Mapping and Measuring Rules of Origin around the World

Antoni Estevadeordal
and
Kati Suominen

Integration, Trade and Hemispheric Issues Division,
Integration and Regional Programs Department
Inter-American Development Bank

June 2005

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Introduction

Preferential trading agreements (PTAs) have proliferated spectacularly around the world over the past decade. The wave of PTA formation has carried with it a colorful mosaic of trade disciplines—such as provisions on market access for goods and services, standards, safeguards, government procurement, and investment—to govern economic relations between the PTA partners. These various rules dispersed through PTAs are hardly inconsequential given that more than a third of global commerce takes place within PTAs. Moreover, reverberating to firms’ export, outsourcing, and investment decisions around the world, PTA disciplines arbitrate both actual and potential trade and investment flows within PTAs—and between PTAs and the rest of the world (ROW).

Yet, the richness of the PTA universe notwithstanding, there are astonishingly few rigorous efforts to disaggregate PTA agreements in order to analyze the operation and effects of the various rules they carry. This, in turn, implies that (1) very little is known about the compatibility of PTA agreements with one another or with the multilateral WTO Agreements; (2) the political economy sources of the divergent contractual formats of PTAs remain unexplored; and (3) analysts have yet to disentangle the respective economic effects of the different PTA disciplines from each other, let alone from the effects of variables beyond PTAs. The lack of understanding of the various component parts of the rapidly burgeoning PTA universe severely undercuts the credibility and usefulness of the arguments of both those who view PTAs as discriminatory instruments hostage to protectionist interests that work to obstruct global trade liberalization, and those who regard PTAs as containing a liberalizing logic conducive to multilateral opening.

The purpose of this chapter is to break new ground in dissecting PTAs by focusing on rules of origin (RoO), a crucial yet poorly understood market access discipline included in virtually every PTA. The economic justification for RoO is to curb trade deflection—to avoid products from non-PTA members from being transshipped through a low-tariff PTA partner to a high-tariff one. As such, RoO are an inherent feature of free trade

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1 PTAs include free trade agreements, customs unions, common markets, and single markets. Some 250 PTAs had been notified to the World Trade Organization (WTO) by the end of 2002; of these, 130 were notified after January 1995. The WTO expects the number of PTAs to soar to nearly 300 by the end of 2005.
2 When unilateral preferential schemes such as the Generalized System of Preferences (GSP) are accounted for, no less than 60 percent of world trade is estimated to be conducted on a preferential basis. Importantly, the unilateral preferential programs carry many of the same disciplines as PTAs.
3 The few mappings of PTA disciplines include WTO (1998, 2002ab), IADB (2002), and Suominen (2004) produced in tandem with this chapter. The few existing rigorous, scholarly studies on the determinants of PTA provisions (beyond the contributions on rules of origin in this volume) tend to center on a single PTA and examine inter-sectoral variation in its market access provisions. See Milner (1997); Kowalczyk and Davis (1998); Olarreaga and Soloaga (1998); and Estevadeordal (2000). For the effects of PTAs’ market access provisions, see Estevadeordal and Robertson (2003) and Ghosh and Yamarik (2003).
agreements (FTAs) where the member states’ external tariffs diverge and/or where the members wish to retain their individual tariff policies vis-à-vis the ROW. RoO are also widely used in customs unions (CUs), either as a transitory tool in the process of moving toward a common external tariff (CET), or as a more permanent means of covering product categories where reaching agreement on a CET is difficult, for instance due to large tariff differentials between the member countries. Thus, basically all PTAs contain rules for establishing the origin of goods.\(^4\) RoO are not only a central facet of preferential trading today, but also at the heart of many on-going PTA negotiations, such as the 34-country talks to establish the Free Trade Area of the Americas (FTAA), and the European Union-Southern Common Market (Mercosur) negotiations to connect the world’s two largest customs unions. In addition, RoO are gaining growing policy attention at the multilateral level: in preparation for the Doha Trade Round, the WTO’s Committee on Regional Trade Agreements has for the first time raised preferential RoO to a systemic issue in the negotiation agenda.

Since a failure to meet the RoO disqualifies an exporter from the PTA-conferrred preferential treatment, RoO can and must be seen as a central market access instrument reigning over preferential trade. Notably, the relevance of RoO as gatekeepers of commerce can accentuate over time: RoO remain in place even after preferential tariffs have been phased out. But what renders RoO particularly relevant is that they are hardly a neutral instrument: given that RoO can serve as an effective means to deter transshipment, they can tempt political economy uses well beyond the efforts to avert trade deflection. Indeed, RoO are widely considered a trade policy instrument that can work to offset the benefits of tariff liberalization.\(^5\) Often negotiated at up to 8- or 10-digit level of disaggregation, RoO, like the tariff, make a superbly targetable instrument. Moreover, that RoO are generally defined in highly technical terms rather than assigned a numerical value entails that they can be tailored for each individual product differently, and that they are not nearly as immediately quantifiable and comparable across products as the tariff is.

It is the use of RoO as a political economy instrument that helps account for the choice of RoO to govern preferential economic exchange—for the integrating governments’ willingness to expend time and resources on the tedious, technical, and often highly contentious crafting of RoO protocols. After all, governments could completely forego using RoO by entering into a CU or by excluding the potentially trade-deflecting

\(^4\) The Asia-Pacific Cooperation (APEC) forum is a prominent exception, with its members employing their respective domestic RoO. APEC is based on a principle of open regionalism—extending tariff preferences on an MFN basis—which renders the need for preferential RoO obsolete.

\(^5\) Most prominently, RoO can be employed to favor intra-PTA industry linkages over those between the PTA and the ROW, and, as such, to indirectly protect PTA-based input producers vis-à-vis their extra-PTA rivals (Krueger 1993; Krishna and Krueger 1995). As such, RoO are akin to a tariff on the intermediate product levied by the importing country (Falvey and Reed 2000; Lloyd 2001), and can be used by one PTA member to secure its PTA partners’ input markets for the exports of its own intermediate products (Krueger 1993; Krishna and Krueger 1995). Furthermore, given that RoO hold the potential for increasing local sourcing, governments can use RoO to encourage investment in sectors that provide high value added and/or jobs (Jensen-Moran 1996; Hirsch 2002).
economic sectors from the PTA’s coverage. Yet, the bulk of PTAs employ RoO, and RoO of widely different types and combinations.

Notwithstanding RoO’s function of refereeing preferential market access, potential uses for distributive purposes, complexity in existing PTAs and centrality in on-going PTA negotiations, and increasing relevance on the multilateral agenda, the global RoO panorama remains largely unexplored.\(^6\) It is the task of this chapter is to mend this gap. We present a global mapping of the existing RoO regimes, and put forth an analytical coding scheme for the types of product-specific and regime-wide RoO employed in these regimes. The most immediate contribution of this chapter is to advance the understanding of the RoO regimes around the world. Except for Suominen (2004) produced in tandem with this chapter, there are no comparable mappings; the contribution here is first of its kind.\(^7\) The analytical tools developed here are already employed in empirical work, both in our efforts to capture the global trade effects of RoO,\(^8\) and in chapter [CHAPTER NUMBER] of this book that focuses on RoO’s effects on investment. This chapter also strives to inspire further work aimed at disaggregating preferential trading arrangements into their component parts—a task is absolutely crucial for understanding the implications of regionalism to the global economic system, as well as for crafting nuanced, well-informed, and fruitful policy prescriptions concerning PTAs.

The first section of this chapter presents the different types of product-specific and general RoO used in RoO regimes. The second section examines the prevalence of the different types of RoO in a hundred integration schemes in the world. Section three puts forth a methodology for developing analytical measurements of the degree of restrictiveness of product-specific RoO and flexibility provided by regime-wide RoO, and uses these measures to draw comparisons within and across RoO regimes as well as over time. The fourth section discusses the RoO innovations. Section five concludes.

I. Types of Rules of Origin in FTAs

There are two types of rules of origin, non-preferential and preferential RoO. Non-preferential RoO are used to distinguish foreign from domestic products in establishing anti-dumping and countervailing duties, safeguard measures, origin marking requirements, and/or discriminatory quantitative restrictions or tariff quotas, as well as in the context of government procurement. Preferential RoO, meanwhile, define the conditions under which the importing country will regard a product as originating in an

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\(^6\) The exceptions are WTO (2002), Estevadeordal and Suominen (2003), and Suominen (2004) produced in tandem with this chapter.

\(^7\) WTO (2002) does provide a charting of various features of RoO regimes. However, this chapter goes well beyond the WTO’s study by including a greater number of regimes, analyzing in much greater detail the universe of product-specific RoO, examining a broader range of regime-wide RoO, discussing RoO innovations, and, perhaps most importantly, developing methodologies for capturing the relative restrictiveness of RoO and RoO regimes.

exporting country that receives preferential treatment from the importing country. PTAs, in effect, employ RoO to determine whether a good qualifies for preferential treatment when exported from one member state to another.

Both non-preferential and preferential RoO regimes have two dimensions: sectoral, product-specific RoO, and general, regime-wide RoO. We discuss each in turn.

A. Product-Specific RoO

The Kyoto Convention recognizes two basic criteria to determine origin: wholly obtained or produced, and substantial transformation. The wholly obtained or produced-category applies only to one PTA member, and asks whether the commodities and related products have been entirely grown, harvested, or extracted from the soil in the territory of that member, or manufactured there from any of these products. The rule of origin is met through not using any second-country components or materials. Most countries apply this strict and precise definition.

The substantial transformation-criterion is more complex, involving four main components that can be used as stand-alone or in combinations with each other. The precision with which these components define RoO in PTAs today contrasts sharply with the vagueness of the substantial transformation-criterion as used by the United States since 1908 until the inception of the Canada-US Free Trade Agreement (CUSFTA) in 1989 and, subsequently, the North American Free Trade Agreement (NAFTA) in 1994 (Reyna 1995: 7).

The first component of the substantial transformation criterion is a change in tariff classification (CTC) between the manufactured good and the inputs from extra-PTA parties used in the productive process. The CTC may require the product to alter its chapter (2 digits under the Harmonized System), heading (4 digits), subheading (6 digits) or item (8-10 digits) in the exporting PTA member.

The second criterion is an exception attached to a particular CTC (ECTC). ECTC generally prohibits the use of non-originating materials from a certain subheading, heading, or chapter.

The third criterion is value content (VC), which requires the product to acquire a certain minimum local value in the exporting country. The value content can be expressed in three main ways: as the minimum percentage of value that must have been added in the exporting country (domestic or regional value content, RVC); as the difference between the value of the final good and the costs of the imported inputs (import content, MC); or

9 The Revised Kyoto Convention is an international instrument adopted by the World Customs Organization (WCO) to standardize and harmonize customs policies and procedures around the world. The WCO adopted the original Convention in 1974. The revised version was adopted in June 1999.

10 The old criterion basically required the emergence of a “new and different article” from the manufacturing process applied to the original article. It was, however, much-criticized for allowing—and indeed requiring—subjective and case-by-case determinations of origin (Reyna 1995: 7).
as the value of parts (VP), whereby originating status is granted to products meeting a minimum percentage of originating parts out of the total.

The fourth RoO component is technical requirement (TECH), which requires the product to undergo certain manufacturing operations in the originating country. TECH essentially prescribes or prohibits the use certain input(s) and/or the realization of certain process(es) in the production of the good.\footnote{TECH can be highly discretional given that lack of classification tools to objectively guarantee sufficient transformation in the production of the good.} It is a particularly prominent feature in RoO governing textile products.

The change of heading-requirement is the staple of PTAs. It is used either as stand-alone or in tandem with other RoO criteria. Also frequently used are the import content (usually ranging from 30 to 60 percent), value of parts, and technical requirements. Adding analytical complexity albeit administrative flexibility is that many RoO regimes provide two alternative RoO for a given product, such as a change of chapter or, alternatively, a change of heading plus RVC.

**B. Regime-Wide RoO**

Besides product-specific RoO, RoO regimes vary by the types of general RoO they employ—including in the degree of *de minimis*, the roll-up principle, and the type of cumulation.

First, most PTAs contain a *de minimis* rule, which allows for a specified maximum percentage of non-originating materials to be used without affecting origin. The *de minimis* rule inserts leniency in the CTC and TECH criteria by making it easier for products with non-originating inputs to qualify.

Second, the roll-up or absorption principle allows materials that have acquired origin by meeting specific processing requirements to be considered originating when used as input in a subsequent transformation. That is, when roll-up is allowed, non-originating materials are not taken into account in the calculation of the value added of the subsequent transformation.

Third, cumulation allows producers of one PTA member to use materials from another PTA member (or other members) without losing the preferential status of the final product. There are three types of cumulation. Bilateral cumulation operates between the two PTA partners and permits them to use products that originate in the other PTA partner as if they were their own when seeking to qualify for the PTA-conferred preferential treatment in that partner. Basically all RoO regimes apply bilateral cumulation. Under diagonal cumulation, countries tied by the same set of preferential origin rules can use products that originate in any part of the common RoO zone as if they originated in the exporting country. Full cumulation extends diagonal cumulation. It provides that countries tied by the same RoO regime can use goods produced in any part...
of the common RoO zone even if these were not originating products: any and all processing done in the zone is calculated as if it had taken place in the final country of manufacture. As such, diagonal and full cumulation can notably expand the geographical and product coverage of a RoO regime.\(^\text{12}\) Table 2 illustrates the frequency of general RoO provisions around the world.

Whereas de minimis, roll-up, and cumulation allow for leniency in the application of RoO, there are three provisions that may have the opposite effect and increase the stringency of RoO.\(^\text{13}\)

First, most PTAs contain a separate list indicating the operations that are in all circumstances considered insufficient to confer origin, such as preservation during transport and storage, as well as simple operations of cleaning, sorting, painting, packaging, assembling, and marking and labeling.

Second, many PTAs prohibit duty drawback—preclude the refunding of tariffs on non-originating inputs that are subsequently included in a final product that is exported to a PTA partner. Many developing countries employ drawback in order to attract investment and to encourage exports; however, drawback in the context of a PTA is viewed as providing a cost advantage to the PTA-based producers who gear their final goods to export over producers selling their final goods in the domestic market.\(^\text{14}\) The end of duty drawback entails an increase in the cost of non-originating components for PTA-based final goods producers. As such, the end of drawback in the presence of cumulation may encourage intra-PTA producers to shift to suppliers in the cumulation area (WTO 2002).

Third, a complex method of certifying the origin of goods can impose high administrative costs on exporters. The main certification methods are self-certification by exporters, certification by the exporting country government or an industry umbrella group to which the government has delegated the task of issuing the certificate, and a combination of the “private” self-certification and the “public” governmental certification. The more numerous the bureaucratic hurdles and the higher the costs for an exporter to obtain an origin certificate, the lower the incentives to seek PTA-conferred preferential treatment.

II. Rules of Origin around the World

This section turns to examining the great variety of combinations of product-specific and regime-wide RoO used in selected PTAs in Europe, the Americas, Asia-Pacific, Africa,

\(^{12}\) In bilateral cumulation, the use of the partner country components is favored; in diagonal cumulation, all the beneficiary trading partners of the cumulation area are favored. Full cumulation is more liberal than diagonal cumulation by allowing a greater use of third-country materials. However, it is rarely allowed in RoO regimes.

\(^{13}\) To be sure, non-members to a cumulation area may view the cumulation system as introducing another layer of discrimination by virtue of its providing incentives to the member countries to outsource from within the cumulation zone at the expense of extra-zone suppliers.

\(^{14}\) Cadot, de Melo and Olarreaga (2001) show that duty drawback may have a protectionist bias due to reducing the interest of producers to lobby against protection of intermediate products.
and the Middle East, as well as in PTAs between these regions. We subsequently discuss the structure of non-preferential RoO. The latter part of this section presents an analytical, comparative assessment of (1) the relative restrictiveness of the product-specific RoO governing different economic sectors in the different RoO regimes; and (2) the degree of flexibility instilled in the various RoO regimes by the regime-wide RoO.

A. Comparing the Structure of RoO Regimes in Five Regions

i. Europe: Expansion of the PANEURO System

The RoO regimes employed across the EU’s FTAs are highly uniform vis-à-vis each other. This owes largely to the European Commission’s recent drive to harmonize the EU’s existing and future preferential RoO regimes in order to facilitate the operations of EU exporters dealing on multiple trade fronts, and to pave the way for particularly the EU’s East European FTA partners to draw greater benefits from the EU-provided preferential treatment via diagonal cumulation—that was previously precluded by the lack of compatibility among the EU’s RoO regimes. The harmonization efforts pertained to product-specific and regime-wide RoO alike. They extended to EU’s RoO protocols with the European Free Trade Association (EFTA) countries that dated from 1972 and 1973, as well as across the EU’s FTAs forged in the early 1990s in the context of the Europe Agreements with Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Romania. The work culminated in 1997 in the launch of the Pan-European (PANEURO) system, which established identical RoO protocols and product-specific RoO across the EU’s existing FTAs, thereby providing for diagonal cumulation among the participating countries. The Commission’s regulation 46 of January 1999 reiterates the harmonized protocols, outlining the so-called single list RoO. Overall, the PANEURO RoO are highly complex, combining CTC mainly at the heading level with exceptions, VC, and TECH, and varying markedly across products.

Since 1997, the PANEURO model has become incorporated in the EU’s newer FTAs, including the Euro-Mediterranean Association Agreements, the Stabilization and Association Agreements with Croatia and the Former Yugoslav Republic of Macedonia, the EU-Slovenia FTA, as well as the extra-regional FTAs with South Africa, Mexico, and Chile. Also the RoO of the EU’s generalized system of preferences (GSP) and the 2000 Cotonou Agreement with the African Caribbean, and Pacific (ACP) developing countries approximate the single list, PANEURO model. EFTA’s recently concluded FTAs with Mexico and Singapore follow the PANEURO model, albeit providing an additional

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15 See Driessen and Graafsma (1999) for review.
16 The harmonized RoO do not represent a dramatic break with those of the pre-1997 era. For example, the RoO in nearly 75 percent of the products (in terms of tariff subheadings) in PANEURO and the original EU-Poland RoO protocol published in 1993 are identical. Both the new and the old versions combine CTC with VC and/or TECH. Indeed, EU RoO feature remarkable continuity: the RoO of the European Community-Cyprus FTA formed in 1973 are strikingly similar to those used today. One notable difference between the older and the newer protocols is that the latter allow for an optional way of meeting the RoO for about 25 percent of the products, whereas the former specify mostly only one way of meeting the RoO. The second option, alternative RoO, much like the first option RoO, combine different RoO criteria; however, the most frequently used alternative RoO is a stand-alone import content criterion.
alternative rule in selected sectors—such as plastics, rubber, textiles, iron and steel products, and some machinery product.

Importantly, the EU’s eastward enlargement 1 May 2004 terminated the FTAs forged among the 10 new member states and also between them and the EU. The new members became incorporated in the EU customs union; as such, they set out to apply the EU’s CET, with their overall external tariffs dropping from nine to four percent, and also assumed the rights and obligations of the FTAs that the EU has in place with non-member countries.

ii. The Americas: Four RoO Families

There is much more variation across RoO regimes in the Americas. Nevertheless, distinct RoO families can be identified (Garay and Cornejo 2002). One extreme is populated by the traditional trade agreements such as the Latin American Integration Agreement (LAIA), which uses a general rule applicable across the board for all tariff items (a change in tariff classification at the heading level or, alternatively, a regional value added of at least 50 percent of the FOB export value of the final good). The LAIA model is the point of reference for RoO used in the Andean Community (CAN) and Caribbean Community (CARICOM). At the other extreme lie the so-called new generation PTAs such as NAFTA, which is used as a reference point for the US-Chile, US-Central America, Mexico-Costa Rica, Mexico-Chile, Mexico-Bolivia, Mexico-Nicaragua, Mexico-Northern Triangle (El Salvador, Guatemala, and Honduras), Chile-Canada, and Mexico-Colombia-Venezuela (or G-3) FTAs. The RoO regimes in these agreements may require a change of chapter, heading, subheading or item, depending on the product in question. In addition, many products combine the change of tariff classification with an exception, regional value content, or technical requirement. The NAFTA model, particularly the versions employed in the US-Chile FTA and CAFTA, is also widely viewed as the likeliest blueprint for the RoO of the Free Trade Area of the Americas (FTAA).

Mercosur RoO, as well as RoO in the Mercosur-Bolivia and Mercosur-Chile FTAs fall between the LAIA-NAFTA extremes. They are mainly based on change of heading and different combinations of regional value content and technical requirements. The Central American Common Market’s (CACM) RoO regime can be seen as located between those of the Mercosur and NAFTA: it uses chiefly change in tariff classification only, but in more precise and diverse ways than Mercosur due to requiring the change to take place at either the chapter, heading, or subheading level, depending on the product in question. The recently concluded CAFTA will, once ratified, coexist with the CACM’s market access mechanisms under the so-called multilateralism principle, which allows Central American producers to choose between the CACM and CAFTA market access regimes when exporting to the other Isthmus markets.

Notably, unlike the EU’s extra-European FTAs that follow the PANEURO system, US bilateral FTAs with extra-Hemispheric partners—Jordan and Israel—diverge markedly from the NAFTA model, operating on VC alone. However, the RoO of the US-Singapore
FTA are again more complex, resembling the NAFTA RoO. Similarly, the RoO of the recently forged Chile-South Korea FTA also feature a high degree of sectoral selectivity à la NAFTA, and, indeed, the US-Chile FTA. Nonetheless, the RoO of the Chile-Korea regime are overall less complex than either NAFTA or US-Chile RoO, and also more reliant on the change in heading criterion than NAFTA, which has an important change in chapter-component, and US-Chile FTA, which features an important change in subheading-component.

iii. Africa, Asia, Middle East: Toward Sectoral Selectivity?

The relative complexity of RoO in Europe and the Americas stands in contrast to the generality of RoO in many Asian, African, and Middle Eastern PTAs. Some of the main integration schemes in these regions—the ASEAN Free Trade Area (AFTA), Australia-New Zealand Closer Economic Relations Trade Agreement (ANZCERTA), Singapore-Australia Free Trade Agreement (SAFTA), and South Pacific Regional Trade and Economic Cooperation (SPARTECA) in Asia-Pacific; the Economic Community of West African States (ECOWAS), Common Market for Eastern and Southern Africa (COMESA), and Namibia-Zimbabwe FTA in Africa; and the Gulf Cooperation Council (GCC) in the Middle East—are based on an across-the-board VC rule that, when defined as RVC, ranges from 25 percent (in Namibia-Zimbabwe FTA) to 50 percent (ANZCERTA). Some of the agreements allow, or, indeed, require, RoO to be calculated on the basis of import content. Most of these regimes also specify an alternative RoO based on the CTC criterion; most often the alternative involves a change in heading or, in the case of ECOWAS that has a relatively low RVC requirement of 30 percent, change in subheading.

However, the more recent RoO regimes in both Africa and Asia-Pacific carry RoO of high degrees of sectoral selectivity. The Southern African Development Community (SADC) RoO approximate the PANEURO model both in types of sectoral RoO and in sectoral selectivity. Moreover, there have been some initiatives to renegotiate COMESA RoO; such attempts may well eventually lead to regimes of greater complexity. On the Asian front, the RoO of the Japan-Singapore Economic Partnership Agreement (JSEPA) are also complex, as evinced by the more than 200-page RoO protocol. However, much like in the Chile-Korea FTA, nearly half of JSEPA RoO are based on a simple change in heading-criterion, which makes the regime much less complex when contrasted with the PANEURO and NAFTA models. Furthermore, for many products JSEPA introduces an alternative, usually PANEURO-type, free-standing VC rule, which instills generality and flexibility to the agreement.

The inter-continental RoO regimes of the US-Singapore and Chile-Korea FTAs have delivered additional complexity to the Asia-Pacific RoO theater. RoO in these agreements tend to follow the NAFTA model yet be notably less complex overall, featuring a strong change of heading component. The future Mexico-Singapore, Canada-Singapore, Mexico-Korea, Mexico-Japan, and US-Australia FTAs, among others, will likely compound this trend. Meanwhile, further European overtures to the Asian front will likely bring the PANEURO model to accompany the NAFTA model in the region.
B. Non-Preferential RoO

Non-preferential RoO are used for purposes distinct from those of preferential rules. Even if a country did not use preferential RoO, it would still apply some type of non-preferential RoO. Unlike preferential RoO that have thus far escaped multilateral regulation, non-preferential RoO have been under a process of harmonization since 1995 as mandated by the Uruguay Round’s Agreement on Rules of Origin (ARO). The harmonization work, propelled precisely by growing concerns about the divergent national RoO’s effects on unfettered trade flows, has been carried out under the auspices of the Committee on Rules of Origin (CRO) of the World Trade Organization (WTO) and the Technical Committee on Rules of Origin (TCRO) of the Brussels-based World Customs Organization. The latter has been responsible for the technical part of the work, including discussions on the RoO options for each product.

The harmonization drive was initially scheduled for completion by July 1998. However, the deadline has been extended several times since then. The Technical Committee’s work was concluded in 1999, with about 500 pending issues that could not be solved at the technical level being sent to the CRO in Geneva. As of July 2003, the process at the WTO had yet to reach a solution to 94 core policy issues; these affect an estimated fifth of the tariff subheadings of the entire tariff universe. The General Council at the time extended the deadline for completion of the issues to July 2004, and agreed that following resolution of these core policy issues, the CRO would complete its remaining work by the end of 2004. In their current structure, the non-preferential RoO approximate the PANEURO and NAFTA models in sectoral specificity, yet are less demanding than either of the two main RoO regimes. However, since several issues are still contested at the WTO, the final degree of complexity and restrictiveness of the non-preferential RoO remains to be gauged.

C. Depicting Product-Specific RoO around the World

Figure 1 focuses on the first RoO component, the CTC criterion, in the RoO regimes of 28 PTAs around the world. These are three of EU’s PTAs (PANEURO—where the RoO are basically fully identical to those of the EU-South Africa FTA—and the EU-Mexico and EU-Chile FTAs); EFTA-Mexico FTA where RoO approximate the EU-Mexico RoO model; seven FTAs drawing on the NAFTA RoO model that is gaining prominence in the Western Hemisphere (NAFTA, US-Chile, US-Central America, Group of Three, and Mexico-Costa Rica, Mexico-Bolivia, and Canada-Chile FTAs); CACM-Chile FTA; Mercosur-Chile and Mercosur-Bolivia FTAs; LAIA; seven PTAs in Asia-Pacific (ANZCERTA, SAFTA, SPARTECA, AFTA, Bangkok Agreement, JSEPA, and Chile-Korea FTA); four PTAs in Africa (ECOWAS, COMESA, Namibia-Zimbabwe FTA, and SADC); the Gulf Cooperation Council in the Middle East; and US extra-hemispheric FTAs with Jordan and Israel. The two final sets of bars depict two potential outcomes of
the harmonization process of the non-preferential RoO (as set to their “lowest” and “highest” levels of stringency, which will be discussed in the next section).  

Figure 1 - Distribution of CTC Criteria by Agreement

The change of heading-criterion dominates EU RoO, whereas the RoO built upon the NAFTA RoO regime are based on change of heading and change of chapter criteria at relatively even quantities. The US-Chile FTA and CAFTA stand somewhat apart from the NAFTA format for requiring only change in subheading for a substantial number of tariff lines. Meanwhile, the Chile-CACM FTA diverges from the NAFTA model due to its marked change in heading-component, as do the Japan-Singapore and Chile-Korea FTAs. The other Asian PTAs considered here stand out for their generality—for using an across-the-board value content requirement exclusively. Except for the SADC, African RoO regimes are also marked by general, across-the-board CTC RoO, as are LAIA and Mercosur’s FTAs with Chile and Bolivia that employ the change of heading-criteria across the RoO universe. In contrast to the PANEURO and NAFTA models, non-preferential RoO feature also a prominent change of subheading-component.

Another notable difference between the various PTAs is that some, such as ANZCERTA, employ the VC criterion across sectors, completely foregoing the use of the CTC-criterion. The EU does this in about a quarter of its RoO; the bulk (more than 80 percent) of these RoO are based on the wholly-obtained criterion used particularly in agricultural products, or on the import content-rule that imposes a ceiling of 40-50 percent to non-originating components of the ex-works price of the final product. The stand-alone import content RoO are used particularly frequently for optics, transportation equipment, and machinery and electrical equipment. Another idiosyncrasy of the EU RoO, yet one that escapes the figure here, is the use of the so-called “soft RoO” in more than a quarter of the RoO requiring a change of heading and about a sixth of the RoO requiring a change of chapter. Soft RoO allows the use of inputs from the same heading (or chapter) up to a certain share of the price of the final product even when the RoO requires a change of heading (or change of chapter). The share is generally between five and 20 percent.

Table 1 centers on the tariff subheadings governed by VC (including combinations of VC with CTC, and VC when employed as an alternative to a CTC criterion) in various RoO regimes, and, in particular, on the level of the VC criterion. The most usual level of VC is 40-50 percent, whether defined as MC or RVC. However, in the US-Chile FTA, CAFTA, and Chile-CACM FTA, RVC is generally set at lower levels of 30-35 percent; conversely, for some products in the PANEURO and SADC regimes, the permitted value of non-originating inputs of the price of the final product is as low as 15-30 percent. The table also displays the various bases for calculation of the VC. Differences in the method of calculation can have crucial implications to the exporters’ capacity to meet the RoO. The PE model that is separated here for analytical purposes essentially involves the same

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17 The figure is based on the first RoO only when two or more possible RoO are provided for a tariff subheading.
product-specific RoO as PANEURO, while diverging somewhat from the PANEURO in the regime-wide RoO. It applies to a handful of European FTAs, particularly to those forged by the EU and East European countries with Israel (WTO 2002a).

**Table 1 – VC Criteria by Agreement**

Capturing the full scale of variation in the RoO regimes requires a look at the various combinations of RoO components. Table 2 displays the RoO combinations in selected FTAs around the world. It considers the entire tariff universe in each RoO regime, and shows the percentage shares of all possible RoO types and combinations thereof in each respective regime. Particularly notable is the high degree of selectivity of PANEURO, NAFTA, and non-preferential RoO.

**Table 2 – Distribution of RoO Combinations, Selected PTAs (1st RoO only)**

D. Regime-Wide RoO

Besides sectoral RoO, the different RoO regimes can be compared by their regime-wide RoO. Table 3 contrasts the various RoO regimes by their general, regime-wide RoO—*de minimis*, roll-up, cumulation, and drawback.

**Table 3 – Regime-Wide RoO in Selected PTAs**

First, EU RoO regimes feature a higher *de minimis* (at 10 percent) than NAFTA and many other FTAs in the Americas; the exceptions are US-Chile FTA and CAFTA, where *de minimis* is the same as in PANEURO. Meanwhile, there is no *de minimis* rule in Mercosur’s FTAs and various FTAs in Asia and Africa. However, the principle does have exceptions in most regimes: for example, EU’s *de minimis* does not apply to textiles and apparel, except for allowing an 8 percent *de minimis* of the total weight of textile materials in mixed textiles products. In the EU-South Africa FTA, *de minimis* is set at 15 percent but excludes fish and crustaceans, tobacco products, as well as certain meat products and alcoholic beverages. NAFTA *de minimis* does not extend to the production of dairy produce; edible products of animal origin; citrus fruit and juice; instant coffee; cocoa products, and some machinery and mechanical appliances, such as air conditioners and refrigerators (Reyna 1995: 115-117).

Second, the roll-up principle is widely used around the world. For example, in NAFTA, a good may acquire originating status if it is produced in a NAFTA country from materials considered as originating (whether such materials are wholly obtained or having satisfied a CTC or RVC criterion) even if no change in tariff classification takes place between the intermediate material and the final product. Similarly, the EU-Mexico FTA stipulates that “if a product which has acquired originating status by fulfilling the conditions…is used in
the manufacture of another product, the conditions applicable to the product in which it is incorporated do not apply to it, and no account shall be taken of the non-originating materials which may have been used in its manufacture.”

Third, the EU’s Pan-European system of cumulation applied since 1997 draws a clear distinction between the EU RoO regimes on the one hand, and most RoO regimes elsewhere in the world, on the other. The foremost diagonal cumulation regime in the world, the Pan-European system incorporated 16 partners and covered no fewer than 50 FTAs prior to the EU’s eastward enlargement. In concrete terms, the system enables producers to use components originating in any of the participating countries without losing the preferential status of the final product. The European Economic Association (EEA) agreement between EU and EFTA permits full cumulation. The EU-South Africa FTA allows both parties to cumulate diagonally with the ACP states. In addition, it incorporates the “single territory” concept, whereby South Africa can calculate working or processing carried out within the Southern Africa Customs Union (SACU) area as if these had been performed in South Africa (but not in the EU).

Other cumulation schemes include the ANZCERTA model, which provides for full cumulation, and the Canada-Israel FTA, which permits cumulation with the two countries’ common FTA partners, such as the United States. Singapore’s FTAs incorporate the outward processing (OP) concept tailored to accommodate Singapore’s unique economic features and its access to low-cost processing in neighboring countries. The US-Singapore FTA also incorporates the integrated sourcing initiative (ISI), which provides further flexibility to outsourcing. OP and ISI will be detailed in Section IV of this chapter. CAFTA stands out in the Americas for providing for diagonal cumulation with Canada and Mexico. However, the clause covers only materials used for producing goods in chapter 62, and so only up to a limited amount of imports to the US market and only after Canada and Mexico agree on the CAFTA cumulation clause.

Fourth, EU’s FTAs and FTAs in the Americas tend to explicitly preclude drawback. Nonetheless, both have allowed for a phase-out periods during which drawback is permitted. For instance, the EU-Mexico FTA permitted drawback for the first two years, while the EU-Chile FTA allows drawback through 2007, the fourth year of the FTA. NAFTA allowed for drawback for the first seven years; however, drawback in the bilateral trade between Canada and the United States under the agreement was valid for only two years. Importantly, NAFTA does provide leniency in the application of the no-drawback rule by putting in place a refund system, whereby the producer will be refunded the lesser of the amount of duties paid on imported goods and the amount of duties paid on the exports of the good (or another product manufactured from that good) upon its introduction to another NAFTA member. AFTA, ANZCERTA, SPARTECA, the US-Israel FTA, CACM, and Mercosur’s FTAs stand out for not prohibiting drawback. However, in Mercosur per se, there is a no-drawback rule governing Argentine and

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18 The participants in the PANEURO system of cumulation prior to the eastward enlargement were the EU, Bulgaria, Czech Republic, Estonia, Hungary, Iceland, Latvia, Liechtenstein, Lithuania, Norway, Poland, Romania, Slovak Republic, Slovenia, Switzerland, and Turkey. Eight of these countries—Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic, and Slovenia—entered the EU in May 2004.
Brazilian imports of intermediate automotive products when the final product is exported to a Mercosur partner; this should help place Paraguay and Uruguay at a par with the two larger economies in attracting investment in the automotive sector.

E. Administration of RoO

The various RoO regimes diverge in their administrative requirements, particularly in the method of certification (table 4).

Table 4 – Certification Methods in Selected PTAs

The EU RoO regimes require the use of a movement certificate, EUR.1, that is to be issued in two steps—by the exporting country government once application has been made by exporter or the exporter’s competent agency, such as a sectoral umbrella organization. However, the EU regimes provide for an alternative certification method, the invoice declaration, for “approved exporters” who make frequent shipments and are authorized by the customs authorities of the exporting country to make invoice declarations.

Meanwhile, NAFTA and a number of other FTAs in the Americas as well as the Chile-Korea FTA rely on self-certification, which entails that the exporter’s signing the certificate suffices as an affirmation that the items covered by it qualify as originating. In CAFTA, the importer rather than the exporter claiming preferential tariff treatment is the party ultimately responsible for seeing that the good is originating. In Mercosur, Andean Community, Caricom, AFTA, ANZCERTA, SAFTA, the Bangkok Agreement, JSEPA, and ECOWAS require certification by a public body or a private umbrella entity approved as a certifying agency by the government. However, unlike in the two-step model, the exporter is not required to take the first cut at filling out the movement certificate, but, rather, to furnish the certifying agency with a legal declaration of the origin of the product.  

19 The CAFTA certification of origin can be prepared by the importer, exporter, or the producer of the good; alternatively, importer can claim origin through his/her “knowledge that the good is an originating good”. Verification of origin can be made via written requests or questionnaires to the importer, exporter, or producer, or by visits by importing country authority to the exporting party territory. Similarly, in the US-Chile FTA, importer is to declare the good as originating and can also certify origin; however, verification can be made by the customs of the importing member “in accordance with its customs laws and regulations.” In contrast, in NAFTA, the exporter or producer are parties in charge of certifying origin, and verification of origin is conducted through written requests or visits by one NAFTA member to the premises of an exporter or a producer in the territory of another member.

20 The certificate in NAFTA, G3, and CACM-Chile FTA will be valid for a single shipment or multiple shipments for a period of a year; in ANZCERTA and SAFTA, the certificate will be valid for multiple shipments for two years. In ECOWAS, the certificate is not required for agricultural, livestock products and handmade articles produced without the use of tools directly operated by the manufacturer. In ANZCERTA, SAFTA, and Mercosur-Chile, Mercosur-Bolivia, and CARICOM-DR FTAs, the certificate requires to be accompanied by a legal declaration by the final producer or exporter of compliance with the RoO. In CAN and CARICOM, declaration by the producer is required. In CARICOM, the declaration can be completed by the exporter if it is not possible for the producer to fill it.
The self-certification model can be seen as placing a burden of proof on the importing country producers; as such, it arguably minimizes the role of the government in the certifying process, entailing rather low administrative costs to exporters and governments alike. In contrast, the two-step system requires heavier involvement by the exporting country government and increases the steps—and likely also the costs—that an exporter is to bear when seeking certification.

III. Analytical Coding Methodology for RoO Rules of Origin in FTAs

This section presents a methodology for measuring (1) the relative restrictiveness of the product-specific RoO governing different economic sectors in the different agreements; and (2) the degree of flexibility instilled in the various RoO regimes by the various regime-wide RoO, such as de minimis and drawback. We subsequently compare RoO regimes by the values yielded by these two analytical measures.

A. A Comparative Analysis of the Levels of Restrictiveness of Product-Specific RoO

The NAFTA RoO family is based on the change of chapter rules, whereas the change of tariff heading-component figures prominently in the EU and most Asian and African RoO models. As such, these regimes will entail somewhat divergent demands on exporters. However, understanding the implications of membership in the different types of regimes for an exporter operating in a particular industry requires both (1) a measure of the restrictiveness of RoO that allows for a more nuanced sectoral analysis of the requirements imposed by RoO; and (2) an indicator of the overall flexibility instilled in a RoO regime by the various regime-wide RoO. This section presents two such measures: a restrictiveness index, and a facilitation index.

i. Restrictiveness of RoO

The manifold RoO combinations within and across RoO regimes present a challenge for cross-RoO comparisons. This chapter seeks to draw such comparisons through an index grounded on the plausible restrictiveness of a given type of RoO. Estevadeordal (2000) constructs a categorical index ranging from 1 (least restrictive) to 7 (most restrictive) on the basis of NAFTA RoO. The index can be conceptualized as an indicator of how demanding a given RoO is for an exporter. The observation rule for the index is based on two assumptions: (1) change at the level of chapter is more restrictive than change at the level of heading, and change at the level of heading more restrictive than change at the
level of subheading, and so on; and (2) VC and TECH attached to a given CTC add to the RoO’s restrictiveness (see appendix I for details).  

Figure 2 reports the restrictiveness of RoO as calculated at the six-digit level of disaggregation in selected FTAs. The EU RoO regimes are again strikingly alike across agreements. The RoO regimes based on the NAFTA model, such as the G-3, are also highly alike. The Mercosur model pertinent to Mercosur-Chile and Mercosur-Bolivia FTAs is more general, yet still exhibits more cross-sectoral variation in the restrictiveness of RoO than the LAIA model marked by the across-the-board change of heading RoO. The generality of the LAIA model is replicated by the most Asian and African RoO regimes. However, some newer PTAs—such as Chile-Korea FTA and SADC—feature high levels of cross-sectoral variation in RoO.

### Figure 2 - Restrictiveness of RoO in Selected PTAs

#### iii. Comparing the Restrictiveness of Sectoral RoO

To what extent does the restrictiveness of RoO vary across economic sectors? Are some sectors more susceptible to the potential negative trade and investment effects of restrictive RoO than others?

We explore these questions by focusing on twelve RoO regimes with inter-sectoral variation in RoO. Table 5 reports the restrictiveness values in these regimes, as aggregated from 6-digit values by section of the Harmonized System. The average restrictiveness and the standard deviation values at the bottom of the table are based on calculations at the 6-digit level.

### Table 5 – Sectoral Restrictiveness of Sectoral RoO in Selected PTAs

The data reveal that agricultural products and textiles and apparel are marked by a particularly high restrictiveness score in each regime, which suggests that the restrictiveness of RoO may be driven by the same political economy variables that arbitrate the level of tariffs particularly in the EU and the United States. Non-preferential RoO exhibit similar patterns across sectors, communicating the operation of political economy dynamics also at the multilateral level. Weighting the sectoral restrictiveness values with trade produces very similar results—which may in and of itself be an indication that stringent RoO stifle commerce.  

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21 Given that the degree of restrictiveness is a function of *ex ante* restrictiveness rather than the effective restrictiveness following the implementation of the RoO, the methodology—much like that of Garay and Cornejo (2002)—is particularly useful for endogenizing and comparing RoO regimes. The methodology allows RoO to be analyzed in terms of their characteristics rather than their effects.

22 See Suominen (2004) for weighted RoO.
B. Comparing Regime-Wide RoO: A Facilitation Index

Product-specific RoO in complex PTAs—PTAs not carrying across-the-board RoO—can impose highly divergent requirements to the exporters of different goods. Even an across-the-board rule will undoubtedly have more striking implications in some sectors than in others, depending on the product-specific features. However, as discussed above, RoO regimes employ several mechanisms to add flexibility to the application of the product-specific RoO. We strive to capture the combined effect of such mechanisms by developing a regime-wide “facilitation index”. The index is based on five components: *de minimis*, diagonal cumulation, full cumulation, drawback, and self-certification. The maximum index value of 5 results when the permitted level of *de minimis* is 5 percent or higher and when the other four variables are permitted by the RoO regime in question.

Figure 3 graphs the “facil index” values for PTAs. The PANEURO and NAFTA models are nearly at a *par*; the difference here is produced by coding NAFTA as allowing drawback, as it did for the first seven years. The EU-South Africa and the Canada-Israel are the most “permissive” regimes, the former thanks to drawback and diagonal and full cumulation, and the latter because of self-certification, drawback and cumulation with the United States. Meanwhile, many regimes with an across-the-board RoO neither provide for *de minimis* nor feature many regime-wide provisions of flexibility; the most usually occurring regime-wide rule in these PTAs is drawback. Indeed, that regimes with the most stringent RoO and the highest degree of sectoral selectivity in RoO feature the highest facilitation values may evince counter-lobbying by producers jeopardized by stringent product-specific RoO.

Figure 3 – Facilitation Index for Selected PTAs

IV. RoO “Innovations”: *Ad Hoc* Mechanisms for Flexibility

This section provides a look at some further dimensions of RoO regimes that go beyond the more traditional and prevalent components included in the restrictiveness and facilitation indices in this study, but that alleviate the impact of stringent RoO: (1) a phase-in period for a stringent value content RoO; (2) permanent deviations for a country or a set of countries from the RoO regime that would otherwise apply; (3) flexibility in the ways of calculating value content; and (4) tariff preference levels (TPLs) employed when the partner lacks intermediate product industries. While most regimes employing these provisions make them applicable to all members, some regimes provide them asymmetrically, for instance to accommodate some country-specific idiosyncrasies in production structures or to provide greater leniency to a developing member country when the parties’ development levels differ drastically. These provisions can be of great importance particularly to countries with limited production base and/or in the absence of relatively cheap inputs and production processes in the PTA area.
A. RoO Phase-Ins

Some regimes have adopted what are in many cases highly detailed product-specific provisions that allow for phasing in of the RoO. Mercosur-Chile FTA provides a seven-year adjustment period for Paraguay to start applying the FTA’s import content RoO of 40 percent in selected headings across a host of sectors such as food products, chemicals, plastics, textiles, apparel, footwear, base metals, and machinery. During the period, Paraguay applies a 60 percent import content rule. Mercosur-Bolivia FTA allows Bolivia to export to Mercosur some selected goods at 50 percent import content for the first five years, and others at 60 percent for three years as opposed to the 40 percent that will subsequently take effect. For its part, Paraguay can export to Bolivia at 60 percent import content for the first three years.

Also the EU’s extra-European agreements with Mexico and Chile allow for some product-specific deviations from the PANEURO standard for a certain period of time. In the case of the EU-Mexico FTA, these pertain to one whole chapter (knitted apparel) and to 25 headings (or subheadings) in chemicals, textiles, footwear, machinery, and vehicles, and endure from two to six years prior to converging to the benchmark RoO. In footwear, the RoO is more restrictive for the EU than in its other FTAs: the same RoO applies as in the FTAs with Chile and South Africa up to a certain quota, while the rest of EU exports to the Mexican market are regulated by much more stringent RoO. The RoO phase-ins are fewer in the case of the EU-Chile FTA, pertaining to textiles and bicycles for the first three years of the agreement.

B. Permanent Reductions in the Level of RVC

A second means to add leniency to the RoO protocol are permanent deviations for a country or a set of countries from the RoO regime that would otherwise apply. The RoO of the Andean Community allows the less developed members, Bolivia and Ecuador, to use non-originating components up to 60 percent of the value of the final good, as opposed to the 40 percent applicable to the other members. LAIA allows the less developed partners to use non-originating components of up to 60 percent of the value of the final good, as opposed to 50 percent applying to the rest of the members. In COMESA, products of importance to economic development to the partners (selected headings in mineral products, chemicals, machinery, and optical instruments) enjoy a 25 percent RVC, as opposed to the across-the-board 35 percent RVC that otherwise applies.

Also the EU-Mexico and EU-Chile FTAs allow for permanent deviations from the single list, PANEURO model. The deviations are rather minor and apply only to selected industrial products. Nonetheless, they indicate that Mexico and Chile did achieve some favorable sectoral outcomes in the RoO bargaining.

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23 For a detailed treatment, see Estevadeordal and Suominen (2003).
24 See Estevadeordal and Suominen (2003).
C. Options for Calculating Value Content

Some regimes have created innovative optional means of calculating value content. In SADC, the more developed members may allow the less developed members to count as originating processes that are usually left outside the value content calculation. Regimes modeled after NAFTA provide a number of optional ways of calculating RVC in vehicles when the producer uses pre-defined intermediate goods from chapters 40 and 84, as well as for calculating the RVC for these intermediate goods.

However, it is Singapore’s FTAs that incorporate perhaps the most innovative and comprehensive mechanisms to add flexibility to the calculation of the value content. These are designed to help the many Singaporean industries that have extensive outsourcing ties especially in South-East Asia to qualify for the preferential treatment provided by its FTA partners. The two key mechanisms are outward processing (OP) and integrated sourcing initiative (ISI). OP is recognized in all of Singapore’s FTAs, while ISI is incorporated in the US-Singapore FTA. The concept of OP enables Singapore to outsource part of the manufacturing process, usually the lower value-added or labor-intensive activities, to the neighboring countries, yet to count the value of Singaporean production done prior to the outsourcing activity toward local, Singaporean content when meeting the RoO required by the export market. Table 6 illustrates the process.

Table 6 – Operation of Outward Processing in Singapore’s FTAs

Although the OP concept applies only to products with a value added rule, it is credited to have encouraged outsourcing of labor-intensive and low-value processes and retaining higher value activities in Singapore.

For its part, ISI operating in the US-Singapore FTA applies to non-sensitive, globalized sectors, such as information technologies. Under the scheme, certain IT components and medical devices are not subject to RoO when shipped from either of the parties to the FTA partner. ISI is designed to reflect the economic realities of globally distributed production linkages, and to further encourage US multinationals to take advantage of outsourcing opportunities in the ASEAN countries.

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25 The producer of a vehicle can calculate the RVC by may average the calculation over the fiscal year by using any one of the following categories: (a) the same model line of vehicles in the same class of vehicles produced in the same plant in the territory of a party; (b) the same class of motor vehicles produced in the same plant in the territory of a party; and (c) the same model line of motor vehicles produced in the territory of a Party. Meanwhile, the producer can calculate the RVC intermediate goods for vehicles by (a) averaging the calculation over the fiscal year of the motor vehicle producer to whom the good is sold, over any quarter or month, or over its fiscal year, if the good is sold as an aftermarket part; (b) calculating the average separately for any or all goods sold to one or more motor vehicle producers; or (c) calculating separately those goods that are exported to the territory of the other party.
D. Tariff Preference Levels

The fourth *ad hoc* mechanism to add leniency to a RoO regime is Tariff Preference Levels (TPLs). TPLs allow goods that would not otherwise satisfy the RoO protocol to qualify for the preferential treatment up to some pre-specified annual quotas. Above these levels, non-originating goods become subject to the importer’s MFN tariff. Most commonly applying to textiles and apparel, TPLs are employed particularly in the NAFTA-model RoO regimes. They are generally extended by all parties to all other parties, made available by any given party on a “first-come, first-served”-basis.

NAFTA provides TPLs for such non-originating products as cotton and manmade fiber apparel, wool apparel, man-made fiber fabrics, and fiber spun yarn. Depending on the product category, they reach up to 80 million square meters equivalent (SMEs) for Canadian and 45 million SMEs for Mexican exports to the US market, and 12 million for selected US exports to Mexico. The most recent RoO regime signed by the US, CAFTA, offers TPLs for only two of the Central American countries, Costa Rican and Nicaragua, and phases them out quickly. In the case of Costa Rica, TPLs are set at 500,000 SMEs, limited to wool, and due to expire in two years. Nicaragua’s TPLs start at 100 million SMEs and are phased out in equal annual cuts over five years.

Still other regimes employ what could be viewed as a modified form of TPLs, allocating the quotas not fully free of RoO, but against some more lenient product-specific RoO. For instance, SADC provides quotas at more lenient RoO for the textile and apparel exports of Malawi, Mozambique, Tanzania, and Zambia (MMTZ countries) to the SACU region for a period of five years.

V. Policy Recommendations: Counteracting Restrictive RoO and the Splintering of the Global RoO Panorama

While RoO are not necessarily bad for sound economic decisions, restrictive RoO can be. Furthermore, the existing differences in the product-specific and regime-wide RoO across the different RoO regimes can even in a simplified bi- or tripolar RoO world make a difference in economic decisions and limit exporters’ opportunities for diversifying markets.

How can the potential frictions created by stringent RoO and cross-regime differences in RoO be reduced? How can entrepreneurs import inputs from the cheapest sources, firms exploit cross-border economies of scale at lowest costs, and multinational companies make sweeping investment decisions based on economic efficiency rather than distortionary policies? What are the best ways to counter the development of trade- and investment diverting hubs in favor of globally free flow of goods, services, and investment?

Abolishing RoO altogether would certainly be the best and simplest means to counteract the impact of RoO. Another way to relegate RoO to irrelevance is by bringing MFN tariffs to zero globally. However, since these options are hardly politically palatable in
the near future, a third possibility is to harmonize preferential RoO at the global level. A
start would be establishing a small set of RoO combinations—a “RoO band”—that are
permitted would be a good start. This would ensure that at least the required production
methods in a given sector would remain relatively similar across export markets—and
enhance the prospects of linking agreements with each other in the future. Measures to
accompany the harmonization work could involve (1) the incorporation of the various
mechanisms of flexibility to RoO regimes during the transition to a global RoO regime;\textsuperscript{26}
and (2) the establishment of a multilateral mechanism to monitor the member states’
implementation of preferential and non-preferential RoO.

To be sure, harmonization would not be a simple endeavor given the differences in the
types of RoO around the world. Even slight differences can be difficult to overcome due
to political resistance by sectors benefiting from status quo. Meanwhile, it is not clear
that a strong global exporter lobby would materialize to voice demands for
harmonization. Perhaps most importantly, both the EU and the US would likely in
principle be reluctant to adopt each other’s RoO. Both parties would likely also be
concerned of the counterpart’s striving for a RoO regime that would allow it to transship
via the parties’ common PTA partners, such as Mexico, to the other party’s market.

However, adopting a global regulations for preferential RoO regimes is not necessarily
all that daunting. There are five sources of optimism.

First, the WTO members have already been able to sit down and compromise on
harmonized non-preferential RoO, which not only evinces a reservoir of political will to
tackle RoO, but also provides an immediately available blueprint for harmonizing
preferential RoO. And not only are non-preferential RoO negotiated and readily available
as a model, but they make a good model: overall, they are less restrictive and complex
than either the NAFTA- or PANEURO-type RoO.

Second, preferential RoO would likely prove easier to negotiate than non-preferential
RoO. Non-preferential RoO involve tracking the production process all the way to the
country in which the good originates, while preferential RoO simply require a
determination that the final exporter country is also the country of origin: the good either
originates in the PTA area or it does not, with the “true” and very initial origin being
immaterial. Preferential RoO talks would thus likely engage a smaller number of
interested parties to contest a given rule. Moreover, unlike non-preferential RoO that are
employed in the application of numerous other trade policy instruments, preferential RoO
have few purposes beyond refereeing the market access of goods to the PTA space. As
such, their negotiation would unlikely involve as much consideration of the other WTO
agreements as the harmonization of non-preferential RoO does.

Third, the growing attention at the WTO on PTAs in general and preferential RoO, in
particular, should propel constructive proposals as to the types of RoO that are most
conducive to the march toward unfettered global flow of commerce. For the first time in

\textsuperscript{26} See Suominen (2004) and Estevadeordal and Suominen (2004c) for details.
its history, the WTO Committee on Regional Trade Agreements (CRTA) has decided to consider RoO a “systemic” issue, as opposed to both individual PTA-issues such as prior considerations of the PANEURO system, and issues that—whether systemic or individual—are not being prioritized by the CRTA.

Fourth, advances in Trade-Related Investment Measures (TRIMS) can help advance the harmonization of RoO, if RoO are viewed, as they rightfully can and should be, as policy instruments affecting investment decisions (Thorstensen 2002). Like TRIMS, RoO can be employed strategically as an incentive to attract investment and encourage exports—and exports with high local value. A sturdier multilateral regulatory framework on investment policies could help curb the strategic, trade- and investment-distorting uses of RoO.

Harmonization of preferential RoO—and harmonization toward a flexible regime model—provides at present the most attainable means to counteract RoO’s negative effects on global trade and investment. The negotiators of the Doha Trade Round should decisively tackle RoO as a distortionary trade and investment policy instrument, and do so in four concrete ways.

First, they should provide a forceful push for completing the task of harmonizing non-preferential RoO. Completing the harmonization process is all the more compelling in the face of the growth of global commerce and the increasing fragmentation of global production, both of which would thrive under clear and uniform set of rules.

Second, the Doha negotiators should launch a process of de jure harmonization of preferential rules of origin. The relatively high levels of restrictiveness of the main RoO regimes and the differences between regimes pose unnecessary policy hurdles to rational economic decisions, limiting the opportunities for exporters to operate on multiple trade fronts simultaneously, and hampering consumers’ access to the best goods at the lowest prices.

Third, the Doha Round should forge in a multilateral mechanism to monitor and enforce the transparent application of both preferential and non-preferential RoO. And fourth, RoO should be incorporated in the TRIMs negotiations.

Preferential RoO matter only as long as there are MFN tariffs. Thus, the ultimate key to counteracting preferential RoO’s negative effects lies in the success of multilateral liberalization. Should multilateral trade rounds result in deep MFN tariff lowerings and the proliferation of PTAs engender a dynamic of competitive liberalization worldwide, the importance of preferential RoO as gatekeepers of commerce would automatically dissolve.

**Conclusion**

This chapter has sought to present a novel descriptive and analytical mapping of the global rules of origin panorama. We have (1) reviewed the types of RoO used around the world; (2) drawn comparisons between the structure of RoO across a host of PTAs; (3)
presented methodologies for constructing generalizable measurements for (a) the degree of restrictiveness and selectivity of product-specific RoO, and (b) the level of flexibility provided by the various regime-wide RoO; and (4) explored the behavior of RoO over time. We have also sought to chart some of the main ad-hoc measures in RoO regimes, and offer policy recommendations for reducing the actual restrictiveness of RoO and the proliferation of divergent types of RoO regimes around the world.

We have provided precursory evidence that RoO are to an important extent driven by political economy dynamics. The analytical tools developed here can be employed beyond existing contributions in order to evaluate the politics behind the definition of RoO as well as the economic effects of RoO. On broader level, we have striven to help pave the way for further efforts to disaggregate PTAs by the various disciplines they prescribe for drawing cross-PTA comparisons. Such a task is central for a developing a full understanding of the contractual diversity in the rapidly proliferating PTA universe. It is also crucial for moving the debate on the effects of PTAs to the multilateral trading system toward PTA-PTA comparisons—and, ultimately, for making recommendations for designing PTAs in ways that are conducive to unfettered global commerce.
References


_______ 2002b. “Coverage, Liberalization Process and Transitional Provisions In Regional Trade Agreements.” Committee on Regional Trade Agreements (5 April).
APPENDIX I.

The observation rule yields a RoO index as follows:

\[ y = 1 \text{ if } y^* \leq CI \]
\[ y = 2 \text{ if } CI < y^* \leq CS \]
\[ y = 3 \text{ if } CS < y^* \leq CS \text{ and } VC \]
\[ y = 4 \text{ if } CS \text{ and } VC < y^* \leq CH \]
\[ y = 5 \text{ if } CH < y^* \leq CH \text{ and } VC \]
\[ y = 6 \text{ if } CH \text{ and } VC < y^* \leq CC \]
\[ y = 7 \text{ if } CC < y^* \leq CC \text{ and } TECH \]

where \( y^* \) is the latent level of restrictiveness of RoO (rather than the observed level of restrictiveness); CI is change of tariff classification at the level of tariff item (8-10 digits), CS is change at the level of subheading (6-digit HS), CH is change at the level of heading (4 digits), and CC is change at the level of chapter (2 digits HS); VC is a value content criterion; and TECH is a technical requirement.

We make three modifications to the observation rule in the case of RoO for which no CTC is specified in order to allow for coding of such RoO in the PANEURO, SADC, and other regimes where not all RoO feature a CTC component. First, RoO based on the import content rule are equated to a change in heading (value 4) if the content requirement allows up to 50 percent of non-originating inputs of the ex-works price of the product. Value 5 is assigned when the share of permitted non-originating inputs is below 50 percent, as well as when the import content criterion is combined with a technical requirement. Second, RoO featuring an exception alone is assigned the value of 1 if exception concerns a heading or a number of headings, and 2 if the exception concerns a chapter or a number of chapters. Third, RoO based on the wholly-obtained criterion are assigned value 7.

To be sure, the observation rule is somewhat crude (1) for accounting for the restrictiveness of a stand-alone TECH RoO, which is likely more demanding than a coding of 1-2 allows; and (2) for capturing subtleties of the EU RoO as it does not account for the “soft” CTC criterion used by the EU. However, it does allow for establishing useful cross-regime comparisons.

APPENDIX IIa. PTAs Around the World, by Year of Entry into Force and Full Name

APPENDIX IIb. Selected PTAs by Member States