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Regional Trade Agreements

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Abstract

This paper reviews the theoretical and empirical literature on regionalism. The formation of regional trade agreements has been, by far, the most popular form of reciprocal trade liberalization in the past 15 years. The discriminatory character of these agreements has raised three main concerns: that trade diversion would be rampant, because special interest groups would induce governments to form the most distortionary agreements; that broader external trade liberalization would stall or reverse; and that multilateralism could be undermined. Theoretically, all of these concerns are legitimate, although there are also several theoretical arguments that oppose them. Empirically, neither widespread trade diversion nor stalled external liberalization has materialized, while the undermining of multilateralism has not been properly tested. There are also several aspects of regionalism that have received too little attention from researchers, but which are central to understanding its causes and consequences.

This paper—a product of the Trade and Integration Team, Development Research Group—is part of a larger effort in the department to understand how regional trade agreements are affecting trade patterns and external trade liberalization. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at cfreund@worldbank.org.

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Regional Trade Agreements

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1. Introduction

Regional trade agreements (RTAs) are proliferating. Figure 1 shows the evolution of the average number of RTA partners for the current members of the World Trade Organization (WTO): the average WTO member now has agreements with more than 15 countries![1] Gains from such increased openness to trade stem from resources flowing to their most productive uses and lower consumer prices. However, with preferential liberalization these standard gains from trade liberalization are not guaranteed. Welfare effects depend on whether trade increases primarily at the expense of nonmembers. Furthermore, there are concerns that the trend towards regionalism could have damaging long-run effects on external trade liberalization and on the multilateral trading system.

At the center of the debate are discrimination and the potential for trade diversion. Trade diversion is the shift of production from efficient external suppliers to inefficient members. In contrast, trade creation is the shift of production from inefficient domestic providers to efficient RTA members. While trade creation is associated with the standard gains from trade, trade diversion can make a trade agreement harmful for both members and nonmembers.

The extent of diversion affects the viability of the agreement ex ante and external trade policies ex post. In some cases governments may choose "natural partners," where trade diversion tends to be tiny and overwhelmed by trade creation; but in other cases widespread trade diversion may offer gains to special interests that lead to precisely the worst types of agreements being formed. The potential for trade diversion also implies that governments may

[1] The RTAs considered in Figure 1 include only "full-fledged" agreements, based on the sample used by Liu (2009). When constructing the figure, we consider how RTA participation of the current (as of November 2009) members of the WTO has evolved from 1958 to 2007. That is, we consider RTA membership of each of the 153 current members regardless of when they acceded to the WTO.

have incentives to adjust external tariffs subsequent to forming an RTA. While high external tariffs exacerbate trade diversion, lowering them has the opposite effect.

Discrimination and diversion also have important implications for the trade system more broadly. In particular, discrimination could affect the relationship between the spread of RTAs and the multilateral trading system. It could induce uncooperative governments to join a multilateral free trade agreement to eliminate costs of diversion. Alternatively, if powerful producers gain from diversion, it could harm multilateral cooperation as producers try to maintain those gains. Feedback may also be felt from global liberalization to regionalism. Since lower tariffs reduce the costs from trade diversion, multilateral liberalization could actually have helped the recent spread of bilaterals.

The extensive theoretical literature on RTAs delves into detail on these issues, but is inconclusive. One complication is that there are two types of agreements, customs unions (CUs) and free trade areas (FTAs). CU members share a common external tariff structure, while FTA members maintain autonomous external trade policies. This subtle distinction affects the the type of agreements formed, the member countries' incentives to adjust external tariffs, and welfare consequences. FTAs are more common than CUs, accounting for over ninety percent of existing agreements. However, the difference is much less pronounced if we consider the average number of partners per country (Figure 1). This reflects the fact that the largest RTA, the European Union (EU), is a customs union.

While the theoretical literature on regionalism is well developed, the empirical literature is still maturing. As more data have become available, we have learned a great deal about which countries tend to form trade blocs, how trade patterns are affected, and the impact of RTAs on other trade policies. The broad picture that emerges is one of trade creation, with diversion

limited to relatively few specific sectors and agreements. This is consistent with the recently uncovered finding that FTAs seem to facilitate external liberalization.

The direst predictions about RTAs—that they will generate significant trade diversion and erode the world trade system—have not come to pass. RTAs have been the main instrument behind reciprocal liberalization in recent years, and the evidence on trade creation and on RTAs facilitating external liberalization is encouraging. Such agreements may not be merely a nuisance but actually an important force behind general liberalization. We still need to approach regionalism with caution, but we believe it is time for a guarded optimism. Regionalism appears to be a useful tool to dismantle trade barriers, to be employed with care when unilateral and multilateral efforts fail.

Beyond these broad themes, the proliferation of RTAs has introduced a number of specific issues that affect the welfare consequences of regionalism. We discuss two of these. The first is the need for rules of origin (ROO) in FTAs to prevent the transshipment of imported goods from a low-tariff country to a high-tariff country. As such ROOs have multiplied in recent years, there is a growing concern about their damaging effects. The second issue is the potential for deeper integration that accompanies some RTAs. There are many additional gains, beyond goods trade, to be had from regional integration, and RTAs could be the natural starting point for achieving deeper integration.

There are other forces that shape the causes and consequences of regionalism, but space constraints do not permit us to cover all of them in this survey. We do not touch, for example, on any economic geography matters, which certainly have plenty of insights for the consequences of regionalism. For example, RTAs change core-periphery dynamics and produce agglomeration effects that can make certain areas within regional trade groupings worse off. While very

interesting, those issues are beyond the scope of this review. See Baldwin and Venables (1995) for an early authoritative survey that takes into account this and some other issues that we do not consider here, like the effects of RTAs on growth.

This paper is organized as follows. The next section discusses trade creation and trade diversion, and how these affect the formation of an agreement, assuming external trade policy is given. Section 3 reconsiders these issues taking into account that external tariffs are endogenous. Section 4 examines linkages between regionalism and the multilateral trade system. Section 5 discusses design issues that shape the impact of trading blocs: rules of origin and the depth of integration. Section 6 concludes and discusses future research.

2. Trade Creation and Trade Diversion

A key question raised by the formation of a regional trade agreement is whether it will make member countries better off. In seminal work, Viner (1950) shows that an RTA does not necessarily improve members' welfare. The preferential removal of tariffs may lead to trade diversion, where imports shift away from the most efficient supplier to the country receiving preferential treatment. This generates an inefficiency in world production, which is harmful to bloc non-members. It can also hurt members, if the change in consumer prices, and therefore in consumer surplus, is too small to outweigh the costs from the inefficiency. In contrast, if the RTA leads to greater imports from the efficient suppliers within the bloc, consumer gains outweigh the costs from production inefficiency and the agreement necessarily improves members' welfare. Such welfare analyses in the context of regional trade agreements highlight

the broader point that removal of one distortion in the presence of a second distortion is not necessarily welfare-enhancing.[2]

There are conditions sufficient to ensure that an agreement will be welfare-enhancing. Kemp and Wan (1976) show that if external tariffs are adjusted so that the formation of a customs union does not affect trade with outsiders, the union is necessarily welfare-improving. The logic is straightforward: if tariffs are such that external trade is constant, then any additional trade between members must be trade creation. This ensures that outsiders are not hurt by the union. With appropriate lump-sum transfers, it is also possible to guarantee that all members are made better off by the union. This is a very general result. It extends to free trade areas (Panagariya and Krishna 2002), to partial liberalization contexts (Neary 1998), and to imperfect competition (Mrazova 2009).[3]

Now, despite the theoretical and normative importance of the Kemp-Wan result, its practical importance is less clear. External tariffs are subject to political constraints, and not set to hold trade with outsiders fixed. As we will see, the endogenous changes in external tariffs following the formation of an RTA are central for the appraisal of regionalism. Moreover, even if members set external tariffs to satisfy the Kemp-Wan criterion, the optimal adjustment of tariffs by the rest of world following the formation of an RTA could leave its members worse off (see Richardson 1995a). In other words, the Kemp-Wan result is not about equilibrium

[2] The early regionalism literature focuses on the conditions that make a CU more or less distortionary in general equilibrium settings. Much of the discussion evolves around the relative importance of trade creation and trade diversion depending on whether CU members produce substitutes or complements, and on the gains from expanded consumption possibilities versus the production inefficiencies that CUs can cause. For an early survey, see Lipsey (1960).

[3] Mrazova (2009) shows in particular that a lower degree of competition among oligopolistic firms reduces the potential for trade diversion, which results in higher Kemp-Wan external tariffs. Thus, less market competition can presumably make it easier (from a political-economy perspective) to meet the Kemp-Wan requirement.

outcomes. In this review our focus is instead on equilibrium outcomes leading to and stemming from regional integration.

2.1 Are RTAs likely to be trade-diverting?

While in principle RTAs can generate either net trade creation or net trade diversion, we must remember that participation in any RTA is a political decision. Thus only *some* types of agreements will be formed, depending on the objectives of governments. If governments were simply concerned with national welfare in their countries, there would be no reason for concern: only trade-creating, welfare-improving RTAs would come into force. But governments also have other motivations, and are in particular influenced by special interest groups. Taking this into account, what kind of agreements should we expect to observe? Grossman and Helpman (1995) and Krishna (1998) provide the same answer to this question: governments influenced by special interest groups will seek primarily *trade-diverting* RTAs. Their reasoning is as follows.

Grossman and Helpman (1995) consider a specific factors model with two small economies. When evaluating a possible FTA, each government considers the impact of the agreement on the average voter while being influenced by the domestic industry through campaign contributions. The more the government values campaign contributions, the greater the influence of producers in the FTA decision, and the greater the support for agreements that provide "enhanced protection." An FTA promotes enhanced protection when producers from the low-(external) tariff member can export all their output to the high-tariff member without affecting prices there. In that case, producers in the high-tariff country are not hurt while producers from the low-tariff country enjoy higher protection rents. If the FTA promotes

enhanced protection in a "balanced" way, so that a significant share of producers in both countries benefits, then it will draw enough political support to be implemented. But notice that enhanced protection is tantamount to (welfare-reducing) trade diversion. Thus, according to Grossman and Helpman, governments that are very susceptible to special interest groups will seek precisely the most trade-diverting agreements.

Krishna (1998) develops his analysis in a different framework, with oligopolistic firms, homogeneous goods and segmented markets, where governments form agreements based only on their impact on the profits of the domestic firms. In that setting, if the FTA does not generate trade diversion, firms from each member country obtain higher market shares (and profits) in the other member's market but lose domestic profits, implying little—or no—net profits to them. But if the FTA allows bloc firms to displace those from excluded countries in each other's markets, then the FTA surely enhances profits for all members' firms, at the expense of outsiders.

The message from the analyses of Grossman and Helpman (1995) and Krishna (1998) is therefore somber: FTAs are likely to be politically viable exactly when they are socially *un*desirable. This raises two main questions. First, are observed RTAs indeed predominantly trade-diverting? Second, how robust are these theoretical results? We start with the first question and discuss the second in Section 3.

2.2 Empirics of trade creation and trade diversion

Ultimately, the welfare consequences of RTAs are an empirical matter. Unfortunately, estimating trade diversion is no easy task. It requires knowledge of the counterfactual: what would have happened to trade if there were no trade agreement? Since this is unknown, assumptions must be made.

Most studies use a gravity equation, which predicts bilateral trade based on income and other characteristics, and focus on variables that capture the extent to which RTA partners trade more or less than would otherwise be expected.[4] The key trade creation variable is a dummy that is one if both countries are members of a common RTA; the key trade diversion variable is a dummy that is one if one country belongs to an RTA and the other does not.[5] A positive coefficient on the former offers evidence of trade creation; a negative coefficient on the latter offers evidence of diversion. Overall, the message from such studies is of a predominance of trade creation. In fact, a concern is that the estimates of the creation effect may be implausibly large, as well as too dependent on the sample of countries and variables included (Haveman and Hummels 1998).

Magee (2008) expands on the traditional approach, with insights from the literature on the proper estimation of gravity models. He uses panel data for 133 countries from 1980-1998, and includes country-pair fixed effects, exporter-year fixed effects and importer-year fixed effects to capture the counterfactual more accurately than standard gravity specifications would. The dyad effects pick up what is natural about the trade partners, the exporter- and importer-year

[4] An alternative is to use computable general equilibrium models to identify counterfactuals, but results are highly dependent on the parameters assumed; see for example Brown et al. (1992).
[5] See Frankel et al. (1995), Carrere (2006), and Lee and Shin (2006).

effects pick up country-specific dynamics. Magee finds that the average impact of agreements on trade flows is small—three percent. Moreover, on average trade creation dominates trade diversion by about one order of magnitude.

Another strand of the literature uses more disaggregated data to examine specific agreements. Clausing (2001) develops an analysis at the product-level of the Canada-United States free trade agreement (CUSFTA) of 1988. Using variation in liberalization across industries to identify trade creation and diversion, she finds that trade creation tends to be the rule, and trade diversion the exception, in most sectors. Using a similar approach, Trefler (2004) finds both trade creation and trade diversion in CUSFTA but calculates positive welfare effects to the average Canadian. In contrast, Romalis (2007) finds that the expansion of CUSTA to Mexico (NAFTA) has been trade-diverting. Romalis' exercise is similar to Clausing's and Trefler's, but he uses changes in EU trade over the period to capture what would have happened in the absence of the agreement. While this might create a better counterfactual if the NAFTA countries were very similar to the EU, it could lead to overestimates of trade diversion in NAFTA if the EU was increasing trade more rapidly with its own new and existing trade agreement partners. Even so, Romalis' results suggest that the welfare costs of the agreement are tiny.

A different perspective is taken by Chang and Winters (2002), who study the effects of Mercosur—a trading bloc formed by Argentina, Brazil, Paraguay and Uruguay in 1991—on export prices to Brazil. They find that Argentina's export prices increased whereas the export

prices of countries outside Mercosur fell. These price effects indicate that Mercosur has hurt outsiders while helping Brazil (the Mercosur partner).[6]

The theoretical literature on static effects of trade agreements highlights potential costs of preferential liberalization and that trade-diverting agreements may be more viable politically. While the empirical literature is not entirely conclusive, it does suggest that trade diversion is not a major concern, though in some agreements and sectors it may matter. Trade diversion may be less relevant than initially thought because countries form trade agreements with "natural trade partners," where trade creation is the norm (see next subsection) or because governments may respond to trade diversion by reducing external tariffs (Section 3).

2.3 Natural trading partners

A rejoinder to the concern that RTAs can promote large trade diversion and welfare losses is that agreements tend to be formed between nearby countries that trade heavily with each other and these agreements are more likely to enhance welfare. Wonnacott and Lutz (1989) were the first to make this point. They argue that countries may have much to gain by forming a union with a major trade partner that is subject to low natural trade costs, where trade creation is likely to dominate. Krugman (1991) shows this in a model where countries are spread over many continents, which form natural trading regions. Variation in transport costs implies that some regions trade relatively more with each other in the absense of RTAs. Krugman shows that in such a setting, where blocs are formed by natural partners, trade diversion is limited and RTAs

[6] Chang and Schiff (2003) find that the *threat* of duty-free exports from Argentina to Brazil, measured by Argentina's exports of the same good to another country, also lowers prices of Mercosur's nonmembers to Brazil.

are likely to enhance welfare, since the gains from freeing intraregional trade are larger and the costs of reducing interregional trade are smaller.[7]

To determine whether nature plays a role in RTA formation, Frankel et al. (1995) examine whether regional trade is greater than could be explained by natural determinants (proximity, sizes, GNPs/capita, common border, common language). They find in favor of "natural" trade bloc formation.

This view has however been challenged by Bhagwati and Panagariya (1996), who show that the volume of trade and transport cost criteria are not sufficient to ensure that an arrangement will raise welfare. They argue that volumes are not necessarily good predictors of diversion, and that comparative advantage can change over time. Furthermore, a country could be better off forming an RTA with a distant rather than a proximate country.

Krishna (2003) addresses this point by using detailed US trade data to estimate the welfare effects from 24 hypothetical bilateral trade agreements in a general equilibrium framework, then correlating the estimated welfare changes with geographical variables and trade volumes. Neither geography nor trade volume is found to be significantly correlated with welfare gains, suggesting that they are not good indicators of the gains from trade, as the natural trade blocs approach would suggest. Still, Krishna finds that 80 percent of the potential agreements he examines are welfare-improving. Given the predominance of trade creation, it is not clear that a correlation between distance or trade volume and welfare is necessary to indicate blocs are formed naturally. To determine which agreements are most natural, costs of forming an

[7] Zissimos (2009) argues that forming an RTA with a nearby country can also facilitate rent-shifting because of lower (rent-destructing) transportation costs.

agreement should be also included, and such costs are plausibly lower with a neighbor or with a large trade partner, as the relationship between the two countries is likely to be well developed.

Baier and Bergstrand (2004) develop a general equilibrium model to determine which country pairs would gain the most from forming RTAs, then examining whether these dyads were actually linked by an RTA in a sample of 53 countries in 1996. They find that the likelihood of an RTA was larger, the closer the two countries are to each other, the more remote they are from the rest of the world (ROW), the larger their GDPs, the smaller the difference between their GDPs, the larger their relative factor endowment difference, and the wider the (absolute) difference between their and ROW's capital-labor ratios. These variables predict 85% of the bilateral RTAs in their sample. Their results thus offer support to the natural trading blocs view.[8] In subsequent work, Baier and Bergstrand (2007) use the same approach to estimate the impact of RTAs on trade flows. Their key finding is that, once one takes into account the endogeneity of the agreements, the positive impact of RTAs on bilateral trade becomes more robust and much larger—it is *quintupled*—than in estimates that take agreements as exogenous. Thus, countries seem to form RTAs when there is much to be gained from liberalizing bilateral trade.

Proving that agreements are natural or unnatural is daunting, as it requires an assessment of many potential agreements and their welfare consequences—and calculating trade diversion and creation in even one agreement is already difficult. Nevertheless, there is solid empirical support for the more general premise of the natural trade bloc view, that trade blocs are formed by countries that have a lot to gain from freer trade.

[8] Egger and Larch (2008) confirm those findings in a larger sample, finding also that pre-existing nearby RTAs increase the probability that a country-pair will form an RTA.

3. Optimal External Tariffs

The original Vinerian insight that RTAs tend to cause both trade creation and trade diversion was developed under the assumption that all other policies were fixed. This is a very strong assumption. At a minimum, one would expect governments to adjust their other *trade* policies, in particular the tariffs that remain unconstrained under the RTA. After all, if a government had previously set a tariff according to some objective—whatever it may be—a constraint on the rate applied on the imports from a subset of countries would likely affect the choice of the rates applied on the imports *of the same product* that come from other countries. This matters, since any welfare analysis of regionalism relies on the relative magnitudes of trade creation and trade diversion, and these depend critically on the levels and the differences between inter- and intra-bloc tariffs. And there are indeed numerous reasons suggesting that governments are likely to change their external tariffs upon the formation of an RTA; recent empirical research makes clear the importance of some of these factors.

3.1 Incentives to alter external tariffs in RTAs

Kennan and Riezman (1990) were the first to consider adjustments in external tariffs after the formation of an RTA. They develop a three-country general equilibrium endowment economy where tariffs are set to maximize national welfare. Kennan and Riezman simulate different endowment structures to study the effects of forming an FTA, where governments set trade policy unilaterally, and then of moving to a CU, where members agree on a common

external tariff. As Kennan and Riezman make clear, equilibrium external tariffs are higher under CUs. First, the CU creates a larger market, which increases the countries' market power and therefore their incentives to tax imports. Second, the coordination of policies allows the CU members to internalize the externalities of their individual trade policies on each other.

Krugman (1991) popularized the market power effect of CUs by showing that, as they expand in size symmetrically and their numbers fall, the optimal tariff of each bloc rises in such a way that world welfare is minimized with three blocs. Bond and Syropoulos (1996) qualify Krugman's observation by noting that, in a symmetric world, whether larger blocs have more market power and higher tariffs depends on the pattern of endowments and on the elasticity of substitution. In general, the optimal tariff can either rise or fall as the number of CUs declines.

The coordination effect of CUs has been studied extensively.[9] Even if national markets were segmented, the joint determination of external policies provides an incentive to agree on higher external protection. Higher external tariffs imply higher preferential margins, which increase the partners' gains with the agreement. When negotiating external tariffs, CU members can internalize this effect, which leads to external tariffs that are higher than they would otherwise be.[10]

Since governments set external trade policies independently under FTAs, neither the market power nor the coordination effects arise in that type of agreement, but other motivations to re-optimize tariffs emerge. Richardson (1993) notes that external tariffs tend to fall after the formation of an FTA. A preferential tariff induces a shift of imports from non-members; as the

[9] See for example Yi (1996), Bagwell and Staiger (1999a), Cadot et al. (1999), Freund (2000a), and Ornelas (2007).
[10] Another force shaping external tariffs in customs unions is the decision to delegate tariff-setting within the bloc (see Gatsios and Karp 1991, Syropoulos 2002, Facchini et al. 2009, and Melatos and Woodland 2009).

diverted imports lower welfare, governments have an incentive to lower external tariffs to shift some imports back to their original source. Thus, the mere potential for costly trade diversion induces governments to lower external tariffs. Bagwell and Staiger (1999a) introduce the role of terms of trade motivations, and dub the tendency toward lower external tariffs in FTAs the "tariff complementarity effect." Other authors have obtained similar results under a variety of settings.[11]

Ornelas (2005a) disentangles some of the additional forces leading to tariff complementarity. If markets are oligopolistic, there is a strategic effect that arises because FTAs make profit shifting more difficult. The elimination of the intra-bloc duty increases competition and lowers mark ups in the domestic market. As a result, any market share shifted from FTA outsiders to domestic firms by a higher external tariff generates less domestic profit under the agreement. Since the tariff was set optimally prior to the FTA, a reduction in the external tariff is necessary to re-equate its marginal benefit to the marginal distortion it imposes.

If governments have political-economy motivations, which is likely, other forces come into play. Consider that these motivations can be translated into a greater concern for producer welfare relative to consumer welfare, as for example in Grossman and Helpman's (1994) "protection for sale" model. This creates a motive for setting relatively high tariffs. Yet participation in an FTA weakens this motivation for protection by making it more difficult to use tariffs for surplus redistribution. The reason is that the free access to the domestic market enjoyed by the partners' exporters under the FTA lowers the market share of the domestic industry. As a result, the FTA makes any price increase generated by a higher tariff less valuable

[11] Cadot et al. (1999) in a political-economy specific-factors model; Freund (2000a) and Yi (2000) in an oligopolistic structure, to which Ornelas (2005a, 2005c) add political-economy forces; Bond et al. (2004) and Saggi and Yildiz (2009) in endowment models.

for the domestic industry. That is, the FTA creates *leakage* in the trade policy redistributive channel: now whenever the government attempts to redistribute surplus to the domestic producers through higher external tariffs, the partners' producers absorb part of that surplus.

Hence, external tariffs tend to fall after the formation of an FTA both because the economic (marginal) cost of external protection rises and because the political-economy (marginal) gain from external protection falls. This last point implies also that the drop in external tariffs will be larger when political-economy motivations are *stronger*, indicating that the economic benefits from FTAs are likely to be greater precisely when protectionist forces loom large.

In contrast, Panagariya and Findlay (1996) show that domestic lobbying can increase if tariffs are a function of the labor allocated into lobbying activities. If lobbying is sizeable enough in the economy to affect the labor market, then an FTA lowers the wage rate by making lobbying for tariffs against the partners innocuous. This would lower the cost of lobbying against FTA outsiders, generating higher external tariffs in equilibrium.

A moderating factor may also come from foreign lobbying, because the same leakage in the trade policy redistributive channel that reduces domestic lobbying under an FTA motivates producers from FTA partners to lobby for protection against outsiders. Stoyanov (2009) makes this simple but neglected point in a monopolistic competition variation of Grossman and Helpman's (1994) model.

Regardless of the type of agreement, Limao (2007) shows that an RTA can induce higher tariffs against outsiders when the goal of the agreement is to induce cooperation of RTA partners in "non-trade" areas, such as drugs or labor standards issues. Both the US and the EU offer

preferences on a unilateral basis that fit this description well. Since lower external tariffs erode preferences and could induce the receiving countries to withdraw their non-trade concessions, the preference-granting government has an incentive to keep external tariffs high.

Putting all these arguments together, one reaches at least three conclusions. First, it is a safe bet that external tariffs will change after the formation of an RTA. There are just too many plausible arguments indicating that governments have incentives to do so, in one direction or the other, regardless of their motivations. Second, the changes are likely to be different in FTAs and CUs. While in general the incentives point to lower external tariffs in FTAs than in CUs, it is possible to write down models where the reverse is true. Third, theoretical work alone cannot determine the direction of the change, and even less so the magnitudes. Therefore, it falls to empirical work to establish which forces prevail, how important they are, and how CUs differ from FTAs in that respect.

3.2 Empirical evidence on external tariff setting in RTAs

Empirical work on how RTAs affect policies against outsiders is still in its infancy, but has been growing and is bound to keep growing as detailed data on preferential rates becomes increasingly available. So far, there is no clear evidence that regionalism has been a major impediment to freer trade and some evidence that it has promoted external liberalization.

Historical accounts often point to complementarity between intra-bloc and external liberalization. Irwin (1993) shows that bilateral agreements during the 19th century induced broader liberalization. The Anglo-French treaty of 1860 led to a host of bilateral agreements that

were ultimately linked by the inclusion of an unconditional nondiscrimination clause. Apparently because trade diversion associated with high tariffs was costly, the French negotiated numerous such agreements.

More recently, the role of trade diversion in promoting external trade liberalization has been confirmed by Bohara et al. (2004), who examine the influence of imports from Brazil on Argentina's external tariffs under Mercosur. Using a cross-industry dataset on Argentina for 1992, 1993 and 1996, they find that increased preferential imports vis-à-vis the value added of the domestic industry led to lower external tariffs in Argentina. Furthermore, the reduction was steeper precisely in the industries that experienced most trade diversion—just as Richardson's (1993) insight suggests. Bohara et al. concentrate on the effects of increases in preferential imports but do not address the direct effect of preferential tariffs. It is also unclear whether their results capture the effect of Mercosur moving from being an FTA to a CU in 1995.

Estevadeordal et al. (2008) offer the first empirical assessment of the effect of preferential tariffs on external trade liberalization in a large group of developing countries. They study ten Latin American countries, where regionalism forces have been particularly strong, from 1990 to 2001. The RTAs they analyze display heterogeneity both across and within blocs. For example, in a typical RTA there are sectors where no preferences are granted, sectors where partial preferences are offered, and sectors where there is free intra-bloc trade. Preferences also vary significantly over time. Estevadeordal et al. ask whether industries with large preferences have been liberalized to the same extent as other sectors. They find no evidence that trade preferences lead to higher external tariffs or smaller tariff cuts, but find strong evidence that preferences induce a faster decline in external tariffs in free trade areas. The magnitudes imply

that, when a country offers free access to another in a sector where it applies a 10% multilateral tariff, the country would tend to subsequently reduce that external tariff by over two percentage points.[12]

The main difficulty in such studies is to establish causality. For example, it may be that some products are easier to liberalize than others, and trade in those products tends to be liberalized both regionally and multilaterally. In addition to a large set of fixed effects, Estevadeordal et al. (2008) use distinct strategies to determine causality. First, they look for differential effects in FTAs and CUs. This is possible in their dataset because it includes both Mercosur and the Andean Pact,[13] which functioned as FTAs in the first part of the sample but switched to being CUs in 1995. If the relationship between preferential and multilateral tariffs simply reflected country-industry specific shocks driving liberalization on all fronts, there would be no reason for those shocks to operate distinctly in different types of agreements. The authors find that tariff complementarity is observed only in FTAs; in CUs internal liberalization is not associated with any statistically significant change in external tariffs. Second, Estevadeordal et al. assess whether there are differential effects in sectors where the potential for trade diversion is large. They find that the complementarity effect is indeed stronger in sectors where trade bloc partners are more important suppliers, where trade discrimination would be more disrupting. Moreover, they find that the complementarity effect is restricted to sectors where the preferential margin is non-trivial (above 2.5 percentage points). As we discuss in subsection 5.1, complying

[12] Estevadeordal et al. (2008) also study whether binding tariffs at the WTO matter for the effects of RTAs on external tariffs. They find that external tariffs tend to fall by more in constrained sectors (only two percent of the sectors in their sample), especially if they have experienced preferential liberalization. This suggests that FTAs are more effective in bringing external tariffs down precisely in the sectors where multilateral agreements have been most successful in constraining tariffs.

[13] During the period studied, the Andean Pact was composed of Bolivia, Colombia, Ecuador, Peru and Venezuela.

with rules of origin is costly, so preferences should matter only if the margins are sufficiently large.

Calvo-Pardo et al. (2009) study instead the behavior of ASEAN's ten-member FTA.[14] The data, at the product level, contain information on both applied and *planned* preferential rates. Members agreed on a schedule of preferential tariff reduction in 1992, to take place from 1993 to 2007. The actual reductions, while correlated, have been different from the planned ones, especially in the later years in the sample. This allows the authors to distill future shocks that may have affected both preferential and external rates by using the planned internal liberalization as an instrument for the actual one. Calvo-Pardo et al. strengthen this rationale by restricting the sample to the period after the Asian crisis of 1997-1998, which changed priorities and policies in most ASEAN countries. Their findings corroborate those of Estevadeordal et al. (2008) for FTAs: there is strong evidence that preferences have induced a deeper decline in external tariffs. The magnitudes are actually larger than those for Latin America: free intra-bloc trade in a product where an ASEAN member applies a 10% multilateral tariff would induce a reduction of about 3.5 percentage points in that tariff.[15]

In contrast, studies by Limao (2006) and Karacaovali and Limao (2008) offer a very different message. They address a distinct but related question: whether preferential liberalization by the US and the EU hindered multilateral trade liberalization at the Uruguay Round. Specifically, they examine whether commitments to liberalize were different in goods that offered preferences from goods that did not. Both papers find that liberalization was

[14] ASEAN is formed by Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam.
[15] Lendle (2007) obtains a qualitatively similar result for ASEAN by estimating changes in the external tariff on a dummy that represents whether the country offered any preferential treatment in the product.

shallower in products where preferences were utilized, especially when they were imported from all preferential partners and when they constituted larger shares of the preferential partners' exports, although they do not explore whether the size of the preferences mattered.[16]

The findings of Limao (2006) and Karacaovali and Limao (2008), that the US and the EU liberalized less during the Uruguay Round in sectors where preferences were granted, contrast sharply with those of Bohara et al. (2004), Estevadeordal et al. (2008), and Calvo-Pardo et al. (2009), which imply that regionalism fosters external liberalization in developing countries. Part of the reason for the different results reflects the differences in the countries analyzed. Since the multilateral system has not enforced much tariff reduction on developing countries, tariffs are relatively high there, creating a large potential for trade diversion. Lower external tariffs moderate that loss. The results of Bohara et al., Estevadeordal et al. and Calvo-Pardo et al. suggest that this force is important in explaining changes in the external tariffs of developing countries involved in FTAs. In contrast, Limao and Karacaovali and Limao focus on the major industrial countries. Tariffs were already quite low in the US and the EU at the onset of the Uruguay Round, which reduces the importance of this channel. Furthermore, the theoretical underpinnings developed by Limao (2007) to justify the importance of preferences in North-South agreements rely on RTAs being formed for non-economic reasons—preferential treatment given in exchange for, say, help in advancing a global political agenda. This is usually not the case in South-South RTAs, where the main goal is often to exchange market access and improve regional economic cooperation.

[16] Relatedly, Stoyanov (2009) finds that lobbying by American firms was responsible for higher external tariffs in Canada under NAFTA than they otherwise would have been.

Notice in any event that lower external tariffs under an RTA do not necessarily imply that excluded countries benefit from the agreement. Although some models suggest that external tariffs may fall enough to benefit outsiders (e.g. Bond et al. 2004; Ornelas 2005a, c), this need not be the case. In fact, Chang and Winters' (2002) analysis of price effects in Mercosur suggests losses for nonmembers despite lower external tariffs. This makes clear that external tariffs do not convey all the information necessary for a thorough welfare analysis of regionalism. Still, it provides a valuable first step and is often the best alternative when detailed price level information is unavailable.

3.3 Are RTAs likely to be trade-diverting? Accounting for endogenous protection

As discussed in section 2.1, Grossman and Helpman (1995) and Krishna (1998) argue that governments tend to favor FTAs precisely when they breed trade diversion. However, a critical element in those models is the assumption that both pre-FTA tariffs and post-FTA external tariffs are exogenously given and equal to each other. This is at odds with both the large theoretical literature and the empirical evidence covered in this section. Moreover, the assumption is pivotal for their results.

Ornelas (2005b) shows this by developing a specific factors model similar to Grossman and Helpman's (although with large countries), but where tariffs are set endogenously, with the influence of special interest groups both before and after the FTA. Ornelas first considers that governments decide to form an FTA without direct influence of lobbies—although lobbies affect the decision indirectly by shaping tariffs under all trade regimes. Among other reasons, external tariffs fall because of the reduced incentives to internal redistribution due to the leakage of

protection to partners under the FTA. The difficulty in redistributing surplus through trade policies under the FTA implies that lobbying activities decrease with the agreement. This in turn lowers the rents created in the political process. But if FTAs destroy protectionist rents, this cannot be a source of their political support. Thus, only those agreements that are sufficiently welfare-*enhancing* can become politically viable.

When Ornelas (2005b) allows for lobbying also at the trade regime decision, this stark result is qualified. He finds that one cannot rule out the political viability of welfare-reducing FTAs. Still, such a possibility is significantly restricted by the rent destruction effects of FTAs. Specifically, welfare-reducing FTAs could gain political support only when the role of "politics" in the governments' objective function is "moderate"—i.e., large enough to sufficiently disconnect the decision to adopt the FTA from a socially desirable criterion but low enough to avoid destruction of too much rents. The overall message is therefore that the rent destruction effect imposes strict limits on the political viability of welfare-reducing FTAs.

Ornelas (2005c), in turn, proposes an oligopolistic model analogous to Krishna's (1998), but with endogenous tariffs and where the weight of profits on the government's objective function is consistent with non-prohibitive tariffs.[17] He obtains results equivalent to those in Ornelas (2005b): only welfare-enhancing FTAs can become politically viable once one accounts for endogenous changes in external tariffs.

The results of Ornelas (2005b, c) seem broadly compatible with the empirical evidence discussed in Section 2. For example, Baier and Bergstrand (2004) provide overwhelming support for the hypothesis that welfare-enhancing dyad characteristics are reliable predictors of RTA

[17] If governments only cared about producers' profits, as Krishna (1998) assumes, both initial tariffs and external tariffs under an FTA must be prohibitive. But then FTAs could (trivially) never be trade-diverting.

links. While one may be concerned that Baier and Bergstrand do not allow for political-economy forces to play any role in their model and empirics, the analyses of Ornelas indicate that this is probably not a big problem after all.

It is worth noting, however, that the results of Ornelas (2005b, c) apply to FTAs, and it is unclear whether they generalize to CUs. Since the (limited) empirical evidence suggests that external tariffs do not change (Estevadeordal et al. 2008) and that export prices of outsiders fall (Chang and Winters 2002) after the formation of CUs, it may well be that trade-diverting CUs are more likely to be politically viable. Research on this topic is needed.

4. Multilateralism and Regionalism

As multilateralism and regionalism proceed in tandem, a central question is whether the spread of regionalism will help or harm the multilateral trading system. The impact of RTAs on members' incentives to liberalize vis-à-vis non-members is only one factor in the assessment of regionalism. In fact, countries' unilateral responses to preferential liberalization may be a deceptive signal of the whole impact of RTAs on the multilateral system. For example, FTAs may induce members to reduce their external tariffs while at the same time lowering their incentives to engage in broader multilateral trade agreements. Conversely, the rise of regionalism could simply reflect the successes—or the failures—of multilateralism. We look at each of these issues in turn.

4.1 The impact of regionalism on multilateralism

Does regionalism complement or hamper broad based multilateral liberalization? The standard approach to this question is to examine whether RTAs help or hinder the viability of multilateral free trade. Some authors take a political-economy perspective. Levy (1997) develops his analysis in a Heckscher-Ohlin framework where trade agreements affect goods prices and, through Stolper-Samuelson effects, the income of individuals depending on their factor endowments. Levy shows that a bilateral agreement may provide disproportionate gains to the countries' median voters, thus undermining support for an otherwise feasible multilateral trade agreement. Krishna (1998), as discussed above, employs an entirely different structure, where national markets are segmented and oligopolistic firms are pivotal to determine trade regimes. Yet he finds a surprisingly similar result: RTAs can turn producers against a multilateral agreement that they would otherwise support, because free trade would destroy the rents created by the RTAs. Since in his setting the most trade-diverting arrangements gather the most political support, Krishna's analysis casts a gloomy view on the desirability of RTAs. Notice that, despite the different settings, the intuition from Levy (1997) and Krishna (1998) is very similar. A regional trade agreement can bring such large gains to some groups that they lose from further liberalization. If these groups are powerful enough, then free trade becomes politically infeasible.[18]

McLaren (2002) departs from the political-economy view, focusing instead on the role of negotiating costs and sector-specific sunk investments. He also finds that RTAs can be harmful

[18] As a simple example, consider that car producers in one member country and steel producers in another member gain from a bilateral agreement, because their market base grows and they are still relatively shielded from international competition. Without the RTA, these groups may have benefited from multilateral liberalization, but not as much as they do under the bilateral agreement. As a result, both steel and car producers oppose free trade once the RTA is in place.

to the prospects of global free trade. The reason is that an anticipated trading bloc induces private agents in each member country to invest and specialize toward each other. This lowers the *ex post* gains from multilateral free trade. Thus, as McLaren puts it, expected regionalism creates its own demand. As a result, countries lose interest in (ex ante efficient) multilateral liberalization once they engage in (ex post efficient) regional initiatives.

A common feature in the analyses of these papers is that all other trade policies beyond the decision to form trade agreements or not are given exogenously. Levy and McLaren consider only the extreme cases of autarky and (preferential and multilateral) free trade, so tariffs are either prohibitive or zero. Krishna allows trade in the absence of trade agreements, but external tariffs are given exogenously. Assuming away the choice of how much to restrict trade in the absence of multilateral free trade helps to streamline but otherwise has no bearing in the argument developed by McLaren (2002). However, that assumption is critical in the political economy analyses. As discussed in the last section, FTAs weaken the role of "politics" in the determination of trade policies. Using this rationale, Ornelas (2005c) shows that as the role of special interests in the decisions of governments diminishes, governments become less inclined to hinder free trade. Thus, whereas political-economy motivations may induce a government to obstruct a welfare-improving multilateral free trade agreement, membership in an FTA makes such possibility less likely to happen. This further underscores the need to take all the trade policy choices of governments as endogenous when studying the consequences of regionalism.

That said, it does *not* follow that taking into account the endogeneity of external tariffs necessarily points to a benign role of regionalism. As Ornelas (2005a) shows, if one considers a model like Krishna's (1998) but where external tariffs are endogenous, the countries left outside an FTA tend to be the ones blocking global free trade. Ironically, the opposition to free trade

arises precisely because of the trade-*creating* features of FTAs. Simply put, if external tariffs fall enough to more than compensate outsiders for the trade discrimination against them—as several models indicate—then the outsiders may turn against multilateral liberalization, since free trade would imply losing the benefits from the non-reciprocal liberalization offered "for free" by the FTA members.

But the possibility of forming RTAs can also make free trade easier to achieve by inducing otherwise uncooperative countries to cooperate. This is more likely to be the case with customs unions, because they tend to be more harmful to outsiders. Riezman (1999) makes this point in a three-country endowment model where he employs the core as the equilibrium concept. Riezman finds that, if countries are sufficiently asymmetric, free trade is achievable only if the two small countries can use a CU as a threat to the reluctant large country.[19]

Baldwin (1995) makes a related point in considering the incentives of small countries to join an existing RTA. As trade diversion generated by an initial agreement reduces the profits of nonmember exporters, it alters the political equilibrium in those countries. Since outsiders are negatively affected by the formation of a regional agreement, their incentives to liberalize trade preferentially increases. This results in an enlargement of the trade agreement. As this expansion harms other nonmembers, it promotes another plea for membership. Thus, the region keeps expanding and trade is increasingly liberalized. Naturally, this is possible if regionalism is "open," in the sense that outsiders are always allowed to join. If so, the long-run consequences of the "domino" are likely to be positive as the RTA expands.

The consequences of regionalism are generally tied to whether it is open or not. Yi (1996)

[19] Ornelas (2007) and Saggi and Yildiz (2008) develop a related argument in oligopolistic models, the latter focusing on coalition-proof Nash equilibrium, the former on the core. Melatos and Woodland (2007) also adopt the core as the equilibrium concept when studying trade bloc formation.

shows that regionalism (with customs unions) is a building bloc to free trade if it is open, but can be a stumbling bloc if it is not open. A set of related studies looks at the long-run equilibrium as country pairs form all bilateral agreements that are supported by both countries. This literature finds that the spread of regionalism always leads to free trade provided countries are symmetric and governments maximize social welfare (e.g. Goyal and Joshi 2006). However, similar to Riezman's (1999) finding, regionalism can be either a stumbling blocs or a building bloc when there are asymmetries in endowments or costs (Saggi and Yildiz 2009).

The rules of the multilateral system also matters.[20] Specifically, the provision of nondiscrimination in the GATT/WTO requires that tariff concessions must be extended to all members. This allows a country to free ride on the liberalization efforts of others, and could ultimately reduce the extent of feasible liberalization by those countries. This may explain the inclusion of RTAs in the original GATT charter, despite the GATT's overwhelming focus on nondiscrimination. Highlighting this point, Saggi and Yildiz (2009) study the role of FTAs for multilateral liberalization in the presence of a nondiscrimination constraint. They show that, if FTAs are not permitted, a country may oppose a multilateral free trade agreement because it can free ride on the liberalization efforts of others. The threat of FTAs can reverse that situation by offering the liberalizing countries a way to stop the outsider from free riding.[21]

This discussion underscores two central elements in this debate: (i) whether the gains from RTAs are so large for their members that a multilateral agreement becomes undesirable for them; and (ii) whether outsiders benefit or lose when an RTA is formed. Aghion et al. (2007)

[20] Bagwell and Staiger (1997a and 1997b) show that formal enforcement constraints are important as well. During the anticipatory phase, CUs are benign for multilateral cooperation but may become harmful in the long run. The reverse is true for FTAs.

[21] Bagwell and Staiger (1999ab) show, on the other hand, that RTAs can undermine the efficiency of the GATT rules. The reason is that RTAs are inherently discriminatory, while they show that nondiscrimination (in addition to reciprocity) is necessary for the efficiency of multilateral negotiations.

highlight the role of these two elements in a dynamic bargaining model with transfers between countries, where a "leading" country decides whether, and in what sequence, to negotiate trade agreements with two "following" countries. Aghion et al. show that, if global free trade maximizes governments' joint payoff, it will be reached regardless of whether FTAs can be formed.[22] In that case, FTAs affect only *how* free trade is reached, depending on the answer to item (ii) above. The leading country will choose to reach free trade through multilateral negotiations when outsiders gain with the formation of FTAs, but through the formation of progressively larger FTAs when outsiders lose.[23]

In their analysis, if free trade does not maximize the joint payoffs of governments FTAs can be either building blocs or stumbling blocs to free trade, depending on how much the leader gains under the status quo relative to free trade and on the types of externalities that FTAs generate. Political-economy motivations provide a strong reason for why this scenario may be the most pertinent. But notice that, if global free trade is not in the payoff frontier of governments, it is unlikely that free trade will ever be in their agendas anyway.

Ornelas (2008) takes this perspective and shows that RTAs can in any case help the world to get "closer" to free trade. Consider that political-economy motivations are such that even a fully cooperative multilateral agreement would not deliver free trade. If a subset of countries eliminates bilateral tariffs in an RTA—motivated by either non-trade objectives or by a

[22] This contrasts with the analysis of Furusawa and Konishi (2007), who show in a network formation game that free trade is unachievable if the level of industrialization—measured by the number of differentiated goods produced per capita—across countries is too different and transfers are forbidden.

[23] This distinction between the different ways to reach free trade—directly or after the formation of RTAs—generalizes an idea originally developed by Freund (2000b), who focuses on the sunk costs that firms have to incur to build a network distribution system when serving a foreign market. Establishing an RTA induces the firms of the involved countries to build these networks in each other's market earlier, and this provides a first-mover advantage under free trade. Thus, countries may rush to form RTAs in anticipation of global free trade. Seidmann (2009) makes a related point when studying a bargaining game where countries form FTAs or CUs to put themselves in a better strategic position in the negotiation of free trade.

reshaping of forces in the multilateral negotiations—the complementarity between external and preferential tariffs will then foster a re-design of the cooperative multilateral agreement that incorporates lower aggregate trade restrictions. In this sense, RTAs can be a benign force for multilateral liberalization precisely when governments are unwilling to liberalize further enough.

The discussion so far underscores the array of potentially important forces shaping the impact of regionalism on the prospects of multilateral liberalization. While this makes for an intellectually engaging debate, it also reflects an important difficulty of the literature. How one defines the objective function of governments and the structure of consumer preferences, how one treats the determination of external tariffs (and therefore of world prices and terms of trade), whether one focuses on FTAs or CUs, which bargain protocol and equilibrium concept one considers, what market structure one assumes: the stance taken on each of these assumptions is often critical to one's conclusions about the effects of regionalism on the prospects of free trade.[24] Surely this is not a prerogative of this literature. But when faced with opposing theoretical results, the solution is typically to scrutinize empirically the divergent predictions. However, the nature of the main question in this debate—whether regionalism helps or hinders multilateralism—is such that it does not lend itself easily to testing. Simply put, at any point in time we observe a single realization of GATT/WTO negotiations. Would they have been any faster, or easier, had there been fewer (or more) RTAs?

One approach to empirically address this issue is to look at the correlation between RTA formation and multilateralism. Mansfield and Reinhardt (2003) examine the relationship between the expansion of the WTO and RTA formation. While their results do not speak to causality, they

[24] Abrego et al. (2006) attempt to assess the validity of opposing results in the literature by numerically simulating trading bloc equilibria over different preference and endowment structures. While a laudable effort, their approach inevitably leaves a wide range of alternatives without examination.

find that more RTAs are formed during multilateral negotiations than at other times, consistent with countries using them to escape from free riders and pressure outsiders to liberalize (or with RTAs being a consequence of liberalization; see subsection 4.2).

A specific example of regionalism aiding multilateralism involves the shift of the United States in the 1990s from historical advocate of multilateralism to defender of bilateralism. According to Bergsten and Schott (1997), NAFTA negotiations revived Uruguay Round talks "by reminding the Europeans that the United States could pursue alternative trade strategies" (p.2). There is some evidence that this shift was intentional, to get the Round started and push it along.[25] Given the timing—NAFTA was concluded in 1993 and the Uruguay Round in 1994—this strategy, intentional or not, appears to have been successful.

However, the work by Limao and coauthors, discussed in subsection 3.2, suggests that regionalism can reduce the extent of liberalization in a multilateral trade round. Moreover, since they focus on the US and the EU, the effects they uncover could extend to other countries due to reciprocity in negotiations. This suggests that the proliferation of RTAs could shift the set of feasible multilateral agreements to one where less liberalization is possible.

In sum, while the theoretical work on how regionalism affects governments' willingness to negotiate multilateral trade agreements has generated a number of important insights, it remains largely inconclusive. The empirical literature is limited primarily to correlations and case studies, so it is not possible to reach a definitive conclusion. At this point, it is difficult to imagine how the debate could be settled without plausible counterfactuals. Perhaps an eventual conclusion of the Doha Round will offer more data to delve into these questions.

[25] Already in the 1980s, the US Trade Representative, William Brock, proposed moving to bilateralism to engage Europe by showing that there were other options (Destler 1996)

4.2 The impact of multilateralism on regionalism

Studying how regionalism affects multilateralism is not the only way to look at this relationship. A few authors have examined it also from the other direction: how multilateralism affects regionalism. Both Ethier (1998) and Freund (2000a) view regional initiatives as a consequence of the success of multilateralism. Ethier asserts that this is a benign consequence, since RTAs intensify world investment and create incentives for economic reforms in less developed countries.

Freund (2000a) studies the incentives for and the sustainability of preferential liberalization when multilateral tariffs are lower. She finds that deeper multilateralism provides greater incentives to form RTAs. The intuition draws from the complementarity effect between internal and external tariffs. When external tariffs are low, the loss from trade diversion is small but the gains to producers from preferential access and to consumers from lower prices remain. Taking into account that RTAs must be sustainable, Freund shows that bound low external tariffs have two opposing effects. Since tariffs are constrained, they lower the gain from deviating from an RTA, making it easier to sustain. But they also weaken the punishment when deviation occurs, since the status quo is less detrimental, making RTAs more difficult to sustain. Provided tariff cuts are significant in an RTA, the first effect dominates and RTAs are easier to sustain as multilateral tariffs fall. This reasoning could help to explain, at least partially, the large increase in RTAs since the conclusion of the Uruguay Round and the formation of the WTO in 1995 (Figure 1).

There are other forces that can make regional and multilateral tariff reduction complement each other to generate broader trade liberalization. Baldwin (2006) points out a juggernaut effect, where reciprocal liberalization lowers tariffs, which leads to an expansion of the export sector and a decline in the import-competing sector. Following this transition, the political-economy support for protection is reduced, and further reciprocal liberalization becomes optimal. This process changes the structure of production, which in turn facilitates future liberalization. The type of liberalization can be regional or multilateral but spillovers from one to the other are likely.

Despite the scarcity of analyses on how multilateralism affects regionalism, the possibility of testing theories focusing on this direction of the relationship is probably higher than the opposite direction. After all, at least from the perspective of small countries, developments in the multilateral arena can sometimes be regarded as exogenous.

The findings of Mansfield and Reinhardt (2003) discussed in the last subsection are consistent with multilateralism promoting RTA formation. Fugazza and Robert-Nicoud (2009) provide a further step in testing this relationship. Their goal is to see whether reductions in the US multilateral tariffs at the Tokyo and Uruguay GATT Rounds had any effect on the level of the US preferential tariffs in the RTAs the US formed after the conclusion of the Uruguay Round. Hence, Fugazza and Robert-Nicoud ask essentially the opposite question studied by Limao (2006).

Fugazza and Robert-Nicoud (2009) find that cuts in the US multilateral tariff of a product during the multilateral rounds are systematically associated with lower preferential tariffs for that product, and with that product being included in more preferential arrangements. Their

identification strategy relies on the timing of the agreements. Since the ten agreements considered were negotiated after the conclusion of the Uruguay Round and are very small from the US perspective, they are unlikely to have affected the multilateral talks in any meaningful way. Hence, the findings of Fugazza and Robert-Nicoud are consistent with the juggernaut idea that tariff complementarity may work both ways. In contrast with the common view that regionalism and multilateralism are substitute trade strategies, their evidence indicates that the two are close complements.

5. Design Issues

The previous sections focus on the broad questions of how regionalism affects trade, welfare, trade policy and the multilateral trade system. As the trend towards regional trade agreements has spread, a number of specific issues in their design have arisen that have implications for trade and welfare. In this section we consider two important design issues that affect the consequences of regionalism. The first is rules of origin, which prevent outsiders from using the low-tariff country as an entry point into a free trade area. The other is integration beyond trade. Regional trade agreements may provide a path to deep integration, which can engender larger gains than trade integration alone.

5.1 Rules of origin

From the discussions on trade diversion, external trade policy and political viability of RTAs, FTAs appear socially superior to CUs. The more negative appraisals for RTAs seem to be

for Mercosur, a customs union. There is some evidence that external tariffs are higher in CUs than in FTAs. Politically viable FTAs, but not necessarily CUs, are likely to be welfare-improving. Moreover, as a practical issue, implementation of CUs requires members to agree on common external tariffs. If they are very different from each other, economically or politically, this coordination could prove difficult, and may require compensating the unsatisfied parties by other means.[26]

Unfortunately, FTAs come with unique costs of their own, making the normative comparison between the two types of agreements difficult. Specifically, FTAs require rules of origin (ROO), which specify domestic content to prevent the transshipment of imported products from low-tariff to high-tariff members. The theoretical literature overwhelmingly suggests that ROO create distortions, and the growing empirical literature confirms this. In contrast, common external tariffs in CUs preclude the need for ROO, thus potentially making them preferable to FTAs.

Rules of origin have multiplied along with the proliferation of FTAs. Most economists deem them highly distortionary because of the detailed product-by-product criteria that have become the norm[27] and the overlapping but different ROO present in countries that are members of multiple FTAs.[28] As a result, exporters need to incur bureaucratic costs of proving that exports meet ROO. Furthermore, they may want to change production processes to meet ROO requirements, distorting trade patterns and investment flows (Krishna and Krueger 1995).

[26] Difficulties in harmonizing external trade policies have induced groups such as the Andean Pact to return to being an FTA.
[27] See Estevadeordal and Suominen (2005) for details of the criteria employed.
[28] For example, the EU has more than 500 product-specific rules of origin (applied on preferential imports from outside the EU) on top of regime-wide rules (Cadot and de Melo 2008).

Rules of origin act like a foreign subsidy to final good producers in the exportable industry, and provide some protection to the domestic intermediate industry. Grossman (1981) shows that a serious issue with such schemes is that the degree of protection is both variable and difficult to predict. As a result, ROO can actually cause a reduction in the output of the exportable industry if the content requirement is binding. Vousden (1987) shows that the effects of ROO also depend on the type of competition in the intermediate and final goods sectors, making their impact even more difficult to identify. Krueger (1999) argues that such rules effectively extend protection from high-tariff to low-tariff FTA countries. To take advantage of the larger market, exporters in the low-tariff country are effectively subject to the same conditions as firms in the high-tariff country. Ju and Krishna (2005) show that the impact on trade and welfare depends also on whether all or only a fraction of the firms try to meet ROO.

Why do countries install complex ROO if their consequences are difficult to determine and they are likely to reduce welfare? One reason is to prevent a race to the bottom in tariff setting. Without ROO (and provided transport costs are relatively low), imports would enter the FTA through the lowest-tariff country, which would then collect most tariff revenue from regional imports. As Richardson (1995b) shows, this gives countries an incentive to undercut each other when setting tariffs—an incentive that ROO neutralizes.

While the role of tariffs in raising revenue was important in the past,[29] it has declined, especially in industrial countries where ROO thrive, making political-economy forces the more likely explanation for the trend in ROO usage. Indeed, agriculture, textiles, and apparel tend to have the most restrictive ROO across regimes (Estevadeordal and Suominen 2005). These are the

[29] McGillivray and Green (2001), for example, show that this happened in the US Colonies, after independence but before a common external tariff was implemented.

same products where trade has been difficult to liberalize historically because of political-economy forces. ROO insulate these sectors from the FTA, thereby allowing the FTA to form.

Empirical work largely tracks the size and complexity of ROO across markets and provides estimates of their ad valorem tariff equivalent. Results suggest that they are quite costly, especially in North-South agreements. For example, Cadot et al. (2005) find that ROO halve the gains to Mexico from NAFTA and Mattoo et al. (2002) find similar results for the Africa Opportunity and Growth and Opportunity Act (AGOA). Cadot and de Melo (2008), in a summary of the literature, note that compliance costs associated with meeting ROO requirements range from 3 to 5 percent of final product prices, largely offsetting the small preferences allotted in developed countries.

In sum, ROO are very likely to be distorting and reduce the positive effects of FTAs. While it is politically unlikely that ROO will be eliminated, simplifying them, for example by moving to a single percentage value added requirement, would be desirable.

5.2 Deeper integration

Regional integration need not be about goods trade only. In fact, the benefits from integration can be much larger if it is deeper. For example, recent studies show that the welfare gains from expanded migration can far outweigh the gains from increased trade in goods (Walmsley and Winters 2005). Similarly for the gains from services trade (Mattoo and Stern 2008). However, many such elements of deeper integration are only feasible in small groups with similar preferences. If the formation of a regional trade agreement is the first step towards a deeper agreement that encompasses such issues, the potential for benefits is much larger.

Alesina and Spolaore (2003) discuss the costs and benefits of deep integration when studying the optimal size of countries. Many of their insights extend to regional agreements. They argue that there is a trade-off between the economic benefits of a larger size and the costs of increased heterogeneity within a country. The benefits of size include provision of public goods and insurance, home market effects, as well as the scope of redistribution of income. The costs of heterogeneity are that people may have different preferences for the extent of public good provision, standards (labor, environment, safety), income redistribution, etc. As a country gets larger, it becomes more heterogeneous, which makes national policies less satisfactory to a larger fraction of the population. While such heterogeneity may matter little for much of goods trade, it clearly does for migration, standards, and trade in services. Regional agreements can provide a compromise, where countries can reap some of the economic benefits of size without surrendering much national sovereignty, which allows them to avoid some of the costs of heterogeneity. Such deeper integration is however less likely to be feasible at the multilateral level, where costs of heterogeneity are much greater.

The conflict between deeper integration and national sovereignty is reflected in the history of European integration. The founding agreement for the European Economic Community, The Treaty of Rome (1958), promised full integration of goods, labor and capital markets. But progress has been slow and lumpy because countries are reluctant to relinquish control to supranational institutions. For example, the Treaty called for a move to majority voting in the European Council in the mid-1960s. France opposed this change because the country could be required to implement policies it voted against. A compromise to keep France in the Community returned the Council to unanimity for 20 years, resulting in little progress on deeper integration during this period (Baldwin 2008). The conflict over sovereignty arose again

recently, as a number of countries opted out of part of the Lisbon Treaty, which further strengthens EU institutions and moves more issues towards majority voting.

Despite these difficulties, the EU is the most complete example of regional economic integration. Goods, capital, and labor move freely across borders. External tariffs are common across countries. Technical barriers to trade have been removed. Sixteen countries share a single currency, while others are lining up to adopt it. A large literature explores deep integration through the history of the EU and its economic effects.[30]

The policy literature also has for a long time discussed the economic benefits from deeper integration (e.g. Lawrence 1996). These benefits have been recognized to some extent in the empirical political science literature. For example, when exploring the determinants of RTA formation, Mansfield et al. (2002, 2008) include such variables as the type of political regime, conflicts, joint political alliances, colonial heritages and third-party disputes. They find that these variables help to predict RTA status, suggesting that regionalism is about more than just integration in goods trade.

Not all economists favor deeper integration. Panagariya (1999) questions the gains from deeper integration when bargaining power is uneven, as one country may set the agenda. In addition, he argues that that even if deeper integration is welfare-enhancing, there is no reason that it must be accomplished through an RTA. Still, the history of the EU and before that of Germany (which began as a customs union of smaller states) suggests that trade integration may be a natural path.

[30] A detailed discussion of this line of research is beyond the scope of this paper. For a summary of the literature, details on the history of European integration, and discussion of integration in goods, capital, and labor markets in the EU, see Baldwin and Wyplosz (2003). The Sapir Report (2005) discusses the performance of the EU and the integration process, as well as the challenges ahead.

The large potential gains from deeper integration highlight a deficiency of the focus on the second-best problems of regional trade integration in the literature. Exaggerated concerns over trade discrimination could lead to the unwarranted conclusion that big countries would be better off as a number of small countries. For example, some trade is certainly diverted away from foreign countries to US states, yet disintegration of the United States is unthinkable, precisely because of the deep integration. A shift of focus toward the gains from deeper integration and to how RTAs may help to facilitate it is therefore desirable.

6. Conclusion

In the last fifteen years regionalism has become, by far, the most popular form of reciprocal trade liberalization. This trend has been met with scepticism by trade economists, many of whom are concerned with the distortions from the discriminatory policies inherent to these arrangements. While legitimate, these concerns seem excessive. Empirical analyses indicate that trade creation, not trade diversion, is the norm. Evidence suggests that this is both because governments "choose well" when forming RTAs and because they adjust other trade policies to moderate the distortions from discrimination. The other main concern is that regionalism could endanger multilateralism. Maybe it does, maybe it does not; at the moment we just do not know. Settling this issue theoretically has proven very difficult. Empirical analyses, which rely on data from a handful of trade rounds, will take time. Perhaps trade economists may do better by looking for ways to better integrate regionalism with multilateralism, recognizing that regionalism is and will probably remain the preferred form of reciprocal liberalization for

most countries.[31] Research could then move on to other important issues that have received little attention. Here we highlight some that we deem vital.

One is the wide range of implementation rates across RTAs. For example, while the EU is fully implemented, most other RTAs are not. Some exclude a few sectors; others exclude most sectors. Inclusion does not imply free intra-bloc trade either. Thus, while useful, measures such as those represented in Figure 1 are very imprecise, as they aggregate over very different arrangements. A sensible classification of RTAs by implementation rates would be very useful for empirical cross-bloc studies. We should also try to understand those differences. What determines implementation rates across RTAs? Which industries tend to be excluded? Among those included, what determines the extent of intra-bloc liberalization? Even though answering these questions is critical for a thorough examination of the impact of RTAs, we know little about them.[32]

Another central area in need of further scrutiny is the benefits that arise from deeper integration in RTAs. For example, it is widely believed that the creation of the European Economic Community in 1958 was motivated mostly by the desire to prevent future conflicts among their members. Deeply integrated blocs such as the EU benefit their members also by taking advantage of increasing returns to scale in the provision of public goods, factor mobility, and enhanced home-market effects. Indeed, it must have been those benefits, as well as the lock-

[31] Baldwin (2006) discusses ways to do this.
[32] Grossman and Helpman (1995) do provide a framework for studying exclusions in FTAs, but that part of their paper has been inexplicably neglected in the subsequent literature. Empirically, we are only aware of Liu's (2009) study of how the influence of special interest groups relative to voters shapes the choice between "partial-scope" and "full-fledged" RTAs (Figure 1 represents the latter), and of Vicard's (2009) analysis of how the history of conflicts between countries affects their choice of type of RTAs.

in of domestic policies, that the Eastern European countries sought in joining the EU, as they already shared free trade agreements with the EU prior to accession.

Relatedly, RTAs may bring about several benefits of a non-trade nature. This idea goes back to at least Cooper and Massell (1965). Arguing that the Vinerian approach fails to explain why countries would ever form a CU—rather than liberalize unilaterally—they propose that a CU can be a useful vehicle for swapping market access when governments want to promote industrialization due to infant-industry concerns.[33] Many other types of gains are possible: see Fernandez and Portes (1998) for a discussion of various potential non-trade motivations for regionalism. In fact, these play a central role in some recent models such as Limao's (2007), and yet there is scarce evidence on the specific nature of those motivations in actual negotiations. This helps to explain the lack of empirical studies in the area despite its significance for assessing both the causes and the consequences of regionalism.[34] Understanding these motivations better could also help us make better sense of the nature of the changes in the world economy during the 1990s that led to the startling timing of regionalism revealed in Figure 1.[35] We look forward to research in those areas.

[33] Small countries can benefit from exchanging market access through a CU even when industrialization is not an issue, for example because of returns to scale (Wonnacott and Wonnacott 1981) or because of market segmentation (Ornelas 2007).
[34] Recent exceptions are Antràs and Foley's (2009) analysis of the role of ASEAN in attracting foreign direct investment and Martin et al.'s (2009) study of the role of RTAs in preventing military conflicts.
[35] Baldwin and Jaimovich (2009), through the construction of a spatial contagion index, and Bergstrand et al. (2009), building on the structure developed by Baier and Bergstrand (2004), provide initial attempts at explaining the sequentiality of regionalism.

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Figure 1 - Average Number of RTA Partners Over Time

