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Rules of Origin in Preferential Trading Arrangements: Is All Well with the Spaghetti Bowl in the Americas?

Preferential trading arrangements (PTAs) have proliferated spectacularly over the past decade around the world.¹ The number of PTAs in force soared from fifty in 1990 to some 230 by the end of 2004, and it is expected to rise to 300 in the course of 2005. Governing more than a third of global trade, PTAs have sparked intense policy interest at the multilateral level. They are among the top priorities of the ongoing Doha Round of trade negotiations of the World Trade Organization (WTO).²

The Western Hemisphere has been a major source for the expansion of the world's PTAs. The region's countries have signed some forty free trade agreements with each other or with extrahemispheric parties since 1990. Mexico and Chile have been particularly prolific integrators: Mexico has signed twelve PTAs and Chile seven.³ While the bulk of their agreements are with partners in the Americas, both countries have also integrated with European and Asian economies. For its part, the United States has concluded four free trade agreements in the Americas and six with

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1. PTAs include free trade agreements, customs unions, common markets, and single markets.

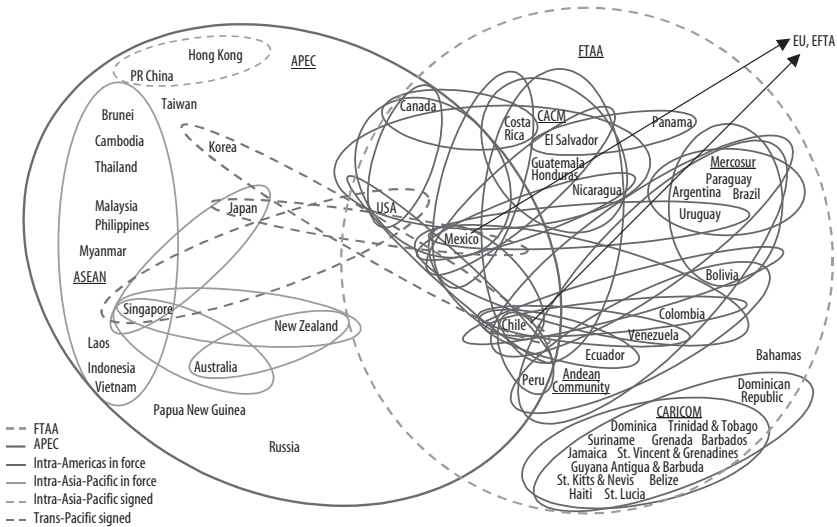
2. The Doha Declaration states, "We also agree to negotiations aimed at clarifying and improving disciplines and procedures under the existing WTO provisions applying to regional trade agreements. The negotiations shall take into account the developmental aspects of regional trade agreements."

3. The figures refer to formal free trade agreements and exclude the economic complementation agreements.

nonhemispheric partners, and it is proceeding toward another six. In total, the countries of the Americas are negotiating or opening negotiations for more than two dozen new PTAs. Prominent ongoing initiatives include the Free Trade Area of the Americas (FTAA) talks encompassing thirty-four countries and the negotiations between the Southern Common Market (Mercosur) and the European Union aimed at connecting the world's two largest customs unions.

The hemispheric PTA spree has forged a veritable spaghetti bowl of multiple and often overlapping agreements (figure 1). The various rules included in each PTA—such as standards, safeguards, government procurement, and investment—entangle the bowl further. While PTAs can generate important economic benefits, the PTA spaghetti bowl carries two risks. First, the manifold trade rules of PTAs can introduce policy frictions that increase the costs of trading. Each new rule in each PTA represents a new policy for firms to consider in their export, outsourcing, and investment decisions. Each also has legal, administrative, and economic implications for the PTA partner countries. Not all PTA rules necessarily work to expand trade from its pre-PTA levels. Second, differences in rules across PTAs can translate into transaction costs to countries dealing on two or more

FIGURE 1. The Americas and Trans-Pacific PTA Spaghetti Bowl



Source: Devlin and Estevadeordal (2004).

PTA fronts simultaneously. This is a particular consideration in the Americas, where each country belongs to an average of four PTAs.⁴

Rules of origin are a key market access rule (or discipline, in the jargon of trade negotiators) in PTAs. Rules of origin are the crucial gatekeepers of commerce: a product shipped from an exporting PTA member must meet the corresponding rule of origin to receive preferential treatment from the importing member. Rules of origin epitomize the hemisphere's policy problem: a growing number of the region's PTAs carry complex and restrictive rules of origin, and the many rules-of-origin regimes differ from each other. Consequently, the rules-of-origin spaghetti could hold back the trade-creating potential of the hard-earned PTAs.

This paper presents an in-depth diagnosis of rules-of-origin regimes in the Americas and offers policy recommendations for the region to counter the potential negative effects of rules of origin. We hope to make two contributions: to deepen understanding of the types and effects of rules of origin used in Western Hemisphere PTAs, and to add rigor to the policy debate on the implications of PTAs to the multilateral trading system.⁵

The paper is organized in four parts. The first part surveys the state and latest trends in the rules-of-origin regimes in the Americas. The next section summarizes the recent research on the political economy reasons behind the choice of rules-of-origin instrument in PTAs. The third section does the same for the economic effects of rules of origin, and discusses the implications of the research findings to the hemisphere's PTA spaghetti bowl. The fourth part contains our policy recommendations, and a final section concludes.

The Current Status of Rules-of-Origin Regimes in the Americas

Rules of origin can be divided into nonpreferential and preferential rules of origin. Individual countries use nonpreferential rules of origin to distinguish foreign from domestic products when applying other trade policy instruments,

4. The calculation includes continental Latin America, Canada, and the United States, but not the countries of the Caribbean. The figures exclude partial scope agreements and economic complementation agreements.

5. See Estevadeordal and Suominen (2005a), Suominen (2004), and WTO (2002b) for further discussions on rules-of-origin regimes around the world.

such as antidumping and countervailing duties, safeguard measures, origin marking requirements, discriminatory quantitative restrictions or tariff quotas, and rules on government procurement. The WTO is in the final stages of the decade-long process of harmonizing nonpreferential rules of origin at the multilateral level.⁶ Preferential rules of origin, the focus of this paper, are employed in PTAs and in the context of a generalized system of preferences. They define the processes to be performed and inputs to be incorporated in a product in the territory of an exporting PTA member in order for the product to qualify for preferential access to an importing PTA member. The justification for preferential rules of origin is to curb trade deflection—to prevent products originating from non-PTA members from being transshipped through a low-tariff PTA partner to a high-tariff one under the PTA-provided preferential treatment. Rules of origin, in short, are tools for keeping non-PTA parties from free riding on the PTA preferences. They are an inherent feature of free trade agreements in which the members' external tariffs diverge or in which the members wish to retain their individual tariff policies vis-à-vis the rest of the world. Rules of origin are also used in aspiring customs unions to govern sectors for which the members have yet to establish a common external tariff.⁷

Rules of origin have become increasingly important over the past decade. This is due both to the globalization of production—the growth of international trade in goods manufactured in multiple countries—and to the fact that today's PTAs quickly reduce the preferential tariff, the more traditional tool regulating preferential market access, to zero across most product categories. Indeed, rules of origin are currently a key arbitrator of the effectiveness of multilateral trade rules requiring PTAs to cover “substantially all trade” between the partner countries and not to raise barriers vis-à-vis third parties.

Preferential rules of origin have thus far eluded multilateral regulation. As a result, a wide repertoire of rules-of-origin types and combinations has developed around the world. This section surveys the rules of origin employed in the Western Hemisphere's PTAs.

6. See Estevadeordal and Suominen (2005a) and Suominen (2004) for details on the harmonization process.

7. Rules of origin are thus employed in the vast majority of PTAs. The Asia-Pacific Economic Cooperation (APEC) forum is a prominent exception in that it operates on the concept of open regionalism, with the preferential tariffs essentially being extended also to nonmembers.

Product-Specific Rules of Origin: Toward Product-Specific Tailoring

Preferential rules of origin were a simple affair in most of the world until a few years ago.⁸ In the Americas, trade agreements formed before the 1990s generally put in place one, often vaguely defined, rule of origin applicable to all products. Over time, the lack of precision in origin requirements became much criticized for allowing—and indeed requiring—subjective case-by-case origin determinations.⁹ The growth in international trade and the globalization of production expanded the constituency that paid attention to rules of origin, while paradoxically complicating correct judgments on origin.

Perhaps the single most important event that raised the profile of rules of origin in the Americas was the U.S. Customs finding in 1991 that the domestic content in Honda Civics imported from Canada fell below 50 percent—the threshold required for claiming origin under the U.S.-Canada free trade agreement of 1989 and the preceding U.S.-Canada Auto Pact of 1965. The finding fuelled the U.S. automotive industry's concerns about the intensifying Japanese competition and the moves by Japanese companies to use Canada as a production base. For its part, Canada, which was concerned about the loss of foreign investment, claimed that U.S. origin determinations were arbitrary at best. The Honda case had important repercussions for the 1994 North American Free Trade Agreement (NAFTA) negotiations. Pressured by vehicle lobbies, NAFTA negotiators put in place a highly precise regional value content of 62.5 percent—a level that Japanese firms were not expected to meet. The rules of origin lobbying spread through other economic sectors. Fearing that Asian and European firms would establish simple touch-up assembly operations in Mexico in order to gain duty-free access to the North American markets, U.S. industries called for tailor-made rules of origin that would be stringent enough to keep extraregional parties out, yet lenient enough to allow U.S. multinationals to retain their extraregional outsourcing linkages. Mexico, in turn, generally pushed for rules of origin that would not deter foreign investment. This bargaining resulted in the 150-page NAFTA rules-of-origin protocol, which carries individualized rules of origin for some 5,000 different products.

8. The exception to the global pattern of general and vaguely defined rules of origin was the European Community, which as early as the 1970s had preferential rules-of-origin regimes with different rules of origin governing the various product categories.

9. Reyna (1995, p. 7).

Product-by-product rules-of-origin tailoring became the norm in PTA talks across the hemisphere and around the world. The drive toward precise rules of origin was reflected by the 1999 multilateral Kyoto Convention, which established five main criteria for determining origin.¹⁰ The first is the wholly obtained or produced criterion, which asks whether the commodities and related products have been entirely grown, harvested, or extracted from the soil in the territory of the exporting PTA member or manufactured in that member from any of these products. This rule is met through not using any second-country components or materials. The remaining four criteria are more complex and are packaged together under the substantial transformation criterion. Of the four individual criteria, the first involves a change in tariff classification in the territory of a PTA member between a product imported from an extra-PTA party and the product that is being exported within the PTA. The change may be required to occur at the level of chapter (two digits under the Harmonized Commodity Description and Coding System), heading (four digits), subheading (six digits), or item (eight to ten digits). The second criterion is an exception attached to a change in tariff classification rule, which generally prohibits the use of nonoriginating materials from a specific subheading, heading, or chapter. The third defines the value content and prescribes either a minimum percentage of the product's value that must originate in the territory of the exporting PTA member (domestic or regional value content) or a maximum percentage of the product's value that can originate outside the PTA member's territory (import content). Finally, technical requirements prescribe or prohibit the use of certain inputs or the realization of certain processes in the production. Technical requirements are particularly prominent in rules of origin governing apparel products.

Rules-of-origin regimes use these four substantial transformation rules both alone and in combination with each other. The staple of regimes is the change in tariff classification. This rule is used at different levels: more than half of NAFTA rules of origin are based on a change in chapter, while many other regimes use mainly a change in heading. Table 1 displays the percentage shares of various combinations of rules-of-origin components in selected PTAs in the Americas and elsewhere. The table reveals the high

10. 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.

TABLE 1. Distribution of Rules-of-Origin Combinations, Selected PTAs in the Americas

Requirement ^a	NAFTA	U.S.- Chile	G3	Mercosur- Chile	Andean Community	Chile- Korea	U.S.- Jordan	E.U.- Mexico	E.U.- Chile
NC	0.54	0.51	4.05			0.51		0.39	0.39
NC + ECTC								2.04	2.39
NC + TECH		0.02						1.39	1.39
NC + ECTC + TECH									
NC + VC					100.00	0.78	83.94	10.91	11.90
NC + ECTC + VC								1.57	1.57
NC + VC + TECH								0.20	0.20
NC + Wholly obtained chapter							16.06	7.62	7.62
NC + Wholly obtained heading								0.70	0.70
Subtotal	0.54	0.53	4.05	0.00	100.00	1.29	100.00	24.82	26.16
CI									
CI + ECTC	0.02								
CI + TECH									
CI + ECTC + TECH									
CI + VC									
CI + ECTC + VC	0.02								
CI + VC + TECH									
Subtotal	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CS	1.29	16.56	1.54			1.68		0.20	0.20
CS + ECTC	2.52	5.57	0.73			0.47			
CS + TECH	0.04	0.14	0.10					1.90	1.78
CS + ECTC + TECH	0.40	0.04	0.04						
CS + VC		0.42	4.60			2.11		0.27	0.27
CS + ECTC + VC	0.10	0.04				0.16			
CS + VC + TECH			0.04						
CS + ECTC + VC + TECH			0.83						
Subtotal	4.35	22.77	7.88	0.00	0.00	4.42	0.00	2.37	2.25
CH	17.09	23.70	16.45	46.00		46.87		32.99	32.86
CH + ECTC	19.18	11.19	13.45			9.12		5.13	4.56
CH + TECH	0.02	0.34	0.97	20.04		0.14			
CH + ECTC + TECH	0.14	0.44	0.26					6.66	6.66
CH + VC	3.54	3.25	2.01	9.99		2.95		12.68	12.78
CH + ECTC + VC	0.58	0.48				0.49		0.86	0.37
CH + VC + TECH	0.10		8.06	23.97					
CH + ECTC + VC + TECH			4.82					0.02	0.02
Subtotal	40.65	39.40	46.02	100.00	0.00	59.57	0.00	58.34	57.25

(continued)

TABLE 1. Distribution of Rules-of-Origin Combinations, Selected PTAs in the Americas (continued)

Requirement ^a	U.S.-		G3	Mercosur- Chile	Andean Community	Chile- Korea	U.S.- Jordan	E.U.- Mexico	E.U.- Chile
	NAFTA	Chile							
CC	30.95	23.18	21.09			22.49		2.16	2.16
CC + ECTC	17.71	5.83	5.90			4.71		1.02	1.02
CC + TECH	0.02	0.06	5.43			0.08		0.04	0.04
CC + ECTC + TECH	5.76	8.08	6.65			5.67		11.25	11.02
CC + VC		0.06	0.14			1.80			
CC + ECTC + VC									
CC + VC + TECH			2.67						
CC + ECTC + VC + TECH			0.20						
Subtotal	54.44	37.21	42.08	0.00	0.00	34.75	0.00	14.47	14.24
Total	100	100	100	100	100	100	100	100	100

Source: Adapted from Estevadeordal and Suominen (2005a); Suominen (2004).

a. The notation on requirements is as follows: NC: No change in tariff classification required; CI: Change in tariff item; CS: Change in tariff subheading; CH: Change in tariff heading; CC: Change in tariff chapter; ECTC: Exception to change in tariff classification; VC: Value content; and TECH: Technical requirement. Calculations are made at six-digit level of the Harmonized System.

degree of diversity in rules-of-origin regimes in the Americas. Nevertheless, four main hemispheric rules-of-origin families can be identified.¹¹ One extreme is populated by the older trade agreements such as the Latin American Integration Agreement (LAIA), which uses one general rule applicable to all products (either a change of heading level or a 50 percent regional value content). The LAIA model has been the point of reference for the Andean Community and Caribbean Community rules-of-origin regimes.

At the other extreme lie the so-called new generation PTAs such as NAFTA. The NAFTA model served as the reference point for numerous recent bilateral agreements, including the U.S.–Central America free trade agreement (CAFTA) and the U.S.–Chile, Chile–Canada, Mexico–Bolivia, Mexico–Chile, Mexico–Costa Rica, Mexico–Nicaragua, Mexico–Northern Triangle (El Salvador, Guatemala, and Honduras), and the Group of Three (or G3, encompassing Mexico, Colombia, and Venezuela) free trade agreements. The model, particularly the versions employed in the U.S.–Chile free trade agreement and CAFTA, is also widely viewed as the likeliest blueprint for the FTAA rules of origin. The NAFTA-based rules-of-origin regimes are complex: depending on the product, the rules of origin may require a change of chapter, heading, subheading, or item, and the change

11. Garay and Cornejo (2002).

of tariff classification is often combined with an exception, regional value content (generally ranging from 35 to 60 percent), or technical requirements. Like many other rules-of-origin regimes in the world, the NAFTA-model regimes contain an alternative list of product-specific rules of origin for selected products, which enables an exporter to choose between two types of rules of origin. The list is relatively extensive in NAFTA, covering nearly 40 percent of the products, and its rules of origin are as complex as those on the main list.

Mercosur rules of origin and the rules of origin in the Mercosur-Bolivia and Mercosur-Chile free trade agreements are based on the change-of-heading criterion and different combinations of regional value content and technical requirements. They fall between the LAIA and NAFTA extremes in their degree of complexity. The Central American Common Market's rules-of-origin regime can be placed between those of Mercosur and NAFTA.¹²

U.S. bilateral free trade agreements with some extrahemispheric partners—such as Jordan and Israel—diverge markedly from the NAFTA model, incorporating value content rules of origin alone. The rules of origin of the U.S.-Singapore and U.S.-Australia free trade agreements, however, resemble NAFTA in their complexity. The recently forged Chile-South Korea and Mexico-Japan free trade agreements also feature sectoral selectivity à la NAFTA. The future Canada-Singapore, Mexico-Singapore, and Mexico-Korea free trade agreements, among others, will likely compound the spread of the NAFTA model in Asia and the Pacific. Meanwhile, the European Union's free trade agreements with Mexico and Chile carry the European Union's standard, harmonized pan-European rules of origin.¹³

How Restrictive Are Rules of Origin?

Making meaningful cross-product comparisons across the many types of rules of origin requires a parsimonious tool. Esteveordal's restrictiveness index provides such a tool.¹⁴ The index's observation rule is based on

12. The Central American Common Market chiefly uses a change in tariff classification only. The regime is more precise and diverse than Mercosur, however, because it requires the change to take place at the chapter, heading, or subheading level, depending on the product in question.

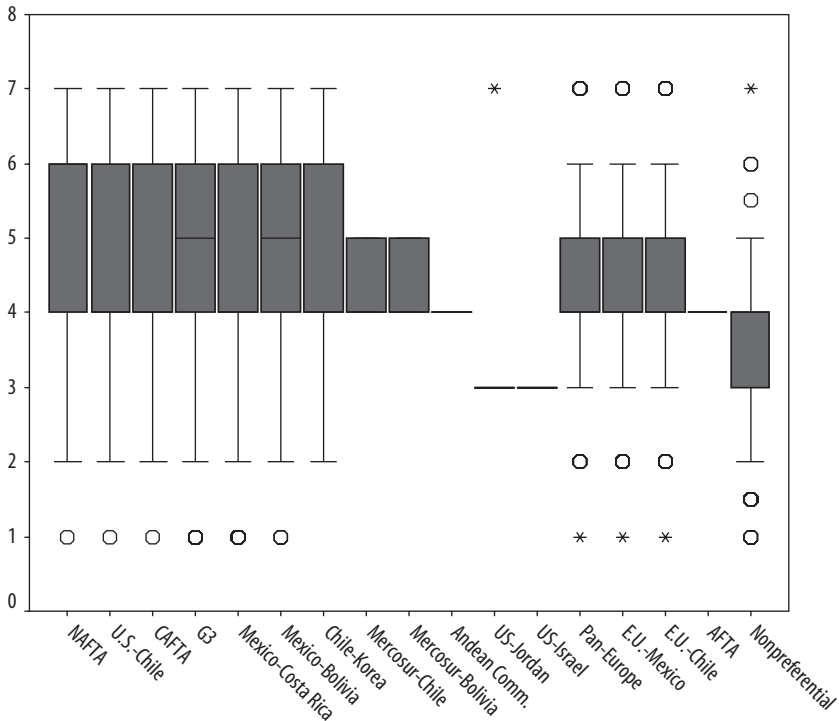
13. See Esteveordal and Suominen (2003).

14. Esteveordal (2000). The index was subsequently made more generalizable in Esteveordal and Suominen (2005a) and Suominen (2004). Carrerè and de Melo (2004) compare Esteveordal's index with an ordering emerging from cost estimates of different types of rules of origin; they find the index to be consistent with the cost ranking.

the length of the jump over the Harmonized System's tariff lines required by rules of origin: a change of chapter is more restrictive than a change of heading, a change of heading more restrictive than a change of subheading, and so on. Value content and technical requirements add to the rule's restrictiveness.

Figure 2 reports the restrictiveness values of rules of origin in some of the main PTAs. Since it is based on coding at the six-digit level, it also reveals the degree of interproduct dispersion of restrictiveness values, which serves as a measure of the selectivity of regimes. The final bar represents the like-

FIGURE 2. Restrictiveness of Rules of Origin in Selected PTAs^a



Source: Adapted from Esteveadoral and Suominen (2005a); Suominen (2004).

a. The box plots represent interquartile ranges (IQR), with the box extending from the twenty-fifth percentile to the seventy-fifth percentile. The line in the middle of the box represents the median fiftieth percentile of the data. The whiskers emerging from the boxes extend to the lower and upper adjacent values. The upper adjacent value is defined as the largest data point less than or equal to $x(75) + 1.5$ IQR. The lower adjacent value is defined as the smallest data point greater than or equal to $x(25) + 1.5$ IQR. Observed points more extreme than the adjacent values are individually plotted (outliers and extreme values are marked using * and O symbols, respectively).

liest outcome of the harmonization process of nonpreferential rules of origin. Two issues stand out. The first is the presence of rules-of-origin families. Regimes drawing on the NAFTA model are highly similar in terms of overall restrictiveness and selectivity, as are regimes drawing on the Mercosur and European Union models. Second, the NAFTA-type rules-of-origin regimes are by far the most restrictive and selective in the hemisphere and, indeed, the world. This finding is particularly important in light of the spread of the NAFTA-model rules of origin across the hemisphere.

Research shows that food, textiles, and apparel products tend to have the highest restrictiveness values across regimes.¹⁵ This provides precursory evidence that rules of origin may be arbitrated by the same political economy variables that drive tariffs, particularly in the industrialized countries. Nonpreferential rules of origin feature some selectivity, which suggests the operation of political economy dynamics also at the multilateral level—and the endogeneity of the nonpreferential rules of origin to the existing preferential rules-of-origin regimes.

Comparing Regimewide Rules of Origin

Rules-of-origin regimes also vary in their use of general, regimewide rules of origin—that is, rules of origin that apply similarly to all products in a regime. Some of the most commonly used regimewide rules of origin include the following:

- De minimis levels, which allow a specified maximum percentage of nonoriginating materials to be used without affecting origin.

- Cumulation provisions, which enable producers of one PTA member to use materials from other members without losing the preferential status of the final product. The three types of cumulation are bilateral cumulation, which operates between two PTA partners (that is, firms operating in one partner country can use products that originate in the other and still qualify for preferential treatment when exporting the product), diagonal cumulation, which allows countries tied by the same set of preferential origin rules to use products that originate in any part of the common rules-of-origin zone as if they originated in the exporting country, and full cumulation, which extends diagonal cumulation to allow the use of goods processed in any part of the common rules-of-origin zone even if these do not qualify as originating products.

15. See, for example, Estevadeordal (2000); Estevadeordal and Suominen (2005a); Suominen (2004); and Sanguinetti and Bianchi (2005).

—Prohibition of duty drawback, which precludes the refunding of tariffs on nonoriginating inputs that are subsequently included in a final product that is exported to a PTA partner. Drawback in the context of a PTA is viewed as providing a cost advantage to producers who gear their final goods to export over producers who sell their final goods in the domestic market. However, ending drawback increases the cost of nonoriginating components to producers who have thus far benefited from it.¹⁶

—Certification method, which defines the instance authorized to certify an origin claim. The main methods are self-certification by exporters; certification by the exporting country's government or a certifying agency; and a two-step combination of the private self-certification and the public governmental certification. High bureaucratic hurdles for obtaining a certificate of origin lower the incentives for exporters to seek preferential treatment.

Whereas *de minimis* and cumulation clauses insert leniency in the application of product-specific rules of origin, drawback prohibition and complex certification methods may have the opposite effect, namely, increasing the difficulty of complying with the rules-of-origin regime.¹⁷

Table 2 compares the regimewide rules of origin in the various rules-of-origin regimes. Bilateral cumulation is applied in virtually all regimes, but use of other regimewide components varies considerably. Again, the different rules-of-origin families stand out. The NAFTA-model regimes set *de minimis* levels at 7–10 percent, preclude diagonal and full cumulation, do not permit drawback (often after a certain transition period), and are based on self-certification.¹⁸ There are exceptions; for example, CAFTA, the latest of the NAFTA-model regimes, allows cumulation within Central America,

16. Many PTAs in the Americas include duty drawback provisions in the market access chapter rather than in the rules-of-origin protocol. However, the implications of ending drawback are very similar to the implications of stringent rules of origin, namely, increasing production costs for exporters. Cadot, de Melo, and Olarreaga (2001) show that duty drawback may have a protectionist bias due to reducing producers' interest in lobbying against protection of intermediate products.

17. Nonmembers of a cumulation area may view the cumulation system as introducing another layer of discrimination in that it provides incentives for member countries to out-source from within the cumulation zone at the expense of extrazone suppliers.

18. Two qualifications are in order. First, the *de minimis* principle has numerous exceptions in most regimes. For example, in NAFTA, it does not extend to dairy products, edible products of animal origin, citrus fruit and juice, instant coffee, cocoa products, and some machinery and mechanical appliances. Many regimes also calculate *de minimis* levels in textile products as the percentage of weight rather than the value of the final product. Second, although NAFTA prohibits drawback, it has launched a refund system, whereby the producer will be refunded the lesser of the amount of duties paid on imported goods and on the exports of the good to another NAFTA member.

TABLE 2. Regimewide Rules of Origin in Selected Preferential Trade Arrangements

Region and preferential trade agreement	De minimis (percent)	Roll-up	Cumulation		Drawback allowed?
			Bilateral	Diagonal	
<i>Americas</i>					
NAFTA	7	Yes (except automotive)	Yes	No	No after 7 years
U.S.-Chile	10	Yes	Yes	No	No after 12 years
CAFTA	10	Yes	Yes	Yes in chap. 62 with Mexico and Canada	Not mentioned
G3	7	Yes	Yes	No	Not mentioned
Mexico–Costa Rica	7	Yes	Yes	No	No after 7 years
Mexico–Bolivia	7	Yes	Yes	No	No after 8 years
Chile–Korea	8	Yes	Yes	No	Not mentioned
Canada–Chile	9	Yes	Yes	No	Not mentioned
Mercosur–Chile	Not mentioned	Yes	Yes	No	No after 5 years
Mercosur–Bolivia	Not mentioned	Yes	Yes	No	No after 5 years
Central American Common Market (CACM)	10	Not mentioned	Yes	No	Yes
U.S.–Jordan	Not mentioned	Not mentioned	Yes	No	Not mentioned
U.S.–Israel	Not mentioned	Yes	Yes	No	Yes
U.S.–Singapore	10	Yes	Yes	No	Not mentioned
E.U.–Mexico	10	Yes	Yes	No (OP and ISI allowed) ^a	No after 2 years
E.U.–Chile	10	Yes	Yes	No	No after 4 years
<i>Other regions</i>					
Pan-European	10	Yes	Yes	Yes (full in EEA) ^b	No
ASEAN Free Trade Agreement (AFTA)	Not mentioned	Not mentioned	Yes	No	Yes
Australia–New Zealand Closer Economic Relations Trade Agreement (ANZCERTA)	2	Yes	Yes	Yes (full)	Yes
Southern African Development Community (SADC)	10	Yes	Yes	No	Not mentioned
Common Market for Eastern and Southern Africa (COMESA)	2 ^c	Yes	Yes	No	Not after 10 years

Source: Adapted from Estevevordal and Suominen (2005a); Suominen (2004).

a. Both originating products (OP) and the integrated sourcing initiative (ISI) operate in the U.S.–Singapore Free Trade Agreement. ISI applies to nonsensitive, globalized sectors, such as information technologies. Under the scheme, certain information technology components and medical devices are not subject to rules of origin when shipped from either of the parties to the FTA. The scheme is designed to reflect the economic realities of globally distributed production linkages and to encourage U.S. multinationals to take advantage of ASEAN countries' respective comparative advantages.

b. European Economic Area (EEA).

c. The section on trade remedies mentions that one of the criteria for imposing a countervailing duty within the block is that the targeted subsidy is not less than the 2 percent de minimis.

Mexico, and Canada of materials that Central America may use for producing U.S.-bound goods.¹⁹ The clause covers only a limited quota, however, and it enters into force only after Canada and Mexico agree on it. The Central American Common Market's regimewide rules of origin resemble those of the NAFTA model, but they do not prohibit drawback. Mercosur's free trade agreements do not have *de minimis* levels or cumulation provisions, they phase drawback out in five years, and they are based on public certification.²⁰ The European Union's rules-of-origin regimes stand out for employing diagonal cumulation extensively across Europe.²¹

As in the case of the restrictiveness of product-specific rules of origin, the facilitation provided by regimewide rules of origin to the application of the rules-of-origin regime can be systematically assessed through an index. The facilitation index developed by Estevadeordal and Suominen incorporates *de minimis* levels, diagonal cumulation, full cumulation, and drawback (all of which can be expected to cut producers' production costs by amplifying their pool of low-cost inputs), as well as self-certification (which can keep producers' administrative costs lower than the other methods).²² Figure 3 shows the behavior of the index. Regimes styled after NAFTA and the European Union feature the highest levels of facilitation, while the Mercosur- and LAIA-based rules of origin score relatively low. The result suggests some correlation between the restrictiveness and facilitation indexes: regimes with the highest restrictiveness of product-specific rules of origin tend to also have the highest facilitation values.

Many rules-of-origin regimes have devised further, more idiosyncratic *ad hoc* mechanisms to help the members adjust to the rigors of rules of origin.²³ Some such mechanisms include phase-in periods for stringent value content rules of origin; a number of different options for calculating value content rules of origin; and tariff preference levels, which allow

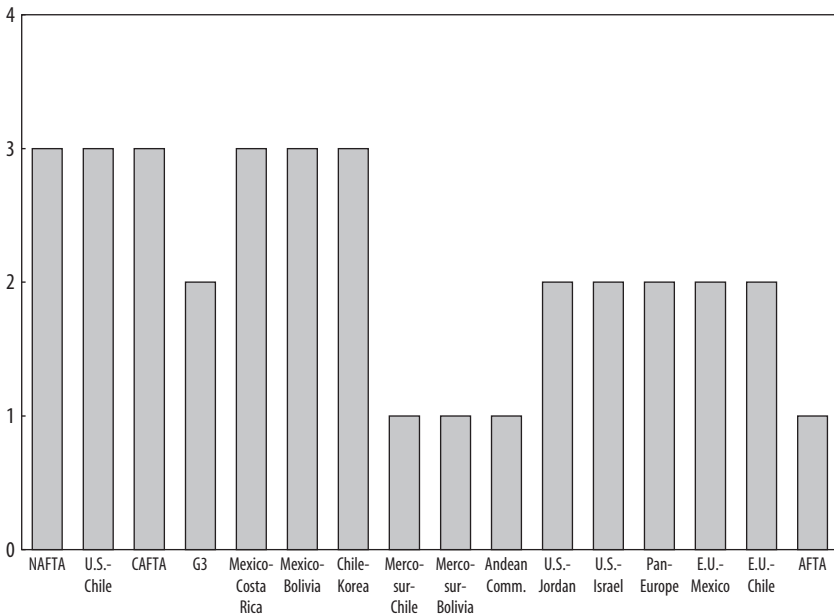
19. See chapter 62 of CAFTA. (The full text of CAFTA is available at www.sice.oas.org/Trade/CAFTA/CAFTADR_e/CAFTADRin_e.asp.)

20. The Mercosur rules-of-origin regime is similar, but allows for drawback. Drawback is, however, prohibited for Argentine and Brazilian imports of intermediate automotive products when the final product is exported within Mercosur.

21. The absorption by the European Union customs union of the ten new member countries implied that thirty-four of the pan-European free trade agreements vanished overnight. Prior to the accession, the diagonal cumulation incorporated sixteen partners and covered no fewer than fifty free trade agreements.

22. Estevadeordal and Suominen (2005a); Suominen (2004).

23. For a more thorough treatment, see Estevadeordal and Suominen (2005a).

FIGURE 3 . Facilitation of Regimewide Rules of Origin in Selected PTAs

Source: Adapted from Esteveordal and Suominen (2005a); Suominen (2004).

goods that would not otherwise satisfy the rules-of-origin protocol to qualify for preferential treatment up to a yearly quota. While most regimes that employ these mechanisms make them available to all members, some regimes provide them to one or some of the PTA partners only (for instance to accommodate country-specific endowments, production structures, and development levels).

Trends in Rules of Origin in the Hemisphere

The main finding of the above analysis is that rules-of-origin regimes based on the NAFTA model are among the most restrictive and selective in the world. The analysis also reveals two key temporal trends in the Western Hemisphere. First, the so-called new generation regimes of the 1990s score the highest for restrictiveness, selectivity, and facilitation values. Second, the restrictiveness of NAFTA-style agreements has fallen somewhat over time. Some of the most marked declines are in the mineral,

leather, plastic, apparel, and footwear sectors. In very general terms, this means, for instance, that some producers based in Costa Rica have greater leeway to procure inputs or perform operations outside the PTA zone under the recently signed CAFTA than they do under the 1995 Costa Rica–Mexico free trade agreement. What is more, NAFTA itself is liberalizing some of its rules of origin.²⁴ The Working Group in charge of the rules-of-origin review process is designing new rules of origin on the basis of consultations with consumers and producers and a review of the rules-of-origin protocols that each NAFTA member country has negotiated in their post-NAFTA free trade agreements, such as the United States with Singapore or Mexico with the European Union. If this latter process results in interregime rules-of-origin borrowing, it could enhance convergence between the NAFTA rules of origin and the rules of origin of other regimes around the world.

The Political Economy of Rules of Origin

This section examines why rules of origin are chosen as policy instruments in preferential trade. After all, integrating governments could simply exclude the potentially trade-deflecting sectors from the PTA's coverage, or put in place a common external tariff covering all products. We also consider why restrictive and selective rules-of-origin regimes have gained ground over the past few years.

The Choice of Rules of Origin as a Policy Instrument

Studies on political economy widely concur that using rules of origin as a key policy instrument serves to pay off import-competing lobbies jeopar-

24. The initial set of revised NAFTA rules of origin took effect on 1 January 2003; they involve alcoholic beverages, petroleum/topped crude, esters of glycerol, pearl jewelry, headphones with microphones, chassis fitted with engines, and photocopiers. See "Regulations Amending the NAFTA Rule of Origin Regulations," *Canada Gazette*, 1 January 2003 (available at canadagazette.gc.ca/partII/2003/20030115/html/sor24-e.html). In July 2004, the trade ministers of the NAFTA countries instructed the trilateral Working Group on Rules of Origin to extend the liberalization drive to chemicals, pharmaceuticals, plastics and rubber, motor vehicles and their parts, footwear, copper, and all items with a zero most-favored-nation tariff for all of the NAFTA members. See "A Decade of Achievement," NAFTA Free Trade Commission, 16 July 2004 (available at www.freetradealliance.org/pdf/2004%20Advocacy/JointStatement.pdf).

dized by PTA formation.²⁵ Rules of origin can be employed to favor intra-PTA industry linkages over linkages between the PTA and the rest of the world and thus to indirectly protect PTA-based input producers vis-à-vis their rivals outside the PTA.²⁶ If rules of origin provide captive markets downstream, they may even be superior for the import-competing intermediate producer lobbies than exclusions of their products from the PTA.²⁷ Furthermore, stringent rules of origin can also extend protection to uncompetitive intra-PTA final-good producers. This happens when their extra-PTA competitors are too hard-pressed to switch to the components prescribed by the rules of origin. Even if an extra-PTA firm were to move operations to the PTA market, the edge of producers with existing intra-PTA supply links would continue until the new entrant's regional sourcing met the rules of origin.²⁸

Rules of origin, in short, enable governments to balance the competing claims of export lobbies, which seek a liberalizing PTA in which all products are subjected to tariff phase-outs, and import-competing lobbies, which are intent on halting all liberalization. Rules of origin compensate and can even benefit import-competing lobbies, while export interests accept stringent product-specific rules of origin as a preferable and politically attainable alternative to a PTA rife with exclusions.²⁹ Indeed, regimes with the most stringent rules of origin also tend to feature the highest facilitation values, which may be a sign of counter-lobbying by exporters threatened by the restrictive rules of origin.

Empirical work supports the hypotheses about the protectionist impulses behind rules of origin. Both Esteveordal and Suominen find that restrictive rules of origin tend to be put in place in sectors that are also marked by high most-favored-nation tariffs and long preferential tariff liberalization

25. Rules of origin are a particularly useful trade policy instrument for two reasons. First, like tariffs, rules of origin are a highly targetable instrument because they are often negotiated at the product level. Second, unlike the tariff, rules of origin can be defined in technical and diverse terms, so they can be tailored differently for each individual good, while their presumed protection can be hidden since rules of origin are not as immediately quantifiable as a tariff.

26. Krueger (1993); Krishna and Krueger (1995).

27. Suominen (2003).

28. Graham and Wilkie (1998). Given that rules of origin hold the potential for increasing local sourcing, governments can also use them to encourage investment in sectors that provide high value-added or jobs (Jensen-Moran, 1996; Hirsch, 2002).

29. Suominen (2003).

phase-out schedules.³⁰ Sanguinetti and Bianchi encounter similar evidence in Mercosur's rules-of-origin regime.³¹

Explaining Rules of Origin Trends

Because they use rules of origin as a trade policy instrument, governments expend considerable time and resources on the tedious, technical, and often highly contentious crafting of the rules-of-origin protocols. But why have rules of origin become more restrictive over time? One possibility is that the liberalization of most-favored-nation treatment and the growth of global trade have strengthened export lobbies, while antagonizing import-competing interests. Governments find themselves under growing pressures from export interests to produce deeper trade liberalization, so they have had to develop targetable and effective tools, such as product-specific rules of origin, to compensate the potential losers from liberalization. In the case of NAFTA, for example, neither the deep preferences nor the sustained political support for the agreement would have been possible without a stringent rules-of-origin regime. Earlier integration schemes, such as LAIA, were less liberalizing than NAFTA; they managed the potential losers' concerns in the tariff schedules, which obviated the need to create a sturdy set of new compensation tools within the PTA. It is thus no accident that the ambitious liberalization of today's PTAs is accompanied by restrictive rules of origin.

Another, complementary explanation is that the growing propensity to fragment global production presents a threat to import-competing intermediate-good providers, who, in turn, see stringent rules of origin as an opportunity to discourage final-good producers from outsourcing or shifting production abroad.³² This notion implies that PTA formation could be driven by protectionist interests.

As noted above, however, the restrictiveness of rules of origin appears to have declined somewhat in the microcosm of NAFTA-model regimes over the past decade. This trend has three potential explanations beyond the potential strengthening of export lobbies in the Americas since the mid-1990s. First, NAFTA partners have had time to learn about the implications of the different types of rules of origin. NAFTA is one of the first regimes in the world to establish rules of origin tailored individually for

30. Estevadeordal (2000); Suominen (2003, 2004).

31. Sanguinetti and Bianchi (2005).

32. Suominen (2003).

each product; both governments and business lobbies thus lacked information on the effects of rules of origin when the NAFTA rules were first negotiated. NAFTA-based exporters and producers are widely perceived as having grown to find the rules-of-origin regime excessively restrictive.³³

Second, the newer regimes may be endogenous to the prior ones. Countries integrating with the United States after Mexico did so—namely, Chile and the Central American countries—may have sought terms that are more favorable than those attained by Mexico in order to rapidly bring themselves on a par with the existing U.S. partners in the U.S. preferential market.³⁴

The third explanation negates the other two: the reduced restrictiveness may have little to do with temporal dynamics, but rather may simply be caused by other variables, such as bilateral trade volumes and the types of goods produced by the different partners. One hypothesis is that newer regimes may have achieved the same level of protection provided by NAFTA through using less stringent rules of origin. Detailed time-series data on the utilization rates of tariff preferences in the different NAFTA-model PTAs would help illuminate whether this is the case.³⁵

The Effects of Rules of Origin

We now turn to the potential economic effects of rules of origin. Recent research indicates that rules of origin can increase firms' administrative and production costs, and both costs can introduce protectionist biases that hamper the free flow of trade and investment. The differences across rules-of-origin regimes may generate transaction costs, but these have yet to receive empirical scrutiny. We consider the three costs in turn.

33. In theory at least, stringent NAFTA rules of origin may have caused competitive extraregional producers to move their production facilities to the NAFTA region. In response, affected intraregional producers who initially favored restrictive rules of origin may have grown disposed to loosening the rules-of-origin regime.

34. Perhaps less plausibly, the fact that all recent free trade agreements have been negotiated in the shadow of the FTAA process may have provided the NAFTA-model adherents incentives to define a rules-of-origin model that is more acceptable to all countries of the hemisphere than the FTAA rules-of-origin regime. This assumes that the adherents to the NAFTA model favor the adoption of the FTAA.

35. The pattern would not be universal, however, given that the European Union has implemented the identical rules-of-origin regime across all its partners.

Administrative and Production Costs

The administrative costs of rules of origin stem from the procedures required for ascertaining compliance with the regime. They are essentially bookkeeping costs for the exporter—the paperwork and costs associated with certifying origin—and the costs incurred by the partner country's customs in verifying origin. The administrative costs can be considerable even in regimes using self-certification.³⁶ Cadot, Estevadeordal, and Suwa-Eisenmann disentangle NAFTA's administrative costs into those associated with rules of origin and those that are not; they find the former to approximate two percent of the value of Mexican exports to the U.S. market.³⁷

The production costs of rules of origin arise from the various technical criteria imposed by the rules-of-origin regime. If rules of origin encourage final-good producers to use intra-PTA sources even when cheaper supplies are available in the rest of the world, then the rules of origin raise production costs and thus likely dampen the PTA's trade-creating potential. Rules of origin can also create trade diversion in intermediates if they give an unnatural boost to intra-PTA purchases of intermediate goods. However, if the costs of complying with the rules-of-origin regime exceed the benefits of the PTA-conferred preferences, then final-good producers might cease to use the preferential channel, obtaining intermediates from the rest of the world and exporting final goods under the most-favored-nation regime instead. Status quo would ensue, with the PTA having no effect on trade. Meanwhile, the various facilitating regimewide rules of origin should have the opposite effect, helping the PTA channel to flourish.

36. Many regimes call for self-certification, including NAFTA, CAFTA, and the U.S.-Chile, Mexico–Costa Rica, Canada-Chile, Central American Common Market (CACM), CACM-Chile, Chile-Korea, U.S.-Singapore, and U.S.-Jordan agreements. The Mexico-Bolivia agreement implements self-certification after an initial four-year period of two-step private and public certification. The pan-European, European Union–Mexico, and European Union–Chile agreements are mostly based on two-step private and public certification, with limited self-certification. The G3 agreement, LAIA, the Common Market for Eastern and Southern Africa (COMESA), and the Southern African Development Community (SADC) specify two-step private and public certification, whereas Mercosur, Mercosur-Chile, Mercosur-Bolivia, Andean Community, Caribbean Community (CARICOM), and most rules-of-origin regimes in Asia and the Pacific rely on public certification or delegate certification to a private entity. See Estevadeordal and Suominen (2005a); Suominen (2004).

37. Cadot, Estevadeordal, and Suwa-Eisenmann (2005).

Esteveordal and Suominen provide the most comprehensive analysis to date on the implications of rules of origin for trade, based on a 155-country gravity model spanning twenty-one years.³⁸ They reach four main conclusions. First, restrictive and selective product-specific rules of origin—that is, rules of origin that can be expected to increase production and administrative costs—undermine bilateral trade flows. This indicates that stringent rules of origin do undermine PTAs' trade-creating potential. Second, *de minimis* levels, diagonal and full cumulation, drawback, and self-certification—which can be expected to reduce a rules-of-origin regime's production and administrative costs—foster bilateral trade. This suggests that lenient regimewide rules of origin may counteract the negative effects of stringent product-specific rules of origin. Third, restrictive rules of origin in final goods encourage bilateral trade in intermediate goods. As such, restrictive rules of origin may result in trade diversion to the PTA area. Fourth, the trade effects of rules of origin change over time: the negative effects of stringent rules of origin gradually decrease, while the positive effects of permissive regimewide rules of origin increase. This suggests that exporters learn to comply with product-specific rules of origin and to take advantage of regimewide rules of origin.

Other, single-regime studies on the trade effects of rules of origin reach similar results, as do the closely related studies on usage rates of PTA preferences.³⁹ Esteveordal and Miller document missed preferences (or utilization rates below 100 percent) between the United States and Canada, which they attribute to the tightening of the rules of origin under NAFTA in 1994.⁴⁰ Cadot, Esteveordal, and Suwa-Eisenmann

38. Esteveordal and Suominen (2005b); Suominen (2004).

39. Cadot, Esteveordal, and Suwa-Eisenmann (2005), focusing on NAFTA, show that stringent rules of origin have undermined Mexico's aggregate exports to the United States. The United States played a key role in establishing NAFTA's Uniform Regulations and rules-of-origin enforcement mechanisms. In January 1995, the United States found a high compliance rate among Mexican and Canadian exporters and producers on rules of origin, at 90 percent and 80 percent, respectively (Reyna, 1995, pp. 37–38). Appiah (1999) also examines NAFTA, but using a three-country, multisector computable general equilibrium (CGE) model; he finds that rules of origin distort trade flows, diverting resources from their most efficient uses and undercutting global welfare. James (2004) posits that NAFTA preferences and restrictive rules of origin have undercut Asian textile and apparel exports to the United States. Flatters and Kirk (2005) find that restrictive South African Development Community (SADC) rules of origin work against efficiency gains that the members could reach through outsourcing outside the PTA area.

40. Esteveordal and Miller (2002).

link the mere 64 percent utilization rate of NAFTA preferences to stringent rules of origin.⁴¹

In addition to their short-run trade effects, stringent rules of origin may cause investment diversion in the long run. This occurs when extra-PTA final-good producers move production to the PTA area with the sole purpose of meeting the rules of origin, even if the PTA is not the most efficient location for production. Rules of origin can also divert investment within the PTA. Final-good producers may want to get around rules of origin by moving production to the territory of the PTA partner that has the largest domestic demand or the lowest external tariff on third-country inputs (or both)—such as the United States in NAFTA.⁴² From a theoretical perspective, requirements for a high regional value content can paradoxically encourage investment to the PTA country that has the highest production costs (that is, is the most inefficient producer), because goods made in member countries with low production costs may be hard-pressed to meet the rules of origin. Rodriguez theorizes that stringent rules of origin can lead to distortions in production structures within the PTA, while Estevadeordal, López-Córdova, and Suominen encounter preliminary empirical evidence that flexible rules of origin are conducive to foreign direct investment (FDI) inflows.⁴³

Transaction Costs

Analysts have yet to understand whether differences among rules-of-origin regimes generate transaction costs and impart economic effects.⁴⁴

41. Cadot, Estevadeordal, and Suwa-Eisenmann (2005). Krueger (1993) reports that under NAFTA's predecessor (the U.S.-Canada free trade agreement), Canadian producers opted to pay the tariff rather than go through the administrative hurdles to meet the rules of origin. Brenton (2003) and Inama (2004) show that rules of origin shape developing countries' odds of qualifying for treatment under the generalized system of preference.

42. For example, a Mexican and a U.S. firm selling on the U.S. market and purchasing their inputs from outside the NAFTA region would be treated unequally under NAFTA: the Mexican firm would be disadvantaged vis-à-vis the U.S. firm because it fails to meet the rules of origin required to export to the U.S. market (Graham and Wilkie, 1998, p. 110).

43. Rodriguez (2001); Estevadeordal, López-Córdova, and Suominen (2004).

44. Garay and Cornejo (2002) provide the only rigorous examination of the diversity in rules of origin across regimes. They evaluate the correlations between types of rules of origin in NAFTA, CACM, Mercosur's free trade agreements, and Mexico's free trade agreements. The study finds that only 10 percent of the product-specific rules of origin are exactly identical or highly similar between the regimes, although up to 75 percent of the rules of origin in most chapters within both the Mercosur and Mexican regimes are highly similar.

Any adverse effects would clearly be heaviest for countries that are party to several relatively different rules-of-origin models, such as Chile and Costa Rica. These so-called spoke countries require customs that are well-equipped to verify and implement the different rules-of-origin regimes, and they may eventually have to tailor their production structures differently for each PTA market.⁴⁵ This generates transaction costs that would be nil in a world with one rules-of-origin model. The costs will be highest for small producers in spokes with a narrow domestic sourcing base. In contrast, producers and customs alike in rules-of-origin hubs—such as the European Union, Mercosur, Mexico, and the United States—escape most of these costs. If the transaction costs of operating on many PTA fronts become excessive, then producers in spoke countries may be compelled to specialize for one preferential channel over the others.⁴⁶ At the global level, the market specialization induced by rules of origin could give rise to policy-driven, trade-diverting PTA hubs.

Other factors, however, could mitigate the costs associated with cross-regime differences. First, a small producer generally produces only a few items and would thus need to apply only a couple of different rules of origin when exporting to the various preferential markets. Multinational companies selling a variety of goods in different markets may face greater complexity, but they are also better equipped to economize any transaction costs given their superior human, technical, and financial capacities. Second, even when rules of origin differ across PTA markets, a single production process may qualify for preferential treatment in each market.

45. Consider a Chilean producer of typewriters (heading 8469): the firm will have to comply with rules of origin that stipulate a ceiling of 50 percent import content to enter the European Union; a change of subheading (except from subheading 8469.12) to enter the United States; a change of heading to enter Korea (except from heading 84.13 or, alternatively, a change from heading 84.13, provided the regional value content is not less than 45 percent using the build-down method or not less than 30 percent using the build-up method); and a 60 percent regional value content (that is, a ceiling of 40 percent import content) to enter Mercosur. Meanwhile, a European Union producer in the same heading can use the same rules of origin—50 percent import content—to enter Mexico, Chile, South Africa, and the whole pan-European system. This example also illustrates the comparative complexities faced by customs: if each rules-of-origin regime stipulates rules of origin for 5,000 products, the Chilean customs would basically have to verify 20,000 different rules of origin, whereas customs in the European Union countries would only need to verify 5,000 rules of origin.

46. Inter-PTA divergences also allow countries wishing to join these preferential arrangements to engage in PTA shopping, choosing to join the agreements that best accommodate their existing domestic standards and interests, rather than joining PTAs that are liberalizing, neutral vis-à-vis third parties, and welfare-enhancing.

Much depends on the idiosyncrasies of the product and production process in question. Finally, regimewide facilitation mechanisms can go a long way toward reducing the effects of the cross-regime incompatibilities in product-specific rules of origin.

Avenues for Future Research

Our understanding of the effects of rules of origin is far from complete. The costs of differences across rules-of-origin regimes await analysis. Three avenues for future empirical research would be particularly fruitful. The first involves the long-term effects of rules of origin, particularly in light of the interplay of intermediate and final goods markets. While restrictive rules of origin may initially dampen intra-PTA trade in final goods by increasing the cost of intermediate goods, the subsequent decline in the demand of intermediates should lower their price and thus revive both the demand for them and the intra-PTA trade in final goods.⁴⁷

The second avenue for research is the economic impact of the certification and verification costs of rules of origin, together with the potential trade-off between the different certification methods, on the one hand, and verification costs, on the other. For example, do regimes using the self-certification method increase the costs of verifying origin, such that the low transaction costs of certifying origin translate into high transaction costs of verifying origin?

Finally, the welfare effects of rules of origin remain uncharted.⁴⁸ Capturing welfare effects will undoubtedly prove challenging, given that rules-of-origin regimes carry frictions—including restrictiveness, selectivity, and various regimewide components—that work in different directions.

Policy Recommendations on Rules-of-Origin Systems for the Americas

This study has analyzed the structure and evolution of rules-of-origin regimes in the Americas and reviewed the latest research results on the effects of rules of origin. The main findings are three-fold: stringent rules of origin can be used as a tool to pay off protectionist sectors in a PTA and thus to foster the political prospects of PTAs; the NAFTA rules-of-origin

47. See Ju and Krishna (1998) and Duttagupta and Panagariya (2001).

48. Appiah (1999) finds that rules of origin undermine welfare in the case of NAFTA, although his operationalization of rules of origin in a CGE framework is rather crude.

model gaining force in the Americas carries relatively restrictive rules of origin; and restrictive rules of origin can undercut the liberalizing potential of PTAs. Taken together, these findings raise concerns about the ultimate economic effects of the Americas' expanding PTA bowl. They also raise legal concerns: stringent rules of origin may breach Article XXIV of the General Agreements on Tariffs and Trade (GATT), which in paragraph 8(b) defines a free trade area as "a group of two or more customs territories in which the duties and other restrictive regulations of commerce . . . are eliminated on substantially all the trade between the constituent territories in products originating in such territories." Indeed, the WTO has recently recognized rules of origin as constituting part of "other regulations of commerce."⁴⁹ Since rules of origin have implications for extra-PTA parties' access to the PTA market, they also risk violating paragraph 5 of Article XXIV, which prohibits PTAs that raise barriers toward the rest of the world from the pre-PTA levels.⁵⁰

The evolution of the hemisphere's rules-of-origin regimes also provides reasons for optimism, however, and the region's countries have a number of policy options for reducing the potential negative effects of rules of origin. The rest of this section addresses these two issues.

Encouraging Patterns in Rules of Origin in the Americas

The countries of the Americas have five reasons to be optimistic about the evolution of the regional rules-of-origin regimes. Each also augurs well for the design and implementation of the FTAA rules of origin. First, the most recent rules-of-origin regimes based on the NAFTA model—namely, the U.S.-Chile free trade agreement and CAFTA—incorporate simpler, more practical, and less restrictive product-specific rules of origin than NAFTA. This evinces a trend toward market-friendly rules of origin in the hemisphere. The NAFTA review process will provide a further boost to the NAFTA system's liberalization of its rules of origin.

Second, the various regimes designed after NAFTA are fairly similar vis-à-vis each other, in both the types of rules of origin specified and their level of restrictiveness. This can help reduce any potential transaction

49. See, for instance, WTO (2002a). Ambiguities remain as to the meaning of "substantially all the trade."

50. The WTO Negotiation Group on Rules is advocating a case-by-case analysis of the potentially restrictive effects of preferential rules of origin on extra-PTA parties (WTO, 2002a).

costs for NAFTA-model adherents that export under preferential terms to two or more NAFTA-model PTAs. NAFTA's review of its rules of origin may engender further interregime compatibilities, thereby paving the way for diagonal cumulation linking the NAFTA-model free trade agreements.

Third, the NAFTA-style regimes apply relatively lenient facilitation terms. This helps alleviate the compliance costs of the product-specific rules of origin. Even more encouraging is the movement toward somewhat higher de minimis levels and the willingness to experiment with diagonal cumulation, as evidenced in CAFTA. Cumulation is crucial even in the presence of identical product-specific rules of origin across PTAs. Augier, Gasiorek, and Lai-Tong find that bilateral trade is up to 52 percent lower than expected between two spoke countries that have identical rules-of-origin protocols with the same hub, but that are not linked by diagonal cumulation.⁵¹

Fourth, the NAFTA model has now been adopted in numerous free trade agreements. The current adherents will thus find it fairly easy to negotiate, adopt, and implement future free trade agreements. Should the FTAA come to carry NAFTA-type rules of origin, the costs of adjusting to its rules-of-origin regime would be low for a good part of the hemisphere.

Finally, negotiators on rules of origin throughout the Americas, and particularly in free trade agreements based on the NAFTA model, have proved their willingness to revise existing rules-of-origin regimes to make them more flexible. NAFTA's review of its rules of origin is the clearest example, demonstrating commitment to keeping North America's rules of origin apace with changes in technology and the globalization of production, and potentially marking a growing role of export interests in setting trade policy.

More generally, the precision of the NAFTA-model rules of origin is superior to the vaguely defined and subjective rules of origin of the past. Precision provides clarity and certainty to traders and customs alike. Because the NAFTA regime is based on the change in tariff classification, it provides a fairer, more transparent, and more easily verifiable rules-of-origin model than regimes based on value content, which paradoxically can be hard to meet in countries with low production costs and are difficult to implement in the face of fluctuations in exchange rates and changes in production costs. Precise rules of origin do not need to be restrictive rules of origin; the NAFTA review process may well yield rules of origin that are both precise and flexible.

51. Augier, Gasiorek, and Lai-Tong (2004).

Tackling the Negative Effects of Rules of Origin: Flexible Rules of Origin plus Hemispheric Cumulation

The positive trends in the Americas notwithstanding, potential sources of friction remain: stringent and selective rules of origin still govern many sectors, and the various regimes differ markedly, even across the subset of regimes based on the NAFTA model. How can entrepreneurs obtain inputs from the cheapest sources, firms exploit cross-border economies of scale, and multinational companies make sweeping investment decisions based on economic efficiency? How can producers in spoke countries qualify for all the preferential markets simultaneously without undue transactions costs? What are the best ways to counter the rise of trade- and investment-diverting hubs?

The simplest way to preempt the negative effects of rules of origin would be to bring most-favored-nation tariffs to zero globally, although this is not likely to become politically palatable in the near future. A further option would be to move from free trade agreements to customs unions with low common external tariffs, thereby eliminating rules of origin altogether, or, alternatively, to harmonize preferential rules of origin at the multilateral level, which would ensure compatible requirements across spoke producers' export markets. However, the founding of customs unions with an across-the-board common external tariff has proved difficult outside the European Union; rules of origin will thus remain an issue as long as a common external tariff does not cover all product categories.⁵² Meanwhile, the prospect of global harmonization of preferential rules of origin is still relatively distant.

Two shorter-term policy options are more realistic. First, the existing regional rules-of-origin spaghetti bowl can be revised. PTA members should strive to design and revise their rules-of-origin regimes to establish transparent, simple, precise, nonrestrictive product-specific rules of origin, such as a change in heading or subheading, and they should put in place lenient regimewide rules of origin, in particular a high de minimis level. Such rules of origin alone would reduce the frictions within and between PTAs. The hemisphere's PTAs should be interconnected through diagonal cumulation—a task that would be relatively uncomplicated to implement in the presence of readily harmonized origin regimes and would pave the way

52. NAFTA contains a small sectoral customs union, with a common external tariff governing certain automatic data-processing goods and their parts. The tariff ranges from zero to 3.9 percent. See NAFTA Annex 308. (The full text of NAFTA is available at www.sice.oas.org/trade/nafta/naftatce.asp.)

to a regionwide trade and production base. The countries of the Americas should also improve training for exporters and customs about the technical requirements and implementation of rules of origin. These measures would help shorten the learning lags associated with rules of origin, reduce the administrative hurdles facing both exporters and customs, provide small countries access to larger pools of intermediate goods, and allow spoke economies to trade on several different fronts by applying the same rules of origin. This, in turn, would ensure that the hemisphere continues to enjoy the benefits of open regionalism. The movement from the complex and restrictive NAFTA rules-of-origin regime to the simpler and less restrictive U.S.-Chile free trade agreement and CAFTA is an encouraging step, and it should be furthered in future regimes.

Second, the FTAA would automatically sort out the rules-of-origin spaghetti bowl and put in place a hemispherewide cumulation zone—no small feat given that the countries of the Americas contain a sizable subsample of the world's PTAs.⁵³ An optimal FTAA rules-of-origin outcome would establish simple, nonrestrictive product-specific rules of origin and, again, lenient regimewide rules of origin. The overall framework could be buttressed with ad hoc innovative measures designed to accommodate the partners' idiosyncratic production patterns and capabilities. Thus construed, the FTAA would also prove that the hemisphere's existing PTAs represent genuine building blocks for regionwide trade liberalization.⁵⁴

To be sure, all hopes should not be pinned on the FTAA. Much work remains to be done to reconcile the various partner countries' rules-of-origin preferences, and the FTAA project per se has been troubled over the past several months. Nonetheless, the FTAA might prove to be the only way to integrate the NAFTA- and Mercosur-model rules-of-origin

53. Countries (and regions such as Mercosur) have thus far submitted rules-of-origin proposals for chapters 1–40. Each product tends to feature five to ten different proposals.

54. The hemisphere's trade ministers proposed in November 2003 a two-tiered FTAA, with the first tier of keen integrators adopting deep commitments and wide tariff liberalization across the tariff universe and the second tier opting for shallower commitments and a narrower list of liberalized products. Two cumulation zones would likely result—one with all member countries and a narrower range of goods, and another with the wider liberalizers in the additional set of goods. Cumulation in both tiers could be complemented with some ad hoc tools, such as phasing in the rules-of-origin regime, particularly for the smaller countries. Should this structure result, countries in the two tiers would be able to cumulate in the products they have liberalized with partners that have liberalized the same goods. Wider liberalizers would thus cumulate among each other in a broad range of goods, while all countries would cumulate in the narrower range to which the second-tier countries have acceded. See Blanco, Zabludovsky, and Gómez Lora (2004).

regimes.⁵⁵ It could also facilitate the prospects of multilateral harmonization of preferential rules of origin.

Whether accomplished through interlinking PTAs or through the FTAA, a hemispherewide cumulation zone appears to be the most promising option—particularly when its rules of origin are flexible enough to prevent trade diversion. A sustained fluid operation of a hemispherewide cumulation zone will require solid verification tools. Poor verification is a major problem in most of Latin America, and it has been accentuated by the growing inflows of goods, particularly from Asia. This situation could provoke a backlash against regional trade liberalization. The strong verification regime that CAFTA introduces in the textile and apparel sector could serve as a starting point, along with technical assistance to countries with the most feeble verification systems. Information technology should be fully harnessed to facilitate verification.⁵⁶

The countries of the Americas cannot afford to pursue new policies only within the hemisphere, but should push their WTO partners on two fronts. First, they should call for launching the harmonization of the world's preferential rules-of-origin regimes. This option is increasingly timely given the proliferation of free trade agreements with different rules of origin around the world and, in particular, the establishment of free trade agreements between the hemisphere's countries and extraregional partners. Harmonizing multilateral rules of origin is hardly a novel idea, but rather is a long-standing international commitment: the Uruguay Round Agreement on Rules of Origin stipulates that once the signatories conclude the harmonization of nonpreferential rules of origin, they will move to harmonize preferential rules of origin, using the relatively flexible and simple harmonized nonpreferential rules of origin as a blueprint.

The second multilateral policy that the countries of the Americas should pursue is the lowering of tariffs and nontariff barriers. The higher the PTA partners' most-favored-nation barriers, the wider the preferential margins and the greater the willingness of firms in the partner countries to comply

55. Even if the different hemispheric rules-of-origin regimes were left to coexist with the FTAA rules of origin (as occurred with the Central American Common Market and CAFTA rules of origin), exporters would be better off for two reasons: first, firms could choose between two alternative rules of origin when trading with their pre-FTAA PTA partners, and second, the FTAA rules of origin could be less restrictive, in practice, than the prior PTA rules of origin—even if they are more restrictive on paper—because the FTAA cumulation zone is vastly expanding the pool of inputs available to any member country. We thank Jeremy Harris for pointing this out.

56. See Cornejo (2004).

even with costly and distortionary rules of origin. The expansion of the PTA spaghetti bowl must be accompanied by open regionalism, in which most-favored-nation liberalization proceeds hand-in-hand with preferential opening.⁵⁷

Conclusion

This paper has analyzed the various rules-of-origin regimes in the Americas, reviewed the latest research findings on the effects of rules of origin, and provided policy recommendations for the region's countries to reduce the adverse economic impact of rules of origin. We have found that the NAFTA rules-of-origin model, which is expanding in the hemisphere, carries restrictive and complex rules of origin, and such rules of origin can counteract PTA-inspired trade liberalization. These findings raise concerns about the hemisphere's increasingly complex rules-of-origin bowl. The worrisome features can be tamed, however, through regional cooperation, in particular the adoption of simple and transparent product-specific rules of origin, the incorporation of mechanisms to promote regimewide flexibility, and the implementation of cross-PTA diagonal cumulation. Given the globalization of regional integration—that is, the movement of regional partners to negotiate interregional agreements—the countries of the Americas should also live up to the Uruguay Round commitment of harmonizing preferential rules of origin at the global level.

Preferential rules of origin matter only as long as there are multilateral barriers to trade. If there is a silver bullet for reducing the negative effects of rules of origin, it is the multilateral liberalization of tariffs and nontariff barriers. If the Doha Round negotiators succeed in producing deep cuts in most-favored-nation tariffs and nontariff barriers, and if the proliferation of PTAs engenders a dynamic of competitive liberalization worldwide, the importance of preferential rules of origin as gatekeepers of commerce will progressively dissolve.

57. See Bergsten (1997) and Wonnacott (1996). Wonnacott suggests that free trade agreements should be replaced by customs unions or a hybrid arrangements of customs unions and free trade agreements, lest the benefits of preferential opening be lost.