
3

Regional Trade Agreements: Effects on Trade

Regional trade agreements (RTAs) can have positive or negative effects on trade depending on their design and implementation. Analysis in this chapter confirms that gains from a preferential trade agreement cannot be taken for granted; moreover, even in agreements with positive impacts on average incomes, not all members are assured of increases. The interesting policy question then is not whether RTAs are categorically good or bad, but what determines their success?

The broader policy context in which an RTA is designed and implemented is crucial. Agreements that have been designed to complement a general program of economic reform have been most effective in raising trade. When RTAs have tended to be fruitless, it is often because of the lack of a coherent program of reform.

For an RTA itself, the most important ingredient for success is low trade barriers with *all* global partners. Most-favored-nation (MFN; i.e., nondiscriminatory) liberalization, which creates more trade, is the fastest and most efficient way to increase intraregional trade. In addition, agreements that minimize excluded products expand the scope for positive net benefits through competition and trade creation.

Recent research has added nonrestrictive rules of origin to the list of successful factors; local firms must be able to effectively source materials at the lowest cost. Such rules of origin are an essential element of agreements that

expand both regional exports and exports to the rest of the world.¹

RTAs can be a springboard to global markets, but here too, low MFN trade barriers are necessary for success. RTAs can help countries integrate with global markets, but no agreement provides guarantees, so design and implementation matter.

The Impact of RTAs on Merchandise Trade and Incomes

RTAs cover much more than trade barriers

RTAs have increasingly been designed to cover much more than formal trade policies (see chapter 2), and RTAs are signed for a variety of reasons. The impact of these agreements on trade determines the extent to which broader political and social objectives are achieved. It is difficult to identify an agreement that has fostered wider political objectives without achieving economic integration. It is clear that the political context and broad economic environment in which integration takes place are crucial for determining the trade impact. Success derives from a strong willingness to liberalize and to accept the subsequent economic adjustments, accompanied by intense mutual economic dialogue and communication and genuine efforts toward mutual understanding. Severe macroeconomic disturbances and a turbulent investment climate can easily disrupt trade and derail an agreement.

The simplest measure of integration is the trend in the share of imports from regional partners in the total imports of a region. Successful regional agreements might be expected to increase trade between partners relative to those countries' trade with the rest of the world. But three important caveats need to be understood.

First, successful regional integration is typically accompanied by reductions in tariffs for all partners. Hence, regional trade shares may not rise even though the volume of regional trade is increasing. Second, regional trade agreements that provide for the removal or reduction in trade costs other than those associated with formal trade policies (such as improved customs procedures), may stimulate trade from all sources. Third, many agreements cover nontrade issues such as investment, services, and labor, and these can have important consequences for growth and incomes. These are analyzed in subsequent chapters, but it is important to bear in mind here that an agreement may be successful even if the propensity for members to trade among themselves does not increase markedly.

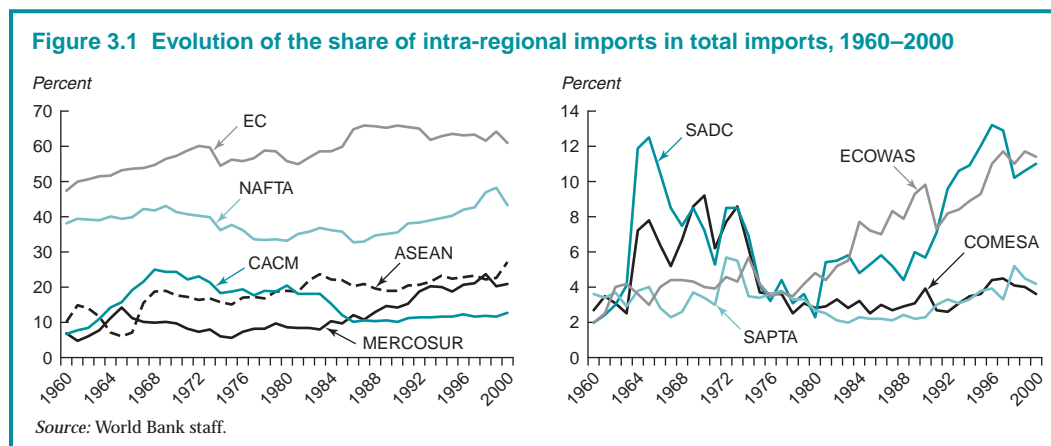
Trade performance in several regional trade agreements shows that the increase in intra-regional trade shares of agreements signed in the 1990s has been substantial (figure 3.1). The share of intra-NAFTA (North America Free Trade Agreement) trade rose from less than 35 percent in the late 1980s to almost

50 percent in 1999. Over the same period, the importance of trade between MERCOSUR members doubled from 10 to 20 percent.

For many of the agreements signed in the 1990s, intra-regional trade shares were growing strongly before the agreements were signed (NAFTA, MERCOSUR, SAPTA, SADC). There may have been some anticipation effect in the year or two before signing, but this doesn't explain trend increases in shares commencing five or more years previous, as in the case of MERCOSUR. In many cases this increase in regional trade reflects the impact of unilateral, multilateral, as well as regional trade liberalization and the fact that agreements often follow growing trade relationships.

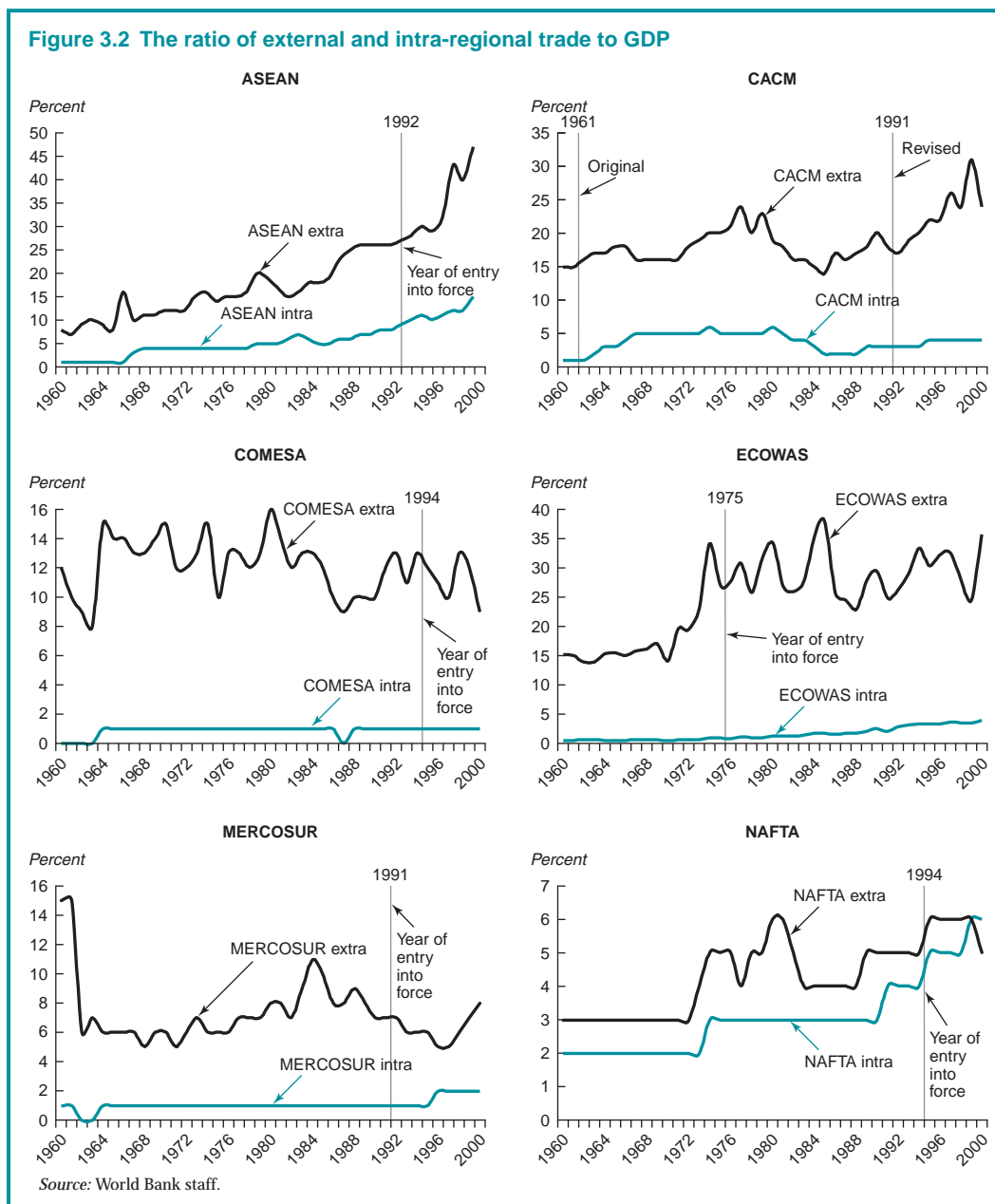
In Africa, the picture is mixed. The extent of regional integration among the Common Market for Eastern and Southern Africa (COMESA) members has been relatively static over the past two decades. In contrast the share of intra-area trade has increased substantially for Economic Community of West African States (ECOWAS) since the early 1980s and for SADC since the late 1980s. In East Asia, a region that has experienced substantial economic progress over the past 20 years, there has been little increase in intra-regional trade shares.

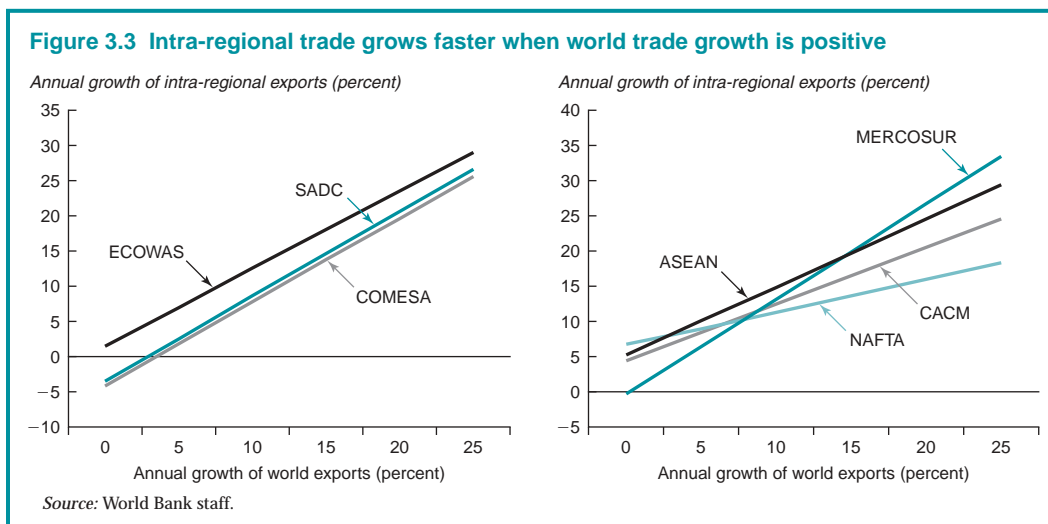
Given these disparate results, it is necessary to go beyond simple trade shares to identify the economic impact of regional trade



agreements. Because a decline in the share of extra-regional trade in total trade will be of less significance if the total value of trade is increasing, a logical (and commonly used) measure is the share of extra- and intra-regional trade in regional GDP (figure 3.2).

With the exception of MERCOSUR, all regions that have experienced an increasing share of intra-regional trade in total trade have also seen the ratio of extra-regional trade in GDP increase. The Association of Southeast Asian Nations (ASEAN) is an





interesting example. The share of intra-regional trade remained fairly flat during the 1990s. However, the ratios of intra-ASEAN trade to GDP and ASEAN imports from the rest of the world to GDP have both increased strongly. ASEAN appears to have been very successful.

In general, this suggests that external openness and the expansion of intra-regional trade go together. To take this analysis a little further, we plot the estimated relationship between annual changes in intra-regional trade and annual changes in the total volume of world trade, and we find a positive association in all cases (figure 3.3). Although crude, this analysis suggests that the successful expansion of trade among the members of a regional trade agreement tends to be associated with increasing extra-regional imports as a share of GDP and with the growth of world trade.²

Do regional trade agreements stimulate trade?

The analysis just discussed provides useful information, but it does not directly measure the impact of regional trade agreements. To isolate the role of policy—that is, RTAs—from other factors influencing trade patterns requires more sophisticated economic modeling. Different, yet complimentary,

approaches are available that we can crudely separate into *ex ante* general equilibrium simulation studies and *ex post* econometric analyses by using the gravity model (box 3.1).

The broad results³ from general equilibrium exercises are that, first, excluded countries almost always lose. Second, for developing countries the bottom line determinant of positive income effects is the increase in market access. Third, in Free Trade Areas (FTAs) each country can always lower its tariff to ensure gains. This may be more difficult in a customs union. Finally, regional trade agreements are typically expected to create more trade than they divert, although this is not always the case.

These points are highlighted in figure 3.4, which summarizes model estimates of the impact of Chile signing FTAs with different regional groupings. Excluded countries lose in every case. Chile loses from an FTA with MERCOSUR. FTAs with larger markets bring bigger gains for Chile but also tend to entail larger losses for excluded countries. Large northern countries gain little from FTAs with substantially smaller southern partners.

A number of analysts have concluded that the numerous estimates from the gravity model generally support the contention that

Box 3.1 A primer on modeling of RTAs

A. Simulation studies: Looking forward to potential gains

The ex ante studies are based on a specific general equilibrium model structure that allows a rich analysis of the impact of RTAs at both the aggregate and sectoral levels. A key strength of this approach is its ability to highlight which sectors may expand and which may contract in the face of given resource constraints. The richness of the model structure, however, requires that many key parameters be selected, (often on the basis of an extensive literature search), with others being derived by a process of calibration to a single base-year observation; that is, the remaining parameters are derived such that the model replicates the situation in the base year. To a large extent the results of the impact of RTAs are determined by the choice of value for key relevant parameters (in this case the price elasticity of demand for exports). Also, given that parameters are chosen and not estimated, the statistical properties of the results are unknown.

The characterization of RTAs is often simple, with most studies focusing on the removal of tariffs but ignoring issues such as the rules of origin, product exclusions, and services. These simulation exercises answer the question, “What would be the impact of the preferential removal of tariffs against a limited set of trade partners, given the assumed model structure?” But they do not tell us whether particular agreements have *actually* created or diverted trade.

B. Econometric studies using the gravity model: Looking back at actual performance

The gravity model provides a useful framework for assessing the impact of policy variables on the behavior of bilateral flows between countries. Its name is derived from its passing similarity to Newtonian physics, in that flows between two countries increase in proportion to their economic mass (as measured by GDP) and are constrained by

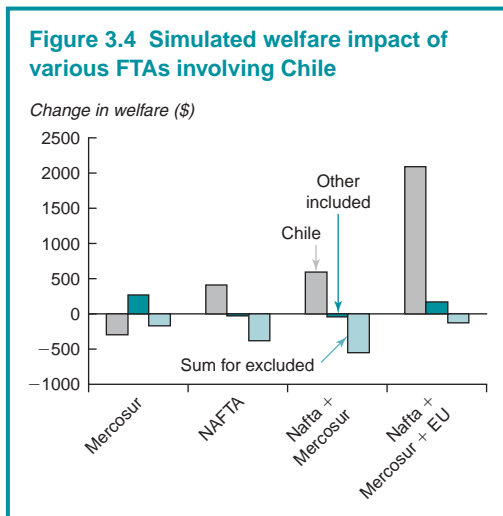
the friction between them (due to trade and other costs, which is proxied by distance). It is also common to use so-called dummy variables to capture geographical effects (such as whether the two countries share a border, or if a country has access to the sea), cultural and historical similarities (such as if two countries share a language or were linked by past colonial ties), and regional integration (such as belonging to a free trade agreement or sharing a common currency). A disadvantage of using dummy variables is that they may capture the impact of a range of other effects that occurred during the same time period as the RTA. For example, most applications do not distinguish the extent of multilateral trade liberalization. Ideally, specific trade policy variables would be included in the estimating equations, such the level of multilateral and preferential tariffs. However, the complexity of preferential trade arrangements precludes such an approach. A notable exception is the study done by Estevadeordal and Robertson (2004), who included a measure of preferential tariffs in their analysis of the impacts of RTAs on regional trade in Latin America.

Although widely used because of its empirical success, the gravity model had lacked rigorous theoretical underpinnings and was long criticized for being an ad hoc model. Recent theoretically grounded gravity equations are derived from models with strong constraints on preferences and technology, which undermines a straightforward interpretation of some of the estimated coefficients. Anderson and van Wincoop (2004) provide a good overview of this debate. Another weakness of many applications of the gravity model is the proxying of trade costs by distance, and the implicit assumption that cargoes traveling 1,000 miles in Africa face exactly the same trade costs as similar cargoes traveling 1000 miles in, say, Europe.

Sources: Inter-American Development Bank 2002 and Bank staff.

RTAs create trade.⁴ This merits further analysis. Differing studies have produced sharply different results for the same agreement. For example, Bayoumi and Eichengreen (1997) find no evidence of trade diversion from

enlargement of the European Union (to include Greece, Portugal, and Spain), whereas Wei and Frankel (1995) find “massive trade diversion.” One way to digest this contradictory literature is to combine and assess these



Source: Harrison et al (2004).

results in a single statistical analysis, called meta-analysis (box 3.2). This meta-analysis of the literature on the impact of regional trade agreements on intra- and extra-regional trade indicates that although agreements typically have a positive impact on intra-regional trade, their overall impact is uncertain. Actual experience reinforces that there can be no presumption that a preferential trade agreement will be trade creating.

Do regional trade agreements benefit all members?

The attention in most of the econometric studies is on the impact of particular RTAs. Few studies have sought to estimate the impact of RTAs on individual members. This is despite the fact that studies of agreements that failed in the 1960s typically identify the lack of mechanisms for redistribution in the presence of asymmetric impacts as a crucial factor creating political tension and undermining commitment to the agreement (Greenaway and Milner 1990). We estimated gravity equations that identify impacts for individual members for each of 17 different regional trade agreements to determine whether the statistical evidence suggests that the agreement has created trade, diverted trade, or had no significant net effect on trade for each country.

For none of the agreements do we find unambiguous evidence of a net trade-creating effect extending to all members.⁵ Thus even if an agreement as a whole creates trade, it is important that there are mechanisms to ensure that all members benefit.

Regional trade agreements and exports to the world

So far the analysis has concentrated on whether increases in intra-regional trade following the signing of a RTA are associated with falling imports from the rest of the world relative to a scenario in which the RTA was not signed. It is equally important to ask how regional agreements can be used as part of a broad approach to openness and especially whether they can provide a springboard to global markets for local exporters.

Applying the gravity model with an additional variable to capture overall exports of a member of a particular set of RTAs, we can assess whether these countries tend to export proportionately more than would “normally” be the case for a similar country that was not party to the agreements.⁶

These results, based on a sample period of 1948 to 2000, show that different agreements are associated with different propensities for higher-than-“normal” overall exports (figure 3.5). AFTA, EC, GCC, MERCOSUR, NAFTA, and SACU all appear to export significantly more than they would have done in the absence of the agreement. The countries that comprise these regional groups appear to have adopted policies that led them to be more export-oriented than they otherwise would have been. We cannot say, however, that it was the RTA alone that led to these policies. The variables that pick up changes in trade flows may be capturing the effects of unilateral and multilateral trade policies. Other agreements—CEMAC, CIS, COMESA, EAC, ECOWAS, and WAEMU—show a propensity to export significantly less than “normal.” The Andean Community and SADC appear to export less when the whole sample period is considered, but not when the analysis is confined to the more recent sub-period, from 1980 to 2000. In

Box 3.2 Regional trade agreements in gravity models: A meta-analysis

Meta-analysis provides a means of assessing and combining empirical results from different studies. The approach takes as individual observations the point estimates of relevant parameters from different studies. This set of observations is then used to test the hypothesis that the relevant coefficient is statistically different from zero. Here we are concerned with two parameters. The first measures the impact of the agreement on total imports (which we label *overall impact*); a negative value for this parameter suggests that for the agreement concerned, the level of trade between a member and any other country is less than the normal level of trade that one could expect. Thus a negative value is evidence of trade diversion. The second parameter captures the impact of a regional trade agreement on the level of trade between partners (*internal impact*). In our analysis we have included 254 estimates of overall impact and 362 estimates of internal impact from

17 research studies. The table below reports the mean value of the overall and internal impacts, the standard deviation, the number of statistically significant estimates, and the total number of estimates of each impact.

Of the estimates of the overall impact, 76 percent are statistically significant, 42 percent are negative and significant, and 34 percent are positive and significant. For the internal impact, 66 percent of the estimates are statistically significant, 54 percent are positive and significant, and only 12 percent are negative and significant. The mean estimate of the overall impact is negative. The most robust estimates of the overall impact are negative. The mean value of the internal impact is positive. For both parameters there is a high degree of variance about the mean values. Within this analysis the estimates of 19 regional agreements were assessed; 10 exhibited on average net trade diversion.

Summary of the estimates by regional trade agreement

	Overall impact				Internal Impact			
	Mean Value	Standard error	Significant estimates	Total estimates	Mean value	Standard error	Significant estimates	Total estimates
Total	-0.31	1.12	194	254	0.79	1.30	238	362

Source: World Bank staff.

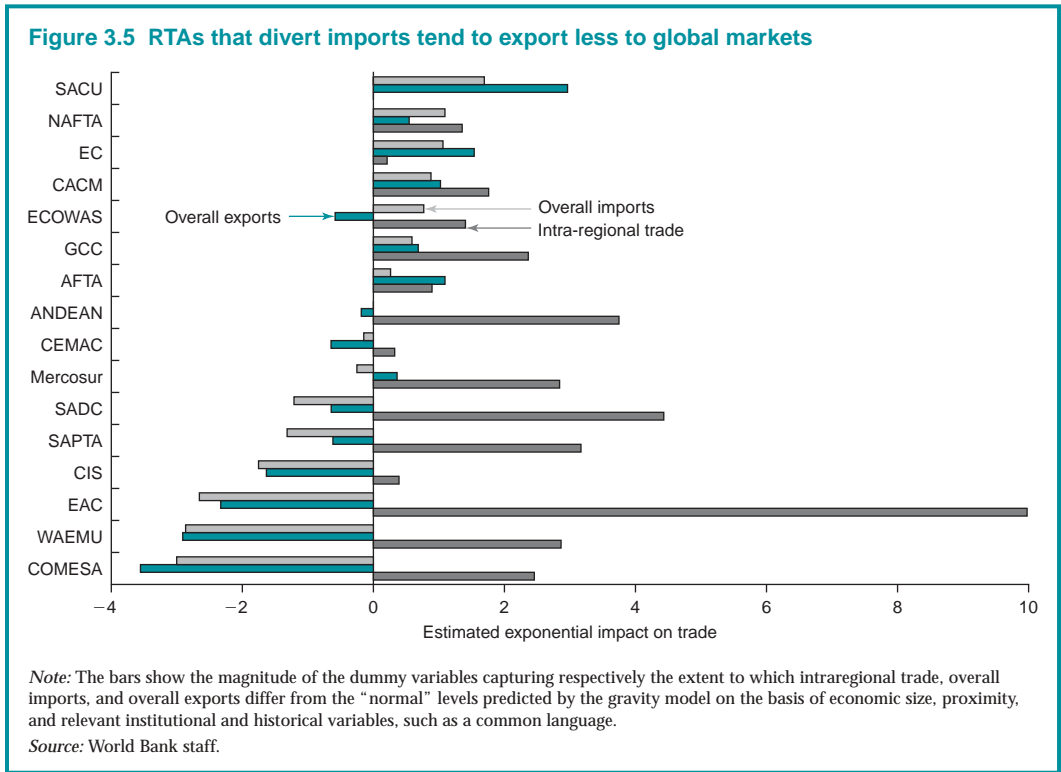
that period, the Andean Community also appears to have been more export-oriented than they otherwise would have been, perhaps reflecting substantial trade policy revisions.

Most of the agreements in which export propensities are lower also appear to generate fewer imports than would “normal” countries not participating in the agreements (CEMAC, CIS, COMESA, EAC, WAEMU). At the same time, those agreements that appear to be more export-oriented tend to be more open to imports (AFTA, EC, GCC, MERCOSUR since 1980, NAFTA, SACU). In many cases, there has been a strong impact on intra-regional trade. In general, members of regional agree-

ments that have been relatively open to imports have shown higher propensities to export to the global market than would otherwise be expected. Elsewhere, intraregional trade has been initiated, but imports have been diverted and exports suppressed.

The potential gains from larger markets and higher growth

Trade of RTA members will be affected through the changes in trade policies that take place, but will also change if there is an improvement in technology, higher investment, and a higher rate of growth. By crudely using dummy variables, gravity models provide a



measure of RTAs, which catches all of these factors through their impact on trade but cannot distinguish the precise mechanisms. Complementary approaches look at the impact of RTAs on these other factors.

Berthelon (2004), using cross-country regressions to estimate the effects of RTAs on growth during 1960–99, found that RTAs that enlarged the market substantially had substantial positive effects on growth. The results suggest, for example, that the FTA signed between Chile and the EU might be expected to increase the growth rate in Chile by 0.6 percentage points and in the EU by 0.005 percentage points. The larger market permits wider competition, larger scales, and greater specialization, all of which increase productivity and growth. South-South agreements face an uphill struggle in two respects: they generally entail much smaller markets, and they have less scope for realizing the gains from comparative advantage that different factor intensities would otherwise bring.

RTAs can also affect growth through technological transfer. Trade raises total factor productivity by providing access to a wider and more advanced range of technologies. The productivity of an importing country can increase through the importation of intermediate goods, which as a result of R&D in the exporting country, are either new and/or of better quality relative to existing products. In this way a country that is open to trade can benefit from R&D activities undertaken overseas. RTAs will have a positive effect if they stimulate imports from technological leaders. On the other hand, if the trade agreement leads to trade diversion away from more technologically advanced sources of inputs, then there could be a negative impact on productivity growth.

Schiff and Wang (2003) found that, for Mexico, trade with NAFTA partners had a large and positive impact on Mexico’s total factor productivity (TFP), while trade with the rest of the

Box 3.3 Implementation matters

The European Union and agriculture

The founding treaty (the Treaty of Rome), and subsequent replacements, commit the European communities to “the harmonious development of world trade, the progressive abolition of restrictions on international trade, and the lowering of customs barriers.” The European Union (EU) has failed to meet these objectives for agricultural products. There is little doubt that EU agricultural policy has been the source of considerable disharmony among trading partners.

Movement of Moldovan wine through Ukraine

Moldova is a major producer of wine. Although it has a free trade agreement with Russia, its main market, it costs more to ship a case of wine from Chisinau to Moscow than from Australia to Moscow (UNECE 2003). Why? Moldovan wine must pass through Ukraine, usually by rail. Although the two countries are party to the CIS free trade agreement, which provides for fair treatment in transit, the Ukrainian authorities, in addition to imposing delays and requiring unofficial payments, recently introduced an additional requirement that bulk wines must be transported in specially heated railway wagons, although a clear rationale for this is difficult to ascertain (World Bank 2004).

ASEAN and exclusions from preferences

ASEAN members initially were allowed to exclude certain products from tariff reduction, a right that they exercised liberally. In many cases the tariff reductions offered were of very limited value to other members. Thailand’s offers, for example, included wood products that it did not import and that other members did not produce. Malaysia’s list of products

for tariff cuts included a number of rubber products of which it was a major exporter. Indonesia, which lies on the equator, offered a 10 percent cut in the duty on snow plows (Balasubramanyam 1989). More recently, the trade elements of the agreement have been intensified with the launching of the AFTA (ASEAN Free Trade Area), the aim being to create a genuine free trade area. In 1995 the deadline for fully implementing AFTA was reduced from 15 to 10 years, although there has been some backsliding recently from agreed tariff-reduction schedules.

SADC and rules of origin

SADC initially agreed to simple, general, and consistent rules of origin similar to those of neighboring and overlapping COMESA. The initial rules required either a change of tariff heading, a minimum of 35 percent of value-added within the region, or a maximum import content of 60 percent of the value of total inputs. Subsequently, however, the rules were revised to include more restrictive sector- and product-specific rules. The requirement concerning change of tariff heading has been supplanted by detailed technical-process requirements, a much higher domestic value added requirement, and lower permitted import contents. The rules became much more similar to those of the EU and of NAFTA, reflecting in part the influence of the recently negotiated EU-South Africa agreement and the rules of origin governing EU preferences to ACP countries (Flatters and Kirk 2003). This example illustrates how sectoral interests and misperceptions of the role and impact of rules of origin can undermine RTAs.

Source: World Bank staff.

OECD did not. They suggest that this is because Mexico not only benefited from the content of trade with the NAFTA partners, the country also experienced closer contact and more information exchanges, especially among subcontracting firms, which are more integrated into the production networks of their Northern partners than was the rest of the OECD. They simulate the impact of NAFTA as a consequence and

find that it has led to a permanent increase in TFP in Mexican manufacturing of between 5.5 percent and 7.5 percent.

In a later study, Schiff and Wang (2004) look at the dynamic impact of North-South trade on technology diffusion to Korea, Mexico, and Poland from the EU, Japan, and North America. Using industry level data, they found that technology diffusion and

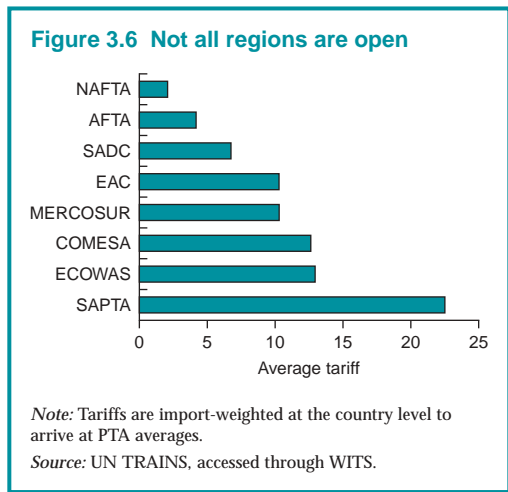
productivity gains tend to be regional. A possible reason for this being that knowledge diffusion is also governed by close contacts and the hands-on relationships that are more likely with neighbors. Nevertheless, for all countries the biggest impact of trade on TFP can be guaranteed by removing trade barriers on knowledge-intensive goods from all countries.

Ingredients of Success

Open regions do better

RTAs are only effective for developing countries if implemented in conjunction with more comprehensive domestic reforms. At the same time, a successful RTA will contribute to the overall economic impact of that reform program. In Europe, the eight Central and Eastern European countries that recently joined the EU experienced strong growth in trade and investment inflows during the 1990s; yet two countries in the region, Bulgaria and Romania, having almost identical trade agreements with the EU but much less extensive domestic reform programs, saw a much weaker trade and investment response. Regional integration initiatives in Latin America in the 1990s have been much more effective than early efforts, reflecting broad and credible structural reforms in many countries (Devlin and French-Davis 1999). Given this context, there are a number of key features of RTAs that are likely to contribute to favorable trade outcomes.

The external trade regime is a crucial determinant of the success of RTAs for several reasons. First, trade diversion tends to fall with the level of the external tariffs maintained by member countries after they form a preferential trade agreement. The negative effects of trade diversion are offset or overcome if the preferential removal of trade barriers against some countries is accompanied by a degree of liberalization to all countries, whether undertaken unilaterally or through multilateral negotiations. If a country that enters into a free trade agreement increases its imports from all countries, not just its



partners in the agreement, then it will experience an improvement in economic welfare. Therefore, countries forming preferential trade areas should simultaneously reduce the level of external protection facing nonmember trading partners. Risks of trade diversion are particularly high in the newly proposed South Asian Free Trade Area (SAFTA); (figure 3.6).

Second, where there are asymmetries in the level of external protection, it is important that the high-duty country reduce tariffs to avoid an adverse terms-of-trade shock. This is particularly relevant for developing countries seeking to sign agreements with the EU or the United States. In developed countries where tariffs on manufactured products are rather low (and high-duty agricultural products are typically excluded from regional preferences), trade diversion and trade creation are less likely to be significant. Thus with no trade being created in the developed market, the decline in domestic sales by firms in the high-tariff developing country may not be offset by a rise in exports to the developed country. Overall, the demand for goods produced in the high-tariff country may fall, and its terms of trade could worsen.

Third, low MFN tariffs (and nonrestrictive rules of origin) ensure that producers within the regional trade agreement will have access to competitively priced inputs. In today's

globalized market, policies that significantly raise the input costs of producers will constrain their exports to both regional and global markets. Regional integration is more likely to be successful if it is achieved on the basis of strong competition and ease of access to low-cost inputs.

Trade liberalization is a crucial mechanism for increasing competition in domestic markets. Where it is not politically feasible to open up broadly to all external suppliers, a regional approach can provide a stepping stone toward the benefits of comprehensive liberalization. However, it is important to take the second step: Even in a large region such as the EU, competition from within the region has been found to be much weaker than that provided by external imports. Jacquemin and Sapir (1991), for example, found that profit margins in European countries were significantly dampened by external imports but not by intra-regional imports. And collusive agreements are more difficult to enforce for companies based in distant locations. Firms that face little competition in local and regional markets will have low incentives to achieve the efficiency necessary to compete in world markets.

Clearly RTAs may affect the setting of external tariffs. This is true by definition in the case of a customs union and indirectly true in the case of a free trade area. Recent research finds that World Trade Organization (WTO) members do not appear to have more liberal external trade policies than non-WTO members (Rose 2004), and that membership in a RTA has, on average, no clear effect on a country's trade policy (Nitsch and Sturm 2003). Foroutan (1998), on the other hand, concludes that countries in effective regional groupings, distinguished by the growth of intra-area trade, have undertaken more far-reaching trade liberalization. However, there are cases of liberalizing countries that did not belong to an RTA and of countries in an effective RTA that did not liberalize trade policy. The conclusion is that the acceptance of a liberal trade policy may be a requirement for the survival

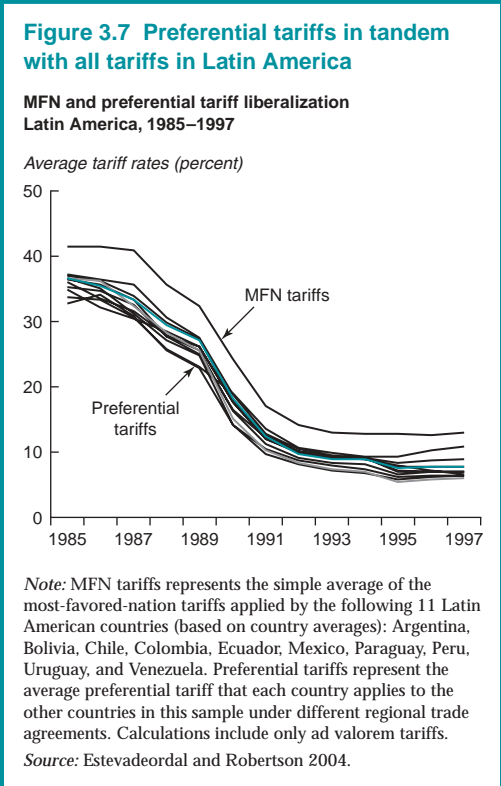
and deepening of a meaningful RTA, whereas belonging to a regional scheme constitutes neither a necessary nor a sufficient condition for an open and liberal trade regime.

In the 1960s and 1970s, preferential agreements among developing countries were typically accompanied by high external tariff barriers as part of an import substitution strategy. In contrast, agreements among more developed countries in the same period were more often associated with declining external barriers. For example, the simple average external tariff of the original six members of the European Union fell from 13 percent in 1958 to 6.6 percent after the Kennedy Round of General Agreement on Tariffs and Trade (GATT) negotiations. Agricultural products were excluded from these reductions, reflecting their exclusion from GATT negotiations until the Uruguay Round. The failure to reduce agricultural tariffs in Europe led to substantial trade diversion in agriculture with significant welfare losses for European consumers, especially the poorest, and a considerable hardship for poor farmers in developing countries.

Many developing countries have since reduced external tariff barriers both unilaterally and through multilateral negotiations. As a result, recent preferential agreements among many developing countries have been introduced or revamped with lower external barriers. This is particularly true in Asia and Latin America, where preferential and MFN tariffs declined in tandem after 1985, so that margins of preference remained stable or were slightly compressed (figure 3.7).

Paper agreements are not enough

Important aspects in the assessment of RTAs are whether their members have implemented their objectives under the agreement and the extent to which the objectives in the agreement have been met. Often the objectives in an agreement are defined by foreign ministers or even prime ministers, while the way that those objectives are to be carried out is determined later in negotiations between ministries. If tariff concessions are subsequently negotiated



sector by sector or item by item, the process becomes cumbersome and open to capture by domestic interests. The distinction is often made between agreements that reduce duties only on products specified in a positive list and other agreements, typically more liberal, implemented on the basis of a negative list of products excluded from tariff reduction.

Sectoral accords within RTAs can curb market forces and limit the benefits from competition. For example, Ozden and Parodi (2003) found that the auto agreement embedded in MERCOSUR between Argentina and Brazil compelled companies in both countries to balance trade, ensuring that production would not be reallocated to the lowest cost producer (Brazil); this move secured the support of the companies for the agreement. Because a new entrant would have to build plants in both countries (not just one), the agreement acted as a barrier to competition that favored insiders.

North-South agreements appear to have a better track record than South-South agreements. The comprehensive tariff objectives of most North-North agreements signed before the mid-1980s were implemented on or ahead of schedule (table 3.1). In contrast, South-South agreements reached during this period—most based on limited positive lists of products for tariff liberalization—had a very weak record of implementation. The delays in implementing initial regional tariff commitments “generally reflected a basic incompatibility between the inward-oriented development strategies of most members and regional liberalization” (De la Torre and Kelly 1992).

A larger number of South-South agreements signed or substantially revised in the late 1980s and early 1990s have sought a much broader degree of internal tariff liberalization, have been more effective in implementing agreed-on tariff reductions, and have tended to reduce external tariffs. For example, the GCC, launched in 1982, was originally intended to become a free trade area—a goal achieved by 1983. By the late 1980s, however, the objective evolved into formation of a customs union, which was established in 2003 (see World Bank 2003). However, table 3.1 also reports that substantial problems with implementation remain in many of the regional agreements involving developing countries.

Nonrestrictive rules of origin are integral to success

Preferential rules of origin are integral to preferential trade agreements. However, it has become increasingly clear that rules of origin can be designed in a way that restricts trade beyond what is necessary to prevent trade deflection or the transshipment of products from third countries through a member for the purpose of obtaining preferential duties. In addition, the proliferation of free trade agreements with accompanying rules of origin is increasing the burdens on customs services in many countries, and these burdens have consequent implications for trade.

Table 3.1 Implementation of tariff commitments by type of agreement, 1960–1999

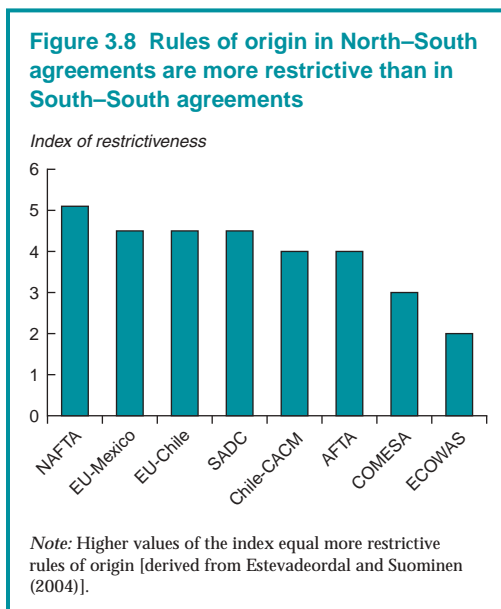
Agreement	Objective on intra-bloc tariffs	Implementation record
North-North agreements reached from 1960–89		
ANZERTA (signed 1983)	Eliminate all tariffs by 1988	On schedule
European Economic Community (signed 1957)	Eliminate all tariffs by 1968	Ahead of schedule
U.S.-Canada FTA (1988)	Eliminate all tariffs by 1999	Ahead of schedule
EFTA (1960)	Eliminate all tariffs on manufactures by mid 1967	On schedule
South-South agreements, 1960–89		
Andean Pact (1969)	Eliminate tariffs on positive list	Postponed several times
Central American Common Market (1960)	Elimination of tariffs	Initially on schedule, most duties removed in the early 1970s, but restrictions reintroduced in the 1980s
EAC (1967–1977)	Establishment of a common market	The Community was dissolved
Latin American Integration Association	Liberalization of common lists of products by 1972	Common lists not liberalized on schedule
ECOWAS	Tariff liberalization by 1990	Progress negligible
ASEAN (1967)	FTA based on positive lists	Repeatedly postponed
GCC (1982)	FTA	Virtual elimination of all tariffs in 1983
South-South agreements, 1990–99		
AFTA (1992)	Gradual reduction of tariffs over 12–15 years according to member-specific schedules	Liberalization took place ahead of original schedule
CACM—Revised (1991)	Customs union	Implementation postponed; progress uneven among members
GCC	Customs union begins in 2003; completed by 2005	Customs union established on schedule
COMESA	Progressive tariff elimination to be completed by 2000	Implementation varies by country, 9 out of 20 members have moved to duty-free trade
MERCOSUR	Elimination of all tariffs by 1995	All lines, with the exception of sugar and automobiles, have been liberalized
SAPTA	Limited tariff concessions from a country-specific positive list	No formal schedules have been adopted
SADC	Tariff liberalization by 2008, with sensitive lists eliminated by 2012	Implementation delayed in some sectors due to lack of agreement on rules of origin
CEMAC (1999)	Economic Union	Tariffs liberalized according to schedule in nearly all lines
WAEMU (2000)	Economic and monetary union	Tariff liberalization mostly on schedule
North-South agreements, 1990–99		
Europe Agreements (Bulgaria, Romania)	Country-specific tariff removal schedules in preparation for the EU membership	Bulgaria mostly on schedule, Romania continues to have some unresolved issues
NAFTA	Tariff elimination in stages to be complete by 2008	On schedule
EU-Mexico	Progressive tariff elimination by 2010	On schedule
EU-South Africa	FTA establishment by 2012	Partial implementation pending official ratification
U.S.-Chile	Progressive tariff elimination by 2015	N/A

Source: World Bank staff.

In general, the rules of origin in North-South agreements are more restrictive than those adopted by South-South agreements (Figure 3.8). A feature of both EU and NAFTA agreements is the high degree of variation in rules of origin across product categories. Different rules are specified for different products:

sometimes the rule may be a change of tariff heading, sometimes a change of tariff chapter; for other products there will be a value-added requirement; and in others the rules of origin may specify a particular technical process.

The amount of the required value added can vary across products. The change of tariff



classification can be used to provide a positive test of origin by stating the tariff classification of imported inputs that can be used in the production of the exported good. Or it may be defined to provide a (more restrictive) negative test by stating cases where a change of tariff classification will not confer origin. For example, in the EU rules of origin, bread, biscuits, and pastry products (heading 1905 of the Harmonized System) can be made from imported products of any other tariff heading except those of chapter 11, which includes flour, the basic input to these products.

Specifying rules of origin on a product by product basis offers opportunities for sectoral interests to influence the specification of the rules in a protectionist way. The outcome of highly detailed product-specific rules of origin is typically a complex set of rules, which can be highly restrictive. Box 3.5 provides an example of the sort of complexity that can arise. Many agreements involving developing countries, on the other hand, tend to specify general rules that apply to all products. The AFTA, COMESA, and ECOWAS, for example, have a single value-added rule applicable to all products.

Anson and others (2004) and Carrere and de Melo (2004) estimate that the administrative costs of providing the documentary evidence to support the certificate of origin under NAFTA are in the region of 1.8 percent of the value of exports. The distorted impact of the rules, resulting from the need to use local and higher cost inputs to qualify, may be equivalent to an average duty of around 4.3 percent. Thus, restrictive rules of origin can very easily wipe out any margin of preference generated by a trade agreement. Other things being equal, compliance costs are lowest for rules involving a change of tariff heading, followed by value-added rules. Rules requiring a specific technical process have the highest compliance costs.

Estevadeordal and Suominen (2004) introduce a synthetic measure of the restrictiveness of rules of origin (the basis for figure 3.8) into a standard gravity model of bilateral trade flows. Their econometric analysis leads them to conclude that restrictive product-specific rules of origin undermine overall trade between preferential partners and that provisions such as cumulation⁷ and *de minimis* rules,⁸ which increase the flexibility of applying a given set of processing requirements, boost intraregional trade. Applied at the sectoral level, this approach yields support for the hypothesis that the restrictiveness of rules of origin for final goods stimulates trade in intermediate products between preferential partners and diverts trade away from nonmembers. Cadot and others (2002) find that for sectors where tariff cuts are larger than average, the rules of origin are more restrictive and the rate of use of preferences by Mexican exporters lower than average. They conclude that rules of origin are the “prime culprit” for the very modest impact of NAFTA on Mexican exports identified by other researchers.

Deeper agreements can lead to larger trade and income effects

In principle, agreements that address a wider range of barriers can have a greater impact on trade flows and incomes.

Box 3.4 Restrictive rules of origin under NAFTA—the case of clothing

Here is an example of what rules of origin look like; the following pertains to men's or boys' overcoats made of wool (HS620111).

A change to subheading 620111 from any other chapter, except from heading 5106 through 5113, 5204 through 5212, 5307 through 5308 or 5310 through 5311, Chapter 54 or heading 5508 through 5516, 5801 through 5802 or 6001 through 6006, provided that: The good is both cut and sewn or otherwise assembled in the territory of one or more of the Parties.

The basic rule of origin stipulates change of chapter but then provides a list of headings and chapters from which inputs cannot be used. Thus in effect, the overcoat must be manufactured from the stage of wool fibers forward, because neither imported woolen yarn (HS5106-5110) nor imported woolen fabric (HS5111-5113) can be used. However, the rule also states that imported cotton thread (HS5204) or imported thread of man-made fibers (HS54) cannot be used to sew the coat together. This rule in itself is very restrictive; however, the rule is further complicated by requirements relating to the visible lining:

Except for fabrics classified in 54082210, 54082311, 54082321, and 54082410, the fabrics identified in the following subheadings and headings, when used as visible lining material in certain men's and women's suits, suit-type jackets, skirts, overcoats, car coats, anoraks, windbreakers, and similar articles, must be formed from yarn and finished in the territory of a party: 5111 through 5112, 520831 through 520859, 520931 through 520959, 521031 through 521059, 521131 through 521159, 521213 through 521215, 521223 through 521225, 540742 through 540744, 540752 through 540754, 540761, 540772 through 540774, 540782

through 540784, 540792 through 540794, 540822 through 540824 (excluding tariff item 540822aa, 540823aa or 540824aa), 540832 through 540834, 551219, 551229, 551299, 551321 through 551349, 551421 through 551599, 551612 through 551614, 551622 through 551624, 551632 through 551634, 551642 through 551644, 551692 through 551694, 600110, 600192, 600531 through 600544 or 600610 through 600644.

This stipulates that the visible lining used must be produced from yarn and finished in either party's location. This rule may well have been introduced to constrain the impact of the tolerance rule, which would normally allow 7 percent of the weight of the article to be of nonoriginating materials. In overcoats and suits, the lining is probably less than 7 percent of the total weight. Finally, it is interesting to note that the rules of origin also provide very specific exemptions for materials that are in short supply or are not produced in the United States. In this regard, the rule reflects firm-specific lobbying to overcome the restrictions of these rules of origin when the original NAFTA rules were defined. The most extreme example is the following, where the apparel will be deemed eligible for tariff preferences if assembled from imported inputs of:

Fabrics of subheading 511111 or 511119, if hand-woven, with a loom width of less than 76 cm, woven in the United Kingdom in accordance with the rules and regulations of the Harris Tweed Association, Ltd., and so certified by the Association.

Clearly, the job of the relevant official to check consistency and compliance with such rules is not a simple one.

Source: World Bank staff.

Subsequent chapters elaborate on the potential economic impacts of dealing with many of the regional agreement issues introduced in chapter 2. Here we simply ask

whether deeper agreements have a significantly greater impact on aggregate merchandise trade than more narrow trade agreements. Two studies⁹ assume a productivity

response to trade liberalization when other measures are included and ascribe the results to the deep integration measures. The calculations of these *ex ante* simulation studies illustrate the potential that deeper agreements may hold when they produce a productivity response, with changes in trade flows and incomes being a multiple of that under preferential tariff removal. However, because this result is inevitable from the way that deeper integration is modeled (i.e., inducing economy-wide increases in productivity), these results from one or another deep integration measure should be seen as indicative of potential rather than evidence of success.

Ex post exercises based on the gravity model will tend to capture all of the policy related impacts of a regional trade agreement on trade, not just the removal of trade policy variables. Several authors have tried to capture in an index the differences of depth between agreements; it is then used as the dummy variable in the gravity model to capture the impact of RTAs [Li (2000), Adams and others (2003)]. However, this approach presents the issue of how to weight different policy measures—for instance, should services liberalization get more weight than customs cooperation? Thus the value of the index would be dependent on the subjective weights that are assigned. The weights chosen by Adams and others lead to EFTA being ranked as much more restrictive than the Andean Pact or NAFTA. Further, many agreements appear extensive on paper but have accomplished little in practice.

Extensive monitoring of agreements is crucial to ensure effective implementation

In order to assess the impact of RTAs, information is needed on the extent to which the agreement's provisions are being implemented and how they are affecting decisions by producers and consumers. Given the need for monitoring, an implementation scorecard would be useful—such an approach has been adopted by the EU Commission which, as

part of its monitoring of the implementation of the single market, has introduced the “Single Market Scoreboard” (box 3.5). In addition to providing vital information, the scorecard is useful as a disciplinary measure—to shame governments with a record of poor implementation into action and to empower governments with good records of implementation to challenge those members who are not meeting their commitments.

More extensive monitoring could make an important contribution to the implementation of many trade agreements. Lack of effective implementation has been a major factor limiting the impact of many trade agreements in Africa, South America, South Asia, North Africa, and the CIS.

Conclusions: Preferential Trade Agreements and Economic Development

This review of the experience of preferential trading agreements over the past 40 years offers the following conclusions:

- There is no strong evidence to support the claim that a preferential trade agreement will be net trade creating or that all members will benefit. Positive outcomes depend on design and implementation.
- When embedded in a consistent and credible reform strategy, the key determinant of regional trade agreements' success is low levels of external trade barriers. While many developing countries have reduced tariffs, they remain high in many countries and regions, and the risk of trade diversion remains significant. Further reductions in applied MFN tariffs will be required to ensure that regional agreements are beneficial for those participating in them and to minimize the impact on the countries that are left out.
- Trade agreements that provide for comprehensive liberalization of trade across

all major sectors and nonrestrictive rules of origin are more likely to be successful. Agreements that devote considerable resources to negotiating limited positive lists or large negative lists and detailed

product specific rules of origin limit the scope for gains.

- Effective implementation is crucial to positive outcomes, yet implementation is compromised by proliferation. If different

Box 3.5 Monitoring implementation of preferential trade agreements: “Single Market Scoreboard” in the European Union

The Single Market Scoreboard measures (1) the extent to which Single Market directives have been transposed into national law by each member state, (2) the average time it takes each member to transpose directives, and (3) the extent to which members are cooperating with enforcement and problem solving. This analysis by the European Commission is supported by regular surveys of businesses and individuals on perceptions of the Single Market and where it is not working. The Commission also monitors differences in prices of identical goods for indications that integration is leading to convergence.

The left figure below shows the implementation deficit for each member; that is, the proportion of directives that have not been notified as having been transposed into national law. The figure shows a

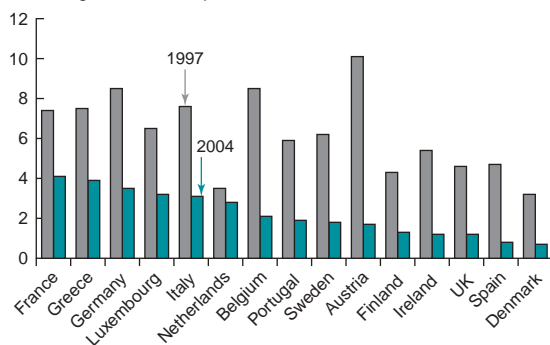
substantial improvement in implementation since 1997; it also shows that the original six members of the EU and Greece are currently the worst offenders. Effective monitoring of implementation also requires that clear targets be established. In 2001, the EU Heads of State established an interim target of a 1.5 percent implementation deficit. As of July 2004, only five members had achieved this target.

A further measure of implementation is the extent to which agreed-on rules are being properly applied. In Europe, the Commission is charged with monitoring when Single Market rules are not being applied correctly; the Commission also takes infringement cases against member countries that are breaking EU laws. In terms of the number of infringement cases open in May 2004, Italy and France are the worst offenders (lower right figure).

Single Market Scoreboard

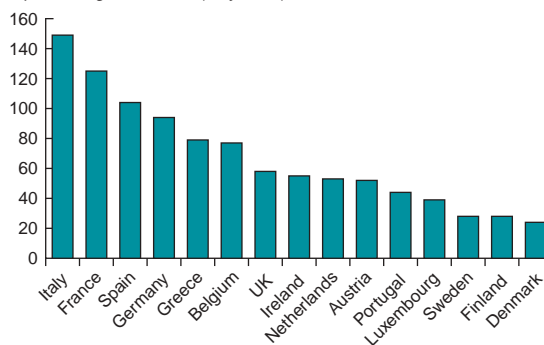
a. Implementation of single market directives by EU members

Percentage rate of nonimplementation



b. EU law breakers

Open infringement case (May 2004)



Source: <http://europa.eu.int/comm/internalmarket/score/index.en.htm#score>.

agreements have different product coverage, different liberalization schedules, and different rules of origin, the ability of agencies such as customs to apply the agreements is severely undermined. The capacity to effectively implement is a crucial issue that countries should consider before signing an RTA.

- Monitoring can play an important role in providing for effective implementation, but often there is insufficient monitoring as well. Technical reviews are frequently not done, and when reports are made, senior officials fail to act on their recommendations.

Notes

1. Flatters and Kirk (2003).
2. The conclusion is unchanged if intra-EU and intra-NAFTA trade are excluded from the total of world exports.
3. Drawn from Burfisher and others (2004) and Harrison and others (2004).
4. For example, Ghosh and Yamarik (2004) suggest that "a consensus has emerged among researchers that RTAs are trade creating."
5. In this exercise, where the counterfactual is based on the historical pattern of trade flows, we assess how the regional trade agreement affected trade flows after its introduction. As a measure of robustness of the effects, we used three different estimation methods. Effects are considered statistically robust only if all three methods generate a significant impact of the same sign. The three methods are pooled OLS with robust standard errors. The second estimation method includes country-pair fixed effects using a specific OLS method. The third approach is a pooled Tobit estimation.
6. Here we follow Soloaga and Winters (2001), who include an additional dummy variable to assess the impact on the exports of members of regional trade agreements, although their focus is on the welfare effects of RTAs. However, here we apply a panel approach to a sample period of 1948 to 2000, covering bilateral trade between 178 countries with country-pair fixed-effects, which a number of authors, although not all, suggest is the preferred method. We apply the above equation. The regional dummies are time sensitive; that is, they are relevant only after the agreement has been signed. Using a different estimation technique, such as Tobit and OLS, and a different sample period can lead to different results for a particular agreement but the overall conclusion remains firm.

7. The basic rules of origin define the processing that has to be done in the individual beneficiary or partner to confer origin. Cumulation is an instrument allowing producers to import materials from a specific country or regional group of countries without undermining the origin of the final product. In effect the imported materials from the identified countries are treated as being of domestic origin of the country requesting preferential access. There are three types of cumulation, bilateral, diagonal (or partial), and full. The most basic form of cumulation is bilateral cumulation, which applies to materials provided by either of two partners of a preferential trade agreement. In this case originating inputs, that is materials, which have been produced in accordance with the relevant rules of origin, imported from the partner, qualify as originating materials when used in a country's exports to that Partner. Second, there can be diagonal cumulation on a regional basis so that qualifying materials from anywhere in the specified region can be used without undermining preferential access. Finally, there can be full cumulation whereby any processing activities carried out in any participating country in a regional group can be counted as qualifying content regardless of whether the processing is sufficient to confer originating status to the materials themselves. Under full cumulation all of the processing carried out in participating countries is assessed in deciding whether there has been substantial transformation. Hence, full cumulation provides for deeper integration among participating countries.

8. De Minimis or tolerance rules allow a certain percentage of nonoriginating materials to be used without affecting the origin of the final product. Thus, the tolerance rule can act to make it easier for products with nonoriginating inputs to qualify for preferences under the change of tariff heading and specific manufacturing process rules. This provision does not affect value added rules.

9. For example, Hoekman and Konan (1999) find that a free trade agreement between the European Union and Egypt limited to goods (but with substantial progress on removing regulatory barriers) could raise welfare by around 4 percent while an agreement that reduced barriers to services in Egypt could raise economic welfare by over 13 percent. Similarly, Brenton, Tourdyeva, and Whalley (2002) find that an EU-Russia FTA limited to tariff removal would increase welfare by around one-tenth of one percent while a comprehensive agreement removing technical barriers to trade and barriers to trade in services would raise welfare by more than 13 percent.

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