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### A Note on Building a Counterfactual for Mercosur

Gabriel V. Montes-Rojas <sup>a</sup>

<sup>a</sup> CONICET-Universidad de San Andrés , Buenos Aires , Argentina  
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## A Note on Building a Counterfactual for Mercosur

GABRIEL V. MONTES-ROJAS

*CONICET-Universidad de San Andrés, Buenos Aires, Argentina*

**ABSTRACT.** *Heterogeneity among trade agreements across Latin American countries is important for comparing different experiences and for evaluating the success of existing trade agreements. This note evaluates the Mercosur agreement in a counterfactual framework. Member countries' experiences are compared to the Mexican experience in several dimensions other than trade. In particular, the effect of trade agreements is evaluated in terms of its effect on the labor market (inequality and informality) and on other measures of integration. This new analysis puts Mercosur in a more positive balance with respect to the pure trade theory analysis.*

**RESUMEN.** *La heterogeneidad observada en los tratados comerciales ente los países latinoamericanos es un factor importante para comparar las diferentes experiencias, así como para evaluar el éxito de los acuerdos comerciales existentes. Este estudio evalúa el acuerdo Mercosur en un marco contrafactual. Las experiencias de los países miembros se comparan a la experiencia mexicana, en diversas dimensiones además de la comercial. La influencia de los acuerdos comerciales se evalúa específicamente cuanto a su efecto sobre el mercado laboral (desigualdad e informalidad), así como sobre otros indicadores de integración. Este nuevo análisis posiciona al Mercosur en un equilibrio más positivo, en lo que atañe al puro análisis teórico del comercio.*

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Address correspondence to Gabriel V. Montes-Rojas, CONICET-Universidad de San Andrés, Vito Dumas 284 (B1644BID), Victoria, Provincia de Buenos Aires, Argentina. E-mail: gmontesrojas@udesa.edu.ar

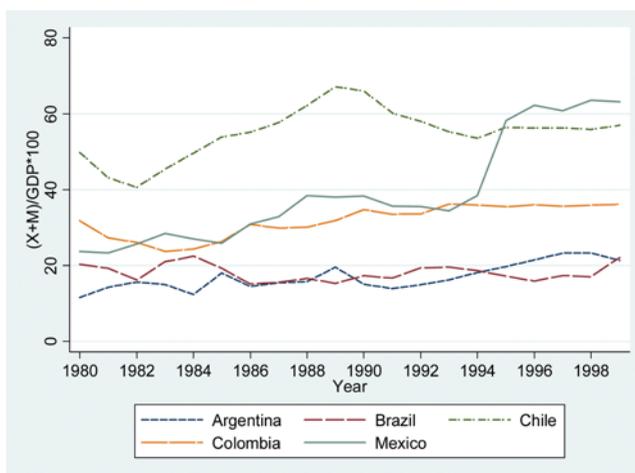
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**RESUMO.** *A heterogeneidade nos tratados comerciais entre os países latino-americanos é importante para a comparação de experiências diferentes e para a avaliação do êxito dos acordos comerciais já existentes. O presente trabalho avalia o acordo Mercosul por meio de uma estrutura contrafactual. As experiências dos países-membros são comparadas à experiência mexicana em várias dimensões além da comercial. O efeito dos acordos comerciais é avaliado especificamente em termos da sua repercussão no mercado de trabalho (desigualdade e informalidade) e também quanto a outros indicadores de integração. Esta nova análise coloca o Mercosul em um equilíbrio mais positivo no que diz respeito à análise teórica pura do comércio.*

**KEYWORDS.** *Argentina, Brazil, Mercosur, Mexico, NAFTA, trade liberalization*

## INTRODUCTION

Among other market reforms, several Latin American countries significantly liberalized their trade regimes in the 1990s. The importance of the new trade regimes can be visualized in Figure 1, which presents trade openness statistics (ratio of exports and imports to gross domestic product [GDP]) for the largest countries in the region (Argentina, Brazil, Chile, Colombia, and Mexico). The figure shows a remarkable increase in the importance of international trade since 1990. The figure also shows significant differences among countries. Each country had specific paths with significant differences



**FIGURE 1** Trade openness in Latin American countries (1980–1999). *Source:* International Finance Statistics, IMF.

among them. For instance, Argentina's trade openness increases from 15% of GDP in 1990 to 21% in 1999, while Mexico's overall trade went up from 36% in 1993 (prior to North American Free Trade Agreement [NAFTA]) to 63% in 1999.

As pointed out by Lovely and Richardson (2000), we should expect different trade liberalization consequences depending on the trading partners considered, such as South-North integration ("vertical" exchange) versus South-South ("horizontal" exchange) experiences. A typical South-North integration is NAFTA, where Mexico liberalizes trade with respect to the United States and Canada. A typical South-South integration is Mercosur, an agreement including Argentina, Brazil, Paraguay, and Uruguay, and later Venezuela. This note evaluates the South-South Mercosur.

Based on the empirical evaluation literature, the impact of a certain reform (known generically as *treatment*) cannot be evaluated on its own, but requires a feasible comparison or control group. In a hypothetical world, this comparison should be constructed by analyzing the evolution of Mercosur countries (treatment group), had they followed a different trade agreement. However, given the curse of all social sciences this is not possible. Economic analysis mainly focuses on evaluating the treatment group using theory, and for this particular case, trade theory. Trade theory focuses on trade diversion and creation, and on this point many authors (see for instance Baer and Silva, 2012) argue that Mercosur did not fulfil its mandate of promoting trade, and that the maximum gains of free trade are yet to be obtained. On paper, thus, Mercosur is inferior to a broader free trade agreement.

Economic theory assumes that the counterfactual comparison group can be constructed (even if only on paper). In international trade, this procedure also requires finding a trade partner, and thus the comparison group depends not only on the characteristics of the studied country but also on actual trade partners. The idea is to construct a control group for Mercosur, that is, a hypothetical country that is similar enough except for its trade experience that can be used for a meaningful comparison. Heterogeneity in trade agreements in Latin America can be used for this comparison. In particular, the Mexican experience is a benchmark for any country considering bilateral free trade agreements with economies in the North, such as the United States. Therefore, we compare the South-South Mercosur with the Mexican NAFTA experience. In a similar vein, the Chilean experience is also useful; indeed, the ambitious Free Trade Area of the Americas (FTAA) was at a time a feasible option for many Latin American countries.

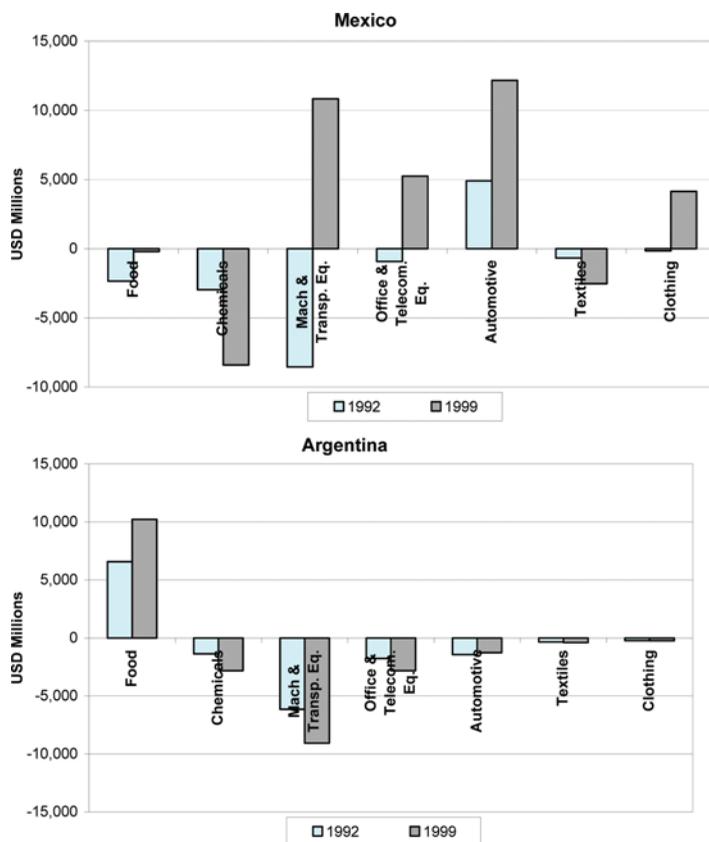
This exercise has many limitations. In fact, the coexistence of several simultaneous factors and considerable differences among countries makes a rigorous empirical analysis unfeasible. Thus, this study only compares the treatment and control groups with the help of economic theory in several bounded dimensions. Each dimension should be seen as a partial equilibrium analysis.

## TRADE IN ARGENTINA AND MEXICO IN THE 1990s

This section looks at the trade patterns across industries in Argentina and Mexico pre- and post-trade liberalization.

After decades of import substitution regimes, Mexico started trade liberalization in 1985. Between 1985 and 1988, import licensing requirements were scaled back to about a quarter of their previous levels, reference prices were removed, and tariff rates on most products were reduced proportionally (Reventa, 1997). Average tariffs fell from 25% to about 12%. In January 1994, Mexico completely liberalized its trade with the United States and Canada, subscribing the NAFTA in 1994. The export and import ratios of NAFTA partners over the rest of the world increased over the period of analysis, converging to a 90% and 75% ratio, respectively.

The Mexican reform produced not only a quantitative change in trade variables but, more important, a qualitative change. The upper panel in Figure 2 shows manufacturing Mexican net exports in 1992 and 1999, pre- and



**FIGURE 2** Net trade in selected manufacturing sectors (1992, 1999). *Source:* Instituto para la Integración de América Latina y el Caribe (INTAL), Inter-American Development Bank.

post-NAFTA agreement, respectively. Mexico significantly changed its manufacturing trade patterns after NAFTA: it became a major exporter in clothing, automotive, office, and machinery and equipment (final goods exports), while significantly increased imports of textiles and chemicals (intermediate goods). Most of these changes reflect the predomination of *maquila* and foreign direct investment export strategy since NAFTA (in particular, clothing and automotive).

Outsourcing of production can also play a role. Trade liberalization with Northern economies may attract skill-intensive foreign companies to relocate in the South, therefore increasing the demand for skilled workers in a given industry. Feenstra and Hanson (1999) gave support to this hypothesis by stating that foreign direct investment can explain a great portion of the increase in wage inequality in Northern Mexico.

Mercosur was created by Argentina, Brazil, Paraguay, and Uruguay in 1991. As argued by Baer and Silva (2012) it has been the most successful multicountry preferential trade agreement created among Latin American countries. Formal tariff barriers to trade in goods have been virtually eliminated among member countries, which have imposed the same common external tariff for the vast majority of tariff lines under the harmonized system. However, nontariff barriers play an important role in intra-Mercosur trade and are the major threat to the trade agreement among its biggest members, Argentina and Brazil. The Mercosur agreement also coincided with profound structural changes of its members. Most of the reforms were made within the Washington Consensus, including the end of sector-specific subsidies with protectionist goals, privatization, and deregulation. The advent of Mercosur also coincided with a broader trade liberalization to the rest of the World.

In Argentina, the largest import tariff reductions were implemented among durable goods, machinery, and transport equipment, from an average of 60% in 1988, to 23% in 1991, and 12% in 1993 (Berlinski, 2003). However, in contrast with Mexico, trade liberalization through Mercosur has not generated major changes in the productive structure or in trade patterns (lower panel, Figure 2), aside from increasing already high exports in agriculture processing goods (food) and imports of machinery and equipment.

In sum, Mexico changed its productive structure following NAFTA, specializing within that group in the export of goods with low-skill content. Argentina entered into a trade agreement with a relatively similar trading partner (Brazil); thus, its productive structure did not change considerably.

## TRADE AND INEQUALITY IN THE 1990s

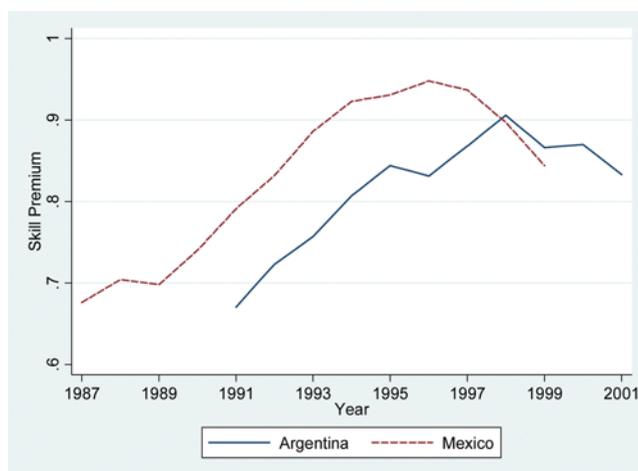
The link between trade and wages is the central result of the Stolper-Samuelson theorem. The logic is that trade affects relative factor remunerations by changing the relative prices of final goods. Trade liberalization rises

in skill premia if it causes the prices of skill-intensive goods to increase relative to those of nonskill intensive goods. The rise in the price of skill-intensive goods would in turn increase the demand for labor in skill-intensive industries, and reduce it in unskilled industries. The resulting shift in employment towards skill-intensive industries would contribute to an increase in the relative demand for skilled workers; and since in the short run the supply of skilled workers in the economy is fixed, their wages would rise relative to those of unskilled workers. The reverse would occur (a decrease in skill premium) if a country that is relatively abundant in unskilled labor opens up toward countries specializing in the production of skill-intensive goods.

There has been a long discussion in the literature on whether the Stolper-Samuelson predictions are useful to explain the increase in skill premium following trade liberalization in both Mexico and Argentina. Some authors argue that although Mexico is relatively abundant in unskilled labor in comparison to the United States, this is no longer true with respect to other countries such as China (Harrison and Hanson, 1999; Robertson, 2000). Alternatively, other authors have stated that, despite their comparative advantages, Mexico and Argentina used to heavily protect unskilled labor industries in the protectionist period, and therefore trade liberalization had a disproportionately large impact in nonskill-intensive sectors (Feliciano, 2001; Galiani and Sanguinetti, 2003; Harrison and Hanson, 1999; Robertson, 2000).

Argentina and Mexico shared trade liberalization in the 1990s, and both exhibited similar wage inequality patterns throughout this decade. In particular, they experienced an initial great increase in skill premium, defined as the wage premium for high-skilled workers (workers with higher education) with respect to low-skilled workers (workers with lower educational levels). Figure 3 plots the skill premium for the period 1987–2001 in both countries (see Acosta and Montes-Rojas, 2008, for details). Argentina experienced a rise in premia during the decade until 1998, while Mexico showed a continuous increase in skill premia during the period 1987–1996. We also observe that the skill premium decreased in both countries after years of trade liberalization, especially after 1996 for Mexico and since 1998 in Argentina.

Consensus has emerged about the effects of trade liberalization on skill premia and inequality in developed countries: trade expansion and tariff reductions were responsible in part for the increase in skill premia in those countries (Feenstra and Hanson, 1999; Leamer, 1994; Wood, 1994). The literature is less conclusive for Latin American countries and other developing regions. For the Mexican case, several studies suggest a positive effect of trade liberalization on premia in the past two decades (Cragg and Epelbaum, 1996; Feliciano, 2001; Harrison and Hanson, 1999; Robertson, 2000;). For other Latin American countries, Gill and Montenegro (2002) found causality from trade into skill premia in Chile, Galiani and Sanguinetti (2003) showed similar results for Argentina as do Attanasio, Goldberg, and Pavcnik (2004) for Colombia. In contrast, Esquivel and Rodríguez-López (2003) suggested



**FIGURE 3** Skill premium in Mexico and Argentina (1987–2001). *Source:* Acosta and Montes-Rojas (2008).

that trade liberalization reduced inequality prior to NAFTA and had a positive but negligible effect thereafter. Pavcnik, Blom, Goldberg, and Schady (2004) reported no relationship between trade liberalization and inequality for Brazil; and the findings of Acosta and Gasparini (2007) were similar in relation to Argentina. Acosta and Montes-Rojas (2008) showed that trade openness can even be considered as a mechanism to reduce inequality and that the positive effect of trade liberalization on inequality is temporary. This hypothesis has been corroborated in the Chilean case (Gill and Montenegro, 2002), where amid the massive trade liberalization started by the Pinochet's government, which spiked inequality, skill premia has been steadily declining in the past decade.

### TRADE AND INFORMALITY IN THE 1990s

Aside from the abundantly documented effects on employment levels and compensations, trade liberalization has a potential effect on labor informality. Informal economic activity is a common feature of developing countries. Informality refers to the lack of compliance with taxation and regulation by employers, and the lack of protection and services that the government can provide to workers. Workers and firms may voluntarily choose to have “informal” contracts to avoid unwanted or undervalued benefits (Maloney, 1999, 2004); however, we assume a positive association between job formality and job quality. It should be emphasized that the term “job quality” does not necessarily entail a welfare judgment. Job quality is a multidimensional concept that entails job characteristics (monetary wages, pecuniary, and nonpecuniary benefits) as well as its dynamics features (job stability).

Evidence for developing countries on the potential effect of trade exposure on the size of the informal sector is scant. In Latin America, Goldberg and Pavnick (2003) showed results from Brazil and Colombia: they found no effect in Brazil, but did find a positive relationship in Colombia during the period preceding a major labor market reform. Bosch, Goñi-Pacchioni, and Maloney (2012) also did not find a significant effect of trade reforms in the rise in informality for Brazil in the 1980s and 1990s, where the more important drivers were increased costs of layoffs and union power. Aleman-Castilla (2006) found that Mexican import tariffs are significantly related to reductions in the likelihood of informality in the tradable industries; however, informality decreases less in industries with higher levels of import penetration, and more in industries that are relatively more export oriented. Acosta and Montes-Rojas (in press) presented evidence for Argentina showing that informality has significantly increased in manufacturing sectors in which trade liberalization has been more intense, accounting for around a third of the increase in informality between 1993 and 2003.

## OTHER DIMENSIONS

The Mercosur trade agreement should be seen as a step toward a larger integration among Latin American countries. Many other integration experiences have a trade component, but they have also advanced in other dimensions. Other dimensions of integration are monetary, political, labor, capital, fiscal, or social legislation integration.

The most important outcome after Mercosur is political coordination. In fact, Argentina and Brazil have a significant history of recent political coordination. This could be argued to be the result of the success of the Mercosur. Several examples could be named on this issue. First, the cancellation of the International Monetary Fund (IMF) debt is a paradigmatic example: both Argentina and Brazil embraced an emblematic cancellation of the debt to avoid the IMF interference on internal economic issues. Second, the incipient political integration<sup>1</sup> of Unasur is also a result of the success of the Mercosur experience. A recent example of its working was the Paraguayan *coup d'état* which was contained, although unresolved, within the Unasur framework. Third, the majority of Mercosur member countries rejected the FTAA proposal at the IV Cumbre de las Américas (IV Summit of the Americas) in Argentina in 2005. This rejection paved the way for the inclusion of Venezuela as a full member. In fact, the politics of containment of Venezuela within the Mercosur should be seen as a positive aspect for the region.

It should be noted, however, that significant size differences among Mercosur members determine that Brazil has the largest political power. Thus, the common external tariffs were imposed mostly at Brazil's convenience (see Olarreaga and Soloaga, 1998). Moreover, Paraguay and Uruguay being both

small open economies results in their benefiting less from trading with relative larger countries such as Argentina and Brazil than they would with the rest of the World.

In contrast, Mexico's role within the NAFTA as a trade partner with small political weight in comparison to its northern giant partner isolated it with respect to other Latin American countries. This isolation became more evident when the United States entered a longstanding recession. Nevertheless, the rapid and meteoric help received from the United States after the Mexican "tequila" crisis greatly differs from Argentina's isolation after the 2001 collapse.

The lack of additional monetary and fiscal policy and exchange rate coordination among the Mercosur countries has produced periodic crises and even distortions in the economic relationships among its member states (see Baer, Cavalcanti, and Silva, 2002; Baer and Silva, 2012). Albeit with several limitations, currency devaluation wars were averted in the last two decades of Mercosur, and political intervention reduced tensions within industries. Observers have often claimed that things might have been better had the member countries been willing to establish a common currency and central bank, thus giving up sovereignty over monetary policy (see Viale et al., 2008). This same issue is treated in Amann and Baer (2012) with respect to the European Union. Regarding this point, however, maintaining sovereignty and independence on monetary policy might be seen as a good thing after the European Union crisis.

## CONCLUSION

The purpose of this note is to develop a counterfactual exercise to evaluate the performance of Mercosur by comparing Argentina to Mexico. The comparison is used to compare South-South versus South-North trade agreements, and the discussion suggests that Mercosur should be evaluated in more dimensions than purely in terms of trade.

## NOTE

1. The Union of South American Nations, in Portuguese: *União de Nações Sul-Americanas*—UNASUL, Spanish: *Unión de Naciones Suramericanas*—UNASUR, is an intergovernmental union integrating two existing customs unions: Mercosur and the Andean Community of Nations (CAN), as part of a continuing process of South American integration. It is modeled on the European Union.

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