

RULES OF ORIGIN IN NORTH-SOUTH PREFERENTIAL TRADE AGREEMENTS

A thesis submitted to the Department of International Development of the
London School of Economics for the degree of Doctor of Philosophy

by
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DECLARATION

I certify that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis. This thesis contains nothing which is the outcome of work done in collaboration with others except as explicitly specified in the thesis and in the Statement of Inclusion below.

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INCLUSION OF PUBLISHED AND CO-AUTHORED WORK

A part of the data collected for this thesis has been published in the World Bank's Deep Trade Agreements project (World Bank, 2020a). This data publication was accompanied by a chapter in the Deep Trade Agreements handbook which I co-authored and which I reference in this thesis, cited as Angeli et al., 2020.

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*"Rules of Origin are very, very complex. You don't want to know about them.
They are terrible things to deal with."*

Michael Wilson, former Canadian Minister for International Trade
(Lukauskas et al., 2013)

ABSTRACT

The study of North-South trade agreements, their policy design and the negotiations that shape them, contains a knowledge gap on Rules of Origin (ROO). ROO regulate which goods get to benefit from preferential market access and prevent tariff fraud. In their simplest form, ROO are domestic content requirements but have mushroomed to create thousands of complex hurdles to preferential trade.

This thesis fills this knowledge gap. The introduction contextualises the role of ROO in North-South trade agreements. Chapter 1 presents a comprehensive dataset on ROO *design* across trade agreements, the first of its kind, responding to a call for better public data on ROO issues from academics and policy makers alike.

Chapter 2 applies this data to advance the debate around *negotiation outcomes* in North-South PTAs. The chapter applies novel metrics to show that the transition from GSP to PTA can lead to significant changes in the usability of trade preferences, but that these changes differ depending on the GSP donor and sector. These findings evidence that, in contrast to common characterisations in the literature, ROO are far from a blanket market access barrier. Instead, ROO design changes depending on who is negotiating what.

The third chapter contributes to the discussion of possible *drivers* of negotiation outcomes, using primary and secondary evidence to better understand the actors and interests that influence ROO design and its variation. The findings suggest that ROO can be negotiated to achieve a variety of policy objectives beyond preventing tariff fraud, and second, that their complexity can often hamper their effective negotiation.

Chapter 4 concludes with a look ahead on future research questions and policy conclusions.

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ABBREVIATIONS

AfCFTA	African Continental Free Trade Agreement
AGOA	African Growth and Opportunity Act
ASEAN	Association of Southeast Asian Nations
DFAT	Australian Department for Foreign Affairs and Trade
EBA	Everything But Arms
EFTA	European Free Trade Association
FDI	Foreign Direct Investment
GATT	General Agreement on Tariffs and Trade
GSP	Generalised System of Preferences
GVC	Global Value Chains
HS	Harmonised Commodity Description and Coding System
ISI	import substitution industrialisation
MFN	Most Favoured Nation
OECD	Organisation for Economic Co-Operation and Development
PSR	Product-Specific Rules of Origin
PTA	Preferential Trade Agreement
ROO	Rules of Origin
UNCTAD	United Nations Conference on Trade and Development
USTR	United States Trade Representative
WCO	World Customs Organisation
WTO	World Trade Organisation

GLOSSARY OF CONCEPTS

Index	A composite measure of variables using more than one data item at a time, or an accumulation of scores (Crossman, 2019)
Ex-ante index	Capturing information before the context it applies in, e.g. the product and the number of possible inputs for each product (Harris, 2007)
Heterogeneity index	An index to capture potential trade costs that can arise from simply imposing more than one rule (Angeli et al., 2020)
Single Transformation index	An index that compares how close an observed product-specific ROO is to the simplest logical ROO
Market access	The conditions, tariff and non-tariff measures, agreed by members for the entry of specific goods into their markets (WTO Secretariat, 2021)
North-South	Pertaining to high-income countries as “Northern”, and low-income, lower-middle-income, and upper-middle-income countries as “Southern”
Preference utilisation	The ratio of imports receiving preferences to eligible imports (Brenton & Manchin, 2003)
ROO restrictiveness	The extent to which a given ROO affects producers and trade (Harris, 2007)
Trade creation	The effect on trade flows as a result of a PTA reducing trade cost among members so trade can flow more efficiently (S. Kim et al., 2013)
Trade deflection	When third countries effectively free-ride on market access concessions granted to PTA partners (EPRS, 2017)

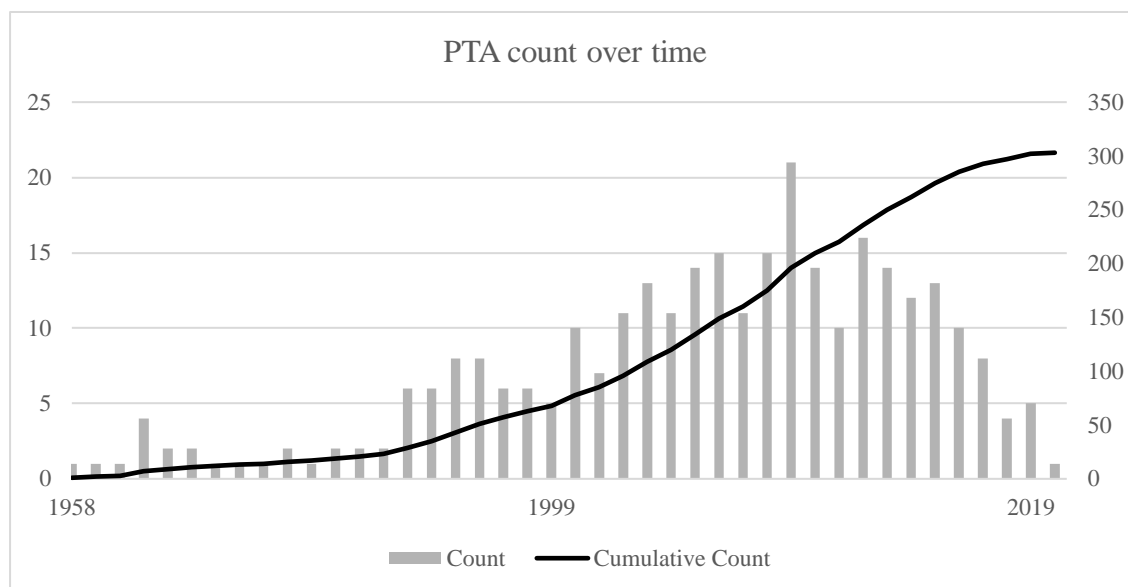
INTRODUCTION: RULES OF ORIGIN IN NORTH-SOUTH PTAs

Trade relationships between developing and industrialised nations have changed substantially over the past three decades. The General Agreement on Tariffs and Trade (GATT) and its successor, the World Trade Organization (WTO) with quasi-global membership and developing country majority, used to govern the design of trade relationships for the second half of the 20th century. This progress stalled at the turn of the millennium when multilateral trade negotiations were gridlocked by lacking consensus on, among other issues, obligations of developing countries in advancing global trade liberalisation. This multilateral gridlock still persists and much of today's trade is regulated by provision in preferential trade agreements (PTAs¹).

PTAs have flourished as a mechanism to advance trade liberalisation in the past two decades (Figure 1). The majority of new PTAs signed since the 1990s involved developing countries (Dür et al., 2014; Schneider, 2018).

¹ Preferential Trade Agreements mean all negotiated trade agreements. The literature also refers to these agreements as regional trade agreements or as free trade agreements. The term Preferential Trade Agreements is most accurate for the purposes of this thesis as these agreements grant *preferential* market access but do not create *free* trade nor are they always *regional*.

Figure 1 Proliferation of PTAs over time



Source: WTO Regional Trade Agreement pathways, author's illustration

While progress on multilateral trade liberalisation has stalled, these PTAs have been the predominant fora for trade policy negotiations for developing countries. Beyond PTAs, North-South trade² is governed by another set of similar but distinct set of rules under developmental trade schemes, the Generalised System of Preferences (GSP). These schemes are unilateral, non-reciprocal offers of improved market access for developing country exports into industrialised economies. The GSP was first introduced in the 1970s and coordinated by the UN Conference on Trade and Development (UNCTAD) to enhance the relative competitiveness of developing countries vis-à-vis industrialised competitors during falling national tariff levels. This system is different to PTAs because industrialised countries merely declare a reduction of market access barriers for developing countries and are free to design or reform these reductions and revoke

² “North-South” shall mean pertaining to high-income countries as “Northern”, and countries classified as low-income, lower-middle-income, and upper-middle-income countries as “Southern”. I acknowledge the shortcomings of this umbrella term, not least while I discuss Australia and New Zealand as a Northern country, and the North American country of Mexico as Southern. I nevertheless apply this description to adhere to common practice in the literature, e.g. Hoekman, 2011; Manger, 2012; Schneider, 2018; Zartman, 2019.

them at their own prerogative. PTAs, on the other hand, are negotiated, so that the Southern party gets a seat at the table to influence outcomes in exchange for own trade concessions.

Table 1 Overview of North-South Trade Schemes

	<i>Participation</i>	<i>Mechanism</i>	<i>Cadence</i>
<i>Preferential trade Agreements</i>	Members only	Negotiation rounds of reciprocal offers exchanged between member states	Set by negotiation partners, often 2-5 negotiation rounds per year over the course of 2-7 years
<i>Developmental trade schemes</i>	A group of developing countries, defined by the preference-granting industrialised country	Market access offer granted by industrialised economy, reviewed or revoked at the donor country	Declared by the industrialised country and reviewed or revoked according to domestic legislation
<i>World Trade Organisation</i>	All 164 WTO members	Rounds of multilateral negotiations; agreement by consensus only	Bi-annual ministerial conferences to work towards agreement on multi-year negotiations; current negotiation round was launched in 2001.

What the three forms of North-South trade schemes have in common is an objective to liberalise market access (*General Agreement on Tariffs and Trade, Art. XXIV, 1944*). Market access, according to the WTO's definition, means the conditions, tariff and non-tariff measures, agreed by members for the entry of specific goods into their markets (WTO Secretariat, 2021).

The academic literature has dedicated many studies to the question whether non-multilateral fora for trade governance have succeeded in improving market access for developing countries. Curiously though, trade policy researchers have largely maintained a blind spot on – in the WTO's definition – the *conditions* of market access liberalisation. These conditions include Rules of Origin (ROO) that define which traded goods are actually eligible for the market access benefits. The design of ROO in every PTA and GSP thus determines whether all, some or no North-South trade flows benefit in real life from the market access benefits in the treaty text. Despite this clear

real-life relevance for North-South trade, there is no systematic data or metric of ROO in North-South PTAs available.

This thesis discusses ROO design, its variation and some potential drivers, in North-South PTAs³ to fill this research and evidence gap. In this introduction, the first section is dedicated to setting out the big picture. It first describes briefly the relationship between trade agreements, trade policy, and development, and then discusses which role ROO play in this relationship. It concludes by outlining the research objectives and hypotheses that are then developed in the following four chapters.

1 THE ROLE OF TRADE AGREEMENTS IN DEVELOPMENT

To set the conceptual framework for this thesis, the following section summarises the core research findings and themes on developmental trade policy before outlining the role that ROO can and do play in developmental trade policy-making. It shows why trade agreements in general, and North-South PTAs in particular, matter for the political economy of developing countries. Two policy issues sit at the heart of the trade-development nexus: industrial policy and economic development.

1.1 Industrial policy

Industrial policy means government policies directed at affecting the economic structure of the economy (Stiglitz et al., 2013). In the research on trade and development, trade has often been

³ North-South PTAs refer to PTAs that are concluded between a GSP donor and a recipient of that same GSP scheme.

association with two main types of industrial policy: attracting more or different foreign direct investment (FDI) and integration into global value chains (GVCs) (Manger & Shadlen, 2015).

Especially in the Americas, different accounts describe PTAs as a tool to attract FDI (Cameron & Tomlin, 2000; Manger & Shadlen, 2015). Large-N data research supports this hypothesis. For example, Milner and Büthe (2008) found that, based on statistical analyses of 122 developing countries, PTA membership increased FDI going into the developing country. The factors explaining this mechanism include both direct effects of the PTA, e.g. the result of investment protection mechanisms in PTAs, but also indirect effects like signalling a liberal policy outlook or a commitment to lasting economic relationship between the parties (Fernandez, 1998).

FDI also plays an important role in developing sectors and industry to integrate into GVCs. PTAs shape GVCs because they lower market access barriers and foster the flow of FDI, technical expertise and services. Empirically, countries that have concluded PTAs have been found to trade more in intermediate products than countries without PTA membership (Hayakawa & Yamashita, 2011; Johnson & Noguera, 2012; Rocha & Orefice, 2011). Particularly middle-income developing countries increasingly participate in GVCs as buyers and sellers of intermediate goods, which has changed the demand for lower trade costs for imports, higher demand for FDI to establish a processing industry, and overall a stronger interest in mutual market access concessions with developed markets to enhance domestic economies of scale (Manger & Shadlen, 2015). In other words, many developing countries today are increasingly both importers of inputs, recipients of FDI, and exporters of processed goods, and PTAs play a role in facilitating and directing these industrial policy levers.

1.2 Trade liberalisation

In using trade policy for economic development, different developing countries have historically placed a different emphasis on the role or right degree of trade liberalisation. For instance, many Latin American countries forewent trade liberalisation in favour focussed on import substitution industrialisation (ISI) where market access protections shielded firms in nascent sectors from international competition. Following the debt crises that affected many Latin American countries in the 1980s, international debt relief was conditioned on market access liberalisations which then moved a range of countries to adopt more exporter-led trade policies (Martin, 2015). East Asian countries, on the other hand, adopted exporter-led trade policies and complemented focussed ISI policies with extensive policies to liberalise domestic and external market access policies.

North-South PTAs have been employed as a tool to advance trade liberalisation in different ways. Whether they have been effective in doing so is still a live discussion. While some consider North-South trade a building block for liberalisation which in turn advances welfare gains and economic growths (e.g. Estevadeordal et al., 2013; Krueger, 1997), others challenge whether PTAs effectively reflect the economic growth and development objectives of developing countries, given the asymmetries in negotiation power and competing interests of the parties (e.g. Rodrik, 2001; Shadlen, 2005). The literature on the relationship between trade liberalisation and development can be characterised as seeking to identify the right degree of trade liberalisation cognisant of the sectors and countries in question, which I refer to as *measured trade liberalisation*.

Measured trade liberalisation centres around the question how much liberalisation is beneficial to an economy or industry. As discussed above, developing countries have historically answered this question differently. Similarly, not all PTAs involving developing countries open markets fully. For example, many South-South PTAs offer limited tariff reductions. PTAs among or with industrialised economy also exhibit similar patterns of varying degrees of market opening and have

to strike a balance between gaining the desired market access abroad while ringfencing domestic interesting groups.

To summarise, developing countries' trade policy has been driven by both industrial policy and economic development interests which led to varying preferences for FDI attraction, domestic industry protection, GVC integration and, as a result of these preference, PTA negotiations. This thesis does not evaluate the success or failure of PTAs as a tool to achieve measured trade liberalisation in developing countries. Instead, it contributes to the academic discussion around the policy tools available to developing countries to achieve a given desired outcome in the interaction between trade liberalisation and economic development. The following section discusses how ROO can in theory be used as such a policy tool and summarises what the small set of available literature has empirically evidenced. Before doing so, I include an explainer on ROO to inform the reader and define terminology and concepts relevant for the remaining thesis.

2 EXPLAINER: WHAT ARE ROO AND WHAT DO THEY DO?

Rules of origin are the criteria needed to determine the national source of a product. PTAs used them to distinguish goods from member countries from those originating in third countries (Conconi et al., 2018). Their importance is derived from the fact that duties and restrictions in PTAs depend on the geographical origin of imports (WTO, 2020).⁴ In the absence of ROO, a PTA could be used by a third country to circumvent non-PTA tariffs by exporting products through a PTA member to the final destination. This makes ROO an insurance mechanism that preferential market access benefits will only be used by the designated beneficiary country and not the entire

⁴ Non-preferential ROO refer to the origin determinations countries may undertake to determine the origin of imports for statistical purposes or to uphold quantitative import restrictions. Unlike preferential ROO, non-preferential ROO do not affect the tariff level levied on the import and are not negotiated but determined unilaterally. They thus do not have the same trade policy impact and are unrelated to PTAs.

world. In this function, ROO can be seen as an enabler of preferential trade liberalisation since without them, countries would not be able to offer tariff reductions to only a few countries.

In the absence of ROO, any item could be shipped from a third party via a GSP recipient or PTA partner of their destination country to avoid paying the MFN duty – a process called transshipment (Crook & Gordon, 2017).

Figure 2 Visualisation: Direct export and transshipment

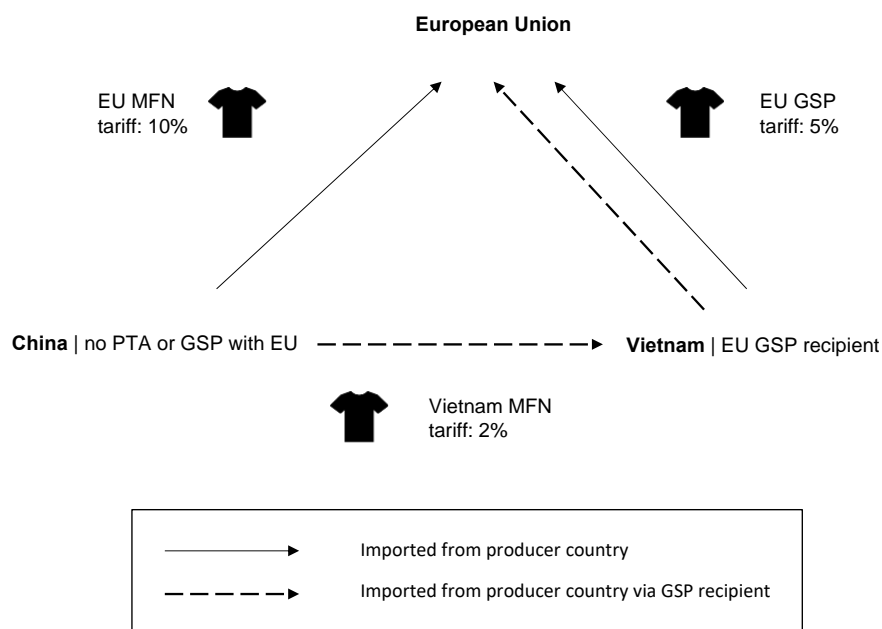


Figure 2 illustrates the challenge of implementing preferential tariff schemes without ROO. In this theoretical example, the EU grants GSP status to Vietnam and applies a 5 per cent GSP tariff on t-shirts. China does not have GSP status or a PTA with the EU and its exports therefore would pay a hypothetical tariff of 10 per cent into the EU. If the EU as the importing party had no means of telling where the product was made, it would need to count the port or airport of shipment as the origin of the product. As a result, China would be able to simply ship its t-shirt exports to the EU via a Vietnamese port instead of shipping them directly, paying 7 per cent import tariffs instead

of the MFN rate of 10 per cent. Similarly, Vietnamese exports shipped from Asia's largest cargo port in Shanghai would automatically be charged the MFN tariffs that Chinese exports face instead of the cheaper GSP rate.

ROO can be found in all preferential trade regimes, i.e. both PTAs and GSP. Importantly, GSP ROO are not negotiated, in line with the rest of the scheme, so recipient countries have no say in the level of third party-input restrictions their exporters are subjected to. In North-South PTAs however, ROO are negotiated in full, often occupying the most time of all PTA chapters, to design a ROO criterion for every product covered by the PTA (DFAT, 2018).

The complexity of ROO design is in part due to the fact that there is no harmonised approach to ROO.⁵ Therefore, PTA parties or preference granting countries are free to – and often do – define the ROO for individual products so that exporters may find that the same product has different origins depending on the country they are exporting to. For some products, such as primary agricultural outputs, the definition of origin is relatively easy because no processing has occurred. Such products are referred to as *wholly obtained*. For most other products, ROO are necessary to determine the transformation that has conveyed the essential character, and thus the home country of the product (Brenton & Imagawa, 2005). This transformation is interchangeably referred to as *sufficient working* or *substantial transformation*. Identifying and defining the processing step that confers such a substantial transformation and thereby the product's origin is the purpose of ROO. The following contains a summary and examples to show how ROO can be designed to test for a substantial transformation and why this can result in complex rules for negotiators and exporters alike.

⁵ Why this should be, and how this could be, remedied, is addressed in Chapter 4.

Similarities do however exist in the criteria that ROO employ to define origin, which is done through one or more of:

1. A processing requirement: defining a specified manufacturing process as origin test,
2. An HS change: a change in the tariff classification of the Harmonised System, and/or
3. A value addition criterion: the value added in the origin-claiming country.

These three criteria will now be addressed in turn.

2.1 Processing requirement

This method confers origin by defining a specified step in the manufacturing process that confers origin (Brenton & Imagawa, 2005). This can be exemplified by comparing two situations:

- (1) raw coffee wholly obtained in Colombia is imported into the EU where it is dusted, roasted, ground, sorted and packaged;
- (2) raw coffee wholly obtained in Colombia is imported into the EU where it is dusted, sorted and packaged.

According to ROO in the EU's PTA with Morocco, dusting, sorting and packaging are insufficient to confer origin to coffee, while roasting and grinding does confer origin. Therefore, the coffee in situation 1 obtains EU origin, while coffee in situation 2 maintains its Colombian origin and is not covered by the EU-Morocco PTA (Inama, 2009).

The way in which the specific manufacturing process is defined can be used to direct production and investments to the country which has a comparative advantage in this particular manufacturing process. Among the best-known examples in this policy niche is the case of ROO in the North

American Free Trade Agreement (NAFTA). The NAFTA ROO for large screen colour television sets introduce stringent restrictions on foreign inputs and offered attracting tariff savings in the case of compliance. As a result, only a television set made in NAFTA countries was only granted NAFTA preferential tariffs when it was both assembled there and the picture tube, its most costly input, was produced in the NAFTA country. In the two years following the inception of NAFTA, five new production sites were established in the US and Mexico, and NAFTA was credited for “returning” the TV industry from Asia to North America (de la Calle, 1997; Dieter, 2013).

2.2 HS change

This method draws on the Harmonised Commodity Description and Coding System (HS) as developed by the World Customs Organisation (WCO). This system was originally established for customs purposes so that importing countries could record and tax imports systematically. Products are grouped from an umbrella category at the section level and then branch out into more and more processed goods within this section, assigning 2-, 4-, and 6-digit codes from least to most processed. For example,

Section XI	Textiles and Textile Articles
Chapter 62	Articles of apparel and clothing accessories, not knitted or crocheted
Heading 62.03	Men's or boys' suits, ensembles, jackets, blazers, trousers, bib and brace overalls, breeches and shorts (other than swimwear)
Subheading 6203.32	Jackets and blazers of cotton

A change in the HS code, also called a tariff classification, can be used to define origin for the purpose of ROO, but there is no harmonised approach to the level which constitutes a substantial transformation. An example of an HS change ROO is this rule for buttons (subheading 9606.30), drawn from USMCA: “A change to subheading 9606.30 from any other heading”.

Using a change in tariff classification avoids additional administrative burdens on the recipient country because 98 per cent of goods traded internationally are already classified under the HS for a variety of purposes (WCO, 2015). An important disadvantage of this method is that the HS system can be inadequate for the purpose of determining origin: the HS system was designed to classify products in international trade, but this classification does not necessarily constitute a substantial transformation, which is what ROO are looking to determine (Inama, 2009). To avoid situations where a change in tariff classification does not imply a substantial transformation, or where a substantial transformation does not result in a change in tariff classification, countries may specify the types of processing that confer origin to a non-originating products.⁶

2.3 Value addition

This ROO establishes either a minimum percentage of value added to a product from the country claiming origin, or a maximum percentage of value added from non-originating inputs. The value of the product, upon which the value added is calculated, can be defined differently, for example from factory, cost, insurance and freight, or into factory (Brenton & Imagawa, 2005). Depending on the denominator used the same process can result in a different percentage of value added.

An example of a value-addition ROO in combination with an HS change rule is taken from the US-Chile PTA on men's suits of subheading 6103.39:

“A change to tariff item 6103.39.aa or 6103.39.bb from any other chapter, except from heading 51.06 through 51.13, 52.04 through 52.12, 53.07 through 53.08, 53.10 through 53.11, 54.01 through 54.02, subheading 5403.20, 5403.33 through 5403.39, 5403.42 through heading 54.08, heading 55.08 through 55.16, or 60.01 through 60.06, provided that the good is cut or knit to shape, or both, and sewn or otherwise assembled in the territory of one or more of the Parties.”

⁶ An example is the Single List by the EC, Norway and Switzerland which specifies such origin-conferring processing for different products.

The value-added method can be costly to exporters, first, because the calculation of value added is complex and since no harmonised approach exists, different calculations may be needed depending on the ROO of the country receiving the export. Second, the value added from the same processing step can vary due to fluctuations in input costs and exchange rates (Brenton & Imagawa, 2005). In developing countries and LDCs, where wages are relatively cheap, a value-added ROO can turn this advantage into a disadvantage: because of the low wages, a minimum value added requires more domestic processing than in a country with higher wages (Inama, 2015).

The NAFTA update, USMCA, includes an example recently in the media for its regulatory complexity. Initial findings on USMCA's impact focus in particular on the ROO for cars, as the automotive industry undergoes significant changes to their manufacture and thus supply chains, following changes in consumer preferences, government regulations, and electrification. USMCA ROO for autos introduced a value-addition criterion both for cars and on top of that another criterion for the steel and aluminium inputs of cars. An initial analysis by Medina (2021) shows that car manufacturers in the US and Mexico have already begun to shift supply chains towards North American producers, or change their business operations, e.g. by ceasing production altogether or shifting to different suppliers for car components to comply with USMCA's ROO .

In addition to defining a substantial transformation, ROO also usually contain a range of provisions that make the ROO input requirements more or less restrictive in their application. In this category falls an important category for the remainder of this thesis, so-called cumulation provisions which extend the scope of products that, although not of domestic origin, count as domestic for the purpose of obtaining originating status. This concept is further explained in the next section.

2.4 Cumulation

Cumulation allows producers to count materials purchased from outside of the PTA area as originating in the area for the purpose of determining origin. Cumulation provisions differ in how many countries, or which processing, they include. For example, a bilateral cumulation provision allows that the inputs from the PTA parties can be used interchangeably and be considered originating when complying with ROO. Cumulation can be extended to an infinite number of third countries through agreement of the parties. Examples include cumulation of processing and inputs as part of the ASEAN trade agreement, and provisions that ASEAN member states have signed with third countries which include ASEAN cumulation.

More generous cross-cumulation provisions refers to situations where at least three participating countries agree to merge individual overlapping bilateral treaties so that inputs can be sourced anywhere within the network. Chapter 1 includes a more detailed description of cumulation, and all other, ROO provisions found in PTA. For the purposes of this introduction, the main take-away should be that ROO do not only include foreign input restrictions but also a variety of mechanisms to make these restrictions more or less stringent for different products, countries, or regions, depending on the negotiation objectives of the parties. Cumulation is further explained in Chapter 1 where additional detail is relevant to the discussion.

These technical details matter for trade policy researchers. After all, substantial transformation thresholds and other ROO policy elements are not based on objective standards. Instead, they can be designed by PTA negotiators and turned into bespoke market access hurdles that curtail or eliminate the benefits of trade liberalisation which PTAs set out to foster in the first place. PTAs often boast about free trade in their treaty titles⁷ – but could these be empty promises because ROO counteract tariff reductions? If trade agreements are really “building blocks” to global trade

⁷ For example, the African Continental Free Trade Agreement, the North American Free Trade Agreement (NAFTA), or the EU-Vietnam Free Trade Agreement.

liberalisation, why do PTAs create Bhagwati's proverbial "spaghetti bowl" (1995) of ROO and regulations that exporters need to disentangle first? And even if PTAs were building blocks to trade liberalisation and development, are the gains and losses equally distributed – or do the negotiated ROO benefit one party more than the other? What determines the variation in ROO – industry pressures, negotiation dynamics, domestic policy, human error? Do policy makers seek stringent ROO requirements to attract FDI or to disguise protectionism? To date, researchers were unable to answer these questions because no systematic data on ROO design was available (Felbermayr et al., 2019).

3 ROO AS POLICY TOOLS IN NORTH-SOUTH TRADE AGREEMENTS

In evaluating the available literature on trade policy tools in PTAs, ROO are rarely mentioned and even less often studied. Three reasons could explain this, but none of them suggest that this literature gap is deliberate or beneficial. First, ROO are among the most technical and complex policy tools available to regulators. Most PTAs have thousands of individual ROO, written in lengthy appendices which do not lend themselves to quantitative or econometric evaluation. While an average tariff can be calculated through simple algebra or TBT provisions contain different degrees of binding commitments described in a small number of pages, ROO are written in hundreds of pages of acronyms and codes. Second, the take-aways are the opposite of straight forward: expressed in acronyms and jargons, the impacts on supply chains are only visible to the expert eye, often excluding exporters which are meant to use these rules in the first place. Third, ROO are rarely publicly communicated or scrutinised in the same way that tariff concessions or products standards often are, arguably as a result of their design complexity (Laaker, 2019). To

date, ROO remain opaque in their impact and are academically regarded as “obscure devices to prevent the transshipment of goods” (Chase, 2008).

The following section sets out why this research gap is more than a formality by summarising the real-life trade impacts that ROO can have.

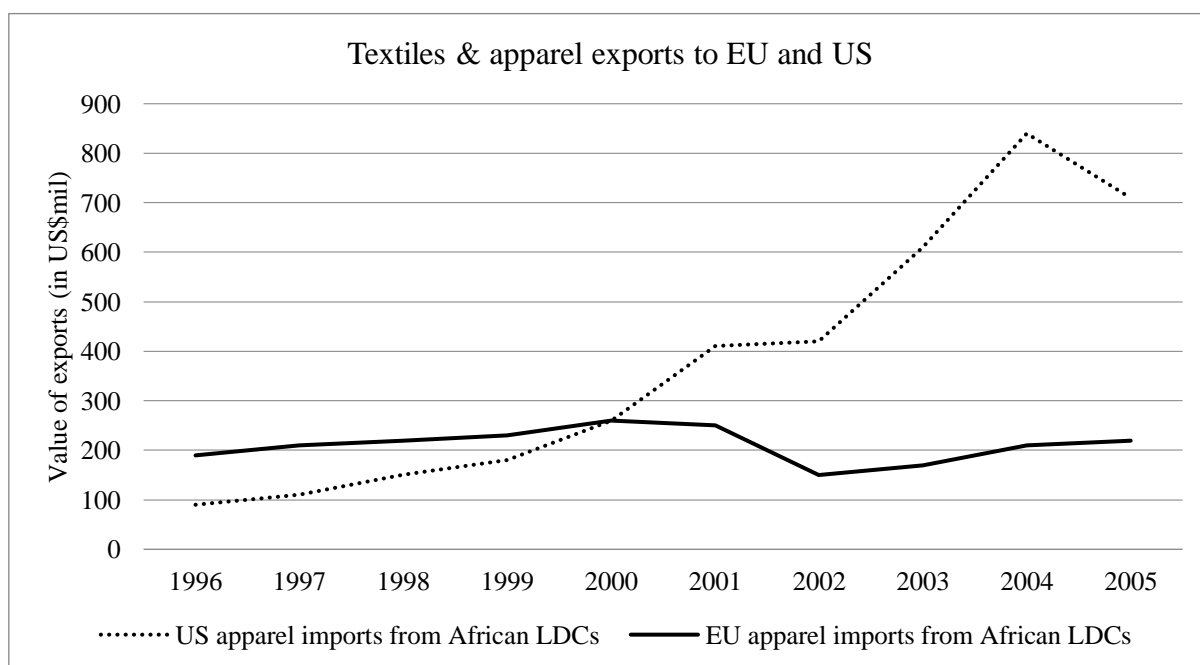
3.1 Industrial policy

The literature suggests that ROO can be used as industrial policy tools to support investment and diversification in national or regional markets (Mukunoki, 2017). Industrial policy, meaning consisting “instruments that are intended to exploit comparative advantages and instruments intended to generate new comparative advantages” (Shadlen, 2005), are often a public objective of trade agreements between industrialised and developing countries, including unilateral preference schemes. ROO logically play an important role in the nexus between industrial policy and PTAs: on the one hand, more restrictive ROO can foster domestic industrial development by ensuring that value is genuinely added in the recipient country, generating economic growth, jobs and investment as a result. On the other hand, more liberal ROO can make it easier for exporters to make use of available tariff preferences and become more closely linked up in international value chains.

On the latter definition of industrial policy – instruments intended to generate new comparative advantages – the empirics are slim and inconclusive. The effects of ROO on industrial policy only been tested on the basis of one singular case study, the US developmental trade scheme for African countries, AGOA. Textile and apparel products are among the most important industrial export sectors under developmental preferences schemes because recipient countries have a comparative advantage in engaging in low-wage-cost operations that apparel production requires (Portugal-

Perez, 2009). In the early 2000s, textile exports under AGOA created an interesting natural experiment because exports from a list of African countries received the same zero-tariff treatment as under the EU's GSP for least-developed countries, Everything But Arms (EBA), but were subject to different ROO. The EU's EBA programme prescribed that textiles and apparel exports had to be made from domestically produced fabric. AGOA allowed the mere assembly from third-party fabric into textiles and apparel products qualified exports for tariff-free treatment. The corresponding export volumes are plotted in Figure 3.

Figure 3 African apparel exports to EU and US



Source: Brenton and Hoppe (2006), author's illustration

Portugal-Perez (2009) estimates that the more liberal ROO under AGOA increased apparel exports from the eligible recipient countries by around 300 per cent. He also highlights that the exporting African countries were successful in attracting foreign direct investment, particularly from Asia. Collier and Venables (2007) and Frazer and van Biesebrook (2010) reach similar conclusions. These studies thus all seem to contradict the theoretical conclusion that more restrictive ROO boost industrial development. Instead, they suggest the opposite.

What the case studies above omit – or rather, interpret as strong investment incentives, rather than a weakness in AGOA – is that in the early 2000s, 99 per cent of exports from the most active AGOA exporters were subject to a US quota to India and China (Rolfe & Woodward, 2005). This fact renders the case study unrepresentative because this quota scheme drastically changed the incentives for transshipment for the world’s largest garment exporter China. Rotunno et al. (2013) investigated this unique circumstance and challenge the conclusion that liberal ROO boosted AGOA textiles export. They hypothesise that the spike in AGOA textile and apparel products is not a result of successful industrial or development policy in the recipient countries, but instead was caused by transhipped Chinese exports, originally destined for direct export to the US but restricted by a quota scheme, the Multi-Fibre Agreement (MFA). The authors find that around 50 per cent of the exports from AGOA recipients to the US were in fact Chinese apparel products merely transhipped through AGOA recipients with only minimum processing actually occurring in the local economy in so-called “screwdriver factories”. This meant that the success of AGOA was short-lived: the end of the US quota scheme in 2005 meant China could again export directly to the US and the factories set up in AGOA recipient countries became redundant. These findings go to show that the sole case study that serves as empirical evidence for the bulk of literature on ROO in industrial policy design is in fact non-representative for trade outside of the unique circumstance of AGOA and the MFA in the early 2000s.

The second tier of industrial policy – instruments that are intended to exploit comparative advantages – should also be investigated with regards to ROO because they also be utilised exploit domestic differences in comparative advantage. As discussed above, ROO can increase the relative competitiveness of cheaper third-party inputs vis-à-vis PTA-internal inputs. Brenton and Imagawa (2005) hypothesise that these effects can even be observed within one country, distorting the relative attractiveness of otherwise similar firms within the same country. For example, company A has set up a global network of price-competitive input suppliers, while company B has relied on

suppliers of more expensive domestic suppliers. With restrictive ROO, the prospect of a tariff reduction in their most important export market could place company B in a better position: while its products may be produced at a higher cost for the domestic market, it is able to satisfy the ROO and export under much lower tariff rates. Company A is forced to continue paying the MFN tariff and loses in competitiveness relative to company B.

3.2 Trade liberalisation

As set out above, ROO lend themselves to undermine PTA trade liberalisation because of the lack of public and WTO oversight (Laaker, 2019). The protectionist effects of ROO has been discussed in most of the small number of existing literature (Cadot et al., 2002; Conconi et al., 2018; Estevadeordal & Suominen, 2004; Krueger, 1993). To some extent, this effect is inherent to the *raison d'être* of preventing trade deflection described above: ROO make third-party inputs less attractive than inputs from within the PTA region. This effect can reduce the relative competitiveness of third-party products because, even though the inputs might be more price-competitive, their use can expose the exporter to paying the MFN tariff, not the preferential tariff.

This mechanism could be employed as a legal tool for protectionism – less transparent than a high PTA tariff, but potentially equally effective (Krueger, 1993; Manger, 2012a). What makes ROO particularly potent as a protectionist tool is that they apply on a product-specific level and can effectively protect individual industries or products: thousands of different ROO requirements can sit within one PTA as product-specific ROO (PSR). Case studies have suggested that ROO can drastically reduce or fully eliminate the tariff preferences granted through the PTA. If this effect were to be observed on a macro scale, this would severely undermine that PTAs are effective fora to boost trade liberalisation and welfare. To date, this “protectionism in disguise” as a result

of restrictive ROO has only been observed in case study settings, mostly on US or EU unilateral preference schemes (Cadot, Estevadeordal, et al., 2006; Inama, 2011; Özden & Reinhardt, 2005).

The previous two sections have set out how ROO can be designed as policy tool to shape industrial policy and trade liberalisation. In the following, I discuss how ROO are tools that can help designed measured trade liberalisation.

Signing a PTA without ROO could theoretically open a market's doors to goods from all across the globe. Without requirements for value generation in the PTA zone, exporters from any third party could simply ship their exports to its final destination via a PTA partner country of the importing nation without as much as unpacking the product. The preference-granting country would be left in an unfavourable position, having granted market access concessions in exchange for lower import tariffs from one PTA partner but then having the rest of the world freeriding on these concessions without granting any in return. If countries did not have ROO as a mechanism to prevent this tariff circumvention, they would arguably not negotiate PTAs in the first place.

ROO enable *measured* trade liberalisation because they allow policy makers to adjust the dial of market access opening. Politically, they enable policy makers to publicise tariff reductions while also retaining protection on specific sectors or firm groups through ROO, akin to the “optimal obfuscation” relationship between other non-tariff barriers and tariff liberalisation described by Kono (2006). Economically, ROO can be adjusted on a sector-by-sector basis, or even product-by-product, to enhance GVC integration for some industries and domestic industry protection for others. ROO can thus open or restrict both trade in finished and intermediate goods, create incentives for FDI in a sector- or even product-specific way, and can open or close opportunities for GVC integration. In other words, ROO could be equally effective at trade regulation as tariffs are, but have not received the same academic attention to date (Krueger, 1993; Manger, 2012a).

To conclude, the previous section has set out why ROO should be studied in more detailed by researchers interested in the interaction between trade and development. This thesis aims to do that. The next section summarises the research objectives and hypotheses to be elaborated in the following chapters.

4 RESEARCH OBJECTIVES AND HYPOTHESES

Chapter 1 is dedicated to understanding the *design* of ROO, nested in the academic literature on the anatomy, design and depth of PTAs. To fill the data and methodology gaps in the literature, the chapter first introduces a dataset that captures the population of all ROO in WTO-notified PTAs and GSP until 2018, and dives into the technical detail of the policy tool to contextualise the remaining three chapters. The chapter then presents new metrics to analyse this data. The preliminary findings show that ROO vary by region and North-South dimension, suggesting that the literature gap has indeed missed patterns of variation that could have informed our understanding of North-South PTAs.

Applying the data presented in chapter 1, chapter 2 addresses the question whether moving from GSP to PTA market access can lead to changes in the ROO for developing countries. I argue that the debate around reasons for negotiating a North-South PTA have previously underestimated the *usability* of market access preference, and introduce a metric for ROO restrictiveness to analyse the ROO improvements – or lack thereof – on usability following a PTA negotiation. North-South PTA formation is a particular puzzle because developing countries already receive better market access conditions to many industrialised countries. The chapter contributes to this debate by improving the empirical evidence base for North-South PTAs. It ROO data on all PTAs that were negotiated between a GSP donor and recipient to capture changes in ROO resign and usability following a North-South PTA negotiation. The findings are threefold. First, market access

restrictions in the form of ROO *change* systematically for all datasets. Second, this change follows a regional *pattern* and looks different depending on the GSP donor. Australia and New Zealand significantly improve their ROO after negotiation. The European GSP donors Norway, Switzerland and the EU change the ROO restrictiveness in their PTAs and offer ROO liberalisations in PTA negotiations for some domestically sensitive sectors. The North American GSP donors Canada and the US offer the most liberal GSP ROO of all donor countries and do not substantially improve their ROO in a PTA negotiation. This could present an interesting starting point in further regional analysis of North-South PTAs and the way industrialised countries employ PTA tools with developing countries. Third, the ROO restrictions in North-South PTAs often show variation depending on the geographical location: the closer the geographical proximity of the developing country partner, the stricter the ROO. This could be interpreted as initial evidence that ROO are used as industrial policy tools to boost regional supply chains. In presenting this data and the patterns of variation, the chapter quantifies the usability of ROO requirements between GSP and North-South PTAs which could generate the foundation for improved and additional future research into the drivers of North-South PTA formation. The chapter also begins to address the question: which objectives could drive the observed changes and variation patterns in ROO?

Chapter 3 scopes some of the drivers of ROO negotiation outcomes, using the case study of Australian North-South PTAs and GSP scheme. Through interviews with trade policy officials, industry associations, and ROO negotiators from Australia and developing country PTA partners, the chapter sheds new light on information usually covered by strict confidentiality around trade negotiations and lack of evidence on ROO outcomes. The chapter inductively develops four potential pathways that could cause different outcomes in ROO negotiations, picking up on the themes framed in this introduction: industrial policy motivations, protectionist interests, and the prevention of tariff fraud. It expands this set of causal pathways by exploring bounded rationality

as a framework to better understand whether the outcomes of ROO negotiations could in part be a consequence of the low information, high uncertainty and prohibitive complexity of trade-offs in the ROO policy space. The evidence and examples for these causal pathways in elite interviews are novel and could form an interesting starting point for further deductive research: the evidence given by interlocutors clearly suggests strong industrial policy and protectionist drivers of ROO, but, introducing evidence for an unconventional causal pathway, also suggests the impact of bounded rationality on ROO outcomes. This causal pathway of negotiation circumstances on ROO outcomes has previously not been discussed in the context of ROO negotiations and could point to a new policy recommendation: that ROO design has become too complex to be effectively negotiated so that negotiation outcomes are likely as much driven by economic evidence as by human error and scarce negotiation resources. The ripe opportunities for further research and demand for ROO policy reform is a core conclusion from this chapter.

Chapter 4 builds on this finding and summarises improvements and innovation to the literature on PTA mapping and impact evaluation. While the literature on PTA mapping dedicates much of its work to the comprehensive data capture of PTAs, the blind spot on ROO is only filled through this dissertation and should be reflected in updated or improved PTA mapping research. Similarly, the evidence bases for research on the determinants and impact of PTAs – be that on North-South trade flows, preference utilisation, or growth prospects – could be re-evaluated on the basis of this thesis' data contribution. These and other suggestions for future research are further explored in Chapter 4. It concludes by exploring options for ROO reform to contribute to policy making and apply the thesis' findings in a real world context. It discusses the three potential options for ROO reform that are mentioned in this dissertation - removing ROO from PTA, harmonising ROO across PTAs, and strengthening the negotiation capacity of developing countries –and acknowledges the reform fora that could lend itself to these policy interventions. The chapter concludes that the most promising pathway for reform comes in stages: first, by strengthening the

ROO negotiation capacity of developing countries, for example by publishing a ROO negotiation manual built on the database presented in this thesis. This step could then further bolster regional ROO harmonisation similar to the process currently underway in AfCFTA negotiation. Lastly, this harmonisation could lead to more evidence on the necessity of ROO for some sectors and lack thereof for others which in turn could inform the removal of ROO for sectors where neither political nor economic rationales justify their existence.

CHAPTER 1: INTRODUCING NEW EVIDENCE ON RULES OF ORIGIN

1 INTRODUCTION

Over the past decade, the academic literature has honed in on a change in global trade governance: as PTAs have grown in number, they have also grown in variation and depth (Dür et al., 2014; Hofmann et al., 2019; Kohl et al., 2016). In other words, PTA differ in the trade policy areas they regulate, and in the restrictions and enforceability that signatories agree to. This insight has generated a new focus on evidence on the anatomy of PTAs in order to understand their determinants and impact. As Hofmann, Osnago and Ruta put it: “Accounting for the changing scope of preferential trade agreements is essential to gain a more complete and accurate understanding of where the global trading system is going and how its governance can be improved.” (Hofmann et al., 2017).

The study of PTA anatomy has neglected component of every agreement: Rules of Origin (ROO). As set out in the introduction, ROO are tests that assess whether products have actually undergone significant production or value addition within the PTA territory. Depending on the negotiated outcome, they can create hurdles to tariff concessions and even exclude exporters from using the market access improvements agreed in the same PTA, acting as tools for disguised protectionism or domestic investment attraction. This is especially pertinent for North-South trade where “rules of origin rather than tariffs or quotas are often pointed to as the main trade barrier facing LDCs” (Heron, 2011).

Despite this, data on ROO is still scarce. As a result, our understanding of the preferences that preferential trade deals actually offer can be undermined: similar to not reading the fine print of a contract, ignoring the ROO of PTAs and GSP means that the full impact of preferential trade deals on research subjects like trade liberalisation, welfare improvements or economic development cannot be understood. The overwhelming majority of research of market access in PTAs and GSP has ignored ROO entirely due to the lack of evidence and analytical approaches. Studies, where they exist employ a singular method on a thin and narrow evidence base, risking to make our understanding of the impacts and variation of ROO incomplete or even incorrect. The databases presenting coded data on non-tariff measures – namely the DESTA database (Dür et al., 2014), the World Bank database on Deep Trade Agreements (World Bank, 2019) – have to date not incorporated data on ROO.

This chapter presents a new dataset and a range of indices to lay the groundwork for more complete, accurate and evidence-based research on ROO. The data and discussion show that the design of ROO in PTAs across the globe is more complex than previously understood, and that untangling this complexity can help understand the diverse drivers and effects of North-South PTAs. In doing so, this chapter adds to the literature on the content, design, and depth of PTAs – literature necessary to improve the empirics and theories that explain today's global trading system and its governance.

The chapter begins with a summary of the studies that have attempted to measure the design and variation in ROO. It subsequently introduces a novel dataset that codifies the characteristics of ROO across WTO-notified PTAs in section 2. This dataset is the first of its kind, capturing information across the over half a million product-specific ROO in all PTAs notified to the WTO at the time of data collection in 2017. Section 3 then introduces alternative approaches to measuring variation in ROO, both by building on available and by designing novel indices: first,

an index of proximity measure how close an observed product-specific ROO is to the least trade-restrictive ROO, and second, a heterogeneity index measuring ROO compliance burden for exporters. The chapter also includes measures for flexibility mechanisms in regime-wide ROO General Provisions. The findings show that variation in ROO is substantial and fill the data gap on ROO in the literature of PTA design.

2 FILLING THE EVIDENCE GAP: A NOVEL DATASET ON ROO

2.1 Data collection methodology

The DESTA OECD database⁸ introduces the first complete quantitative database on both product-specific and regime-wide ROO provisions across all WTO-notified PTAs and all GSP schemes.⁹ The dataset captures all ROO provisions in all PTAs and GSP schemes notified to the WTO by 2017. This makes it the only source of codified ROO information across all PTAs and ROO provisions. The data was collected through a collaboration between the author and the OECD Trade & Agriculture directorate, and coded and quality-assured through a combination of computer and manual coding over three years with a team of research assistants.

The codebook design mirrors the method and structure of other datasets published under the Design of Trade Agreements (DESTA) umbrella – one of the largest and most widely used sources of codified information on PTA design (e.g. Allee & Elsig, 2019; Burri & Polanco, 2020; Carrère

⁸ This data presented was collected while I studied under the supervision of Manfred Elsig, a co-author of the DESTA database. The data introduced in this thesis will, upon successful completion of my PhD, be published as part of the DESTA database on trade agreements, and has been developed in collaboration with researchers at the OECD. The database therefore carries this name.

⁹ As part of the data collection and this PhD, a part of the data, covering the regime-wide rules, and a chapter that maps ROO in Latin American supply chains has been co-authored by the author of this thesis and published by the World Bank's Deep Trade Agreements (Angeli et al., 2020).

et al., 2021; Raess & Sari, 2018). By designing the codebook this way, the data on ROO can be merged seamlessly with other DESTA data on PTA provisions to further enhance the literature on PTA design. Similar to other DESTA codebooks, the ROO codebook is designed to generate mostly dummy variables to cover the existence or absence of a given provision within a PTA text, with exceptions for numerical values to be captured, like a percentage or currency threshold.

In structure, the codebook mirrors the treaty design of ROO chapters and covers the strands of ROO design. The first data set codifies product-specific rules of origin (PSR) in PTAs which identify the origin test each export needs to satisfy to be granted PTA preferences at the border. The second data set captures the regulations in so-called General Provisions, which is the legal text that defines concepts and sets certain flexibility mechanisms. The following section describes the information captured in the dataset and their theoretical footing. Codebooks for both data sets are attached in Appendix 1.

2.2 Classification of product-specific rules of origin

The WTO Rules of Origin Agreement and the Revised WCO Kyoto Convention (World Customs Organization, 2006) recognise two basic criteria for determining origin: wholly obtained and substantial transformation. A brief explanation of the principal PSR design features and cumulation was given in the introduction so that the following describes these provisions in the detail relevant to understanding or applying the database and the findings presented from it in this thesis.

The wholly obtained criterion specifies that the country of origin of a product, often a commodity, is the country where it has been made or retrieved in its entirety. The origin requirement is met if a product or commodity does not use any foreign components or materials.

The substantial transformation criterion specifies that the country of origin is the country where the last substantial transformation took place, with what deems a transformation being subject to negotiation. There are three sets of criteria to express such a substantial transformation, so-called

- value content tests
- change in tariff classification tests
- technical processing step tests,

each of which is elaborated below in more detail. If more than one origin criterion is mentioned – either to be used in combination or as alternatives – all mentioned criteria are recorded.

For a *value content test*, the exported good must reach a threshold percentage value of locally or regionally produced inputs in order to qualify for PTA tariff reductions.

When applying a value content test to define origin, a good is considered to be substantially transformed when the manufacturing operation conducted in the territory of a contracting party increases the value of the product. The increased value is expressed as an *ad valorem* percentage, i.e. as a share of the estimated value of the good. The estimated value and the ad valorem percentage that can be calculated in two different ways: the *import contents* method and the *domestic contents* method.

The domestic content test imposes a minimum requirement on domestic (or, in the context of cumulation, regional) content, meaning that a final product is deemed originating if the materials exceed a certain threshold. This method requires a comparison between the value added in a contracting party and the value of the final product, and can be calculated in two ways: the *build-up* method or the *build-down* method.

The *import content* method establishes a maximum allowance for non-originating materials entailing that a final product can be considered as originating if foreign inputs do not exceed a certain threshold. This method requires a comparison between the value of the imported inputs or the inputs with undetermined origin and the value of the final product. Some PTAs allow combination of both approaches, which is also captured in the dataset.

For the valuation of non-originating materials, the *price basis* criteria may vary according to the price basis used for the final product. In that order, the price basis may be established at different moments in the marketing chain; and there are generally four price basis for the calculation of value-added rules, which are captured in the data.

For a *change in HS classification* test, a product's origin is the country where a product is exported under a different HS section than its imported inputs – for example, where inputs at a 6-digit level subheading must be transformed into a product in a different 4-digit heading. *Exceptions* can be attached to particular change in HS code requirement generally prohibiting the use of non-originating materials from a particular HS subheading, heading, or chapter for goods supposed to qualify via a change in HS code and thereby making the requirement more restrictive.

For a *technical processing step* test, the exported good obtains originating status of the country where it has undergone specified manufacturing or processing operations which are deemed to confer origin of the country in which they were carried out.

2.3 Classification of regime-wide rules of origin

Regime-wide ROO, usually called General provisions apply to all products on top of PSR. They address how the product-specific rules are operationalised – e.g. certification requirements and verification bodies, which are also part of the negotiation substance – and include levers that

tighten or relax the requirements in the product-specific rules, e.g. through cumulation provisions.

The database captures variation in the following variables:

- **Certification:** PTAs define different procedures for certification of origin and establish a system of checks on the authenticity of claims for preferential treatment.
- **The type of certificate-issuing body:** PTAs often define who holds the burden of providing and securing information about the origin of the goods in case of doubt or verification. Various bodies can issue a certificate of origin, such as authorities, exporters, producers, importers and designated private bodies. First, the certificate of origin may be issued on the basis of self-certification by the exporter / producer / importer and does not need to be authenticated by the competent authority. Second, competent authorities of the exporting party, including customs administrations, other government authorities, and designated private bodies may issue certification of origin. Third, the agreement may permit a combination of self-certification and certification by a competent authority.
- **The validity period of the certificate of origin:** the validity period means the time limit allowed for the importer/exporter to conclude the importation of goods under this certificate from the date of issuance. This certificate must be submitted to the customs authorities of the importing country at the time of the importation and within the validity period. This information is not a binary variable but a concrete numerical variable recording the number of months.
- **The record keeping period:** This is the time period during which exporters, producers or importers should maintain documents or background information relating to the origin of the goods. This period ensures that customs authority can check and control documents

during a certain period of time. This information is not a binary variable but a concrete numerical variable recording the number of months.

- **Exemptions:** Most of the PTAs hold a provision regarding the exemption from ROO but there is a great diversity as to the amount up to which the certificate is not required. Moreover, some PTAs provide that the importing country can waive the requirement for a proof of origin in accordance with its laws and regulations without stipulating a specific amount.
- **Minor amendments:** Whenever the certificate contains errors, some PTAs stipulate that some minor amendments can be made, while some others explain that it is mandatory to require the issuance of a new certificate and invalidate the former one.
- **Verification:** The origin certificate needs to be checked by the customs authorities of the importing member in order to ensure that benefits are not unduly accorded to goods that do not comply with the origin requirements. Agreements usually prescribe one of the following three verification systems:
 - **Direction verification:** This means that the competent authority of the importing country directly requests information from either the importer or from the exporter in the territory of the exporting country.
 - **Indirect verification:** This means that the competent authority of the exporting country undertakes verification upon request from the Customs authority of the importing country. Thus, it is built upon mutual administrative assistance of the competent authorities.

- **Cumulation:** Cumulation allows producers to count materials purchased from outside of the PTA area as originating in the area for the purpose of determining origin. Cumulation is relevant for the application of VC methods involving cost calculations. Cumulation can take four forms:
 - **Bilateral cumulation:** Bilateral cumulation applies between two members of the same PTA. It allows the exporting party to use originating inputs in the importing countries as if they were originating in the exporting country, and thus count them towards the origin criterion. Only originating products or materials can benefit from the bilateral cumulation, and it implies that inputs originating in one member country shall be considered as originating inputs in the other country.
 - **Diagonal cumulation:** Diagonal cumulation allows the exporting party to use inputs originating in the importing countries and predefined third parties as if they were originating in the exporting country, and thus count them towards the origin criterion.
 - **Full cumulation:** Full cumulation permits that any processing activities carried out in a predefined third country can be counted as qualifying content. Unlike bilateral or diagonal cumulation, full cumulation is not limited to originating inputs but allows any processing in third countries to be counted towards the origin criterion.
 - **Cross-cumulation:** Cross-cumulation refers to situations where at least three participating countries agree to merge individual overlapping bilateral treaties so that inputs can be sourced anywhere within the network. It does not require common origin provisions.

- **Tolerance or *de minimis* rules:** These provisions allow the use of materials supplied by non-PTA members and it is usually expressed as a maximum percentage of non-originating materials. In practice, the *de minimis* rule offers the possibility to use a certain percentage (the threshold) of non-originating inputs which otherwise would lead to the non-fulfilment of the rules of origin.
- **Absorption or roll-up principle:** When a non-originating intermediate material acquires originating status by satisfying an initial test relating to input requirements and/or lack of availability of domestically produced supplies, this material is considered to be 100 per cent originating once incorporated into a final product. This allows keeping originating status of intermediates used for subsequent manufacturing operations of originating good and disregards the part of all former non originating inputs contained in the intermediates.
- **Methods of estimating value content:** When applying a value content test to define origin, a good is considered to be substantially transformed when the manufacturing operation conducted in the territory of a contracting party increases the value of the product. The increased value is expressed as an ad valorem percentage that can be calculated in two different ways: the import contents method and the regional contents method.
 - Regional value content test: The regional content test imposes a minimum requirement on domestic content, meaning that a final product is deemed originating if the materials exceed a certain threshold. This method requires a comparison between the value added in a contracting party and the value of the final product, and can be calculated in two ways: build-up method or build-down method.

- **Import content test:** The import content method establishes a maximum allowance for non-originating materials entailing that a final product can be considered as originating if foreign inputs do not exceed a certain threshold. This method requires a comparison between the value of the imported inputs or the inputs with undetermined origin and the value of the final product.
- **Duty drawback:** Duty drawback allows tariffs due on imported materials used in the production of export items to be waived or refunded. Thus, the no-drawback rule means that there is no refund of duties paid for input materials from third countries which are used for the final products. The objective is to ensure that there will be an equal treatment between goods manufactured and traded in the domestic market and those that will be exported to trade partner countries. Admitting the possibility of drawback duties would entail that the exported goods would be cheaper than the same goods for sale on the domestic market.
- **Fungible goods or materials:** This term refers to goods or materials which are interchangeable for commercial purposes insofar as their properties are essentially identical. When using originating and non-originating input materials, manufacturers are required to stock originating and non-originating materials separately to allow a tracing back of the different origins of materials used, and to ensure that only those originating inputs are being used in the goods applying for preferential treatment.
- **Advance rulings:** Advance rulings a binding official decision issued by a competent authority which provides the applicant with an assessment of the origin prior to an import or export transaction for a specified period. It must be taken into account that some origin

legislations contain the legal basis for the issuance of advance rulings in a specific rule, however some others deal with this matter under their general Customs law.

- **Transshipment:** A transshipment rule is a relaxation of a direct transport obligation in origin legislation.
- **Review and appeal:** Importers, exporters or producers are entitled to request a review of decisions rendered by customs authorities in respect of origin determination. Thus, regarding the legal basis for review and appeal, there are two approaches, where some agreements contain specific provisions on review and appeal while some others do not, and instead these are regulated in their national legislation.

To summarise, the database includes two data sets that capture systematic, codified information on ROO: first, the product-specific rules (PSR) across 278 PTAs and GSP schemes and up to 5,300 product lines, and second, the regime-wide General Provisions, included each of the 278 PTAs and GSP schemes covered in the database. Both datasets include PTA identifiers to that researchers and policy makers can merge parts of the data sets to other data included in the DESTA research project.

The following section of this chapter shows preliminary findings, describing and indexing the data to highlight interest patterns and variation across both General Provisions and PSR.

3 PRELIMINARY FINDINGS FROM MAPPING ROO

The previous section has described the codebook and the information capture by the coding exercise. This section now applies the data to describe and discuss information on ROO and its potential usefulness for future research. To do so, I develop and use a range of indices, a common

methodology when analysing data on PTA provisions (Dür et al., 2014; Hofmann et al., 2019). An index means a composite measure of variables using more than one data item at a time, or an accumulation of scores (Crossman, 2019). Indices thus lend themselves to information that, on its own, communicates little relevant information but, taken together with other pieces of information, communicates more relevant conclusions and deductions from the data.

To give an example, the ROO data presented in this chapter includes information on different origin verification mechanisms: whether a PTA contains a provision on origin verification (a dummy variable), the type of certificate-issuing body (a categorical variable), and the number of months such origin verification documents remain valid for (a numerical variable). By themselves, the variables communicate just the information contained in the observation, but taken together, these three data points can inform researchers of the administrative burden the PTA introduces for exporters wishing to utilise the PTA's tariff preferences. After all, when researching the administrative barriers to trade, red tape and customs or verification procedures play an important role, and ROO contain much of the information on these potential trade costs. For example, a PTA could include provisions that allow an exporter to self-certify that they meet the origin requirements and this certificate stays valid for years, meaning the certification requirements land on the liberal end of the possible administrative burdens in PTAs. On the other side of the spectrum, a PTA can require exporters to go through expensive service providers like business associations to issue a new certificate for every shipment, leading to continual and burdensome red tape for exporters. An index helps summarise these provisions – e.g. by adding together or weighting individual observation to reach a numerical value that represents where the requirements lie on a spectrum for burdensome to facilitative. This in turn helps to compare different ranges of PTA provisions across agreements, sectors, or countries. Because these details are not minutiae to customs policy makers, trade negotiators or exporters, the dataset in its public version still contains the raw data.

Measuring ROO through an index metric was championed by Estevadeordal (2000) who developed a restrictiveness index for NAFTA, ranking the restrictiveness of product-specific ROO on a scale from 1 to 7, coding NAFTA ROO – and thus the simplest form of ROO criteria (see Classification of product-specific rules of origin, p. 36). Second, Harris (2007) further developed Estevadeordal's index by adding and subtracting restrictiveness scores for cumulative and alternative rules respectively and including more ROO provisions. Again building on Estevadeordal's index, he and Suominen (2009) expand the evidence base by five regime-wide variables to capture potential added flexibility at the product-level. Lastly, Kelleher (2012) built the most advanced index by weighing the individual restrictiveness scores by a few regime-wide ROO provisions in the data.

In the next chapter, I improve upon these existing measurements of ROO restrictiveness. A more detailed explanation of ROO restrictiveness as a concept, and how an index can help measure it, is thus moved to the next chapter. This brief introduction on restrictiveness indices is merely intended to acknowledge the existing work on utilising index metrics in the context of ROO analysis, before presenting own novel metrics developed as part of this thesis. The remainder of this chapter is dedicated to developing novel, additional indices that add new conceptual and empirical aspects to our understanding of the anatomy of PTAs.

On the theoretical level, the impact of ROO has more dimensions than merely that of restricting trade. Hoekmann and Inama (2018) group these dimension into three groups. Only the first dimension is that of PSR *restrictiveness*, which, as mentioned above, I revisit in the next chapter. The second dimension is that of ROO *heterogeneity* (Angeli et al., 2020), which looks at the trade barriers introduced to exporters by having to comply with several and different ROO requirements depending on the importing partner. For example, a given exporter may be able to adjust supply chains to suppliers within one PTA zone. However, if she wants to export under preferential tariffs

under different PTA and additional ROO requirements, she might then need to set up different supply chains for each PTA importer. Even in a scenario where the ROO-compliant inputs are not more expensive than the third-party inputs, the mere compliance burden of having to source and import from several suppliers, and losing out on economies of scale and quantity discounts could lead to higher trade costs. The concept of ROO heterogeneity thus captures potential trade costs that can arise from simply imposing more than one rule.

The third dimension is that of *distance*, i.e. how far ROO from one PTA are removed or are different from ROO in other PTAs. This dimension is crucial when looking at the potential for harmonisation and convergence of ROO across regional PTAs like the African Continental Free Trade Area or the Comprehensive and Progressive Agreement for Trans-Pacific Partnership which each cut across several PTAs among members: the smaller the distance, the larger the potential for harmonisation and divergence.

This chapter presents novel metrics the distance and heterogeneity dimension and highlights why ROO are far from homogeneous blanket restrictions on third-party inputs but instead can introduce both facilitative and additionally costly features to PTA design (Estevadeordal et al., 2009).

The following section first introduces a novel dataset that codifies the characteristics of ROO. The dataset is the first instance that captures all ROO provisions at the product level across all WTO-notified agreements, allowing for the first systematic analysis of ROO design and variation. Following a technical description of the dataset, the chapter concludes with a presentation of some preliminary findings.

3.1 Variation in Product-Specific ROO

3.1.1 PSR proximity

The below introduces a new index to measure how restrictive PSR for the product and supply chain they apply to. Called a Single Transformation (ST) index, it measures the proximity between the most straight forward PSR – a single transformation – of the product on the one hand, and the transformation steps prescribed in a PTA’s PSR protocol. In other words, it compares how close an observed product-specific ROO is to the simplest logical ROO. As elaborated above, PSR mean to capture a substantial transformation – a production step that has genuinely changed the products from its inputs. The index is based on a logical assessment of what one such substantial transformation would look like for each product line. For this logical assessment, I designed and codified a set of ‘ideal’ PSR for every one of the HS’ 5,300 product lines – if ideal means for a PSR to be as restrictive as necessary to prevent tariff fraud but as liberal as possible to avoid trade diversion. To identify this ideal set of PSR, I relied on input-output data by the OECD (2020), HS tables and their explanatory notes and correlation tables (WCO, 2020), and, where these source did not provide for the necessary information for certain HS6 lines, included the most liberal PSR included in the OECD DESTA database for those lines.

While labour-intensive, this measurement improves the existing metrics of ROO (Estevadeordal & Suominen, 2004; Harris, 2007; Kelleher, 2012). The authors of these indices assign a restrictiveness value to PSR regardless of the product they apply to. This undermines their theoretical and logical footing: logically, a restriction on third-party inputs in the form of PSR will have less of a burdensome impact on the exporter of potatoes, produced with no foreign exports, than on the exporter of electric vehicles made from thousands of imported parts. The ST index defines the benchmark of supply chain restrictions by tethering it to the production process the PSR applies to.

The ST index then measures the proximity, i.e. the degree of overlap between any given PSR in the OECD DESTA database on the one hand and the model PSR set on the other. An ST index value of 1 means that the observed PTA PSR is identical to the most liberal available ST requirement; a value of 0 means that there is no similarity between the most liberal available PSR and the observed PTA PSR. The index value then allows a relative comparison of distance at the product-, sector- or PTA level.

Existing indices scored the product level according to an textual definition of supply chain restrictiveness without reflection of the production patterns beneath it (Estevadeordal, 2000; Harris, 2008; Kelleher, 2012). The ST index is the first means to compare the similarity, or proximity, of PSR through the lens of theoretical input restrictions, at the product level, reflecting the supply chains whose restrictedness it aims to measure. The difference between theoretical and practical means here that not every input restriction on paper is a supply chain restriction in real life. For example, if no foreign inputs may be used in the production of a raw material, most exporters will not need to undertake supply chain adjustments because they did not use inputs in the first place. The ST index captures this by defining a PSR set that takes the product it considers into account.

Figure 4 Single Transformation index values by sector

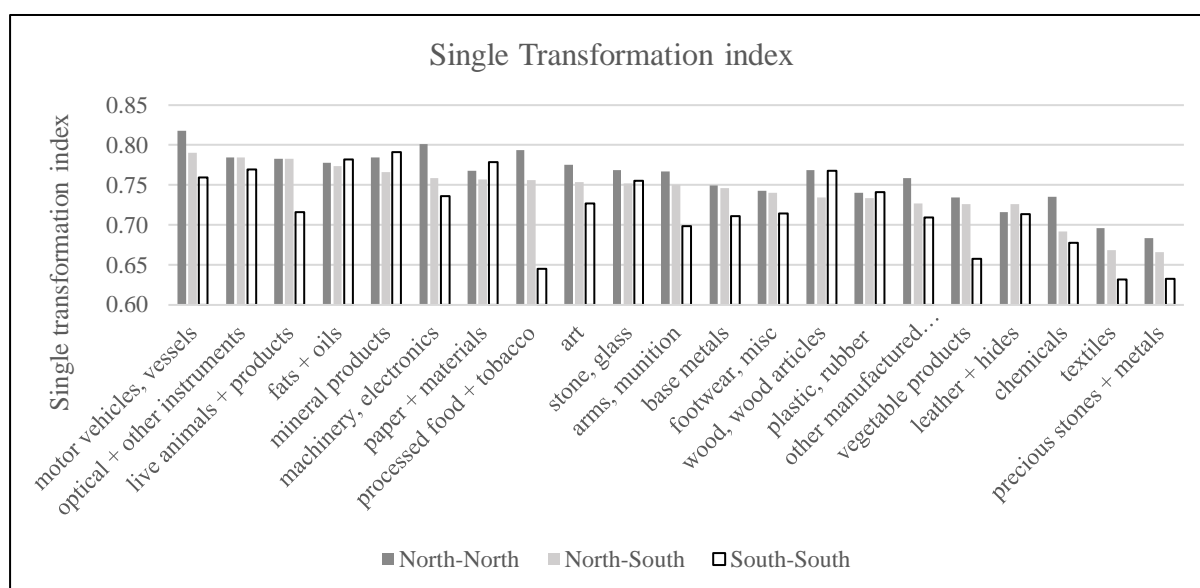


Figure 4 plots average values for the ST index by sector and grouped by economic region. The higher the index score value, the higher the proximity or similarity between the most liberal ST benchmark. While aggregation across all PTAs naturally loses a significant level of detail, this plot confirms some of the existing theoretical and empirical studies.

North-South PTAs employ liberal PSR where supply chains are short – for live animals, animal products or minerals. Unsurprisingly, sectors with few input-intensive goods have a high ST index, like live animals. This observation contradicts that of the ex-ante restrictiveness indices (Estevadeordal, 2000; Harris, 2007) which assign a high restrictiveness to these products, meaning that PSR for live animals and animal products restrict the use of most third-party inputs or processing. This misappropriation is an existing critique of why ex-ante¹⁰ restrictiveness indices often miss the mark (Laaker, 2019): they deem a PSR restrictive of third-party inputs even though the real-life product does not contain any inputs.

¹⁰ “ex-ante” means that an index captures provisions before looking at the product and the number of possible inputs (Harris, 2007).

Textile products score low across all three PTA groups, meaning that they are far removed from the most liberal PSR available. This aligns with findings in the literature that characterise the ROO for textiles and apparel as far removed from the most liberal ST threshold available (Brenton & Özden, 2005; Cadot et al., 2005; Portugal-Perez, 2009). Textiles PSR are discussed in academia and policy-making as among the most restrictive PSR types, especially for EU and US PTAs. These employ more restrictive PSR for textiles, footwear inputs like leather or chemicals including pharmaceutical products. Interestingly, textiles scores are lowest for South-South PTAs. Restrictive textiles PSR in South-South agreements mean that third-party inputs would be difficult to include while maintaining preferential market access.

Figure 5 Difference in ST index values by PTA type

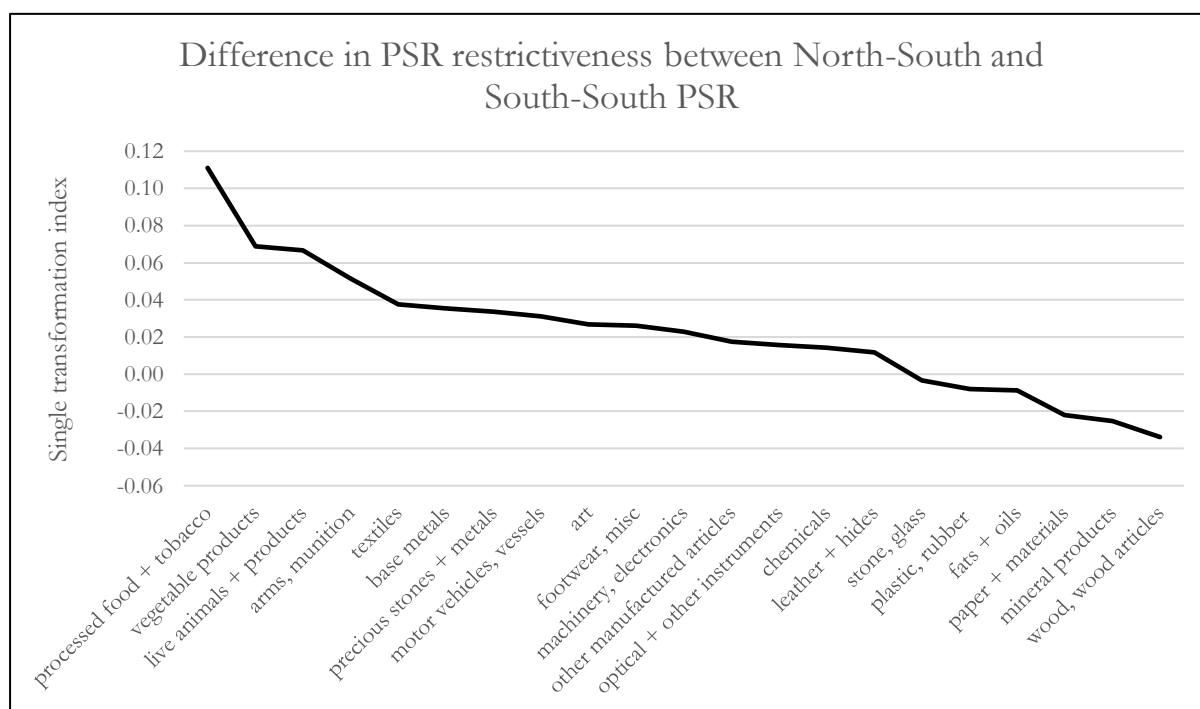


Figure 5 plots the difference in ST scores between North-South and South-South agreements. South-South PTAs are a lot more restrictive on some of the core export products for developing and least-developed countries: food and vegetable products. In contrast, South-South agreements are more liberal for products that do not rely on a wide range of inputs: wood, mineral products

and oil. This could suggest that Southern PTA parties design PSR to increase the relative competitiveness of primary goods as inputs for production in the PTA partner country. This hypothesis is supported by relatively more liberal PSR in South-South PTAs for primary inputs – woods, minerals, plastic, stones – meaning that these inputs could still be sourced from third party for domestic processing and exporting.

In sum, these examples illustrate how PSR design and their ex-ante impact can be measured, and why this topic generates findings relevant to the study of North-South PTAs. The following section introduces another complementary metric to the study of trade costs generated by ROO through the dimension of heterogeneity.

3.1.2 PSR heterogeneity

As set out in the previous section, heterogeneity here relates to the trade barriers introduced by having to comply with several and different ROO requirements depending on the importing partner. This section presents a metric on how to quantify the ‘spaghetti bowl’ of ROO requirements that a PTA party imposes. This index differs from the previous one because it does not reflect the design of ROO in a PTA text, but instead looks at how many different ROO requirements a given PTA member country imposes on its exporters.

The DESTA OECD dataset makes it possible to approach restrictiveness from the exporters’ perspective. The average country has 6 PTAs currently in force, meaning that exporters may have to adjust to a multitude of separate and possibly different supply chain requirements. On top of that, the compliance cost of ROO likely also increases if each PTA creates additional rules and regulations as a precondition for preferential trade.

To show what is meant by the heterogeneity of PSR, Crook and Gordon (2017) give a telling example of product-specific ROO that Australian exporters of bed sheets face if they want to make use of Australia's PTAs. The respective PTAs prescribe the following (the numbers refer to product codes for inputs commonly in the making of bed linen):

- Australia – US: “Change to heading 6302 from any other chapter, except from heading 5106 through 5113, 5204 through 5212, 5307 through 5308 or 5310 through 5311, chapter 54, or heading 5508 through 5516, 5801 through 5802 or 6001 through 6006, provided that the good is both cut (or knit to shape) and sewn or otherwise assembled in the US or Australia.”
- Australia – Thailand: “Change to heading 6302 from any other chapter, provided that any non-originating material that is fabric is pre-bleached or unbleached, and that there is a regional value content of not less than 55 per cent.”
- Australia – New Zealand: “Change to heading 6302 from any other chapter, provided that where the starting material is fabric, the fabric is raw and fully finished in the territory of the Parties; or No change in tariff classification is required, provided that there is a regional value content of not less than 45 per cent based on the build down method.”
- Australia – Chile: “Change to heading 6302 from any other chapter provided that where the starting material is fabric, the fabric is raw and fully finished in the territory of the parties.”
- Australia – Malaysia: “Change to heading 6302 from any other chapter, provided that where the starting material is fabric, the fabric was greige fabric that: (a) is dyed or printed; and (b) finished in Australia or Malaysia to render it directly usable.”

- Australia – Japan: “Change to heading from any other chapter provided that, where non-originating materials of headings 50.07, 51.11 through 51.13, 52.08 through 52.12, 53.09 through 53.11, 54.07, 54.08, 55.12 through 55.16, or chapter 60 are used, each of the non-originating materials is woven, or knitted or crocheted entirely in the Area of one or both Parties.”

In layperson’s terms, these rules all prescribe that different inputs may or may not be sourced from abroad, and thus apply a different definition of what “originating” means to Australian bed linens depending on the export’s country of destination, not origin.

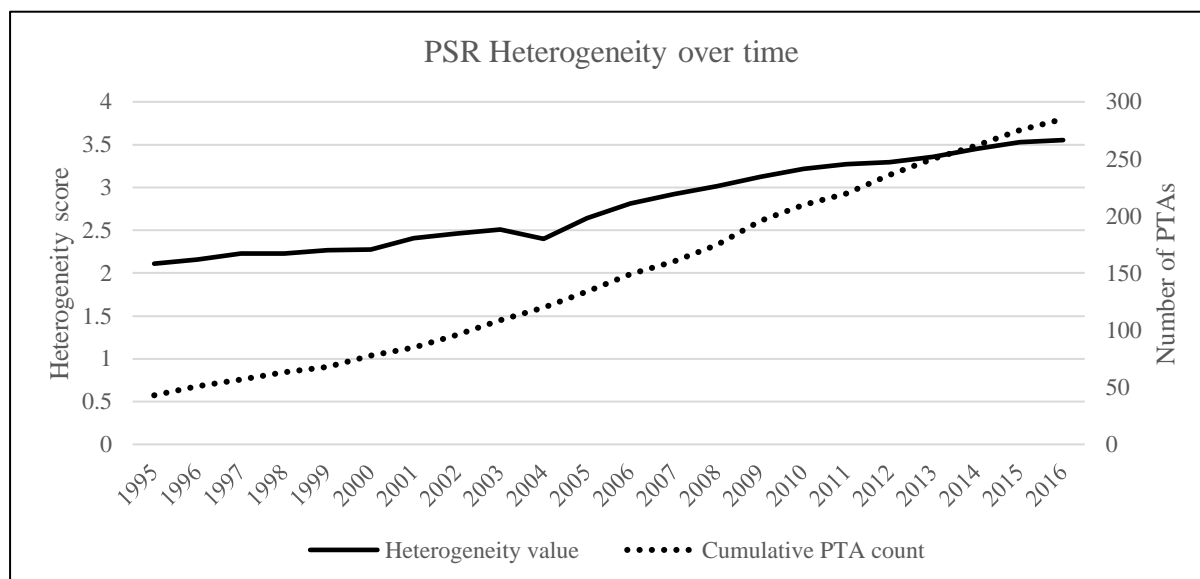
To capture how many different ROO obligations individual countries agree for one and the same export product, a new heterogeneity index was created.¹¹ This mathematical index captures the number of different PSR which can apply to one product in a given country. Where a country is party to several PTAs with dissimilar PSR, this will yield a higher index score than membership in only one PTA. Mathematically, a Shannon index of 1.50 can be converted into $\exp(1.50) = 4.5$, which is equivalent in heterogeneity to a country with 4.5 different types of PSRs, on average, per product. Unless all new PTAs use precedented PSR, an increase in the cumulative number of PTAs will lead to an increase in the heterogeneity index.

Figure 6 plots heterogeneity index scores for a subset of PTAs, averaged across all products, over time. It shows that heterogeneity scores increase over time the rate of increase is lower than the cumulative growth rate of PTAs. This could suggest PSR harmonisation, if new PTAs draw of existing PSR precedent instead of introducing new, bespoke rules. Alternatively, a correlation

¹¹ As part of the data collaboration with the OECD, this index is published in a co-authored chapter by the author of this chapter and collaborators at the OECD (Angeli et al., 2020).

between PTA count and heterogeneity could be tested to shine a clearer light on the hub-and-spoke hypothesis of PTA formation presented by Cadot et al. (2006).

Figure 6 PSR Heterogeneity over time



While these indices are only tentative quantification of the effect of ROO on trade liberalisation, they nevertheless highlight the complexity and variation within ROO. The use of the OECD DESTA database helps to build on existing findings and create a better understanding of how PSR design and the absence of harmonisation can impact exporters in industrial and developing countries alike. The next section then maps the design of General Provisions in more detail to cover both legal building blocks of ROO.

3.2 Variation in General Provisions

Variation in General Provisions has not been the subject of academic attention to date. As elaborated above, ROO are by definition restrictive because they limit the use of third-party inputs and labour. Nevertheless, the toolbox of policy mechanisms contained in General Provisions include a number of flexibility mechanisms that give the producers some flexibility in satisfying

PSR criteria. These mechanisms reduce both the lump-sum costs of compliance, but also supply chain adjustment costs. For example, cumulation provisions expand the pool of originating inputs from the PTA parties to third parties, e.g. ASEAN cumulation or PEM cumulation. Some ROO protocols also allow annual averaging for value content requirements whereby the annual average of domestic value addition is counted, not that of the individual shipment. This can help producers who use inputs with large price or currency fluctuations. On administrative requirements, General Provisions can alleviate compliance burdens below the legal default, – e.g. through self-certification of origin by the exporter, rather than through a trade or customs agency, or a complete exemption of preferential origin documentation for low-value consignments. These mechanisms should benefit in particular smaller exporters who will benefit more from a reduction in lump-sum costs, e.g. for customs documentation, than larger exporters.

3.2.1 ROO flexibility by economic region

A new index on these flexibility mechanisms helps to illustrate variation within General Provisions across WTO-notified PTAs and allows for relative comparison among individual ROO regimes. This index is an ex-ante index, meaning that it captures provisions in their design, not their effects, similar to Estevadeordal (2000), Harris (2007), and Kelleher (2012). The index is different from other precedented indices because it focusses on general provisions ROO which have not been previously discussed. This is surprising because, as set out in the first chapter, General Provision contain a range of policy tools to either tighten or relax ROO requirements. Similar to ignoring the chapeau of a legal treaty, or the footnotes, studies on ROO that only codifying PSR mischaracterise the design and effect of ROO.

To highlight that General Provisions include policy tools to enhance the flexibility of PSR, I constructed a flexibility metric to map whether these are blanket, binary rules or whether they vary by PTA or country.

Figure 7 Flexibility by country income group

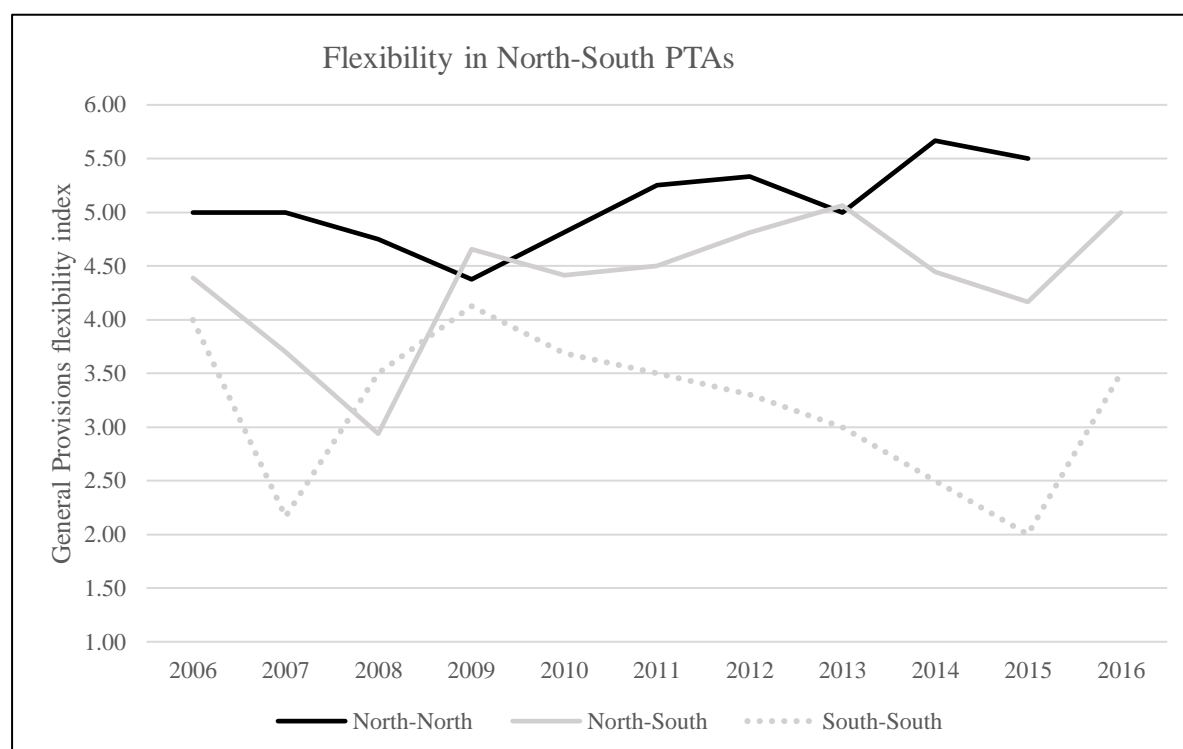


Figure 7 shows the variation in General Provisions for all WTO-notified PTAs until 2016 by country groups. While no clear pattern emerges until the early 2000, the past decade shows a clear trend: North-North PTAs make more use ROO flexibility tools than in South-South agreements. North-South agreements sit in the middle.

This pattern of variation raises some interesting research questions on the ROO preferences of Southern parties in PTA negotiation. After all, businesses in developing countries report ROO to be the most burdensome non-tariff barrier to exporting (International Trade Center, 2015). According to theory, Southern parties should be drivers for ROO flexibility to enhance their relative competitiveness in Northern markets and, on average, smaller domestic markets for the

sourcing of originating materials. In other words, Southern countries should champion liberal ROO. An alternative explanation could be that Northern countries strengthen high-value-add supply chains among each other, but restrict market access for those with access to cheaper inputs and labour. In particular, analysis on a data subset of GSP recipient countries who have negotiated a PTA with GSP donor could shed a light on the effect of negotiation on the flexibility of ROO in North-South PTAs.

3.2.2 ROO flexibility by membership

Existing empirical research suggests that the North-American model of ROO is particularly restrictive: Several studies focus on the NAFTA model of ROO and point out its restrictive features (Anson et al., 2005; Cadot et al., 2002; Carrère & De Melo, 2004; Conconi et al., 2018). The same applies to its unilateral preference schemes to developing countries (Condon & Stern, 2011; Edwards & Lawrence, 2014; Harris, 2008; Rolfe & Woodward, 2005).

However, when comparing the flexibility of General Provisions of PTAs with at least one North-American member to that of PTAs without one, the observed pattern tells a different story (Figure 8).

Figure 8 ROO Flexibility Index values for North-South PTA

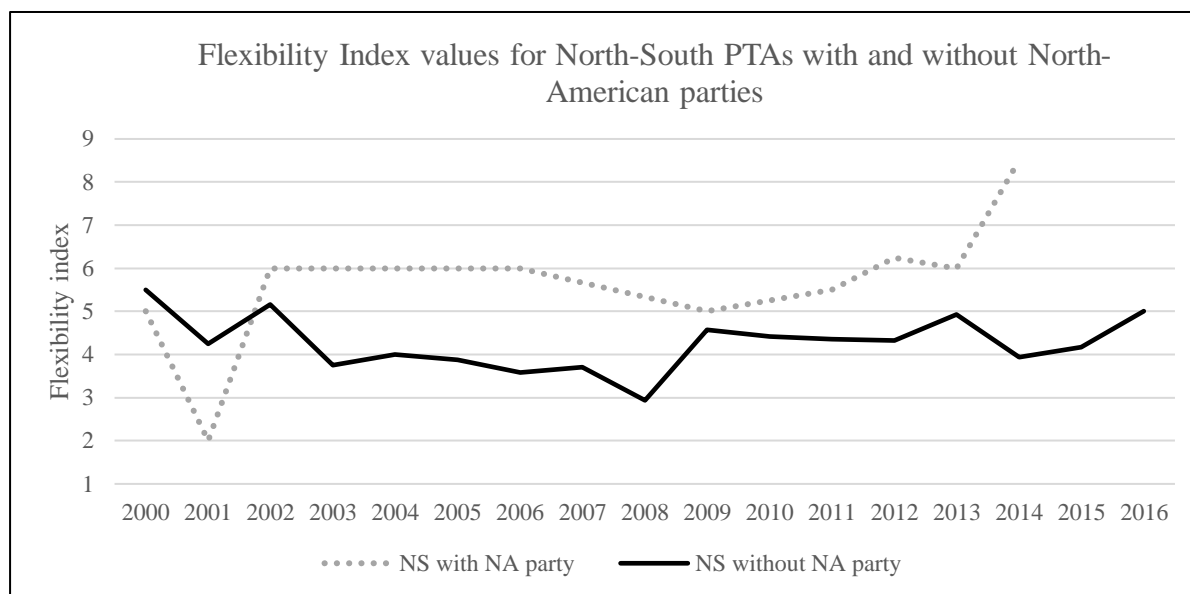


Figure 8 shows that North-South PTAs with a North American membership, i.e. the US or Canada, make consistently more use of ROO flexibility mechanisms than PTAs with no North American member. Indeed, more recent agreements concluded by the US, namely the US-Mexico-Canada agreement or the US-Korea agreement, score high on their flexibility of General Provisions. In contrast, ROO flexibility for PTAs without a North-American member has decreased since 2010.

While the explanatory power of country membership in ROO design is yet to be researched, the observed pattern in Figure 8 shows an example of a patterns whose explanatory power could be the subject of further research. ROO design and variation has largely been studied with data on US PTAs. The US and Canada are not a party to the vast majority of existing PTAs and those PTAs differ in design. If PTAs without a North American party design ROO in a way that grants exporters more flexibility, the trade-restricting effect of ROO observed across existing studies could really be more an observation of North American PTAs, not ROO as a whole.

To summarise, the dataset opens a new window into the variation that can be observed within General Provisions and thus into the differences and patterns in PTA content and impact. Through the use of indices, some patterns by membership or economic regions can be visualised, pointing towards interest research questions. These initial findings suggest that the available research on ROO paints too small a picture, or even an inaccurate picture of the variation and effects of ROO. The insights and metrics presented could be used as a starting point for future research, e.g. on the determinants of flexibility provisions in PTAs or on trends and harmonisation tendencies in regional trading blocks.

4 CONCLUSION

The analysis of PTAs in general, and their design and anatomy in particular, has gained increasing focus over the past decade (Allee & Elsig, 2019; Dür et al., 2014; Horn et al., 2010). The academic understanding of where the trading system is going and how it affects its players is crucially dependent on knowledge of the contents of PTAs. This chapter contributes to the literature by filling a major data gap on the prerequisites of goods trade, i.e. its ROO. Beginning from the premise that ROO are important policy tools in PTAs, it has shown that variation in ROO is under-researched and possibly misrepresented. Where studies have addressed variation in ROO, they have done so on the basis of a single method of restrictiveness indices with substantial theoretical, practical and empirical shortcomings. The employed restrictiveness indices lack the theoretical or practical footing. In addition, they are applied to an EU- and US-centric evidence base, leaving researchers and policy makers with knowledge gaps on the true variation within ROO and their potential impacts. This is surprising and needs remedying, given that most PTAs dedicate dozens or even hundreds of pages to ROO which can have an impact on supply chains, a sector's inclusion in global value chains, or the protections granted for domestic industries. Thus, the

academic consensus that ROO matter for the study of PTAs, this consensus needs to be challenged – or confirmed – with more robust evidence and metrics.

This chapter introduces a novel dataset that codifies the characteristics of ROO across all PTAs in section 2. This dataset is the first of its kind, capturing variation across the over half a million product-specific ROO in all WTO-notified PTAs. Section 3 then introduces alternative approaches to measuring variation in ROO. To study variation in product-specific ROO, two new indices are proposed: first, an index of proximity measure how close an observed product-specific ROO is to the least trade-restrictive ROO, and second, a heterogeneity index measuring ROO compliance burden at the firm level. The section also includes measures for flexibility mechanisms in regime-wide ROO General Provisions, assessing the variation of ROO flexibility across the full dataset.

The preliminary findings at the product level show substantial variation in supply chain requirements by sector, suggesting that ROO for some sectors highlighted as most restrictive in the existing literature may actually not follow that pattern beyond the narrow evidence base of previous studies. The indices also show large differences in PSR proximity between North-North, North-South and South-South PTAs. These observations suggest interesting research questions on the different use of PSR as tools for supply chain integration in North-South PTAs, but also contribute to more research on ROO harmonisation at the regional or multilateral level.

For General Provisions, the observed variation in the flexibility index emphasised that the EU- and US-centric approach of the existing literature ignores the design and effects of ROO in PTAs across the globe. Plotting trends in ROO flexibility over time, the preliminary findings also show that North-North PTAs are most flexible and have been over time, while South-South PTAs make

less use of these mechanisms. These preliminary findings point towards numerous avenues for innovative and relevant research on the basis of the novel dataset.

Taking a step back, these findings suggest that ROO could be negotiated to achieve different outcomes which can presumably be used as trade policy tools to change the impact of North-South PTAs. This idea is explored in an in-depth qualitative case study in Chapter 3. The next chapter builds on this finding and applies the OECD DESTA dataset on ROO to a popular question in trade research: whether North-South trade negotiations lead to changes in preferential market access beyond the GSP benchmark. As set out in the introduction of this thesis, policy objectives to advance industrial policy and economic development can be core determinants explaining North-South PTA formation. The findings presented in this chapter thus do not only highlight a gap in theory and evidence, but also suggest that the existing literature may have mischaracterised the design of ROO and PTA market access benefits as a whole: rather than a black box of opaque policy content, ROO could be part of the answer of what developing countries seek to achieve by negotiating North-South PTAs. This question will be discussed in the following chapter.

CHAPTER 2: EVIDENCE ON ROO IN NORTH-SOUTH TRADE AGREEMENTS

1 INTRODUCTION

This chapter answers the question: “Does negotiation change the conditions of market access for developing countries?” by assessing the changes of ROO design from GSP to North-South PTAs. This question can be answered by analysing ROO data of country dyads who have both negotiated and non-negotiated trade agreements – i.e. by comparing ROO in GSP schemes and in North-South PTAs. The resulting findings could generate interesting conclusions about the benefits – or lack therefore – of negotiation the usability of trade preferences for developing countries which can in turn inform our understanding of the outcomes and objectives of North-South trade negotiation.

Market access means the conditions, tariffs and non-tariff measures for the entry of goods into markets (WTO Secretariat, 2021). These conditions include ROO which define the prerequisites for trade in goods to enjoy the preferential tariffs rates agreed in PTAs. The previous chapter presented a novel large-N dataset on ROO to fill a data gap in the evidence base for PTA analysis. Applying this data, it presented a range of metrics to exemplify the information that ROO data can inject into trade research on PTAs. Beyond that, it highlighted how ROO design changes. These findings suggested that, contrary to how this policy measure has been incorporated into the bulk of PTA studies, ROO are by no means homogeneous or binary (Estevadeordal et al., 2009). Instead, the data shows that their design varies in terms of the flexibility or restrictiveness of the market access of North-South PTAs. A question left unanswered is the source of these ROO

outcomes: how do the unnegotiated GSP schemes compare to negotiated PTA outcomes, and what could explain these changes?

The existence of GSP schemes generates a useful counterfactual to evidence from PTAs: since GSP ROO are granted, comparing data on PTA ROO against GSP ROO data highlights what developing countries could gain – or lose – from negotiation trade agreements. The question why developing countries choose to pay for market access preferences they would otherwise get for free has given rise to literature aiming to understand what drives developing countries into pursuing a North-South PTA. Large industrialised countries grant developing countries market access at – what seems like – the best possible terms: GSP schemes offer their exports at no or low tariff rates. Developing countries do not need to offer more market access in return: GSP is granted without negotiation or reciprocal tariff treatment. As long as the receiving countries keep a relatively clean record on human rights and free market principles, their exports receive some of the most favourable tariff treatment to industrialised markets.

This literature clearly addresses the costs of negotiation, further stressing the potential imbalance of costs and benefits when developing countries negotiate trade agreements. The benefits, according to the existing literature, are gains in the political economy of trade liberalisation, plus improvements in the degree and stability of market access preferences.

In discussing the costs and benefits of North-South PTA formation, researchers miss a crucial component of the GSP market access package: the *usability* of preferences. I argue that it is not just the degree and stability of market access that North-South PTAs aim to change, but also the *usability*. Judging by a small but interesting set of empirical studies, the usability of GSP market access leaves much room for improvement (Cirera et al., 2011) and could thus be an outcome that developing countries seek to change in PTA negotiations. An important reason for low GSP

usability lies in the requirements GSP schemes – and all PTAs – put in place. The bulk of these requirements is found in the Rules of Origin which have been identified as one or even the main suspect for low use of PTA preference (Brenton, 2003; Candau et al., 2004; Donner Abreu, 2013; Gasioerek et al., 2010).

In sum, the existing literature has identified a number of potential explanations for why developing countries negotiate trade agreements. The low usability of GSP schemes, and the role of ROO therein, are a blind spot in the literature that seeks to explain why developing countries negotiate PTAs. This blind spot undermines our understanding of why developing countries seek arrangements that require they undertake substantial policy reform.

This chapter provides a dual contribution to the literature. First, it applies the OECD DESTA database to GSP schemes and North-South PTAs and improves our understanding of the anatomy of this subset of PTAs previously under-researched in ROO analysis. Second, it generates new insights into North-South trade negotiations, generating additional research questions on the potential drivers, objectives and outcomes that developing countries might pursue.

The chapter is structured as follows. The first section discusses the literature around the negotiation costs and benefits of North-South PTAs. The contribution of this dissertation lies in the addition of data on ROO and the quantification of PTA usability which could contribute to improved or additional research on the drivers of North-South PTA formation. For example, if GSP donors agree to ROO with a higher PTA usability in North-South PTAs than in the GSP scheme, then ROO variables should be included in econometric modelling of North-South PTA formation drivers. The second section then discusses theoretical and practical reasons for seeking different ROO outcomes, and in particular why restrictive ROO might be negotiated in the first place.

In the empirical part of this paper, I apply the OECD DESTA database presented in the first chapter which contains general and product-specific ROO in North-South PTAs and GSP schemes. Using ROO data adds to the existing research in two ways: first, it presents a novel comparative analysis of the design of ROO across PTAs, allowing for conclusions of market access usability at the product, sector and PTA level. Second, it expands on existing analysis which focussed on EU and US GSP schemes and instead covers all GSP donor countries and their North-South PTAs. To do so, I use an improved index of ROO restrictiveness to assess whether and how the usability of North-South trade preferences changes in the transition from GSP schemes to PTAs.

The findings show that that the usability of North-South trade preferences, changes for every North-South dyad in the sample and for almost every sector for these dyads. Second, the chapter analyses whether these changes follow a specific pattern – i.e. whether preference usability improves or worsens, whether these changes are the same for all countries, and whether different sectors are equally affected. It shows that clear patterns emerge by GSP donor. Preference usability improves after a PTA negotiation for all North-South PTAs involving the US, Australia and New Zealand. The European GSP donors and Canada conclude improvements in preference usability but carve out sectors of domestic sensitivity. For instance, the difference between the EU's GSP and PTA ROO restrictiveness scores is largest for products of political and/or economic sensitivity: arms, machinery, chemicals, animal and vegetable products, or apparel. A consistent worsening of preference usability, measured through the lens of ROO restrictiveness, is mapped for the case of Japanese GSP and PTA preferences.

For all countries that offer either a blanket improvement or worsening of preference usability, a closer look at the data shows that these effects are different depending on geographical location of the Southern PTA party. Japanese, Australian and New Zealand's North-South PTAs include

more restrictive ROO for all PTAs concluded with partners in their economic and geographic region. This suggests that ROO outcomes may have been driven by desires to strengthen regional economic integration and the relative competitiveness of regional producers, while PTAs concluded with partners further removed contained provisions to facilitate the inclusion into global supply chains.

These observations can contribute to the debate on North-South PTA formation. First, they provide starting points for future research on PTA negotiation changes outcomes for developing countries away from the GSP benchmark. Second, the findings suggest that negotiations may not automatically lead to a reduction in market access costs and more liberal ROO. Instead, they follow a pattern where some Northern countries grant more liberal ROO than others in their PTA negotiations. Third, the chapter discusses whether the changes could constitute an ex-ante incentive for developing countries to negotiate a PTA on top of GSP preferences. Put differently, do developing countries pursue negotiations *because* they want to change the ROO? While this chapter or the empirical analysis does not qualify the determinants of negotiation outcomes, it does present the first empirical description that variation in PTA usability exists between North-South PTAs and GSP schemes. The question of the drivers of negotiation outcomes is complex to answer because, as drawn out in the first chapter of this thesis, there is no one set of ROO that benefits all developing economies equally, and because a mapping of outcomes does not test their drivers and determinants. Chapter 3 sets out to scope some of possible drivers of ROO outcomes and partially qualifies preference formation, concluding with a novel presentation of primary evidence on ROO negotiations and suggestions for future research.

2 LITERATURE REVIEW

North-South PTAs are a unique subset of trade agreements, characterised by stark differences in market size, geopolitical weight, and institutional capacity between the negotiating parties. In addition, developing countries already benefit from unilateral market access liberalisation by the GSP donor so the relative gains from PTA conclusion are even smaller than for non-GSP recipients. At the same time, the costs of negotiation are arguably relatively higher for GSP recipients with, on average, smaller pools of trade expertise, resources and experience to draw from than the GSP donor party. These characteristics have given rise to literature suggesting that North-South trade negotiations are inherently skewed in favour of the industrialised party, or at least that the benefits of negotiations for developing countries are likely not found in an actual change in market access and instead benefit the Southern party in other areas.

This begs the question: does a North-South trade negotiation even change the trading conditions for developing countries, and if so, for the better? One side of the literature argues that North-South PTAs are best understood in the wider trade policy objectives of the industrialised party (Heron & Siles-Brügge, 2012) or to improve the political economy of trade preferences (Shadlen, 2005), focussing thus on indirect effects of PTA formation rather than effects to the PTA content and provisions. Some scholars would however negate this question entirely. For instance, the size and distance of the developing party to a North-South PTA could make developing countries an unattractive target of reciprocal trade liberalisation for industrialised countries (Manger, 2012a; Mansfield & Milner, 1997). Manger (2012a) even questions whether North-South PTA negotiations have anything to do with trade at all.

The section below briefly summarises the existing research on developing countries' potential costs and benefits of negotiating North-South PTAs to evidence this chapter's hypothesis that North-South negotiations likely change little in terms of the conditions of market access for the Southern Parties vis-à-vis a non-negotiated agreement.

2.1 Negotiation costs

2.1.1 Imbalance of resources and leverage

Trade negotiations are a time-consuming process, reflective of the complexity and diversity of issues that are covered. As Odell puts it, “[n]egotiating international trade agreements has become a full-time job for developing countries” (Odell, 2006). Trade negotiations also keep a huge number of public servants in employment not just in developing countries. For example, the EU’s trade agreement negotiations usually progress through some 30 stages and take several years to complete (European Commission, 2017). Arguably, the costs of negotiating a PTA can be thought of as fixed or marginal. For example, the fixed costs of creating the systems and institutions to negotiate a first PTA are substantial – setting up a trade department, hiring trade negotiators and training them. But the marginal costs of negotiating every following PTA are then much smaller. Indeed, having the institutions, processes and people in place to conclude PTAs can create momentum to negotiate more – an observation Poulsen and Aisbett make in explaining the spread of investment treaties: “Diplomats want treaties.” (Poulsen & Aisbett, 2016).

There are two reasons why this approach is not the only way to think about negotiation costs in North-South agreements. First, the difference in relative opportunity costs for the Northern and the Southern party persist. The marginal costs of negotiating a second PTA may be smaller than the first, but in comparison the resource-poorer country will still spend more in relative terms on a second PTA than the resource-richer country will on a second PTA. So the unlevel playing field persists. Second, governmental resources are not the only costs or burdens shouldered by negotiation parties. Successful PTA negotiations rely on a good understanding of what a successful negotiation outcome would look like. To get there, countries undergo extensive consultations with stakeholder bodies: agricultural producers, chambers of commerce and industry, business

associations, consumer bodies, standard-setting bodies, service providers. In other words, “consulting requires an effort” (Goode, 2005) and thereby also costs and resources which are relatively more abundant in high-income countries.

Negotiation partners also need to invest in generating the necessary evidence to produce effective policy positions. For example, the Australia-China trade negotiations were preceded by scoping studies to assess whether a trade agreement would be feasible and beneficial. These studies included an overview of economic and trade trends between the two countries, an assessment of international trade policy developments and their implications on Australian-Chinese trade and investment, an analysis of the existing barriers to trade and investment covering all aspects that might be addressed in a PTA, and an impact assessment of the reduction of existing trade barriers in goods, services and investment (Goode, 2005). This is not to say that all PTA negotiations must follow this blueprint, but extensive preparations and research can help and has helped the negotiation position of developing countries in North-South negotiations (Secretariat & Jones, 2013).

Successful trade negotiations also rely on the availability of institutions and instruments to support a successful negotiation. Developing countries usually have much smaller trade negotiator delegations, smaller budgets and – as a result of both – less people power and expertise to deploy across different PTA or chapter negotiations (Secretariat & Jones, 2013). Where available, a functioning and experienced trade negotiating infrastructure can contribute to the success of a trade negotiation. For example, officials in CARIFORUM states have accredited their quick understanding of technical questions in fast-paced negotiations to the Caribbean Regional Negotiation Machinery and the College of Negotiators – two operational structures that spanned the CARIFORUM region and also included a training component (Spence, 2009).

Power asymmetries in North-South trade negotiations mean that developing countries are fighting an uphill battle when negotiating offensive positions against the industrialised party's interest. In a survey of 93 surveyed trade negotiators from developing countries, over half of all respondents said they expect to have low or no influence at all on the outcome of the negotiations (E. Jones, 2010). Jones finds that this attitude is reflected in the final PTA texts: intellectual property provisions in EU North-South agreements are a direct copy-paste from EU domestic legislation. As Allee and Lugg (2016) use evidence from a text-as-data analysis of the Transpacific Partnership (TPP) text, a mega-regional trade agreement, and find that “whose model prevails is largely determined by bargaining power” because TPP and other trade initiatives “cannot be separated from power politics and their geopolitical context”. These studies suggest that, again, the costs and risks of North-South PTA negotiation are much higher for the developing country which makes the motivators even more interesting.

In sum, the imbalance of resources, negotiation capital, and leverage affect trade negotiations and as a result can put developing countries in a disadvantaged position. This hypothesis is reflected in the literature. Moerland (2017) shows that negotiation success in North-South PTAs depends less on strategic and more on structural factors, i.e. the availability of instruments discussed above. In the absence of evidence or stakeholder involvement, developing country negotiators can struggle to make a good case for their negotiation position, or “be pushed around by his counterparts” (Moerland, 2017).

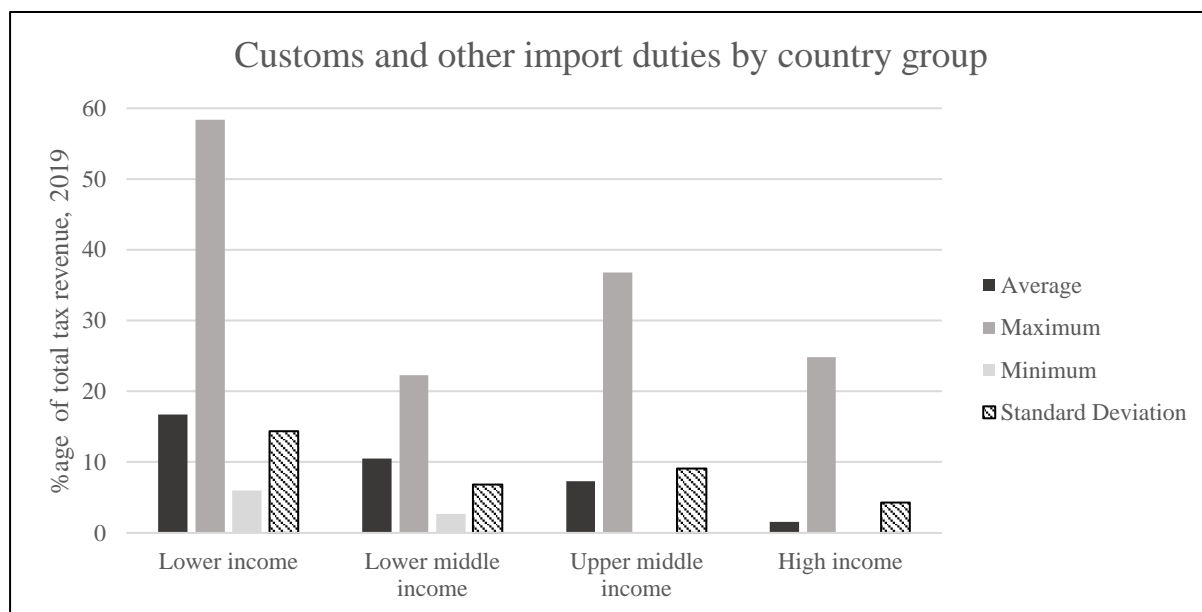
2.1.2 Giving Up Policy Space

The main feature of GSP schemes is that they are for free – they are offered without an exchange of reciprocal tariff concessions. That changes when developing countries decide to enter a PTA negotiation where they have to give up policy space in exchange for reciprocal concessions.

Importantly, policy concessions are not limited to tariff reductions and trade-offs are instead often found in the wider economic and development policy remit (Heron, 2011). In the context of international economic integration, national policy space is the combination of *de jure* policy sovereignty and *de facto* national policy autonomy (Mayer, 2009). Specifically, “integration into the global economy restricts national policy space both in terms of a reduction in the number of available instruments as a result of legal commitments to international rules and practices (i.e. constraints on *de jure* policy sovereignty), and in terms of the reduced effectiveness of macroeconomic instruments (i.e. constraints on *de facto* policy autonomy)” (Mayer, 2009).

For developing countries seeking to negotiate a North-South PTA, an important *de facto* cost will often be the loss of domestic tariff revenue. PTAs must liberalise substantially all trade according to WTO sources so parties lower their tariff levels from the MFN benchmark. This requirement asks more of developing countries than their industrialised counterparts: developing countries rely much more on customs and other import duties as a share of their annual tax revenue than industrialised countries (see Figure 9 for a visualisation). Measured in simple averages, high income countries only generate about 1.6 per cent of their annual tax revenue from customs revenue, and that number grows to 7.3 per cent for upper middle-income countries, 10.5 per cent for lower middle-income countries, and peaks at 16.7 per cent for lower income countries (International Monetary Fund, 2020). So not only do developing countries give up more *de facto* policy space through PTA negotiations, they also give up more relative policy space compared to their industrialised negotiation partner.

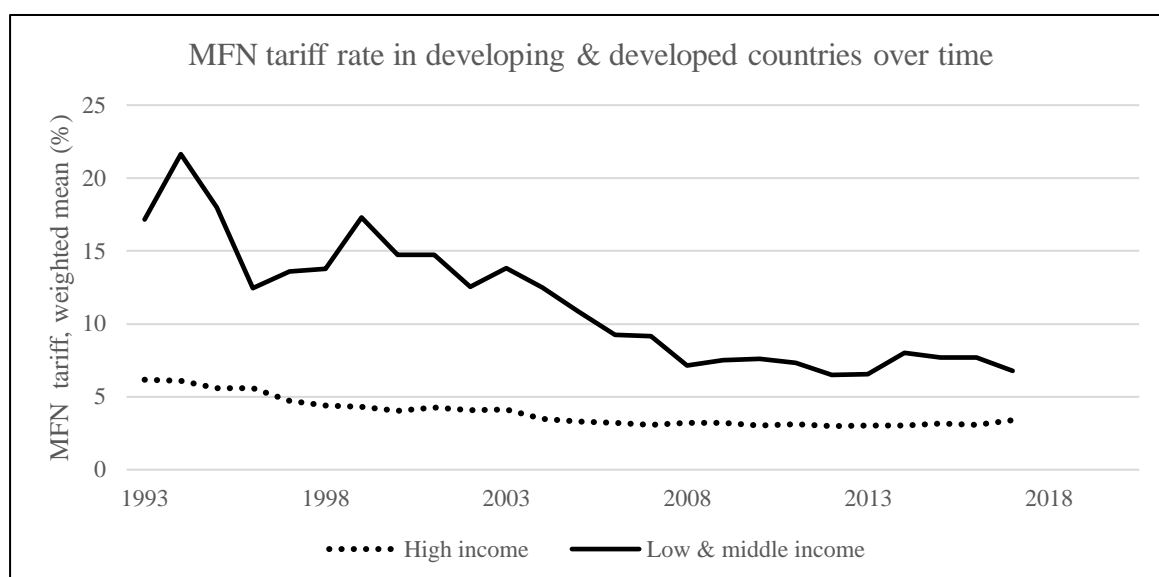
Figure 9 Customs & duties as share of tax revenue



Source: Data by country by International Monetary Fund (2020), ID: GC.TAX.IMPT.ZS. Calculation by author

MFN tariff levels are also still around twice as high for developing countries in comparison to industrialised countries (see Figure 10). While developing countries have also lowered MFN tariffs under their multilateral commitments at the WTO, these commitments are legally less ambitious than for industrialised countries so that North-South PTAs can reduce developing country tariff levels by more, in absolute terms, than in the industrialised party.

Figure 10 Average MFN tariff rates over time



Source: World Bank (2020b), author's illustration

Not only is the absolute level and reliance on tariffs higher in developing countries, they also face a “potential adverse effects of revenue reduction on poverty reduction, redistribution and development strategies” and need to address the risk that the revenue reduction undermine the economic progress or even result in “a reversal of the trade reform itself” (Kowalski, 2005). This blow of revenue loss has historically been softened in welfare states which underwent comparable adjustments to tax revenue losses. In the absence of mature financial systems, high skill levels among the labour force, and investments in infrastructure, human and other capital, the costs of trade liberalisation are “often enormous” (Manger & Shadlen, 2015).

North-South PTA negotiations can also lead to a reduction in the *de jure* policy space of developing countries, i.e. a reduction in policy sovereignty and the number of available legal instruments. Most North-South PTAs today cover a range of policy areas, like the protection of intellectual property, dispute settlement, the observation of human rights, gender equality or environmental protection. From the Northern party's perspective, this extensive scope makes a lot of sense: it allows for the developed party to influence the global agenda of these non-trade related issues. In some cases,

PTAs have been argued to do so more effectively than agreements specifically dedicated to policy areas, like human rights. Indeed, developed countries have been public about being the driving force around including non-trade-related matters into their North-South trade agreements like the protection of intellectual property, dispute settlement, the observation of human rights, gender equality or environmental protection (Ionel, 2018) and in some cases, PTAs have been found to implement non-trade matters more effectively than issue-specific agreements (Hafner-Burton, 2005, 2013). The European Commission advertises their European Partnership Programmes as “leveraging trade and investment for sustainable development” (European Commission, 2021); the Canadian government run every trade negotiation through an environmental assessment (Global Affairs Canada, 2021); EFTA countries “apply and promote high standards for sustainable development [...] in their trade policies” (EFTA Secretariat, 2021). These standards often translate into legal commitments to international treaties, standards or values. For some of the EU’s trade agreements, the scope of the PTA provisions even exceeds the level applied internally in the EU, regulating more of the non-EU party’s policy space than it would otherwise do for its own members (Moerland, 2017). It is plausible to assume that the non-trade-related policy outcomes that end up in North-South PTAs are a negotiation interest by the North party at the possible cost, or at least no gain, to the *de jure* policy space of the developing party.

The *de jure* costs of giving up policy space also include a temporal dimension (Heron, 2011). The benefits of additional market access benefits can often be felt very quickly: the tariff reduction leads to a lower costs of exporting from the day of entry into force, noticeable to anybody who transports goods or services to another PTA party. The costs of policy concessions, on the other hand, are likely felt more slowly over time, as for instance investment protection regimes are enforced, intellectual property regimes are implemented or constrictions in labour or domestic market subsidisation begin to take shape (Shadlen, 2008). These concessions restrict domestic room to regulate, not the costs of doing business, and thus will be felt more slowly as new

regulations are introduced in line with PTA obligations. This additional temporal dimension of a multi-faceted policy cost makes the cost of giving up policy space difficult to measure.

Of course, not all developing countries will be opposed to the objectives – sustainability, environmental protection or human rights standards are by no means only on the agenda of industrialised nations. Nevertheless, the summarised literature shows that GSP granting parties can and do harvest substantial policy concessions and, in terms of absolute magnitude, a higher concession of tariff reductions – so much so that North-South PTAs have been described as one-sided (Perroni & Whalley, 2000; Winters, 1993). Following from these observations, one might assume that the transition from GSP to PTA introduces few changes to the usability of trade preferences for developing countries. If the GSP scheme represents what the industrialised party is willing to offer in terms of market access, this lopsided distribution of negotiation costs and incentives for reciprocal market access would suggest that developing countries have little reason to believe North-South trade negotiations will generate sufficient additional benefits to warrant the cost.

2.2 Negotiation benefits

Despite the costs of negotiation, developing countries still enter trade negotiations with their GSP donors. This section presents the potential beneficial changes that developing countries may seek to pursue in order to contextualise the subsequent data discussion on North-South PTAs. It should be noted that changes to North-South trade relationships could also occur through an improvement in political relationships or geopolitical strategy. For example, Mansfield and Reinhardt argue that PTA formation can enhance the bargaining power of its parties at the WTO (2003). Since this chapter discusses changes to the design of North-South PTAs, and such “soft

power” changes would likely not be captured in PTA design, these soft power benefits of PTA negotiations fall outside the remit of this thesis.

PTAs and GSP schemes have the potential to both improve market access for developing countries because they lower or remove tariffs, make exporting cheaper and improve the relative competitiveness of developing countries’ exports in industrialised countries’ markets. The important difference between the two schemes is that GSP grant these preferences without reciprocal concessions, whereas PTAs are negotiated and result in a trade-off of concessions. This begs the question which market access benefits developing countries could theoretically change through negotiations if GSP already grants a generous market access offer for free. This section discusses potential improvements that developing countries may seek in PTAs through three lenses: first, the *degree* of market access preferences, then the *stability* of these preferences (Manger & Shadlen, 2014), and third, the *usability* of market access preferences.

2.2.1 Degree of market access benefits

First, the *degree* of market access preferences means the extent of MFN tariff reductions. Existing studies suggest that the degree of market access won by a North-South PTA vis-à-vis the GSP level is small. For one, the asymmetry in negotiation power puts developing countries at the lower end of an unlevel playing field. Freund (2004) investigates this hypothesis empirically and finds “modified reciprocity” in North-South trade negotiations: on average, a ten per cent reduction of tariffs in the Northern party leads to 33 per cent tariff reduction in the Southern party. The other way round, a ten per cent tariff reduction by the Southern party only yields a 2 per cent reduction in the Northern party. In line with Freund’s results, several studies accept that North-South PTAs do not substantially improve the degree of market access enjoyed by developing countries under

GSP (Hoekman, 2005; Perroni & Whalley, 2000). Carrère et al. (2010) even find “no effective market access preference at all” for large GSP recipients like Indonesia.

2.2.2 Stability of market access benefits

Instead, researchers suggest that the benefits of North-South PTAs vis-à-vis GSP schemes lie in more *stable* market access: PTA market access preferences are more predictable and secured (Freund, 2004; Manger & Shadlen, 2014; Mansfield & Reinhardt, 2003; Perroni & Whalley, 2000). The instability of GSP schemes is well documented. For example, South Africa saw their AGOA preferences removed in ad-hoc review of AGOA following a dispute over US farmers dumping low-cost chicken into the South African market. South Africa eventually conceded to a quota of 65,000 tons of chicken parts imports from US in exchange for renewed AGOA access (Trade Law Centre, 2018). India saw their GSP status to the US removed with 60 days of notice in 2018 after US producers of medical devices complained about India invoking a price ceiling for certain medical devices. Three decades prior, the US had already revoked India’s GSP access to get the country to agree to intellectual property negotiations as part of the Uruguay Round (ICTSD, 2018).

Similar to the US, the EU removes GSP status in an annual review from countries who become classified as “upper middle-income countries” by the World Bank. In 2012, this affected Thailand, Ecuador, China and the Maldives. Thailand entered PTA negotiations with the EU one year later, but these negotiations were paused after the military coup in 2014. Ecuador acceded to an existing FTA with neighbouring Andean countries. China and the Maldives have not been granted preferential market access to the EU since their GSP status removal. For trade relations with the Maldives, the EU Commission stated that a PTA would only be negotiated if the Maldives agreed to legally binding provisions on sustainable development (*Answer to Question No E-002768/19*, 2019). The EU removed GSP status from Belarus following labour rights violations there which

led to a drop in exports of affected products by almost a third (Gnutzmann & Gnutzmann-Mkrtchyan, 2017).

These examples go to show that GSP donors can change the condition of market access at short notice and unilaterally, e.g. by revoking GSP status, reducing the products covered under GSP, or using GSP schemes to exert pressure on recipient countries. PTAs help lock in trade preferences through their reciprocity (Manger & Shadlen, 2014; Mansfield & Reinhardt, 2003). In PTAs, GSP recipient countries essentially exchange regulatory and trade concessions for more predictable market access with the GSP donor country (Özden, Reinhardt 2004). Perroni & Whalley go so far as describing North-South PTAs as “insurance agreements”, rather than trade liberalisation agreements (2000).

Inherent in this argument – that the desire for higher *stability* if not a higher *degree* of market access drive the formation of North-South PTAs – is the assumption that the GSP market access benefits are worth locking in, i.e. that they are *usable*. If GSP preferences are not usable, it indicates that the degree or stabilisation of GSP schemes are not the only potential explanations for why developing countries negotiate trade agreements. Instead, they could want to agree PTAs in order to change the usability of existing tariff preferences.

2.2.3 Usability of market access benefits

The available literature is small but does suggest that the problem with market access under GSP is not merely its *degree* or its *stability* but indeed whether the preferences are *usable*. On the basis of a comprehensive tariff-line analysis of the EU GSP, Cirera et al. (2011) conclude that GSP tariff preferences have a “negligible or even negative” impact on developing country exports to industrialised countries. The usability of trade arrangements has previously been quantitatively

measured through preference utilisation rates. Preference utilisation can be calculated in several ways but is generally defined as the ratio of imports receiving preferences to eligible imports (Brenton & Manchin, 2003)¹². Preference utilisation rates are “a check-up on the well-being” of a PTA (Crivelli et al., 2021) and function as a “clear indicator of the effectiveness of trade preferences” and have been used to this end since the 1970s. They show whether tariff reductions granted on paper are actually taken up and used. Preference utilisation rates are often not published, and even more rare on a PTA- or GSP-specific basis (Hamanaka, 2013; Keck & Lendle, 2012) so the available case studies are few and far between. Given this lack in public and available data, this thesis does not replicate the empirical research on preference utilisation rates but instead works with the conclusions from the existing empirical case studies that preference utilisation rates tend to increase where ROO are less restrictive (Augier et al., 2005; Brenton, 2003; Candau & Jean, 2005; Donner Abreu, 2013).

This chapter builds on the available literature which suggests that ROO impede the use of GSP preferences, and seeks to understand where PTA negotiations can change that. To do that, the following section explains in more detail why and how ROO could undermine the usability of GSP preferences, and introduces the concept of ROO restrictiveness – a numerical measure to analyse how far ROO could potentially impede the usability of preferences by restricting supply chains. The empirical section 3 then uses ROO data measures to describe how the usability of preferential market access compares in GSP schemes and North-South PTAs. These will then be used to answer research gaps, including whether North-South negotiations generate changes in preference usability despite the lopsided distribution

¹² See Hamanaka (2013) for a comprehensive summary of the calculation options and data sources used to calculate preference utilisation rate.

This difference in rules makes the available preferences less usable: while complying with one requirement is feasible, these different rules prescribe that one and the same product is made in five different ways, depending on the PTA partner market that the export product is intended for. These examples show that Australian exporters have to not only limit their inputs in parts to domestic inputs, but also that these requirements are different for every preferential trade partner, multiplying the complexity and restrictiveness of ROO on their export opportunities.

In negotiations, the parties will seek to define ROO so that they include their own exports or even to exclude the partner country's products. In GSP schemes, the donor country can simply define its ROO so that they de-facto limit or exclude the product from GSP preferences, even though the product is covered on paper. For example, many GSP schemes prescribe that products be made entirely from domestic inputs. If these inputs are not domestically available, then the export cannot qualify for GSP preferences. The flipside of this mechanism is that domestic or regional inputs, under regional cumulation provisions, become relatively more competitive. This in turn can attract more investment, both domestic and foreign, into national or regional production which could, in the absence of restrictive ROO, moved abroad to the most competitive global producer (Conconi et al., 2018; Dieter, 2004).

This two-way effect has connected the literature on ROO to the debate whether PTAs create or divert trade or incentivise protectionism (Datta & Kouliavtsev, 2009; Ghoneim, 2003; Moktan, 2008; Soumatsa, 2020). Trade diversion means an increase in trade flows with PTA partners as a result of lower trade costs even though the trade partner is not the most competitive producer. Trade creation occurs when PTAs reduce trade cost among members so trade can flow more efficiently (S. Kim et al., 2013). Trade creation and trade diversion are two sides of the trade liberalisation coin and reflect the built-in discrimination of PTAs against third parties in favour of the members (Anh & Ngoc, 2015). The concepts are pertinent to the analysis of ROO since ROO

are the main policy tool that ensure that trade liberalisation only occurs to the benefit of partners. Protectionism, trade creation and trade diversion should all be positively correlated to ROO restrictiveness – the more restrictive ROO are, the stronger the protectionist, trade-creating and -diverting effects of the PTA.

In theory, restrictive ROO can contribute to trade creation because they lower trade barriers: ROO can create more trade among the agreement members by making originating inputs relatively cheaper than non-originating inputs from third parties. The academic literature supports some trade-creating effects of restrictive ROO but does so primarily where trade preferences are extended to neighbouring or geographically close countries (Conconi et al., 2018; Fukao et al., 2009).

When it comes to the role of ROO in trade diversion, the lay of the land is less clear. Econometric studies have found that ROO can undermine the trade-diverting effects of PTAs because they enhance the costs of intra-PTA trade (Datta & Kouliavtsev, 2009). Others argued that ROO have a trade-diverting effect *prima facie* but that the overall trade-enhancing effect of the PTA is also very small as a result of ROO (Baysan et al., 2006). Where trade-diverting effects were observed, these were usually limited to specific sectors whose inputs are available within the PTA territory, e.g. apparel in the case of NAFTA (Conconi et al., 2018; Fukao et al., 2009). So why are ROO still restrictive if members do not benefit relative to non-members through trade creation or trade diversion?

As explained, ROO are in essence restrictions on the production that can occur outside of the trade agreement's parties. In PTAs and GSP schemes, ROO define a specific threshold of minimum value addition or production in the preference-claiming country. If this threshold is defined generously, the exporter can choose to source inputs from the most competitive producer

even when they are located in another country. In many countries, especially smaller economies, sourcing inputs from abroad may not be a question of choice but of necessity because they are simply not available domestically. This is a predicament that makes preference usability difficult for exporters across the globe – for instance, the EU and UK had to negotiate intricate ROO for electric vehicles in a way that would allow manufacturers to still import the batteries from Asia (Lowe, 2020).

The restrictiveness of ROO is costly for developing country exporters. Kennan and Stevens (2005) studied EU GSP beneficiary countries in Sub-Saharan Africa and found that even the largest economies were unable to use the GSP preferences for clothing because the ROO requirements are too restrictive; they paid the EU MFN duty instead. In the case of South African exports to the US, they found evidence that for over half of the South African apparel exports to the US, exporters deliberately chose to forego AGOA tariff reductions because they were unable to source price-competitive inputs domestically. ROO restrictiveness is also costly because ROO chapters also regulate the transportation of originating goods to the importing countries. The official policy objective of these ROO is to prevent that originating goods are manipulated or mixed with non-originating goods outside the parties (World Customs Organization, 2017). Many PTAs and GSP schemes require direct transport where exporters must ship the product directly to the importer. Especially for landlocked countries or small shipments, this creates a costly and complex logistical challenge. To account for that, the international Kyoto Convention on the Simplification and Harmonisation of Customs Procedures recommends to move away from a direct transport requirement and instead move to a rule that only prescribes that shipments may not be altered while transported through third countries (World Customs Organization, 2006). Nevertheless, many GSP schemes still contain this rule, making the usability of GSP preferences again more costly and complex for exporters.

In sum, a closer look at the practical application of ROO suggests that ROO restrictiveness can realistically impact the usability of market access preferences. ROO therefore lend themselves as policy measures to give market access with one hand, in the form of lower tariffs, and take away with the other, in the form of more restrictive ROO. In the case of GSP schemes, donor countries could implement restrictive ROO to get developing countries to the negotiation table for a reciprocal market access negotiation.

To summarise, the chapter has set out the question whether and which changes North-South PTAs could introduce to the usability of trade preferences. In setting out the argument, I have agreed with the literature which suggests that the likely costs and benefits of North-South negotiation are likely tilted in favour of the industrialised negotiation party. This in turn could result in the outcomes of North-South PTAs changing little in comparison to GSP schemes. However, after showing how GSP schemes often underperform in terms of their usability, I argue that developing countries could nonetheless seek change to trade preference usability through North-South PTA negotiations.

I further develop this argument by analysing data on ROO restrictiveness as a measure of preference usability. I do so by, first, introducing an improved ROO restrictiveness metric that both integrates into and improves upon the existing literature. I then go on to analyse patterns to discuss the likely restrictiveness ROO in their country- or sector-specific context, also addressing whether these patterns could have been designed with a trade-creating or protectionist effect in mind. These negotiation objectives are then the subject of the next chapter.

3 EMPIRICAL ANALYSIS

3.1 Methodology

The previous chapter introduced the OECD DESTA dataset on ROO and the benefit of using an index methodology. As discussed there, restrictiveness indicators are commonly used to evaluate trade and ROO policies. Case studies to analyse the design and impact of ROO have been made through the lens of ROO restrictiveness indices but these studies are limited to a subset of PTAs, centred around US and EU agreements. This chapter expands on both the theoretical footing around trade policy restrictiveness, existing ROO restrictiveness indices, and introduces an improved index to apply in the empirical analysis that follows.

ROO restrictiveness would ideally be measured directly through the form of ad-valorem equivalents similar to the effects of tariff quotas in trade statistics. As Laaker (2019) explains, this is not feasible for ROO. To calculate an ad-valorem equivalent would be measured through changes to the prices of firms' sourcing decisions. This data is often not collected at the national level. Where it is collected, it is usually covered by confidentiality constraints that eliminate product-level data to protect the identity of buyers and their sourcing decisions and profit margins. To still develop a quantitative metric of ROO restrictiveness, the available literature has relied on restrictiveness indices.

Estevadeordal et al. (2000) piloted the approach with the first ROO restrictiveness index which other studies have either directly replicated (Cadot & Ing, 2014) or refined (Anson et al., 2005; Estevadeordal & Suominen, 2004; Harris, 2007; Kelleher, 2012). These indices and adaptations all have in common that they are *ex-ante* and relative. *Ex-ante* means that the index captures the textual features of ROO, not their restrictions on exporters following the implementation of the PTA or GSP scheme (Estevadeordal & Suominen, 2004). Relative means that the index measures the restrictiveness of a given ROO in comparison to other ROO. An ex-ante, relative restrictiveness

index is therefore well suited to the comparative analysis of ROO design that this chapter sets out to do.

This and the following chapter use a restrictiveness index akin to that of Kelleher (2012) because it has the strongest footing in theory, as shown below. I first describe the pilot methodology created by Estevadeordal (2000), then summarise the changes proposed by other iterations of the index, and in doing so explain the benefits of the Regime-Weighted Harris Index that I apply in the next section on empirical analysis.

Estevadeordal's (2000) index is built using ROO data from only one PTA, NAFTA. He uses an ordinal categorical index of 1 (least restrictive) to 7 (most restrictive) to rate the relative restrictiveness of the most common ROO in the agreement. The design of this index is built on logic. It uses the tree-like structure of the global nomenclature of goods for customs purposes, commonly referred to as the Harmonized System or HS, which assigns a 6-digit ("HS6") code to the most granular level, usually the product, then a 4-digit code to smaller groups of products, and a 2-digit code to broad categories of products. If a change in a 2-digit chapter is required it means that other inputs contained in the same chapter of the export may not be used from third parties. This list of excluded products is automatically smaller if a change in 4-digit or 6-digit codes is required because fewer products are listed as the digits go up. This results in the Estevadeordal index listed in Appendix 2 .

This index has two main sets of shortcomings. First, the design only works in the context of NAFTA ROO which are designed as origin tests in the form of a change in tariff classification which is used as a proxy for a substantial transformation in the NAFTA territories. The index therefore does not reflect variation in the other building blocks of ROO that may not be found in NAFTA but that is included in the hundreds of other ROO protocols – in particular, variation the

regional value content threshold and a technical requirement. A regional value content threshold is, as the name suggests, a requirement to add a minimum of domestic value or use a maximum of foreign value in an originating good. Whether that threshold is set to 15 per cent or 70 per cent will logically make a large difference to the restrictiveness of ROO. Similarly, a technical requirement is only accounted for in combination with a chapter change and is then assigned an incremental value of 1. In real life, a technical requirement is used in PTAs in many combinations which the index does not account for. On top of that, the index disregards a common feature of ROO of the NAFTA design: additional products are excluded, beyond those in the same HS2/HS4/HS6 group. Negotiators include these products because they are inputs into the products and thus further increase the restrictiveness of the ROO (Harris, 2007).

Second, the index only captures the product-specific rules that differ from product-to-product, but not the regime-wide ROO that apply to all products. Many of these provisions are specifically designed to change the restrictiveness of ROO (see p.38 for a refresher on regime-wide ROO). For example, so-called cumulation provisions can expand the list of countries where originating inputs may be sourced from to include non-parties or, in the case of GSP, often include all GSP recipients. This makes ROO much less restrictive because inputs may be sourced not just domestically but from the donor country and dozens of GSP recipients without undermining the originating status of the good. Direct transport provisions are also covered under these cross-cutting provisions which prevent or permit exports to be shipped via third countries, making trade easier for shipments of small size or value. Other cross-cutting provisions include customs facilitation measures, full ROO documentation waivers, or leniency measures on how to certify an originating product – in sum, a range of measures that should be included in an ex-ante measure of ROO restrictiveness. Lastly, Estevadeordal's index increases when rules are used cumulatively, i.e. in addition to each other, but it disregards the effect on restrictiveness if alternative rules are proposed. The alternative rules should be similar to each other in terms of their individual

restrictiveness – which is why negotiators agree to them as alternatives – but offer exporters more flexibility which test and documentation they want to choose. Alternative product-specific ROO should therefore result in lower ROO restrictiveness.

Harris (2007) improves the index by addressing the first set of shortcomings addressed above. He uses a system of points, positive or negative, to capture the restrictiveness-enhancing or restrictiveness-reducing feature of a ROO. By addressing variation in technical requirements, regional value content thresholds and additional or alternative rules, Harris' index has a stronger theoretical footing and can be applied to more PTAs. Yet his index also does not address cross-cutting ROO provisions and their impact on restrictiveness.

This is remedied in Kelleher's index (2012). She builds on Estevadeordal's and Harris' work by weighing the Harris Index score with a value for the size of the cumulation regime and the two main procedural provisions in ROO chapters: the type of certification and the *de minimis* threshold. The cumulation zone is the territory of countries whose inputs can be used as if they were originating. Certification of originating exports can either occur, trade-restrictively, through a national administration body or, trade-factitively, by the exporter themselves. The *de minimis* threshold, as Kelleher defines it, is the minimum value of a good that must be originating.

Kelleher's assessment of the *de minimis* threshold is the only substantial theoretical shortcoming of the index because it is conceptualised incorrectly. Kelleher describes the *de minimis* provision as “the maximum level of non-originating materials permitted before the origin status of the final good is affected”. This is in fact the description of the regional value content threshold, not the *de minimis* threshold. The latter is a tolerance threshold applied to permit a small share of inputs otherwise prohibited under a tariff classification rules or technical requirement (World Customs Organization, 2017). For example, a change in chapter rule for cars means that no non-originating

car parts may be used and assembled to make originating car exports, because car parts are listed in the same HS chapter as cars. A *de minimis* rule adds flexibility by permitting a certain threshold – usually between 7-15 per cent – of these inputs from within the same chapter to still be used and, for the most part, only applies to tariff classification rules or technical requirements. This provision is not what Kelleher describes.

The algebraic weighting of the Harris index with the *de minimis* provision should also be challenged. Kelleher weighs the misappropriated *de minimis* threshold at the same weight as a cumulation zone. From a practical perspective, that does not sound right: a cumulation zone that covers 50 per cent of the world's GDP for all intra-PTA trade must reduce ROO restrictiveness by more than a 50 per cent *de minimis* threshold that makes some restrictive product-specific ROO slightly less restrictive. For this chapter, I therefore adapt her index to remedy this misunderstanding. Both the *de minimis* threshold and alternative ROO alleviate the restrictiveness, rather than fundamentally changing the size of the “originating” market as a cumulation provision does. I therefore assign the *de minimis* provision the same score as Harris does for the other uniquely flexibility-focused provision in his index, for alternative ROO.

I further adjust her index by replacing the size of the cumulation zone as a share of GDP with coded information of the cumulation zone as prescribed in the PTA or GSP scheme. While this has required more data points to be added to the dataset, it should result in a more accurate measure of the ex-ante relative restrictiveness of ROO which this chapter sets out to analyse. For example, in Kelleher's measure cumulation between the EU and Lesotho would be given a much larger weight than cumulation with the Southern African Customs Union which is smaller in global GDP share but includes Lesotho's primary trade partners with whom it shares a customs union. Measuring cumulation not through the economic size of the partner but the depth and extent of the provision makes logical sense and also aligns with theory that ROO restrictiveness should

depend on geographical and country-specific aspects (Krishna & Krueger, 1995). I therefore include a restrictiveness score reduction if cumulation is allowed beyond the PTA partners and to capture whether GSP exporters may use both the labour and materials of their cumulation partners, not only the materials originating there. This is also how the available literature has characterised cumulation (Deardorff, 2018; Inama, 2009). The restrictiveness index used in this chapter improves Kelleher's index on these dimensions and is described in detail in Appendix 3.

The choice of methodology warrants a short explanation. A bulk of studies have used ROO restrictiveness indices as a variable, mostly explanatory, in econometric modelling to assess questions similar to this chapter. In theory, a regression model could have lent itself to study the effect of negotiation on ROO restrictiveness as the dependent variable. This has been done for ROO in the ASEAN PTA by Cadot and Ing (2014). I choose a descriptive empirical methodology, followed by a qualitative case study, to answer these questions. An econometric assessment would come at the cost of filling the research gap this thesis sets out to fill: the lack of systematic data on ROO, and the use of small samples and an over-emphasis on major EU or US PTAs in the research.

One option to fill that research gap econometrically could be to simply replicate the methodology of existing studies, like Laaker (2019), Conconi (2018), or Cadot and Ing (2014), and apply it to a wider sample. However, a copy-paste of methodology runs against a computational constraint when applied to the wide, comparative research framework on all North-South PTA because of the following challenge. As discussed in this thesis, ROO are designed to impose product-specific restrictions on supply chains. To account for these effects, Cadot and Ing's model would have to include country-product fixed effects at the HS6 level but which, they acknowledge, would have exceeded "the computational capabilities of most computers and would tie up too much costly time on a super-computer" (Cadot & Ing, 2014). Instead, they develop a different approach to

reduce the computational load and discuss ROO effects at the HS4 level by apply a simplified vector analysis and using effects HS4 ROO data, rather that the product level. They trade off granularity for the sake of a quantitative methodology which, for econometric researchers, is a logical trade-off to make. However, even this trade-off is only feasible because Cadot and Ing focus their study on ASEAN ROO, and not dozens or hundreds of country-product dyads as this thesis does.

In other words, applying an econometric methodology the much wider scope of my research project would only be computable an even less granular level, like the HS section level, where the effects of ROO on supply chains at the *product* level could not be measured. This issue arises even when considering a single-country case study, as I do in chapter 3, because I still consider several PTAs that involve a single GSP donor country. Instead of opting for a second- or third-best methodology for the sake of using econometric analysis, I chose a descriptive empirical analysis combined with a qualitative study on possible determinants of outcomes.

Another driver of this methodological choice is that the production of input-out mapping to HS codes and ROO coding for this thesis' research scope would have far exceeded the feasibility of one, or even several, PhD research projects. For example, Conconi et al. (2018) codify 700,000 input-output linkages for one US PTA alone, on top of ROO coding. This would not have been doable when multiplied to 278 PTAs or even a case-study subset of one GSP donor and its North-South PTAs. I instead opted to dedicate the data collection of this research project, financed with public resources, to generating a public database that responds to a knowledge gap explicitly expressed by researchers and policy makers.

To still discuss some potential drivers of observed outcomes, I use a qualitative case study in chapter 3 which produces, by virtue of applying a qualitative methodology, further results that

advance the literature on North-South determinants. A qualitative case study lends itself as a well-developed method to explore a phenomenon within its natural context, with the consideration that the context will create a difference in the outcome (Kaarbo & Beasley, 1999; Rashid et al., 2019). An evidence base developed through semi-structured interviews with sources familiar with negotiation drivers and dynamics can help fill the information gap on confidential negotiation outcomes in a way that quantitative data cannot do. Building on “a growing consensus among social scientists that research programs advance more effectively through the iterative or collaborative use of different research methods than through the use of any one method alone” (Bennett, 2004), the qualitative methodology of this chapter complements the quantitative previous chapters to advance the research of ROO determinants. The methodological framework is discussed in chapter 3.

3.2 Data

This chapter draws on the data and ROO restrictiveness index presented in the previous chapter. The OECD DESTA dataset includes variables for all cross-cutting and product-specific provisions in ROO chapters of North-South PTAs and GSP schemes. Appendix 4 lists the GSP schemes and North-South PTAs included in the data.

The GSP donors listed include all GSP donors recorded by UNCTAD (UNCTAD, 2018a). Two countries are excluded. First, Turkey has a GSP scheme but both its GSP scheme and its PTAs are fully aligned to the corresponding EU scheme and agreements because Turkey and the EU are in a customs union (UNCTAD, 2017). Second, South Korea is excluded because it does not have PTAs with the recipients of its LDC-only GSP scheme (UNCTAD, 2020b).

The data for the North-South PTAs was collected by the author in collaboration with the OECD for the World Bank Deep Trade Agreements database (Angeli et al., 2020). This database includes codified information on 52 policy areas in PTAs, now including ROO. The public dataset covers 279 PTAs notified to the WTO signed between 1958 and 2015 (Hofmann et al., 2017). The sub-dataset used for this paper includes all 44 North-South PTAs by the seven GSP donors spanning 67 country dyads.

The GSP schemes included in the dataset do not include any LDC-only because most GSP donors do not have PTAs with LDCs. The only exception is Norway which has both a PTA and grants LDC GSP status to Lesotho and Eswatini. The ROO in Norway's LDC GSP scheme are the same as for their regular GSP scheme so are not analysed separately here (Norwegian Customs, 2021). GSP+ schemes expands the tariff line coverage of GSP but does not involve changes to GSP ROO and are therefore not recorded separately (European Commission, 2020).

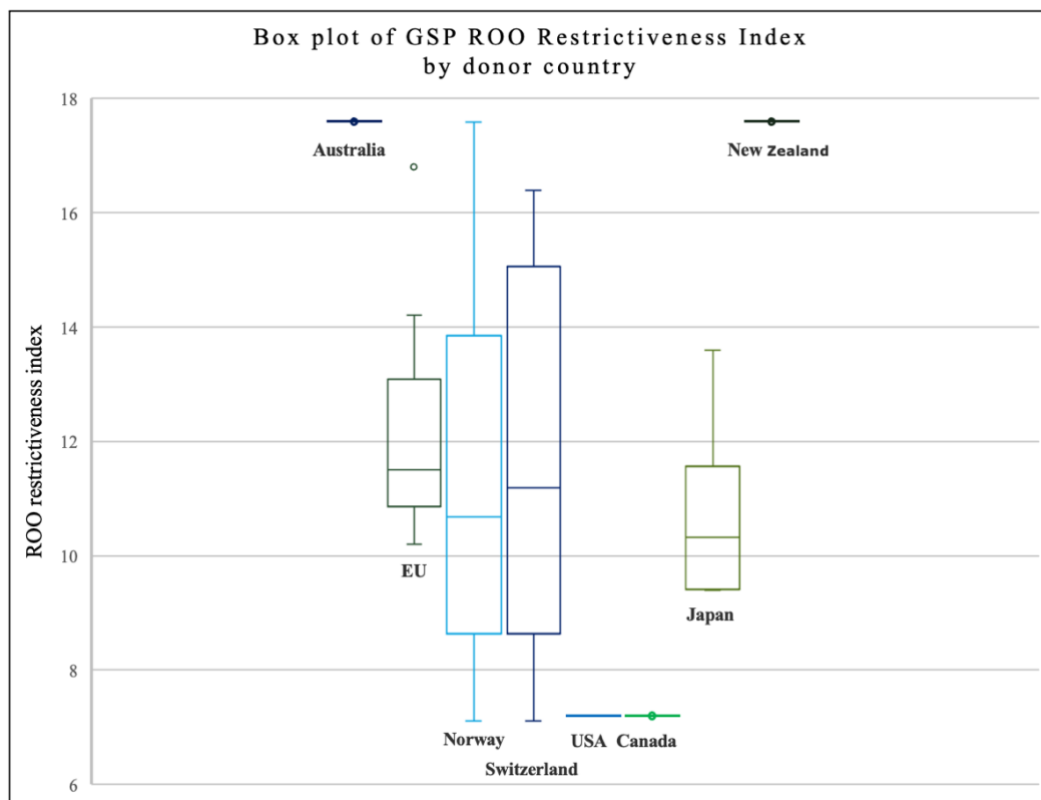
Unless otherwise specified, the ROO Restrictiveness score values are averaged by sector to allow for discussion and comparison. For reference, chapter 1 included a more granular analysis of ROO at a non-sectoral level on p. 44.

3.3 ROO restrictiveness across GSP Schemes

This section begins with an analysis of ROO in all covered GSP schemes. It then analyses how ROO in GSP schemes and North-South PTAs compare, broken down by GSP donor country. In doing so, this paper presents novel and insightful findings on the changes to market access useability, through the lens of ROO restrictiveness, and highlights that these changes differ significantly by sector and country.

Figure 11 presents the spread of ROO restrictiveness scores in GSP scores, grouped by GSP donor country.

Figure 11 Box plot of ROO Restrictiveness scores by GSP donor



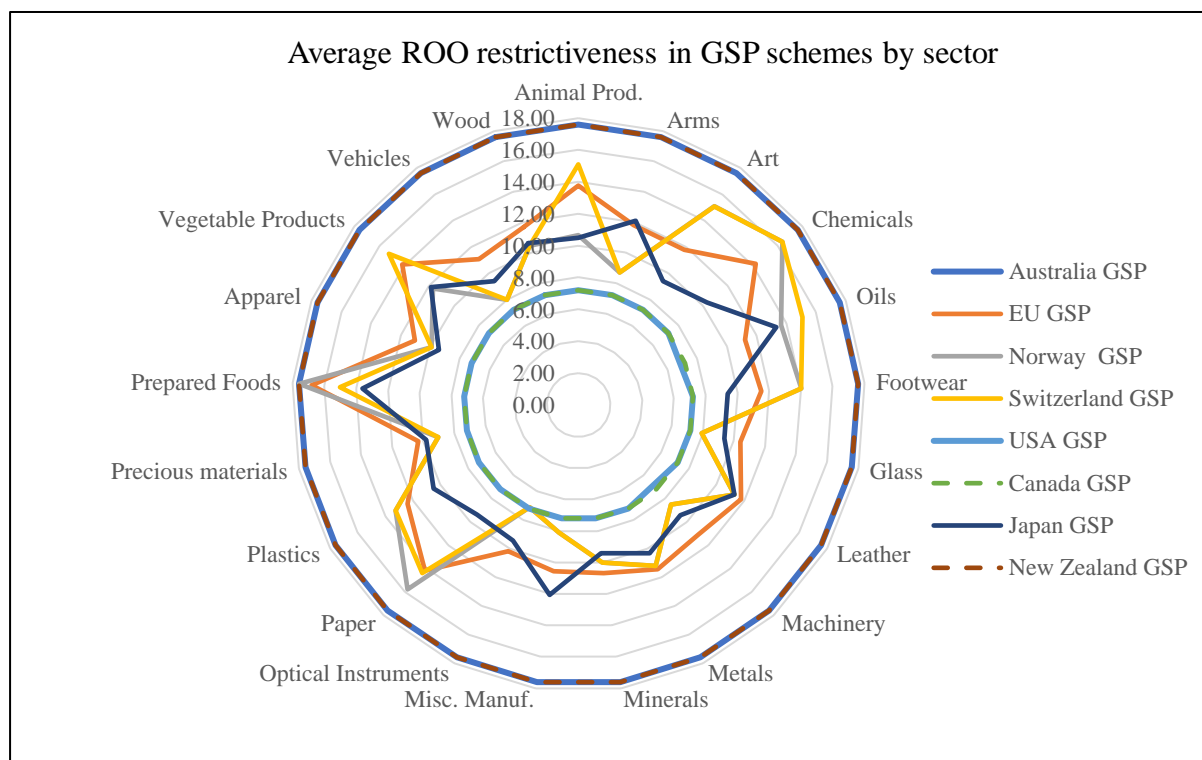
Two observations stand out. First, there are two models of GSP ROO design: one is a blanket rule model where the same ROO restrictiveness – and, from looking at the data, the same ROO – applies to all products. This blanket rule model is applied by all anglophone GSP donors: Canada, the US, New Zealand and Australia. Interestingly, these GSP donors do not follow this design in their negotiated PTAs. Indeed, the US is commonly credited for inventing a phone-book style of product-specific ROO in NAFTA where a ROO was negotiated specific and bespoke to every product. Instead, this blanket rule model is a GSP-specific feature that, to the author’s knowledge, is not replicated anywhere else. In addition, the restrictiveness of ROO covers a much wider range

for Switzerland and Norway – countries geographically surrounded by the world’s largest exporter of manufactured goods – than for the EU and Japan.

Within countries applying this blanket rule model, the ROO restrictiveness varies by region: the Canadian and US GSP scheme have the same restrictiveness score – and very similar ROO design – and the same applies to New Zealand and Australia. Looking at the raw data, this difference in ROO restrictiveness stems primarily from Australia and New Zealand applying more processing to happen within the GSP recipient. Australia and New Zealand require two product-specific rules to be satisfied in conjunction with each other: a qualifying developing country has to have undergone the last processing step in the exporting country (meaning that cumulation with inputs from other countries, or further manufacturing in a third country automatically preclude GSP tariff preference), and at least 50 per cent of the export’s value need to have been generated in GSP recipient countries or Australia. This threshold is a high barrier in the context of GSP countries because value addition is to a large extent a function of the cost of resources and labour which are on average substantially lower in developing countries than in the GSP donor country.

In contrast, the Japanese and European GSP schemes have targeted product-specific rules that change between different products and sectors, following the same design as found in the PTAs that these GSP donors sign with non-GSP recipients. Figure 12 visualises the changes in average ROO restrictiveness scores between sectors, where each line represents one GSP donor country.

Figure 12 Variation of ROO restrictiveness by GSP donor and sector



For the European GSP donors, the ROO restrictiveness scores peak at sectors that are import-sensitive to the GSP donor country. ROO are most restrictive in the prepared foods sector – in other words the part of agri-foods where ROO can be most effective. While animal products should be equally sensitive, this sector is less susceptible to ROO because they contain few inputs, so ROO limitations on third-party inputs are less relevant (Inama, 2009). The ROO restrictiveness score reflects that: vegetable and animal products thus show an average restrictiveness score of 15.6, two points lower than the score for prepared foods.

Another peak in ROO restrictiveness scores can be seen in paper products for all European GSP schemes. This category covers the full supply chain from wood pulp to finished books. The high restrictiveness could stem from the fact that many inputs are agricultural, meaning timber and wood products, which are to be protected from cheaper competition from GSP recipient countries. Looking at a clear peak in restrictiveness in the Swiss GSP scheme, the chemical and

pharmaceutical industry is Switzerland's leading exporter and generated 4.8 per cent of Swiss GDP in 2016 (Federal Department for Foreign Affairs, 2020). This could be an explanation why negotiators sought the high ROO restrictiveness observed for chemicals in the Swiss GSP. The Japanese GSP scheme stands out as having both targeted product-specific rules, like the EU schemes, but scoring lower on the restrictiveness index for many sectors and having lower peaks.

In sum, a descriptive analysis of ROO restrictiveness shows how much variation and potential learnings become apparent when GSP schemes are considered beyond the case study level for EU or US GSP schemes only.

3.4 Comparing ROO restrictiveness

This chapter set out to compare preference usability as North-South trade moves from GSP conditions to PTA preferences. Having established that GSP schemes are not uniform in their ROO restrictiveness, the following comparative analysis is structured by GSP donor country. This section discusses how ROO restrictiveness compares between GSP schemes and North-South PTAs. This analysis leads to findings around the PTA outcomes on restrictiveness and usability, patterns in the changes from GSP to PTA, and some of the potential drivers for these changes.

Figure 14 presents an overview of the compared ROO restrictiveness between GSP schemes and North-South PTAs, broken down by donor country. ROO restrictiveness scores, averaged by sector (as classified in the HS sections), are plotted along the vertical axis for North-South PTAs and along the horizontal axis for GSP schemes. The graphs show average ROO restrictiveness scores by sector, where one dot represents one sector. Appendix 5 includes each graph including data labels for a detailed look, which is omitted in Figure 14 to improve readability.

The diagonal line in each plot is a *reference line* $x=y$ that represents the points where ROO restrictiveness is identical for GSP schemes and North-South PTAs. Data points that fall below the reference line represent sectors for which GSP ROO are more restrictive than PTA ROO. Data points that land above the reference line signify sectors where, on average, ROO are less restrictive in the North-South PTA than in the GSP scheme (see Figure 13 for a visual explainer).

Figure 13 Explainer: visual comparison of ROO restrictiveness

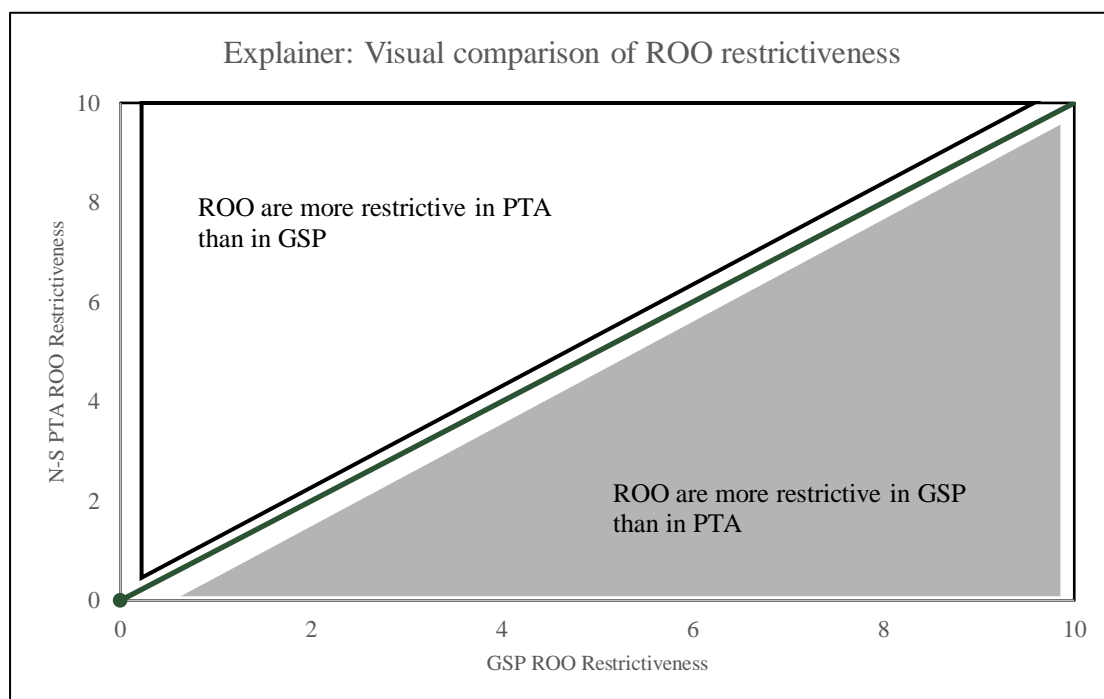
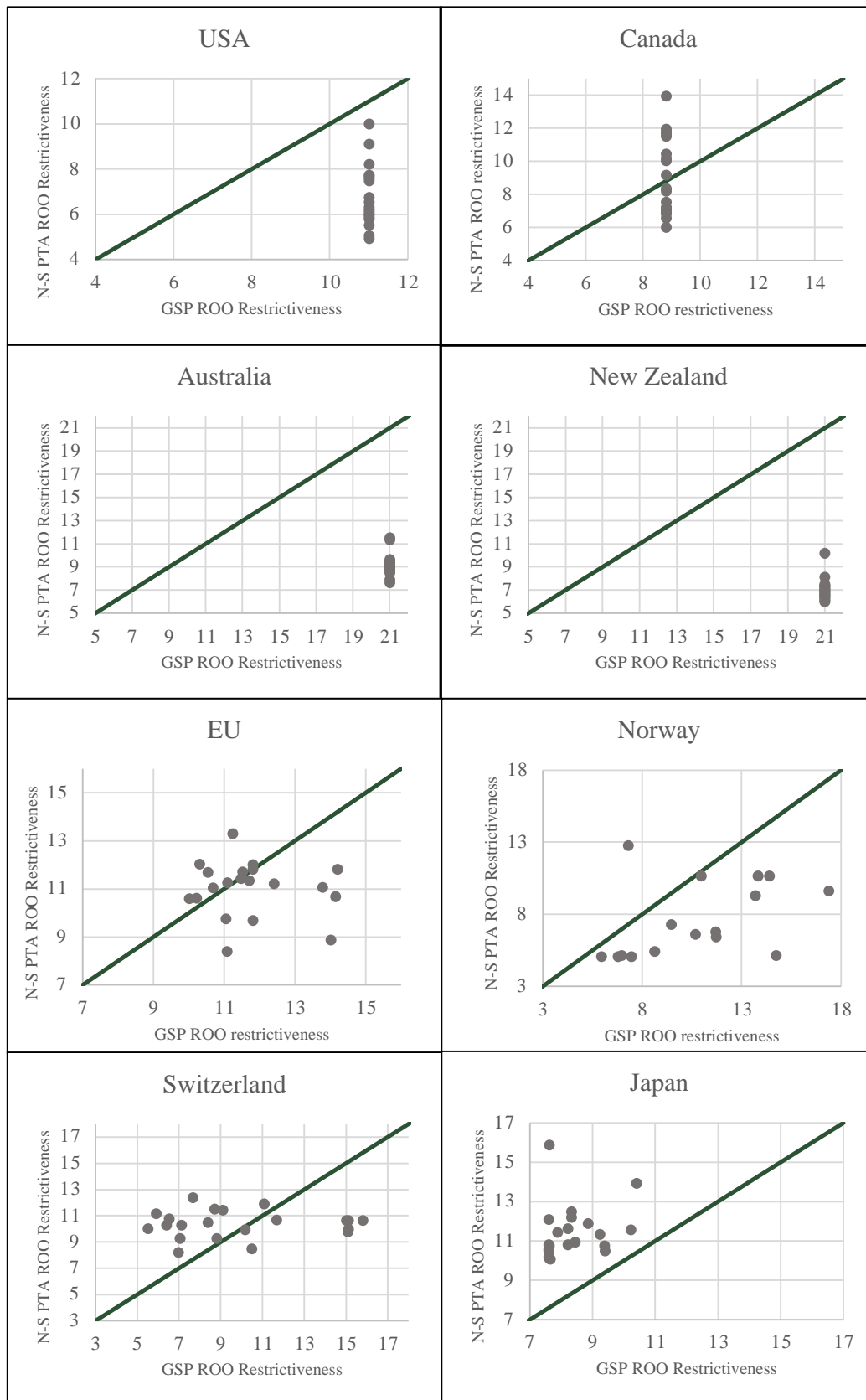


Figure 14 ROO Restrictiveness by sector and GSP donor country



The GSP donors fall into three groups in how their PTAs compare to GSP in ROO restrictiveness: the US, Australia and New Zealand offer more liberal ROO in negotiated PTAs than what they grant in GSP schemes. Canada, the EU, Norway, and Switzerland offer ROO liberalisation in some or most sectors after a PTA negotiation, but tighten ROO restrictions for other sectors, especially those with domestic sensitivities (see Appendix 5). Third, only Japan does not record a change in ROO restrictiveness scores across all sectors after PTA negotiation.

Beyond that, the GSP schemes fall in two different models: as discussed in section 3.1, the four anglophone GSP schemes in the top four graphs have a blanket rule and apply one set of ROO for every product. Their North-South PTAs however use a phone-book model and include different ROO, with different ROO restrictiveness index values. The bottom four graphs show the spread of sectoral restrictiveness averages for the GSP donors that use a phone-book ROO drafting style, which results in a wider spread of data points plotted in the graph. The following sections discuss the countries or regions in more detail.

3.4.1 Europe

European GSP donors – the EU, Switzerland, and Norway – all use a phonebook model for the ROO in both PTAs and GSP schemes. In comparative restrictiveness, their ROO fall on both sides of the reference line – meaning that PTAs include more restrictive ROO than in GSP for some sectors, and less restrictive ROO for others.

In the case of the EU, the difference between GSP and PTA scores is largest for products of political and/or economic sensitivity: arms, machinery, chemicals, animal and vegetable products, apparel. A few sectors see more restrictive ROO in PTAs than in the EU GSP. And outlier are the

ROO restrictiveness values for the HS sector of oil – a range of products made up of vegetable oils, like margarine or olive and sunflower seed oils, and animal offal or their by-products, like fish liver oil or lanolin from wool. In other words, the sector includes products or by-products from traditionally sensitive sectors, namely agricultural products and apparel inputs. The GSP ROO are quite simple – only one transformation (like crushing sunflower seeds and retrieving sunflower seed oil) has to occur within the parties. This rule is not accepted in most of the EU’s North-South PTAs where more manufacturing processes must occur within the parties, introducing a sourcing restriction for developing countries on agricultural products to be sourced from abroad. The Swiss GSP has more ROO restrictions for all agricultural products – from animal products and prepared foods to oils, vegetable products and wood. In contrast, the Swiss North-South PTAs are more restrictive than the GSP scheme for all manufactured articles. The data for the Norwegian GSP and North-South PTAs shows a clear picture – its GSP scheme is, except for precious materials like jewellery, gold or pearls, more ROO restrictive than its PTAs.

3.4.2 North America

The North American GSP schemes offer the same ROO for every product. The ROO in the Canadian GSP scheme are uniform and relatively low in their ROO restrictiveness. This is combined with a generously long list of beneficiary countries, including all higher-middle income countries which is rare among GSP donors (UNCTAD, 2018a).

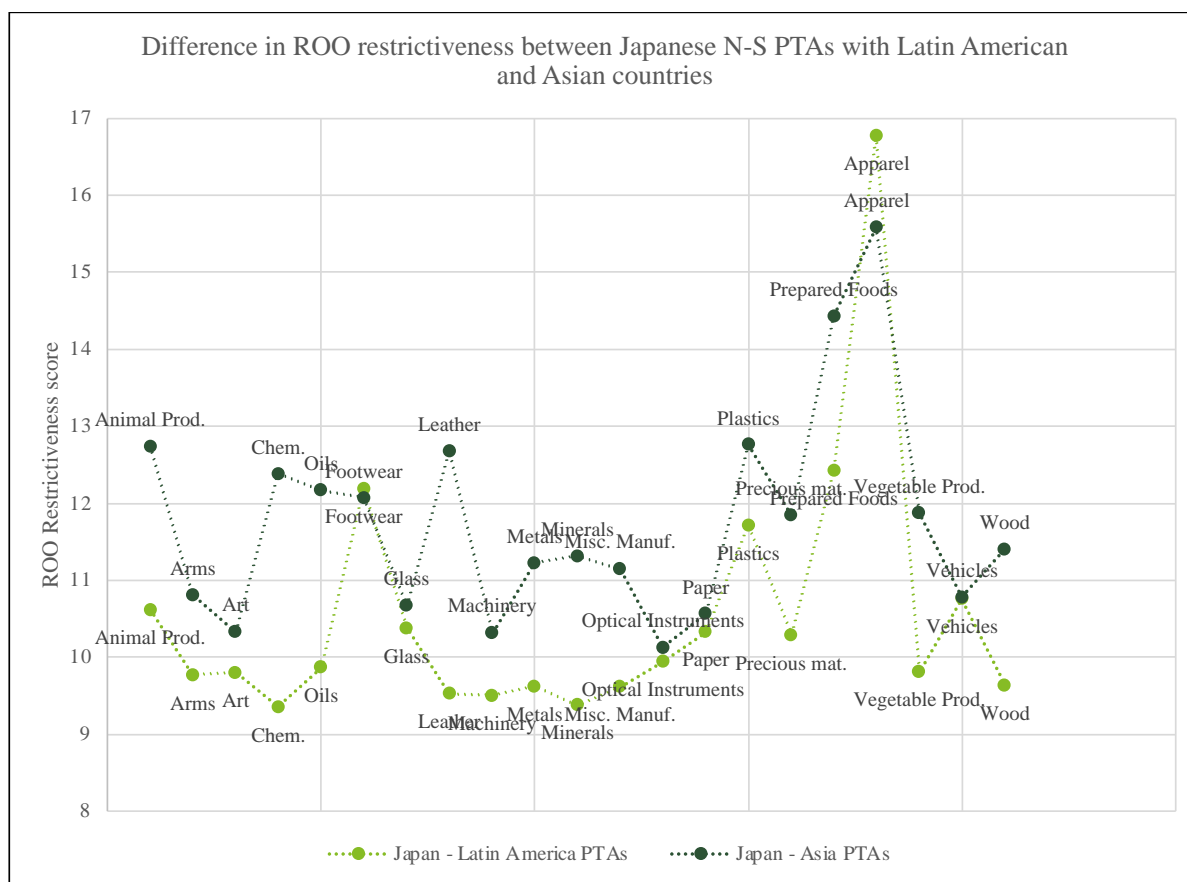
In comparison to the low-restrictiveness GSP benchmark, Canada’s North-South PTAs are more restrictive for most sectors, including those of high economic or political sensitivity like arms, footwear, apparel, cars and machinery.

The restrictiveness patterns for US GSP and North-South PTAs are very similar to those observed by Canada. The GSP scheme is less liberal than most North-South PTAs, with the notable exception of NAFTA. ROO negotiation has resulted in a change in ROO, though this change looks different depending on the geographical region of the PTA partner country. For North American partners, ROO add restrictiveness vis-à-vis the GSP scheme which aligns with existing observations that North and Latin American countries commonly use PTAs as a tool to attract FDI or to onshore supply chains (Dieter, 2004; Martin, 2015).

3.4.3 Japan

Japan is the only GSP donor case where average ROO restrictiveness index values are more restrictive in the North-South PTAs than in the GSP for every sector (Figure 14). In other words, no other country has equally strong precedents for developing countries receiving tighter restrictions on preferential market access after PTA negotiation. From a theoretical perspective, this is a puzzle: why would developing countries be interested in a worse negotiation outcome than what they had at the start? A closer look at the data suggests some explanations.

Figure 15 ROO restrictiveness in Japanese N-S PTAs



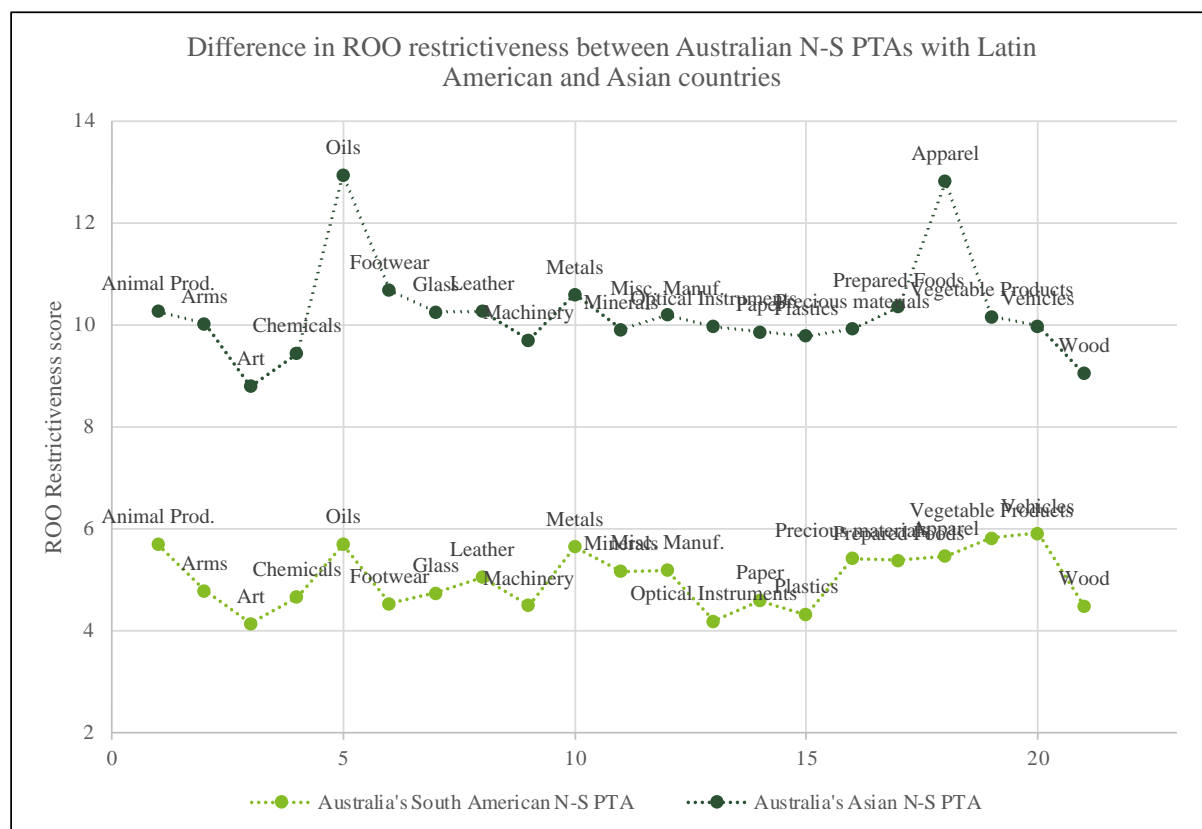
I further untangle the data on Japanese North-South PTAs to understand whether the ROO are more restrictive in different regions. Japan has concluded PTAs with countries in Latin America (Mexico and Peru) and in Asia (Malaysia, Mongolia, Thailand, Vietnam, the Philippines) and the ROO restrictiveness index values display a clear difference in pattern (Figure 15). For almost all sectors, ROO are more restrictive in Japanese North-South PTAs with Asian developing countries. As discussed in section 2.2.3, the theory and available empirical literature suggests that these changes could either reflect the parties’ interest to protect domestic industries, and alternatively or additionally to tighten regional supply chains. This could also explain why apparel and prepared foods – sectors with trade sensitivities for most developed economies – have a higher restrictiveness score in PTAs with other Asian partners than with partners on other continents. Where regional integration is less feasible, i.e., in PTAs with partners on other continents, the

ROO are relatively more liberal. While possible drivers of negotiations outcomes are discussed in more detail in chapter 3, this observation suggests that ROO restrictiveness could be driven by regional negotiation interests.

3.4.4 Australia and New Zealand

Australia is an interesting case within the sample of GSP donors: compared to the other donor countries, Australia has, together with New Zealand, the highest ROO restrictiveness index value for its GSP scheme, as visualised in Figure 14. At the same time, no other country sample shows such a large difference in restrictiveness between GSP and North-South PTA. In other words, Australia offers its GSP scheme at the most restrictive conditions and then offers more ROO improvements than any other GSP donor in its North-South PTA negotiations.

Figure 16 ROO restrictiveness in different Australia N-S PTAs



Australia has North-South PTAs with countries in Asia and with Chile. The Asian North-South PTAs have much more restrictive ROO than the Australian PTA with Chile (Figure 16), in particular for clothing and oils. Similar to the pattern observed in Japanese PTAs with Asian partners, this could be because the ROO are designed to tighten supply chains between the partners. Trade with Asia has been credited for being an important driver of Australian economic growth and the Trade and Investment Commission of the Australian government links years of unprecedented economic growth in Australia to its PTAs with the region and “the importance of being near Asia” (Australian Trade and Investment Commission, 2019).

New Zealand and Australia share many similarities in their GSP design and PTA partners, largely owing to the strong economic integration, including the shared ANZCERTA ROO protocol (DFAT, 2020).

3.5 Discussion

The empirical analysis of ROO restrictiveness in GSP schemes and North-South PTAs has shown that PTA negotiations *change* the preference usability, mapped through a proxy of ROO restrictiveness, for every country dyad in the dataset. ROO the GSP donors fall into three groups in how their PTAs compare to GSP in ROO restrictiveness: the US, Australia and New Zealand offer more liberal ROO in negotiated PTAs than what they grant in GSP schemes. The findings also show *patterns* in this GSP-to-PTA change: European countries and Canada maintain ROO restrictions on sensitive domestic sectors, anglophone countries, the US, Australia, and New Zealand relax ROO requirements in negotiated agreements, and only Japan agrees North-South PTAs with tighter ROO than in its GSP scheme. This observation should shape future research on regional trade governance, the determinants of North-South PTA conclusion, and the inclusion of ROO data in wider econometric analysis given it can no longer be treated as a binary.

The chapter generated another set of findings. For countries that offer across-the-board relaxations on ROO requirements, these relaxations still differ by region. The data on Australia and New Zealand shows that negotiated ROO with developing countries in Asia are, for almost all sectors, more restrictive than for developing countries outside the “region”. This observation gives new rise to the question with which objectives ROO are negotiated: protectionism, regional integration, trade creation, or an altogether different determinant? This question motivates the following chapter. To answer this question, Australia lends itself as the most interesting case study. Within the group of GSP donors that offer ROO relaxations for all sectors, it is the country with the largest changes in preference usability across all sectors when moving from GSP to PTA. This creates a starting point to trace interview data for evidence of a number of different causal pathways through which negotiation outcomes might be influenced.

4 CONCLUSION

This chapter discussed whether negotiation changes the usability of trade preference when GSP schemes are replaced by North-South PTAs. I showed why on the basis of the existing literature, the lopsided distribution of negotiation costs and benefits, PTA outcomes could resemble GSP outcomes. I then argued, if change did occur, it could change the usability of trade preferences, a dimension where GSP schemes have previously underperformed. The chapter answered three question to approach this issue.

First, does the transition from GSP to PTA result in a change in ROO *outcomes*? The evaluated data showed changes in all GSP schemes and for almost all sectors. Second, do changes to outcomes from GSP to PTAs follow any *pattern*? The data presented a mixed picture with interesting similarities depending on the GSP donor region. Japan, as the only Asian GSP donor country with

overlapping North-South PTAs, is also the only country that exhibits consistently more restrictive ROO outcomes for PTA schemes than for GSP.

For Australia and New Zealand on the other hand, all North-South PTAs show a significantly more liberal ROO outcome than the GSP. While these two countries also had the most restrictive GSP scheme in the dataset, they also are the pair with the largest difference between PTA and GSP scores. Interestingly, a clear pattern emerged when comparing ROO restrictiveness within North-South PTAs by region: both Australia and New Zealand's PTAs had significantly more restrictive ROO for PTAs with partner countries in Asia.

Similar observations are true for the North American GSP schemes in Canada and the US. While their GSP schemes offer the most liberal ROO in the GSP dataset, the data displayed a similar pattern for ROO restrictiveness in regional PTAs. The average ROO restrictiveness across all sectors was significantly higher for NAFTA, the regional trade agreement in force at the time of data collection.

For European GSP schemes – Norway, Switzerland and the EU – PTAs did not offer a universally more liberal or restrictive outcome. Instead, sectors defined as sensitive in these countries, like food products, chemicals, or apparel continue to be covered by more restrictive ROO. Other, less sensitive, sectors displayed more liberal ROO once the donor and recipient countries negotiated outcomes.

The third and final question analysed in this chapter was an initial discussion of potential negotiation *objectives* pursued behind these ROO changes. An answer to this question could advance the debate around the drivers for North-South PTA formation. This question is complex to discuss because, as set out in the introductory chapter and previous sections, there is no one set of ROO that benefits all developing countries. Restrictive ROO could mean an effective

mechanism to foster integration in regional supply chains or to attract FDI for some economies, whereas they could result in undermined tariff reductions for others. Conversely, analysing the effect of ROO would also fall short of answering this question because the effect of a negotiated outcome and the objectives behind pursuing it in the first place can be quite different. This dissertation does not model the effect of different potential negotiation objectives on ROO outcomes. What can be said descriptively is that the variations in the data follows rather clear patterns: European North-South PTAs apply stricter ROO for sensitive products but liberalise ROO for others. This could mean that developing countries gain preference usability gains only for a few sectors, not across the board. For the anglophone GSP donors, negotiation results in a clear change, though that change is, on average, less pronounced where PTA partners are found in the same geographic region. This could be evidence in support of the hypothesis that some countries – developing or industrialised economies alike – utilise PTAs to advance their industrial policy through tightening regional supply chains and attracting FDI. These questions have not been answered in the existing research, but on the basis of the data base and descriptive analysis presented in this and the previous chapter, future research could now test these hypotheses empirically. In sum, the evidence discussed in this chapter suggests a better understanding of ROO in GSP and PTAs can aide our understanding why developing countries pursue trade agreements on top of GSP.

The third, and most complex, question on the objectives behind the observed ROO changes cannot be answered with public data and evidence on PTA design outcomes. To understand which ROO outcomes negotiators have in mind, and which determinants drive these outcomes, the next chapter applies a qualitative methodology on the case study of Australia. These questions have previously not been answered because ROO negotiations are hidden behind confidentiality constraints and the complexity of ROO design outlined in previous chapters. In scoping some potential explanations for causal pathways that influence ROO negotiation outcomes, the next

chapter contributes to both the literature and policy making by offering more insights into drivers of North-South PTA formation drivers, the influences on confidential negotiations, and the dynamics of North-South trade negotiations.

CHAPTER 3: OUTCOME DRIVERS IN NORTH-SOUTH ROO NEGOTIATIONS

1 INTRODUCTION

The objective of this thesis is to shed a light on how ROO can help our understanding of the relationship between trade agreements and development, by mapping the variation of ROO restrictiveness when comparing GSP schemes and North-South PTAs and by seeking to explain this variation. The first chapter introduced a novel dataset and mapped the variation and complexity of ROO design to argue that ROO warrant more analysis. The second chapter analysed ROO design data to understand the outcomes and changes to preference usability in North-South PTAs in more detail and pointed out patterns in ROO restrictiveness and sectors. It brought to light changes in the outcomes and patterns in ROO design which suggested that, akin to the hypothesis set out in the introduction, ROO could be designed as tools for both industrial policy and economic development. These changes in preference usability varied by GSP donor and were particularly pronounced for Australia and New Zealand. For these two datasets, the change in ROO restrictiveness from a GSP benchmark to North-South PTAs showed the most significant change. In other words, these countries restricted the preference usability when granting GSP conditions for free to developing countries, and loosened them in PTAs. The previous chapter explored the variation in ROO and asked whether changes to ROO restrictiveness could even be a motivating factor to conduct a North-South PTA negotiation, and found evidence in the outcomes that such changes were introduced.

This chapter now discusses some of the possible dynamics, drivers and determinants in North-South PTA negotiations that could be causal pathways to understanding these outcomes. To do

so, I use a qualitative case study of negotiations between Australia and its “Southern” trade partners. While New Zealand’s and Japan’s North-South PTAs exhibit similar patterns to Australia, Australia presented itself as the most suitable case study. A Japanese case study would have required, at least for the consultation of secondary sources of information like government publications or industry association reports, fluency in the Japanese which I do not speak. The many hours of technical semi-structured interviews that generated the primary information base for this chapter could also have been impacted by a language barrier. I chose Australia over New Zealand as a case study because Australia has concluded not only more North-South PTAs but, unlike New Zealand, has concluded them with partners outside of Asia. This allowed me to disentangle and explore some influences on differences in ROO outcomes by the geographical location of the Southern party which I discuss in chapter 2.

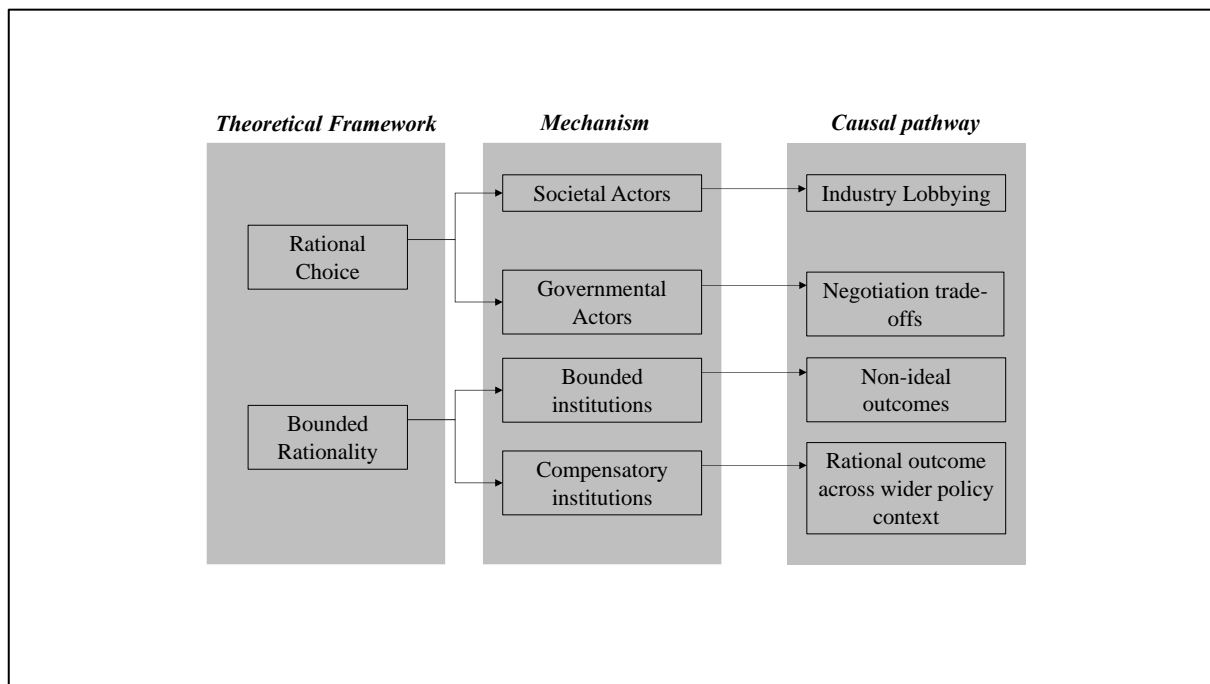
The choice of a qualitative methodology is driven by a research interest to account for information on the negotiations themselves when discussing negotiation outcomes. To that end, a qualitative case study lends itself as a well-developed method to explore a phenomenon within its natural context, with the consideration that the context will create a difference in the outcome (Kaarbo & Beasley, 1999; Rashid et al., 2019). An evidence base developed through semi-structured interviews with sources familiar with negotiation drivers and dynamics can contribute to the information gap on confidential negotiation outcomes in a way that quantitative data cannot do. Building on “a growing consensus among social scientists that research programs advance more effectively through the iterative or collaborative use of different research methods than through the use of any one method alone” (Bennett, 2004), the qualitative methodology of this chapter complements the quantitative previous chapters to advance the research of ROO determinants. In designing the research framework, I followed the stages and considerations set out by Baxter and Jack for qualitative case study methodologies (2010).

The chapter is structured as follows. It first develops causal pathways of possible influences on negotiation outcomes – in other words, exploring some of the politico-economic drivers and dynamics that could influence the ROO outcome in PTAs. In doing so, the chapter builds on available literature and primary sources, and then applies them to a case study of Australian North-South PTAs. The following section uses evidence generated through semi-structured interviews with ROO negotiators, trade officials, and industry association representatives from Australia and Southern countries to illustrate inductively how these causal pathways can influence negotiation outcomes in practice. This evidence is then discussed in the final section of this paper.

2 LITERATURE REVIEW AND DEVELOPMENT OF CAUSAL PATHWAYS

The following section develops different causal pathways that could help explain the outcomes in North-South ROO negotiations. It draws on existing theoretical frameworks about the political economy of trade liberalisation and protection. These pathways are then applied in section 3 to the case study of Australia's North-South PTAs. The pathways are developed through two theoretical frameworks – Rational Choice and Bounded Rationality. The process is visualised in Figure 17 and explained below.

Figure 17 Development of causal pathways



The two frameworks explored here are popular theoretical frameworks for explaining behaviour actors and institutions in international political economy literature: Rational Choice and Bounded Rationality (Shannon et al., 2019). Rational Choice has been discussed extensively in the existing literature so a short summary of the central underlying assumptions will suffice. The main assumption is that actors are rational and pursue their preferences in a consistent, rational manner that maximises their utility (Coleman & Farraro, 1992; Elster, 1986; Milner, 2004). Under a Rational Choice framework, the variation in ROO outcomes would be determined by rational officials with goal-oriented behaviour. In most Rational Choice models, actors have complete and perfect information. In this chapter, the Rational Choice framework is explored through both a societal and a state-centric approach, similar to Capling and Ravenhill (2015), i.e. through both societal and governmental actors could influence ROO outcomes. In sum, under a Rational Choice framework, actors would influence ROO on the basis of complete information in pursuit of rational, utility-maximising goals – either through societal mechanisms, e.g. industry lobbying, or through state-centric mechanisms, e.g. by seeking specific outcomes in negotiation sessions.

The second theoretical framework, Bounded Rationality, has primarily been tested in the context of Bilateral Investment Treaties (BITs) (Skovgaard Poulsen, 2014, 2015). The Bounded Rationality framework postulates that individuals are goal-oriented but that their rationality is affected by cognitive constraints which in turn affects the institutions they inhabit (Shannon et al., 2019; Simon, 1947). Thus, it is not intellectual or knowledge constraints that limit actors' ability to reach rational negotiation outcomes, but the natural limits of human ability to process information which set humans apart from super-computers.

In the context of BITs, Poulsen (2015) uses a Bounded Rationality framework to discuss why and how developing countries agree investment treaties. Drawing on findings from behavioural economics and psychology, Bounded Rationality accepts that policy makers *try* to pursue rational preferences but are constrained by the limits of human decision-making. But, in contrast to Rational Choice theories, Bounded Rationality “acknowledges that policy-makers are subject to cognitive constraints and often prone to make mistakes. For rather than engaging in sophisticated cost-benefit calculations when assessing the implications of different policies, their inferences are often skewed by systematic information processing biases.” (Skovgaard Poulsen, 2015).

In the context of ROO negotiations – characterised by low levels of information and high levels of complexity – it seems logical to assume that not all societal or governmental actors have the full information and cognitive capacity to develop rational outcomes. Accounts from academics, businesses, officials and politicians in the secondary literature support that assumption. For example, researchers at the Australian government's Productivity Commission point the “the daunting yet mind numbingly dull complexity” of ROO policy (Crook & Gordon, 2017). A survey of exporters in developing countries by the International Trade Center found that ROO were perceived as the most cumbersome barrier to trade (International Trade Center, 2015). Assuming perfect information and intellectual capacity in the creation of ROO outcomes seems optimistic

in light of these accounts. This section therefore also uses Bounded Rationality assumptions to develop causal pathways to trace in the case study.

Trade negotiators are of course not private individuals who go out and negotiate trade agreements in their free time. Instead, they act under the auspices of institutions like governments or customs unions. The Bounded Rationality framework describes institutions to take on different roles in mitigating the bounded rational behaviour of actors within them. Under the first school of thought, first developed by March and Simon (1958), institutions *compensate* for the cognitive limits of the individuals within them, for example through hierarchy or specialisation. Under the second school of thought, institutions *reflect* the cognitive limits of individuals (B. D. Jones, 1999; Workman et al., 2017).

To reflect those two different understandings of the role of institutions, this chapter explores two mechanisms in the form of actors or institutions that could influence negotiation outcomes. The first, assuming that institutions *reflect* individuals' bounded rationality, would suggest that ROO outcomes do not always follow a systemic pattern and instead reflect the weak, incomplete or complex information that make it difficult for officials to evaluate outcomes. The second mechanism, assuming that institutions *compensate* individuals' bounded rationality, would apply if ROO outcomes do not follow a rational market access-enhancing pattern but that the ROO outcomes may still be rational in the context of wider trade or political outcomes. In other words, while the ROO outcomes may not result in better market access, they may nevertheless be rational vis-à-vis other interests.

These four causal pathways discussed in this chapter are neither mutually exclusive nor collectively exhaustive. They are not mutually exclusive because ROO can be tailored to individual sectors, products and even producers so that a different combination of – or none of these - pathways

could explain ROO variation in one and the same PTA. They are not collectively exhaustive because this chapter is among first attempts to explain different ROO outcomes. In other words, all, some or none of these causal pathways may influence any given PTA negotiation outcome, and other causal pathways may be added in future research. While this research framework, like most, is bound to miss an explanation among the plethora of dynamics that influence trade negotiations but should nevertheless improve the academic understanding of ROO in North-South PTAs.

This section contextualises the four causal pathways in ROO and trade policy context and explores inductively how the pathways might apply to the case study of Australian PTAs.

2.1 Industry lobbying

Under this causal pathway, governments would be influenced by industry lobbying which in turn would be influenced by firms' trade policy preferences. These interest group pressures can favour both more and less restrictive ROO depending on the sector and the PTA partner because they can aim at either an increase in domestic market share, or an expansion of foreign market share or both. The institutional and organisational factors that determined how industry lobby groups seek to influence trade policy outcomes have been explored extensively in the literature. Both pathways are similar in that they represent two sides of a PTA, or they could occur within the same party but in different industries.

Importantly, the existing research on trade liberalisation suggests that influence of industry interest groups would not automatically favour more protectionist policies. Some researchers have characterised industry groups as rent-seeking and thus generally opposed to trade liberalisation – which would manifest itself in restrictive ROO (e.g. Dür, 2008; H. V. Milner, 1999; Tollison, 2012).

A different body of literature proposes a more nuanced explanation for industry opposition to – or support for – trade liberalisation, triggered by the observation that the global wave of trade liberalisation became increasingly difficult to explain (Rönnbäck, 2015). As a result, researchers have developed explanatory variables like political ideology, geographic location, or benefits from reciprocal trade liberalisations to explain observed industry support for trade liberalisation (Bhagwati, 1988; Milner & Kubota, 2005; Rönnbäck, 2015).

ROO are only addressed once in this body of literature by Chase (2008). Studying the ROO outcomes in NAFTA, he argues that industry support for trade-liberalising ROO will depend on the industry's returns to scale, dependence on multinational supply chains, and the level of existing protection previously enjoyed. Industries that previously enjoyed high levels of protection, have large returns to scale, and are not import-reliant will lobby governments for more restrictive ROO than industries that fall on the other side of the spectrum. At the same time, he concludes that ROO are difficult to explain by existing models for ROO in final products that are domestically produced with constant returns to scale. The conclusions and future research questions he suggests are largely specific to the US-American trade negotiation context – made unique through policy-making aspects like the Fast Track Authority. Nevertheless, his findings suggest that examining industry lobbying as an explanatory variable for ROO outcomes could render relevant findings.

Regardless of the way in which industry lobby groups seek to influence trade policy outcomes, ROO negotiations are a likely contender of industry interest. First, as is developed in Chapter 1, ROO are product-specific and can be designed to capture specific export, import or investment incentives of the parties. Second, ROO are very complex, rendering them a good example for the Optimal Obfuscation theory developed by Kono (2006). Third, because ROO are so complex and product-specific, negotiators commonly rely on industry for information (Chase, 2008) or even for policy drafting. For example, in the case of the UK-EU Brexit ROO negotiations, the EU's and

the UK's chemical industry associations published a product-specific ROO proposal which bears a striking resemblance with the final agreement text (Chemical Industries Association & Cefic, 2019).

An indicator of this pathways influencing negotiation outcomes would be evidence from businesses or industry associations requesting ROO or market access outcomes that reflect their current production patterns, rather than future export opportunities. For industries with few inputs, like mining or primary agricultural products, these requests would favour restrictive ROO. Conversely, for industries with high reliance on imported inputs like the advance manufacturing sector, e.g. the automobile sector, would lobby for more lenient ROO. Again, outcomes could vary by sector, by region, or both because each of these policy objectives would likely differ depending on the industry and PTA partner country.

The flipside of the industry lobbying coin would be industries lobbying for the expansion of domestic market share. This mechanism could also be observed if governments would be influenced by industry pushing for a specific ROO set, rather than merely liberal ROO, that would enhance their competitiveness vis-à-vis exporters from third markets. This mechanisms has been discussed primarily through the lens of export competition, whereby industry influence government to conclude preferential market access agreements so that domestic exports do not lose competitiveness vis-à-vis exports from other countries with PTAs (Elsig & Dupont, 2012; Gruber, 2000; Manger, 2012a). Industries could either push for more restrictive ROO if they rely less on foreign inputs, because this would result in their exports being used as inputs in the PTA partner country. In the literature, this mechanism has been discussed in the wider context of trade policy rules. For example, Kim and Lee (2003) find that in North-South PTAs, developing countries compete for access to Northern markets with other developing countries not party to a PTA and therefore support more restrictive rules in their export sectors. The mechanism of

enhancing foreign market share through restrictive ROO was observed in the process of signing the Central American Free Trade Agreement between the US and Central American countries. Initially, the agreement faced opposition by Republican lawmakers from textile-producing districts. The agreement eventually received Republican support because the ROO in the agreement were restrictive enough to incentivise the use of American textile inputs in Central American apparel products (Andrews, 2005).

In this vein, evidence in support of this pathway applying could be accounts of interlocutors that a given ROO outcome was agreed to aide a specific industry – i.e. rather than merely agreeing to the most liberal ROO available, the rules were designed to reflect a specific production pattern. Another indicator would be that ROO outcomes differ by sector, geographical regions, or both, and that different industry associations have different or contradictory preferences for ROO outcomes. Accounts by industry representatives that confirm – or decline – that given negotiation outcomes were the subject of industry lobbying, and that these outcomes reflected the interests and positions favoured by industry.

2.2 Negotiation trade-offs

In free trade agreements, ROO and tariff schedules are designed as separate chapters. Their public perception and presentation are also different: while tariff liberalisation is usually at the forefront of political pitches for public or political PTA support, ROO are rarely addressed in public and buried deep in PTA addendums and annexes.

Nevertheless, PTA tariff reductions and ROO are intertwined – one chapter cannot take effect without the other. Tariff preferences can only be accessed through ROO compliance, and ROO compliance is only needed where tariff preferences are available. Since the effects of tariff

schedules and ROO are intertwined, their negotiation should also be connected. The limited available literature suggests that, rather than facilitating tariff savings, ROO are often more restrictive for sectors where tariff gains are higher. In other words, PTAs can give better market access in their tariff chapter but can at the same time narrow the set of actors who can benefit from preferential market access.

It could of course be argued that this follows a logical rationale: the higher the tariff saving, the higher the incentive for tariff circumvention so ROO need to be extra specific to prevent circumvention. However, the available evidence points more to political economy interests: in the only discussion of this mechanism in the available literature, Chase (2008) finds that more restrictive ROO help to neutralize dissent from industries that enjoy protection under high MFN tariffs and are opposed to PTA tariff reductions. Evidence under this pathway would be accounts from negotiators where these trade-offs were either implicitly or explicitly included in the negotiation strategy.

Trade-offs could also occur between sectors, either instead of or in addition to trade-offs between tariff concessions and ROO discussed above. In trade negotiations – as in any other negotiations – agreement is reached via reciprocal concessions. In trade negotiations for goods, this trade-off can occur between sectors. If two parties place a priority or sensitivity on different sectors, the preferred outcomes for both can be agreed as a trade-off between sectors. This mechanism in itself is not surprising but it has not been investigated as a potential explanation for variation in ROO restrictiveness, especially between different PTAs. Regional variation in particular could benefit from being assessed under this mechanism – potentially, the reason for why more restrictive ROO for textiles are agreed in Australia – Thailand than in Australia – Malaysia is because a different trade-off route was chosen.

While trade negotiations in Australia and all other countries take place confidentially, a few public examples are available in the body of secondary literature to demonstrate this common feature of negotiations in the context of PTAs. In a submission to the Australian Productivity Commission by 19 Australian and New Zealand economists and businesspeople, Ross Garnaut, an Economics Professor at the Australian National University, stated at a private briefing to the parliamentary Joint Standing Committee on Foreign Affairs, Defence and Trade:

“[I]n discussions between Australia and China, at an early stage China said that it needed to put some constraints on agriculture. We said we needed to put some constraints on textiles and some other things. [...] It is the way the rules of origin are negotiated, which end up being highly interventionist.” (Carmichael et al., 2010)

2.3 Suboptimal ROO outcomes due to bounded rationality

Under this causal pathway, the ROO outcomes could be the product of the limitations of evidence rather than systemic considerations. Given the intense technical detail and complexity involved in ROO negotiations, the idea that the explanation of ROO variation is at least in part a consequence of the low information, high uncertainty and prohibitive complexity of trade-offs, making it difficult for policy makers to identify and pursue a rational outcome. While PTA texts are rarely layperson’s territory, the technical knowledge required to understand, interpret and amend a ROO proposal is different to that of other non-tariff measures. For example, negotiations in intellectual property provisions or investment protection are built around domestic legislation which already sits in the realm of government and legislators. Government negotiators can therefore source and obtain the evidence necessary for a negotiating position internally. Tariff negotiations can largely be conducted on the basis of spreadsheets collected by the national customs authority that contain MFN levels and trade flow data. Other non-tariff measures like

TBT and SPS provisions also pertain to domestic legislation on standards and border measures which officials and administrators already govern.

In contrast, ROO regulate not domestic legislation or regulation but business supply chains. In the age of global value chains, supply chains have reached a level of complexity that is difficult to understand even for multinational companies. At a hearing in front of an Australian parliamentary committee, the Australian economist Ross Garnaut gave evidence and said:

“Every company has to have people who are experts in the stuff [ROO] that has actually got nothing to do with the fundamental economics of producing goods and services at a lower cost. This is getting worse and worse.” (Carmichael et al., 2010).

The necessary supply chain information is already difficult to come by for traders and, if obtained, is highly sensitive. This data declares the source of the most competitive supplier of inputs, the costs of purchase and in some cases even the profit margin. This makes supply chain information very difficult to come by for government officials. Some countries, like the US, have established business representatives available to ROO negotiators who are covered by data protection agreements and are expert on reviewing and amending product-specific ROO proposals. Other countries do not have these mechanisms available and as a result can lack the evidence needed for well-informed negotiation positions. It is therefore plausible that some of the ROO restrictiveness variation cannot be systematically explained and instead is more the product of the limitations of evidence as opposed to systematic considerations, as this causal pathway aims to draw out.

Accounts of how this pathway could influence negotiation outcomes would be evidence from negotiators that outcomes were agreed under time pressure, without data available to support an outcome, or with uncertainty about the benefits of a given outcome.

2.4 Rational outcomes only across wider policy context

The previous causal pathway begs the question why officials conclude a negotiation when they outcome is not optimised. The assumption would be that ROO outcomes are determined by an interest in concluding the chapter even with non-optimal or incomplete ROO outcomes. In other words, the ROO outcomes would, if considered in isolation, not represent a rational outcome aimed at maximising market access benefits, but if considered in the context of wider trade or international policy questions do represent a rational trade-off. An example of this scenario would be one where the ROO outcome is non-ideal or not fully understood, but the conclusion of the chapter is still beneficial because it at least reflects the objectives for a subset of sectors. Another example would be a negotiation where concluding quickly is generally beneficial because the country expects the benefit from an PTA negotiation overall – for geostrategic, political or economic reasons – and so the conclusion of a non-optimised ROO chapter is still a beneficial outcome.

The academic literature has discussed the non-trade elements that can influence variation in PTA outcomes with a focus on market access more broadly. For instance, Capling and Ravenhill (2015) identify non-trade considerations that factored into Australian PTA negotiations. One set of considerations they discuss is a political desire for the conclusion of negotiations which leads to inferior outcomes. They reference the Australian negotiations with China where some of the Chinese tariff phase-outs were long and a number of key Australian exports were entirely excluded from the agreement, like sugar, rice and wheat.

If this causal pathway applied in action, negotiators or trade policy officials might give accounts that PTA conclusion was beneficial to trade policy objectives despite a ROO outcome not

reflective of rational objectives, or that the timings and resulting impact on detailed negotiation were agreed with a political milestone in mind.

3 CASE STUDY: AUSTRALIA'S NORTH-SOUTH PTA NEGOTIATIONS

This section summarises Australian trade policies and the political economy of its North-South PTAs before setting out the methodology used in analysing the case study of Australian North-South ROO.

3.1 Australian trade policy

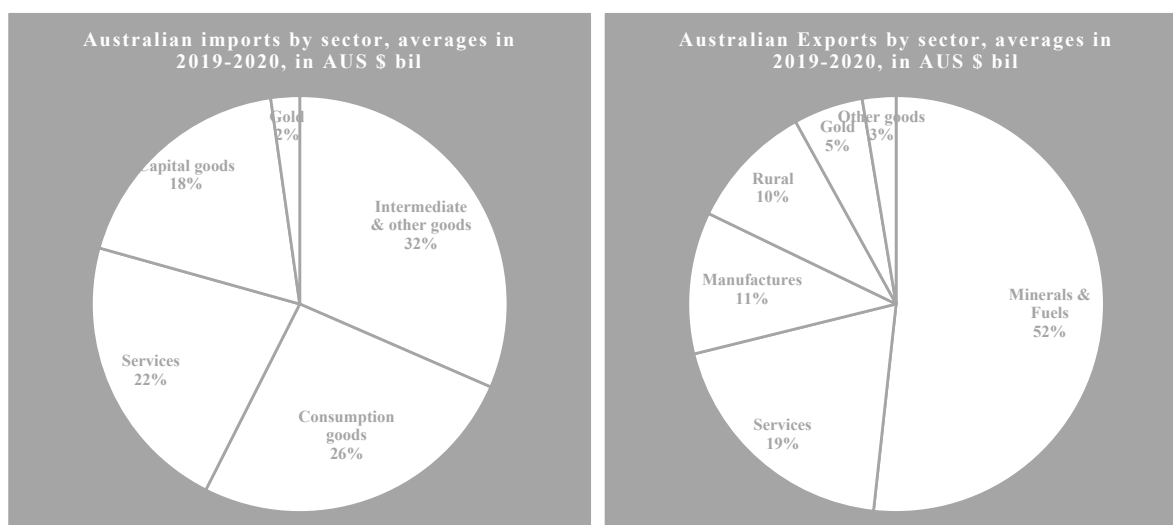
Australian trade policy can be summarised as first, import-dependent and second, regionally integrated. The bulk of Australian businesses is characterised as an importer, whether selling into the domestic market or exporting. Australia's unilateral trade policy reflects that. Since 1902, the Australian system of concessional imports has allowed foreign inputs to enter the country at low or zero tariff rates as long as they do not compete with domestically available products (Lloyd, 2009). And there is good reasons for seeking reductions in trade costs: according to the World Bank, compared to the OECD average the cost to import is five times higher in Australia, and the cost to export is six times higher (Joint Standing Committee on Trade and Investment Growth, 2020). As in other parts of the world, ROO have been named as a culprit driving up trade costs: in response to a call for inputs on the impact of PTAs by the Australian Productivity Commission, respondents highlighted the costs of complying with ROO (Productivity Commission, 2010). In response to the report issues by the Productivity Commission, the Australian Department of

Foreign Affairs and Trade (DFAT) pointed to a regional work programme to improve the complementarity and coherence of ROO in the region (Productivity Commission, 2010).

The Australian export market is small, concentrated, and dominated in number by small businesses. only 2.4 per cent of Australian businesses export physical goods. Australian trade relationships are regionally concentrated: 15 per cent of Australian imports and exports are traded with ASEAN countries, and that figure rises to 65 per cent for the APT region (“ASEAN+3” – ASEAN, China, Japan and India) (Australian Government, 2021).

In terms of value, the vast majority of Australian exports is in primary goods: the top five merchandise exports are mining products and beef. On imports, the picture is the reversed: the five major merchandise imports are complex manufactured items like cars and IT equipment (DFAT, 2020). Relevant context for the interpretation of trade flow data: 64 per cent of export value is generated in the mining sector, but only one per cent of exporters are in the mining sectors (Australian Bureau of Statistics, 2020). This information is relevant in the context of ROO because, as discussed in the previous chapter, ROO exert more of an influence on producers of goods with multiple inputs. Raw materials will scarcely be impacted by ROO because they are automatically wholly obtained. This characteristic will be particularly relevant for the discussion in section 468664.o.

Figure 18 Australian Imports & Exports by sector



Source: DFAT, 2021, author's illustration

PTAs are an important element in Australia's trade strategy. Australia's interest in PTA formation has gone so far as to attract criticism from the Australian Productivity Commission, an independent government agency, that governments reach agreements for agreement's sake, focussing on its symbolism and perceived potential to boost exports (Productivity Commission, 2010). Australia has unilaterally liberalised most of its MFN tariffs: even the most protected sectors – autos, apparel and footwear – only enjoy tariff protection of 5 – 10 per cent (Capling & Ravenhill, 2015). Similar to the study of the IPE of other trade negotiations, the academic literature has argued for political or strategic motivations that drove Australian PTA conclusions, especially for the Australian PTA with the US (Capling & Ravenhill, 2015; Kelton, 2016).

Whether these PTAs deliver the desired outcomes for the public and the private sector is less clear. At the time of the last independent public report on the matter in 2010, Australian businesses were sceptical about the benefits that PTAs generated for their businesses. The Australian Chamber of Commerce and Industry, who conducted the survey-based report upon request by the Australian Productivity Commission, found that “[a]t best, based on the survey results, PTAs are marginally

beneficial to business.”; while PTAs could help in making the PTA partner market more attractive, “actual market access issues do not appear to have significantly improved.” (Productivity Commission, 2010). In response to a call for inputs from the Australian Productivity Commission, businesses gave “limited evidence of business benefits” from Australia’s PTAs. The Productivity Commission suggests that this could be explained by the fact that benefits have in reality been limited, either because businesses have been unable to make use of the benefits afforded by the PTA, or because the benefits afforded do not effectively address commercially significant trade barriers, or both (Productivity Commission, 2010). The ACCI, self-declared as Australia’s largest and most representative business network, says that PTAs have had “little effect in the eyes of businesses” (ACCI, 2013). To explain why Australian trade policies are still emphasised strongly around PTAs instead of other trade facilitation efforts, they suggest that PTA negotiations are process-driven and “can subsequently lack strategic direction and coordination” (Productivity Commission, 2010).

The lack of public information about trade negotiations has been identified as one reason why the benefits of PTAs fail to be communicable to the public. Lloyd, at the Australian Conference of Economists in 2005, said:

“The way we are set up at the moment we have the Government discussing trade behind closed doors, and the public finding out about the issues later. [...] We need people to be involved in the analysis of trade policy who are disinterested, who are technically competent, and who can provide advice that is utterly transparent.” (Productivity Commission, 2010)

Australia has signed North-South PTAs with four of its GSP recipients: Thailand, China, Malaysia and Chile, plus ASEAN where not all countries are GSP recipients. The following section briefly outlines timelines and objectives for each of them.

TAFTA, the PTA between Thailand and Australia, was concluded in 2003, signed in 2004 and entered into force in January 2005. On market access, the agreement commits Australia to immediately eliminate 83 per cent of its tariffs and to reduce the remaining tariffs to zero by January 2015. Thailand agreed to a slower schedule: 44 per cent of its tariffs were agreed to be removed within five years after entry into force and the remaining tariff levels were to be phased down until 2020. Until 2020, Thailand agreed to expand Australian market access to Thailand through more and/or larger tariff quotas whose volume and tariff level depended on the product (Productivity Commission, 2005). When TAFTA came into force, expectations of the benefits the agreement would deliver were optimistic: in 2004, 70 per cent of surveyed businesses had a positive perception of the agreement. That value had shrunk to 20 per cent only four years later. It was estimated that an agreement could increase Australia's GDP by 0.021 per cent 10 years out if the agreement went ahead (CIE 2004b).

CHAFTA, the PTA between China and Australia, entered into force in 2015. It was perceived as a strong symbolic and economic move given that China has only signed PTAs with a select few industrialised economies. Preceding formal trade agreement negotiations, the Australian and Chinese governments' first agreed to undertake a joint trade agreement feasibility study (Productivity Commission, 2005). In early negotiations, China clarified that in the final agreement it would need to maintain restrictions on agriculture. Australia responded that it would need to maintain restrictions in textiles "and some other things" (Carmichael et al., 2010).

MAFTA, the PTA between Malaysia and Australia, entered into force in 2013. Malaysia appeared a logical PTA partner for Australia given the close economic ties to the region, and the fact that, alongside China, Malaysia is one of the most important export markets for Australian agricultural exports (Productivity Commission, 2010). Ahead of commencing negotiations, the

Malaysian and Australian trade ministers agreed to conduct parallel scoping studies where internal analysis and public comment would be considered to evaluate the potential of a trade agreement.

The Australia-Chile PTA entered into force in 2009. It was signed as Australia's fifth PTA and its first with a Latin American country. In a survey by the Australian Industry Group, an association representing a range of Australian manufacturing industries, only 17 per cent of the businesses that exported to Chile reported that the Australia-Chile PTA was moderately or highly effective in providing new export opportunities (Productivity Commission, 2010).

The Australia-Chile PTA has been described as covering “low-hanging fruits with relatively few contentious issues” (Capling & Ravenhill, 2015). A particular context frames Chilean trade policy: often described as the ‘Miracle of Chile’, Pinochet led a substantial liberalisation of import tariffs during the 1980s at a time when much of the South American continent were transitioning from trade policy focussed on infant industry protection through international interventions into a more export-led trade strategy. Thus, when Chile began its North-South PTA negotiations, the Chilean economy, its firms and workers, had already undergone the pains of trade liberalisation.

In terms of their design or anatomy, Australian trade agreements do not follow the EU's or the US' style of drafting (Horn et al., 2010). Lloyd surveyed trade measures in Australian trade agreements and found little consistency between the respective agreement (Lloyd, 2009). In a similar vein, the Australian Productivity Commission analysed the ROO in Australian trade agreements and found little consistency between agreements (Productivity Commission, 2005).

3.2 Methodology

To briefly recap the choice of case study and methodology: the vast majority of research on North-South ROO exhibits a clear geographical and methodological focus. Geographically, the literature

discusses, almost exclusively, EU and US agreements (e.g. Anson et al., 2005; Brenton & Manchin, 2003; Carrère & De Melo, 2004; Deardorff, 2018; Estevadeordal & Suominen, 2004; Inama, 2011). As chapters 1 and 2 have shown, North-South PTAs by other GSP donors do not align with the US and EU formats so warrant a separate discussion.

Methodologically, the available studies rely either on regression analysis to assess the impacts of ROO (e.g. Cadot & Gourdon, 2015; Cadot & Ing, 2014; Estevadeordal & Suominen, 2004; Harris, 2008), or are a descriptive account of rules (e.g. Deardorff, 2018; Hoekman & Inama, 2018; Inama, 2011). As for the previous chapters, this thesis builds on these findings but aims to develop them further by testing how the interactions of institutions, information and individuals determine the ROO outcome in North-South PTAs – a question that previous studies do not answer.

To fill this research gap, this chapter uses qualitative data derived from elite interviews to trace evidence for four causal pathways developed above. This approach adds to the understanding of ROO determinants by incorporating confidential information on objectives, dynamics and decision in negotiations not previously captured quantitatively or addressed in existing studies.

3.2.1 Case study design

Through semi-structured interviews with policy officials, ROO negotiators and industry lobbyists, the chapter develops our understanding of what could determine ROO outcomes in North-South PTA negotiations.

To remedy the geographical monopoly of ROO research, this chapter uses the case of Australian North-South. The gap in the literature on the political economy of Australian trade agreements is startling – after all, Australia is among the world’s most active PTA negotiators and has, unlike the

US and the EU, played a leading role in mega-regional discussions like the CPTPP and RCEP while the US has increasingly deprioritised their bilateral trade liberalisation agenda.

To develop the case study, test the explanatory variables and account for the negotiation perspective in understanding the determinants of North-South negotiation outcomes, I collected both primary and secondary evidence. The primary information is obtained through extensive, semi-structured interviews to shine a light on ROO negotiations that are generally kept under confidential seals. Primary sources are evaluated through confidential semi-structured interviews with:

- Eight ROO negotiators, market access negotiators, senior officials in trade departments (or equivalent), former senior politicians, to generate information about the confidential content of trade negotiations – three representing Australia, three representing Latin American GSP recipients, and two representing Asian GSP recipients. The selection of interlocutors was based on officials' exposure to or involvement in North-South ROO or market access negotiations. The government departments with the ROO negotiation lead in Australia and its North-South PTA partner country were all approached through several points of contact but not all were able to offer an interview.
- Three trade diplomats and senior officials in international organisations, to test statements from national officials and to contextualise the statements in an international comparison
- Trade experts and representatives at the largest industry associations in Australia and Southern PTA partner countries. The selection of interlocutors was based on the industry associations formally mandated to issue certificates of origin, usually chambers of commerce, which as a result of their mandate have a seat at the governmental stakeholder table. Since these organisations often have a membership bias towards the manufacturing

sector which constitute the majority of importers and exporters in all countries contacted, further interlocutors were approached in agricultural associations. In addition, all associations mentioned in secondary sources were contacted for a confidential interview though not all were able to engage on the request. In total, three industry representatives from Australia, two from an Asian GSP recipient and two from a Latin American GSP recipient were interviewed.

A core challenge in the execution of this research was to identify, contact and interview interlocutors, in particular in the GSP recipient countries (Murray & Overton, 2003). Secondary sources, negotiation protocols, and departmental organograms were consulted where available. In some cases, a first interlocutor would suggest other names to contact. This bore the risk of not representing a variety of experiences. However, given that, for officials, the research goal was to speak to negotiation teams, trade associations, and others with close familiarity with the negotiation process which are by definition aligned and relatively small, this risk was accepted. Roughly one in ten officials contacted responded, and only about half of those were then eventually willing to be interviewed.

Another challenge was the language barrier with interlocutors in Southern parties. Most negotiators spoke English well and the language barrier did not impact the length of the conversation or the depths of content covered. Instead, the language barrier was most notable in the evaluation of secondary sources of information. The interviewed Southern parties' representatives could rarely point to English-language documents, especially describing industry positions, which has created an emphasis on secondary knowledge sources from Australia. While a language barrier was inherent to a case study covering several different languages, I tried to minimise the impact of this barrier by choosing a case study where I at least speak two of the

native languages, rather than one in the case of New Zealand, or zero in the case of Japanese North-South trade schemes.

3.2.2 Ethics

The implementation of a strict research ethics protocol served a dual purpose in this research. First, I emphasised to protect the confidentiality of the information shared within interviews and the anonymity of interlocutors. Some of the information shared could be perceived as going against the confidentiality of trade negotiations, or could present industry representatives as influencing negotiation outcomes, putting interlocutors' jobs at risk. I considered the protection of confidentiality as a core pillar to gaining the trust of interlocutors. I obtained formal approval for conducting qualitative research from LSE's PhD Academy and adhered to LSE's protocol on conducting confidential interviews, including the naming, storing and deletion of notes and voice recordings where available. I informed interlocutors about the purpose of my research and the role of interviews within it. At the same time, I clarified at the outset of every conversation that I would not discuss how their individual accounts compared to those of other interlocutors, nor the conclusions I would derive from the conversations.

The second purpose of adhering to a clear research ethics and confidentiality protocol was to reduce the risk of collecting incomplete or false information. This risk was present in the way I designed the research framework and selected interlocutors because all interlocutors understood that some of the evidence went against how negotiations, to quote one interviewee, "should be done". By ensuring that no statement or reflection can be traced back to the individual, I tried to minimise this risk. I further found that, by being able to present data and evidence on the global design and differences in ROO and presenting myself as an objective but informed conversation partner, the interviews could move away from standard government positions more easily. For

instance, I was able to challenge initial positions that resembled replication of Australia's public line: "DFAT's objective in ROOs negotiations is to seek a rule which facilitates trade while still ensuring that the good undergoes a substantial transformation." (DFAT, 2010) with evidence that Australia's PTA outcomes and GSP schemes did not fully align with that statement. By discussing specific outcomes and probing individual drivers and dynamics, conversations moved beyond public lines and towards more technical discussions.

3.2.3 Interview structure

The interviews were conducted between June and September 2021 via video calls because pandemic-related travel restrictions were in place for the entire year. Statements from interviews in this chapter are paraphrased and their titles and, in the case of Latin American and Asian interlocutors, their country of origin are not disclosed. Mentioning Australia specifically is necessary because the chapter discusses dynamics in both Northern and Southern parties and Australia is the only Northern party in the case study.

All conversations were semi-structured and covered the four variables this chapter aims to test.

The interviews covered the following themes:

1. Industry lobbying:
 - sources of data and evidence that informed ROO opening positions
 - role of private sector associations in making this evidence available
 - pathways used to access government officials
 - personal evaluation of the effectiveness of private sector interventions
2. Negotiation trade-offs:

- how compromise was reached in case of diverging opening negotiation positions
- if trade-offs were mentioned, the information and evidence used to identify areas for trade-off
- how effective the traded-off outcomes were in achieving the overarching ROO negotiation objective
- similarities and differences in negotiation capital and strategy between North-South, North-South, South-South dyads
- difference in GSP vs PTA outcomes

3. Non-ideal outcomes:

- existence of outcomes that were neither aligned with ex-ante negotiation goals or with evidence from public data or industry requests
- dynamics that led to these outcomes
- ex-post evaluation of the effectiveness of these outcomes

4. Rational outcomes across wider policy context:

- determinants of agreement if not aligned with ex-ante determined negotiation position
- existence of trade-offs between other areas of the agreement
- wider policy considerations, e.g. political or strategic relevance of concluding an PTA

Secondary sources included research papers and publications from public sources, e.g.

- The independent Australian Productivity Commission, in particular its reviews of PTAs and annual reports
- Read-outs and minutes from parliamentary committee hearings

- Official sources on PTA negotiations, like mandate documents, scoping assessments, presentations of the agreed outcomes.

4 ANALYSIS

4.1 Industry lobbying

The bulk of evidence on industry lobbying was given by Australian interlocutors. In Australia, industry associations feed into PTA negotiations in three main ways. First, they provide information and evidence, where available, to inform the starting positions in negotiations. Second, trade negotiators also reach out to associations once the other party has shared counteroffers or landing zone proposals to test whether these would be viable for businesses. Third, business associations input into consultations to retroactively review Australian PTAs, for instance to evaluate the effects of PTAs (Productivity Commission, 2010) or PTA usability (Ai Group, 2015).

Conversations with Australian industry associations suggested that the inputs they give to parts of the Australian Government are primarily directed at DFAT, the department directly responsible for trade negotiations, and, for associations in the agri-food sector, the Department for Agriculture, Forestry and Fisheries which in turn is a stakeholder department to DFAT.

An interesting finding from interviews with Australian business representatives was that they shared little detailed data with government and instead limited their lobby messages at high-level objectives aimed at import liberalisations. One of Australia's largest industry associations, according to its senior trade expert, has focussed its efforts on emphasising the importance of imported inputs for all Australian businesses while in contrast export liberalisations are only felt by the minority of Australian businesses that export. This association also lobbies actively for

unilateral liberalisation of ROO administration, for example by unilaterally abolishing checks on ROO certificates. This is strong support for the idea that Australian businesses influence ROO design to protect their domestic market share via more liberal ROO to facilitate the cheaper supply of imported inputs.

The only exception in the Australian context was the food processing industry – i.e. an industry buying from and selling into the highly protected agricultural and consumer market in Australia. Associations in this sector had a similarly strong interest in the protection of their domestic markets but instead advocated in parts for more restrictive ROO. These accounts align with the import-dependent characterisation of the Australian economy explained in section 3.

Looking at potential drivers for restrictive ROO, Australian business representatives expressed no interest in using ROO as a booster to exports and foreign market share. Given the economy's heavy reliance on imports for domestic production and exports alike, this account is reasonable: the benefits of restrictive ROO to make Australian exports more competitive in the PTA partners' market would likely not outweigh the costs of more expensive inputs.

In contrast, there was limited evidence of industry lobbying on ROO outcomes in the Southern countries. In size, mandate and resource, the applicable industry associations differed from those in Australia. The general influence of business lobbying appeared very small but with notable exceptions. For example, the outcome on ROO for autos in the Australia-Thailand PTA was described as the result of Thai auto lobbying to protect their significant industry interest. Thailand had proposed a ROO set more restrictive than the one tabled by Australia. Since Australia did not have a relevant production sector in autos or auto parts similar to Thailand, Australia was able to agree to the Thai proposal on autos.

The Australian Manufacturing Workers Union (AMWU) are critical of the ROO agreed in Australian PTAs: “The costs of differing and complex rules of origin are born by exporters, consumers and ultimately the entire world economy via the problems they create for a single properly functioning multilateral trading system.” (Productivity Commission, 2010). In a similar vein, the Australian Industry Group, the Employers and Manufacturers Association and the Law Council of Australia have gone on record to criticise the negotiated ROO in Australian PTAs (Productivity Commission, 2010). These accounts reflect the heterogeneity costs that I argued and mapped in chapter 1: simply by agreeing a ‘spaghetti bowl’ of *different* rules for the same product, governments can increase costs for their businesses.

In a submission to the Australian Productivity Commission, DFAT asserted in response to industry submissions that it pursues the least restrictive ROO in PTAs, while preventing trade deflection: “DFAT’s objective in ROOs negotiations is to seek a rule which facilitates trade while still ensuring that the good undergoes a substantial transformation.” (DFAT, 2010). The Department does not specify their definition of a substantial transformation and instead refers to industry submission on their preferred ROO design. In the same submission, DFAT also concedes that “the decision on the appropriate approach to use in individual PTAs will also need to continue to take account of the negotiating dynamics and situation of each PTA”. In sum, DFAT’s statements make clear that there is no harmonised approach to the level of permitted foreign inputs and that this level is instead determined on the basis of industry inputs and negotiated trade-offs.

No interlocutor gave evidence that could explain the difference in ROO restrictiveness in Australia’s PTAs with Latin American versus Asian parties. Secondary sources of information addressed this issue in more detail. Australian industry groups have made submissions to the Australian Government and DFAT to argue that ROO should be designed to take account of their industry’s needs (Productivity Commission, 2004). For example, an Australian clothing

manufacturer requested a change in chapter rule, meaning the highest level of restrictiveness in CTC-based tests that requires that all inputs are made domestically and only inputs' inputs can be imported. This sensitivity was flagged in particular in the PTA with Thailand, and is mirrored by high ROO restrictiveness scores for textiles and apparel (see Appendix 5). The Australian Plastics and Chemicals Industries Association (PACIA) also suggested the exact design of product-specific ROO with different CTC- and RVC-based test plus a technical requirement based on chemical reaction requirements, however with a view to reflect the bespoke industry requirements to make them less costly, not to protect domestic or foreign market share.

In conclusion, the semi-structured interviews resulted in many examples under this causal pathway that industry lobby could influence negotiation outcomes. For most sectors in Australia, industry lobbying and government messaging alike emphasised the importance of trade preference usability and low-restrictiveness ROO for the Australian economy. This tendency was mirrored by industry accounts in Southern parties. Only few industry associations, mostly of internationalised and large sectors like chemicals, car manufacturing, or the clothing industry, went public with individual statements in support of or against a given ROO outcome. There was limited evidence of industry associations giving specific data on sourcing decisions and supply chain structure to inform governments' negotiation positions. Industry representatives across all covered countries also highlighted the substantial complexity of ROO negotiation and the opaque impacts the negotiated outcomes would have on their industries in the long run.

4.2 Negotiation dynamics

Interviews with interlocutors also traced evidence for the causal pathway that negotiation dynamics can determine ROO outcomes. These could be trade-offs between tariff concessions and ROO outcomes, or trade-offs between sectors. On the former, interviews with ROO negotiators

indicated that the trading-off of outcomes between ROO and tariffs was omnipresent, both implicitly and explicitly. This pertained to different stages of the negotiation: the timing of offers, the offers themselves, and the negotiation towards a final agreement. On timing, one Southern negotiator mentioned how one party might only table their ROO offer once they received the other party's tariff offer. On the offers themselves, they might make the level of liberalisation of their ROO offer dependent on the reductions in market access offered by the other side. In terms of final outcomes, the ROO offers and tariff offers should ideally be read together, as presented by an official.

Accounts described that trade-offs between ROO and tariffs could go both ways – a party's own tariff offer could mean that they would in turn push for a more restrictive ROO outcome to make the overall impact on their domestic industry less drastic. The official could not think of such examples in the case of Australia and instead references North American parties. The same mechanism would also go the other direction where a party would push for a liberal market access offer from both sides and to show its commitments to genuine market access improvements table a liberal ROO offer. Trade-offs between tariffs and ROO could therefore account for a share of the variation in ROO outcomes and could explain why ROO restrictiveness is higher in some sectors than in others, even though the economic or industry interests would suggest to the same ROO design.

With regards to trade-offs between sectors, according to primary sources in the Australian trade department, these occur frequently and deliberately. An official cited an example of a typical negotiation where the other party had a core interest in Australian tariff reductions on agricultural goods and tabled a restrictive ROO offer on manufactured goods to generate negotiation capital. Agreement was eventually reached through a trade-off of liberal ROO on manufactured goods against faster tariff reductions on Australian agriculture imports.

In understanding how trade-offs and negotiation dynamics played out against the backdrop of GSP preferences, all Southern officials were clear that the GSP did not, at the time when the respective negotiations began, represent market access incentives relevant to the country at the time. GSP was generally described as not fit for purpose, reflecting either a Southern economic reality that no longer existed or a programme that had never been intended to be utilised for more than primary products. Interestingly, two Southern officials mentioned that they did use the GSP as “a tool” to generate more negotiation leverage. For example, when a Northern offer on market access issues was perceived to be unambitious, the Southern officials pointed to their GSP as the best alternative to a negotiated agreement to trigger a more ambitious offer from the Northern party.

Power asymmetries were evidence by Southern officials but not by Australian officials. Australian interlocutors mentioned they were aiming to reflect the Southern party’s interest and mentioned Thai interests in the auto sector as one example where the Southern interest prevailed over the Australian interest. However, when asked, they could not think of an example where a Southern interest was reflected against the expressed preference of Australia. Conversely, Southern negotiators reflected on substantial power and negotiation capital asymmetries, albeit not with Australia because Australian trade interests were felt as being genuinely focussed on ROO liberalisation. A core take-away from interviews for this chapter was, however, that all negotiators and officials interviewed could not account for a bulk of the ROO outcomes in the North-South PTAs.

4.3 Non-ideal outcomes due to Bounded Rationality

To recap, this causal pathway builds on assumptions from the bounded rationality framework where individuals – i.e. trade negotiators, policy advisors, government analysts – cannot account

in full for the prohibitive complexity of the issue or have imperfect information on which to base decisions. As a result, while the actors attempt to behave in a rational fashion and reach an optimal outcome, they do so within the constraints of their cognitive capacity and available information. The determinants and impacts of ROO have previously been analysed as rational outcomes of trade negotiations, reflective of different government objectives. Accounts of practitioners present a more complex image which should inform future research on ROO and preferential market access.

Their characterisation of the negotiation process by interlocutors was insightful. They described that, before negotiations, each side would draw up a ROO proposal based largely on precedent agreements, to save time, to expedite parliamentary clearance after negotiations, and/or because the full resource and expertise was not available at the department. In some cases, officials mentioned they would even copy the other side's precedent to expedite the negotiation process or to show good will. The consultations with industry at this stage would often be limited, focussed on particular sectors or dependent on industry experts offering advice proactively. Industry associations interviewed mentioned that they gave little to no specific information ahead of negotiations. Where initial offers – based on precedent on both sides – aligned, these would logically not be discussed further. Only where offers differed would negotiations take place. These would then be solved through trade-offs and compromise, as set out above. The remaining sections, where initial offers did not align but where neither side had a priority sector in would often simply be solved through a tit-for-tat process. Industry representatives mentioned that officials would find a textual compromise rather than one rooted in business evidence – as they suggested, the fact that many government officials are lawyers could influence this process. They mentioned as an example where one party proposed a 50 per cent value addition threshold, the other proposes a 30 per cent threshold. An outcome would then often be the simple average of these two thresholds, but often, this would not be a helpful compromise.

Business representatives mention that, in this example, the party proposing a 30 per cent threshold might have industry that could meet a 30 per cent threshold at maximum and would, in the alternative, prefer a change in tariff heading rule which might have been agreeable with the other party. A 40 per cent threshold would however exclude many exports from qualifying for preference, so that the outcome is both non-efficient in terms of the allocation of negotiation capital, nor rational from a business perspective. In other words, a large share of all product-specific ROO would not get discussed on the basis of evidence at all because of limits in capacity, preference, or knowledge and instead textual compromise is reached.

The general consensus among industry and association representatives interviewed was that evidence, such as firm-level input-output data, domestic production data, and private sector information on up- and downstream supply chains, was extremely rare. This message was particularly evident among the Southern interlocutors. Some interlocutors mentioned that having more data – regardless of whether from a private or public source – would have made negotiations easier because it would have strengthened their own understanding of an ideal outcome. Phrases like “building a plane while flying it” or “taking a shot in the dark” were used to describe the way ROO negotiations progressed in the absence of information. Australian industry representatives confirmed that description in their case – the experts interviewed could not remember having shared ROO advice or ROO-relevant supply chain information.

The available human resources were also mentioned by both Australian and Southern interlocutors. A DFAT official also mentioned that a lack of ROO negotiation resource affected the department, with experienced colleagues moving out of the system leaving fewer people with an acute understanding of the issues. The remaining colleagues would then be further incentivised to build negotiations on the basis of precedent, with adjustments to reflect bilateral specificities, rather than tabling new proposals for every negotiation.

In contrast, Asian negotiation partners approached negotiations from a different strategic perspective, according to DFAT officials. Malaysia, China and Thailand all had explicit export interests and feared export competition from countries in the regions so could not afford to de-prioritise ROO negotiations. However, similar resource and complexity constraints also applied to their negotiations so that varying outcomes were achieved for different sectors. This account is mirrored in the ROO restrictiveness data (see Appendix 5): Australian PTAs with Asian partners has higher absolute and relative peaks vis-à-vis the Chilean agreement, potentially reflecting the protective intentions of the Asian parties in some sectors and simply signing off or rolling over precedent in other sectors.

4.4 Rational outcomes across wider policy context

The second causal pathway developed under a Bounded Rationality framework that was traced in the interviews would account for a different understanding of the role of institutions, namely one where institutions mitigate the bounded rational outcomes reached by actors. Practical examples of this pathway would be situated in circumstances with imperfect knowledge or decision-making by individuals which is compensated for by institutions. Individuals could still land on irrational outcomes but institutions, like chief negotiation teams, trade departments or governments, utilise these irrational outcomes to facilitate a broader objective, like the overall conclusion of the PTA, or geopolitical alliances. For example, the conclusion of a ROO chapter would deliver non-rational outcomes but its conclusion is necessary to allow for the signature of a PTA that delivers other non-trade objectives, like political signalling or geopolitical alignment with another country. The non-trade objectives of PTAs have been discussed in the international political economy of trade (e.g. Gowa, 1995; Mansfield & Reinhardt, 2003) but have not been applied to explain ROO outcomes.

To understand how the ROO outcomes in Australian North-South PTAs could be explained by wider policy objectives, the policy context is useful to understand. Ten of the 15 Australian PTAs currently in force, and all of the Australian North-South PTAs signed until 2016 in this thesis's data set, were negotiated signed under two governments, under Prime Ministers Abbott (2013 – 2015) and Howard (1996 – 2007). Capling and Ravenhill are the main authors who researched motivators of Australian PTA formation. They highlight a rush to completion of PTAs under the Howard and Abbott governments. For the PTA concluded under the Abbott government (with China, South Korea and Japan), they argue, these were motivated by domestic political interests the Australian industries with an export interest (mining and agriculture) are heavily concentrated in the electorates held by the coalition parties at the time. (Capling, 2008; Capling & Ravenhill, 2015). For all PTAs from these two governments they identify a strong political or foreign policy motivation: they were negotiated with strategic allies or gateway partners on different continents. (Capling & Ravenhill, 2015; Ravenhill, 2010). The authors also give evidence of instances where Australian prime ministers went against officials' or departments' advice to walk away from negotiations and instead signed the treaty with limited benefits or costs to Australians. The low impact and limited benefits that Australian accrue from their PTAs has been the finding of an independent investigation by the Australian Productivity Commissions which aligns with the researchers' arguments (Productivity Commission, 2010). Applied to the ROO context, it could be hypothesised that the ROO outcomes that cannot be accounted for by economic interests were rationalised by the overall political or geostrategic gains.

Interviews with former politicians and trade negotiators found some examples of this causal pathway applying in practice. With regard to the Australia-Chile PTA, former negotiators from both sides confirmed the strategic importance of the Chile-Australia trading relationship beyond the immediate outcomes of the trade in goods chapter: Chile negotiated with the implicit objective of attracting Australian investment in its mining sector through both capital and services.

Conversely, Australia chose Chile as a first PTA partner in South America as a gateway to the region. Chile, with its heavily liberalised economy and small import competition, posed little threat and a wealth of opportunity, according to negotiators on both sides. ROO negotiators in both sides had limited resource and experience to dedicate to the negotiation; an institutional focus was instead on facilitating foreign investment. This could help explain why the ROO restrictiveness in the Australia-Chile PTA is significantly lower than in other Australian North-South PTAs with Asian countries. Nevertheless, accounts of Australian-Asian PTA negotiations did not talk about this causal pathway. Much rather, the covered Asian countries were described as natural PTA partners given Australia's focus on regional integration with ASEAN and other Asian countries. In terms of the timing of their conclusion, Asian interlocutors suggested that these PTAs were formed as and when multilateral trends moved towards PTA formation.

5 DISCUSSION

This chapter has inductively developed causal pathways that could explain ROO negotiation outcomes in North-South PTAs. Using evidence from elite interviews of ROO negotiators, the chapter collected examples and accounts of how these causal pathways work in practice and influence negotiation outcomes.

The interviews found mixed evidence for the influence that industry interest groups have on negotiation outcomes. In the case of Australia, interest groups have access to negotiations, benefitted by the fact that Australia has well-established industry associations that have been following trade negotiations for decades, building up both the advocacy capacity internally but also developing opinions among their membership. These access routes are used predominately to influence Australian North-South trade policy towards liberalisation. Frequently quoting the import dependence of Australian consumers, producers and exporters, and lamenting the cost of

trading, Australian industry associations use their existing leverage to open Australian trade policy, including a move towards liberal ROO or even their complete removal. Policy officials from all interviewed countries confirmed this description: Australia's genuine ambition to remove trade barriers in ROO was confirmed by all Southern interlocutors, and by public and confidential statements of DFAT officials. These interests were particularly pronounced for Chile where a removal of trade barriers was confirmed from both sides as the negotiation objective. The interest was described as similarly present but less pronounced for Asian trade partners, where more restrictive ROO were cited in some instances as more appropriate for the tighter supply chains between Australia and the Asian trade partner. Interlocutors also cited intra-ASEAN cumulation as an important factor that enables Asian developing countries to comply with more restrictive ROO more readily, which was not the case for the Latin American interlocutors. Drawing on the ROO restrictiveness data presented in the previous chapter, these objectives and negotiations context are mirrored by the data which shows that ROO in Australia's Asian PTAs are more restrictive than in the Australia-Chile PTA (see a discussion of these datasets on p. 104).

Evidence from Southern parties suggested that industry interests are less reflected in negotiations – both because such interest groups are less well established but also because market-protecting interests were less strong. In the Australian and the Southern cases, notable exceptions exist for the automotive sector – a sector known in international ROO negotiations for their unique supply chain set-up. Because the global automotive market is dominated by multinational producers that own most of their upstream suppliers, information on desired ROO negotiation outcomes is more easily accessible than if it involved polling hundreds of competing global suppliers. Similarly, the textiles and apparel industry is known for its effective ROO advocacy across the globe – the US Trade Representative, for instance, has an entire department dedicated to apparel ROO and tariff negotiations. It is thus not surprising that the textiles and apparel industry advocated for ROO outcomes in Southern countries. This finding overlaps with observation in the empirical analysis

of the previous chapter, where textiles and apparel are an outlier on the ROO restrictiveness scores for most country dyads, showing among the highest restrictiveness values in the entire dataset. The outcome can be observed in the restrictiveness of ROO outcomes (see Appendix 5). Predominately though, all interlocutors referred to the loudest private sector voices being those from Australia calling for a reduction of trade barriers caused by ROO. This evidence suggests that a part of ROO outcomes was determined by industry lobbying in the Northern party.

Within this tendency towards ROO liberalisation however, all interlocutors volunteered their assessment that a majority of ROO outcomes is not driven by evidence or optimal outcome scenarios. Instead, they reflected on the almost impossible task of first obtaining, then processing, and then agreeing evidence-based ROO outcomes for 5300 product lines, especially where such evidence is inaccessible to negotiators as exporters protect data on their sourcing decisions. They offered overlapping accounts of non-ideal outcomes, shaped by negotiation dynamics and outcomes legitimised through the broader policy context. A particularly poignant example mentioned was that all of the sampled PTAs still include ROO for products where MFN levels in both countries have bound MFN rates of zero per cent, i.e. where PTAs cannot introduce a further tariff preference. Depending on the country dyad, the share of HS6 lines where both parties do not impose a bound MFN duty ranges from 1 per cent for the Australia – Chile dyad to 8 per cent for Australia – Thailand and Australia – Malaysia. When looking at applied MFN rates, this range increases, from 2 per cent for Australia – Chile to 29 per cent for Australia – Thailand and 40 per cent for Australia – Malaysia (WTO, 2021). These figures highlight that for a share, bigger for some dyads than others, ROO do not need to be negotiated because the countries already permit duty-free imports.

The depth and detail of evidence under the Bounded Rationality pathways are among the most insightful in this chapter and highlight the importance of qualitative research on ROO

determinants beyond the econometric approach that prevails among ROO research. The finding adds context, reasoning and a potential explanation to the wide spread and variation in ROO restrictiveness between sectors where, from a macroeconomic perspective, ROO differences make little sense. Examples cited by interlocutors were cross-checked and confirmed in the OECD DESTA dataset and include, among others, differences in the ROO provisions for art and precious metals, which include very limited foreign content, glass, paper, and in general all product lines where MFN tariffs are already zero.

The wider negotiation dynamic was sometimes described as agnostic to the outcome and instead driven by common negotiation dynamics, like reaching a middle ground between opening positions. The opening gambit was often a copy-paste from precedent agreement. To expedite negotiations, officials would sometimes even consider the other party's precedent and copy that. From that starting point, negotiations were driven by finding compromise through trade-offs, either between sectors or between ROO and tariff offers. The accounts were almost agnostic to the ROO outcome and instead referenced basic negotiation strategy and reaching agreement, with little regard for the outcome that was agreed. Sticking points arouse mostly around very few sensitive sectors like meat and dairy, automotive and apparel producers. These were the only sectors mentioned where evidence was considered in further detail.

Inductively, these outcomes would best be understood under the assumption of a Bounded Rationality framework. As set out in section 2.4, this framework would not suggest that the outcomes are irrational or unbeneficial. Instead, the ROO outcomes appear to have been driven by a general interest in concluding a North-South PTA to replace the not-fit-for-purpose GSP. The specific outcomes were then a result of copy-pasting existing agreements and meeting in the middle to compromise. Future research may consider developing further pathways under Bounded Rationality assumptions, or test these pathways more systematically or deductively.

6 CONCLUSION

This chapter sought to better understand dynamics, drivers and determinants in North-South PTA negotiations that deliver these outcomes. To do so, I used a qualitative case study of negotiations between Australia and its “Southern” trade partners. The chapter first inductively developed four causal pathways to attempt an explanation of some of the politico-economic drivers and dynamics that shape ROO negotiation outcomes. It then described interview evidence from the Australian case study and how examples of these possible pathways bore out in the case study. In doing so, the findings of the chapter complement the empirical picture painted in the previous chapter by attempting a look behind the scenes of confidential ROO negotiations and developing conceptual starting points that could be used for a systematic hypothesis testing exercise in future research.

Evidence for some pathways was more present than for others, namely for the general interest in opening or protecting their domestic sectors of the Northern party, and for the bounded rationality of negotiators constrained by the complexity of the task and lack of evidence to determine what a rational outcome would look like. These core findings point at negotiation dynamics not specific to Australia. Both the dominant role of the Northern party in setting the level of ambition in the ROO negotiation outcome, and the complexity of ROO negotiations that undermines rational results, could inform future research on the North-South trade politics of other GSP donors.

The examples for the applicability of causal pathways developed under a Bounded Rationality frame are among the most insightful in this chapter because they emphasise the importance of qualitative research on ROO determinants. Building on these examples, future deductive research could research a potential explanation to the wide spread and variation in ROO restrictiveness between sectors where, from a macroeconomic perspective, ROO differences make little sense, like ROO restrictions on raw materials or on products where bound MFN levels in both countries

are already at zero per cent. This matters beyond a logical inconsistency through the link to negotiation costs and their lopsided distribution in favour of the Northern negotiation party. If negotiation capital and public resources are spent on conducting moot negotiation, the relative opportunity costs of this capital and resource is smaller for the more resource-abundant party. As mentioned above, the share of HS6 ROO lines where both Australia and one of its Southern PTA partners charge a zero per cent MFN tariff can reach up to 40 per cent, but where the PTA outcomes still include negotiated ROO of varying design and restrictiveness.

The lack of evidence available to negotiators in both Southern and Northern parties also highlighted how difficult the development of a rational, utility-maximising negotiation position on ROO is. If data on the input-output linkages at the firm level are covered by commercial confidentiality and are not collected at the governmental level, negotiators will by default struggle to develop a negotiation position that reflects domestic interests and upstream supply chain sensitivities. Notably, some sectors did provide desired ROO positions or information to negotiation teams, but negotiators described these instances to be in the minority.

The complexity, lack of data, and even the absence of a *raison d'être* for ROO for some products highlights a clear take-away: negotiators, governments and traders could benefit substantially from more research on ROO outcomes, their impact and potential innovation for ROO in future PTAs. The next and final chapter of this thesis discusses ideas for future research to further explore findings presented here, and suggests potential avenues for ROO reform.

CHAPTER 4: DISCUSSION OF FINDINGS AND POLICY RECOMMENDATIONS

1 INTRODUCTION

The preceding chapters have highlighted that ROO can restrict the usability of trade preferences in North-South PTAs. ROO obstruct market access because, first, they restrict the use of foreign inputs and the integration of developing country exports into global supply chains. Second, their heterogeneity means that exporters need to comply with a new ROO set for each PTA partner they want to trade with. These barriers mean that for many countries and sectors, North-South PTAs take with one hand what they give in additional PTA tariff reductions. Even where PTA negotiations lead to an ex-ante improvement of ROO restrictiveness, the technical complexity and volume of ROO negotiation can act as a negotiation barrier in itself, as highlighted in the previous chapter. This has raised the question: how could ROO be reformed to support, not hinder, the usability and negotiation of North-South PTAs?

The challenge is of course that ROO do not underlie WTO rules or other governance system. By accounts presented in the previous chapter, a share of ROO outcomes may not be driven by rational negotiation or policy objective, which could represent a window of opportunity for reform within negotiations.

This chapter closes this thesis by evaluating existing reform proposals through the lens of the data and conclusions presented in previous chapters. It focusses in particular on the balance between effectiveness of a given reform proposal by design, and the likelihood of the proposal being agreed.

Drawing on assessments from policy makers and experts at international organisations, it then evaluates potential fora for reform.

2 DISCUSSION OF FINDINGS

A core motivation of this dissertation and its data contribution is to improve the existing understanding of North-South PTAs, their drivers, outcomes and impact. As mentioned across the respective chapters, variation in ROO is a common blind spot in the existing literature and attempts to fill that blind spot have largely been limited to N-S PTAs by the EU or the US. This section reimagines some of the existing literature with the availability of large-N data on ROO, and offers suggestions for a future research agenda.

In general, the availability of the novel ROO dataset significantly reduces the costs of expanding existing research on ROO from a single-dyad or single-country case study to a global study. For example, the modelling and analysis by Estevadeordal (2004), Harris (2007) or Kelleher (2012) could be expanded to a multi-country study, thus testing whether their existing conclusion hold for non-US PTAs. This opportunity will likely constitute the largest possible knowledge contribution of this dissertation because the existing geographical focus has ignored the significant and seemingly structural inter-country variation in ROO design that chapter 2 unearths. Beyond this general opportunity, a few specific themes for future research on the back of this dissertation emerge.

2.1 Drivers of PTA Formation

The literature on North-South PTA formation has inspired parts of this dissertation because the respective researchers treat ROO as homogeneous, not accounting for variation in their design or

impact on PTA formation desires (Manger, 2012; Manger & Shadlen, 2014; Mansfield & Milner, 1999, Perroni & Whalley, 2000; Winters, 1993). The observed changes from GSP to PTA suggest that this variation exists. The current conclusion that developing countries have little to gain from negotiating a PTA with an industrialised economy could be changed or strengthened by taking the new ROO, indexed by restrictiveness for computational ease, into account. For example, the change in ROO when moving from GSP to PTA could have explanatory power vis-à-vis the argument for political trade dependence purported by Manger and Shadlen (2014), because developing countries seek a PTA for updated ROO that reflect changes in import and export patterns.

While this dissertation has focussed on North-South PTAs, the available ROO data spans all WTO-notified PTAs. Research on PTA formation in the wider International Political Economy remit could thus also benefit from an expansion of variables to include ROO. In addition, the solitary example of ROO research on North-North PTA formation by Chase (2008) could be replicated to cover different country dyads including South-South or North-South PTAs.

2.2 Determinants of ROO Outcomes

This dissertation has approached the question of what determines ROO outcomes with an inductive qualitative scoping of potential causal pathways. This approach generated new contributions to the existing literature but could both be expanded and deepened. An expansion could explore other causal pathways, for example whether the influence of the regime type of negotiation parties influences ROO outcomes, akin to thinking suggested by Kono (2006) or Chase (2008). A negotiation party's integration in regional value chains could also be an interesting starting point for empirical research on determinants of ROO outcomes. A deepening of the

findings presented in chapter 3 could take the form of a deductive or systematic hypothesis testing exercise using similar variables as the causal pathways suggested here.

An expansion to different or more countries than the Australia case study discussed in chapter 3 would be a straight-forward starting point for future research. The empirical discussion of the available ROO data in chapter 2, Figure 14, could suggest a variety of new research questions, ranging from a simple replication of the questions pursued in chapter 3 but applied to different Northern PTA parties, to a quantitative testing of the variables that could explain these outcomes.

2.3 Impact of ROO

The impact of ROO has to date been discussed in quantitative case studies relying on data samples from EU and the US PTAs, covering impacts like the cost of trade (Cadot & Ing, 2014), the utilisation of PTAs (Keck & Lendle, 2012), or the restriction of third-party imports (Conconi et al., 2018, Laaker, 2019). Many of them have been restricted by computational thresholds where only expensive super-computers would be able to compute the research question for more dyad-product-year data points (Cadot & Ing, 2014). The presentation of new indexes in this dissertation, which could reduce the computational load by a factor of 5 to 500, may help replicate these studies with a quantitative, rather than binary, variable for ROO.

The research on the impact of ROO on trade flows that already applies a strong quantitative focus could be replicated to cover North-North or South-South dyads (e.g. Conconi et al., 2018, Laker, 2019). These studies were restricted by using the easy-to-code NAFTA or USCMA ROO. The new ROO dataset remedies that constraint and clears the path for quantitative ROO studies on different PTAs and country dyads outside the North-South dynamic, thus improving our understanding whether Conconi et al. or Laaker's findings allow generalisable conclusions beyond

US-Mexico trade flows. Research on the impact of ROO on PTA utilisation has to date been restrictive by the availability of utilisation data, as mentioned in chapter 2. Almost all countries do not publish how much of eligible imports are actually granted PTA preferences, and those that do – including the EU and the US – do not publish which PTA preferences were granted, making dyadic research problematic. This dissertation does not solve that problem, but could hopefully contribute to a continued push for data collection and publication by trade administrations.

3 POLICY RECOMMENDATIONS: OPTIONS FOR ROO REFORM

This thesis has highlighted three options to remedy the shortcomings of the current ROO regime in North-South PTAs for negotiators, users and research of ROO: removing ROO from parts of PTAs (see chapter 3, section 4; and Felbermayr et al., 2019), harmonising ROO across PTAs (see chapter 1, section 3, and chapter 3, section 4; and B. Hoekman & Inama, 2018; LaNasa, 1996; Park & Park, 2009), and strengthening the negotiation capacity of developing countries (see chapter 2, section 2, and chapter 3, section 5).¹³ I evaluate the likelihood of success and the potential effectiveness for these three avenues of reform – ROO removal, harmonisation, and capacity building – in this chapter in order to apply the academic findings of this dissertation in a real-world context and to prepare potential future research questions for policy researchers.

3.1 ROO removal

¹³ Capacity building as a means of supporting developing country positions in international trade negotiations is not a revolutionary concept (Chan, 2020; Medalla & Quimba, 2017; Pasadilla, 2020), but it has not been discussed in the context of ROO negotiations.

ROO are usually considered a necessity for the effective implementation of an PTA because they prevent trade deflection. Initially, this rationale is logical: ROO prevent preference fraud and the circumvention of MFN duty rates for non-eligible inputs. ROO are the mechanism needed to prevent imports into a PTA area entering exclusively through the country with the lowest external MFN tariff and being shipped towards its final destination from there. However, this rationale is built on the assumption that preference fraud is a real-life risk. This assumption has recently been challenged by Felbermayr et al (2019). They question that trade deflection would occur in the absence of ROO by testing whether trade deflection is actually economical.

As discussed in previous chapters of this thesis, the costs of ROO can be substantial: depending on the method and definition of restrictiveness, the cost are estimated to range from 3 – 15 per cent. Felbermayr et al use data on MFN and PTA preferential tariff rates from the USA and New Zealand. In addition, they use a sample of pair-product specific transport costs to estimate for which products and country dyads trade deflection would be economical. They find that, for 86 per cent of PTA trade, trade deflection would not be profitable because transport costs exceed the potential tariff gain of circumvention. This figure rises to 98 per cent for GSP schemes, and the authors argue that even this figure is conservative because they do not factor in other trade costs like exchange rate risks.

As discussed in previous chapters, the drivers of ROO likely also exceed that of pure tariff savings. Instead, the design of Product-Specific Rules suggests that ROO are shaped to enhance the relative competitiveness of domestic inputs, or protect sensitive industries – policy objectives which Felbermayr et al. summarise as rent-seeking. Regardless of the perceived legitimacy of these policy objectives, the political economy of ROO removal in North-South PTAs is likely more complex than a comparison of transport costs vis-à-vis tariff savings for certain sectors. However, as the data in chapter 2 highlights, negotiation partners in North-South PTAs are able to agree on ROO

of low restrictiveness for a range of sectors. Low restrictiveness can be interpreted as an indicator for low sensitivity beyond preventing trade deflection. If trade deflection in North-South trade is only economical in around two per cent of product lines, exports with low ROO restrictiveness could be a low hanging fruit where ROO requirements could be abolished in PTAs. Since low ROO restrictiveness is often linked to lower ROO compliance cost, the benefits of ROO removal for sectors with high ROO restrictiveness would likely be higher. However, in a negotiation environment where ROO removal is currently unheard of, starting to abolish ROO for a small range of sectors with high transport costs could trigger more critical engagement with the rationale for omnipresent ROO.

In sum, partial ROO removal could be beneficial for North-South trade from a policy perspective: the proposal could boost the welfare-enhancing effects of PTAs (Deardorff, 2018), could increase the uptake of available tariff reductions for developing countries (Brenton & Özden, 2005; Mizuo, 2019; Özden & Reinhardt, 2005), and could reduce the complexity of PTAs which in turn could enhance the relative bargaining power of developing countries in North-South PTAs (Commonwealth Secretariat & Jones, 2013; Delegation of Bangladesh, on behalf of the LDC group at the WTO, 2015).

3.2 ROO harmonisation

Harmonisation means a multilateral consensus on a ROO design. In a first-best scenario, ROO would be harmonised at a level of low restrictiveness and minimal compliance cost. But even harmonisation towards a second-best, more restrictive ROO design would generate benefits for businesses. This scenario would still reduce trade costs because the heterogeneity of ROO is reduced and exporters need to comply with fewer rules when exporting the same good to different parties (see for reference chapter 1, p. 52, for a summary of ROO heterogeneity).

ROO harmonisation efforts would require institutional oversight. Evidence suggests that WTO members and Secretariat have little appetite to restrict members' policy space to define their own preferential ROO (Inama, 2009; Hoekman & Inama, 2018). This silent consent is tangible in the minimal progress that the WTO's body mandated to work on the harmonisation of non-preferential ROO, the Technical Committee on Rules of Origin, has made.

One of the WTO's agreements does pertain to Rules of Origin but its contents primarily regulate non-preferential Rules of Origin, meaning the rules that help member states with determining the origin of a product for statistical or quota management purposes (WTO, 1986). Non-preferential ROO do not affect the tariff level that an import will be levied with.

Nevertheless, there is precedent for agreements in the non-preferential space spilling over into preferential ROO design in PTAs and GSP schemes: the building blocks of how ROO are defined – tariff classification changes, value add rules, or technical requirements – were first formalised in the WTO Agreement for non-preferential ROO. These building blocks have since been adopted in all PTAs and GSP schemes across the globe. Based on this observation, Hoekman and Inama (2018) argue that agreement in the non-preferential space could be carried over into preferential ROO discussions. Agreement to policy issues at the WTO has in the past been carried forward without full consensus by the entire membership. One path here is agreement by a critical mass (i.e. negotiated by a few but benefits granted to all), as was the case with Agreement on Basic Telecommunications and the Agreement on Financial Services (Winslett, 2018). Another route are plurilateral agreements (i.e. negotiated by a few and benefits granted only to the parties), two of which are currently part of the WTO's covered agreements – the Agreement on Civil Aircraft and the Agreement on Government Procurement.¹⁴ In sum, there is precedent that ROO

¹⁴ For a full discussion on club-based initiatives to advance trade policy issues at the WTO, see Hoekman and Inama (2018) and Hoekman and Mavroidis (2015b, 2015a).

harmonisation in the non-preferential space could trickle into preferential ROO governance, and there is precedent that agreement at the WTO can be reached outside consensus.

Crook and Gordon (2017) point out that ROO harmonisation would require the negotiation partners – or the donor in GSP countries – to start from a clean slate without reference to existing precedents. This would be a break from existing practices where two rough ROO models prevail – the European model on the one hand, and the anglophone model preceded by the US which has spilled over to Canada, Australia and New Zealand (see for reference the discussion in chapter 2, section 3.4). Mega-regional trade agreements could form a stepping stone to breaking with precedent where several large players need to agree on a common ROO schedule (Armstrong, 2015). The Regional Comprehensive Economic Partnership (RCEP) which includes Australia, China, Japan, and New Zealand could be one such example. Indeed, DFAT, the Australian trade department, has expressed an interest in agreeing unrestrictive ROO in RCEP plus the expansion of cumulation provisions to more future parties (Crook & Gordon, 2017).

One of the most ambitious projects for ROO harmonisation in regional fora is the African Continental Free Trade Agreement (AfCFTA). It cuts across 22 intra-African PTAs with enforced ROO protocols, and contains the declared ambition to agree on one set of ROO to govern trade between its members. The complexity of this undertaking has created challenges during negotiation and ratification. Originally the list of parties covered all African countries, but by mid-2021 only 35 of the 55 countries have ratified the agreement. To date, ROO negotiations have not been concluded: while the regime-wide General Provisions have been agreed, ROO have not been defined for around one fifth of all goods (Gourdon et al., 2021).

The AfCFTA example shows both the opportunities and challenges of ROO harmonisation in regional fora. The success of agreeing on one set of General Provisions to replace the bilateral

ROO for all members is an unparalleled milestone at this scope. Importantly, the agreement reached on many impactful provisions is more than a lowest common denominator, as recent research published by the International Trade Center shows (Gourdon et al., 2021): AfCFTA includes a flexible cumulation arrangement whereby inputs and processing from each party can be counted towards satisfying the origin criteria as if they were domestically produced. This type of cumulation rule has been found to enhance intra-PTA trade (Augier et al., 2005). In addition, AfCFTA includes a business-friendly method for proving that the threshold for domestic content has been satisfied, the import content method. This means that businesses do not need to obtain the value of labour and inputs from domestic sources – information that is rarely held by the exporter, and often unobtainable because it could reveal the profit margins of intermediary producers. Instead, the exporter can present the value of imported products, a value that is easier to obtain since the value of imports must be declared with the domestic customs agency (Gourdon et al., 2021).

Not all General Provisions were agreed ambitiously however, in particular those pertaining to origin-related customs procedures like the self-certification of originating status or the provision of duty drawback. Nevertheless, the mere cost of ROO heterogeneity (Angeli et al., 2020) – the cost of having to comply with different rules for the same export when trading with different countries under different ROO – is reduced by agreeing on one harmonised rule set, even where opportunities for more ambitious agreement were missed.

3.3 Negotiation capacity building

As presented at the outset of this chapter, the challenge for ROO policy makers with an interest in North-South trade is how to improve North-South ROO for developing countries. The previous two sections have discussed a complete or partial removal of ROO, or ROO

harmonisation across different fora. In addition to these pathways, this final section also discusses capacity building as a tool to improve the relative negotiation leverage by developing countries in obtaining beneficial ROO outcomes in North-South PTA negotiations.

Given the obvious structural, economic and political discrepancies that bear on negotiations, capacity building in trade negotiations is a common policy intervention in the trade-development policy nexus (Commonwealth Secretariat & Jones, 2013). For example, UNCTAD has published a range of capacity-building guidelines on areas like digital trade policy harmonisation or agricultural trade negotiations. Similarly, the WCO runs a multitude of in-person and virtual training courses on origin implementations. Yet, despite policy and academic consensus that ROO often negatively affect the growth potential of GSP schemes and North-South PTAs and require technical expertise to negotiate, neither forum has taken active steps to enhance the negotiation capacity for ROO. Since ROO rely on such a complex range of information – like firm-level trade flow information, supply chain data by exporting company, and in-depth engagement with the private sector – capacity building for ROO is different to expertise needed for other less technical areas of PTAs. Capacity building for negotiations thus means both practical support in generating the industry and supply chain knowledge, and the training to use this information to form effective ROO positions and negotiate these. The WTO could play a central role in enhancing the ROO negotiation outcome for developing countries through capacity building. The WTO Secretariat's agenda is member-driven, meaning that its officials service WTO negotiations, help to provide oversight over obligations, and assist with dispute resolution (Shaffer, 2005).

The technical capacity of developing country negotiators could further be supported through knowledge generation and research which sits within the remit of the WTO Secretariat. For example, the WTO Secretariat holds considerable expertise on non-preferential ROO through the WTO Committee on ROO, and the Technical Committee on ROO which it co-owns with the

WCO. The secretariat also publishes OECD data and its own database on global supply chains and contributes to the methodological discourse on the measurement and attribution of origin in international trade statistics (WTO, 2018, 2019). The WTO could also contribute to a better global understanding of the granularity and development of trade across global supply chains, and the role that value addition on developing countries play therein. Developing country ROO negotiators could benefit from a public source of granular supply chain data to inform their position formation.

Among international organisations, UNCTAD could have the largest potential in building ROO negotiation capacity among developing countries. Unlike the WTO, UNCTAD's mandate empowers the organisation to advise developing countries on policy options, both for multilateral negotiations and PTAs (UNCTAD, 2018b). In this vein, UNCTAD carries out a range of capacity building programmes across policy areas. For example, UNCTAD developed a negotiations manual for trade in agriculture negotiations to benefit African PTA negotiations (UNCTAD, 2020c), publishes an ongoing report on case studies of lessons learned in port operations management (UNCTAD, 2020a) and has authored a free public course on how to analyse publicly available trade data (UNCTAD, 2013). To date, there is little information whether and how regional trade fora like AfCFTA develop the negotiation capacity developing country members. Beyond a practice effect, it is unlikely that opposing parties in a negotiation would actively aide the other side in becoming stronger negotiators. A regional forum with unified ROO could nevertheless strengthen the bargaining position and negotiation outcome in favour of developing countries by setting a stronger precedent. As discussed in chapter 3, precedented outcomes are common tools to define a starting point in PTA negotiations. In North-South trade agreements, either the European or the North American ROO model prevails (see chapter 2). Regional PTAs could generate a counter-model better adapted to developing country export interests which could then be rolled out as strong precedent.

For this effect to be impactful, regional PTAs would need to reflect innovation and specific drafting style. Initial analysis of AfCFTA shows that the European drafting style dominates the agreed ROO, but the actual policy reflects intra-African PTAs like SADC, COMESA or EAC (Gourdon et al., 2021). Once negotiations on AfCFTA ROO are concluded and the full agreement is in force, it will be interesting to analyse whether and how AfCFTA member countries use the agreement in future North-South PTA negotiations.

CONCLUSION

Preferential Trade Agreements between developing and industrialised countries have shaped the way North-South trade relations are designed and governed. The academic literature has dedicated many studies to the question whether non-multilateral fora for trade governance have succeeded in improving market access for developing countries. Curiously though, this research includes a persistent gap on ROO, provisions that shape the conditions of market access liberalisation. The design of ROO in every PTA and GSP determines whether all, some or no North-South trade benefits in real life from the market access benefits in the treaty text. Despite this clear real-life relevance for North-South trade, both the research and policy-making on North-South PTAs have lacked a systematic evidence base and analysis of ROO.

This matters because ROO can be designed to operationalise and facilitate the update of PTA tariff preferences, as is their *raison d'être* and legal justification – but negotiators and policy makers can also design them in a way that protects domestic industries, enhances the domestic attractiveness for foreign investments, or changes the integration into upstream and downstream supply chains of domestic producers. In other words, ROO could be designed as economic and industrial policy tools with protectionist tendencies, all while evading WTO legal challenge. This thesis has addressed both the evidence and research gap on this potent trade policy lever in multiple ways, and has introduced findings that contribute to ongoing debates on the design, drivers and objectives behind North-South trade agreements.

1 A SYSTEMATIC MAPPING OF ROO

CONCLUSION

I began this thesis by introducing a novel dataset, the first of its kind, that presents systematic codified information on all ROO provisions across 278 PTAs notified to the WTO by 2016. I used this data to map out the design of ROO in PTAs and the variation found within provisions that have commonly been considered homogeneous or binary in design and effect. The data and discussion show that the design of ROO in PTAs across the globe is more complex than previously understood, and that untangling this complexity can help understand the diverse drivers and effects of North-South PTAs. In doing so, the first chapter contributes in particular to the academic literature that is dedicated to accounting for the change in scope and design of PTAs to gain a more accurate understanding of “where the global trading system is going and how its governance can be improved.” (Hofmann et al., 2017). The chapter develops new index metrics, relying on a common methodological approach when mapping PTA provisions across a large-N dataset (Dür et al., 2014; Hofmann et al., 2019). These metrics help to map the potential effects of ROO as an additional trade costs to exporters, but also the variation in how different countries design ROO to facilitate the costs of ROO compliance. These data and metrics respond directly to calls for better evidence on ROO in the literature (Brenton & Özden, 2005; Conconi et al., 2018; Hoekman & Inama, 2018; Laaker, 2019). The evidence presented also expands the existing research focus away from European and North American PTAs towards a global understanding of how other agreements, including North-South and South-South PTAs, design core provisions in their PTAs.

Chapter 1 highlights that ROO are far from uniform blanket rules on how a product’s origin is determined. Instead, the individual design features of ROO provisions are actively used by negotiators to introduce different rules, regulations, facilitations and restrictions to traders which warrant further research and analysis. The findings presented in this chapter thus do not only highlight a gap in theory and evidence, but also suggest that the existing literature may have mischaracterised the design of ROO and PTA market access benefits as a whole: rather than a black box of opaque policy content, ROO could be part of the answer of what and why developing

countries seek to achieve by negotiating North-South PTAs. The exploration of some possible causal pathways on the basis of qualitative information is the focus of the following chapter.

2 ROO OUTCOMES IN NORTH-SOUTH PTAS

The second chapter builds on the understanding and systematic mapping of ROO developed in the first chapter. Using this understanding, the chapter focusses on a specific debate in the literature: why do developing countries negotiate North-South PTAs when they already receive generous market access benefits through GSP schemes? Given the considerable negotiation cost and imbalances, some authors argue that North-South PTA negotiations do not result in an improvement of market access for developing countries *vis-à-vis* a GSP benchmark (Manger, 2012a; Mansfield & Milner, 1999). I develop the argument that, rather than changing the degree of market access or its stability, North-South PTAs change the usability of GSP market access. ROO have been characterised in the literature as a core determinant of trade preference usability and their effect has been proxied through a ROO restrictiveness index. To test this argument, I thus introduce and apply an improved ROO restrictiveness index to map whether the transition from GSP schemes to North-South PTAs introduces a change in trade preference usability.

The findings the chapter presents are threefold. First, it highlights that the usability of North-South trade preferences changes for every North-South dyad in the sample and for almost every sector for these dyads. Thus, North-South PTAs change the usability of GSP schemes. Second, the chapter analyses whether these changes follow a specific pattern – i.e. whether preference usability improves or worsens, whether these changes are the same for all countries, and whether different sectors are equally affected. It shows that clear patterns emerge by GSP donor. Preference usability improves after a PTA negotiation for all North-South PTAs involving the US, Australia and New Zealand. The European GSP donors and Canada conclude improvements in preference

usability but carve out sectors of domestic sensitivity. For instance, the difference between the EU's GSP and PTA ROO restrictiveness scores is largest for products of political and/or economic sensitivity: arms, machinery, chemicals, animal and vegetable products, or apparel. Japanese North-South PTAs introduce new barriers to preference usability for all sectors.

For all countries that offer either a blanket improvement or worsening of preference usability, a closer look at the data shows that these effects are different depending on geographical location of the Southern PTA party. Japanese, Australian and New Zealand's North-South PTAs include more restrictive ROO for all PTAs concluded with partners in their economic and geographic region. This suggests that ROO outcomes may have been driven by desires to strengthen regional economic integration and the relative competitiveness of regional producers, while PTAs concluded with partners further removed contained provisions to facilitate the inclusion into global supply chains.

3 DRIVERS OF ROO OUTCOMES IN NORTH-SOUTH PTAs

The third chapter aims to understand the drivers that determine the changes in preference usability outcomes found in the previous chapter. I first develop four causal pathways of possible dynamics that could influence ROO outcomes in North-South PTA negotiations, drawing on researched concepts and policies in the trade and development nexus established at the outset of this thesis. These pathways span two theoretical frameworks associated with drivers of negotiation outcomes, namely Rational Choice and Bounded Rationality. Using Australian North-South PTA dyads as a case study, I then apply these causal pathways to evidence obtained through extensive semi-structured interviews with trade negotiators and industry representatives. The evidence obtained

through this qualitative case study could shine a light on novel and impactful determinants of PTA negotiations not previously discussed in the literature. The explorations finds interesting examples of how these causal pathways can and do apply in practice, in particular where the Northern party's domestic interest for genuine trade liberalisation that sets the direction of travel, but with inter-sectoral trade-offs and bounded rationality leading to ROO outcomes that negotiators concede. These findings could be extrapolated to other GSP donors to better understand how the preference usability in North-South PTAs is shaped, and what this could tell researchers about drivers for North-South PTA formation.

The complexity, resource intensity, and reliance on often unavailable data and evidence occurs as a common theme throughout the interviews. This motivates the fourth and final chapter of this thesis that addresses potential avenues and fora for reform to influence international ROO design norms in a way that makes them less costly for Southern governments to negotiate and for traders to use.

4 REFORM POTENTIAL FOR NORTH-SOUTH ROO

With multilateral negotiations in gridlock and new ROO sets and PTAs mushrooming, the question arises: what forums are available to developing countries to reform ROO? The chapter reviews and introduces ROO reform proposals through the lens of the data and conclusions presented in previous chapters. It focusses in particular on the balance between effectiveness of reform in removing market access barriers for developing countries, and the likelihood of the proposal being agreed. Drawing on assessments from policy makers and experts at international organisations, it then discusses potential fora for reform.

CONCLUSION

The evaluation presents a path for ROO reform, using the most effective fora and design proposals. It suggests to begin the reform process by first increasing capacity building initiatives to heighten awareness around the risks of a growing ROO ‘spaghetti bowl’ to users and negotiators of North-South PTAs. The OECD-DESTA dataset on ROO published as part of this thesis can form the evidence base for this initiative. Second, regional harmonisation could be advanced through the negotiation or committee-based updates to PSRs in an effort to streamline ROO results through a ratchet effect. Third, these regional bases for harmonisation could then be used to identify products and sectors where the removal of ROO requirements, or the introduction of a default origin declaration, like a port of origin. These proposals are designed to balance the risks of tariff fraud with the benefits of genuine trade preference usability.

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APPENDICES

Appendix 1 Codebooks for OECD DESTA ROO Database

Appendix A Codebook for PSR dataset

[Variable name] Prompt	Variable type
[roo_psr] Does the agreement contain product-specific Rules of Origin?	binary
[roo_who] Does a “wholly obtained” requirement apply to the product?	binary
[roo_stc] Does a substantial transformation criterion apply to the product?	binary
[roo_vcr] Is the product’s origin defined through a value content requirement?	binary
[roo_vcr_thr] Does the product-specific rule define further how the value content threshold shall be calculated?	binary
[roo_vcr_pct] What is the value content threshold in percent?	numeric
[roo_psr_rbd] Is the value content requirement calculated as a minimum regional content requirement using a <u>build-down</u> calculation?	binary
[roo_psr_rbu] Is the value content requirement calculated as a minimum regional content requirement using a <u>build-up</u> calculation?	binary
[roo_psr_alt] Is more than one calculation method permitted to determine the Regional Value Content?	binary
[roo_psr_ime] Is the value content requirement calculated through import content?	binary
[roo_psr_ric] Is the value content requirement calculated through both regional and import content?	binary
[roo_psr_cst] Is the price basis for the content threshold requirement the ex-works <u>cost</u> ?	binary
[roo_psr_fnt] Is the price basis for the content threshold requirement the FOB/net price?	binary
[roo_psr_prc] Is the price basis for the content threshold requirement the ex-works price?	binary
[roo_psr_fob] Is the price basis for the content threshold requirement the FOB (free on board) price?	binary
[roo_ctc] Is the product’s origin defined through a change in tariff classification?	binary
[roo_ctc_exc] Are one or more HS codes or product groups explicitly excluded from being used as inputs for originating goods?	binary
[roo_ctc_cc] Is the product’s origin defined through a change in chapter?	binary

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[roo_ctc_ch] Is the product's origin defined through a change in heading?	binary
[roo_ctc_cs] Is the product's origin defined through a change in subheading?	binary
[roo_tr] Is the product's origin defined through a technical requirement?	binary
[roo_psr_alt] Do two or more origin criteria apply alternatively?	binary

Appendix B Codebook for GP dataset

[Variable name] Prompt	Variable type
[roo_cer_sel] Does the agreement permit self-certification?	binary
[roo_cer_adm] Does the agreement require origin certification by an authority?	binary
[roo_cer_two] Does the agreement permit a combination of self-certification and certification by an authority?	binary
[roo_cer_val]: How many months is the certificate of origin valid for?	numeric
[roo_cer_rec]: How many months are origin-related documents kept on record (by exporters, producers or importers)?	binary
[roo_cer_exe] Is there a certificate exemption?	binary
[roo_cer_usd] What is the threshold for exemption in \$US ?	numeric
[roo_cer_err] Are amendments for minor errors permitted?	binary
[roo_ver_exp] Does the competent verification authority directly request information from the exporter?	binary
[roo_ver_imp] Does the competent verification authority directly request information from the importer?	binary
[roo_ver_vis] Is verification .carried out through a visit to the exporter's premises in the exporting country?	binary
[roo_ver_ind] Is there an indirect verification of the certificate?	binary
[roo_ver_alt] Is more than one verification method permitted?	binary
[roo_ver_cum] Is more than one verification method prescribed?	binary
[roo_cum_bil] Does the agreement allow for bilateral or partial cumulation?	binary
[roo_cum_dia] Does the agreement allow for diagonal cumulation?	binary
[roo_cum_ful] Does the agreement allow for full cumulation?	binary
[roo_cum_cro] Does the agreement allow for cross cumulation?	binary
[roo_tol_min] Does the agreement contain de minimis provisions?	binary
[roo_tol_per] What is the minimis percentage?	numeric
[roo_cum_abs] Does the agreement include absorption provisions?	binary
[roo_rwr_rbd] Is the value content requirement calculated as a minimum regional content requirement using a build-down calculation?	binary
[roo_rwr_rbu] Is the value content requirement calculated as a minimum regional content requirement using a build-up calculation?	binary

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[roo_rwr_alt] Is more than one calculation method permitted to determine the minimum regional content requirement?	binary
[roo_rwr_ime] Is the value content requirement calculated through import content?	binary
[roo_rwr_rie] Is the value content requirement calculated through both regional and import content?	binary
[roo_rwr_cst] Is the price basis for the content threshold requirement the ex-works cost?	binary
[roo_rwr_fnt] Is the price basis for the content threshold requirement the FOB/net price?	binary
[roo_rwr_prc] Is the price basis for the content threshold requirement the ex-works price?	binary
[roo_rwr_fob] Is the price basis for the content threshold requirement the FOB (free on board) price?	binary
[roo_drb] Does the agreement contain drawback rules?	binary
[roo_dbb_yes] Does the agreement allow drawback?	binary
[roo_fng] Does the agreement allow for joint storage of originating and non-originating inputs when these inputs are interchangeable?	binary
[roo_adr] Does the agreement allow for advance rulings?	binary
[roo_trs] Does the agreement contain a transshipment rule?	binary
[roo_rev] Does the agreement contain a review and appeal mechanisms?	binary

Appendix 2 Calculation of precedented ROO restrictiveness indices

Appendix C Estevadeordal Index of ROO restrictiveness

Index value y	ROO provision y*
1	$y^* \leq$ Change from one tariff line/HS8 item to another
2	Change from tariff line $< y^* \leq$ subheading/HS6
3	Change from subheading/HS6 $< y^* \leq$ change from subheading/HS6 and a regional value content threshold
4	Change from subheading/HS6 and a regional value content threshold $< y^* \leq$ change from heading/HS4
5	change from heading/HS4 $< y^* \leq$ change from heading/HS4 and a regional value content threshold
6	change from heading/HS4 and a regional value content threshold $< y^* \leq$ change in chapter/HS2 and a regional value content threshold
7	change in chapter/HS2 and a regional value content threshold $< y^* \leq$ change in chapter/HS2 and a technical requirement

Appendix D Harris Index of ROO restrictiveness

Change of index points	ROO provision	
	Change in classification	
+2		Change in classification at item level (HS8)
+4		Change in classification at subheading level (HS6)
+6		Change in classification at heading level (HS4)
+8		Change in classification at chapter level (HS8)
	Exceptions	
+5		items
+6		Subheadings
+7		Headings
+8		Chapters

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	Additional permissions	
-5		items
-6		Subheadings
-7		Headings
-8		Chapters
	Regional value content thresholds	
+5		1-40%
+6		>40-50%
+7		>50-60%
+8		>60%
+4	Technical requirement	
-3	Alternative rules	

Appendix E Kelleher's Regime-Weighted Harris Index

<i>Harris Index</i>		<i>Kelleher's regime-weighted Harris Index</i>
Change of index points	ROO provision	
	Change in classification	Multiplied by size of cumulation zone, measured as $1 - \frac{\sum \text{Cumulation Zone}}{100}$
+2	Change in classification at item level (HS8)	
+4	Change in classification at subheading level (HS6)	
+6	Change in classification at heading level (HS4)	
+8	Change in classification at chapter level (HS8)	
	Exceptions	Multiplied by the <i>de minimis</i> threshold, measured as $1 - \frac{100 - \text{de minimis threshold}}{100}$
+5	items	

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+6		Subheadings
+7		Headings
+8		Chapters
	Additional permissions	
-5		items
-6		Subheadings
-7		Headings
-8		Chapters
	Regional value content thresholds	
+5		1-40%
+6		>40-50%
+7		>50-60%
+8		>60%
+4	Technical requirement	
-3	Alternative rules	
	Certification	
0		Self
+4		Two-step
+8		External

Appendix 3 Calculation of adapted ROO restrictiveness index

Appendix F Adapted ROO restrictiveness index used in this thesis

Index Calculation	ROO provision		Expressed in index as	Change from Kelleher's Regime-Weighted Harris Index
	W.O.		+8	Equivalent to CC score
	RVC threshold	1-40%	+5	
		>40-50%	+6	
		>50-60%	+7	
		>60%	+8	
	CTC rules	CC	+8	
		CTH	+6	
		CTSH	+4	
	TR		+5	
	PSR alternatives		-3	
	Two PSR apply at once		+3	Not included in Kelleher index. +3 introduced akin to treatment in Harris index
	PSR exclusions		+6	Not included in Kelleher index. +3 introduced akin to treatment in Harris index
Additions	Cumulation (weighted)	No cumulation	x1.0	Adjusted to reflect ex-ante type of cumulation and make comparison more accurate.
		Bilateral	x0.9	
		Diagonal	x0.8	
		Cross	x0.7	
	Certification	Self-certification	0	

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		Mix of self- and other certification	3	
		Certification by authority	5	
	<i>De minimis</i> threshold		Multiplied by threshold, captured as $1 - \frac{100 - \textit{de minimis threshold}}{100}$	

Appendix 4 Covered country dyads and PTAs

Appendix G Table of country dyads covered by both a PTA and GSP

GSP donor	Developing country
EU	Côte d'Ivoire
	Nicaragua
	Honduras
	El Salvador
	Cameroon
	Papua New Guinea
	Samoa
	Egypt
	Algeria
	Jordan
	Lebanon
	Morocco
	Tunisia
	CARIFORUM Group: Belize, St. Kitts and Nevis, Bahamas, Dominican Republic, Antigua and Barbuda, Dominica, Jamaica, Saint Lucia, Saint-Vincent and the Grenadines, Barbados, Trinidad and Tobago, Grenada, Guyana, Surinam
	Seychelles
	Mauritius
	Zimbabwe
	Mexico
	South Africa
USA	Chile
	Colombia
	Costa Rica
	Dominican Republic

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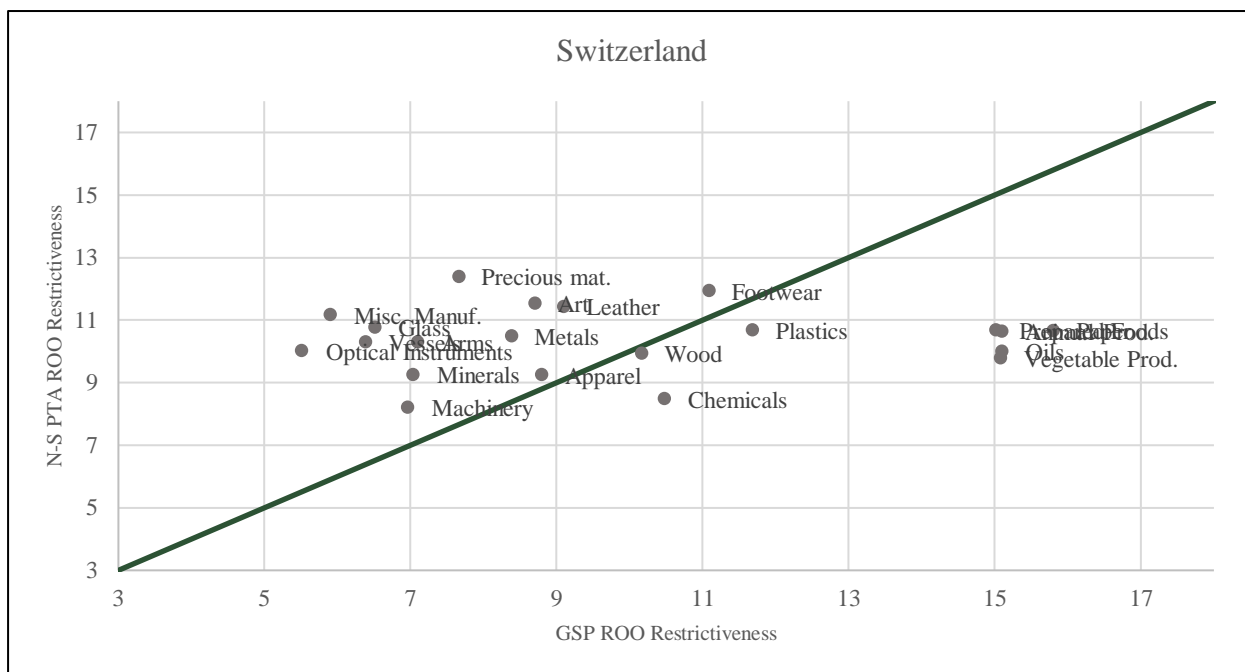
	Guatemala
	Honduras
	Jordan
	Mexico
	Panama
	Peru
	El Salvador
New Zealand	Malaysia
	Thailand
	ASEAN
	China
Switzerland	China
	Colombia
	Panama
	Honduras
	El Salvador
	Nicaragua
Canada	Peru
	Colombia
	Costa Rica
	Panama
	Honduras
	Jordan
	Mexico
Australia	Thailand
	Malaysia
	ASEAN
	China

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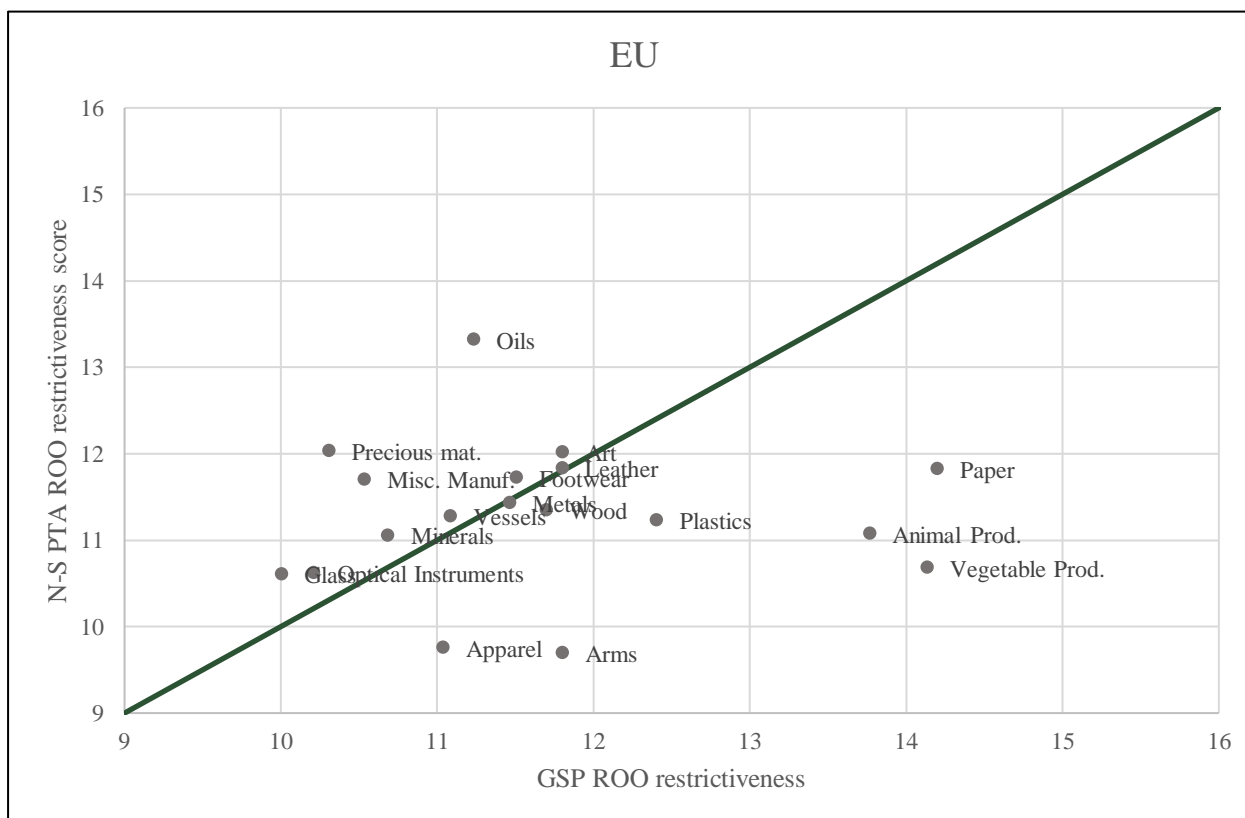
	Chile
	Indonesia
Japan	Malaysia
	Mexico
	Mongolia
	Peru
	Thailand
	Vietnam
	Philippines
	ASEAN
Norway	Guatemala
	Honduras
	Lesotho
	South Africa
	Eswatini

Appendix 5 ROO Restrictiveness by sector and GSP donor country

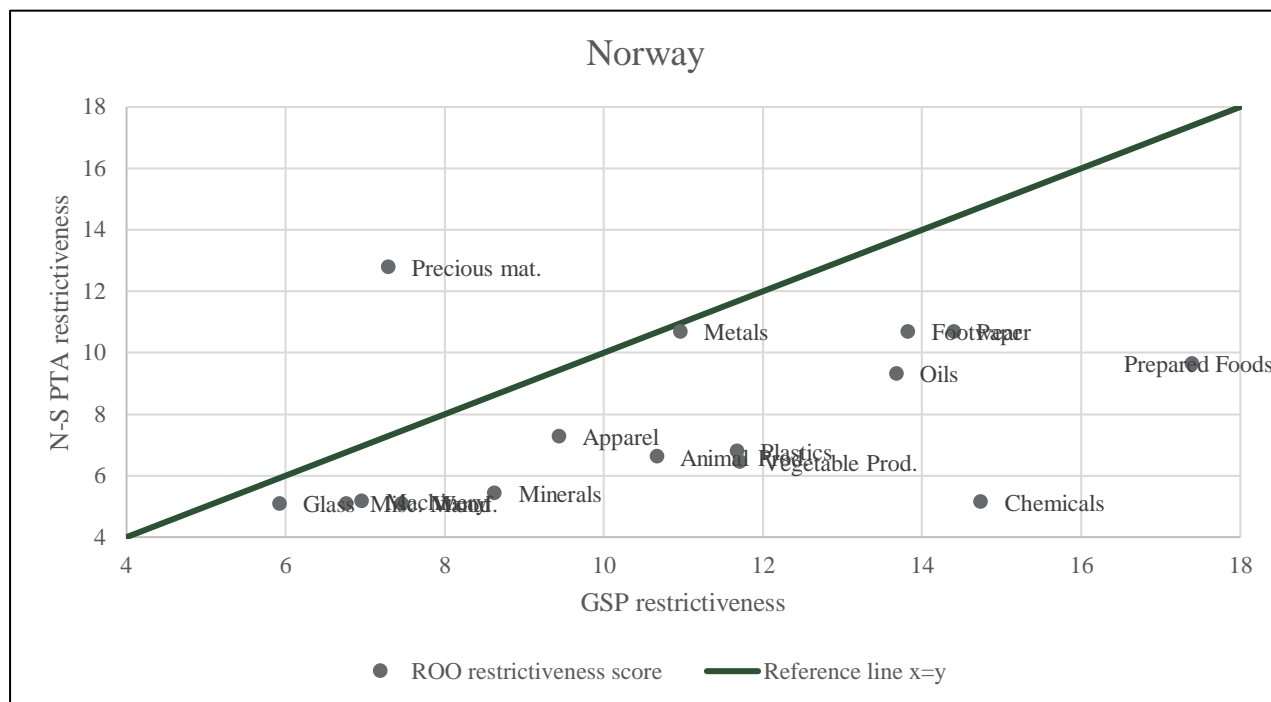
Appendix H Switzerland: Spread of ROO restrictiveness by sector (incl. reference line)



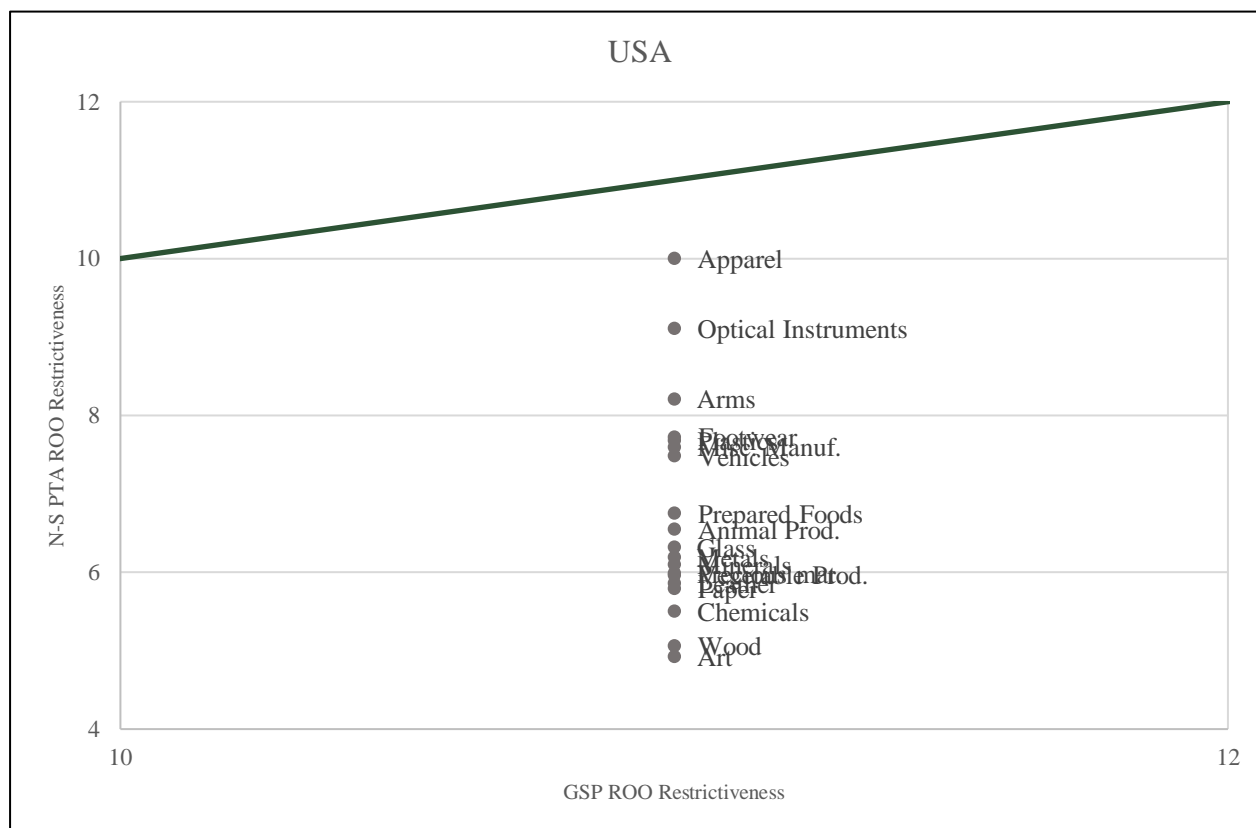
Appendix I EU: Spread of ROO restrictiveness by sector (incl. reference line)



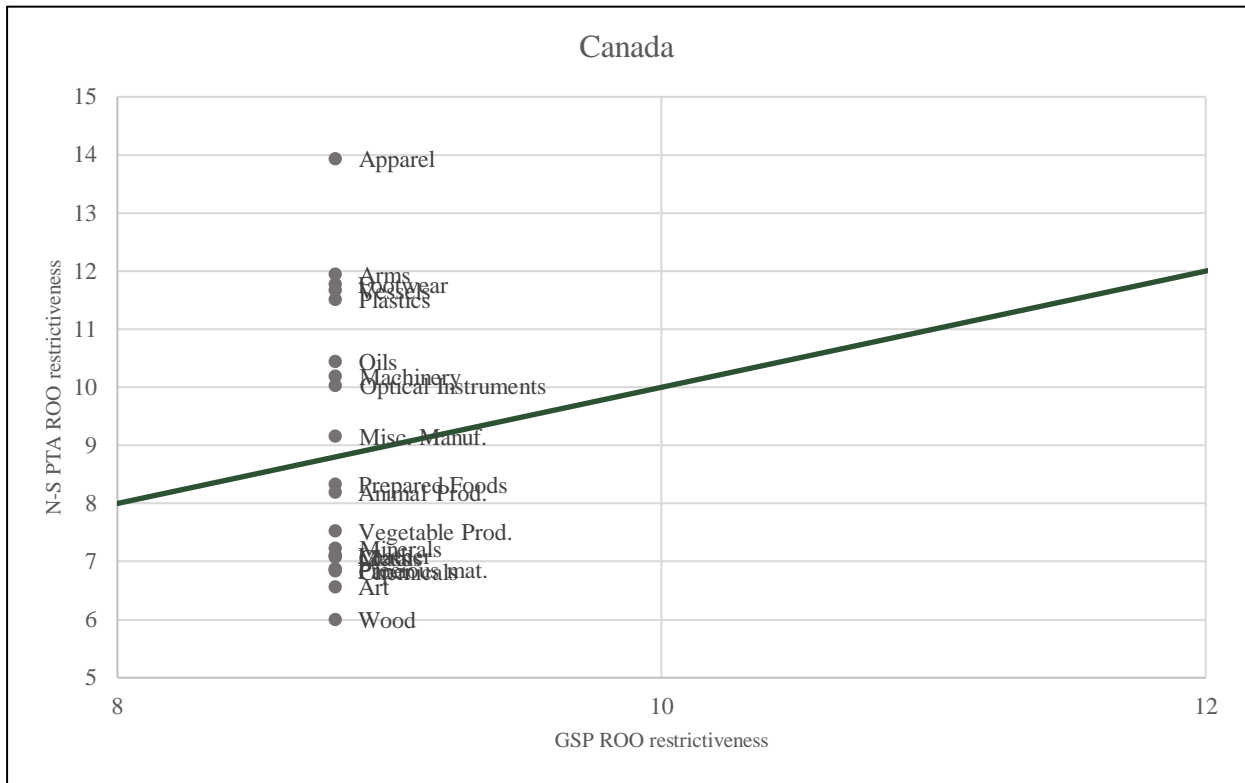
Appendix J Norway: Spread of ROO restrictiveness by sector (incl. reference line)



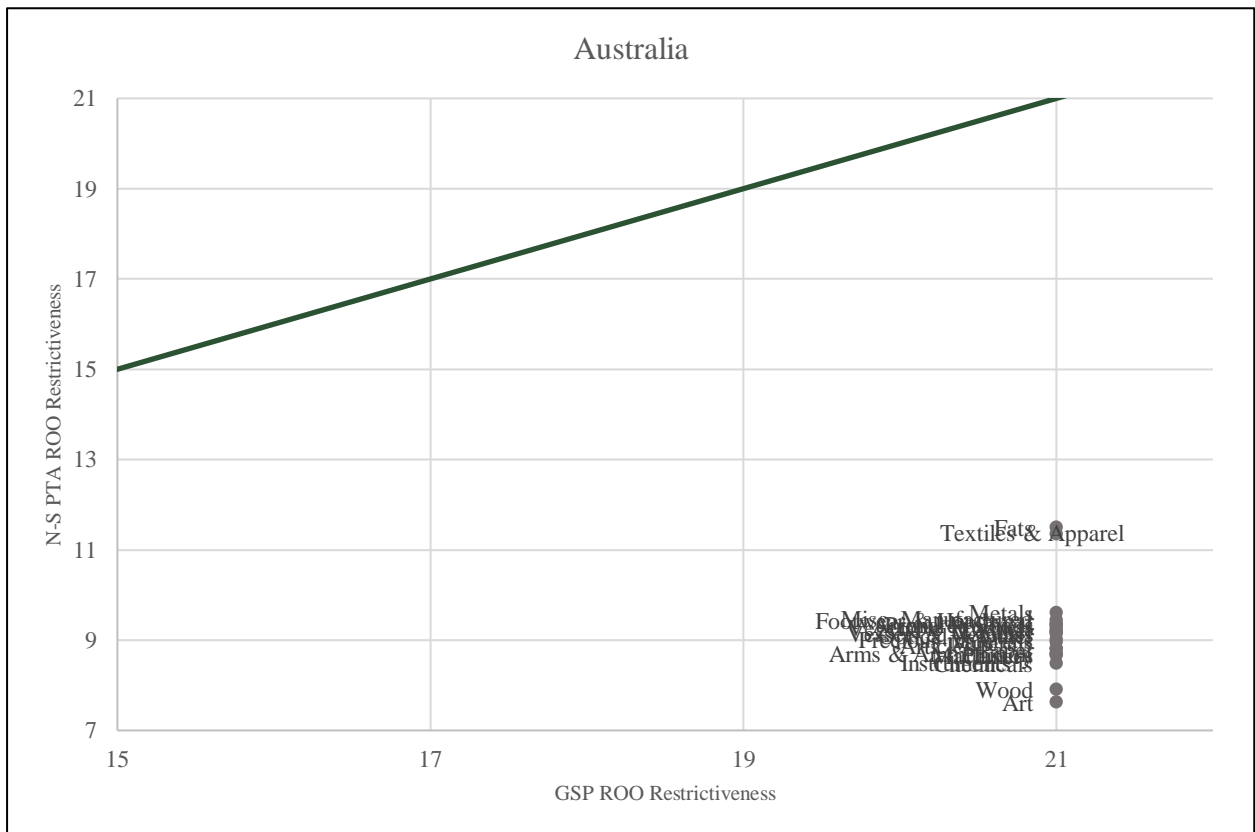
Appendix K USA: Spread of ROO restrictiveness by sector (incl. reference line)



Appendix L Canada: Spread of ROO restrictiveness by sector (incl. reference line)



Appendix M Australia: Spread of ROO restrictiveness by sector (incl. reference line)



Appendix N New Zealand: Spread of ROO restrictiveness by sector (incl. reference line)

