CHAPTER 3

Restrictiveness of RCEP Rules of Origin:
Implications for Global Value Chains in East Asia

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This chapter aims to examine the restrictiveness of rules of origin (RoO) in the Regional Comprehensive Economic Partnership (RCEP) and other key multilateral free trade agreements (FTAs) in East Asia with a view to facilitating the operations of existing global value chains (GVCs). The analysis begins with dissecting PSRs in the RoO Chapter in these FTAs and quantifying them. The key finding is that product-specific rules in RCEP are the most flexible compared to the other multilateral FTAs and more facilitative to GVC operations. This is driven by RCEP-specific features, such as high intra-member trade and the member coverage. The main policy inference is that a full cumulation clause is needed in RCEP to allow a regional value content alternative to be in full effect. Harmonisation in RoO provision across these multilateral FTAs remains a challenge for ongoing negotiation. Monitoring the dynamics of RoO as well as the FTA utilisation is needed so that these multilateral FTAs could be a true stepping stone for trade liberalisation in the broader World Trade Organization multilateral trading system.

Issues

Recently, a growing number of multilateral free trade agreements (FTAs) have been observed amid the proliferation of FTAs. These FTAs not only enlarge the market size of a trading bloc but the common rules and regulations in them also facilitate firms to efficiently formulate production networks within the trading bloc. The latter is often highlighted as the main advantage for countries to join mega FTAs like the Regional Comprehensive Economic Partnership (RCEP) and Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). Whether the above benefit from the FTA is materialised depends on many features of the FTA, and the rules of origin (RoO) are amongst them. This is the focus of this chapter.

In principle, RoO establish the conditions that products must meet to be eligible for preferential market access. They are to prevent superficial assembly operations with little or no value added that would, *de facto*, extend the benefit of preferential access to non-eligible intermediate producers upstream of those assembly operations. If these constraints specified in the RoO are binding, firms must alter their production processes to meet them and obtain certificates of origin. This raises the production cost of the product to a certain extent. In addition, bureaucratic procedures to obtain certificates of origin could incur fixed compliance costs, entailing paperwork and bureaucratic hassle. Hence, RoO have the power to depress preference uptake.

Generally, there are two components in RoO: one is product-specific rules (PSRs) and the other is regime-wide rules. The former is directly related to products of interest. The rules can be either uniform across products or vary across products. The latter lays out rules applicable for all products, including a maximum percentage of non-originating

materials to be used without affecting the origin (*de minimis*), how to treat transhipment, and the data requirements for obtaining certificates of origin. As seen below, convergence is often observed in the latter so our analysis is on the former.

In the RoO restrictiveness literature, the standard practice to assess how restrictive PSRs are is to assign numerical values to them to reflect their restrictiveness score (Estevadeordal, 2000; Gretton and Gali, 2005; Anson et al. 2005; Harris, 2007). In general, there are four forms of PSRs: (1) technical requirements (TR), (2) wholly obtained (WO), (3) regional value content (RVC), and (4) change in tariff classifications (CTCs), which requires changes in tariff chapter (CC), those in tariff heading (CH), or those in tariff subheading (CSH). TR and WO are often ranked as the most restrictive, followed by CC and RVC/CH respectively, whereas CSH is the least restrictive. In practice, these forms are used as either alternatives (RVC or CC) or in combination (RVC and CC).

The standard practice discussed above might be problematic in the context of global value chains (GVCs). GVC activities often involve cross-border trade in parts and components, which often takes place at the tariff subheading level of the 6-digit Harmonised System (HS) classification. In this regard, it is likely for a country to experience exports and imports of a given 6-digit HS item (i.e. intra-industry trade) simultaneously, so the CSH PSR, the least restrictive rule often claimed in the existing literature, could be counterproductive in GVC operation. This has been overlooked in the previous studies but is of immense policy relevance in multilateral FTAs like RCEP, where GVC activities take place intensively.

Against this backdrop, this chapter assesses the RoO restrictiveness of RCEP as opposed to other key multilateral FTAs in the region with a view to formulating prudential policy to facilitate GVC operation. The multilateral FTAs covered in this study include the CPTPP, Association of Southeast Asian Nations (ASEAN)–Australia–New Zealand FTA (AANZFTA), Japan–ASEAN Economic Partnership Agreement (JAEPA), ASEAN–Republic of Korea FTA (AKFTA), ASEAN–China FTA (ACFTA), and ASEAN–India FTA (AIFTA). Our chapter contributes to the existing literature in two ways. Firstly, to the best of our knowledge so far, this study is the first systematic analysis to assess the RoO restrictiveness of the key multilateral FTAs covering East Asian economies, including RCEP, the largest multilateral FTAs ever signed so far. Secondly, the restrictiveness assessment in this study incorporates the intra-industry trade feature of GVC operation. The higher the intra-industry trade index at the sub-heading HS, the more the restrictiveness of the CSH criterion, *ceteris paribus*. Overlooking such a feature might mislead the implications for GVC operation.

The chapter is organised as follows. It begins with the analytical framework illustrating the role of RoO in FTAs and how RoO restrictiveness has been assessed so far. The methodology used in this study is discussed in Section 3, followed by the analysis in Section 4. Section 5 presents the conclusion and policy inferences.

Analytical Framework

The proliferation of FTAs observed in the past two decades has far-reaching implications not just for the multilateral trading system's philosophy but also for the day-to-day conduct of business. For good or bad, preferential trading rules are of increasing relevance to traders on the ground. Notwithstanding the debate about whether FTAs create a net welfare gain (i.e. trade diversion vs trade creation), how they are designed matters a lot in understanding how much market access they really confer. In this regard, RoO play a key role.

RoO establish the conditions that products must meet to be eligible for preferential market access. They are vital for a signed FTA to prevent 'trade deflection' in the absence of external-tariff harmonisation – imports entering a bloc through the lowest-tariff member and then moving tariff-free within the bloc. It is also to prevent superficial assembly operations with little or no value added that would, de facto, extend the benefit of preferential access to non-eligible intermediate producers upstream of those assembly operations.

Generally, there are two main components in the RoO chapter in each FTA; product-specific rules (PSRs) and regime-wide rules (RWRs).

PSRs

There are four standard criteria in PSRs, including regional value content (RVC), technical requirements (TR), products that must be made entirely within the parties to be deemed originating (often referred to as wholly obtained or WO), and changes in tariff classification (CTCs).

RVCs are set to ensure firms source their intermediates from other member countries substantially and exclude superficial assembly operations. A minimum share of value added created within a trade bloc is often set in the product's price. TR can take many forms, often requiring certain production processes to be undertaken within and/or by sourcing certain intermediates from the trade bloc's members. WO, requiring that products must be made entirely within the parties to be deemed originating, seems to be the most severe criterion to identify the origin of goods (Harris, 2007).

CTC means that the tariff classification of the final product is different from the tariff classification of all non-originating materials used. The minimum requirement of the change may take place at CC, CH, or CSH. The stringency of CTC depends on the tariff

classification changes required. A change at the chapter level is the most demanding, whilst a change at the sub-heading level is the least demanding; thus, the order of the rules in descending stringency is CC, CH, and CSH (WTO, 2018).

Pioneered by Estevadeordal (2000), a numerical value is arbitrarily assigned to RoO product-specific rules to reflect the RoO restrictiveness score. Generally, the number assigned to CTC is the lowest and that to WO is the highest to reflect their restrictiveness levels. The higher the number the more restrictive the rule. In addition, CSH is regarded as the least restrictive, whereas CC is the most restrictive. The CH restrictiveness level is in the middle. The RVC criterion is often treated as the same level of restrictiveness as CH. Overall, the assigned value will be in ascending order: CSH < CH/RVC < CC < TR/WO. Any additional requirements that may be attached to each individual rule would increase the PSR restrictiveness level.

Table 3.1 reveals the scores used in the previous studies. Whilst the numerical values assigned are different amongst the studies, their ranks are similar to a certain extent. For example, in Hayakawa (2014), 8 is the maximum value assigned to WO and CC & Tech, followed by 7 to CC. The lowest score of 1 is assigned for rules where CSH, RVC, or Tech are available as an alternative. In Estevadeoral and Suominen (2006), where WO is not included, 7 is the maximum value assigned to CC & Tech. The CSH criterion is the second-lowest, with a score of 2, but higher than CTC at 8–10 digits. Hence, direct value comparison of the other studies must be done with care. Instead, ranking matters.

Table 3.1 Numerical Values Assigned in Selected Studies

Criteria	Estevadeoral and Suominen (2006)	Hayakawa (2014)	This Study
WO/TR		8 (highest)	7 (highest)*
CC/RVC		6	3
CSH/RVC		1	1
RVC		4	3
CH/RVC		3	3
CSH & Tech/RVC			2.25
CH/RVC/Tech		3	1.25
CC	6	7	5
CC & Tech	7 (highest)	8 (highest)	6.25
CH	4	4	3

Criteria	Estevadeoral and Suominen (2006)	Hayakawa (2014)	This Study
CH &Tech		5	4.25
CH/Tech		3	3
CSH	2	2	1
CH & RVC	5	5	
CSH & RVC	3		2.25
CSH/RVC/Tech		1 (Lowest)	1 (Lowest)
CTC at 8–10 digits	1 (lowest)		

* The numerical value assigned to WO applied to HS 01-24 is 1.

Source: Authors.

There are two remarks in this practice. Firstly, assigning a value to WO in reflecting its restrictiveness is uniform. In fact, WO might not be a binding constraint in agricultural products, for which the production process often takes place from the beginning to the end within a given territory. This is different from manufacturing products, whose production processes could be fragmented across borders. Therefore, it would be more appropriate to treat the WO criterion differently between agricultural and manufacturing products.

Secondly, the above practice has not yet incorporated one important feature in GVC trade. Basically, GVCs, the geographic separation of activities involved in producing a good or service across two or more countries, have substantially increased the interdependencies amongst economies around the globe, leading to fast-growing trade in parts and components.[1] GVCs are highly concentrated in East Asia. This is especially true when sourcing parts and components is concerned (Athukorala and Kohpaiboon, 2011; 2014). As seen below, cross-border trade occurs at the tariff subheading level (i.e. CSH). A clear example is printed circuit board (PCB), a crucial electronic part in many machinery and electrical products. By HS classification, blank PCBs and those assembled with electronics (e.g. integrated circuits and sensors are under HS 850440. It is very likely for a GVC-engaged country to export blank PCBs to another country for assembling electronics there. Such cross-border trade might not be able to meet the CSH criterion to obtain the certificate of origin, thereby depressing the preferential uptake. So far, this feature has been overlooked in measuring the RoO restrictiveness but is of immense policy relevance for multilateral FTAs to facilitate GVC participation.

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[1] There are a wide range of factors attributing to the GVC growing importance. They include the fall of tariff barriers, the drop in freight rates, the emergence of globally oriented logistics services, and digital technology advancement (internet, computing power) facilitating the rapid flow of information (Baldwin, 2016). Improvement in the protection of intellectual property rights, particularly the World Trade Organization (WTO) agreement on trade-related aspects of intellectual property rights (TRIPs) is also one of the contributing factors (Estevadeordal et al., 2013).

RWRs

RWRs lay down general rules applicable to all products. They include a maximum percentage of non-originating materials to be used without affecting the origin (*de minimis*), how to treat transhipment, and the data requirements for fulfilling certificates of origin. This matters much in an FTA involving more than two members like RCEP and other multilateral FTAs. Basically, all RoO apply bilateral cumulation where products from two trading members, not elsewhere in the trade bloc, are eligible to fulfil RoO. Interestingly, more liberal forms of RWRs are found in some FTAs. One is diagonal cumulation, where countries can use products that originate in any part of the similar RoO as originating products. The most flexible and least-restrictive cumulation rule is full cumulation, which allows firms to accumulate originating components in non-originating intermediates elsewhere in the trading bloc to identify the origin of final goods.

To meet with the PSRs and RWRs, firms must alter their production processes. This raises the production cost of the product to a certain extent. How restrictive they are is the key to understanding the potential gains expected from the signed FTA. Note that RoO are not always a binding constraint, so the scoring procedure indicates the *ex ante* restrictiveness of RoO.[2] In reality, RoO can also be designed and implemented to be a protectionist device (Cadot et al., 2006; Cadot and Ing, 2015; Jongwanich and Kohpaiboon, 2017; Cadestin et al., 2016). Hence, the score revealed by this method is not the *ex post* effect of their implementation.

Methodology

To reflect RoO restrictiveness, both PSRs and RWRs are analysed in this study. The analysis begins with quantifying the restrictiveness of PSRs and then integrating the effect of RWRs on existing PSRs.

To quantify PSRs, this study uses the method adopted in the previous studies as a point of departure. It starts with setting up criteria to quantify PSRs to obtain numerical values to reflect the restrictiveness score. The criteria are presented in Table 3.1. The score initially ranges between 1 and 7. The lower the score the least restrictive the PSRs are. The CSH criterion score is equal to 1, the lowest score. CH and RVC 40% (in short RVC) share the same score of restrictiveness equal to 3. The scores associated with the CC and WO and TR criteria, respectively, are 5 and 7. Such a ranking is in line with the previous studies (Estevadeoral and Suominen, 2006; Hayakawa, 2014). Table 3.2 presents the annexes of the FTAs related to RoO provision to reflect their restrictiveness.

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[2] See Kohpaiboon (2015) for the case of unbinding RoO in the Thai automotive industry.

Table 3.2 Annexes of the FTAs Used to Reflect RoO Restrictiveness

FTAs	Annex
RCEP	Annex 3A Product-specific rules
CPTPP	Annex 3-D Product-specific rules of origin
AANZFTA	Appendix 4: Annex 2 (Product-specific rules)
JAEPA	Annex 2: Product-specific rules (2002)
AKFTA	Appendix 2: Product-specific rules
ACFTA	Attachment B (Product-specific rules) as amended by the Protocol to Amend the Framework Agreement on Comprehensive Economic Co-operation between ASEAN and China (ACFTA upgrading protocol)
AIFTA	Annex 2: Rules of origin for the ASEAN–India Free Trade Area (AIFTA)

Source: Authors.

As mentioned earlier, WO applied to agricultural products (HS 01-24) is treated differently from other products. Agriculture products by nature are wholly obtained in a given territory so the WO criteria might not be a binding constraint. This is different from other products. To integrate this feature into the numerical value procedure, the WO criterion is treated as the least restrictive and its score is equal to 1. Otherwise, its value is 7.

As found in many FTAs, the PSRs of given products often either combine two or more criteria together, offering alternative criterion, or add some exceptions. When an additional requirement is introduced, this could make the existing criterion more restrictive.[3] In such a case, the following rule is applied: +0.5, +0.75, +1 are added to the existing form if the exception is for CSH, CH, or CC, respectively. In a few cases, a further requirement is added, thereby adding a +1.25 score.[4]

In contrast, some PSRs offer options for firms to choose from. All other things being constant, this will make the PSRs less restrictive. In this regard, firms would opt for the easier choice to minimise the burden so that the minimum score amongst the available options is chosen to reflect the restrictiveness of the PSRs. This seems to be different from the practice in Hayakawa (2014), where the existing score is reduced when an alternative is available. For example, the score of the CSH criterion equals 2, whereas the CSH/RVC criterion score decreases to 1.

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[3] For example, HS110313 [*Cereal groats, meal and pellets of maize (corn)*] in RCEP is subject to CC except from Chapter 10 [*Cereals*].

[4] For example, the PSRs of HS 210390 [*Other Sauces and preparations therefor; mixed condiments and mixed seasonings; mustard flour and meal and prepared mustard] in the AKFTA require Change to Subheading 2103.90 from any other Heading, provided that materials from Chapters 7 and 9 are Wholly-Obtained or Produced in the territory of any Party for 2103.90.1030; 2103.90.9030;2103.90.9090 and the others: Change to Subheading 2103.90 from any other Heading; or RVC (40) provided that materials from Chapters 7 and 9 are Wholly-Obtained or Produced in the territory of any Party.*

Note that TR in this study refers to the case where there is a separate annex of PSRs for a product of interest. A clear example of TR is found in the case of vehicles (HS 8701–07) in the CPTPP where a specific annex (Annex 3-D for vehicles) provides full details of the RoO. It is a combination of RVCs, CTC, certain processes that must be undertaken within the member countries, and other constraints (see full discussion in Section 4). Such complicated RoO are classified as TR, and the assigned score is 7. Technical requirements are also imposed as an additional condition to the specific rule in other products. It is treated as the same as an additional condition to PSRs and 1.25 is added to the existing score. This is applicable for textiles, although there is a separate annex for textiles and apparel.

There are several cases where the percentage set in the RVC criterion is not 40%. The lower (higher) the percentage, the lower (higher) the RoO restrictiveness. A linear relationship between the RVC percentage and score is assumed. For example, if the RVC percentage increases to 45%, the score will drop to 3*45/40 = 3.375.

Analysis

Overview of RCEP's RoO

The RoO provision in RCEP is in Chapter 3 of the agreement. The main text in this chapter provides the basic information, including definitions (Article 3.1), cumulation (Article 3.4), calculation of the regional value content (Article 3.5), and certificates of origin (Article 3.17). The product–specific RoO are in Annex 3A, using the Harmonised System Nomenclature 2012 edition. In RCEP, there is no separate annex or appendix for any products (i.e. no use of TR criterion). The length of the text exceeds 300 pages.

Table 3.3 presents the distribution of the RoO forms used in the FTAs. All product–specific rules available can be grouped into four main categories. The first is the single form (SF) of RoO imposed. This is one of six standard rules, i.e. WO, TR, RVC, CC, CH and CSH. The second category is the alternative form (AF), a circumstance where there are more than one RoO rule for firms to choose from. The third category is the combination form (CF), where more than one form of RoO are imposed and to be satisfied simultaneously. The last group, the other form (OF), is for those that do not fit into the three groups above.

Table 3.3 RoO Forms Imposed in Selected Multilateral FTAs (% of Total Product Lines)

RoO Forms		RCEP	CPTPP	AANZFTA	JAEPA	AKFTA	ACFTA	AIFTA
Single form (1.1+2.1+3.1+4.1+5.1+6)		33.5	98.9	15	22.2	14	73.4	0
Alternatives (2.2+3.2+4.2)		58.8	0.6	60.6	62.5	85.9	18.2	100
Combination (2.3+3.3+4.2.2+5.4.3)		2.4	0	1	12.5	0.1	2.9	0
Others		5.3	0.5	23.4	2.8	0	5.5	0
1.1	WO single	3.2	16	6.8	0.1	12.3	4.4	0
1.2	WO or	0	0.6	0	0	0.1	0	100
1.2.1	WO or RVC45	0	0.6	0	0	0.1	0	0
1.2.2	WO or RVC35/CSH	0	0	0	0	0	0	100
2.1	CC	20.5	18	4.9	15	0	6.6	0
2.2	CC or	5.2	0.5	11.9	2.6	0	4.1	0
2.2.1	CC/RVC40	5.2	0.5	11.6	2.6	0	4.1	0
2.2.2	CC/Tech	0	0	0.3	0	0	0	0
2.3	CC plus	1.6	0	0.8	12.4	0	0.5	0
2.3.1	CC plus exception at CC	1.5	0	0	2.7	0	0.5	0
2.3.2	CC plus exception at CH	0	0	0.1	1.7	0	0.1	0
2.3.3	CC plus exception at CSH	0	0	0	0.1	0	0	0
2.3.4	CC plus tech	0	0	0.7	8	0	0	0
2.4	Other CC (CC/RVC) plus tech	0	0	3.9	0	0	0	0
3.1	CH single	8.8	30.2	2.1	2.5	0.2	0.1	0
3.2	CH or	46.5	0	41.2	61.8	83.6	16.1	0
3.2.1	CH/RVC	46.5	0	39.1	61.8	83.6	11.1	0
3.2.2	CH/Tech	0	0	1.6	0	0	0	0
3.2.3	CH/RVC/Tech	0	0	0.4	0	0	5	0
3.3	CH plus	0.6	0	0.2	0.1	0	0	0
3.3.1	CH plus exception at CSH	0.6	0	0	0	0	0	0
3.3.2	CH plus tech	0	0	0.2	0.1	0	0	0
3.3.3	CH plus exception at CH and CSH	0	0	0	0	0	0	0
3.4	Other CH	0	0	1.6	0.3	0	1.3	0

	RoO Forms	RCEP	CPTPP	AANZFTA	JAEPA	AKFTA	ACFTA	AIFTA
3.4.1	CH plus exception at CC or RVC40	0	0	1.4	0.3	0	1	0
3.4.2	CH plus exception at CH or RVC40	0	0	0	0	0	0	0
3.4.3	CH or RVC40 plus tech	0	0	0.1	0	0	0.3	0
4.1	CSH single	0.2	21.3	0	0.1	0.3	0	0
4.2	CSH or	12.3	0	19.5	0.7	2.2	2.1	0
4.2.1	CSH or RVC	12.3	0	19.5	0.7	2.2	2.1	0
4.3	CSH plus	0.3	0	0	0	0	0	0
4.3.1	CSH plus exception	0	0	0	0	0	0	0
4.3.2	CSH plus exception at CSH	0.3	0	0	0	0	0	0
4.3.3	CSH plus exception CH and CSH	0	0	0	0	0	0	0
4.4	Other CSH	0.1	0	4.6	0	0	0	0
4.4.1	CSH plus exception at CC or RVC	0.1	0	0	0	0	0	0
4.4.2	CSH plus exception at CSH or RVC	0	0	0.7	0	0	0	0
4.4.3	CSH or RVC plus tech	0	0	3.9	0	0	0	0
5	RVC	0.8	13.4	1.3	4.5	1.1	62.3	0
5.1	RVC40	0.8	13.4	1.3	4.5	1.1	62.3	0
5.2	RVC35	0	0	0	0	0	0	0
5.3	RVC greater than 40	0	0	0	0	0	0	0
5.3.1	RVC45	0	0	0	0	0	0	0
5.3.2	RVC60	0	0	0	0	0	0	0
5.3.3	RVC70	0	0	0	0	0	0	0
5.4	Other RVC	0	0	0	0	0.1	2.4	0
5.4.1	RVC or CH or CC plus exception at CC	0	0	0	0	0	0	0
5.4.2	RVC or CH or RVC35 plus CSH	0	0	0	0	0	0	0
5.4.3	RVC plus tech	0	0	0	0	0.1	2.4	0
6	Tech single	0	0	1.4	0	0	0.1	0
7	TR	0	0	0	0	0	0	0

Note: The total product lines of RCEP, CPTPP, AAANZFTA, JAEPA, AKFTA, and AIFTA are 5,066; 5,205; 5,182; 4,916; 5,052; 5,388; and 5,052 lines, respectively.

Source: Authors' compilation from official documents.

In RCEP, AF accounts for 58.8% of total product lines, followed by SF (33.5%). CF and OF account for 2.4% and 5.3%, respectively. AF is dominated by CH/RVC, accounting for 46.5% of total product lines (nearly 80% of all AF). The exception is machinery (HS 84) and electronics and electrical appliances (HS 85), the GVC-intensive duo cited in the literature where CSH instead of CH is employed as an alternative to RVC. The availability of such an alternative immensely matters when GVC operation takes place at the subheading (HS 6 digit) level of disaggregation within East Asia. See more discussion about this below.

SF, the second largest group, is in CC and CH, accounting for 20.5% and 8.8%, respectively. The CC criterion is often imposed on agricultural products (HS 01–24), whereas the CH criterion is used for mineral products (HS 25–27) as well as textiles and garments (HS 50–63). The imposition of the WO criterion is found for animals and animal products (HS 01–05) as well as vegetable products (HS06-15).

The PSRs in RCEP are quite similar to other ASEAN-plus FTAs with high-income countries (i.e. the AANZFTA, JAEPA, and AKFTA) where AF is the main criterion to identify the product origin. The share of AF in these ASEAN-plus FTAs ranges from 60.6% in the AANZFTA, 62.5% in the JAEPA and 85.9% in the AKFTA. AF is dominated by the CH/RVC criterion. This is especially true for the JAEPA and AKFTA. Even though the percentage of product lines subject to the CH/RVC criterion is more or less the same as those for the ASEAN-plus FTAs, the greater share of intra-member trade makes RCEP's criterion easier to comply with, all other things being equal.

The relative importance of SF in these ASEAN-plus FTAs is less than that in RCEP. Its share is 14%, 15%, and 22.2% of the total product lines in the AKFTA, AANZFTA, and JAEPA, respectively. Nonetheless, the imposed criteria differ across these FTAs. For example, in the AANZFTA, the WO, CC, CH, and RVC criteria are imposed, accounting for 6.8%, 4.9%, 2.1%, and 1.3%, respectively. In contrast, the CC criterion dominates in the JAEPA, whereas WO dominates in the AKFTA. For both the AANZFTA and AKFTA, WO is mainly imposed on agricultural products.

Different from the other ASEAN-plus FTAs, including RCEP, OF in AANZFTA is sizable, accounting for nearly 10% of product lines. The share of OF in the other FTAs is between 0.1%–2.8%. The difference is the result of adding extra clauses (e.g. exception, additional requirements) on the standard RoO form. For example, HS 220421 other wine (*grape must with fermentation prevented or arrested by the addition of alcohol: in containers holding 2 l or less*) is subject to RVC/CSH except for HS 220429. It is difficult to identify whether the exception is binding in reality, but it makes the rules more complex and likely to depress the use of FTA preferential schemes. Note that such clauses are rarely in RCEP's PSRs.

RCEP's PSRs are quite different from those of ACFTA and AIFTA, whose RoO are rather uniform. This is very clear in the AIFTA, where the WO/RVC35/CSH criterion is imposed on all products. In the ACFTA, SF accounts for 73.4%. It is dominated by RVC (62.3%), followed by CC (6.6%) and WO (4.4%). Note that the WO and CC criteria are mostly imposed on agricultural products, whereas the RVC criterion is often for manufacturing products. The imposition of AF in ACFTA is around 20% of product lines, which is much smaller than that found in RCEP and the other ASEAN-plus FTAs mentioned above. Particularly, the CC/RVC, CH/RVC, and CSH/RVC criteria account for 4.1%, 11.1%, and 2.1%, respectively. There is no clear pattern of which products are subject to which AF criterion.

In contrast, the PSRs in the CPTPP are often in SF, accounting for 78.2% of total product lines. CH, CSH, and CC account for 37.1%, 24.4%, and 20.4%, respectively. The WO criterion accounts for 0.9% of agricultural products. The RVC criterion accounts for 15.1% and is often imposed on machinery and electrical (HS 84–85), transportation (HS 86–89), and miscellaneous (HS 90–97).

One rather unique feature of the PSRs in the CPTPP is that there are two separate rules for textiles and apparel (HS 50–63) and automotive products (HS 8701–8707), i.e. Annex 4-A (textiles and apparel product-specific rules of origin) together with Appendix 1, *Short Supply List of Products*,[5] and Annex 3-D (Appendix 1: provisions related to the product-specific rules of origin for certain vehicles and parts of vehicles). In Annex 4-A (textiles and apparel), CF applies to textiles (HS 50-60), in which one of the standard RoO forms together with an extra clause. This is not much different from the rules imposed in other multilateral FTAs to a large extent, and therefore they are not treated as TR. In contrast, apparel (HS 61-62) is a combination of CC, exceptions of CC, and the yarn-forward clause. This is more restrictive compared to the other multilateral FTAs (e.g. RCEP is subject to the CC criterion, and the AANZFTA is subject to the RVC plus fabric forward), so TR is assigned to reflect the restrictiveness of the RoO.

Interestingly, Appendix 1 in Annex-D applying to vehicles and parts of vehicles is much more complex and arguably the most restrictive compared to the other FTAs. Whilst the RVC criterion is the core, additional requirements are introduced. For example, the production of the following parts must be undertaken on those materials in the territory of one or more of the parties and involves one or more of the operations listed in Table B (complex assembly, complex welding, die or other casting). The parts include toughened safety glass (HS 7007.11), laminated safety glass (HS 7007.21), bodies for the motor vehicles of heading 87.03 (HS8707.10), bodies (including cabs) for the motor vehicles

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[3] Lists of intermediates are temporarily unavailable in FTA members so they are allowed to be imported elsewhere temporarily without affecting product origin. In the CPTPP, the lists will be removed five years after the date of entry into force. Note that the years lists to be removed in the CPTPP are longer than those in the Trans-Pacific Partnership (TPP) (CPTPP+ US).

of heading 87.01, 87.02, 87.04, and 87.05 bumpers (HS ex 8708.10), body stamping (HS ex 8708.29), and drive- axles (HS ex 8708.50). In addition, the value of the materials that originate in the above production shall be counted as originating content as specified in the appendix's Table C.

Interestingly, when all the PSRs across these multilateral FTAs are combined, they are presented in 43 forms. This comes from 13 PSRs in RCEP, 11 PSRs in the CPTPP, 20 PSRs in the AANZFTA, 14 PSRs in the JAEPA, 9 PSRs in the AKFTA, and 15 PSRs in the ACFTA. This suggests that the PSRs across these FTAs are far from harmonised in which a single rule is applicable for a given product across FTAs.

Table 3.4 presents the RWRs in RCEP together with the other multilateral FTAs covered in this study. The RWRs in RCEP allow diagonal cumulation, private self-certification, 10% *de mininis*, minimum data requirement, direct consignment, and provision of back-to-back proofs of origin. They are in line with other multilateral FTAs in this study. The exception would be the CPTPP, where full cumulation is offered. Nonetheless, whilst full cumulation is the least restrictive form in principle, proving compliance with full-cumulation rules implies complete traceability of the production process and the sourcing of intermediates. This is a heavy burden for many companies both in terms of paperwork and, more importantly, in terms of the disclosure of sensitive price and supplier information. Such a burden can be eased if an effective private self-certification system is in place. It is absent in the CPTPP, where private self-certification is not available.

Table 3.4 Region-wide Components in RCEP and Other Multilateral FTAs

	RCEP	CPTPP	AANZFTA	JAEPA	AKFTA	ACFTA	AIFTA
Cumulation rule (diagonal vs full cumulation)	Diagonal	Full	Diagonal	Diagonal	Diagonal	No	Diagonal
Private self-certificate	Yes	No	No	Yes	No	No	No
De minimis (% of FOB value vs % of weight)	10%	10%	10%	10%	10%	No	
Minimum data requirement	Yes	Yes	Yes	No	No	No	
Direct consignment, i.e. transhipment	Yes	No	Yes	Yes	Yes	No	Yes
Provision of back-to-back proofs of origin	Yes	No	Yes	No	No	No	No

Source: Compiled by authors.

RoO restrictiveness

Table 3.5 presents the PSRs' restrictiveness scores. The qualification is done at the HS 6-digit level of disaggregation and then aggregated by the HS section. The shaded cells indicate the highest values across the FTAs at a given HS section.

As revealed in Table 3.5, RCEP's restrictiveness score equals 3.31. It is higher than the AIFTA (1), AANZFTA (2.74), AKFTA (2.90), and ACFTA (3.08) but lower than the CPTPP (3.37), and JAEPA (3.78). AIFTA's RoO restrictiveness score is the lowest due to the uniform criterion, WO/RVC35/CSH, applicable to all products. Such a uniform criterion was found in the traditional FTA before the presence of the North American Free Trade Agreement (NAFTA) (Garay and Cornejo, 2002, cited in Cadot et al. (2006)). Compared to the AANZFTA and AKFTA, the higher score in RCEP is due to the relatively larger share of the CC criterion. The ACFTA restrictiveness is lower than that of RCEP due to the higher share of the RVC criterion in the RoO. JAEPA's score is higher than that of RCEP because the former is often associated with technical requirements as an additional condition.

Table 3.5 RoO Restrictiveness Scores of Selected Multilateral FTAs

HS	Description	RCEP	CPTPP	AANZFTA	JAEPA	AKFTA	ACFTA	AIFTA
01–05	Animal & Animal Products	4.62	4.10	2.24	5.23	1.29	3.62	1.00
06–15	Vegetable Products	3.96	4.71	2.76	4.88	1.30	3.18	1.00
16–24	Foodstuffs	4.50	4.39	4.11	4.99	2.17	3.88	1.00
25–27	Mineral Products	3.14	2.84	2.72	3.00	3.00	3.04	1.00
28–38	Chemicals & Allied Industries	2.76	1.54	1.40	3.02	2.98	3.03	1.00
39–40	Plastics/Rubbers	3.05	2.71	3.05	3.01	3.00	2.95	1.00
41–43	Raw Hides, Skins, Leather, & Furs	3.99	3.86	3.14	4.95	3.03	3.55	1.00
44–49	Wood & Wood Products	3.38	2.99	2.49	3.09	3.00	3.01	1.00
50–63	Textiles	4.32	5.70	3.86	5.20	4.19	3.31	1.00
64–67	Footwear/Headgear	3.13	4.11	3.34	4.11	3.00	3.04	1.00
68–71	Stone/Glass	3.17	3.44	2.89	3.20	2.88	2.99	1.00
72–83	Metals	3.17	3.16	3.69	3.43	2.99	3.05	1.00
84–85	Machinery/Electrical	2.04	2.31	2.11	3.01	2.92	2.53	1.00
86–89	Transportation	4.20	3.77	2.84	3.00	3.00	3.23	1.00
90–96	Miscellaneous	2.48	2.70	2.39	2.85	2.98	2.90	1.00
All		3.31	3.37	2.74	3.78	2.90	3.08	1.00
Agricultural products		4.33	4.41	2.88	5.04	1.50	3.51	1.00
Manufacturing products		3.10	3.16	2.71	3.53	3.20	2.99	1.00

Source: Authors' calculations.

RCEP's score is slightly lower than that of the CPTPP simply because the PSRs in RCEP are more flexible. In the latter, the RVC criterion is often available. In contrast, there is no option available in the PSRs in the former. In particular, the CH and CSH criteria account for 30.7% and 21.3%, respectively. The share of the CSH criterion is larger in the CPTPP, so its score is more or less the same as that in RCEP. Nonetheless, as seen below, this might not be the case when products are often crossing borders at the HS 6-digit disaggregation.

Spearman's rank correlation of the restrictiveness scores for each product across the FTAs points to the high correlation between RCEP, the CPTPP, JAEPA, and AANZFTA (Table 3.6). That is, products subject to relatively restrictive RoO in one of these FTAs are likely to face relatively restrictive RoO in the others.

Table 3.6 Spearman's Rank Correlation of the PSR Scores of the Multilateral FTAs

	RCEP	CPTPP	AANZFTA	JAEPA	AKFTA	ACFTA
RCEP						
CPTPP	0.3051***	1				
AANZFTA	0.5706***	0.3159***	1			
JAEPA	0.5691***	0.2437***	0.4643***	1		
AKFTA	−0.249***	−0.0289**	0.0156	−0.3399***	1	
ACFTA	−0.1251***	−0.1072***	−0.0232*	−0.2829***	0.3404***	1

Source: Authors' estimates.

There are several explanations for the high correlation. One would reflect the nature of the RoO negotiation texts, which require deep industry-specific knowledge. Hence, negotiating teams from developed country members are more advantageous in influencing the texts. It is even worse when the negotiation of RoO is shifted away from the uniform criterion. This points to capacity building for developing country members to equally participate in negotiations. Another explanation would reflect lobbying efforts by interest groups in using the PSRs as a protectionist device and depressing preferential uptake. It is far from the scope of the current study to pin down their relative importance, but both point to room for improvement in making FTAs a stepping stone for further liberalisation.

Generally, the restrictiveness score for agricultural products is higher than that for manufacturing products (Table 3.5). This is observed in all the FTAs covered in this study, but the score varies substantially across them. In FTAs involving developed country members (North–South FTAs), the score is higher than those amongst

developing countries. Interestingly, the RoO criterion on agricultural products is moving away from WO to CC and CC/RVC without a clear pattern across three HS sections (i.e. animal and animal products, vegetable products, and foodstuffs).

In contrast, the restrictiveness score of manufacturing products does not differ much across the FTAs. Three criteria, i.e. CC, CH, and CSH, are often imposed on manufacturing products. The score is within a narrow range from 2.7 to 3.5. One interesting observation is the restrictiveness score is higher in the FTAs involving manufacturing powerhouses like Japan, the Republic of Korea, and China, ceteris paribus.

The score of RoO restrictiveness for textiles and apparel (HS 50–63) is the highest amongst the manufacturing products. This is especially true for those involving developed countries. Both textiles and apparel have long been sensitive products for developed countries and were protected by a special arrangement known as the multi-fibre arrangement (MFA) (1974–1994) and its successor, the Agreement of Textiles and Clothing (ATC) (1995–2005). Protection remains in the form of a tariff, and liberalisation efforts carried out by FTAs have been undermined by more restrictive PSRs. The PSRs of textiles and apparel in RCEP are similar to those in the North–South multilateral FTAs The CC criterion set in RCEP is equivalent to fabric forward requirements. This is because yarns and fabrics are in HS 51-60. To make apparel eligible for the preferential scheme, its manufacturing process must start at least from fabrics. In the AANZFTA and CPTPP, fabric- and yarn-forward requirements are imposed in addition to RVC, respectively.

In the GVC-intensive duos, for the machinery and electrical section (HS 84 and 85), the restrictiveness score seems lower than other manufacturing products. This highlights the importance of GVCs and the associated benefits mutually shared amongst policymakers in the region (Table 3.5).

Table 3.7 presents the PSRs imposed on these duos. The PSRs in RCEP are the most facilitative to GVC operation as the CSH/RVC and CH/RVC criteria are often used in these products. CSH/RVC and CH/RVC account for 48.6% and 46.6% of the total product lines, respectively. To a large extent, the PSRs on these duos in the AANZFTA, JAEPA, and AKFTA are similar to RCEP. ACFTA's PSR on these duos is, in contrast, the RVC criterion, accounting for nearly 60% of total product lines. Even though China is generally known as Asia's factory, sizable parts come from non-ACFTA members and make the RVC criterion restrictive to GVC operations. This seems to be very different compared to RCEP, where key players in GVCs, especially Northeast Asian economies, are included.

Table 3.7 PSRs Used in Machinery, Electrics, and Electrical Appliances (HS 84 and HS85) (% of Total Product Lines)

	RCEP	CPTPP	AANZFTA	JAEPA	AKFTA	ACFTA
CH single	0	25.8	0	0	1.9	0
CH/RVC	46.6	0.1	45.7	98.4	97.4	28.6
CSH single	0	35	0	0	0	0
CSH or RVC	48.6	0	30.8	0	0.7	12.3
CSH or RVC plus tech	0	0	17.1	0	0	0
RVC40	0	38.8	2.1	0.9	0	57.9
Tech single	0	0	0.1	0	0	0
TR	0	0	0	0	0	0
Others	0.1	0	20.6	0.8	0	1.3

Note: The AIFTA is excluded due to the uniform PSRs.

Source: Authors' compilation.

In contrast, the PSRs in the CPTPP on these GVC-intensive products are quite rigid. The PSR is either RVC, CSH or CH, accounting for 38.8%, 35% and 25.8% of the total product lines of the GVC-intensive duos, respectively. Given the specialisation within the GVC network that could take place at the sub-heading tariff lines, the lack of flexibility in the CPTPP's PSRs could run counterproductive to GVC operation.

When focusing on the parts and components used in GVCs, the PSRs in RCEP remain the most facilitative for GVC operation. Table 3.8 shows the PSRs imposed on 471 items classified as parts and components across HS 39, 40, 56, 62, 66, 67, 70, 73, 82, 85, 87, 88, 90, 91, 94, and 96. The PSRs in RCEP on parts and components are either CH or CSH, associated with RVC as an alternative to choose (Table 3.8). Flexible PSRs are also found in other ASEAN-plus FTAs like the AANZFTA, JAEPA, and AKFTA. In contrast, the RVC criterion is the criterion most often imposed on parts and components in the CPTPP. This could have a severe impact on GVC operation in East Asia due to the fact that only some East Asian members are currently CPTPP members.

Table 3.8 PSRs Used in Parts and Components (% of Total Product Lines)

	RCEP	CPTPP	AANZFTA	AJFTA	AKFTA	ACFTA
CSH/RVC	19.7	0	8.9	0.4	4.7	6.4
RVC	0.4	43.7	7.7	5.7	0.4	62.7
CH/RVC	66.9	0.2	59.8	87	90.2	27.1
CC	4.7	3.4	3	0.2	0	0
CH	0	28.9	0	0.4	0	0
CSH	0	18.7	0	0	0	0
Others	8.3	5.1	20.6	6.3	4.7	3.8

Note: The AIFTA is excluded due to the uniform PSRs.

Source: Authors' compilation.

To elaborate on the nature of international trade in GVCs, the intra-industry trade (IIT) index for each multilateral FTA in 2014–2015 and 2019–2020 is calculated at the 6-digit HS level.[6] Then, they are aggregated by HS section as presented in Table 3.9. In general, the IIT indices increased between these two periods without any noticeable change across HS section. Hence, the following discussion focuses on 2019–2020. Generally, the average IIT index of RCEP is the highest at 0.77. The IIT index does not change when only the current 15 RCEP members are included. RCEP is higher than other multilateral FTAs, and followed by the CPTPP (0.69), AANZFTA (0.71), AKFTA (0.71), JAEPA (0.71), ACFTA (0.69), and AIFTA (0.68).

Table 3.9 IIT Index of the Multilateral FTAs

9.1: 2014–2015

HS	Description	RCEP	RCEP-15	CPTPP	AANZFTA	JAEPA	AKFTA	ACFTA	AIFTA
01–05	Animal & Animal Products	0.60	0.60	0.58	0.54	0.48	0.50	0.45	0.45
06–15	Vegetable Products	0.70	0.70	0.67	0.64	0.59	0.58	0.60	0.55
16–24	Foodstuffs	0.76	0.75	0.74	0.71	0.66	0.65	0.65	0.63

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[6] Grubel–Lloyd intra-industry trade index amongst FTA members is calculated as expressed in Equation 1 (henceforth referred to as the FTA_GL index).

$$IIT_{ijt}^{FTA_k} = 1 - \frac{\left| X_{ijt}^{FTA_k} - M_{ijt}^{FTA_k} \right|}{X_{ijt}^{FTA_k} + M_{ijt}^{FTA_k}}$$

$X_{ijt}^{FTA_k}$ = Exports of Good i from Country j to FTAk members at time t
$M_{ijt}^{FTA_k}$ = Imports of Good i from Country j to FTAk members at time t
FTA_k = Free trade agreement k including RCEP, CPTPP, AANZFTA, JAEPA, AKFTA, ACFTA and AIFTA.

HS	Description	RCEP	RCEP-15	CPTPP	AANZFTA	JAEPA	AKFTA	ACFTA	AIFTA
25–27	Mineral Products	0.63	0.63	0.53	0.57	0.59	0.58	0.56	0.55
28–38	Chemicals & Allied Industries	0.78	0.78	0.64	0.66	0.71	0.67	0.70	0.64
39–40	Plastics/Rubbers	0.85	0.85	0.78	0.79	0.81	0.79	0.77	0.78
41–43	Raw Hides, Skins, Leather, & Furs	0.65	0.65	0.61	0.56	0.57	0.55	0.51	0.50
44–49	Wood & Wood Products	0.73	0.73	0.70	0.67	0.66	0.69	0.66	0.67
50–63	Textiles	0.71	0.71	0.65	0.63	0.66	0.63	0.57	0.59
64–67	Footwear/Headgear	0.72	0.73	0.75	0.77	0.70	0.77	0.62	0.72
68–71	Stone/Glass	0.73	0.72	0.64	0.70	0.71	0.70	0.62	0.66
72–83	Metals	0.78	0.77	0.74	0.72	0.75	0.74	0.68	0.69
84–85	Machinery/Electrical	0.82	0.81	0.74	0.72	0.76	0.75	0.74	0.71
86–89	Transportation	0.73	0.72	0.65	0.66	0.63	0.61	0.61	0.60
90–96	Miscellaneous	0.75	0.75	0.74	0.68	0.73	0.69	0.64	0.64
All		0.60	0.60	0.58	0.54	0.48	0.50	0.45	0.45
Primary products		0.67	0.67	0.64	0.61	0.57	0.57	0.56	0.54
Manufacturing products		0.77	0.76	0.69	0.68	0.71	0.69	0.67	0.66

9.1: 2019–2020

HS	Description	RCEP	RCEP-15	CPTPP	AANZFTA	JAEPA	AKFTA	ACFTA	AIFTA
01–05	Animal & Animal Products	0.60	0.60	0.58	0.54	0.48	0.50	0.45	0.45
06–15	Vegetable Products	0.70	0.70	0.67	0.64	0.59	0.58	0.60	0.55
16–24	Foodstuffs	0.76	0.75	0.74	0.71	0.66	0.65	0.65	0.63
25–27	Mineral Products	0.63	0.63	0.53	0.57	0.59	0.58	0.56	0.55
28–38	Chemicals & Allied Industries	0.78	0.78	0.64	0.66	0.71	0.67	0.70	0.64
39–40	Plastics/Rubbers	0.85	0.85	0.78	0.79	0.81	0.79	0.77	0.78
41–43	Raw Hides, Skins, Leather, & Furs	0.65	0.65	0.61	0.56	0.57	0.55	0.51	0.50
44–49	Wood & Wood Products	0.73	0.73	0.70	0.67	0.66	0.69	0.66	0.67
50–63	Textiles	0.71	0.71	0.65	0.63	0.66	0.63	0.57	0.59
64–67	Footwear/Headgear	0.72	0.73	0.75	0.77	0.70	0.77	0.62	0.72

HS	Description	RCEP	RCEP-15	CPTPP	AANZFTA	JAEPA	AKFTA	ACFTA	AIFTA
68–71	Stone/Glass	0.73	0.72	0.64	0.70	0.71	0.70	0.62	0.66
72–83	Metals	0.78	0.77	0.74	0.72	0.75	0.74	0.68	0.69
84–85	Machinery/ Electrical	0.82	0.81	0.74	0.72	0.76	0.75	0.74	0.71
86–89	Transportation	0.73	0.72	0.65	0.66	0.63	0.61	0.61	0.60
90–96	Miscellaneous	0.75	0.75	0.74	0.68	0.73	0.69	0.64	0.64
All		0.60	0.60	0.58	0.54	0.48	0.50	0.45	0.45
Primary products		0.67	0.67	0.64	0.61	0.57	0.57	0.56	0.54
Manufacturing products		0.77	0.76	0.69	0.68	0.71	0.69	0.67	0.66

Source: Authors' calculations.

The IIT index for agricultural and mining products (HS 01–24 and 25–27) is lower than that for manufacturing products (HS 28–96). The plastics and rubbers section shows the highest IIT index score (0.88), followed by the machinery and electrical section (0.83). Arguably, their production process involves transforming raw materials into processed products, which are in different HS headings, so the high IIT index for the plastics and rubbers section would indicate trade between two specialised products in the same HS subheading item. For example, plastics in their primary form are in the range of HS 3901–3915, whereas processed products are in HS 3916–26. Similarly, rubbers in primary forms are in HS 4001–06, whereas their processed products are in HS 4007–4016. This is different from the high IIT index for GVC-intensive duos, whose international trade is largely driven by the cross-border trade of parts and components.

When the 2019–2020 trade value is used as the weight in averaging the IIT index across HS sections, the weighted average is higher than the unweighted ones (Table 3.10). Interestingly, the weighted average of the CPTPP, AANZFTA and AKFTA is more or less the same as that of RCEP. The JAEPA recorded the highest weighted average of the IIT index. Such changes suggest that products that are intensively traded within a trade bloc exhibit a high IIT index. It also implies that it is less likely for firms to comply with the CSH criterion, which is the least restrictive RoO criterion. The presumption that the CSH criterion is suitable for GVC operations overlooks the nature of GVCs that take place at the highly disaggregated level and gives misleading implications for GVC operations.

Offering RVC as an alternative seems to be a valuable option so that firms can choose one or the other whenever it fits their operations. Such flexibility is also found in the AANZFTA, JAEPA, and AKFTA, but the differences in intra-member trade make RCEP more attractive for GVC operations. This also points to the role of RCEP in contributing to the earlier signed multilateral FTAs to facilitate GVC operations.

Table 3.10 Trade-Weighted IIT Indices Averaged Between 2019 and 2020

HS	Description	RCEP	RCEP-15	CPTPP	AANZFTA	JAEPA	AKFTA	ACFTA	AIFTA
01–05	Animal & Animal Products	0.90	0.91	0.92	0.86	0.81	0.81	0.81	0.78
06–15	Vegetable Products	0.87	0.85	0.85	0.85	0.86	0.85	0.81	0.84
16–24	Foodstuffs	0.87	0.86	0.85	0.86	0.83	0.84	0.81	0.82
25–27	Mineral Products	0.87	0.87	0.84	0.84	0.94	0.93	0.90	0.93
28–38	Chemicals & Allied Industries	0.89	0.89	0.78	0.87	0.87	0.86	0.87	0.87
39–40	Plastics/Rubbers	0.93	0.93	0.87	0.90	0.92	0.91	0.89	0.90
41–43	Raw Hides, Skins, Leather, & Furs	0.77	0.76	0.64	0.75	0.71	0.71	0.76	0.76
44–49	Wood & Wood Products	0.86	0.86	0.86	0.84	0.82	0.84	0.84	0.81
50–63	Textiles	0.82	0.81	0.86	0.78	0.81	0.80	0.66	0.75
64–67	Footwear/Headgear	0.83	0.83	0.89	0.87	0.84	0.79	0.77	0.86
68–71	Stone/Glass	0.78	0.79	0.88	0.83	0.79	0.81	0.77	0.80
72–83	Metals	0.89	0.88	0.87	0.87	0.90	0.90	0.82	0.87
84–85	Machinery/Electrical	0.83	0.83	0.85	0.86	0.88	0.83	0.75	0.86
86–89	Transportation	0.86	0.86	0.84	0.76	0.81	0.72	0.77	0.76
90–96	Miscellaneous	0.85	0.84	0.79	0.81	0.86	0.80	0.70	0.80
All		0.86	0.85	0.84	0.85	0.87	0.85	0.79	0.86
Primary products		0.87	0.87	0.85	0.85	0.90	0.90	0.87	0.89
Manufacturing products		0.85	0.85	0.84	0.85	0.87	0.84	0.77	0.84

Source: Authors' calculations.

Conclusion and Policy Inferences

This chapter aims to quantify the *ex ante* restrictiveness of the RoO of RCEP compared to other multilateral FTAs with a view to facilitating the operation of existing GVCs. The other multilateral FTAs are the AANZFTA, JAEPA, AKFTA, ACFTA, AIFTA, and CPTPP.

The analysis begins with dissecting the PSRs in RoO Chapters of the FTAs so that any details (e.g. alternative rules, additional requirements, and/or exceptions) in the PSRs are not missed out. Whilst the criteria in assigning numerical values to each PSR are in line with the standard practices in the literature, such scores are analysed in depth together with the RWRs as well as the nature of international trade in GVCs. This is to ensure the scores reflect the actual impacts on GVC operations.

The key finding is that the PSRs in RCEP are the most flexible compared to the other multilateral FTAs covered in this study as RCEP offers more than one PSR for firms to choose from. The often-found alternative is RVC, so firms can choose to comply with either CTC or RVC. Whilst the flexible feature of the PSRs seems to be common amongst ASEAN-plus FTAs with high-income countries (i.e. AANZFTA, JAEPA, and AKFTA), the higher share of intra-member trade in RCEP makes the PSRs easier to comply with and facilitate GVC operations. The PSRs in RCEP are quite different from those in the ACFTA and AIFTA, which remain traditionally uniform in style. This is very clear in the case of the AIFTA, where the WO/RVC35/CSH criterion is imposed for all products. In the ACFTA, a single form accounts for 73.4% and is dominated by RVC (62.3%).

Compared with compatible-size mega FTAs like CPTPP, RCEP's PSRs are more facilitative to GVC operations. The PSRs in the CPTPP do not offer such flexibility and are dominated by the CTC criterion. In addition, there are two separate rules for textiles and apparel (HS 50–63) and automotive products (HS 8701–8707), which make these PSRs much more restrictive.

Comparing all of these FTAs suggests that their PSRs are far from harmonised, in which a single rule is applicable for a given product across FTAs. Hence, the risk of the 'spaghetti bowl' effect remains. In contrast, a convergence of the RWRs is found. Diagonal cumulation, private self-certification, 10% de mininis, minimum data requirement, direct consignment, and the provision of back-to-back proofs of origin are the common features offered in these FTAs. The exception would be the CPTPP, where full cumulation is offered but not associated with private self-certification. This makes the offered full cumulation look good only on paper.

The restrictiveness score of RCEP is in the middle amongst the multilateral FTAs covered in this study. When taking the FTA-specific features, such as high intra-member trade, and the member coverage, the PSRs in RCEP are the most facilitative to GVC operations. This points to the role of RCEP in contributing to the earlier signed multilateral FTAs to facilitate GVC operations.

Finally, our findig estimate of the Spearman's rank correlation amongst the PSR scores is found to be highly positive and statistically significant amongst RCEP, the CPTPP, JAEPA, and AANZFTA. Despite a few possible explanations (e.g. specific knowledge needed in the negotiations and protectionism), all point to room for improvement to make FTAs a stepping stone for further liberalisation.

Two policy inferences can be drawn from this study. Firstly, to allow RCEP's member countries to harness the preferential trade schemes, introducing a full cumulation clause would allow an RVC alternative often associated with the CTC criterion to be in full effect and further boost the use of RCEP.

Secondly, harmonisation of the RoO provisions across these multilateral FTAs has not been found. Together with the high rank correlation of the recent multilateral FTAs that is found, the lack of harmonisation suggests that further liberalisation of sensitive products remains a challenge to ongoing FTA negotiations. One way to achieve this is to set up monitoring of FTA utilisation and the problems that arise from complying with the RoO. This will allow RCEP to become a true stepping stone for trade liberalisation in the broader WTO multilateral trading system.

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Appendix RoO Scores of Selected Multilateral FTAs

HS2	Description	RCEP	CPTPP	AANZFTA	JAEPA	AKFTA	ACFTA	AIFTA
1	Live Animals	1.0	1.0	1.0	5.0	1.0	1.0	1.0
2	Meat and Edible Meat Offal	6.0	5.0	5.0	6.0	1.0	1.0	1.0
3	Fish and Crustaceans, Molluscs and Other Aquatic Invertebrates	4.8	4.2	1.4	5.1	1.4	4.8	1.0
4	Dairy Produce; Bird Eggs; Natural Honey; Edible Products of Animal Origin, Not Elsewhere Specified or Included	4.4	4.9	2.7	5.0	1.6	4.1	1.0
5	Products of Animal Origin, Not Elsewhere Specified or Included	5.1	5.0	4.7	5.0	1.0	4.7	1.0
6	Live Trees and Other Plants; Bulbs, Roots and the Like; Cut Flowers and Ornamental Foliage	5.0	5.0	1.2	5.0	1.0	2.9	1.0
7	Edible Vegetables and Certain Roots and Tubers	3.2	5.0	1.7	5.0	1.0	2.8	1.0
8	Edible Fruit and Nuts; Peel of Citrus Fruit or Melons	5.0	4.9	2.5	5.0	1.0	4.7	1.0
9	Coffee, Tea, Mate and Spices	3.6	3.8	4.0	4.7	1.4	3.1	1.0
10	Cereals	1.0	5.0	1.0	5.0	1.0	1.2	1.0
11	Products of the Milling Industry; Malt; Starches; Inulin; Wheat Gluten	5.4	5.0	4.7	5.1	3.8	4.8	1.0
12	Oil Seeds and Oleaginous Fruits; Miscellaneous Grains, Seeds and Fruit; Industrial or Medicinal Plants; Straw and Fodder	3.3	5.0	2.3	5.0	1.0	1.1	1.0
13	Lac; Gums, Resins and Other Vegetable Saps and Extracts	5.1	4.8	3.8	5.0	1.2	3.0	1.0
14	Vegetable Plaiting Materials; Vegetable Products Not Elsewhere Specified or Included	5.0	5.0	2.6	5.0	1.0	3.0	1.0
15	Animal or Vegetable Fats and Oils and Their Cleavage Products; Prepared Edible Fats; Animal or Vegetable Waxes	4.8	4.7	5.0	4.5	1.3	4.1	1.0
16	Preparations of Meat, of Fish or of Crustaceans, Molluscs or Other Aquatic Invertebrates	5.0	5.0	5.0	5.7	3.9	4.4	1.0
17	Sugars and Sugar Confectionery	4.3	4.8	3.6	5.6	1.0	2.6	1.0
18	Cocoa and Cocoa Preparations	3.4	4.1	3.3	4.8	1.0	2.9	1.0
19	Preparations of Cereals, Flour, Starch or Milk; Pastrycooks' Products	4.8	4.4	4.4	5.1	2.1	4.3	1.0
20	Preparations of Vegetables, Fruit, Nuts or Other Parts of Plants	5.0	4.8	4.7	5.6	1.9	4.8	1.0
21	Miscellaneous Edible Preparations	4.9	3.9	3.8	5.0	1.4	3.7	1.0
22	Beverages, Spirits and Vinegar	3.6	3.7	3.6	4.4	2.2	3.3	1.0
23	Residues and Waste from the Food Industries; Prepared Animal Fodder	4.0	4.1	3.4	3.1	1.6	3.3	1.0
24	Tobacco and Manufactured Tobacco Substitutes	3.6	4.2	3.6	3.4	2.4	3.0	1.0
25	Salt; Sulphur; Earths and Stone; Plastering Materials, Lime and Cement	3.2	3.0	2.7	3.0	3.0	3.0	2.0

HS2	Description	RCEP	CPTPP	AANZFTA	JAEPA	AKFTA	ACFTA	AIFTA
26	Ores, Slag and Ash	3.0	3.0	2.4	3.0	3.0	3.1	1.7
27	Mineral Fuels, Mineral Oils and Products of Their Distillation; Bituminous Substances; Mineral Waxes	3.2	2.8	2.9	3.0	3.0	3.1	2.1
28	Inorganic Chemicals; Organic or Inorganic Compounds of Precious Metals, of Rare-Earth Metals, of Radioactive Elements or of Isotopes	2.9	2.5	2.3	3.0	3.0	3.0	2.2
29	Organic Chemicals	3.0	2.3	2.3	3.0	3.0	3.0	2.1
30	Pharmaceutical Products	3.1	2.4	2.3	3.0	3.0	3.2	2.0
31	Fertilisers	3.3	2.2	2.2	3.0	3.0	3.0	2.0
32	Tanning or Dyeing Extracts; Tannins and Their Derivatives; Dyes, Pigments and Other Colouring Matter; Paints and Varnishes; Putty and Other Mastics; Inks	2.9	2.9	2.7	3.0	3.0	3.0	2.5
33	Essential Oils and Resinoids; Perfumery, Cosmetic or Toilet Preparations	3.0	2.8	2.8	3.0	2.9	3.0	2.3
34	Soap, Organic Surface-Active Agents, Washing Preparations, Lubricating Preparations, Artificial Waxes, Prepared Waxes, Polishing or Scouring Preparations, Candles and Similar Articles, Modelling Pastes, 'Dental Waxes' and Dental Preparations with a Basis of Plaster	2.9	2.8	2.8	3.0	3.0	3.0	2.5
35	Albuminoidal Substances; Modified Starches; Glues; Enzymes	2.7	2.5	2.6	3.4	3.0	3.1	2.2
36	Explosives; Pyrotechnic Products; Matches; Pyrophoric Alloys; Certain Combustible Preparations	3.0	3.0	3.0	3.0	3.0	3.3	1.8
37	Photographic or Cinematographic Goods	3.0	3.0	2.6	3.0	3.0	3.5	1.6
38	Miscellaneous Chemical Products	3.4	2.6	2.4	3.0	3.0	3.0	2.2
39	Plastics and Articles Thereof	3.0	2.9	2.9	3.0	3.0	3.0	2.4
40	Rubber and Articles Thereof	3.1	3.0	3.2	3.0	3.0	2.9	2.2
41	Raw Hides and Skins (Other Than Furskins) and Leather	3.5	3.3	2.7	5.0	3.0	4.0	1.8
42	Articles of Leather; Saddlery and Harness; Travel Goods, Handbags and Similar Containers; Articles of Animal Gut (Other Than Silk-Worm Gut)	5.0	5.2	4.1	5.0	3.1	3.0	2.1
43	Furskins and Artificial Fur; Manufactures Thereof	3.8	3.8	3.0	4.7	3.0	3.0	1.6
44	Wood and Articles of Wood; Wood Charcoal	3.0	3.0	2.3	3.1	3.0	3.0	2.0
45	Cork and Articles of Cork	3.0	3.0	3.0	3.4	3.0	3.0	2.3
46	Manufactures of Straw, of Esparto or of Other Plaiting Materials; Basketware and Wickerwork	3.2	4.3	0.5	4.1	3.0	3.0	2.1

HS2	Description	RCEP	CPTPP	AANZFTA	JAEPA	AKFTA	ACFTA	AIFTA
47	Pulp Of Wood Or Of Other Fibrous Cellulosic Material; Recovered (Waste And Scrap) Paper And Paperboard	3.8	3.0	2.8	3.0	3.0	3.0	1.8
48	Paper and Paperboard; Articles of Paper Pulp, of Paper or of Paperboard	3.7	3.0	2.7	3.0	3.0	3.0	2.3
49	Printed Books, Newspapers, Pictures and Other Products of the Printing Industry; Manuscripts, Typescripts and Plans	3.0	3.0	3.0	3.1	3.0	3.1	2.3
50	Silk	3.8	3.5	2.8	3.8	3.7	3.4	2.1
51	Wool, Fine or Coarse Animal Hair; Horsehair Yarn and Woven Fabric	3.9	4.3	3.8	4.3	3.9	2.9	1.4
52	Cotton	3.1	4.3	2.6	3.8	3.1	6.8	2.0
53	Other Vegetable Textile Fibres; Paper Yarn and Woven Fabrics of Paper Yarn	3.8	3.7	2.8	4.2	3.8	3.0	1.9
54	Man-Made Filaments; Strip and the Like of Man-Made Textile Materials	4.0	5.3	2.7	4.4	4.0	3.4	2.2
55	Man-Made Staple Fibres	3.6	5.0	2.7	4.1	3.4	3.0	2.1
56	Wadding, Felt and Nonwovens; Special Yarns; Twine, Cordage, Ropes and Cables and Articles Thereof	4.8	6.2	4.7	6.0	5.0	3.6	2.2
57	Carpets and Other Textile Floor Coverings	5.0	5.0	4.8	5.8	5.0	3.0	2.2
58	Special Woven Fabrics; Tufted Textile Fabrics; Lace; Tapestries; Trimmings; Embroidery	5.0	6.2	3.3	6.2	4.7	3.0	2.0
59	Impregnated, Coated, Covered or Laminated Textile Fabrics; Textile Articles of a Kind Suitable for Industrial Use	5.0	5.9	5.0	5.4	5.0	3.2	2.1
60	Knitted or Crocheted Fabrics	5.0	6.3	5.0	6.3	3.0	7.3	1.9
61	Articles of Apparel and Clothing Accessories, Knitted or Crocheted	5.0	7.0	4.6	6.3	5.0	1.3	2.2
62	Articles of Apparel and Clothing Accessories, Not Knitted or Crocheted	5.0	7.0	5.0	6.3	5.0	1.3	2.1
63	Other Made Up Textile Articles; Sets; Worn Clothing and Worn Textile Articles; Rags	5.0	7.0	5.5	6.3	5.1	1.4	2.3
64	Footwear, Gaiters and the Like; Parts of Such Articles	3.2	4.8	3.0	5.0	3.0	3.0	2.3
65	Headgear and Parts Thereof	3.0	3.5	3.8	3.3	3.0	3.3	2.3
66	Umbrellas, Sun Umbrellas, Walking-Sticks, Seat-Sticks, Whips, Riding-Crops and Parts Thereof	3.0	3.7	3.7	3.0	3.0	3.0	2.2
67	Prepared Feathers and Down and Articles Made of Feathers or of Down; Artificial Flowers; Articles of Human Hair	3.0	3.0	3.8	3.0	3.0	3.0	1.9
68	Articles of Stone, Plaster, Cement, Asbestos, Mica or Similar Materials	3.0	2.9	2.3	3.0	3.1	3.0	2.2
69	Ceramic Products	3.0	5.0	3.1	3.0	3.0	3.0	2.2
70	Glass and Glassware	3.0	3.0	2.7	3.1	3.0	3.0	2.3

HS2	Description	RCEP	CPTPP	AANZFTA	JAEPA	AKFTA	ACFTA	AIFTA
71	Natural or Cultured Pearls, Precious or Semi-Precious Stones, Precious Metals, Metals Clad with Precious Metal, and Articles Thereof; Imitation Jewellery; Coin	3.7	3.8	3.8	3.6	2.9	3.0	2.1
72	Iron and Steel	3.4	3.3	3.8	4.4	3.0	3.2	2.2
73	Articles of Iron or Steel	3.0	3.8	4.5	3.1	3.0	3.0	2.3
74	Copper and Articles Thereof	3.0	3.0	3.0	3.0	3.0	3.0	2.2
75	Nickel and Articles Thereof	3.0	2.7	2.9	3.0	3.0	3.0	2.0
76	Aluminium and Articles Thereof	3.1	3.0	3.3	3.0	3.0	3.0	2.4
78	Lead and Articles Thereof	3.0	3.0	3.5	3.0	3.0	3.0	2.1
79	Zinc and Articles Thereof	3.0	3.0	2.8	3.0	3.0	3.0	2.6
80	Tin and Articles Thereof	3.0	3.0	2.7	3.0	3.0	3.0	2.2
81	Other Base Metals; Cermets; Articles Thereof	2.5	2.1	2.4	3.0	3.0	3.0	1.7
82	Tools, Implements, Cutlery, Spoons and Forks, of Base Metal; Parts Thereof of Base Metal	5.0	4.4	5.0	3.0	3.0	3.0	2.2
83	Miscellaneous Articles of Base Metal	2.9	2.9	3.1	3.0	3.0	3.0	2.4
84	Nuclear Reactors, Boilers, Machinery and Mechanical Appliances; Parts Thereof	2.8	2.8	2.6	3.0	3.0	2.9	2.3
85	Electrical Machinery and Equipment and Parts Thereof; Sound Recorders and Reproducers, Television Image and Sound Recorders and Reproducers, and Parts and Accessories of Such Articles	2.7	2.8	2.4	3.0	3.0	2.8	2.3
86	Railway or Tramway Locomotives, Rolling-Stock and Parts Thereof; Railway or Tramway Track Fixtures and Fittings and Parts Thereof; Mechanical (Including Electro-Mechanical) Traffic Signalling Equipment of All Kinds	3.0	3.0	3.0	3.0	3.0	3.0	1.7
87	Vehicles Other Than Railway or Tramway Rolling-Stock, and Parts and Accessories Thereof	5.1	4.6	2.9	3.0	3.0	3.1	2.2
88	Aircraft, Spacecraft, and Parts Thereof	3.0	3.0	2.8	3.0	3.0	3.1	1.9
89	Ships, Boats and Floating Structures	3.0	3.0	3.0	3.0	3.0	4.3	1.9
90	Optical, Photographic, Cinematographic, Measuring, Checking, Precision, Medical or Surgical Instruments and Apparatus; Parts and Accessories Thereof	2.7	2.8	2.4	3.0	3.0	3.0	2.2
91	Clocks and Watches and Parts Thereof	2.9	3.0	2.9	3.0	3.0	3.0	1.8
92	Musical Instruments; Parts and Accessories of Such Articles	3.0	2.9	3.0	3.0	3.0	3.0	2.0
93	Arms and Ammunition; Parts and Accessories Thereof	3.0	2.9	3.0	2.9	3.0	2.9	1.7

HS2	Description	RCEP	CPTPP	AANZFTA	JAEPA	AKFTA	ACFTA	AIFTA
94	Furniture; Bedding, Mattresses, Mattress Supports, Cushions and Similar Stuffed Furnishings; Lamps and Lighting Fittings, Not Elsewhere Specified or Included; Illuminated Signs, Illuminated Name-Plates and the Like; Prefabricated Buildings	3.0	3.1	2.5	3.0	3.0	3.0	2.4
95	Toys, Games and Sports Requisites; Parts and Accessories Thereof	3.0	3.0	2.9	3.0	3.0	3.0	2.0
96	Miscellaneous Manufactured Articles	3.0	3.0	2.8	2.9	3.0	3.0	2.2