

CURRENT ISSUES

IN ECONOMICS AND FINANCE

May 1999

Volume 5 Number 7

Mercosur: Implications for Growth in Member Countries

Michelle Connolly and Jenessa Gunther

The South American customs union known as Mercosur has contributed significantly to regional trade liberalization. But by encouraging trade within the group at the expense of trade with nonmembers, Mercosur may limit member countries' access to high-technology imports, an important stimulus to growth.

In March 1991, Argentina, Brazil, Paraguay, and Uruguay agreed to form a customs union called the Mercado Común del Sur, or Southern Common Market. The union—commonly known as Mercosur—created an integrated regional market whose members were committed to liberalizing trade with one another while imposing a common tariff on goods imported from nonmembers. Currently the fourth largest integrated market after the North American free trade area, the European Union, and Japan, Mercosur has further extended its scope by entering free trade agreements with Chile and Bolivia. The union's sheer size gives it considerable market power and influence over trade developments worldwide.

Like other regional trade arrangements that offer preferential terms to member countries—arrangements that include the North American Free Trade Agreement and the European Union¹—Mercosur has generated a fair amount of debate. This debate traditionally centers on three issues: First, do regional trade blocs promote or hinder multilateral trade negotiations?² Second, do these blocs fortify or ease trade barriers for nonmember countries? Third, do regional trade agreements create trade by opening up new sources of low-cost imports or divert trade by inducing members to import high-cost goods from their partners in place of goods produced more efficiently by nonmembers?

In this edition of *Current Issues*, we touch on a number of these issues as we explore the impact of Mercosur on the trade patterns and growth of the participating countries. Although we make no claims as to the net effects of the customs union on national welfare, we do cite some persuasive evidence that Mercosur has shifted trade in many manufactured goods to higher cost member countries. In addition, our analysis breaks new ground by considering the *dynamic* effects of regional trade arrangements—that is, the effects of such arrangements on member countries' growth rates. A recent study by Connolly suggests that exposure to high-technology products from developed countries can accelerate growth and innovation in the countries importing those goods. Applying this finding to Mercosur and other regional trade blocs composed exclusively of developing countries raises an important concern: Because these trade blocs promote intra-group trade over trade with outsiders, they may reduce members' access to high-technology imports from industrialized nations, limiting the opportunities for technical diffusion and the potential for faster growth.

The Creation of Mercosur

Before establishing Mercosur in March 1991, Argentina, Brazil, Paraguay, and Uruguay had been engaged in multilateral trade liberalization for three

years. The Treaty of Asunción, which created the customs union, essentially continued this liberalizing trend while narrowing it to the participating countries. The treaty called for the elimination of all tariffs on intra-Mercosur trade by the end of 1994 but mandated that member countries impose a common external tariff on goods imported from countries outside the union.³

Member nations began lowering tariffs in June 1991, and by early 1997, fully 90 percent of intra-Mercosur trade was free of tariffs. Most of the remaining intra-trade tariffs—applied to products specified in lists of exceptions for each country—are scheduled to fall to zero by January 2000.

The common external tariff, or CET, was initially set to equal a weighted average of the national tariffs levied by the member countries before the formation of Mercosur. As of January 1995, all members had adopted the external tariff, which ranged from 0 to 20 percent by product type: 0 to 9 percent for raw materials and some food stuffs; 10 to 15 percent for certain agricultural products and semiprocessed goods; and 15 to 20 percent for textiles, manufactured goods, and consumption goods (Frischtak, Leipziger, and Normand 1996). Across all product types, the average external tariff was originally 12 percent (Garay and Estevadeordal 1995); it was increased to 15 percent in December 1997.

Not all nonmember products, however, are currently subject to the common external tariff. The terms of the Mercosur agreement permitted each member country to maintain its existing national tariffs on 300 specific products—about 15 percent of all product types—until early in the next century. The governments of the Mercosur countries justified the continuation of these generally higher national tariffs on the grounds that domestic producers of these goods needed more time to prepare for foreign competition. The protection afforded by this provision of the agreement appears to have helped domestic producers expand their trade operations within the Mercosur group: the products exempted from the common external tariff now account for almost half of intra-Mercosur trade.

Among the key industries affected by the national tariffs are capital goods, computer hardware, professional electronics, and vehicles. National tariffs imposed on capital goods produced outside the customs union are scheduled to converge with the common external tariff by 2001, while those levied on computer hardware and electronics will not converge until 2006 (Frischtak, Leipziger, and Normand 1996). National tariffs on vehicles were supposed to converge with the common external tariff, but Brazil and Argentina are maintaining tariffs of 35 percent on all cars produced by

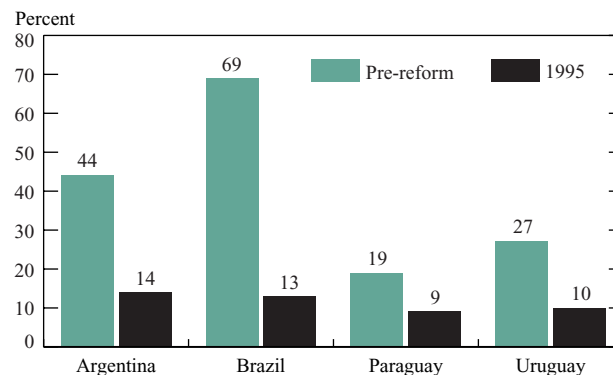
nonmembers (*Economist* 1999). The continuation of national tariffs in these politically important industries suggests that many of the changes in production and trade expected from the formation of Mercosur have not yet occurred.

Mercosur's Effects on Tariff Rates and Trade Volume

The removal of tariff barriers between Mercosur countries following the 1991 treaty, coupled with the more general trade liberalization undertaken by these same countries in 1988-91, sharply reduced the countries' average tariff rates (Chart 1). Most dramatically, Brazil's average tariff rate tumbled from a high of 69 percent before 1990 to 13 percent in 1995. Nevertheless, because the common external tariff was calculated as a weighted average of the national tariffs of member countries, its adoption actually *raised* the average tariff rates for some countries above their 1991 levels.

As expected, the lowering of internal trade barriers under the terms of the Mercosur treaty has led to a marked expansion in trade among members. As a percentage of total trade, intra-Mercosur trade rose from roughly 12 percent in 1991 to a high of about 19 percent in 1994 (Chart 2). Intra-Mercosur exports showed especially strong growth, advancing from 11 percent of total exports in 1991 to 20 percent in 1996. The rising share of trade claimed by Mercosur members clearly came at the expense of non-Mercosur countries, but even trade with nonmembers increased in absolute terms after the customs union was formed (Chart 3). Nevertheless, we cannot compare this outcome with the aggregate trade pattern that would have been observed had Mercosur not formed, or had Argentina, Brazil, Paraguay, and Uruguay instead continued their efforts to liberalize trade multilaterally.

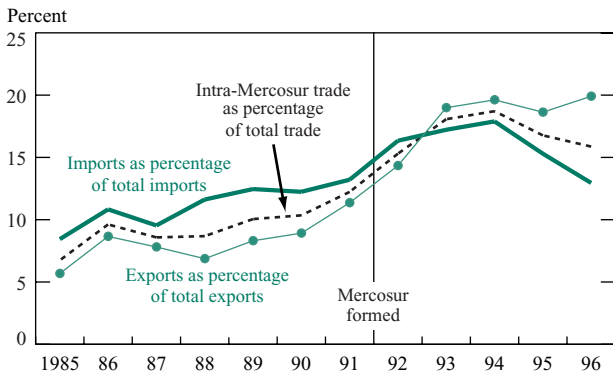
Chart 1
Average Tariff Rates in Mercosur Countries



Source: Inter-American Development Bank (1996).

Note: Reform dates are as follows: Argentina, 1989; Brazil, 1990; Paraguay, 1989; Uruguay, 1991.

Chart 2
Trends in Intra-Mercosur Trade



Source: International Monetary Fund, *Direction of Trade Statistics*.

In the remainder of the article, we look at the economic impact of Mercosur on the participating countries. Specifically, is the customs union more likely to improve or to hurt national welfare? The answer depends in large measure on the dynamic effects of “trade creation” and “trade diversion.”

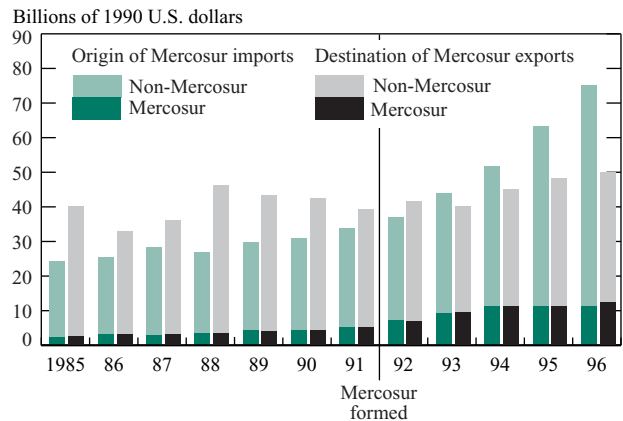
Trade Creation versus Trade Diversion

Because a customs union entails differential treatment for member and nonmember countries, it typically leads to a shift in the member countries’ sources of supply. This shift can be either to lower cost or to higher cost sources. For example, the lowering of trade barriers within the customs union may prompt members to import from one another goods they had previously produced at higher cost for themselves. This outcome—termed trade creation—allows for greater efficiency in production and lower consumption prices, benefits that enhance economic welfare and national income.

Conversely, the imposition of a common tariff on the goods produced by nonmembers may cause member countries to import products from a high-cost partner country rather than from a low-cost nonmember. This result—trade diversion—reduces tariff revenues and essentially subsidizes less efficient producers.

An example may clarify how trade diversion operates. Suppose Paraguay initially imposed a 30 percent tariff on all imports. After joining a customs union with Argentina, Paraguay drops the tariff on Argentine imports while maintaining the tariff on U.S. imports. If the pre-tariff import price of U.S. automobiles was \$20,000 and of Argentine automobiles, \$22,000, Paraguay will shift from importing American cars for \$26,000 (the price including the 30 percent tariff) to importing Argentine cars for \$22,000 after joining the customs union. The \$6,000 loss in tariff revenues

Chart 3
Changes in Mercosur Imports and Exports
Breakdown by Origin and Destination



Source: Inter-American Development Bank (1996).

incurred by the Paraguayan government on each car will be partially offset by the reduction in the price paid by the Paraguayan consumer, but the remainder of the lost revenue amounts to a production subsidy for Argentina’s car producers.

To be sure, lower prices will induce Paraguayan consumers to buy more cars. The increase in car purchases may be large enough to offset the national income loss from trade diversion. Thus, whether trade diversion boosts or reduces member country income depends on which effect dominates. Either way, however, the external tariff acts as a protectionist measure for member nation industries that may not produce goods as efficiently as their counterparts in other countries.

Export Patterns as Evidence of Mercosur’s Welfare Effects

Since we do not know how trade patterns would have evolved in the absence of Mercosur, it is difficult to observe and quantify the presence of trade creation and trade diversion. Indirect evidence of these effects, however, can be drawn from statistics on Mercosur countries’ exports. In a 1997 study, Yeats assesses observed changes in Mercosur countries’ exports in relation to a measure of the countries’ efficiency in producing particular goods. His intention is to investigate whether trade in the wake of the Mercosur agreement is oriented toward those products in which Mercosur countries have shown a competitive edge.

Yeats seeks evidence on this point by determining whether goods that account for an increasing share of intra-Mercosur trade also perform well in markets outside the group, where they receive no preferential treatment. He finds significant discrepancies in the

performance of goods in internal and external markets—most notably in the case of manufactured goods. Manufactured goods have made dramatic gains in intra-Mercosur trade. Machinery and transportation equipment have shown particular strength, accounting for almost one-third of all Mercosur exports in 1994 (Chart 4). But while manufactured goods as a whole represent 63 percent of Mercosur members' exports to one another, they represent only 35 percent of Mercosur exports to nonmembers. This comparison suggests that members are importing from one another goods that are not fully competitive in independent markets.

To test this conclusion further, Yeats identifies thirty product types that showed the fastest growth in intra-Mercosur trade as a percentage of extra-Mercosur trade between 1988 and 1994. For each product, he then derives an index of Mercosur's competitiveness—or "revealed" comparative advantage—by calculating the ratio of 1) that product's prevalence in Mercosur exports to nonmembers to 2) its prevalence in world exports.⁴ A high index suggests that the Mercosur product was created at sufficiently low cost to perform well in external markets; a low index suggests that the same product could be produced more efficiently by nonmembers.

Yeats finds that Mercosur countries lacked a comparative advantage in twenty-eight of the thirty fast-growing product groups. Machinery and transportation equipment scored particularly low. Moreover, the indexes for twenty-one of the thirty product groups fell between 1988 and 1994, suggesting that the Mercosur countries' degree of competitiveness actually declined over the period. Since comparative advantage does not seem to be driving the changes in intra-Mercosur export patterns, the observed increases in trade for particular

product types appear to stem from the greater level of protection afforded by the higher common external tariffs, as well as nontariff barriers, in those industries.⁵

Yeats' findings suggest that trade diversion is occurring in certain industries, particularly machinery and transportation equipment. This is not surprising given that manufactured goods such as autos, capital goods, and telecommunications and information products are still subject to national tariffs both within and outside Mercosur.⁶ Certainly, future convergence to the common external tariff will lower the tariff rates on some of these products—as, for example, in Brazil, where tariffs on consumer durables from non-Mercosur countries are supposed to drop from 70 percent to 20 percent early in the next century. Nevertheless, the common external tariff of 20 percent will continue to protect these domestic industries at a high cost to consumers for the foreseeable future. Moreover, in the case of other products, future convergence to the external tariff will actually increase protection for Mercosur industries. For example, capital good imports into Argentina are currently duty-free except for a 10 percent statistical surcharge. Beginning in 2001, however, they will be subject to a 14 percent common external tariff (Frischtak, Leipziger, and Normand 1996).

Although the evidence that Mercosur countries are importing some goods from higher cost member countries is persuasive, the trade-diverting effects of the customs union must be evaluated against its trade-creating effects. Even if trade diversion dominates, member nations may still be better off if consumer prices decline sufficiently with the shift to intra-Mercosur import sources. Lacking adequate information to resolve this issue fully, we make no judgments about which effect is dominant in Mercosur. Still, given that the industries in which trade diversion appears to be occurring are technology-driven industries, we must consider how the growth of Mercosur countries may be affected.

Chart 4
Increase in Manufactured Goods as a Percentage of Mercosur Exports



Sources: Inter-American Development Bank (1996); Yeats (1997).

Dynamic Effects of Mercosur

So far, we have looked for evidence of welfare gains or losses under Mercosur that are "static"—that is, gains or losses that consist of onetime changes in national income levels. Another approach is to consider how Mercosur has affected the *rate* of income growth in member countries. These "dynamic" gains or losses differ from static effects in much the same way that an increase in a worker's annual raise from 3 to 5 percent differs from a single \$5,000 increase in a worker's salary. Although largely neglected in earlier studies of the risks and benefits of regional trade agreements, dynamic effects merit particular attention because they compound themselves over time, quickly overshadowing any static effects.

In theory, customs unions and other regional trade arrangements may accelerate the rate of income growth in the participating countries by increasing political cooperation, enhancing the credibility of government commitments to trade reform, and enabling industries to achieve greater economies of scale in production. Indeed, it is likely that the Mercosur countries have benefited in these ways.

However, when considering dynamic effects, one must weigh the potential benefits of greater integration within the regional trade group against the potential losses from less integration with the outside world. In other words, the standard of comparison in evaluating Mercosur must be multilateral trade liberalization—the trend observed in Argentina, Brazil, Paraguay, and Uruguay before the formation of the customs union.

In forgoing freer trade relations with the rest of the world, the Mercosur countries lost one important means of achieving dynamic gains—the technological diffusion that occurs through trade between developed and developing countries. Because Mercosur includes only developing countries, its members are less likely to be exposed to the advanced technology embodied in imports from developed countries. Indeed, the external tariff that Mercosur applies to the rest of the world heightens the union’s isolation from developed countries. Yeats’ suggestion that trade diversion is likely occurring in technology-driven industries such as machinery and transportation equipment further supports the conclusion that the opportunities to learn from the advances of other countries are more limited under Mercosur.

Exposure to high-technology imports from developed countries can affect the growth of the importing country in two ways. First, such imports raise a country’s output directly if they are used as intermediate goods in the production of other goods. Consequently, increased imports of high-technology goods from developed countries should accelerate domestic output growth. Second, exposure to this technology should also encourage growth indirectly, by stimulating domestic imitation and innovation. Firms that reverse-engineer sophisticated imports learn to duplicate or improve upon the technology embodied in these products. Thus, increased exposure to such imports should benefit firms’ research and development efforts, further encouraging growth.⁷

Previous work by Connolly (1998) finds statistical evidence of a relationship between a country’s access to technology and its rate of growth. Using data on forty countries from 1970 to 1985, the study considers the effects of high-technology imports from developed countries on domestic innovation, imitation, and growth in both developed and developing countries.

Connolly’s findings suggest that if a country had initial rates of domestic innovation and imitation of 1 percent, then a sustained 10 percent increase in high-technology imports from developed countries as a share of GDP would have increased the innovation rate during the period to 1.13 percent and the imitation rate to 1.14 percent, all else equal.⁸ Similarly, Connolly’s results suggest that if the growth of high-technology imports per capita increased from its average of 2 percent to 4 percent, then per capita GDP growth for the average country would increase from its average of 2 percent to 2.2 percent. Interestingly, the growth of high-technology imports has a significantly greater impact on developing countries than on developed countries. One interpretation of this finding is that trade in physical goods is especially important for the diffusion of technology to developing countries because such countries are often not highly integrated with developed countries.

If trade with developed countries enhances domestic growth significantly—as the Connolly study suggests—then the welfare effects of trade diversion on the Mercosur countries may be far greater than generally assumed. Any shift in import sources that reduces access to advanced technologies will slow the rate of economic growth in member countries. Thus, the trade diversion that appears to be occurring in manufacturing industries in Mercosur is cause for concern.

Of course, proponents of regional trade arrangements might point out that the external tariffs applying to manufactured goods are not high enough to discourage all trade with nonmembers and are in some cases lower than the national tariffs that prevailed before Mercosur’s formation. Nonetheless, these tariffs are sufficiently high to divert trade in these product types from developed nonmember countries to member countries. Consequently, relative to multilateral trade liberalization, Mercosur’s preferential trade arrangement may ultimately have a cost. By paying higher prices for certain imports, Mercosur consumers sacrifice income; by losing access to high-technology imports from developed countries, Mercosur nations risk slower growth.

Conclusion

Our findings should not be construed to mean that Mercosur countries are worse off overall than they had been before the creation of the customs union. Mercosur has clearly provided a political framework that has helped to advance regional trade liberalization. In addition, the customs union may have promoted lower average tariff rates on goods from all countries and increased the credibility of the participating governments’ commitments to trade reform.

Nevertheless, a balanced assessment of Mercosur's effectiveness must include some recognition of the union's potential drawbacks. In this article, we have looked at evidence suggesting that Mercosur is diverting trade in manufactured goods from lower cost nonmembers to higher cost members. We have also examined how the membership of Mercosur—a membership confined to developing countries—may impede growth by limiting the participants' access to the advanced technologies of developed countries. These considerations suggest that had Argentina, Brazil, Paraguay, and Uruguay undertaken a similar degree of trade liberalization in a multilateral setting, they might have realized even greater benefits from their efforts to open up trade.

Notes

1. Although all regional trade arrangements discriminate between members and nonmembers, customs unions (such as Mercosur) require members to levy a common tariff on imports from nonmembers, whereas free trade agreements (such as NAFTA) do not regulate the tariffs placed by members on nonmember goods.

2. Winters (1996) surveys the theoretical work on this issue.

3. If a good is to be traded tariff-free within Mercosur, 60 percent of its raw material inputs must come from member countries.

4. The comparative advantage index for good j is defined as

$$C_j = \frac{\text{extra-Mercosur exports of good } j}{\text{total extra-Mercosur exports}} \div \frac{\text{world exports of good } j}{\text{total world exports}},$$

where world exports exclude intra-Mercosur trade.

5. A few caveats apply to these findings. First, transportation costs within Mercosur are likely lower than those between Mercosur and the rest of the world. Second, trade barriers in third markets affect Mercosur exports to those markets. Third, Mercosur countries might be producing manufactured goods tailored to regional demand. These caveats might explain why intra-Mercosur exports of manufactured goods are greater than manufactured goods exports to the rest of the world. Still, Yeats is looking at changes in regional orientation, not levels of regional orientation. Hence, observed changes in 1988-94 trade patterns are unlikely to stem from changes in transportation costs or changes in third-country trade barriers.

6. The effect of retaining these tariffs is evident in a study of trade restrictions and domestic regulations on the production of vehicles (Chudnovsky, Lopez, and Porta 1996). The study finds that vehicles produced within Mercosur are inferior in quality and higher in price than comparable vehicles produced outside the customs union.

7. For a theoretical modeling of these concepts, see Connolly (1999).

8. To control for the endogeneity of imports and other variables, Connolly uses two-staged least squares regressions with instrumental variables. The regressions also control for inflows of foreign direct investment, the scale of the domestic economy, and general measures of openness to trade.

References

- Chudnovsky, Daniel, Andres Lopez, and Fernando Porta. 1996. "Intra-Industry Trade and Regional Integration: The Case of the Auto Industry in Argentina." Working paper, University of Buenos Aires. Cited in Yeats (1997).
- Connolly, Michelle P. 1998. "The Dual Nature of Trade: Measuring Its Impact on Imitation and Growth." Duke University Economics Department Working Paper no. 97-34.
- . 1999. "North-South Technological Diffusion: A New Case for Dynamic Gains from Trade." Duke University Economics Department Working Paper no. 99-08.
- Economist*. 1999. "Double Parked." January 9.
- Frischtak, Claudio, Danny M. Leipziger, and John F. Normand. 1996. *Industrial Policy in MERCOSUR: Issues and Lessons*. World Bank.
- Garay, L. J., and A. Estevadeordal. 1995. "Protection, Preferential Tariff Elimination and Rules of Origin in the Hemisphere." Integration, Trade and Hemispheric Issues Division, Inter-American Development Bank, June.
- Inter-American Development Bank. 1996. *Economic and Social Progress in Latin America*.
- Winters, L. Alan. 1996. "Regionalism versus Multilateralism." World Bank Policy Research Working Paper no. 1687.
- Yeats, Alexander. 1997. "Does Mercosur's Trade Performance Raise Concerns about the Effects of Regional Trade Arrangements?" World Bank Policy Research Working Paper no. 1729.

About the Authors

Michelle Connolly, formerly an economist in the International Research Function, is now an assistant professor in the Department of Economics at Duke University. Jenessa Gunther, formerly an assistant economist in the International Research Function, is currently a graduate student in economics at the University of Maryland.

The views expressed in this article are those of the authors and do not necessarily reflect the position of the Federal Reserve Bank of New York or the Federal Reserve System.

Current Issues in Economics and Finance is published by the Research and Market Analysis Group of the Federal Reserve Bank of New York. Dorothy Meadow Sobol is the editor.