The North American Free Trade Agreement (NAFTA) is arguably the first “case study” of what might be expected from the increasing number of preferential trade agreements involving both developed and developing economies. Ten years after the treaty’s inception, it is time to assess how its outcomes compare with initial expectations. The articles in this symposium issue provide insights into the effects of NAFTA on economic geography, trade, wages and migration, and foreign investment from Mexico’s perspective. The contributions paint a complex post-NAFTA reality characterized by persistent intrabloc trade barriers, interregional inequality within Mexico, labor market outcomes that seem closely tied to migration patterns and international trade and investment, and foreign investment flows that appear weakly related to trade agreements. NAFTA seems to be the first trade agreement in history for which the traditional static trade creation or diversion effects are likely negligible—and hard to identify in any case.

Trade negotiations among Mexico, Canada, and the United States began informally in 1990 and more formally in 1991. The North American Free Trade Agreement (NAFTA) was implemented in January 1994. From the outset of negotiations, this preferential trade agreement among developed economies and a developing economy became controversial. On the one hand, it raised concerns about the impact of preferential trade on the multilateral trading system, especially after numerous other countries in Latin America and elsewhere jumped on the preferential trade agreement bandwagon. On the other hand, the advent of NAFTA raised public awareness of the developmental effects of trade liberalization, including its potential effects on economic growth, labor markets, and the environment.

Ten years later, it is useful to ask how closely NAFTA’s outcomes have tracked initial expectations. The articles in this symposium issue explore specific aspects
and effects of this preferential trade agreement from Mexico’s perspective. The contributions paint a complex post-NAFTA reality, characterized by persistent intrabloc trade barriers, interregional inequality within Mexico, labor market outcomes that seem closely tied to migration patterns and international trade and investment, and foreign investment flows that seem only indirectly related to free trade agreements. NAFTA may be the first trade arrangement in history for which the traditional static trade creation or diversion effects are likely negligible—and hard to identify in any case. And NAFTA is arguably the first “case study” of what might be expected from the recent upsurge in preferential trade agreements involving both developed and developing economies.

Before entering into the specific details of the articles, it may be instructive to recall some relevant details about NAFTA. First, since Mexico had unilaterally reduced import tariffs beginning in 1985, it is difficult to separate the effects of NAFTA on the volume and composition of Mexico’s trade from the effects of the unilateral reforms, especially since even the announcement of NAFTA talks could have had an impact on economic outcomes. Also, the U.S.–Canada Free Trade Agreement had been implemented in 1988, and consequently NAFTA’s effects on global trade patterns are also difficult to differentiate from trends that predated 1994.

During the 1990s, Mexico became one of Latin America’s heaviest trading economies, with the highest volume of trade as a share of gross domestic product (GDP). Mexico caught up with Chile on this indicator of economic integration and is fast approaching the very high trade shares—more than 100 percent of GDP—typical of smaller economies such as Costa Rica. Importantly, this increase in Mexico’s trade was associated with fast growth in intra-NAFTA trade.

Second, while NAFTA entailed substantial trade reforms by Mexico, it required much less liberalization from the United States and Canada, which had already significantly lowered trade barriers. Most import tariffs and other restrictions to trade among the United States, Canada, and Mexico were eliminated over the first 10 years of implementation. The average Mexican tariff fell from about 12 percent in 1993 to 1.3 percent by 2001. U.S. tariffs on Mexican imports fell from 2 to 0.2 percent. However, duty-free access to NAFTA markets depends on the fulfillment of product- and sector-specific rules of origin, which determine the criteria for products to be considered as originating in a member country. Market access for some Mexican exports is inhibited by these rules.

Third, like most preferential trade agreements, NAFTA did not achieve truly free trade, and many distortions still remain. Some tariff rate quotas for sensitive agricultural products will finally be eliminated by 2008, but these quotas have not been binding, and thus most agricultural imports from the United States and Canada have entered Mexico duty-free. However, Mexico’s import-competing agriculture benefited from subsidies ranging from decoupled income transfers to producers to a variety of subsidies affecting domestic producer prices. The decoupled income supports known as PROCAMPO are scheduled to
be eliminated by 2008, but like the other subsidies they are not currently subject to international disciplines. Also, all member countries have continued to use antidumping and countervailing duties according to their own national trade laws. In addition, NAFTA allows the use of temporary safeguard duties when a country faces sudden import surges that disrupt domestic production. At the same time, going beyond what other shallower preferential trade agreements have achieved, NAFTA established various dispute settlement mechanisms dealing with foreign investment and trade. It also established a review mechanism for the use of antidumping and countervailing duties.

Lastly, besides trade-related measures, NAFTA includes a variety of provisions affecting investment flows, financial and other services, government procurement, and protection of intellectual property rights. However, the agreement did not establish a fully liberalized financial system. For example, it provides for only limited foreign participation in the banking system. In contrast, it did establish an open capital account for cross-border financial services. But Mexico had already unilaterally opened its capital account before NAFTA was implemented in 1994, and thus it is not obvious that the agreement had much additional impact through liberalization of the capital account.

In sum, NAFTA entailed substantial although incomplete trade reforms. At the same time, the agreement went well beyond traditional trade issues. On top of this complexity, Mexico experienced economic shocks after implementing NAFTA, which complicate the analysis of the impact of the agreement.

I. WHAT WAS EXPECTED FROM NAFTA?

When NAFTA came into force, there were hopes that the treaty would speed up growth and income convergence in Mexico toward its partners and that wage convergence and new employment opportunities in Mexico would discourage migration to the United States. At the same time, it was feared that the treaty might have a negative impact on Mexico’s environmental regulations and environmental outcomes.

The impact on growth and income convergence—the dynamic effects—would have as key intervening mechanisms trade and foreign investment. These would accelerate technological catch-up through the adoption of foreign technologies embodied in imports (Keller 2001) or brought by foreign investors, as the competitive pressures created by trade openness forced firms to reduce production costs and perhaps created incentives for research and development under strengthened intellectual property rights (Lopez-Cordoba 2003). There would also be effects through factor movements from less to more productive

1. Annexes VII(B) and 1413.6 of NAFTA limited foreign penetration in Mexico’s banking system to a maximum of 25 percent of the aggregate capital of all commercial banks. NAFTA’s restrictions on foreign insurance companies were even more severe. Mexico removed the limitations on foreign entry into the domestic commercial banking system unilaterally during the financial crisis of 1995.
sectors and firms (Lederman, Maloney, and Servén 2005, chapters 2 and 5). At the same time, it was expected that firms would congregate close to the U.S. border, displacing Mexico’s economic center further to the north and creating a gradient of progressively poorer regions at greater distance from the border.

Wages, jobs, and migration were at the center of the political debate over the merits of NAFTA from the very beginning. A reduction in the wage differential between Mexico and the United States was one of the primary hopes attached to NAFTA. Proponents of the treaty argued that rising trade and foreign direct investment (FDI) would increase demand for labor in Mexico and thus Mexican wages relative to U.S. wages, reducing incentives for Mexican workers to migrate to the United States (Hanson and Spilimbergo 1999). Indeed, former Mexican President Carlos Salinas de Gortari expressed the hope that NAFTA would lead to the export of goods rather than people.

The impact on FDI is an aspect of the dynamic effects of preferential trade agreements that has attracted considerable attention because of the presumed contribution of FDI to technological advances and productivity growth. Empirically, however, evidence suggests that entry into a preferential trade agreement does not itself ensure a takeoff of FDI inflows. Spain and Portugal experienced transitory FDI booms at the time of European Union (EU) accession, but Greece did not (Kehoe and Kehoe 1995). Furthermore, qualified observers expressed the fear that Mexico’s FDI gains would come at the expense of Central America.

Lastly, a key concern among NAFTA skeptics—one that attracted much attention in the political and policy debate—was that the prospect of increased trade and FDI would induce Mexico to weaken its environmental regulations to attract businesses, the so-called race to the bottom that could transform Mexico into a pollution haven for foreign investors.

Since it is difficult to empirically assess the growth and structural effects of NAFTA on the Mexican economy and their subsequent impact on pollution, the evolution of Mexico’s environmental regime may be the best measure of NAFTA’s environmental consequences. A quick look at the literature reveals that Mexico’s environmental regulations and enforcement capabilities in fact became stronger in the years when NAFTA was being negotiated and implemented. In addition, the trade agreement was accompanied by an environmental side agreement, which may have institutionalized a source of constant pressure on the Mexican authorities. Furthermore, the most recent evidence concerning the

2. For example, Gilbreath (2003) shows that since 1988 Mexico has experienced a renaissance of environmental legislation that raised standards and the enforcement powers of the federal government. These developments, however, would need to be balanced against the controversial NAFTA provisions that protect foreign corporations from sudden and discriminatory changes in regulations. It is plausible that these provisions could be used by private companies to demand remedies when a local, state, or federal government changes regulations after foreign corporations have begun operating under previous regulations. Gilbreath argues that the rapid pace of the reforms during 1991–96 can only be explained by the political pressures exerted by the NAFTA debate in the United States and Mexico.
effect of international trade on pollution suggests that there is no adverse causal
effect (Frankel and Rose 2005). Thus it is hard to conclude that the advent of
NAFTA brought about an environmental race to the bottom. Rather, it seems to
have produced a race to the top in environmental institutions. For these reasons,
this symposium does not include a specific assessment of the environmental
consequences of NAFTA.

II. Assessing the Effects of NAFTA: Contributions
in this Symposium

The contributions focus on four topics: economic geography, trade, wages and
migration, and foreign investment flows.

Economic Geography

However mild or strong the aggregate growth effects of NAFTA might have been,
the economic gap between the poorest regions or states within Mexico and the
rest of the Mexican economy did increase after the trade reforms—including the
unilateral reforms initiated in the mid-1980s. It is not clear, however, whether
this was the result of trade liberalization or the result of the continuing effects of
the unfavorable initial conditions in Mexico’s southern states.

The conventional wisdom in the literature seems to be that NAFTA and trade
reforms disproportionately benefited the northern states of Mexico through
economies of scale driven by transport costs. Hanson (1997) was one of the
first to study how the economic geography of Mexico changed because of the
unilateral trade reforms. His conclusion was that wages had in fact grown faster
in cities along the Mexico–U.S. border than in the rest of the country.

A more recent contribution by Nicita (2004) explores another channel
through which trade reforms might have affected Mexico’s economic geography.
He first analyzes the pass-through of tariff reductions for a set of agricultural
commodity and manufactures aggregates across the Mexican territory,
allowing for a less-than-full transmission of trade reforms for states further
from the border. Second, Nicita estimates household income and consumption
elasticities about the same set of aggregate prices, enabling him to calculate the
welfare effects of tariff reductions across households. He finds that poverty fell
in Mexico because of trade reforms but that some regions fared better than
others.

The new evidence provided by Aroca, Bosch, and Maloney in this symposium
confirms views advanced in earlier literature but provides a more nuanced
depiction of trends in per capita incomes across regions within Mexico. First,
while it is true that northern cities and states are richer than southern states, it is
not clear that these differences imply a linear gradient regarding the U.S. border.
There does not seem to be a convergence club of the north of Mexico, because
the levels and trends in GDP per capita of the northern states are not significantly
different from those of the central states, including the Federal District of
Mexico City, which remains the richest agglomeration in the country. Second, the three poor southern states—Chiapas, Guerrero, and Oaxaca—seem to constitute a club of poor states whose economic distance from the rest of the country increased after 1985. Thus, spatial analysis methods provide a clearer picture of the geography of integration by allowing for the emergence of pockets of poverty or convergence clubs.

**Trade Effects**

While trade creation and trade diversion effects did not occupy center stage during the initial NAFTA debate, they are always a cause for concern when trade preferences are extended on a discriminatory basis. In the early years, a host of ex ante estimates were carried out using computable general equilibrium models. The consensus today is that these attempts to study the trade effects of NAFTA—and other trade arrangements—failed to predict both the aggregate welfare effects and the sectoral composition of the ensuing growth (Kehoe 2003). More recent ex post estimates using gravity models of trade do not yet offer a clear-cut assessment of the trade effects of NAFTA. Post-NAFTA trends in trade patterns do not seem very different from earlier ones, which may simply reflect the difficulty in disentangling the impact of NAFTA from the delayed effects of Mexico’s unilateral reforms of the late 1980s (Carrière forthcoming).

It is also possible that limitations of the agreement itself dampened its potential impact on trade.

One such limitation, common to preferential trade agreements in general—unlike customs unions—is the use of rules of origin. These rules establish the criteria affecting the transformation and regional input use that must take place within a country’s territory for a product to be considered produced by that member country. These rules are thought necessary to prevent trade deflection: the relabeling and reexport of imports from the rest of the world to take advantage of preferential access. But rules of origin are often the main objective of the negotiations, whose outcome is typically influenced by special interest groups (Estevadeordal 2000; Estevadeordal and Suominen 2005). Furthermore, if the rules are very onerous, exporters may decide to export under most-favored-nation tariffs, rendering the preferences irrelevant.

Another potential shortcoming of NAFTA and trade agreements in general is their use of administered protection in the form of antidumping and countervailing duties. If preferential trade agreements do not curb the use of these duties, the extent of true trade liberalization will fall short of the preferential tariff reductions, and thus trade creation will be lessened—although trade diversion may be lessened as well.

Two contributions in this symposium assess these potential limitations of NAFTA. First, Cadot and his coauthors examine the effects of rules of origin in the textiles and apparel industry, where trade diversion could have been strongest. At least since the contribution by Krueger (1993), a concern has been expressed in the literature about the potentially pernicious effects of rules of origin. Cadot
and his coauthors look at the behavior of export prices for Mexican apparel exporters. Their estimates of the pass-through from tariff preferences in the U.S. market to export prices for Mexican producers suggest that about one-third of the increase in export prices was offset by the cost of complying with NAFTA rules of origin.

Second, Blonigen explores the determinants of antidumping and countervailing duty investigations by the United States. His estimations of count data models suggest that the conditional frequency of such cases did not change after 1994. Thus, NAFTA failed to curtail the threat of such actions and their trade-reducing effects, which in a context of imperfect competition can be even larger than the effects of more transparent trade barriers such as import tariffs. Given the rules of origin and the threat of antidumping and countervailing duties, it is not surprising that estimates of trade creation and diversion fail to find much of an effect.

**Effects on Labor Markets and Migration**

Contrary to the hopes of NAFTA proponents, there is little evidence of a narrowing of the U.S.–Mexico wage differential under NAFTA. But this is one of the areas in which inferences about the treaty’s effects are greatly complicated by the Tequila crisis. Mexico’s wages relative to U.S. wages rose rapidly during the overvaluation of the peso in the run-up to the crisis and then fell sharply with the collapse of the peso and the recession of 1995. Trade liberalization cannot be held responsible for the sudden widening of the wage differential or for its relatively rapid narrowing following the crisis.

Robertson assesses the effects of NAFTA on labor market integration by looking for changes along three dimensions: (a) the responsiveness of Mexican wages to U.S. wage shocks, (b) the speed at which relative wages converge to their long-term differential, and (c) the rate of convergence of absolute wages. Robertson uses panel data on synthetic worker cohorts and makes a variety of adjustments to deal with the effects of the Tequila crisis. On the whole, he finds only limited evidence of increased integration under NAFTA by any of the above criteria. The strongest hint at convergence comes from the seemingly closer co-movement of the wages of skilled workers on both sides of the border, something not found for the wages of unskilled workers. This trend likely reflects the ongoing rise in the skill differential in all NAFTA partners, rather than the effects of the agreement. At best, the treaty seems to have made only a modest difference, and by some measures, labor markets appear less integrated under NAFTA than before.

Robertson seeks to explain this puzzle through migration, which, like trade and FDI, is another important force integrating labor markets. Assessments of trends in migration from Mexico to the United States are greatly complicated by the lack of reliable data, owing to the illicit nature of much of the migration. Robertson works around this problem by using data on U.S. border enforcement, which became stricter following NAFTA. An empirical analysis of the forces
driving wage differentials suggests that trade and FDI increases in the post-NAFTA period contributed to a narrowing of U.S.–Mexico wage differentials, ceteris paribus, but that much of the effect was offset by the simultaneous tightening of U.S. border enforcement that exerted a negative effect on Mexican wages by restricting illegal migration.

To assess the effect of NAFTA on migration itself, despite the data problem, Aroca and Maloney take an indirect route. They use information on the effects of NAFTA-related variables on migration within Mexico to infer the treaty’s consequences for migration into the United States. To justify this approach, they offer evidence that domestic and international migrants share broadly similar characteristics and face mobility costs that are not too different.

The article’s empirical analysis, based on data on migrants’ origin and destination by state, allows disentangling substitution and income—or liquidity—effects of changes in relative earnings across locations. In contrast to much of the literature, this approach yields significant migration-deterring effects of labor market performance variables at the source location. More important, the article finds that both FDI and trade flows are substitutes for labor flows: their pull effects on migration are generally larger than their push effects. One caveat, however, is the lack of good instruments to deal with the potential endogeneity of trade and FDI location decisions; for this reason, the results have to be viewed with some caution. Aroca and Maloney use their estimates to draw some tentative inferences on the impact of FDI on Mexican migration to the United States.

Foreign Direct Investment Effects
Conceptually, a preferential trade agreement affects both the profitability and the risk of investing in member countries. Preferential trade agreements can boost profitability by raising the return on capital in member countries, thus encouraging investment. Such trade agreements also alter the relative profitability of investing in different member countries in a way that depends primarily on whether investment flows are horizontally or vertically motivated—whether they substitute for trade flows or complement them (Blonigen 2005). If FDI is a substitute for trade flows, it may decline with the dismantling of trade barriers; if it is a complement to trade flows, it is likely to rise. Mexico, like most developing economies, receives primarily vertical FDI (Shatz and Venables 2001), and so NAFTA membership is expected to enhance Mexico’s appeal to investors seeking a platform for exports to partner countries.

Preferential trade agreements also affect the perceived riskiness of investment through a credibility effect, which many analysts consider to be even more important than the profitability effect. It arises from the way preferential trade agreements lock in trade policies—and other reforms included in the agreement, such as protections provided to foreign investors—and from the agreement’s guarantee of access to partner countries’ markets. Some have argued that this credibility
dividend should be expected to play a much bigger role in developed–developing economy preferential trade agreements than in trade agreements among only developed economies or only developing economies (Blomstrom and Kokko 1997).

While NAFTA coincided with a surge in FDI into Mexico, the surge took place in the midst of a worldwide FDI boom. The article by Cuevas, Messmacher, and Werner attempts to disentangle the roles of NAFTA and other factors in Mexico’s FDI performance. They use a panel empirical framework in which the effects of NAFTA membership on FDI inflows are captured by the host country’s extended market, as measured by the aggregate GDP of all partner countries. This is combined with a variety of other variables representing local and global determinants of FDI.

They find robust support for the notion that joining a preferential trade agreement leads to higher investment inflows, to an extent that depends on the size of the host country’s trade agreement partners. The authors estimate that NAFTA membership accounts for an increase in FDI in Mexico ranging from 25–30 percent—when Mexico’s exports are held constant—to 60 percent—when the response of exports to preferential trade agreement membership is factored in.

One important question is whether the effect of preferential trade agreements on FDI inflows is just temporary, reflecting a portfolio stock adjustment—as, for example, Fernández de Córdoba and Kehoe (2000) found for Spain’s integration into the EU. Cuevas, Messmacher, and Werner likewise find that their empirical equations tend to overpredict FDI inflows to Mexico at the end of the 1990s. This result is consistent with a one-time adjustment effect, but other explanations are also possible. An upward reassessment of the anticipated returns in Eastern European countries—and a downward reassessment of their perceived risk—with their expected EU accession may have reduced Mexico’s relative appeal as an investment destination, for example.

Lastly, Cuevas, Messmacher, and Werner explore investment diversion—the notion that preferential trade agreements may make investment more attractive in member countries at the expense of outsiders—by adding an explanatory variable that captures any special attraction as an FDI destination that may come from membership in a preferential trade agreement. This approach fails to yield a statistically significant effect, however. But the result applies to all preferential trade agreements in the sample, leaving unexplored the extent to which NAFTA fits that general pattern. Lederman, Maloney, and Servén (2005, chapter 7) offer some NAFTA-specific evidence. Examining country-specific deviations from past FDI performance in the post-NAFTA years, they find that Mexico outperformed other Latin American countries in 1994–95 (or 1994–96) but not in later years. They also show that Mexico’s high FDI performance does not seem to have been matched by underperformance by other countries in the region, suggesting that investment diversion effects, if present at all, are unlikely to have been very strong.
References


