

Economic Benefits and Costs

Introduction

MEMBERSHIP IN A RIA HAS IMPLICATIONS FOR ALMOST ALL parts of the economy. Some sectors will face opportunities for expansion; others will contract. Some sources of income will be boosted; others will decline. In this chapter we outline the main economic mechanisms that bring these changes and the evidence on their importance. We group these mechanisms into two main types, which we refer to as *competition and scale* effects, and *trade and location* effects.

Competition and scale effects arise as separate national markets become more integrated in a single unified market. The larger market permits economies of scale to be achieved and brings producers in member countries into closer contact—and competition—with each other. Entrenched monopoly positions are eroded, promoting efficiency gains within firms. Suppliers from nonmember countries will also experience the change in market size and competition, inducing changes in the pricing of their imports and in their attitude to foreign direct investment (FDI). We start this chapter (section 3.1) by examining these competition and scale effects.

Competition and scale effects can occur even if the sectoral mix of production in each country stays broadly unchanged. In contrast, trade and location effects arise when the regional agreement changes the pattern of trade and the location of production. The direction of trade changes as imports from partner countries become cheaper, encouraging consumers to substitute these for local production and for imports from the rest of the world—phenomena known as trade creation and trade diversion. These effects create real income changes for consumers and producers, as well as changing government tariff revenues. We analyze these costs and benefits in section 3.2.

As the direction of trade changes, so too does the location of economic activity within the integrating countries. Countries will see expansion of some activities and contraction of others. In some cases these changes may not be evenly balanced, so some countries (or regions within countries) will do better than others. Sometimes these changes promote convergence of income levels, raising income levels in poorer countries to the levels of richer partners. In other circumstances they may cause divergence, with some countries gaining at the expense of others. In section 3.3 we show how these location effects depend on the comparative advantage of members of the agreement, on incentives for clustering of activity, and on the potential for technology diffusion and adoption.

3.1 Competition and Scale

MANY COUNTRIES ARE TOO SMALL TO SUPPORT, SEPARATELY, activities that are subject to large economies of scale. This might be because insufficient quantities of specialized inputs are available, or because markets are too small to generate the sales necessary to cover costs. Regional cooperation offers one route to overcome the disadvantages of smallness, by pooling resources or combining markets. In chapter 2 we saw some examples of this in increased ability to undertake cross-border public sector projects. There may be similar gains to be had in the private sector, although they are likely to be achieved through quite different mechanisms, arising out of a combination of scale effects and changes in the intensity of competition. Note that the disadvantage of smallness can also be overcome through unilateral trade liberalization.

Domestic Production

Small domestic markets make it difficult to produce profitably goods that are subject to increasing returns to scale—declining average production costs. Even if production is profitable, scale economies mean that only one or a few producers can survive, typically with monopoly power, leading to high prices, low levels of sales, and perhaps also high costs. There is plenty of evidence of the relatively small number of firms operating in most developing countries, and Rodrik (1988) reports that

measures of concentration (measures of firms' market power) in manufacturing sectors in large developing countries are typically between 50 percent and 100 percent higher than in industrial countries. However, entry costs may also be relatively low in developing countries, imposing competitive pressure on incumbents.¹

What difference can a RIA make? In principle, a RIA combines markets, making it possible to reduce monopoly power as firms from different countries are brought into more intense competition. This can yield three types of gain. The first is the textbook gain from increased competition: firms are induced to cut prices and to expand sales, benefiting consumers as the monopolistic distortion is reduced.²

The second source of gain arises as market enlargement allows firms to exploit economies of scale more fully. In a market of a given size there is a tradeoff between scale economies and competition—if firms are larger, then there are fewer of them and the market is less competitive. Enlarging the market shifts this tradeoff, as it becomes possible to have both larger firms and more competition. For example, there might be an initial situation in which two economies each have two firms in a particular industry, and these firms exploit their “duopoly” power, setting prices well above marginal cost. After formation of the RIA this becomes four firms in one combined RIA market. This increases the intensity of competition, and possibly induces merger (or bankruptcy) of some firms, perhaps leaving only the three most efficient firms. The net effect is increased competition, increased firm scale, and lower costs. “Triopoly” competition is likely to be more intense than the original duopolies; and surviving firms are larger and more efficient, so can better exploit economies of scale.

The third source of gains comes from possible reductions in internal inefficiencies that firms are induced to make. If the RIA increases the intensity of competition, it may induce firms to eliminate internal inefficiencies (so called X-inefficiency) and raise productivity levels (Horn, Lang, and Lundgren 1995). Since competition raises the probability of bankruptcy and hence layoffs, it also generates stronger incentives for workers to improve productivity, and increases labor turnover across firms within sectors (Dickens and Katz 1987).

There is a good deal of evidence that general (nonpreferential) trade liberalizations achieves many of these gains. A number of studies have found that openness to trade reduces price-cost margins, an indicator of competitive pressure in the industry (Roberts and Tybout 1996).³ There is also evidence of an association between trade liberalization and increases

in efficiency, and between trade liberalization and a reduction in the dispersion of efficiency levels, as low efficiency firms adapt or are eliminated.⁴ Tybout (1999) concludes that most of the efficiency gains from openness come from reductions in inefficiencies, rather than from scale effects.

When it comes to regional integration, we have less direct evidence. The most extensively studied RIA is the EU, and here the static gains from these effects have been estimated to range up to 5 percent of the gross domestic product (GDP), with additional, and even more speculative, dynamic growth effects on top (Baldwin 1989; Catinat and Italianer 1989; McKibbin 1994). These estimates are based on extrapolations of calculations from a handful of industries, and assume a significant increase in competitive pressure.⁵ They are therefore appropriately characterized as somewhat “heroic” (Winters 1992). Even in the EU, there is some evidence that general external trade liberalization may be more important than regional integration in achieving these gains. Estimates from the EU found that procompetitive effects are largest not in markets where there is a high level of intra-EU trade, but instead in markets where there is a high degree of import competition from firms outside the EU (Jacquemin and Sapir 1991).

Turning to developing countries, there are several arguments that suggest that the *potential* gains may be larger than they are for high-income countries. The small size and relatively closed structure of many developing countries mean that there is scope for fuller exploitation of economies of scale and for removing local monopoly power. A well-documented example concerns duplication of plants in the tire industry of Central America (Wilmore 1976, 1978). A plant in Guatemala had the capacity to meet entire CACM demand, and there was another sizable plant in Costa Rica. Rationalization did not occur, however—possibly because the external tariff remained high, enabling the firms to impede effective competition. The service sector too offers considerable potential gains from opening to competition.

A number of studies calculated the potential (rather than actual) gains that might be expected from the competition and scale effects. Hunter, Markusen, and Rutherford (1992) construct a model of the U.S. and Mexican automobile industries and simulate the possible effects of NAFTA; they predict large increases in output for Mexico, increases in the scale of individual firms, and reductions in price-cost margins. A study for MERCOSUR (Flores 1997) based on a similar methodology suggests GDP gains of 1.8 percent, 1.1 percent, and 2.3

percent for Argentina, Brazil, and Uruguay, respectively (the larger economies gaining less because they are already closer to reaping economies of scale). However, these estimates are essentially predictions of what might be expected from regional integration, rather than measures of what was actually achieved.

The message from this section is then, that regional integration schemes offer developing countries substantial *potential* from these competition and scale effects. However, the gains are not automatic, and making sure that they are achieved involves careful policy design—and many of these gains can also be achieved through unilateral (nonpreferential) trade liberalization.

Market Segmentation and Deep Integration

The competition, scale, and consequent efficiency effects we have outlined are likely to be important sources of economic benefit, although they have proved difficult to quantify in practice. However, regional integration does not necessarily secure these gains. They arise from firms being brought into more direct and more intense competition with each other, and lower tariffs are a necessary, but not sufficient condition to achieve this.

There are some extreme examples, where RIA member governments, under pressure from industry lobbies, have deliberately acted to stop markets from being fully opened to competition. In Europe, a well-known example is automobile distribution, where a variety of nontariff measures restrict the ability of European consumers to engage in intra-European arbitrage. The measures include national product standards and licensing requirements that make it expensive for a consumer to import an automobile from another European country, and a tolerance of restrictions on competition in car distribution (Mattoo and Mavroidis 1995). In MERCOSUR, Argentina and Brazil have negotiated an agreement on automobile trade, whereby each individual *firm* is required to balance its Argentina-Brazil trade (Bouzas 1997). This inhibits efficient reorganization of the industry, and favors companies with plants in both countries, discriminating against other firms, and restricting competition.

Even if competition is not being obstructed in this way, it is likely that remaining border “frictions” will still create substantial obstacles to effective cross-border competition. For example, within NAFTA,

evidence from Canadian-U.S. trade suggests exports from Canadian provinces to other Canadian provinces are some 20 times larger than their exports to United States states at a similar distance (McCallum 1995; Helliwell 1997); other estimates suggest that the United States-Canada border imposes barriers to arbitrage comparable to 1,700 miles of physical space (Engel and Rogers 1996). The significance of these border frictions is increased by the fact that firms will typically have no desire to compete more intensely with rivals in partner countries; they may seek to collude, tacitly if not explicitly, agreeing not to supply each other's markets. The implication is that markets will be left "segmented," rather than integrated into a single unified market. In this case the gains we have outlined above will only be partially realized.

This is one of the main arguments for pursuing "deep integration." Liberalization of trade between countries can involve not just removing tariff barriers, but also removing "trade chilling" contingent protection, and other obstacles created by frontier frictions, such as frontier red-tape, differences in national product standards and so on. The benefit of implementing as deep a range of measures as possible—and extending them into areas such as service trade—is that it will force firms to compete directly. It was precisely these arguments that caused the EU to embark on the Single Market Program in 1989—a far-reaching set of measures aimed at integrating markets (box 3.1). We return to ways of achieving this deep integration in chapter 4.

Importers and the Terms of Trade

If regional integration makes markets more competitive, then this should be felt not only by firms inside the agreement, but also by firms outside that export to the RIA markets. The more intense competition may induce them to cut prices; if so, this will be a direct source of economic gain to purchasers in the RIA (although the gain comes at a cost to these outside firms). The effects of RIA formation on import prices is an under-researched area, but there is now some evidence that they have achieved this effect.

Chang and Winters (1999) show that Brazil's membership in MERCOSUR has been accompanied by a significant decline in the relative prices of imports from nonmember countries. They use econometric techniques to investigate changes in the prices of U.S. exports

Box 3.1 The Single Market Program

THE SINGLE MARKET OR “EC-1992” PROGRAM AIMED at eliminating the remaining restrictions on the exchange of goods and services in the EU. The project involved adoption of almost 300 measures to eliminate intra-EU barriers. They fall into five main types.

- Simplification and in some cases abolition of intra-European Community border controls. This involves replacing border paperwork by an EU wide system of administering value added tax on cross-border transactions.
- Product standards: to remove the need for expensive retesting and recertification of products in each EU country, the “mutual recognition” principle was adopted, under which a product that can be legally sold in any one EU country can be legally sold in all.

- Progress toward deregulation of the transport sectors of EU countries, including measures to reduce restrictions on hauliers from one country accepting loads in another.
- The opening of public procurement in EU countries to effective competition from suppliers in all EU countries. Measures include the requirement that public projects be advertised in the EU wide publications.
- Deregulation of service sector activities, including opening financial services to competition and giving service providers and professionals the right of establishment in other EU countries.

Source: Pelkmans and Winters (1988); Pohl and Sorsa (1992).

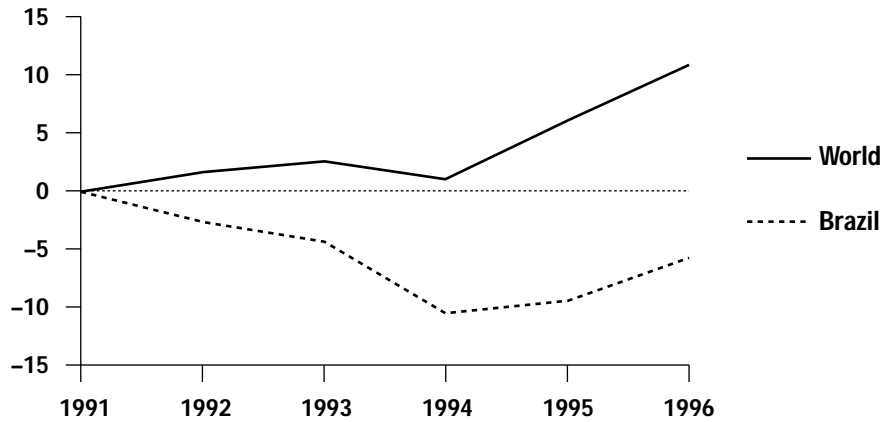
to Brazil, relative to Argentinean ones. They observe a substantial fall in the relative price of the U.S. goods for most of the period. Formal econometric estimates suggest that these changes in relative prices are largely due to the reduction in tariffs on Argentine exports to Brazil compared to those on U.S. exports.

An additional test of the hypothesis is to see what happened to U.S. export prices in Brazil relative to U.S. export prices on sales to markets outside MERCOSUR. Figure 3.1 shows that U.S. export prices (averaged over 1,356 products) in the Brazilian market declined in absolute as well as relative terms over the integration period. Figure 3.2 shows a similar experience for Korean exports to MERCOSUR. These are sizable price reductions, and are confirmed by econometric analysis, which were also found for Japan and EU countries. They indicate that increased competition in MERCOSUR markets induced exporters to cut prices, thereby improving the terms of trade of MERCOSUR countries and yielding them a sizable welfare gain.

Is it necessary for Argentina to export to Brazil in order for prices to fall on exports to Brazil from the rest of the world, or is a *threat* of increased competition enough? Chang and Schiff (1999) find that the prices of

Figure 3.1 United States Export Prices to Brazil and Rest of World
(1,356 commodities)

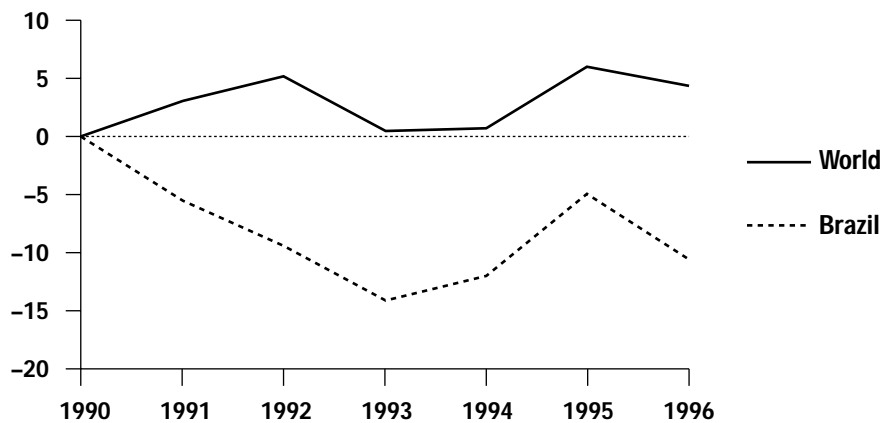
Average prices (percent difference from 1991)



Source: Chang and Winters (1999).

Figure 3.2 Republic of Korea Export Prices to Brazil and Rest of World
(99 commodities)

Average prices (percent difference from 1990)



Source: Chang and Winters (1999).

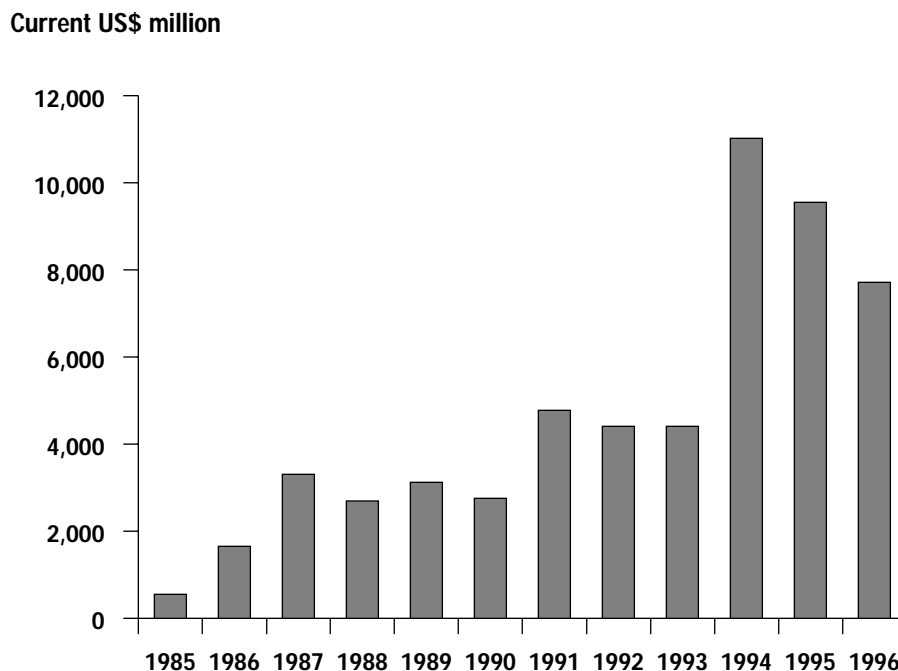
exports to Brazil from the rest of the world fall even for products that Argentina does not export to Brazil, implying that the threat of increased competition may be enough to improve the terms of trade in MERCOSUR.

Foreign Direct Investment

In addition to changing the organization of local industry, if RIAs create large markets they may also assist in attracting FDI. Foreign firms that want to supply their product to a particular country face a choice between serving the market by importing or by building a local plant. The tradeoff is between the costs of tariffs and other trade barriers incurred on imports, and the production costs of the local plant. If the investment is “lumpy,” requiring a certain minimum level of sales to be viable, then the scale effect of joining markets in a RIA may well tip the decision toward FDI. The decision will be tipped further in favor of FDI if the RIA makes the market more competitive, favoring lower marginal cost sources of production.

There is considerable evidence that RIAs—or at least RIAs with large markets—have succeeded in attracting FDI. Mexico perhaps provides the best example of this, although its position as a potential export platform to the United States is clearly special. NAFTA guaranteed market access to its Northern neighbors, and this had a profound impact on FDI, as can be seen from figure 3.3. Flows into Mexico more than doubled in the year following the launch of NAFTA, and Blomstrom and Kokko (1997a) argue this increase was mainly by non-NAFTA countries’ firms taking advantage of preferential access to the larger Northern market. For example, Japan redirected part of its FDI from the United States and Canada toward Mexico, and many projects (in the automobile industry, for example) are intended for the NAFTA continental market.

Similar phenomena have been observed elsewhere. In Europe, a major surge of FDI accompanied the Single Market Program; the European Commission (*The Single Market Review* 4 (1) 1998) finds that the EU’s share of worldwide inward FDI flows increased from 28 percent to 33 percent during 1982–93. In MERCOSUR too, there is evidence of significant expansion of FDI inflows. The share of the MERCOSUR countries in the stock of U.S. FDI increased from 3.9 percent in 1992 to 4.4 percent in 1995; the inflow to each country is given in table 3.1.

Figure 3.3 Mexican Foreign Direct Investment, Net Inflows

Source: World Development Indicators (various issues); Feenstra and Hansen (1997).

Table 3.1 MERCOSUR: Net Inflows of Foreign Direct Investment

(1991 US\$ million)

<i>Country</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>	<i>1994</i>	<i>1995</i>	<i>1996</i>
Argentina	2,439	3,934	2,421	2,843	3,774	3,781
Brazil	1,103	2,005	1,224	2,847	4,387	8,728
Paraguay	84	133	105	167	166	194
Uruguay	0	1	97	144	142	149

Source: World Development Indicators (various issues).

It is tempting to assume that inward flows of FDI are beneficial, although this cannot be taken for granted. External trade barriers can provide an incentive for FDI just to avoid these barriers. If the private incentive to undertake FDI is created solely by the desire not to pay tariffs to the local government, then this “tariff jumping” FDI can reduce real

income, as it is possible that local production costs exceed the costs of imports. However, there is evidence that FDI can play a role in stimulating local production in related industries, in transferring technology, and in raising productivity in neighboring firms. (For a survey of evidence, see Blomstrom and Kokko 1997b, and Saggi 1999.) These benefits generally outweigh the costs associated with “tariff jumping.”

Competition and Scale; Conclusions

Pulling together the strands of this section, we see that there are significant *potential gains* to be achieved, but that these depend on securing effective competition. It can easily be obstructed, and policy is required to prevent this from happening. We return in chapter 4 to a more detailed study of the policies that are needed if effective competition is to be achieved.

3.2 Trade and Location: The Pattern of Trade

REGIONAL INTEGRATION WILL CHANGE RELATIVE PRICES IN member economies. Imports from partner countries will become cheaper due to the elimination of tariffs, and in response demand patterns will change, causing changes in the flow of trade and in output levels in many sectors. What do we know about these changes, and what are their economic effects? These are intrinsically multi-industry or “general equilibrium” issues, involving expansion of some sectors, contraction of others, and relocation of industries from country to country. However, it is necessary to start discussion with the mechanics of preferential trade liberalization in a single industry—the analysis of trade creation and diversion first put forward by Viner (1950).

The classical source of gains from trade is that global free trade allows consumers and firms to purchase from the cheapest source of supply, hence ensuring that production is located according to comparative advantage. In contrast, trade barriers discriminate against some (foreign) producers in favor of domestic suppliers. This induces domestic import-competing producers to expand, even though their costs are higher than the cost of imports, which in turn starves domestic export sectors of resources, raises their costs, and causes these sectors to be smaller than they otherwise would

be. Since a RIA liberalizes trade, reducing at least some of the barriers, doesn't it follow that it too will generate gains from trade? Unfortunately, as Viner pointed out, the answer is, "Not necessarily." The gains-from-trade argument tells us what happens if all trade barriers are reduced, but need not apply to a partial—and discriminatory—reduction in barriers, as in a RIA. This is true because discrimination between sources of supply is not eliminated, it is simply shifted. If partner country production displaces higher cost domestic production, then there will be gains—trade creation. It is also possible that partner country production may displace *lower cost* imports from the rest of the world—trade diversion.

Sourcing Imports: Trade Diversion

To understand the effects of discrimination, it is helpful to think through a simple example. Suppose that a country can import a good from a potential partner country at \$105 per unit, and from the rest of the world at \$100, and that in both cases the country pays \$10 in duty, making the prices paid by consumers \$115 and \$110 respectively. In this situation consumers obviously purchase from the rest of the world and pay \$110. If the country joins a RIA with the partner, imports come in duty-free so the price consumers pay for imports from the partner country falls to \$105, while imports from the rest of the world still cost consumers \$110. Consumer choices are obvious: They switch to the partner country, buying the \$105 good and saving \$5. But the government now loses \$10 per unit (the revenue it was getting on each unit of imports from the rest of the world), so the net effect for the country is a loss of \$5—the RIA has reduced real income. Another way of putting it is that the country (not the consumers) used to pay \$100 per imported unit, and now pays \$105. This is the deleterious welfare effect of "trade diversion."

This is just an example, and circumstances like this clearly will not apply in all sectors—there are some where partner country costs are less than are those in the rest of the world, and others where the country under study is an exporter—but the example makes an important point. Can we identify circumstances where trade diversion is more or less likely to be a problem?

First, notice that trade diversion can occur only if the country has a tariff on imports from the rest of the world, and that the cost of trade

diversion cannot exceed the height of this external tariff. In the previous example, if the external tariff was initially low the loss of tariff revenue would be small, and if the external tariff were cut, the switch in supply-source would not occur. One clear policy implication is that member countries should lower external tariffs as much as possible.

Second, trade diversion arises only if partner country costs are out of line with costs and prices in the rest of the world, this will not be the case if the partner itself has low trade barriers. For example, if the partner had a duty of just \$2 per unit, then prices and costs in the partner country could not exceed \$102 (the price at which imports from the rest of the world would be sold in the partner country). Preferential liberalization would then cost the government \$10 but save consumers \$8, creating a net loss of just \$2 per unit, and mitigating the cost of trade diversion. However, as discussed in chapter 4, the country with high trade barriers will impose rules of origin to prevent trade deflection (where imported goods are re-exported from the low- to the high-tariff country), and prices could still differ by more than \$2.

Third, our example is of a rather artificial and “frictionless” trade; in reality products from different countries are not perfect substitutes, and trade faces transport costs and other barriers apart from tariffs. How does this change the situation? The fact that products are less than perfect substitutes means that the change in sourcing of imports will be less sharp than in the example, again mitigating the costs of trade diversion. The presence of transport costs means that countries that are close may have lower costs of supply than more distant countries. This is the “natural trading bloc” argument (Wonnacott and Lutz 1989; Summers 1991) and means forming a RIA with close countries may be less prone to costly trade diversion than forming one with more distant countries. This argument has not been resolved: the opposite view is provided in Bhagwati and Panagariya (1996), while Schiff (1999) argues that neither view is correct.

Trade diversion is more than a theoretical possibility—the best-known example is the EU’s Common Agricultural Policy. This involves a price structure for agricultural products designed to divert consumer purchases toward EU farmers and away from non-European suppliers. Some of the money is a transfer to farmers’ incomes, and some is, in economic terms, wasted, because food is produced which could be more cheaply purchased on world markets. Messerlin (1998) estimates the cost of this protection at, conservatively, 12 percent of total EU farm income.

An example from NAFTA concerns clothing. Following the “Tequila” crisis, Mexico increased tariffs on non-NAFTA imports of clothing from 20 percent to 35 percent in March 1995, just as it was reducing tariffs on NAFTA imports. Mexican imports from the rest of the world fell by 66 percent between 1994 and 1996, while those from the United States increased by 47 percent. Similarly in the U.S. market, imports from Asia fell while imports of clothing and finished textiles from Mexico and from Canada increased by more than 90 percent (USITC 1997).

A particularly disturbing possibility is that trade diversion may occur in capital goods or other goods used as inputs in production; this would reduce production efficiency, and possibly slow the transfer of technology to the country. For example, Madani (1999) examines the effect of intermediate goods imports in three Andean Pact countries (Bolivia, Colombia, and Ecuador) from the early 1970s to 1994. She finds that imports of intermediate goods from the rest of the world (primarily industrial countries) tend to raise growth while intrabloc imports do not have this effect. She also reports that the share (although not the level) of extrabloc imports in total trade has fallen, suggesting that regional integration might have a negative effect on growth. Her findings suggest that from the viewpoint of technology and growth, an agreement with a large industrial country is superior to one with a developing country.

Finally, note that a RIA between two small developing countries is likely to only generate trade diversion and no trade creation. This can be seen most clearly in the case of homogeneous goods. In each member country domestic consumer prices are fixed at the world price plus the import tariff. Since these do not change with integration, consumption does not change. However, production increases because each country can now sell to the partner without tariff. Thus, each member country substitutes cheaper imports from the rest of the world with more expensive partner imports. The outcome is trade diversion and a loss for both countries (Schiff 1997).

Exports and Trade Diversion

The focus of our discussion of trade diversion has been on imports. What about exports? Is an importer country loss due to trade diversion just the other side of an exporter gain, in which case the RIA as a whole

would be better off? The answer to this is that there may be exporter country gain, but it is less, per unit, than importer country loss.

Recall that in our example above, consumers switched to imports from the partner country. Partner country export sales expand, but how much of a gain is this for the partner country? If exports are just selling at cost (\$105 in the example), then selling more of them does not raise income in the partner country.⁶ If, however, they are selling above cost, then there will be a real income gain. But how much higher than cost can the price go? The answer is that the price cannot go above \$110 (if it did, consumers would switch back to buying from the rest of the world), so the exporter country gain per unit cannot exceed the gap between the price of imports from the rest of the world and costs (maximum \$5 = \$110 – \$105).

This line of reasoning suggests another way of thinking about trade diversion. Returning to our example (for the last time), the government has given up \$10 of tariff revenue per unit. We can see where this has gone: \$5 per unit goes to the higher cost of producing partner country imports compared to the cost of imports from the rest of the world, and the remaining \$5 is divided between domestic consumers and partner country firms, depending on whether these firms are able to raise their prices in response to having preferential access to the domestic market. It is often argued that an advantage of a RIA (over unilateral liberalization) is that firms benefit from preferential access to partner markets. This is true, but we now see that it comes only at the expense of consumers and government revenue.⁷ The RIA acts as an inefficient way of transferring some of the country's tariff revenue either to domestic consumers or to partner country producers.

Transfers are important in North-South RIAs because developing countries risk losing from a RIA with the North. The reason is that developing countries typically have higher tariffs than industrial countries. Consequently, the industrial member is likely to gain more from increased access to the partner's market than the developing member. The latter can resolve this issue by unilaterally lowering its tariffs.

Government Revenue

For many developing countries trade taxes are an important source of government revenue, and membership in a RIA leads to loss of tariff

revenue. This arises directly—as tariffs on intra-RIA trade are reduced—and also indirectly, when trade diversion occurs, such as when importers switch away from external imports subject to tariffs.

Loss of government revenue underlies the trade diversion argument, as we saw in the preceding subsections. However, if the government is constrained in its alternative revenue sources, then a loss of tariff revenue can be particularly damaging.⁸ Many developing countries are heavily dependent on trade taxes as a source of revenue, with some African countries raising as much as one-half of government revenues from trade taxes. In practice, how much revenue has typically been lost by RIA formation? In many cases we see that larger amounts of revenue have been lost in countries that are less dependent on trade taxes. This paradox arises from the fact that intra-RIA trade volumes are typically very high in RIAs where dependency on trade taxes has been quite low (such as the EU), while countries with higher trade tax dependency have often formed RIAs with countries with whom they have relatively little trade.

However, there are exceptions to this. Cambodia derived 56 percent of its total tax revenues from customs duties prior to its entry into the ASEAN free trade area, with two thirds of these levied on imports from ASEAN countries (Fukase and Martin 1999c). Entry into ASEAN provided a powerful stimulus for the introduction of a value added tax in early 1999. In the SADC also, where some countries are heavily dependent on trade with South Africa, substantial amounts of revenue are involved. Table 3.2 gives estimates of the revenue cost of going to free internal trade, and we see that this will approximately halve customs revenue in Zambia and Zimbabwe, losing the governments 5.6 percent and 9.8 percent of government revenue respectively. These are very substantial revenue losses, and point to the need to ensure that alternative tax systems are in place before removing sources of trade tax revenue.

Trade Flows: The Evidence

Trade diversion increases intrabloc trade at the expense of trade with outside countries, while trade creation does not have this negative effect. If we look at overall trade flows, what evidence is there of trade diversion relative to creation? Looking at the raw numbers we typically see expansions both in trade within the bloc, and in external trade, suggesting

Table 3.2 Customs Revenue Collected as a Percent of Total Government Revenue in 1996 and the Implications of a Free Trade Area for SADC Members

<i>Member country</i>	<i>Customs duty as percent of total tax revenue</i>	<i>Estimated change in customs duty</i>	
		<i>Percent custom duty</i>	<i>Percent total tax revenue</i>
Malawi	14.3	-36.7	-5.3
Mauritius	29.8	-18.2	-5.4
South Africa	3.6	4.9	0.2
Tanzania	24.0	-8.3	-2.0
Zambia	12.3	-45.3	-5.6
Zimbabwe	18.4	-53.3	-9.8

Note: The FTA assumes Free Trade on intra-SADC trade. The projections assume that each country's average tariff rates against SADC members are zero. There are discrepancies between the duty revenue reported by customs departments and that reported in budget numbers. For example Malawi reported FY96 duty revenues of 1,505.2 and 2,028.7 million kwacha against the 615 million reported by customs. For consistency, we have used the numbers reported by customs.

Source: Staff calculations, IMF.

that there is no evidence of trade diversion. However, looking at the raw data alone fails to distinguish the effects of regional integration from other economic changes—including in some cases external trade liberalization. To identify the effects of the RIA the researcher must try to control for these other changes, and this can be done with varying degrees of sophistication. When we include these controls we find that there is some evidence of trade diversion as well as trade creation.

The raw data on intra-RIA and extra-RIA trade for nine developing country RIAs before (one year before implementation) and after (five years after implementation) is given in figures 3.4–3.6. We see increases in intra-RIA imports for all cases (figure 3.4), although perhaps the most startling thing from the figure is how little trade there is within some of the RIAs; Union Douanière et Economique de l'Afrique Centrale (UDEAC) members partner trade as a share of GDP trebled, but only from 0.24 percent to 0.79 percent. For trade diversion, we look at the extra-RIA trade (figure 3.5) for evidence of declines, but here too we see increases, typically around much higher trade volumes. Looking at the ratio of intra-RIA imports to external imports (figure 3.6) we see that the share of intra-RIA imports expanded relative to external for seven of the nine RIAs (the exceptions are CARICOM and the GCC). However, since this was on the basis of rising volumes of both sorts of trade, it provides no evidence of trade diversion.

Figure 3.4 Intra-RIA Imports as Share of GDP

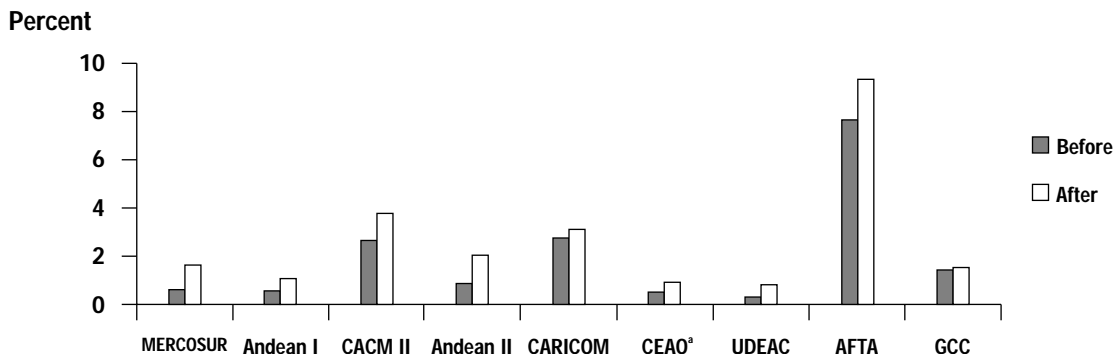


Figure 3.5 Extra-RIA Imports as Share of GDP

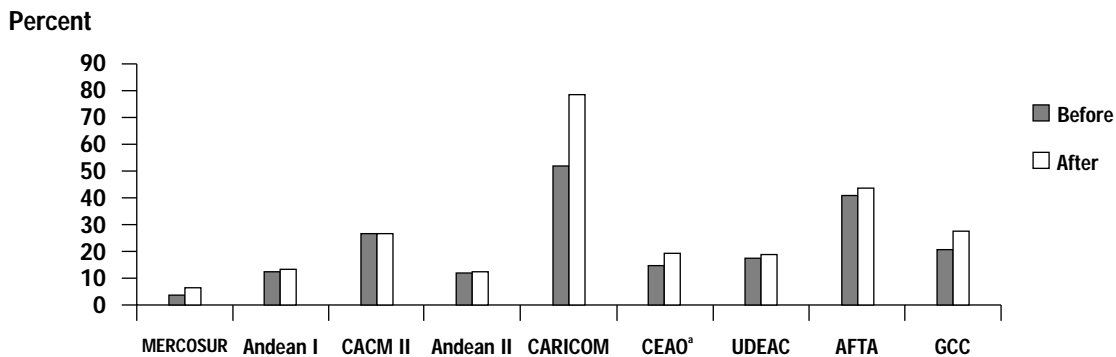
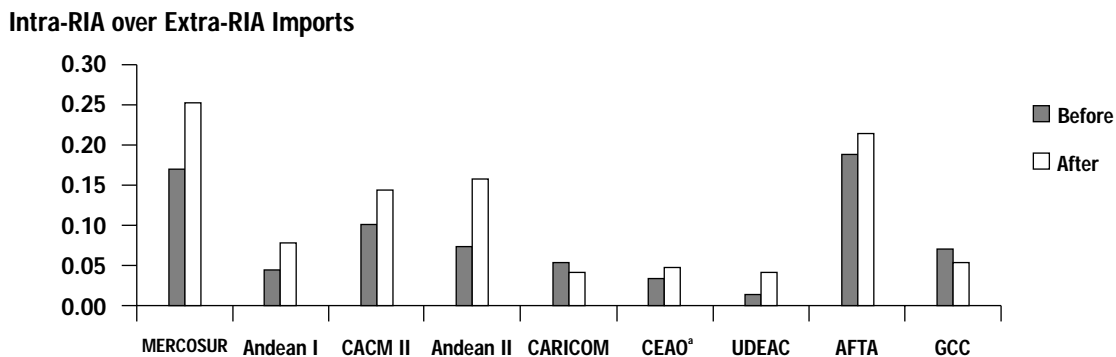


Figure 3.6 Ratio of Intra-RIA Imports over Extra-RIA Imports



a. Economic Community of West Africa

Note: For MERCOSUR this encompasses two years 1991 and 1996; Andean Pact I 1968 and 1974; Andean Pact II 1990 and 1996; CACM II 1990 and 1996; CARICOM 1972 and 1978; the Economic Community of West Africa 1965 and 1971; AFTA 1991 and 1996; and the GCC 1980 and 1986.

Source: U.N. COMTRADE data.

The standard way to control for other effects is to build an econometric model of trade, and see whether the estimated relationships change as a consequence of implementing the RIA. The usual model for such purposes is the gravity model, which estimates bilateral trade between countries, generally for a sample of many countries and for several different dates. It explains trade between pairs of countries as a function of their GDPs (larger economies trade more), populations, the distance between them (as a proxy for transport costs, cultural similarity and business contacts), and physical factors such as sharing a land border, and being landlocked or an island. Researchers add to the list dummy variables that capture whether or not countries are in a particular RIA. If these show up positively for pairs of countries in a RIA, then they indicate that these countries trade more than would be suggested by the other factors. A fall in the value of a dummy for trade between a member and nonmember is indicative of trade diversion, particularly if the fall shows up after formation of the RIA.

Using this technique, Bayoumi and Eichengreen (1997) find that the formation of the EEC reduced the annual growth of member trade with other industrial countries by 1.7 percentage points, with the major attenuation occurring over 1959–61, just as preferences started to bite. Cumulating the decline in growth over 1957–73 gives lost exports to the rest of the world of \$24 billion in 1973.

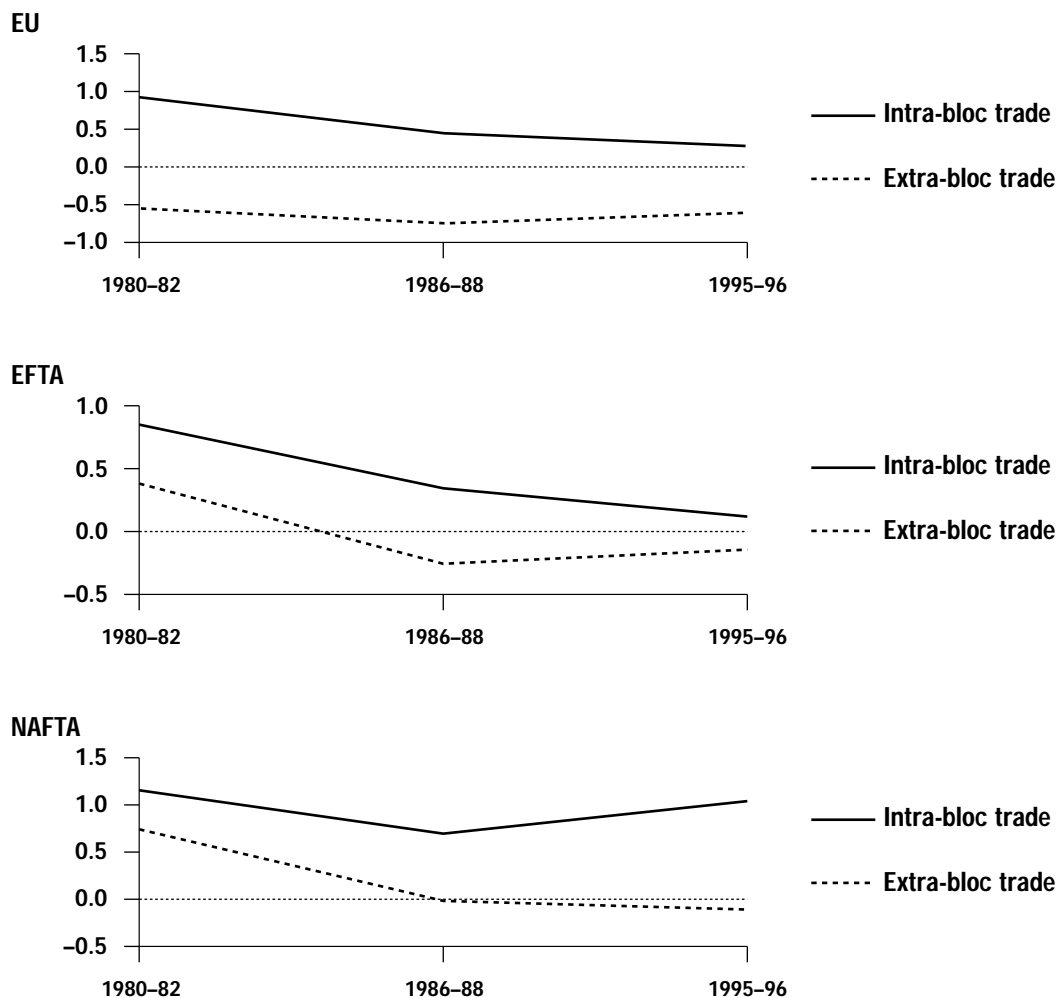
A recent example of this approach is work undertaken by the World Bank investigating nine major blocs over 1980–96 (Soloaga and Winters 1999a,b). Figures 3.7a and 3.7b summarize the estimates of the trade effects in 1980–82, 1986–88, and 1995–96. A positive value on the vertical axis of these figures indicates that a country is trading more than would be suggested by other factors. Looking first at figure 3.7a we see that the EU, European Free Trade Association (EFTA), and NAFTA had relatively high levels of extrabloc trade, but that these coefficients fell over the period. This suggests trade diversion was occurring. Surprisingly, the change in the coefficients on intrabloc trade are generally smaller, and in some cases negative.

Figure 3.7b looks at four blocs for which the picture is rather different. Extrabloc trade is generally lower for these blocs, but there is no evidence of trade diversion taking place during the period. Indeed, for ASEAN there is substantial increase in the coefficients for extrabloc trade, accompanied by a fall in that on intrabloc trade.

What do we learn from these studies? It is extremely difficult to control for other determinants of trade, but once we do there appears

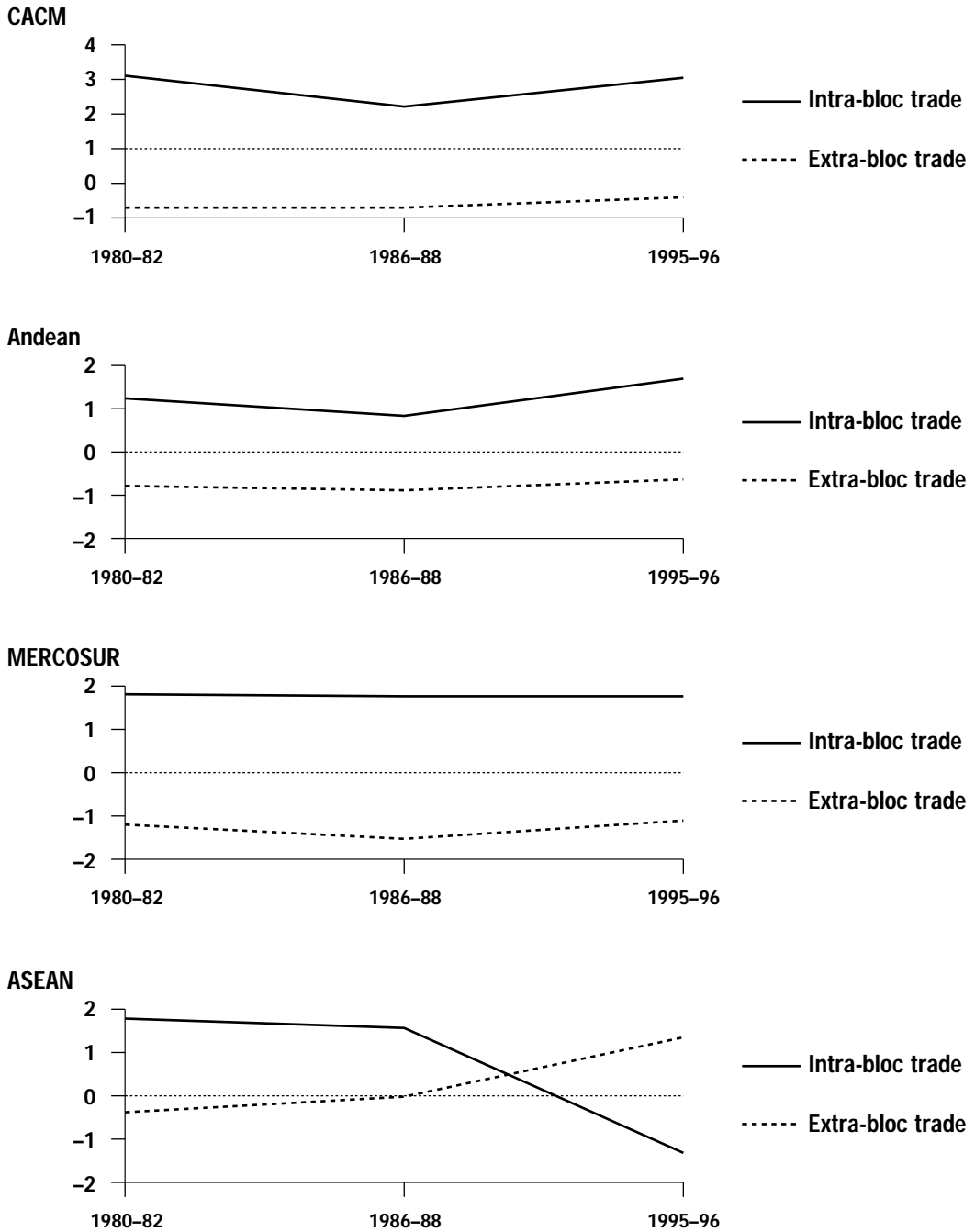
Figure 3.7a RIA's Trade within and across Borders: Evidence of Diversion

(Gravity model estimates over three periods; 1980–82, 1986–88, 1995–96)

*Source:* Soloaga and Winters (1999a,b).

to be weak evidence that external trade is smaller than it otherwise might have been in at least some of the blocs that have been researched. However, the picture is sufficiently mixed that it is not possible to conclude that trade diversion has been a major problem. Furthermore, we cannot infer that trade diversion has been economically damaging without information on relative costs and tariff structures, which are not revealed in this sort of aggregate exercise.

Figure 3.7b RIA's Trade within and across Borders: No Evidence of Diversion
 (Gravity model estimates over three periods; 1980-82, 1986-88, 1995-96)



Source: Soloaga and Winters (1999a,b).

Computable Equilibrium Studies

Although the gravity equations control for some of the other factors determining trade flows, they cannot control for all of them. In addition, they do not contain the details about tariff rates and product supplies and demands that are needed to establish whether changes in trade flows are really beneficial or damaging. An alternative approach that enables the researcher to do this is to construct a full computer model of the economies under study, and then simulate the effects of the policy changes associated with the RIA. Such a model typically contains a great deal of microeconomic detail, so it can be used to predict changes in production in each sector and changes in factor prices and real incomes.

Models of this type come in increasing degrees of sophistication as researchers have refined technique.⁹ “First generation” models assume that all markets are perfectly competitive, so the costs and benefits of RIA membership arise only from trade diversion and trade creation (the effects discussed in section 3.2). “Second generation” models include increasing returns and imperfect competition, so incorporate some of the scale and competition effects outlined in section 3.1. “Third generation” models contain some dynamics, allowing for capital accumulation, and sometimes also technical progress.

The conclusions from these models are, broadly, that there are gains from regional integration, but the gains are small (Francois and Shiells 1994; Harrison, Rutherford, and Tarr 1994). In the first generation models the interaction between trade diversion and trade creation brought effects that were typically very small—a fraction of 1 percent of GDP. Second generation models generally increased this somewhat, to around 2–3 percent of GDP. Third generation models increased the gain further, to approximately 5 percent of GDP.

The strength of these models is that they have sufficient microeconomic structure to enable the effects of a policy change to be traced out in detail, and its real income effects to be calculated. They are also often used for prediction—to estimate the likely effects of a policy change before it is implemented. But they have the major weakness that they are not usually fitted to data as carefully, nor are they subject to the same statistical testing as econometric models. The cost of the microeconomic detail is a complexity that makes rigorous econometric estimation impossible.

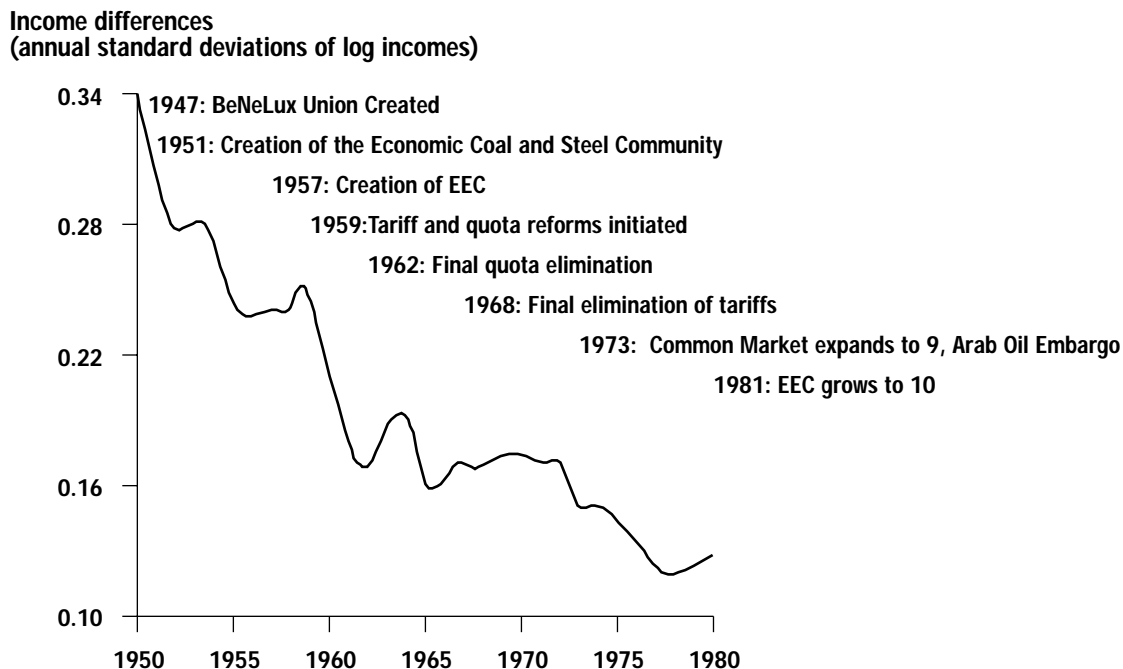
3.3 Trade and Location: Convergence or Divergence?

REGIONAL INTEGRATION WILL LEAD TO RELOCATION OF economic activity; industries will expand in some countries and contract in others, and as this happens demand for labor and real income levels will change. How will this affect member states, and which countries are likely to be gainers and which losers from this process?

There is an empirical paradox here that needs to be explained. There is evidence from the European experience that RIA membership is associated with convergence in the income levels of different countries. The overall dispersion of income levels in the EU to the mid-1980s has been studied by Ben-David (1993), from which figure 3.8 is drawn. The vertical axis of the figure measures the dispersion of income levels in Europe, and clearly shows an almost continuous convergence, from 1947 (when the BeNeLux Customs Union was created), through 1951 (the formation of Economic Coal and Steel Community), 1957 (creation of the EEC), 1962 (when quotas were eliminated), 1968 (when internal tariffs were removed) to 1981. Income differences narrowed by about two-thirds over the period, due mainly to more rapid growth of the lower-income countries.

The most interesting features of the more recent experience are the strong performance of Ireland, Portugal, and Spain, who have made substantial progress in closing the gap with richer members of the EU. Whereas in the mid 1980s these countries' per capita incomes were, respectively, 61 percent, 49 percent, and 27 percent of the income of the large EU countries,¹⁰ by the late 1990s the numbers had risen to 91 percent, 67 percent, and 38 percent. This convergence did not take place in Greece, although it joined the EU earlier than Portugal and Spain, because Greece did not implement the necessary reforms after joining the EU. This suggests that even though integrating with a large and advanced region is potentially beneficial, economic reforms in the poorer country are needed in order to capture these benefits.

While European experience suggests convergence, the experience of most developing country RIAs does not. Indeed, there are several examples of integration being blamed for divergence of economic performance, such as the experience of the East African Community and East and West Paki-

Figure 3.8 Incomes Converge as EEC Integrates

Source: Ben-David (1993).

stan, discussed in chapter 2. The concentration of manufacturing in the old East African Community (where the Nairobi region gained at the expense of manufacturing in Uganda and Tanzania) has been extensively studied (Hansen 1969). Uganda and Tanzania contended that all the gains of the East African Common Market were going to Kenya, which was steadily enhancing its position as the industrial center of the Common Market, producing 70 percent of the manufactures and exporting a growing percentage of them to its two relatively less industrial partners. By 1958, 404 of the 474 companies registered in East Africa were located in Kenya, and by 1960 Kenya's manufacturing sector accounted for 10 percent of its gross national product (GNP), against 4 percent in the other two states. The community collapsed in 1977, because it failed to satisfy the poorer members that they were getting a fair share of the gains.

More recent examples include the concentration of industry, commerce, and services in and around Guatemala City and San Salvador in the Central American Common Market (due to lack of data in the early years,

Costa Rica is not included) and Abidjan and Dakar in the Economic Community of West Africa. Figures 3.9 and 3.10 indicate how dominant these locations have become in manufacturing in their regions.

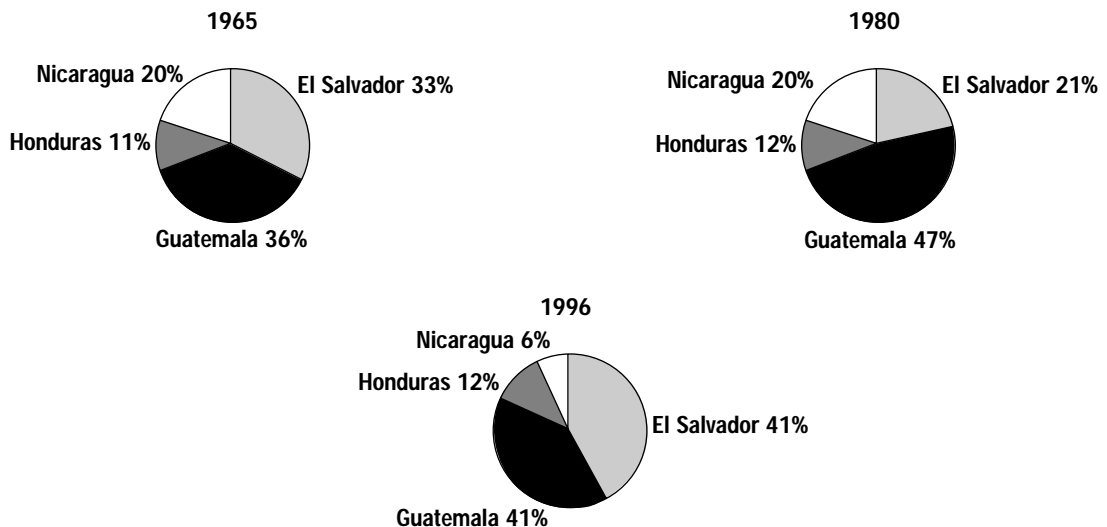
In this section we shed light on these differing experiences, by addressing the question, how can regional integration lead to relocations of economic activity between member countries?

Internal and External Comparative Advantage

To think about how industry will relocate within the RIA we look first at the comparative advantage of RIA members relative to each other, and relative to the rest of the world. It turns out that comparative advantage alone can go a long way toward explaining the different experiences of different RIAs, although these forces are augmented by agglomeration and technology transfer, to which we turn in the following subsections.¹¹

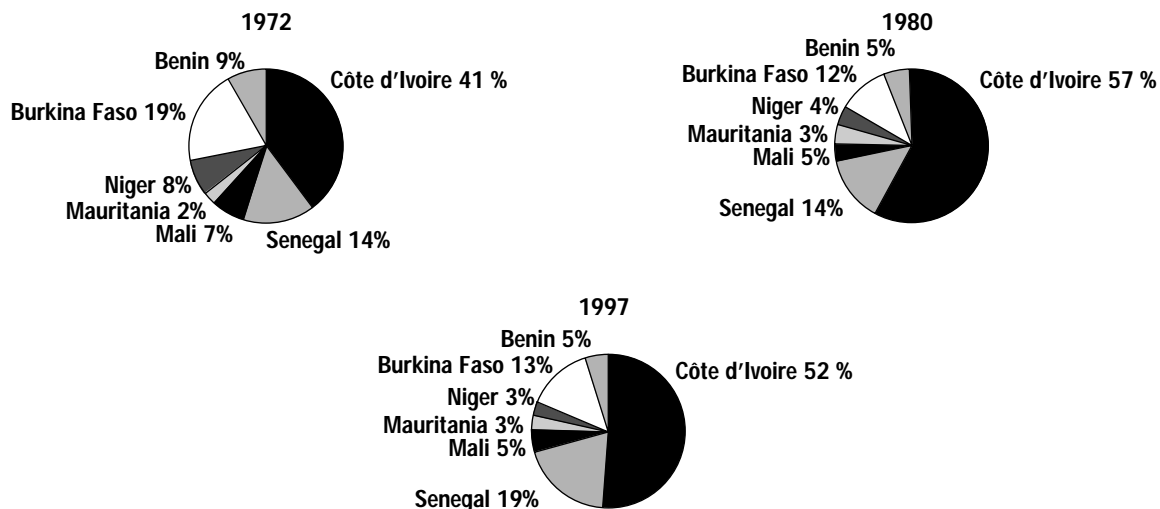
Let us start by thinking of two developing economies that both have a comparative *dis*advantage in manufactures relative to the rest of the world, but the disadvantage is less for one of them than the other.

Figure 3.9 CACM, Formed in 1960, Manufactures Value Added
(percent of total)



Source: Venables (1999).

Figure 3.10 CEA0, Formed in 1974, Manufacturing Value Added
(percent of total)



Source: Venables (1999).

Kenya and Uganda can serve as examples. Their comparative disadvantage in manufactures could come from many alternative sources—technological, geographical or institutional differences—but let us suppose that it is because of different endowments of capital: Kenya has little capital per worker relative to the world average, and Uganda has even less. The initial position is one in which both Kenya and Uganda have some manufacturing, serving local consumers and surviving because of relatively high tariff protection.

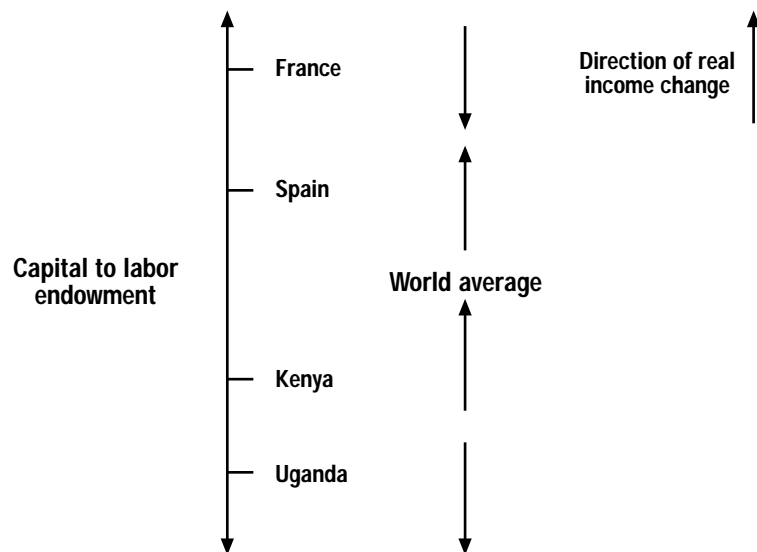
What happens if these two countries form a RIA? Since Kenya has a comparative advantage in manufacturing (relative to Uganda, but not relative to the rest of the world), it will draw manufacturing production out of Uganda, so consumers in both countries will be supplied with manufactures from Kenya. This moves Kenya's production structure further away from its true comparative advantage, while moving Uganda's closer. What are the effects of this on real income? Surprisingly, Kenya will gain from the relocation, and Uganda may lose (and will certainly do less well than Kenya). The reason is that Uganda is suffering trade diversion—some manufactures that were previously imported from the rest of the world are now imported from Kenya. But for Kenya there are

gains from being able to supply manufactures in the Ugandan market, protected from competition with the rest of the world.

There is a general argument here, which is that countries with comparative advantage closer to the world average do better in a RIA than do countries with more extreme comparative advantage. Interposing the “intermediate” country between the “extreme” one and the rest of the world distorts the extreme country’s trade, causing it to switch import supplier. But the intermediate country does not experience this switch in supply; its trade with the “extreme” country and with the rest of the world are less close substitutes, and therefore less vulnerable to trade diversion.

A further implication follows. A RIA between two poor countries will tend to cause their income levels to diverge, but a RIA between two rich ones will tend to cause convergence. The logic can be seen from figure 3.11. The vertical line measures each country’s endowment of capital per worker; countries higher up the line have a greater comparative advantage in manufacturing, and also higher initial per capita income. For two countries below the line, we see the extreme country losing, and the intermediate country gaining—Uganda and Kenya, as marked. Similarly, for countries above the line, the extreme

Figure 3.11 Convergence and Divergence of Real Incomes



Source: Venables (1999).

country loses and the intermediate gains (labeled France and Spain on the figure). However, in the former case the extreme country is the poorer of the two, and in the latter it is the richer. The same basic forces therefore mean that regional integration between rich countries causes their incomes to converge, whereas integration between poor ones causes divergence.

The two cases analyzed above were for a pair of low-income countries and a pair of higher-income countries. What about regional agreements that link high- and low-income countries? The mechanism driving the changes is simply relocation of industry in response to differences in factor endowments, and associated differences in factor prices. The changes might be particularly large, and particularly beneficial, for a lower-wage economy in a RIA with an industrialized and high-wage economy. We have already seen how Mexico acts as a platform for FDI to serve the U.S. market, and there is substantial evidence of the relocation of manufacturing production from the United States to Mexico (Feenstra and Hanson 1997).

There is also evidence of a similar process underway in Europe, both within the EU and also in its relationship with some of the transition economies, with relatively labor intensive activities moving to lower-wage economies, and promoting convergence in wage rates. This may also become more important over time, as new technologies make it easier to fragment production processes—or “slice up the value chain”—moving labor-intensive elements of the process to lower-wage economies. Often this occurs through FDI, and within production networks, closely linked networks involving intrafirm trade, or trade between firms and established suppliers.

Agglomeration

Comparative advantage is not the only force that drives relocation of activity in a RIA. As economic centers start to develop, so “cumulative causation” mechanisms come into effect, leading to clustering (or agglomeration) of economic activity, and extending the advantage of locations that have a head start.¹²

Spatial clustering of economic activities is all-pervasive. Cities exist because businesses, workers, and consumers benefit by being in close proximity. Particular types of activity are frequently clustered, the most

spectacular examples being the electronics industries of Silicon Valley, cinema in Hollywood, and the concentration of banking activities in the world's financial districts. Clustering also occurs in many manufacturing industries—for example U.S. automobile manufacturing in the Detroit area, or industries such as medical equipment, printing machinery, and others studied by Porter (1998).

Clustering or agglomeration typically arises from the interaction between “centripetal” forces, encouraging firms to locate close to each other, and “centrifugal” forces, encouraging them to spread out. The centripetal forces are usually classified in three groups (Marshall 1920). The first are knowledge spillovers, or other beneficial technological externalities that make it attractive for firms to locate close to each other—in Marshall's phrase, “The mysteries of the trade become no mysteries, but are, as it were, in the air.” The second are various labor market pooling effects, which encourage firms to locate where they can benefit from readily available labor skills—perhaps by attracting skilled labor away from existing firms.

The third centripetal force arises from “linkages” between buyers and sellers. Firms will, other things being equal, want to locate where their customers are, and customers will want to locate close to their suppliers. These linkages are simply the “backward” (demand) and “forward” (supply) linkages of Hirschman (1958). They create a positive interdependence between the location decisions of different firms, and this can give rise to a process of cumulative causation, creating agglomerations of activity.¹³

These centripetal or agglomeration forces can operate at quite an aggregate level, or can be much more narrowly focused. For example, aggregate demand creates a backward linkage, drawing firms from all sectors into locations with large markets. Other forces affect broad classes of business activity—providing basic industrial labor skills, or access to business services such as finance and telecommunications. In contrast, knowledge spillovers affecting particular technologies, or the availability of highly specialized inputs might operate at an industry level. In this case the forces work for clustering of the narrowly defined sector, rather than for clustering of manufacturing as a whole.

Pulling in the opposite direction are “centrifugal forces,” encouraging the dispersion of activity. These include congestion, pollution, or other negative externalities that might be associated with concentrations of economic activity. Competition for immobile factors will deter agglomeration, as the price of land and perhaps also labor is bid up

in centers of activity. Also, there are demands to be met from consumers who are not located in the centers of activity; dispersed consumers will encourage dispersion of producers, particularly if trade barriers or transport costs are high.

How might the balance between centripetal and centrifugal forces be upset by membership of a RIA? Can membership cause, or amplify, the clustering of economic activity, and if so might it widen income differentials between partner countries?

By reducing trade barriers, membership in a RIA makes it easier to supply consumers (or customers more generally) from a few locations. This suggests that the balance of forces may be tipped in favor of agglomeration, although the ensuing relocation of industry could develop in several different ways.

One possibility is that particular sectors become more spatially concentrated, and this is likely if the centripetal forces act at a quite narrow, sectoral level. For example, industries in the United States are much more spatially concentrated than in Europe (even controlling for the distribution of population and manufacturing as a whole), suggesting that regional integration in Europe could cause agglomeration at the sectoral level (for example, Germany gets engineering, the UK financial services, and so on). The possibility that this might happen is generating some concern in Europe, although evidence for it is so far rather weak (see Midelfart-Knarvik and others 1999). If it does happen it will create considerable adjustment costs—as the industrial structure of different locations changes—but aggregate gains, as there are real efficiency gains from spatial concentration. This sectoral agglomeration need not be associated with increases in cross-RIA inequalities; each country or region may attract activity in some sectors.

An alternative possibility is that, instead of relatively small sectors each clustering in different locations, manufacturing as a whole comes to cluster in a few locations, de-industrializing the less-favored regions. Under what circumstances might this be the outcome? It will be relatively more likely to occur if manufacturing as a whole is a small share of the economy. This is because fitting the whole of manufacturing in one (or a few) locations is then less likely to press up against factor supply constraints and to lead to rising prices of immobile factors (such as land). It will be relatively more likely if linkages are broad, across many sectors, rather than narrowly sector specific. This in turn is more likely in early stages of development, where a country's basic industrial infrastructure—

transport, telecommunications, or access to financial markets and other business services—is thinly developed and unevenly spread.

This suggests that there is a real possibility that RIA membership could lead to agglomeration and growing divergence between member countries, as we saw in the examples earlier in this section. The agglomeration forces we have outlined here will interact with comparative advantage and may well reinforce each other. It seems likely that both comparative advantage and agglomeration are at work in some South-South RIAs. As Nairobi, Abidjan, and Dakar have attracted manufacturing, so they have started to develop business networks and the linkages that tend to lock manufacturing in to the location. The process might be further accelerated by the propensity of foreign direct investment to cluster in relatively few locations. Agglomeration is then accentuating the forces for divergence that we outlined in the preceding subsection.

In other circumstances agglomeration forces may pull against comparative advantage. For example, firms choosing location in Europe may want the agglomeration benefits of locating in Germany, but factor price differences create an incentive for them to locate in Hungary. An important final point is that agglomeration forces will be strongest at “intermediate” levels of trade barriers (or transport costs). When barriers are very high, each country will have its own industry to supply local consumers. When they are very low firms go where labor costs are cheapest, because they can bring in their inputs and ship their output at very low cost—as with the production networks described in box 3.2. But at “intermediate” barriers firms are reluctant to move away from suppliers and other agglomeration benefits, yet are able to supply foreign markets through exports.

Knowledge Flows

Both the comparative advantage and agglomeration mechanisms suggest that integration may cause the performance of members of developing country RIAs to diverge. One further factor needs to be added to the convergence or divergence calculus. RIAs may promote knowledge flows between member countries.

An influential—although not universally accepted—body of work argues that trade flows provide a powerful mechanism for the transfer of technology between countries. A good example of this are the works

Box 3.2 Production Networks

LOW TRADE BARRIERS AND NEW INFORMATION technologies make it possible to split the production process in many goods, relocating labor-intensive parts of the process to lower-wage economies. This has led to growth of trade in components, which now accounts for a substantial part of some country's imports (WDR 1999). Such tightly integrated international production chains are sometimes referred to as production networks.

Ireland provides a good example of production networks in Europe. Since joining the European Community in 1973 Ireland has attracted multinationals which use Ireland as an export platform to supply the

rest of Europe. By 1993 foreign owned plants produced 60 percent of gross output and accounted for nearly 45 percent of manufacturing employment (Barry and Bradley 1997). They are concentrated in high-technology sectors, and import two-thirds of their inputs and export about 86 percent of their output.

Similar developments are occurring in some of the East European countries that have regional agreements with the EU, in particular Hungary and Estonia. Production networks are particularly important in the automotive, telecommunications, and office machinery sectors, and have accounted for a rising share of the trade of these countries.

of Coe and Helpman (1995) and Coe, Helpman, and Hoffmaister (1997), which seek to explain the rate of increase in total factor productivity across OECD and developing countries. They construct an index of total knowledge capital (measured by accumulated investment in research and development) in each industrial country, and assume that trading partners get access to a country's stock of knowledge in proportion to their imports from that country.

These authors find that access to foreign knowledge is a statistically significant determinant of the rate of growth of total factor productivity. For developing countries, Coe, Helpman, and Hoffmaister find that productivity growth is related to the interaction between the *openness* of the economy (imports relative to GDP) and *access* to foreign knowledge. Thus, an economy benefits from foreign knowledge, first, according to how open it is, and, second, according to whether it is open to those countries that have the largest knowledge stocks. These results are intuitively very attractive and suggest, again, that trade is a major conduit for spillovers between countries.¹⁴ Of course, these results may be due to other factors highly correlated with trade, such as foreign direct investment.

Although the research was not undertaken explicitly for RIAs, it has clear implications. Increasing trade with high-income countries by forming a North-South RIA may lead to beneficial transfers of technology,

and consequent convergence of incomes. Developing country RIAs do not offer such good prospects—particularly if they are relatively closed to external trade and cause trade diversion.

Convergence or Divergence: The Balance

We have seen how there are conflicting forces at work, some tending to lead to convergence of member countries, others pushing divergence. How do we think these forces balance out? In regional agreements that include high-wage countries with industrial centers and lower-wage countries, our judgment is that the convergence is probably dominant. But for South-South RIAs—particularly between the lowest income countries where manufacturing is small and business infrastructure thin—the analytical arguments suggest that there is a real danger of divergence. The analytical arguments are supported by the empirics, suggesting that RIAs containing high-wage countries have promoted income convergence, in a way that South-South RIAs have not.

3.4 Conclusion

AS POINTED OUT IN THE INTRODUCTION TO THIS CHAPTER, regional integration will affect many aspects of economic life. Whether or not trade diversion dominates trade creation depends on the specific circumstances. There is potential for gains from “competition and scale” effects in industrial sectors of the economy, but achieving these might require “deep integration” policies, and these gains might also be achievable through unilateral trade liberalization. The government will lose revenue, and some of this may be dissipated through trade diversion. Industries are likely to relocate, benefiting some countries and possibly harming others.

The ambivalence of these conclusions does not reflect ignorance but rather the wide range of country circumstances and policy options that exist. There are thus no fast and easy conclusions, but a number of reasonably firm policy conclusions are provided at the end of chapter 4.

Notes

1. Tybout (1999) fails to find evidence that price-cost margins are systematically higher in developing than in industrial countries, although reports a number of examples where this is so.
2. Djankov and Hoekman (1998) report the positive effects of trade reform on competition in Slovakia.
3. See Levinsohn (1993); Harrison (1994); Foroutan (1996); and Krishna and Mitra (1997).
4. See Nishimuzi and Page (1982); Tybout and others (1991); Haddad (1993); Haddad and Harrison (1993); Tybout and Westbrook (1995); Harrison (1996).
5. The original industry studies in this area were undertaken by Smith and Venables (1988).
6. Because some other sector must contract to release resources for the expansion.
7. Partner country consumers and government for exports; own consumers and government for imports from partners.
8. Any additional cost of losing government revenue applies only if the shadow price on government revenue is greater than unity.
9. This classification is from Baldwin and Venables (1997), who survey some of these studies in greater detail.
10. We use the average of France, Germany, Italy, and the United Kingdom.
11. This section is based on Venables (1999).
12. This section is based on Fujita, Krugman, and Venables (1999).
13. This argument only works if there are increasing returns to scale in production. (If not, firms can put small plants in many different locations.) For formal analysis see Fujita, Krugman, and Venables (1999).
14. The conclusion has been challenged because the paper assumes, rather than tests, that imports from industrial countries provide the correct weights with which to combine stocks of foreign knowledge. Keller (1998) has suggested that the results are little better than would be obtained from relating total factor productivity to a random weighting of foreign knowledge stocks.