP; and shaded areas indicate the absence of existing bilateral or plurilateral cooperation schemes.

Source: Author based on ARIC, Free Trade Agreements, https://aric.adb.org/database/fta (accessed 2 November 2021).

2.3. Effectiveness of ASEAN+1 Free Trade Agreements

Expecting significant gains from the hub-and-spoke type of FTA, ASEAN initiated five FTAs with its six dialogue partners. To avoid any loss due to exclusion, the six dialogue partners competitively agreed to sign an FTA as a spoke. However, the East Asian RTAs' expansionary evolution from the AFTA to the five ASEAN+1 FTAs could not generate a significantly strong trade creation effect because of the additional cost imposed by complicated ROO of overlapping RTAs.

The administrative and compliance costs of verifying the ROO may offset the initial gains from freer trade by lowering FTA utilisation rates. Fukunaga and Isono (2013) and Hayakawa and Laksanapanyakul (2017) elaborated upon the complicated ROO in the five ASEAN+1 FTAs, which resulted in the ineffective utilisation of RTAs. Ando and Urata (2018); Lee and Park (2021); Thangavelu, Narjoko, and Urata (2021); and Chang et al. (2021) demonstrated the negative impact of complicated and restrictive ROO on RTA utilisation rates.[7] To mitigate the trade diversion effect caused by the restrictive ROO, regime-wide ROO – such as diagonal or full cumulation, de minimis, and self-certification requirements – can be applied to complement the restrictive ROO. However, Table 3-4 reveals that rather restrictive regime-wide ROO of the East Asian RTAs in practice lower utilisation rates of the East Asian RTAs, making them ineffective.

[7] Ando and Urata (2018) reported relatively lower AJCEP utilisation rates of Japanese imports from ASEAN partners in 2015 – 25.7% of the AJCEP and 50.4% of Japan's bilateral FTAs with ASEAN countries. Lee and Park (2021) also reported lower utilisation rates of the AKFTA in terms of the Republic of Korea's exports to ASEAN in 2019 (51.3%) relative to the Republic of Korea's exports to other importers of all of the Republic of Korea's FTAs (74.9%). Thangavelu, Narjoko, and Urata (2021) reported low AANZFTA utilisation rates of ASEAN's imports from Australia, mostly lower than 25% in 2015 and 2016. Chang et al. (2021) reported lower FTA utilisation rates of three ASEAN countries' imports from their six dialogue partners on average, 37.8% by Indonesia in 2016, 47.0% by the Philippines in 2018, and 55.8% by Thailand in 2018.

Table 4: Rules of Origin of Various Free Trade Agreements in East Asia

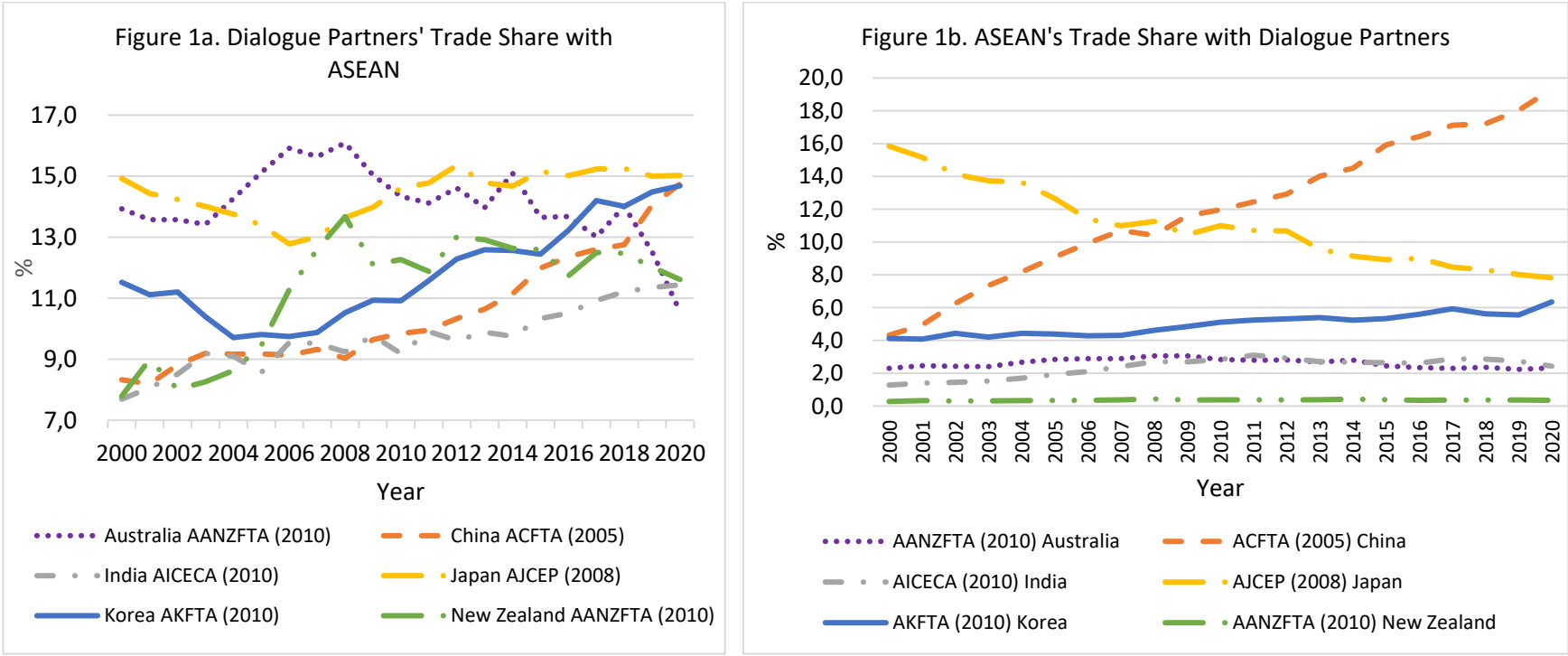
Regional Trade Agreement	De Minimis	Regional Value Contents	Certificate of Origin
ASEAN–Australia–New Zealand Free Trade Agreement	10%	40% (build down and up)	Public
ASEAN–China Comprehensive Economic Cooperation Agreement		40%	Public
ASEAN–Japan Comprehensive Economic Partnership	10%; for some agricultural products, 7%	40% (build down)	Public
ASEAN–Korea Comprehensive Economic Cooperation Agreement	10%	40%–60% (build down or up)	Public
ASEAN Free Trade Area	10%	40%	Public
Australia–New Zealand	10%	50%	Public
Brunei Darussalam–Japan	By product	40%	Public
China–New Zealand	10%	By product	Public
China–Singapore	10%	40% (build down)	Public
Japan–Australia	10%	40% by product (QVC)	Public
Japan–Indonesia	28–49 and 64–97, 10%; 50–63, 7%	QVC 40% by product	Public
Japan–Malaysia	28–49 and 64–97, 10%; 50–63, 7%	40% (build down)	Public
Japan–Philippines	28–49 and 64–97, 10%; 50–63, 7%	By product	Public
Japan–Singapore	10%; for some agricultural products, 7%	60%	Public
Japan–Thailand	19–24, 7%; 28–49, 50–63, and 64–97, 10%	By product	Public
Japan–Viet Nam	7% or 10% by product	40%	Public
Korea–Australia	10%	By product (RVC 40%)	Self (Australia, public)
Korea–Singapore	8% or 10% by product	55% (build down), 45% in some cases	Public
Malaysia–Australia	10%	40% by product (or CTC)	Public
New Zealand–Malaysia	10%	40% by product (QVC)	Public
New Zealand–Singapore		By product	Public
Singapore–Australia	2%	30%, 50% by product	Public

Regional Trade Agreement	De Minimis	Regional Value Contents	Certificate of Origin
Thailand–Australia	10%	By product	Public
Thailand–New Zealand	10%	By product	Self

ASEAN = Association of Southeast Asian Nations, CTC = change in tariff classification, RVC = regional value chain, QVC = qualifying value content.
Source: Author.

The low RTA utilisation rates may explain why the five ASEAN+1 FTAs have not successfully created bilateral trade between ASEAN and the six dialogue partners. Over the last 20 years (i.e. 2000–2020), all six dialogue partners have increased their respective trade share with ASEAN, even as a recent decreasing trend of Australia's trade share with ASEAN and an insignificant increase in Japan's trade share with ASEAN have been reported (Figure 1a). From the ASEAN side, its trade share with both the Republic of Korea and China has been steadily increasing, but its trade share with Japan has been decreasing continuously (Figure 1b).

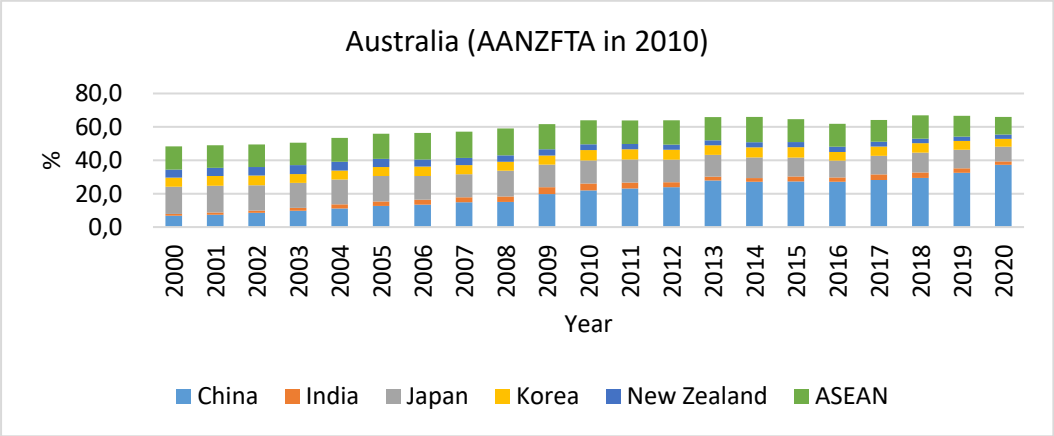
Figure 1: Trade Shares between ASEAN and Dialogue Partners

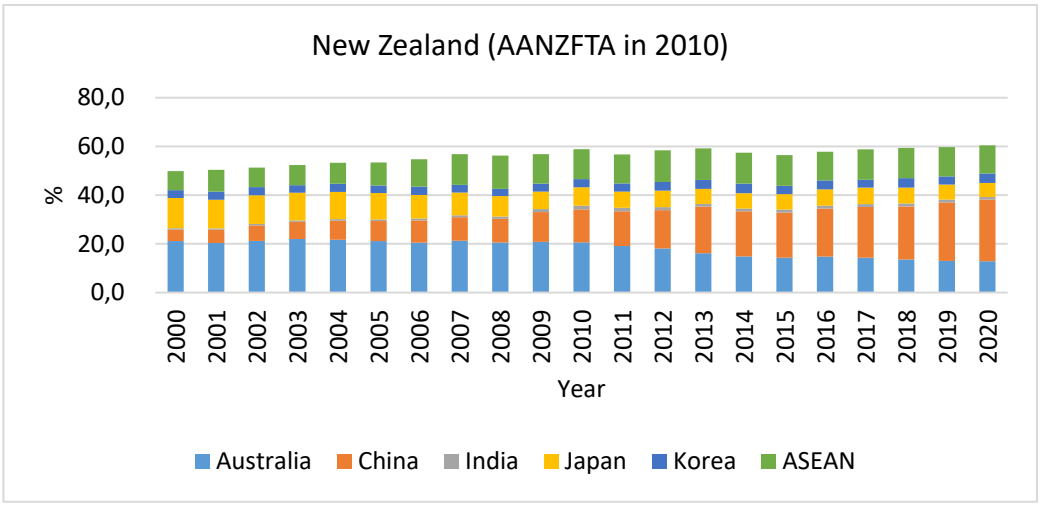


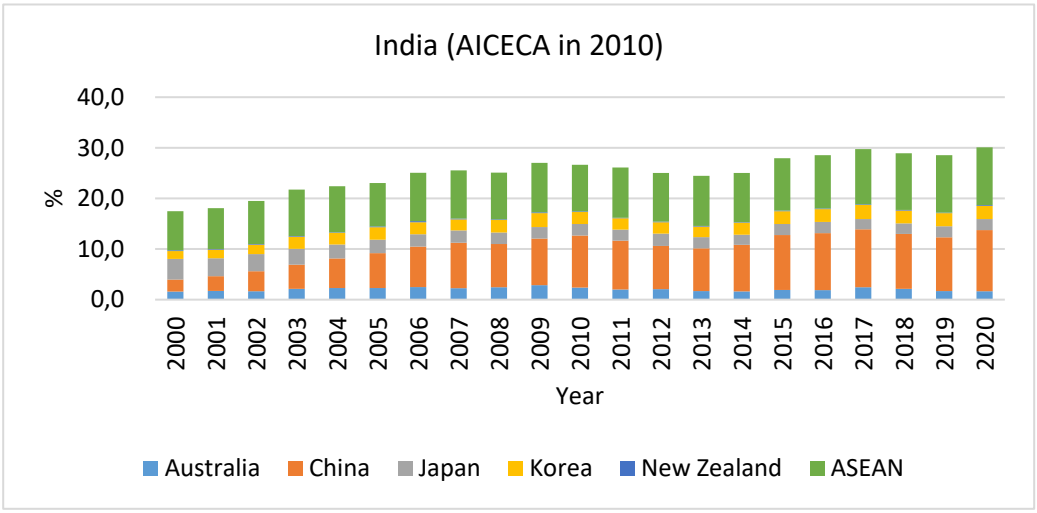
AANZFTA = ASEAN–Australia–New Zealand Free Trade Agreement, ACFTA = ASEAN–China Comprehensive Economic Cooperation Agreement, AICECA = ASEAN–India Comprehensive Economic Cooperation Agreement, AJCEP = ASEAN–Japan Comprehensive Economic Partnership, AKFTA = ASEAN–Korea Comprehensive Economic Cooperation Agreement, ASEAN = Association of Southeast Asian Nations.
Note: Figures in parenthesis indicate the year in effect.
Source: Author's calculation.

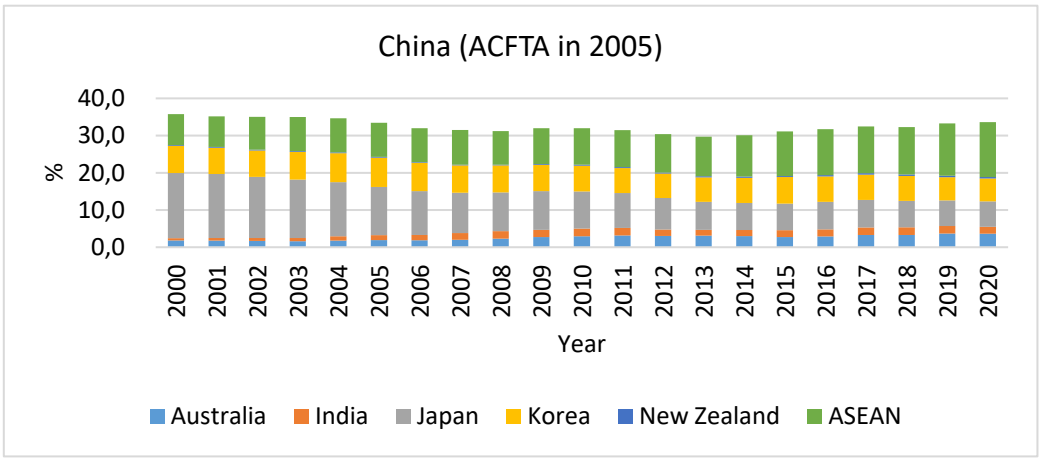
Figure 1 does not provide clear evidence of trade creation and diversion caused by the five ASEAN+1 FTAs as a possible turning point identified by the year in effect. To identify whether the bilateral trade shares between members and non-members of ASEAN+1 FTAs have changed after forming the trade bloc, Figure 2 delineates the bilateral trade shares into individual country/regional levels. All of the countries in the region show increasing intraregional trade shares mainly driven by trade with China – but not by trade with ASEAN. From Figures 1 and 2, there is not any strong evidence of a successful trade-creation effect generated by the ASEAN+1 FTAs when members' bilateral trade activities before and after the formation of the corresponding FTA are evaluated. However, these observations partially support findings from existing rigorous empirical studies (i.e. Yang and Martinez-Zarzoso, 2014; Okabe, 2019; Lee and Park, 2021) reporting the positive trade-creation effects of the ACFTA and AKFTA and the insignificant trade-creation effects of the AANZFTA, AICECA, and AJCEP.

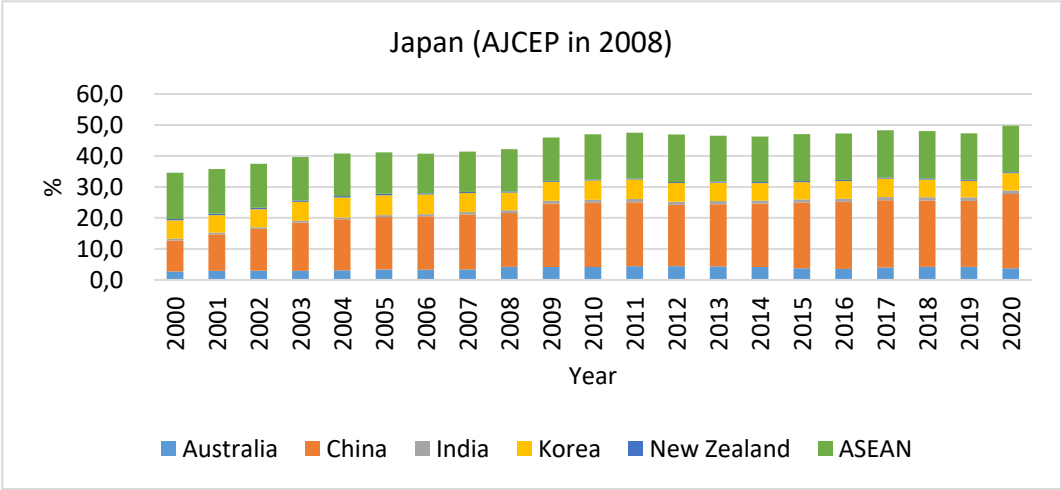
Figure 2: Intraregional Trade Shares, ASEAN+1 Free Trade Agreements

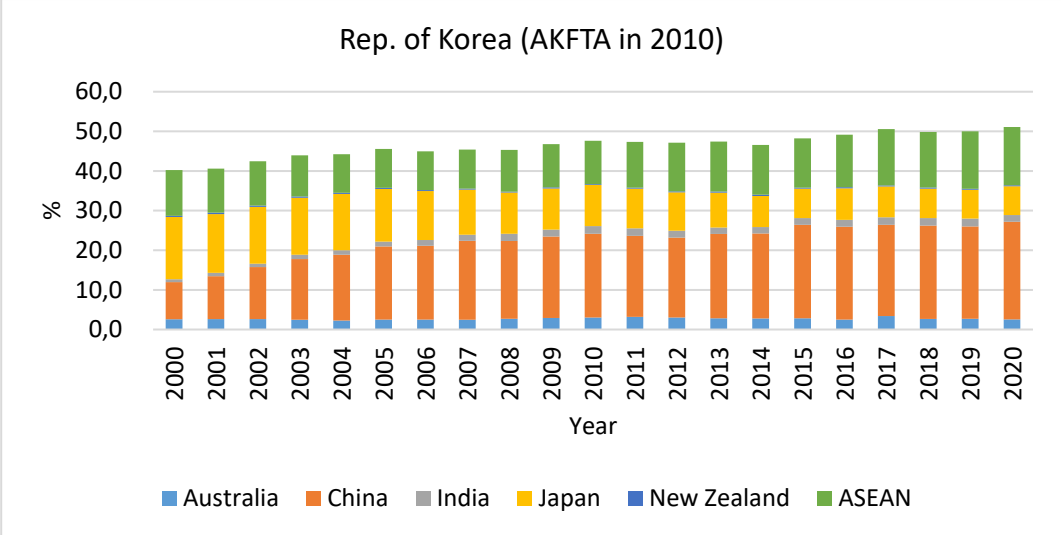


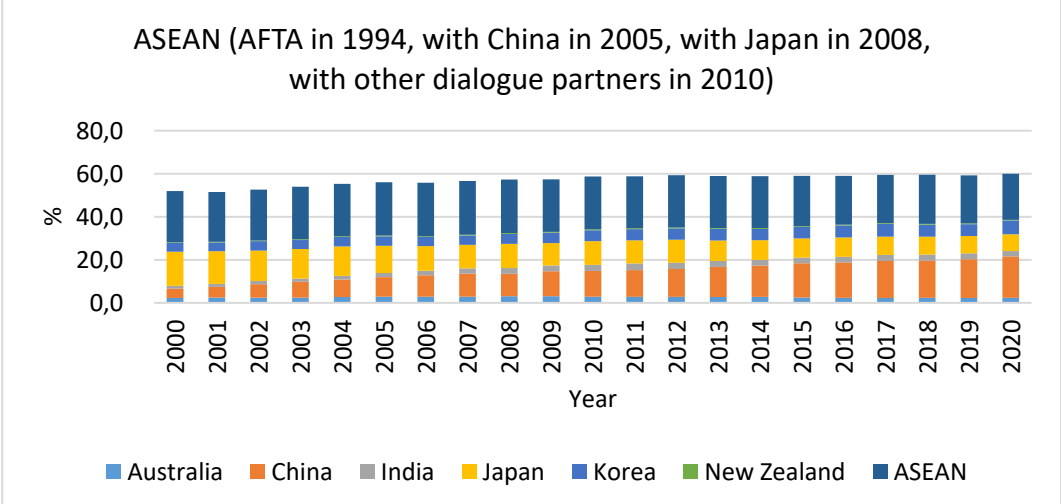

New Zealand (AANZFTA in 2010)
80,0
60,0
40,0
20,0
0,0
%
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020
Year
Australia China India Japan Korea ASEAN


India (AICECA in 2010)
40,0
30,0
20,0
10,0
0,0
%
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020
Year
Australia China Japan Korea New Zealand ASEAN


China (ACFTA in 2005)
40,0
30,0
20,0
10,0
0,0
%
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020
Year
Australia India Japan Korea New Zealand ASEAN







AANZFTA = ASEAN–Australia–New Zealand Free Trade Agreement, ACFTA = ASEAN–China Comprehensive Economic Cooperation Agreement, AFTA = ASEAN Free Trade Area, AICECA = ASEAN–India Comprehensive Economic Cooperation Agreement, AJCEP = ASEAN–Japan Comprehensive Economic Partnership, AKFTA = ASEAN–Korea Comprehensive Economic Cooperation Agreement, ASEAN = Association of Southeast Asian Nations.
Source: Author's calculation.

To overcome the ineffectiveness of the ASEAN+1 FTAs, the ASEAN+6 countries agreed to launch the region-wide RCEP by upgrading and consolidating existing provisions of the five ASEAN+1 FTAs. The US-initiated TPP negotiation, which was started earlier and moved quickly, could be another reason that RCEP was proposed by ASEAN and backed by China. That is, ASEAN's intention of maintaining its centrality and China's concern about losing its dominance in the regional market against the TPP drove the RCEP negotiation process.

3. Desirability of RCEP

RCEP was created for easier market access, by reducing trade costs between deeply interconnected countries through RVCs and existing sub-regional RTAs. More specifically, it aims to achieve wider, deeper Asia-Pacific regional integration that consolidates the already-implemented five ASEAN+1 FTAs. It is driven by ASEAN centrality and will establish the first trade agreement amongst China, Japan, and Korea.

RCEP's desirability has been widely discussed, based on expected gains from extended membership and deeper coverage compared to the existing ASEAN+1 FTAs. Particularly, RCEP is more flexible than other mega-lateral RTAs such as the CPTPP, EU, and USMCA. It allows certain members the freedom to negotiate different timelines for the date of entry into force for specific provisions. Moreover, agreements specifically linked to India remain open until India re-joins. RCEP is also flexible for membership expansion; it offers accession to countries that submit expressions of interest just 18 months into the agreement.

3.1. Scale

The current status of the RCEP members' economies is investigated that affect trade creation and the diversion effect of RTAs, such as market size; development level; participation in supply chains; intra-RTA trade volume; intra-RTA trade intensity; complementarity; and concentration of tradable products, trade cost, and cultural affinity.[8]

[8] The positive gains from trust-building between RTA members can be significantly influenced by the cultural distance between members, as investigated by Park and Park (2021).

RCEP is the largest regional trading bloc worldwide, comprising a combined population of 2.4 billion people (30.3% of the world population in 2020), regional GDP of $25.873 billion (30.6% of global GDP in 2020), and regional trade of $10.173 billion (29.1% of global trade in 2020) (Table 5). Intra-RCEP trade constitutes 44.1% of members' global trade – larger than that of the CPTPP (35.6%) in 2020. More specifically, the intra-RCEP trade value is $4.491 billion (12.9% of global trade in 2020), which is 2.4 times larger than the intra-CPTPP trade of $1.903 billion (5.5% of global trade in 2020). Assuming that India and the US join, the intra-RCEP16 trade will be $4.684 billion (13.4% of global trade), and the intra-TPP trade will be $3.436 billion (9.8% of global trade).

However, the GDP per capita of the RCEP members ($11,000) is lower than that of CPTPP ($19,966) and USMCA ($56,072) members, and the gap is much wider than that of other blocs. Considering that the GDP per capita represents the level of economic development, the developmental gap between the RCEP members is wider, encompassing many developing countries in transitional ASEAN economies, in contrast to the CPTPP and USMCA.

Table 5: Scale of Selected Regional Trade Agreements, 2020

	GDP		Population		GDP per Capita	Trade with World		Intra-RCEP Trade			Intra-CPTPP Trade			Intra-RCEP16 Trade		Intra-TPP Trade	
	$ billion	% of world	million	% of world	$	$ billion	% of world	$ billion	% of total trade	% of world	$ billion	% of total trade	% of world	$ billion	% of total trade	$ billion	% of total trade
Australia	1,331	1.6	25.7	0.3	51,812	469	1.3	300	6.7	63.9	88	4.6	18.7	309	6.6	124	3.6
Brunei Darussalam	12	0.0	0.4	0.0	27,466	12	0.0	9	0.2	79.0	6	0.3	53.7	10	0.2	7	0.2
Cambodia	25	0.0	16.7	0.2	1,513	35	0.1	20	0.5	57.9				21	0.4		
Canada	1,644	1.9	38.0	0.5	43,258	819	2.3				70	3.7	8.5			566	16.5
Chile	253	0.3	19.1	0.2	13,232	133	0.4				17	0.9	12.8			37	1.1
China	14,723	17.4	1,402.1	18.1	10,500	4,658	13.3	1,479	32.9	31.7				1,566	33.4		
India	2,623	3.1	1,380.0	17.8	1,901	644	1.8							194	4.1		
Indonesia	1,058	1.3	273.5	3.5	3,870	313	0.9	192	4.3	61.2				207	4.4		
Japan	4,975	5.9	125.8	1.6	39,539	1,269	3.6	618	13.8	48.7	189	9.9	14.9	632	13.5	379	11.0
Korea	1,631	1.9	51.8	0.7	31,489	980	2.8	484	10.8	49.4				501	10.7		
Lao PDR	19	0.0	7.3	0.1	2,630	13	0.0	12	0.3	92.0				12	0.2		
Malaysia	337	0.4	128.9	1.7	10,402	423	1.2	262	5.8	61.8	108	5.7	25.4	271	5.8	143	4.2
Mexico	1,076	1.3	54.4	0.7	8,347	824	2.4				66	3.5	8.0			583	17.0
Myanmar	76	0.1	32.4	0.4	1,400	36	0.1	26	0.6	73.2				28	0.6		
New Zealand	211	0.2	5.1	0.1	41,478	76	0.2	45	1.0	59.4	21	1.1	27.1	46	1.0	28	0.8
Peru	202	0.2	33.0	0.4	6,127	75	0.2				12	0.6	15.5			25	0.7
Philippines	361	0.4	109.6	1.4	3,299	206	0.6	124	2.8	60.0				126	2.7		
Singapore	340	0.4	5.7	0.1	59,798	703	2.0	373	8.3	53.0	170	8.9	24.2	389	8.3	239	7.0
Thailand	502	0.6	69.8	0.9	7,189	437	1.3	252	5.6	57.6				261	5.6		
US	20,937	24.8	329.5	4.2	63,544	3,768	10.8									1,533	44.6
Viet Nam	271	0.3	97.3	1.3	2,786	541	1.5	296	6.6	54.7	79	4.1	14.6	306	6.5	170	5.0
RCEP	**25,873**	**30.6**	**2,352**	**30.3**	**11,000**	**10,173**	**29.1**	**4,491**	**100.0**	**44.1**							
CPTPP	**10,652**	**12.6**	**534**	**6.9**	**19,966**	**5,344**	**15.3**				**1,903**	**100.0**	**35.6**				
RCEP16	28,496	33.7	3,732	48.1	7,635	10,816	31.0							4,684	100.0		
TPP	31,589	37.3	863	11.1	36,604	9,112	26.1									3,436	100.0
ASEAN	3,002	3.5	742	9.6	4,048	2,719	7.8										

	GDP		Population		GDP per Capita	Trade with World		Intra-RCEP Trade			Intra-CPTPP Trade			Intra-RCEP16 Trade		Intra-TPP Trade	
	$ billion	% of world	million	% of world	$	$ billion	% of world	$ billion	% of total trade	% of world	$ billion	% of total trade	% of world	$ billion	% of total trade	$ billion	% of total trade
CJK	21,329	25.2	1,580	20.4	13,501	6,908	19.8										
USMCA	23,657	28.0	422	5.4	56,072	5,411	15.5										
World	84,578	100.0	7,752.8	100.0	10,909	34,914	100.0										

ASEAN = Association of Southeast Asian Nations; CJK = China, Japan, and Korea; CPTPP = Comprehensive and Progressive Agreement for Trans-Pacific Partnership; GDP = gross domestic product; Lao PDR = Lao People's Democratic Republic; RCEP = Regional Comprehensive Economic Partnership; RCEP16 = RCEP with India; TPP = Trans-Pacific Partnership; US = United States; USMCA = United States–Mexico–Canada Agreement.
Source: Author's calculation based on World Bank, World Development Indicators, https://databank.worldbank.org/source/world-development-indicators (accessed 2 November 2021); and ADB, Asia-Pacific Regional Cooperation and Integration Index, https://aric.adb.org/database/arcii (accessed 2 November 2021).

Table 6 compares bilateral trade shares of all TPP and the RCEP16 members, including the US and India, by RTA and region in 2020. It indicates that the RCEP members are mostly integrated in terms of bilateral trade activities (60.2% on average), followed by the USMCA (52.5%) and TPP (41.1%). Amongst the mega-lateral RTAs considered, the CPTPP (20.3%) is the least-connected RTA. In the RCEP region, ASEAN members (65.0%) are mostly connected through bilateral trade, followed by Australia and New Zealand (61.7%), and China, Japan, and Korea (43.3%).

Table 6: Bilateral Trade Share in 2020 by Regional Trade Agreement (%)

			RCEP	CPTPP	RCEP16	TPP	USMCA	ASEAN	CJK	ANZ
	TPP	US	32.5	40.7	34.6	40.7	28.2	8.2	23.1	1.2
		Canada	16.5	8.5	17.3	69.2	64.1	2.5	13.4	0.5
		Mexico	19.4	8.0	20.2	70.8	65.2	4.0	15.2	0.2
		Chile	46.3	12.8	47.5	28.0	18.6	2.3	43.5	0.5
		Peru	35.5	15.5	37.3	33.8	24.1	2.9	32.2	0.4
RCEP16		Australia	63.9	18.7	66.0	26.5	9.1	10.6	50.8	2.6
		New Zealand	59.4	27.1	60.5	37.4	12.1	11.6	34.9	12.9
		Brunei Darussalam	79.0	53.8	81.8	57.6	4.0	36.4	38.7	3.9
		Malaysia	61.8	25.4	64.1	33.8	9.3	24.3	34.4	3.1
		Singapore	53.0	24.2	55.3	34.0	11.1	25.4	24.3	3.3
		Viet Nam	54.7	14.6	56.5	31.4	18.5	10.0	43.0	1.7
		Japan	48.7	14.9	49.8	29.8	17.4	15.0	29.6	4.1
		Korea	49.4	24.1	51.1	37.6	16.0	14.7	31.9	2.8
		China	31.7	23.9	33.6	36.5	15.3	14.7	13.0	4.0
		Cambodia	57.9	20.4	58.4	36.3	18.3	23.1	34.1	0.6
		Indonesia	61.2	29.8	66.2	38.0	9.3	24.0	34.5	2.6
		Lao PDR	92.0	12.3	92.2	13.3	1.5	60.0	31.6	0.4
		Myanmar	73.2	21.4	77.7	23.9	3.1	33.3	39.2	0.7
		Philippines	60.0	25.2	61.3	38.0	13.7	21.5	37.3	1.2
		Thailand	57.6	28.6	59.8	39.8	12.4	21.6	32.5	3.4
		India	30.1	13.3	30.1	25.1	13.6	11.4	16.9	1.8
Intraregional Average			**60.2**	**20.3**	**60.3**	**41.1**	**52.5**	**28.0**	**24.8**	**7.8**

ANZ = Australia and New Zealand; ASEAN = Association of Southeast Asian Nations; CJK = China, Japan, and Korea; CPTPP = Comprehensive and Progressive Agreement for Trans-Pacific Partnership; Lao PDR = Lao People's Democratic Republic; RCEP = Regional Comprehensive Economic Partnership; RCEP16 = RCEP with India; TPP = Trans-Pacific Partnership; US = United States; USMCA = United States–Mexico–Canada Agreement.
Source: Author's calculation based on ADB, Asia-Pacific Regional Cooperation and Integration Index, https://aric.adb.org/database/arcii (accessed 2 November 2021).

Table 7 also compares the bilateral trade intensity of TPP and the RCEP16 members, including the US and India, by RTA and region in 2020. It indicates that the RCEP members' bilateral trade intensity (2.6 on average) is much higher than the competitive CPTPP (1.7), although it is less intensive than the USMCA (4.4). In the RCEP region, ASEAN Members (2.9) most intensively trade with each other followed by Australia and New Zealand (2.2); China, Japan, and Korea (1.8) less intensively trade with each other.

Table 7: Bilateral Trade Intensity in 2020, Simple Average by Region (%)

			RCEP	CPTPP	RCEP16	TPP	USMCA	ASEAN	CJK	ANZ
	TPP	US	0.9	2.0	0.9	2.0	6.2	0.8	1.2	0.8
		Canada	0.4	0.6	0.4	1.1	3.6	0.3	0.6	0.4
		Mexico	0.4	0.5	0.4	1.0	3.5	0.3	0.8	0.2
		Chile	0.6	1.3	0.6	1.4	1.0	0.2	1.9	0.5
		Peru	0.5	1.5	0.6	1.5	1.4	0.3	1.5	0.5
RCEP16		Australia	2.6	2.7	2.5	2.6	0.4	1.7	2.3	12.1
		New Zealand	1.9	1.9	1.8	1.8	0.6	1.1	1.6	9.7
		Brunei Darussalam	2.7	2.8	2.6	2.6	0.1	3.0	2.5	1.6
		Malaysia	2.8	2.3	2.7	2.2	0.4	3.2	2.1	1.9
		Singapore	3.2	2.4	3.1	2.3	0.5	4.1	1.3	2.1
		Viet Nam	2.3	0.9	2.2	1.0	0.8	2.5	2.7	1.1
		Japan	1.9	1.7	1.8	1.6	0.8	1.9	1.9	2.2
		Korea	1.4	1.5	1.4	1.4	0.8	1.3	2.0	1.6
		China	1.9	1.7	1.9	1.7	0.8	1.9	2.0	2.2
		Cambodia	1.7	1.1	1.6	1.1	0.9	2.1	1.4	0.3
		Indonesia	2.3	1.7	2.4	1.6	0.4	2.6	1.9	1.6
		Lao PDR	3.5	0.6	3.3	0.5	0.1	5.0	1.1	0.2
		Myanmar	2.3	1.1	2.3	1.0	0.2	2.9	1.6	0.5
		Philippines	2.1	1.5	2.0	1.5	0.5	2.3	2.2	1.1
		Thailand	6.4	1.8	6.1	1.7	0.5	8.9	1.9	2.1
		India	1.1	1.1	1.1	1.1	0.6	1.3	0.8	0.9
Intraregional Average			**2.6**	**1.7**	**2.4**	**1.8**	**4.4**	**3.6**	**2.0**	**10.9**

ASEAN = Association of Southeast Asian Nations; CJK = China, Japan, and Korea; CPTPP = Comprehensive and Progressive Agreement for Trans-Pacific Partnership; Lao PDR = Lao People's Democratic Republic; RCEP = Regional Comprehensive Economic Partnership; RCEP16 = RCEP with India; TPP = Trans-Pacific Partnership; US = United States; USMCA = United States–Mexico–Canada Agreement.

Source: Author's calculation based on ADB, Asia-Pacific Regional Cooperation and Integration Index, https://aric.adb.org/database/arcii (accessed 2 November 2021).

Table 8 compares some additional indicators, measuring connectivity amongst members in RCEP, EU, and North America. It shows that the RCEP members are mostly interconnected through RVCs – as indicated by the intermediate export and import shares (60.5% and 68.3%, respectively) – amongst the three major blocs.

Considering overall trade costs,[9] RCEP still has room to reduce trade costs between members, relative to those between more developed member countries in the EU and North America. The cultural distance (measured by cultural proximity) between the RCEP members is longer than that between EU members but shorter than that between North American countries. However, the RCEP members' trade structure is less complementary (0.5) to generate gains from integration, and their trade is highly concentrated in a limited number of products (4.1).

Table 8: Regional Interdependence, 2018 (% of global)

	RCEP16	EU	US and Canada
Intermediate Goods Exports	60.5	48.6	51.7
Intermediate Goods Imports	68.3	46.8	53.8
Complementarity	0.5	0.8	0.8
Concentration	4.1	2.6	1.1
Trade Costs	0.9	0.4	0.2
Cultural Proximity	1.8	3.0	1.5

EU = European Union, RCEP16 = Regional Comprehensive Economic Partnership including India, US = United States.
Source: Author's calculation based on ADB, Asia-Pacific Regional Cooperation and Integration Index, https://aric.adb.org/database/arcii (accessed 2 November 2021).

Overall, evaluating the conditions for desirable RTAs in terms of scale determined by member-specific characteristics, RCEP is expected to generate significantly larger gains compared to other RTAs, especially the CPTPP. However, a wider development gap and higher concentration of tradable products should be

[9] According to ADB (2021), the bilateral trade cost data are drawn from the United Nations Economic and Social Commission for Asia and the Pacific and World Bank. They measure the ratio between the average trade cost over regional trading partners and average trade cost overall of the trading partners, including all costs related to trading goods between international partners relative to the costs of trading goods domestically.

considered to make RCEP a more desirable RTA.

3.2. Depth

The effectiveness of RTAs depends on members' economic characteristics and the depth of provisions. Matto, Rocha, and Ruta (2020) and Fernandes, Rocha, and Ruta (2021) discussed the changing pattern of RTA characteristics from typical shallow preferential trade agreements to deep trade agreements worldwide. They elaborated upon the enhanced effectiveness of deep trade agreements by generating larger trade-creation effects and fewer trade-diversion effects than those of shallow trade agreements.

The depth of RCEP is evaluated in terms of tariff concession rates and provisions compared to other RTAs. Consolidating and upgrading the five ASEAN+1 FTAs, the depth of RCEP deepened; however,, this effect was still less compared to the competitive CPTPP and USMCA (Table 9). The RCEP provisions not only lack certain major issues – such as provisions on labour, the environment, regulatory coherence, anti-corruption, transparency, state-owned enterprises, and competitiveness – but are also less rigorously implemented than those of the CPTPP (Park, Petri, Plummer, 2021). Additionally, although RCEP includes specific e-commerce, services, and investment provisions, they are relatively weak.

Table 9: Comparison of Provisions of Selected Regional Trade Agreements

Issue	TPP	USMCA	CPTPP	RCEP
Market Access for Goods	O	O	O	O
Rules of Origin: Cumulation Rule	O	O	O	O
Customs Administration and Trade Facilitation	O	O	O	O
Trade Remedies	O	O	O	O
Sanitary and Phytosanitary Measures	O	O	O	O
Technical Barriers to Trade	O	O	O	O
Cross Border Trade in Services	O	O	O	O
Electronic Commerce (Digital Trade)	O	O	O	O
Investment	O	O	O	O
Competition	O	O	O	O
Intellectual Property	O	O	O	O
Government Procurement	O	O	O	O
Labour	O	O	O	X
Environment	O	O	O	X
Dispute Settlement	O	O	O	O
Regulatory Coherence	O	O	O	X
Transparency	O	O	O	X

Issue	TPP	USMCA	CPTPP	RCEP
Anti-Corruption	O	O	X	X
Cooperation	O	O	O	O
Development	O	X	O	O
State-Owned Enterprises	O	O	O	X
Small and Medium-Sized Enterprises	O	O	O	O
Competitiveness	O	O	X	X
Macroeconomic Policies and Exchange Rate Matters	X	O	X	X

CPTPP = Comprehensive and Progressive Agreement for Trans-Pacific Partnership, RCEP = Regional Comprehensive Economic Partnership, TPP = Trans-Pacific Partnership, USMCA = United States–Mexico–Canada Agreement.
Note: O (or X) identifies whether the corresponding provision is included (or excluded) in the agreement. The rigorousness of provisions is not considered.
Source: Kim (2021).

The tariff concession rates of RCEP (91% on average) are lower than those of four ASEAN+1 FTAs (94% on average), excluding the AICECA (Table 10). RCEP, which positively lists products to be liberalised, eliminates 86%–100% of tariffs within 20 years and covers only a narrow part of services. The CPTPP, which negatively lists products to be liberalised, eliminates 95%–100% of tariffs and opens around 160 services industries. For manufacturing products, RCEP eliminates 92% of tariffs, which is lower than the complete elimination of tariffs under the CPTPP. Moreover, unlike the common tariff concession rule applied to all CPTPP members, the tariff reduction schedule of RCEP is relatively complex, allowing different preferential treatment by pair of member countries.

Table 10: Comparison of Tariff Concession Rates, ASEAN+1 Free Trade Agreements and RCEP (%)

ASEAN	AANZFTA	ACFTA	AICECA	AJCEP	AKFTA	Average Excluding AICECA	RCEP
Brunei Darussalam	99	98	85	98	99	99	98
Cambodia	89	90	88	85	91	89	87
Indonesia	93	92	49	91	91	92	91
Lao PDR	92	97	80	86	90	91	86
Malaysia	97	93	80	94	92	94	90
Myanmar	88	94	77	85	92	90	86
Philippines	95	92	81	97	90	94	91

ASEAN	AANZFTA	ACFTA	AICECA	AJCEP	AKFTA	Average Excluding AICECA	RCEP
Singapore	100	100	100	100	100	100	100
Thailand	99	93	78	96	95	96	90
Viet Nam	95	92	79	94	89	93	89
Average	**95**	**94**	**80**	**93**	**93**	**94**	**91**
Dialogue Partners							
Australia	100					100	98
China		95				95	89
India			79				
Japan				92		92	88
Korea					90	90	88
New Zealand	100					100	92
Average	**100**	**95**	**79**	**92**	**90**	**95**	**91**
Average as a whole	**96**	**94**	**80**	**93**	**93**	**94**	**91**

AANZFTA = ASEAN–Australia–New Zealand Free Trade Agreement, ACFTA = ASEAN–China Comprehensive Economic Cooperation Agreement, AICECA = ASEAN–India Comprehensive Economic Cooperation Agreement, AJCEP = ASEAN–Japan Comprehensive Economic Partnership, AKFTA = ASEAN–Korea Comprehensive Economic Cooperation Agreement, ASEAN = Association of Southeast Asian Nations, RCEP = Regional Comprehensive Economic Partnership.
Source: Author's revision based on Pambagyo (2020).

There are a few notable provisions distinct from existing ASEAN+1 FTAs. The consistent application of the ROO for all products will simplify the origin verification process, increasing the RCEP's utilisation rate. Adopting the diagonal cumulation scheme will generate significant gains, considering the deepened RVCs amongst the RCEP members; however, these may not be comparable to those of the CPTPP. The full cumulation scheme adopted in the CPTPP will reduce trade costs more than the diagonal cumulation adopted in RCEP, as estimated by Chung, Park, and Park (2022).[10] Meanwhile, the introduction of ROO self-certification is another less-restrictive application of regime-wide ROO. Additionally, rules for securing intellectual property rights, including the digital copyright rule, are strong,

[10] They ran a gravity model estimation to investigate the effect of the ROO cumulation on bilateral trade costs amongst FTA members, finding that FTAs with diagonal cumulation and full cumulation reduced trade costs by 15.8% and 25.9%, respectively.

and non-tariff barriers will be gradually unified to activate intraregional trade.

Overall, positive gains are expected from the depth of RCEP by consolidating and upgrading the five ASEAN+1 FTAs, although gains through deeper integration may not be comparable to those of the CPTPP.

4. Effects of RCEP[11]

The positive gains from participating in RCEP will be larger than those from the CPTPP if the comparative advantage of member-specific characteristics is considered. The immediate scale effects generated by larger, more connected memberships will be accelerated over time. Meanwhile, the shallower depth of RCEP relative to the CPTPP could be a worrisome factor in generating substantial long-term gains. Additionally, the arrival of RCEP after the CPTPP could limit additional gains to the RCEP members, especially to dual members, who may prefer to utilise the CPTPP provisions rather than favouring RCEP.

There is no comprehensive study covering all of the aforementioned member- and provision-specific factors considering the sequential process of RTA implementation. However, a few studies have estimated the likely impact of RCEP and CPTPP by applying a commonly used computable general equilibrium (CGE) model analysis with relevant specifications and model frameworks.[12]

Table 11 compares the impacts of mega-lateral RTAs on real GDP by independently simulating the liberalisation packages of RCEP and other RTAs

[11] This section reinterprets empirical findings from some existing computable general equilibrium (CGE) model analyses on the impact of mega-lateral RTAs in the Asia-Pacific region, mainly for consistent comparison, considering model types and specifications that are closely related to RCEP and other interdependent FTAs such as the CPTPP. For a more comprehensive study on the impact of RCEP by using the CGE model analysis, see Itakura (2022).

[12] See Lee and Itakura (2018), using the dynamic GTAP model for eliminating tariffs and non-tariff barriers; Itakura and Lee (2019), using the global CGE model with disaggregated imports of intermediate products by country of origin for global value chain connectivity; Ahmed et al. (2020), using the MPSGE model employing GAMS and reducing only tariffs; and Kumagai and Hayakawa (2021), using the IDE-GSM model for tariff reduction. Their predictions unanimously showed that significant positive gains will be enjoyed by RCEP members, and relatively larger gains will be shared by China, Japan, and the Republic of Korea over ASEAN Members.

reported in Ferrantino, Maliszewska, and Taran (2019) and Chung, Park, and Park (2022). As a conventional approach to measure the likely impact of the mega-lateral RTAs, Ferrantino, Maliszewska, and Taran (2019) used the World Bank's global dynamic CGE model, Linkage, covering 17 production sectors and 35 countries, and simulated a reduction of tariffs and non-tariff measures in both trade in goods and services without and with a change in productivity. To emphasise the significant impact of the ROO cumulation schemes of mega-lateral RTAs, Chung, Park, and Park (2022) used the Global Trade Analysis Project (GTAP) model, covering 140 regions and 57 commodities, and simulated a reduction of bilateral trade costs under different ROO cumulation schemes of RTAs, diagonal or full cumulation without and with capital accumulation over time. The two cases are found to be similar in terms of magnitude. The mega-lateral RTAs increase world GDP as a whole, ranging from 0.09% (CPTPP) to 0.24% (TPP) to 0.29% or 0.56% (RCEP16) to 0.70% or 0.96% (FTAAP).

Interpreting the static model experiments comparing RCEP16 and CPTPP, it is found that

(i) RCEP16 members draw larger benefits (1.46% in Ferrantino, Maliszewska, and Taran [2019] and 1.14% in Chung, Park, and Park [2022]) than CPTPP members (0.43% and 0.71%, respectively);

(ii) the differences in members' gains between RCEP16 and CPTPP (i.e. RCEP16 minus CPTPP) are relatively small, as the ROO cumulation schemes (1.03% versus 0.43%, respectively) are considered, indicating more effective full cumulation than diagonal cumulation;

(iii) the effects on non-members are not significant (–0.04% ~ 0.03%);

(iv) the CPTPP is more desirable for ASEAN (0.36%) and Australia and New Zealand (0.45%) than for China, Japan, and Korea (0.14%), and RCEP16 is more desirable for China, Japan, and Korea (1.66%) than ASEAN (0.38%) and Australia and New Zealand (0.44%) without considering the ROO cumulation; however, both the CPTPP and RCEP16 become more desirable for ASEAN (1.25% and 2.73%, respectively) and Australia and New Zealand (0.87% and 0.99%,

respectively) than China, Japan, and Korea (0.15% and 0.93%, respectively) when ROO cumulation is considered, indicating that the

ASEAN-centred complicated ROO could be problematic before harmonisation under RCEP16;

(v) both the US's return to the TPP and the expansionary path of the FTAAP generate larger gains for both ASEAN and China, Japan, and Korea;

(vi) productivity improvement and capital accumulation over time generate much stronger positive gains without incurring significant negative effects on non-members;

(vii) at the county level, RCEP16 is more desirable for Brunei Darussalam, Malaysia, Philippines, China, Japan, Korea, and India;

(viii) if the regional ROO cumulation of RCEP16 is considered, Cambodia, the Lao PDR, Malaysia, Singapore, Thailand, Viet Nam, and Korea draw relatively larger gains.

Table 11: Impact on Gross Domestic Product by Independently Simulated CGE Model Analysis (% deviation from the baseline)

	Ferrantino, Maliszewska, and Taran (2019)										Chung, Park, and Park (2022)							
	Standard Simulations					Simulations with Productivity Kick					Static Model				Capital Accumulation Model			
	CPTPP	RCEP16	RCEP16-CPTPP	TPP	FTAAP	CPTPP	RCEP16	RCEP16-CPTPP	TPP	FTAAP	CPTPP: Full Cumul.	RCEP16: Diagonal Cumul.	RCEP16-CPTPP	FTAAP: Diagonal Cumul.	CPTPP: Full Cumul.	RCEP16: Diagonal Cumul.	RCEP16-CPTPP	FTAAP: Diagonal Cumul.
Canada	0.37	0.03	–0.34	0.76	0.95	1.66	0.01	–1.65	1.01	1.68	0.32	–0.03	–0.35	1.74	0.32	–0.08	–0.40	3.44
Chile	0.12	0.14	0.02	0.12	0.14	0.14	0.08	–0.06	0.13	0.29	0.84	–0.07	–0.91	1.57	0.84	–0.67	–1.51	4.63
Mexico	0.13	–0.02	–0.14	0.20	0.36	0.79	0.02	–0.78	0.29	1.69	0.42	–0.06	–0.48	2.06	0.42	–0.26	–0.68	9.27
Peru	0.95	0.16	–0.79	1.23	0.78	1.13	0.07	–1.05	1.33	0.88	0.54	0.02	–0.52	1.01	0.54	–0.08	–0.62	1.83
Australia	0.45	0.52	0.07	0.35	0.54	0.54	2.34	1.81	0.41	0.69	0.87	0.95	0.08	1.02	0.87	2.35	1.48	2.26
Brunei Darussalam	1.88	1.70	–0.18	2.47	2.23	1.90	1.89	–0.01	2.72	2.39	1.93	1.45	–0.48	1.54	1.93	6.79	4.86	5.54
Japan	0.41	0.74	0.33	1.39	1.61	1.04	2.99	1.95	2.12	3.41	0.45	0.62	0.17	0.99	0.45	2.31	1.86	3.31
Malaysia	0.99	0.80	–0.19	1.80	1.49	1.34	0.98	–0.35	2.61	1.70	4.58	4.08	–0.50	4.62	4.58	11.93	7.35	14.47
New Zealand	0.44	–0.31	–0.76	0.67	–0.33	0.48	–0.06	–0.54	0.76	–0.20	0.83	1.29	0.46	1.53	0.83	4.48	3.65	5.12
Singapore	0.80	0.45	–0.36	0.81	0.55	0.81	0.35	–0.46	0.81	0.45	3.17	3.18	0.01	4.02	3.17	11.55	8.38	13.17
Viet Nam	1.13	0.39	–0.73	3.61	1.59	3.50	0.98	–2.53	6.64	2.08	3.83	5.57	1.74	8.23	3.83	10.61	6.78	19.47
US	0.05	0.07	0.02	0.38	0.58	0.05	0.04	0.00	0.51	2.51	–0.01	–0.02	–0.01	0.83	–0.01	–0.09	–0.08	1.56
Thailand	0.24	0.08	–0.16	0.44	0.76	0.24	0.44	0.20	0.44	1.67	–0.18	3.63	3.81	4.13	–0.18	12.70	12.88	15.62
Korea	–0.04	1.68	1.72	–0.30	1.68	–0.03	3.88	3.91	–0.29	4.98	0.00	2.09	2.09	2.76	0.00	6.17	6.17	8.19
Philippines	0.04	0.75	0.71	0.17	2.24	0.04	0.88	0.84	0.17	2.84	–0.05	2.06	2.11	2.51	–0.05	8.74	8.79	11.43
Indonesia	0.07	0.18	0.11	0.16	0.89	0.07	0.40	0.32	0.17	1.61	–0.05	1.37	1.42	1.51	–0.05	3.30	3.35	3.83
Cambodia	–0.01	0.53	0.53	–0.04	–0.38	0.00	1.21	1.21	–0.01	–0.31	–0.14	6.07	6.21	0.00	–0.14	13.75	13.89	0.00
Lao PDR	0.06	0.60	0.53	0.04	0.04	0.07	1.18	1.11	0.05	0.23	0.00	3.95	3.95	0.00	0.00	7.79	7.79	0.00
India	0.06	1.75	1.68	0.20	0.22	0.06	8.17	8.10	0.20	0.24	–0.05	1.08	1.13	0.00	–0.05	2.82	2.87	0.00
China	0.06	1.98	1.92	0.03	3.08	0.06	5.67	5.60	0.03	7.52	–0.06	0.98	1.04	1.70	–0.06	2.11	2.17	3.69
European Union	0.01	0.00	–0.01	0.02	0.00	0.01	–0.02	–0.03	0.02	–0.01	–0.01	–0.03	–0.02	–0.08	–0.01	–0.12	–0.11	–0.49
Rest of World	0.01	0.01	0.00	0.03	0.27	0.02	0.03	0.02	0.03	1.72	–0.03	–0.06	–0.03	0.13	–0.03	–0.31	–0.28	0.10
World	**0.09**	**0.56**	**0.47**	**0.24**	**0.96**	**0.18**	**1.73**	**1.55**	**0.33**	**2.69**	**0.09**	**0.29**	**0.20**	**0.70**	**0.09**	**0.77**	**0.67**	**1.65**

Members	**0.43**	**1.46**	**1.03**	**0.65**	**1.60**	**1.06**	**4.64**	**3.58**	**0.92**	**4.60**	**0.71**	**1.14**	**0.43**	**1.35**	**0.47**	**1.42**	**0.95**	**3.47**
Non-members	**0.03**	**0.03**	**–0.01**	**0.03**	**0.00**	**0.03**	**0.02**	**–0.02**	**0.04**	**0.00**	**–0.02**	**–0.04**	**–0.01**	**–0.12**	**–0.01**	**–0.11**	**–0.10**	**–0.61**
ASEAN	**0.36**	**0.38**	**0.02**	**0.72**	**1.14**	**0.57**	**0.60**	**0.03**	**1.04**	**1.70**	**1.25**	**2.73**	**1.48**	**3.24**	**1.25**	**8.18**	**6.93**	**10.20**
CJK	**0.14**	**1.66**	**1.52**	**0.33**	**2.63**	**0.29**	**4.90**	**4.61**	**0.51**	**6.35**	**0.15**	**0.93**	**0.77**	**1.50**	**0.15**	**2.53**	**2.38**	**3.91**
ANZ	**0.45**	**0.44**	**–0.01**	**0.38**	**0.46**	**0.53**	**2.12**	**1.59**	**0.44**	**0.61**	**0.87**	**0.99**	**0.12**	**1.07**	**0.87**	**2.58**	**1.71**	**2.56**
Model	A global dynamic CGE model (Linkage): 17 production sectors and 35 countries; impacts of policy changes up to 2030 as a baseline solution; reduction of tariffs and non-tariff measures in goods and services trade.										GTAP Model: 140 regions and 57 commodities of GTAP Data Version 9; reducing trade costs between trading partners by different rules of origin cumulation schemes of regional trade agreements by estimating a gravity regression model.							

ANZ = Australia and New Zealand; ASEAN = Association of Southeast Asian Nations; CGE = computable general equilibrium; CJK = China, Japan, and Korea;
CPTPP = Comprehensive and Progressive Agreement for Trans-Pacific Partnership; FTAAP = Free Trade Area of the Asia-Pacific; GTAP = Global Trade Analysis Project;
Lao PDR = Lao People's Democratic Republic; RCEP = Regional Comprehensive Economic Partnership; RCEP16 = RCEP with India; TPP = Trans-Pacific Partnership;
US = United States.
Source: Author's calculation.

Table 12 shows the impacts of mega-lateral RTAs on real GDP by sequentially simulating liberalisation packages of RCEP and CPTPP reported in Petri and Plummer (2020) and Park, Petri, and Plummer (2021). Both used the modified global CGE model, which was introduced in Petri and Plummer (2016) and Petri, Plummer, and Zhai (2012). It encompasses 29 regions and 19 economic sectors, dynamically projecting annual results from a 2015 base year until 2030 as a baseline solution, and liberalising tariff, non-tariff, and foreign direct investment without and with a US–China trade war.

Interpreting Petri and Plummer (2020), the mega-lateral RTAs are found to increase world GDP as a whole, ranging from 0.11% (CPTPP) to 0.25% (RCEP) to 0.29% (RCEP16). The positive gains from the CPTPP (1.04%) are larger, and the additional gains from RCEP (0.60%) on top of the CPTPP are much smaller than the independently simulated model estimations in Table 3-11. Dual members' gains (1.73% or 1.66%) are much larger than single members' gains (0.29% or 0.38%) from participating in both RCEP (either 15 or 16) and the CPTPP together; the lower additional gains derived from RCEP and larger gains shared by dual members explain the larger gains enjoyed by ASEAN and Australia and New Zealand than China, Japan, and Korea as a group in Table 3-12.

Conversely, interpreting Park, Petri, and Plummer (2021), a US–China trade war decreases world GDP by 0.38%, and the mega-lateral RTAs offset the negative effect of 0.14% (CPTPP) and 0.33% (RCEP on top of CPTPP). Dual members of RCEP and CPTPP (2.37%) are found to overcome the negative GDP effect incurred because of a trade war, but single members still experience a negative GDP effect (–1.02%). Overall, the additional gains generated by RCEP on top of the CPTPP are negative for all members of RCEP (–0.29%). However, the additional gains generated by RCEP on top of the CPTPP are positive for all members of RCEP excluding China (–1.44%). ASEAN will take advantage of a US–China trade war by collecting 1.31% more GDP and even more additional GDP gains from implementing RCEP on top of the CPTPP (1.31% and 1.80%, respectively).

Table 12: Impact on Gross Domestic Product by Sequentially Simulated CGE Model Analysis (% deviation from the baseline)

	Petri and Plummer (2020)					Park, Petri, and Plummer (2021)			
	Business as Usual					With US–China Trade War			
	CPTPP	RCEP after CPTPP	RCEP16 after CPTPP	Incremental Effects of RCEP	Incremental Effects of RCEP16	US-China Trade War	CPTPP	RCEP after CPTPP	Incremental Effects of RCEP
Canada	0.81	0.81	0.81	0.00	0.00	0.22	1.18	1.21	0.04
Chile	0.65	0.65	0.65	0.00	0.00	–0.22	0.65	0.65	0.00
Mexico	0.74	0.74	0.74	0.00	0.00	1.34	2.31	2.35	0.05
Peru	2.26	2.26	2.26	0.00	0.00	0.23	2.94	2.94	0.00
Australia	0.46	0.50	0.62	0.04	0.12	–0.08	0.50	0.58	0.08
Brunei Darussalam	3.23	3.23	3.23	0.00	0.00	0.00	3.23	3.23	0.00
Japan	0.93	1.91	1.73	0.97	–0.18	0.14	1.30	2.52	1.22
Malaysia	3.11	3.70	3.56	0.59	–0.15	0.59	4.89	5.93	1.04
New Zealand	1.14	1.52	1.52	0.38	0.00	0.00	1.52	1.89	0.38
Singapore	2.68	2.68	2.89	0.00	0.21	–0.62	2.47	2.47	0.00
Viet Nam	2.21	2.82	2.62	0.60	–0.20	1.01	4.43	5.43	1.01
US	–0.01	0.00	0.00	0.00	0.00	–0.16	–0.17	–0.17	0.00
Thailand	–0.62	–0.12	–0.25	0.49	–0.12	0.74	0.12	0.99	0.86
Korea	–0.13	0.89	0.80	1.03	–0.09	0.31	0.13	1.38	1.25
Philippines	0.00	0.29	0.15	0.29	–0.15	0.44	0.44	0.88	0.44
Indonesia	–0.05	0.09	0.00	0.14	–0.09	0.14	0.05	0.23	0.18
India	–0.07	–0.18	0.91	–0.11	1.09	0.31	0.22	0.09	-0.13
China	–0.04	0.27	0.30	0.31	0.03	–1.85	–1.90	–1.44	0.46
Europe	0.05	0.11	0.10	0.06	0.00				
Rest of world	0.01	0.02	0.01	0.01	0.00	–0.09	–0.07	–0.05	0.03
World	**0.11**	**0.25**	**0.29**	**0.14**	**0.04**	**–0.38**	**–0.24**	**–0.05**	**0.20**
Members	**1.04**	**0.60**	**0.63**	**0.24**	**0.09**		**1.62**	**–0.29**	**–0.85**

	Petri and Plummer (2020)					Park, Petri, and Plummer (2021)			
	Business as Usual					With US–China Trade War			
	CPTPP	RCEP after CPTPP	RCEP16 after CPTPP	Incremental Effects of RCEP	Incremental Effects of RCEP16	US-China Trade War	CPTPP	RCEP after CPTPP	Incremental Effects of RCEP
Single		**0.29**	**0.38**	**0.14**	**0.13**			**–1.02**	**–1.31**
Dual		**1.73**	**1.66**	**0.60**	**–0.07**			**2.37**	**0.79**
Non-members	**–0.01**	**0.08**	**0.09**	**0.09**	**0.01**		**–0.48**	**0.07**	**0.70**
ASEAN	**0.71**	**1.01**	**0.92**	**0.30**	**–0.09**	**0.32**	**1.31**	**1.80**	**0.50**
CJK	**0.09**	**0.54**	**0.53**	**0.45**	**–0.01**	**–1.43**	**–1.32**	**–0.71**	**0.61**
ANZ	**0.53**	**0.60**	**0.70**	**0.07**	**0.11**	**–0.07**	**0.60**	**0.70**	**0.11**
Model	A modified global CGE model of 29 regions and 19 economic sectors; dynamically projects annual results from a 2015 base year to 2030 as a baseline solution; liberalises tariffs, non-tariffs, and foreign direct investment; sequentially simulates CPTPP followed by RCEP (16); and reports incremental effects.								

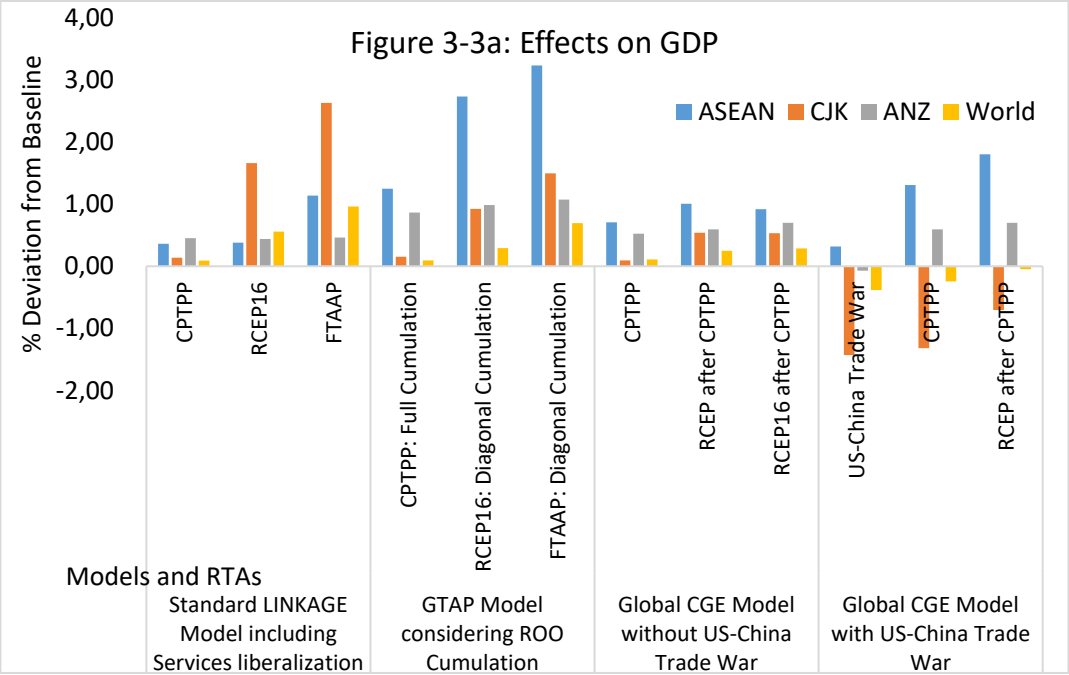
ANZ = Australia and New Zealand; ASEAN = Association of Southeast Asian Nations; CGE = computable general equilibrium; CJK = China, Japan, and Korea; CPTPP = Comprehensive and Progressive Agreement for Trans-Pacific Partnership; FTAAP = Free Trade Area of the Asia-Pacific; Lao PDR = Lao People's Democratic Republic; RCEP = Regional Comprehensive Economic Partnership; RCEP16 = RCEP with India; TPP = Trans-Pacific Partnership; US = United States.
Source: Author's calculation.

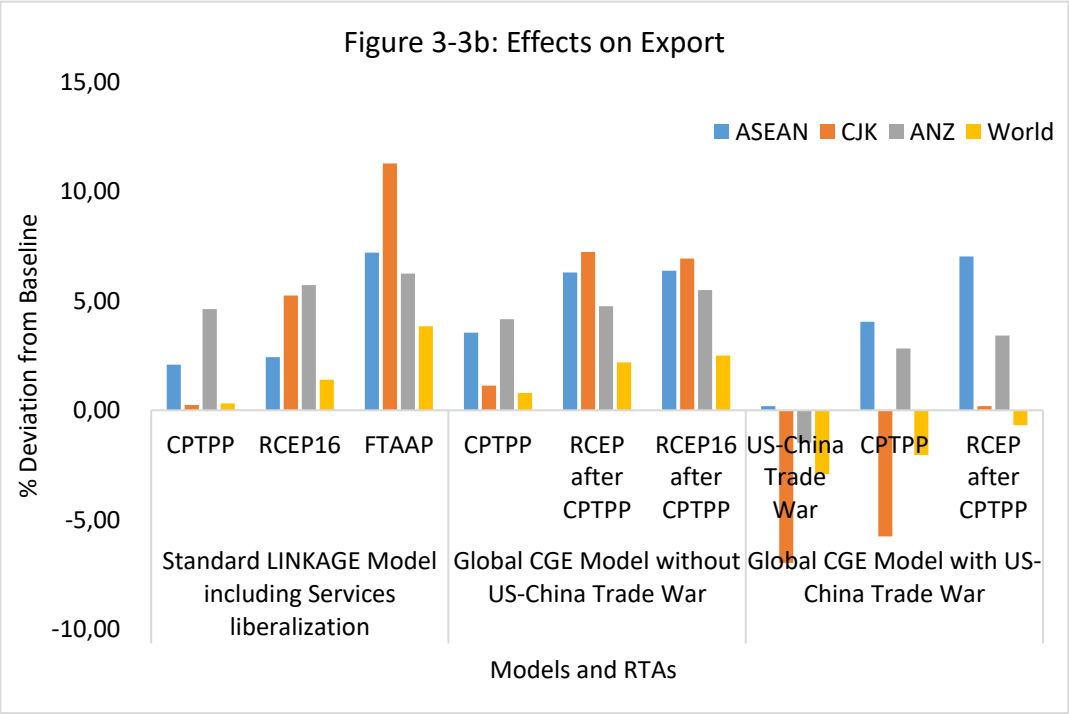
Figure 3 illustrates the impact of mega-lateral RTAs on the RCEP members' gains in terms of GDP and exports, observed via adopted models.[13] As expected, both the scale and ROO cumulation schemes of RTAs matter. That is, the member-specific economic size and interconnectivity and the provision-specific ROO cumulation schemes determine the magnitude of RTA gains. Regardless of models and specifications, the CPTPP is more desirable for ASEAN and Australia and New Zealand; RCEP is more desirable for China, Japan, and Korea; and the FTAAP is the most desirable for all. The regime-wide ROO cumulation of RCEP and CPTPP remarkably increases ASEAN's gains. Considering the high interconnectivity of RTA members may explain why the five ASEAN+1 FTAs have been ineffective and why a less restrictive ROO cumulation is required. The additional gains from RCEP on top of the CPTPP are incremental, but not significant for ASEAN; however, they are significant for China, Japan, and Korea.

Overall, RCEP and CPTPP are found to be desirable mega-lateral RTAs. Particularly, RCEP significantly offsets the harmful effect on China, Japan, and Korea from gains incurred because of a US–China trade war. China, Japan, and Korea's GDPs and exports as a whole will rebound from the loss of –1.43% and –6.97% to –0.71% and 0.19%, respectively. The effects of RCEP on ASEAN's gains (1.80% in terms of GDP and 7.03% in terms of exports) are mainly led by Malaysia (5.93% and 12.22%), Thailand (0.99% and 4.28%), Singapore (2.47% and 5.53%), and Viet Nam (5.43% and 14.85%, respectively) from both diverted trade caused by the trade war and the mega-lateral RTAs.[14]

[13] See the Appendix for impact on exports by country and region in detail.
[14] See Table 12 and Appendix.

Figure 3: Impact of CPTPP, RCEP, and FTAAP on RCEP Members' Gross Domestic Products and Exports





ANZ = Australia and New Zealand; ASEAN = Association of Southeast Asian Nations; CJK = China, Japan, and Korea; CPTPP = Comprehensive and Progressive Agreement for Trans-Pacific Partnership; FTAAP = Free Trade Area of the Asia-Pacific; GDP = gross domestic product; Lao PDR = Lao People's Democratic Republic; RCEP = Regional Comprehensive Economic Partnership; RCEP16 = RCEP with India; TPP = Trans-Pacific Partnership; US = United States.
Source: Author's calculation.

5. Conclusion

This study evaluated the desirability of RCEP by comparing it with other RTAs, such as the five ASEAN+1 FTAs, CPTPP, RCEP16, and FTAAP. Evaluating the member-specific characteristics that determine the scale effects of RTAs, RCEP is expected to generate significantly larger gains in comparison to the CPTPP. Meanwhile, by evaluating provision-specific characteristics of RCEP, positive gains are expected from the enhanced depth of RCEP by consolidating and upgrading the five ASEAN+1 FTAs. However, the positive gains are not sufficiently large to compare them with the CPTPP.

Interpreting the CGE model analyses of the impacts of mega-lateral RTAs on the GDPs and exports in the Asia-Pacific region, RCEP will generate larger gains than the CPTPP, regardless of the models adopted and their specifications. More specifically, RCEP – as the only trade bloc connecting China–Japan and Japan–Korea – is more desirable for China, Japan, and Korea, especially for China and Korea. The gains of ASEAN increase as the model considers the effects of the diagonal ROO cumulation scheme on bilateral trade costs. As the sequence of implementing RTAs is considered, the CPTPP will generate larger gains for the dual members of the CPTPP and RCEP; however, gains of single members will not be significant. The incremental gains of members may be even lower than estimated if the dual members do not utilise RCEP liberalising package and stay with the CPTPP – even after RCEP becomes effective.

Considering the gains shared amongst the RCEP members, reforming the RCEP provisions is recommended. The ineffectiveness of the ASEAN+1 FTAs clarifies the importance of raising FTA utilisation rates. Particularly, the ASEAN Members of RCEP should consider the predicted incremental gains generated under the diagonal ROO cumulation scheme. This observation strongly supports ASEAN to initiate RCEP reform; the active reform initiative would strengthen ASEAN centrality as well. For China, Japan, and Korea, a step towards upgrading the RCEP provisions comparable to the CPTPP is also required. China, Japan, and Korea may consider a trilateral FTA as an alternative sub-regional RTA to generate additional gains and to spur ASEAN to accelerate reformative actions. To upgrade the liberalisation packages of RCEP, the effective operation of the proposed RCEP

Secretariat should be emphasised to lead ASEAN and other partners towards accepting more desirable
mega-lateral RTAs.

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Appendix: Impact on Exports by using CGE Model Analysis (% deviation from the baseline)

	Ferrantino, Maliszewska, Taran (2019)										Petri and Plummer (2020)					Park and Park (2021)			
	Standard Simulations					Simulations with Productivity Kick					Business as Usual					With US–China Trade War			
	CPTPP	RCEP16	RCEP16-CPTPP	TPP	FTAAP	CPTPP	RCEP16	RCEP16-CPTPP	TPP	FTAAP	CPTPP	RCEP after CPTPP	RCEP16 after CPTPP	Increm. RCEP Effects	Increm. RCEP16 Effects	US-China Trade War	CPTPP	RCEP after CPTPP	Increm. RCEP Effects
Canada	1.5	–0.3	–1.8	3.6	5.7	2.5	–0.2	–2.8	3.8	6.9	4.7	4.6	4.6	–0.1	0.0	1.0	5.7	5.6	–0.1
Chile	0.7	–1.0	–1.7	0.4	1.5	0.8	–0.5	–1.3	0.5	2.1	4.1	3.4	3.4	–0.7	0.0	–1.4	2.7	2.0	–0.7
Mexico	1.6	–0.2	–1.8	1.7	6.0	2.2	–0.4	–2.5	1.9	7.4	3.4	3.1	3.1	–0.3	0.0	4.8	8.5	8.4	–0.1
Peru	1.8	–0.9	–2.7	2.5	5.4	2.0	0.0	–2.0	2.6	6.8	8.9	8.9	8.9	0.0	0.0	–0.7	8.1	8.1	0.0
Australia	4.4	5.6	1.3	3.6	5.6	4.5	8.1	3.6	3.7	7.1	3.9	4.4	5.3	0.5	0.8	–1.5	2.5	3.1	0.5
Brunei Darussalam	1.7	1.3	–0.4	2.9	3.0	1.8	2.0	0.2	3.1	3.7	6.3	6.3	6.3	0.0	0.0	0.0	6.3	6.3	0.0
Japan	1.9	10.3	8.5	4.1	15.3	2.5	12.8	10.3	4.8	17.6	8.2	19.5	17.0	11.3	2.5	0.0	8.4	19.6	11.2
Malaysia	4.6	4.7	0.1	8.1	11.0	5.0	5.4	0.4	8.8	11.6	8.6	10.8	10.6	2.2	–0.2	0.6	9.8	12.2	2.4
New Zealand	6.4	6.2	–0.1	7.5	10.5	6.5	7.8	1.3	7.7	11.9	6.0	7.1	7.1	1.2	0.0	–1.2	4.8	6.0	1.2
Singapore	3.8	1.6	–2.2	3.5	3.2	3.8	1.5	–2.3	3.6	3.0	6.2	5.5	6.0	–0.6	0.4	–0.4	6.0	5.5	–0.4
Viet Nam	5.0	3.5	–1.5	20.7	14.6	7.2	4.4	–2.8	23.9	15.6	8.7	12.6	12.0	3.9	-0.6	0.6	10.4	14.8	4.5
US	–0.3	–0.7	–0.5	2.8	8.0	–0.1	–0.5	–0.3	3.0	10.1	–0.3	–0.2	–0.2	0.1	0.0	–10.5	–10.7	–10.8	–0.1
Thailand	–0.4	0.3	0.7	–0.6	4.1	–0.4	0.8	1.1	–0.6	5.1	–1.2	3.4	3.4	4.6	0.0	0.5	–0.7	4.3	5.0

Korea	–0.3	3.4	3.7	–0.7	6.4	–0.3	5.7	6.0	–0.6	9.7	–0.6	5.3	5.0	5.9	–0.4	0.0	–0.6	5.4	6.0
Philippines	–0.1	3.6	3.6	–0.5	11.4	0.0	3.9	3.9	–0.5	12.5	0.0	3.8	2.7	3.8	–1.1	0.5	0.5	4.3	3.8
Indonesia	–0.4	1.6	2.0	–0.9	5.0	–0.4	2.7	3.1	–0.8	6.0	–0.7	2.2	3.4	2.9	1.1	–0.4	–1.1	1.8	2.9
Cambodia	–0.4	2.4	2.8	–4.1	–11.5	–0.4	3.0	3.4	–4.0	–11.4									
Lao PDR	0.3	2.9	2.6	0.3	–1.2	0.4	4.5	4.1	0.3	0.0									
India	0.0	7.1	7.2	–0.1	–1.4	0.0	13.4	13.4	-0.1	–1.0	–0.2	–0.7	9.4	–0.4	10.1	0.0	–0.2	–0.6	–0.4
China	–0.1	4.2	4.3	–0.3	11.4	0.0	8.0	8.1	–0.2	16.3	–0.2	4.7	5.0	4.9	0.2	–10.2	–10.3	–5.6	4.7
Europe	0.0	–0.5	–0.4	–0.1	–1.2	0.0	–0.5	–0.5	–0.1	–1.3	0.1	0.0	0.0	0.0	–0.1	–0.8	-0.7	–0.7	–0.1
Rest of World	0.0	–0.5	–0.5	–0.1	0.0	0.0	0.0	0.0	–0.1	1.5	0.1	0.1	0.0	0.0	0.0	–1.0	-0.9	–0.9	0.0
World	**0.3**	**1.4**	**1.1**	**0.8**	**3.8**	**0.4**	**2.6**	**2.1**	**0.9**	**5.5**	**0.8**	**2.2**	**2.5**	**1.4**	**0.3**	**–2.9**	**–2.0**	**–0.7**	**1.4**
Members	**2.8**	**4.9**	**2.1**	**4.1**	**9.4**	**3.4**	**7.8**	**4.4**	**4.5**	**12.5**	**6.2**	**6.8**	**7.0**	**3.9**	**0.9**		**7.1**	**2.1**	**–1.3**
Single												**4.5**	**5.4**	**3.4**	**1.6**			**–2.4**	**–4.0**
Dual												**12.2**	**11.4**	**5.0**	**–0.8**			**12.4**	**5.1**
Non-Members	**–0.1**	**–0.5**	**–0.4**	**–0.2**	**–1.2**	**–0.1**	**–0.3**	**–0.3**	**–0.2**	**–0.9**	**–0.1**	**0.3**	**0.3**	**0.4**	**0.0**		**–3.5**	**–1.8**	**2.5**
ASEAN	**2.1**	**2.4**	**0.3**	**4.4**	**7.2**	**2.5**	**3.0**	**0.6**	**4.9**	**7.9**	**3.6**	**6.3**	**6.4**	**2.8**	**0.1**	**0.19**	**4.0**	**7.0**	**3.0**
CJK	**0.2**	**5.2**	**5.0**	**0.5**	**11.3**	**0.4**	**8.5**	**8.1**	**0.7**	**15.5**	**1.1**	**7.2**	**6.9**	**6.1**	**–0.3**	**–6.97**	**–5.8**	**0.2**	**6.0**
ANZ	**4.6**	**5.7**	**1.1**	**4.1**	**6.2**	**4.8**	**8.1**	**3.3**	**4.2**	**7.8**	**4.2**	**4.8**	**5.5**	**0.6**	**0.7**	**–1.49**	**2.8**	**3.4**	**0.6**
Model	A global dynamic CGE model (LINKAGE): 17 production sectors and 35 countries; impacts of policy changes up to 2030 as a baseline solution; reduction of tariffs, non-tariff measures in goods and services trade.											A modified global CGE model: 29 regions and 19 economic sectors; dynamically projects annual results from a 2015 base year to 2030 as a baseline solution; liberalising tariff, non-tariff, and foreign direct investment; sequentially simulates CPTPP followed by RCEP (16) and reports incremental effects.							

ANZ = Australia and New Zealand; ASEAN = Association of Southeast Asian Nations; CJK = China, Japan, and Korea; CPTPP = Comprehensive and Progressive Agreement for Trans-Pacific Partnership; FTAAP = Free Trade Area of the Asia-Pacific; Lao PDR = Lao People's Democratic Republic; RCEP = Regional Comprehensive Economic Partnership; RCEP16 = RCEP with India; TPP = Trans-Pacific Partnership; US = United States.
Source: Author's calculation.

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