Origin, the present day and trends in shared production.
NORTH AMERICA
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One of the most noticeable effects of NAFTA is the development of complex value chains that deal with the economic integration of the region. This agreement, however, has reached its peak, making it necessary to adopt new commercial exchange instruments.

During the integration process of North America there were two important turning points that ensued in 1965. Firstly, the agreement on automotive products signed by the United States and Canada which provided an incentive for the creation of a more comprehensive free trade agreement between the two countries in 1988. Secondly, the establishment of new promotion policies for the textile export industry (maquiladoras), aimed at creating employment, strengthening trade balance, attracting foreign currency and boosting technology imports to our country. On the other hand, the textile industry had the particular effect of encouraging productive integration in the Mexico-United States border region.

The economic crises of the sixties and eighties in Mexico encouraged trade liberalization. Trade openness was devised to promote the export of goods manufactured with greater added value —minimizing primary goods— and attracting foreign investment. This policy, along with the acknowledgement of the United States as a key exporter of goods and an important source of investment, led Mexico to consider the establishment of formal mechanisms to manage the economic exchange between the two countries. This event led to an increase in regional integration proceedings. The completion of these proceedings took place in the last decade of the 20th century. The Mexican Government observed the growing tendency towards a greater regional integration worldwide and acknowl-
edged the importance of keeping up with this transformation. Its response followed Canada’s example and proposed the creation of an integration project that could position Mexico in North America. In this way, the North American Free Trade Agreement (NAFTA), signed in 1993 by Mexico, the United States and Canada emerged.

NAFTA is one of the most relevant international economic policy measures that Mexico has implemented. From the perspective of the goal that guided its negotiation, trade promotion and regional investment have been successful. Furthermore, it has encouraged the integration of key industries and the reinforcement of value chains in diverse segments. Thus, it has been a key instrument in the integration of North America.

However, regarding other important goals, NAFTA has fallen short of expectations. The per capita income of Mexico and the United States has not converged as required and the contribution of the agreement towards the creation of employment opportunities has not been sufficient. One has to consider, nevertheless, that during NAFTA, Mexico went through three different economic crises — in 1994, 1997 and 2007 — that did not have any relation to the agreement that in any event helped the country overcome them.

During the first 20 years of NAFTA (1994-2014), trade among its members tripled, with an average annual growth of 7.2%. However, performance has not been consistent. Trade under NAFTA had an outstanding development between 1994 and 2000, with an average annual growth rate of 12%, compared to the worldwide average of 8% during the same period. In turn, since 2001, annual trade growth under NAFTA has not surpassed international averages. Despite this fact, regional integration has continued. We can observe that after decreasing between 2001 and 2007, during the subsequent period, the average annual trade growth of each NAFTA member with their counterparts surpassed third party trade; this had already been observed during the most dynamic period between 1994 and 2000.

A similar trend can be perceived in the foreign direct investment flows (FDI) in the region. The Mexican FDI assets in the United States and Canada grew, respectively, 701% and 748% in the first year of the agreement. The FDI assets in Mexico that originated in the United States and Canada doubled between 1994 and 2007.

In the last decade of the 20th century, the government focused its attention on regional integration and acknowledged the need to not be left on the outskirts.
2000. Nevertheless, the flow drive has weathered. Whereas between 1994 and 2000 the FDI flows to Mexico under NAFTA on average grew exponentially faster than the rest of the world, this was thwarted in the 21st century.

This reveals that the period of time following 2001 has been complex for NAFTA. The first element that helps to understand this halt is the fact that China entered the WTO in 2001. This affected the position of Mexican exports to the United States. In 1994, Mexico controlled 7% of the American import market; this figure grew to 13% in 2015. During the same period, China increased its shares in the same market from 6% to 21%, without acting in a context similar to those dictated by NAFTA.

Another element that halted the agreement was the economic crisis suffered in 2008, the worst in the United States since The Great Depression. This crisis thwarted economic exchanges in the region and, in turn, the integration process.

Despite the fact that the impact of these events was crucial, the events that had a more negative influence on the integration of North America are the terrorist attacks of September 11, 2001. These occurrences resulted in the alteration of the policies that governed the American border, which severely affected trade in the region.

To put it into perspective, 70% of trade between Mexico and the United States goes through its border by land. The changes in border management procedures were considerably detrimental to regional integration.

Each of the three North American partners has made efforts towards strengthening the process of integration. The “intelligent borders” program, which was designed to encourage trade while dealing with the American national security concerns, stands out. Moreover, the Security and Prosperity Partnership of North America (SPP), which included competitive encouragement schemes, is worth mentioning. More recently, a high level economic dialogue (DEAN) was implemented. It highlighted the importance of boosting productivity, connectivity and economic growth. These undertakings have shown modest but significant results.

Notwithstanding the difficulties afflicting NAFTA, it is important to mention that the agreement has boosted

**NAFTA is one of the most relevant international economic policies that Mexico has implemented**
the consolidation of regional value chains and production sharing in North America. The intensification of production sharing procedures implies that diverse products cross the border on multiple occasions during their manufacturing phases. This entails that Mexican imports of “American” products, as an example, often contain Mexican added value. This is probably the most important long-term legacy of NAFTA.

In only a few sectors has this procedure reached this level of visibility as in the automotive. This industry has been crucial to the integration of North America, making Mexico the fourth most important exporter and the eighth largest producer of vehicles in the world. From 1994 to 2014, vehicle production in NAFTA countries grew 16%. In 2014, the region contributed 19% of vehicle production worldwide. Thus, the performance of the automotive industry in North America is fundamental to the regional economy, above all because it provides inputs from a wide range of similar local industries.

Despite its achievements, NAFTA is no longer a useful instrument. Production and trade practices have changed. For this reason, each member opted for a renovation of the integration procedure. This update will be carried out through the Trans-Pacific Partnership (TPP), an agreement — currently under ratification process — among 12 countries, including the three members representing North America. The TPP is a mechanism whose goal is to ‘modernize’ NAFTA and, thus, to restore the integration process in North America.

This does not mean that the TPP will override NAFTA but rather that they will coexist. However, since it’s applicable to the three North American members, TPP guidelines will renovate the trade integration process. This will be achieved through new guidelines in areas such as rules of origin, electronic commerce, telecommunications, intellectual property, competitiveness and investment; key sectors in the 21st century economy.

The integration process in North America gave rise to various difficulties that Mexico, the United States and Canada had to deal with. Despite these circumstances, our countries have achieved the promotion of trade and investment as well as the creation of value chains and shared production in the region. These accounts have brought actual important benefits for the three countries. Nevertheless, it is crucial to recognize that the instruments designed to encourage integration in the 20th century are no longer sufficient. The key schemes in global trade have been modified, thus, the instruments that regulate them should be modified as well.

The challenge is to adopt new mechanisms that encourage regional integration and competitiveness. The best scenario — to create a customs union or a common market — is not so promising due to the political environment of the three members of NAFTA. It is important to search for alternatives. One of them is to modernize trade guidelines in the region. There are several options to take into consideration. At this moment, the most viable — aside from renegotiating NAFTA — would be to rely on the TPP. Its ambitious agenda, though improvable, has the capacity to ignite economic links in the region. Nowadays, it is the best alternative to enhance the integration process of the region. Walking this road means encouraging economic vitality and prosperity in North America.

Translated by Sonia Georgette Alfaro Victoria

Despite its achievements, NAFTA is no longer an adequate instrument. Production and trade practices have changed.
A REGIONAL MANUFACTURING PLATFORM\textsuperscript{1} / Christopher Wilson

Measuring the final goods trade between Mexico and the United States is vital but not sufficient. The author turns to recent databases on intra-industry and intra-firm trade, routes of intermediate goods and trade in value added to show how deep commercial integration is in North America.

Since the 1990s, trade between the United States and Mexico has grown tremendously, with bilateral goods and services trade in 2015 reaching a total six times greater than before the North American Free Trade Agreement (NAFTA) was implemented in 1993.\textsuperscript{2} In 2015, bilateral trade reached 584 billion dollars, meaning that the United States and Mexico trade more than a million dollars worth of goods and services every minute. The United States is Mexico’s top export market, and Mexico is the second largest foreign buyer of U.S. goods, second only to Canada. The bilateral trade relationship is enormous in size, and the U.S. and Mexican economies each depend significantly upon one another.

As impressive as it is, the magnitude of the U.S.-Mexico trading relationship is probably not its most important feature. Instead, it is the deepening of manufacturing integration between the United States and Mexico which has truly changed the nature of the bilateral economic relationship. The United States and Mexico do not simply sell finished products to one another, but rather produce them together. Supply chains crisscross the U.S.-Mexico border, such that parts and materials often cross the border multiple times during the course of production.

Mexican oil, for example, might be sent to the United States to be refined and turned into raw plastic in Louisiana, before being sent to an injection molder in the U.S. Midwest.

Christopher Wilson is Deputy Director of the Mexico Institute at the Woodrow Wilson International Center for Scholars.
that creates the components for a car’s dashboard. Those parts might return to Mexico for assembly at a factory along the border and then be used in the final production of a car in the Bajío. Most of those cars would probably return to the United States to be sold to consumers, but they may very well be shipped to customers around the world as well. Through these types of operations, the main components of cars built in North America have been found to cross the United States borders with Canada and Mexico an average of eight times as a vehicle is being produced.3 With such deep integration, there is no longer any such thing as an American car, a Canadian car, or a Mexican car. There are only North Americans cars, incorporating parts and materials from across the continent. Although competition can, does, and should still exist between producers on both sides of the border, at this point the United States and Mexico are better conceived as business partners working together to improve the competitiveness of their joint operations than as competitors fighting for market share (Figure 1).

Since NAFTA was implemented in 1994, complex cross-border value chains have become the defining characteristic of the U.S.-Mexico economic relationship, but with only traditional trade statistics, it was for years very difficult to measure and monitor the depth of economic integration that was occurring. Regular trade data can tell us that bilateral trade has grown more than six-fold since 1993 to its current level of more than a half-trillion dollars, and while that is huge growth and an impressive total, it does little to describe the unique nature of the U.S.-Mexico manufacturing partnership that has developed over the past decades. This short essay will look at a number of newer datasets to learn what we can about the development and current status of production sharing networks between the United States and Mexico.

Intra-Industry and Intra-Firm Trade

Traditionally, the expectation was that when two countries trade, each would specialize in creating the types of goods they produce best. In the context of U.S.-Mexico trade, this would mean that Mexico specializes in labor-intensive production, and the
show us that bilateral trade among the relevant nations does not simply consist of exchanges of wine for cloth—to cite Ricardo’s famous example—or avocados for grains. Not only does a large portion of U.S.-Mexico trade take place within the same industries, but also within the same companies. Since 1993, the total stock of bilateral foreign direct investment has grown from $16$ billion USD to $106$ billion. When U.S. and Mexican companies open up subsidiaries in the other country, they tend to develop cross-border trading networks to supply their operations. In 2013 (the most recent year for which this data is available), bilateral trade between U.S. and Mexican parents and their majority-owned affiliates operating in the other country represented $97.8$ billion dollars, or $19\%$ of all U.S.-Mexico trade in goods. Some of this intra-firm trade takes place in wholesale and retail networks, but by far the largest part of bilateral intra-firm trade is in the manufacturing sector.

This suggests that a very large portion of the intra-firm trade within the region happens within the context of the strong joint production platform for manufactured goods throughout North America. Businesses in the region have created highly competitive value chains that span the continent, taking advantage of economies of scale and the unique comparative advantages of each country in North America.

Cross-Border Supply Chains

Of course, most of the value chains in the region involve not only the participation of multiple facilities of a single firm, but rather a complex web of suppliers, material makers, and assembly plants involving numerous companies. The

### Table

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<tr>
<th>Intra-industry trade with top U.S. trading partners</th>
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<td><strong>Grubel-Lloyd Index of Intra-Industry Trade, 2015</strong></td>
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<td>Canada</td>
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<td>Japan</td>
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<td>China</td>
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**SOURCE:** Author’s calculations based on four-digit data from the North American Industry Classification System (NAICS).
World Input-Output Database allows one to track the use of intermediate goods produced in one country, which are then traded and used as inputs for production in another country. In 2011, the most recent year for which this data is available, Mexican industries consumed 140 billion dollars in U.S. intermediate goods, and U.S. industries consumed 111 billion dollars worth of Mexican inputs. This is direct evidence of joint production taking place between the United States and Mexico on a massive scale.

Though this data is not directly comparable to trade data and any attempt to do so should be taken with a grain of salt, comparing these figures to U.S. and Mexican imports and exports for the same year is revealing. If each Mexican input used in U.S. production in 2011 was also imported in 2011, they would account for 42% of all U.S. imports from Mexico. In the same sense, if each U.S. input used in Mexican production in 2011 was imported during that year, those transactions would account for 53% of all U.S. exports to Mexico. Figure 2 shows the growth in the use of inputs from across the border in U.S. and Mexican production since 1995. In 2011, the two countries used a combined 251 billion dollars in inputs from each other, growing nearly four-fold from the 65 billion in cross-border inputs used in 1995. As neighbors, and through NAFTA, the United States and Mexico have come to be tightly bound together, contributing extensively to each other’s systems of production.

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Trends in Production Sharing

Even as the value of U.S. and Mexican participation in each other’s supply chains has continued to grow consistently, some important developments can be appreciated by viewing how the relative share of this participation has changed over time and by analyzing related data from the recently created World Trade Organization (WTO) / Organization for Economic Co-operation and Development (OECD) Trade in Value Added Database (TIVA). The TIVA numbers distinguish between gross trade, or traditional import and export statistics that capture the full value of a product each time it crosses an international boundary, and trade in value added, which separates out

Figure 2
Value of foreign inputs for domestic production, billions of USD (1995-2011)

- Value of U.S. inputs used in Mexican production
- Value of Mexican inputs used in U.S. production


Figure 3

- % Mexican value added in U.S. exports
- % Mexican inputs in U.S. production

the foreign and domestic content of traded goods and services. These figures allow us to look at the extent to which intermediate goods traded between the United States and Mexico end up embodied in each country’s gross exports. Interestingly, and logically, we see in Figures 3 and 4 that the share of a country’s inputs used in another country’s production and the share of a country’s value added embodied in another country’s exports are closely related.

For Mexico, and its participation in U.S. production, the story is simple. It is one of continual growth. Just as the absolute value of Mexican inputs used in U.S. production has experienced secular growth since the 1990s, so has the Mexican share of all the intermediate goods used as inputs for production in the United States and the percentage of Mexican value added embodied in U.S. exports to the world (see Figure 3). This shows us U.S. industries are finding that by relying on Mexican suppliers, they can improve the productivity and competitiveness of their businesses. The percentages of Mexican participation in U.S. exports and intermediate goods consumption are overall still relatively low, reflecting the massive size of the U.S. economy and robust domestic supply chains (which produce a full 85% of the value in U.S. exports), but the continuous growth of Mexican participation demonstrates the value producers are finding in regionalizing their supply chains.

As shown in Figure 2, the United States sells even more inputs to Mexico than Mexico sells to the United States. Given that Mexico sends approximately 80% of its gross exports to the United States, it should be no surprise that the vast majority of the inputs sent from the United States to Mexico make their way back to consumers in the United States. In this sense, a study using data from 2004 found that U.S. imports of final goods from Mexico contained 40% U.S. value added, a number significantly larger than was found for U.S. imports from any other country included in the study (other examples: 25% for Canada; just 4% for China). Nonetheless, the portion of total inputs used in Mexican production that come from the United States, as well as

Figure 4

The U.S. value embedded in Mexican exports, has experienced some ups and downs (see Figure 4). During the 1990s, after the passage of NAFTA, both measures rose, but as value chains became more global and China in particular grew its participation in global systems of production, the U.S. share fell.10

This trend, this arc of increasing North American integration across all measures in the 1990s and then decreasing relative trade dependence in the first decade of the 2000s, has been the subject of some discussion among scholars.11 Some have interpreted the data as a sign of regional dis-integration, others as a natural consequence of economic growth in emerging economies. I tend to put more weight in the second argument, especially given the continued growth of absolute U.S. participation in Mexican value chains and the overall strength of the North American economy, but there is no space for complacency. There are plenty of reasons to believe that the thickening of the U.S.-Mexico border after the terrorist attacks of 9/11 did indeed raise costs for those employing regional production sharing,12 and there are a wide range of domestic and bilateral policy initiatives that should be implemented to strengthen regional competitiveness, ranging from infrastructure planning and investment to education reform, strengthened workforce training programs, and improved labor mobility, to name a few.

Conclusions

The United States and Mexico are profoundly linked, with value chains that span the region and crisscross the border. This deep level of integration has important consequences for the regional economy and for the policy makers charged with its management. First, the business cycles of the United States and Mexico are now tightly linked. The two countries experience growth and recession together, necessitating coordination and communication on issues of macroeconomic management. Second, the United States and Mexico are linked in terms of productivity and competitiveness. Productivity enhancing reforms or investments in either country increase...
the competitiveness of that country’s contribution to regional value chains, thereby increasing the competitiveness of the region as a whole. Finally, the integrated nature of the regional manufacturing platform creates a multiplier effect on the importance of trade and border management. Every time cargo crosses a border, there are costs associated with it—whether tariffs, transportation costs, added transportation costs due to border congestion, the costs associated with filing the proper import and export paperwork, or others. But in the case of the U.S.-Mexico border, which is often crossed multiple times during the production process, those border costs end up being paid multiple times. The negative side of this is that even small inefficiencies in the management of the border can easily add up to have major impacts on regional competitiveness. The positive side, though, is that infrastructure investments and process improvements that make U.S.-Mexico border and regional logistics operations more efficient tend to have a very high return on investment.

The shared North American production platform is already among the most competitive in the world. With attention to maintaining and growing the regional value chains that comprise the platform, the unique assets that each country in the region brings to the table will ensure that its status as a world leader endures.

1. This article has been adapted from the production sharing section of the forthcoming second edition of the Wilson Center publication, Working Together: Economic Ties between the United States and Mexico. I would like to thank Miguel Toro and Andrea Conde for their valuable research assistance in the preparation of this article.

2. Author’s calculation with data from the U.S. Census Bureau, Bureau of Economic Analysis, and the OECD. Please note there was a change in definitions used to collect services trade data, so the 1993-1998 OECD data and the 1999-2015 BEA data are not directly comparable. Total trade refers to the sum of imports and exports.


4. Though the order of importance of the four categories differs for Mexico and the United States, at the two-digit HS level these are the top four export categories for each. United States Trade Representative <https://ustr.gov/countries-regions/americas/mexico>, 2016.

5. Calculated by the author using 2015 data from the U.S. Census Bureau at the four-digit level of the North American Classification System (NAICS).


7. There is almost certainly additional intra-firm trade between the United States and Mexico not included in the numbers cited here, which would include trade between the U.S. and Mexico-based subsidiaries of European, Asian, or other parent companies.


10. Other potential drivers of this decrease include dual recessions in the United States, the thickening of the U.S.-Mexico border following the terrorist attacks of September, 2001, and China joining the WTO.


The effect of the transfer of operations from the United States to Mexico by transnational companies has been widely documented. Various studies show that the benefit to employment, sales and investment has been mutual. The results of one of those studies are set out here.

Enactment of the North American Free Trade Agreement (NAFTA) 20 years ago was accompanied by dire predictions that an increase in United States (U.S.) investment in Mexico would lead to job losses and investment reduction at home. The rhetorical highpoint for this concern was captured by H. Ross Perot’s assertion in the 1992 presidential campaign that NAFTA would create a “giant sucking sound” as U.S. jobs and investors rushed south of the border.

But that warning overlooked the possibility that foreign direct investment (FDI) and job creation abroad are complements to investment and job creation at home, that offshoring strengthens the competitiveness of the U.S. outward investor (leading to both substitution for and enhancement of home country economic activity), and that the complementary effects may be even greater than the substitution effects.

This essay builds on our recent Peterson Institute for International Economics (PIIE) Policy Brief, The U.S. Manufacturing Base: Four Signs of Strength, which presents empirical evidence that increased offshoring by U.S. manufacturing multinational corporations (MNCs) — a phenomenon criticized for contributing to domestic job losses — is actually associated with greater overall investment and an increase in jobs at home. This update focuses on the subset of U.S. firms that offshore to Mexico. We find that they too use their foreign activities to complement, and not just substitute for, their employment, sales, invest-
those sold by affiliates of U.S. firms in Mexico, has grown over two decades. Sales by affiliates of U.S. firms in Mexico grew from about 32 billion dollars in 1990 to 252 billion dollars in 2011. In 1990 these sales were 2.2% of sales by U.S. MNCs that originated in the United States, and in 2011 they were 3.6% of U.S.-based sales. Foreign and domestic sales by U.S. MNCs follow similar trends, with the rate of growth varying with times of overall economic growth and contraction.

Figure 2 shows the employment trend by U.S. MNCs in the United States and at their affiliates in Mexico over the same time period. Employment by affiliates of U.S. firms in Mexico grew from about 553,000 workers in 1990 to 1.34 million in 2011. Employment in Mexico went from 3% employment by U.S. MNCs in the United States to 5.9% employment by U.S. MNCs in the United States in 2011. As was the case with sales, it is clear from Figure 2 that employment by U.S. MNCs in the United States and Mexico both follow similar trends, with the rate of growth varying with times of overall economic growth and contraction.

Trade between U.S. MNCs and their affiliates in Mexico has also grown since the signing of NAFTA. Trade in both directions increased rapidly in the second half of the 1990s, and was close to being balanced during that period. In the early 2000s, U.S. MNCs imported more from their affiliates in Mexico than they exported to them, though the trade gap began to narrow in 2008. U.S. firms with affiliates in Mexico operate in a variety of different industries. Not surprisingly, given the extent...
of offshoring by U.S. auto companies, the largest of these is transportation equipment, which includes automobile manufacturing. The Table provides details on the 15 largest industries, ranked by the number of workers employed by U.S. MNCs in Mexico in 2011.

What Happens to U.S. Firms’ Domestic Operations When They Invest Abroad? The Case of NAFTA

Figures 1 to 3 show that investment by U.S. MNCs in Mexico has increased since the signing of NAFTA. But has this expansion come at the expense of investment and employment in the United States? To disentangle the extent to which MNC activity at home and abroad are substitutes or complements, we examine detailed microdata on how individual firms behave over time. The U.S. Bureau of Economic Analysis (BEA) collects confidential firm-level data on the activities of U.S.-owned multinationals, both at home and at their foreign affiliates. All U.S.-owned firms with at least one foreign affiliate that meet a minimum threshold by size are required by law to provide this data to the BEA. These data allow us to examine what happens to domestic employment, sales, capital investment, and exports in the United States when an individual firm expands its FDI activities. Obviously many other factors such as recessions, industry trends, and idiosyncratic firm decisions will also affect the domestic operations of U.S. firms. For this reason, we employ panel regression methods that allow us to control for those factors and isolate the direct relationship between foreign expansion and domestic outcomes at U.S. firms.

These methods use data on all U.S. MNCs with foreign affiliates in Mexico. We include firm fixed effects, which allow us to examine changes within each firm over time, rather than comparing one firm to another. Firm “fixed effects” hold constant everything that is unique about a given firm, isolating how its employment in the United States and the other variables we examine change when the firm increases its outward FDI. Thus all the characteristics that define a given firm — such as the industry it operates in, its size, its relative market power, etc. — are controlled for, allowing us to focus only on the relationship between offshoring and the domestic activities of U.S. firms.

In 2011, affiliates of U.S. firms employed 1.3 million workers in Mexico
The first thing to note about these results is that they all show a positive impact on investment and jobs in the United States. Thus expansion in Mexico by a U.S.-based MNC is associated with domestic U.S. expansion by the same firm. The foreign operations of these firms are net complements to domestic U.S. operations. These results are consistent with the complementarities that we found using all countries in which U.S. firms invest (Moran and Oldeninski 2014). U.S. firms that have greater sales, hire more workers, spend more on R&D, export more goods, and invest more capital in Mexico also have domestic. This type of pure experiment is neither possible nor desirable. Using the fixed effects methodology is the next best option, however. This approach controls for everything that is unique about a given firm and looks at changes within each firm over time, rather than drawing conclusions based on observed behaviours across very different firms.

Figure 4 summarizes the relationship between U.S. MNC activities at home and in Mexico. These results draw on firm level data from 1990 through 2009, covering hundreds of U.S. MNCs and their more than 1,000 affiliates in Mexico.

We also include year fixed effects, a technique that controls for the potential impact of recessions and booms (controlling for such impacts is particularly important in light of the severe Mexican currency crisis shortly after NAFTA was signed). Just as firm fixed effects hold constant firm characteristics, year fixed effects hold constant everything external to the firm that was going on in a given year. The only way to truly identify a causal effect between foreign and domestic activity would be to randomly assign some U.S. firms to become multinationals, while forcing others to remain purely domestic. This type of pure experiment is neither possible nor desirable. Using the fixed effects methodology is the next best option, however. This approach controls for everything that is unique about a given firm and looks at changes within each firm over time, rather than drawing conclusions based on observed behaviours across very different firms.

Figure 4 summarizes the relationship between U.S. MNC activities at home and in Mexico. These results draw on firm level data from 1990 through 2009, covering hundreds of U.S. MNCs and their more than 1,000 affiliates in Mexico.
The expansion in Mexico of a U.S. multinational is positively related to the expansion of the same firm in the U.S.
The general result of foreign direct investment after the implementation of NAFTA has clearly been positive for U.S. firms.
Mexico, and Canada and within and among sectors in each country. The point is that a dispassionate public policy analyst would have to conclude that the aggregate result from outward FDI on the part of U.S. firms after NAFTA is strongly positive. Conversely, the overall consequence would be less activity at home — not more activity at home — if overseas operations of U.S. MNCs had not been able to take advantage of NAFTA.

A case study illustrates this point. One of the best-selling and most successful trucks in the world has been Ford’s F-150 series. Following the completion of NAFTA, Ford redesigned the F-150 line, making the Ford Essex engine plant in Windsor, Canada, the exclusive source of the 5.4 liter, 32-valve high-performance Triton V-8 engine, and choosing Ford’s contract manufacturer, International Metals de México (IMMSA) of Monterrey, Mexico, as the sole supplier of the M450 chassis, using inexpensive but reliable Mexican steel alloy.

Ford’s prospects for holding its share of the truck market in subsequent years vis-à-vis the Toyota Tacoma and the Isuzu DMAX, not to mention the Chrysler Dodge Ram, depend upon this NAFTA-integrated supply chain. Recently, the United Auto Workers (UAW) called for NAFTA to be “renegotiated to fix the many problems with this agreement and to stop the outsourcing of good-paying manufacturing jobs to Mexico.”

However, the competitive fate of UAW workers at Ford’s U.S. assembly facilities actually depends on NAFTA.

Other previous studies have found results that tell a similar story. Mihir A. Desai, C. Fritz Foley, and James R. Hines (2009) use firm-level data from 1982 to 2004 to show that growth in employment, compensation, fixed assets, and property, plant and equipment at foreign affiliates of U.S. firms is associated with U.S. domestic growth in these same measures. (Similarly, Lee Branstetter and Foley [2010] find that U.S. firms that invest in China simultaneously invest more in the U.S. home market as well.)

Figure 4
Relationship between foreign expansion in Mexico and domestic activities of U.S. multinational corporations, 1990-2009

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<th>A 10% increase in employment at foreign affiliates leads to:</th>
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<td>U.S. R&amp;D spending</td>
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<tr>
<td>U.S. sales</td>
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<td>U.S. employment</td>
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<td>Exports from the United States</td>
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<td>Capx in the United States</td>
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<th>A 10% increase in sales by foreign affiliates leads to:</th>
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<tr>
<td>U.S. R&amp;D spending</td>
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<td>U.S. sales</td>
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<td>U.S. employment</td>
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<td>Exports from the United States</td>
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<td>Capx in the United States</td>
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Notes: 1. The numbers in this table are regression coefficients that isolate the relationship between each variable listed and either domestic employment or sales, controlling for firm characteristics, industry characteristics, and business cycle macroeconomic conditions as described in the text. All results are statistically significant at the 1% level.
2. Capx refers to capital investment by U.S. multinational corporations.
3. The statistical analysis of firm-level data on U.S. multinational companies was conducted at the Bureau of Economic Analysis, U.S. Department of Commerce, under arrangements that maintain legal confidentiality requirements.
4. Views expressed in this Policy Brief are those of the authors and do not reflect official positions of the Department of Commerce.

Overall the evidence paints a picture in which outward investment is an integral part of MNC strategy to maximize the competitive position of the whole corporation, a goal for which headquarters raise the needed amount of capital from sources all around the globe. In determining where to deploy capital and where to locate production, relative costs—including relative wages and benefits (as well as relative skills and relative productivity)—play a role. But in the end, operations at home and operations abroad complement each other as the MNC parent tries to make the deployment of tangible and intangible assets more productive and more profitable. Fears that expansion abroad may lead to contraction at home have been raised in discussions of trade agreements now on the U.S. agenda, particularly the Trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP). But the strong complementary relationship revealed here—and in other similarly rigorous studies—means that firms, workers, and communities will likely be net beneficiaries of such market-opening and investment-widening agreements.

The fear that expansion abroad leads to domestic recession has been suggested in debates.

1. The quotation comes from the UAW website. Ford’s decision to shift from steel to aluminium for the F-150 will involve a new configuration in source of inputs. Available at <http://www.uaw.org/> (link is external) (accessed on July 2, 2014).
North America

October - November 2016

NORTH AMERICA’S AGENDA FOR 2017 AND BEYOND / Gary Clyde Hufbauer and Earl Anthony Wayne

In shared production North America found a successful formula for competing in global markets. The treaties reached by the presidents of Mexico, the United States and Canada at the recent summit held in Ottawa outline the route to scaling up the international competitiveness of the region and improve the performance of the three economies. In this article the prime matters on the agreed work agenda are explained.

Contrary to the assertions of some in the United States of America (U.S.) political campaign, under the North American Free Trade Agreement (NAFTA), North America’s economy has grown significantly and adapted with success to tough competition in global markets. North America can be even more competitive in 2017 and beyond, if the next U.S. President joins the leaders of Canada and Mexico in further strengthening the continent’s integrated production networks and further un harnessing its significant human and natural assets to generate more prosperity together for the region.

North American trade networks and continental investment ties generate millions of jobs. North America is the region that shows the best economic performance among advanced economies. But it needs to create more and better jobs while delivering higher wages. Economic growth is too slow, infrastructure badly needs renovation, and productivity growth is far below its potential. An ambitious and cooperative agenda can boost the three economies.

Since the signing of NAFTA in 1993 the trade in goods and services between the three neighbors has expanded fourfold. Canada and Mexico are the world’s largest buyers of U.S. products; sales to the two neighbors account for up to 14 million U.S. jobs, about 9% of U.S.

Gary Clyde Hufbauer and Earl Anthony Wayne are respectively emeritus professor at the Peterson Institute for International Economics and former United States ambassador to Mexico.
employment. Canada, in some cases, and Mexico in others, are the largest export market for most U.S. states. Stuningly, the finished manufactured products Mexico and Canada sell to the American market have by far the highest content of U.S.-produced materials compared to U.S. imports from other countries: an estimated 40% for finished manufactured goods exported from Mexico and over 20% from Canada.

Continental supply chains that link Canada, the United States and Mexico mean that much of what is produced in each country has content from its neighbors. For example, a CRV SUV built in Jalisco, Mexico, has inputs of 70% from the United States and Canada. To establish these supply and production chains, private firms in all three countries have invested in their neighbors: U.S. companies have invested about 386 billion dollars in Canada and 108 billion dollars in Mexico. Canadian firms have invested 348 billion dollars in the United States and 12 billion in Mexico. Mexican companies, despite operating in a smaller economy, have invested about 19 billion dollars in the United States and Canada and its rate of investment has picked up significantly in the last several years.

Each of the three governments must enhance its country’s economic performance with domestic reforms in key areas including education, worker retraining, infrastructure investment, support for innovation, smart regulation and tax policy. The United States, for example, needs to work to maintain its strengths in advanced industries and services; if it coordinates with its neighbors, it can also bring the entire economy of North America to higher levels of performance.

Cooperation is well established. This was reinforced by the North America Leaders’ Summit held in Ottawa on June 29, 2016. The document called White House Fact Sheet ticked off commitments for 2017 and beyond. Many of the items are developed across a wide range of topics from sensitive international trade issues to educational exchanges to support for women entrepreneurs to collaboration in international forums. But a few commitments deserve the spotlight for promoting increased economic competitiveness, if the next U.S. president is willing to pursue the work of making North America even more prosperous. These commitments suggest an agenda for 2017 and beyond.

Reduce the border crossing time

Borders inevitably create frictions, but frictions can be reduced by progress on agreed programs. Separate trusted traveler programs are now operated by the three countries. The leaders have agreed to launch a single North American portal for applications by the end of 2017. Currently, about 5 million North Americans participate in trusted traveler programs, but well over 300 million people legally cross the U.S.-Mexican border each year, and some 70 million cross the U.S.-Canadian border annually. Many of these crossings represent the same person taking multiple trips, but with a combined North American population of almost 500 million, it’s reasonable that at least 20 million should enjoy a trusted traveler designation. Making website portals and registration processes easy to navigate and ensuring that fast lanes are always available to trusted travelers will facilitate this expansion. The same logic applies to “trusted shippers” who are willing to take extra steps to assure governments that their goods are safe from contraband. A number of initiatives are under way to speed up shipment clearance while assuring security.

Under NAFTA the regional economy has grown significantly and has successfully adapted to the strong competition of global markets
The three North American customs agencies should set a goal of not more than 30 minutes on average for a traveler—whether trusted or ordinary—to clear the border. Each crossing location and international airport should post its average wait times electronically and the periodical analysis of this data should be the basis for making improvements. Comparable goals and programs should be established for truck and rail traffic.

**Build more border infrastructure**

A big step would be to create a virtual trilateral mechanism with a mandate to develop a North American Transportation Plan, and update it as well as regional plans along the borders on a rolling basis. The federal governments should partner with state, provincial and municipal border authorities to plan new border infrastructure, set priorities consistent with trade and travel flows, and tap private as well as public funding sources. The Tijuana International Airport, since 2015 accessible to San Diego travelers through a short pedestrian bridge and the use of its big parking lot, provides a wonderful model of public-private collaboration. The only complaint is that it took bureaucracies too long to enable Tijuana to complement San Diego’s own inadequate airport. Visionaries were talking about this solution as early as the 1980s.

**Reduce trade obstacles**

Whether or not the Trans-Pacific Partnership (TPP) agreement is ratified in 2017, the North American leaders should establish the goal of common external most-favored-nation (MFN) tariffs for 95% or more of 6-digit Harmonized System (HS) product lines in 10 years. This would pave the way for a waiver of NAFTA/TPP rules of origin on most commerce (apart from sensitive areas like automobiles, auto parts, textiles and apparel) as there would be no motivation for “trade deflection”, namely the importation of third-country goods into the lowest-tariff country followed by trans-shipment duty free to its North American neighbors.

**Help small business**

This can be done by enacting higher de minimis thresholds in Mexico and Canada, below which customs declara-

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North America is the region that exhibits the best economic performance of all advanced economies.
The trade of goods and services between the three neighbors has increased four-fold since 1993 with NAFTA
SIZE AND DISTANCE ARE DESTINY /
The Future of Economic Relations Between Mexico and the United States¹ / Antonio Ortiz-Mena L. N.

The current political discourse sometimes overlooks the great significance and complexity of the commercial exchange between Mexico and the United States. It also forgets that our country is likely to become one of the six largest economies in the world. This article measures the economic integration of North America and lays out its main challenges.

Geography is destiny, and Mexico’s economic fate is inextricably tied to that of the United States (U.S.). Mexico has sought to diversify its international economic relations at least since the Porfiriato, but the power of geography and the market is greater than political will (see Figure 1). Economic relations with the U.S. have been a perennial factor in Mexico’s foreign economic policy, but their nature changed in the last quarter century.⁷ While the bulk of Mexican exports traditionally went to the U.S., foreign trade is increasingly important to the Mexican economy: the trade openness coefficient increased from 27% in 1980³ to 67% in 2015⁴.

This is linked to the growing importance of direct foreign investment: in 1993, just before the coming into force of the North American Free Trade Agreement (NAFTA), it was 4.38 billion USD,⁵ and by 2015, it was 28.38 billion USD.⁶ The U.S. remains the largest foreign investor in Mexico. Increasing trade and investment have in turn led to increased intra-industry and intra-firm trade. One way to appreciate this is by measuring value-added in trade in a country and added in the exports of the other (see Figure 2).

In short, countries in North America not only trade with each other and invest in the region but produce jointly. In all likelihood, these trends will continue to intensify in the next decades. PricewaterhouseCoopers (PwC) estimates that in 2050 Mexico will be the

Just the facts

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6. In short, countries in North America not only trade with each other and invest in the region but produce jointly.
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North America

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The challenges

Economic integration between Mexico and the U.S. is becoming deeper, so the opportunity cost from barriers to economic interaction is growing. Although Canada’s economy will be smaller than that of Mexico, from the perspective of production sharing and the allocation of resources (human and energy, among others), greater economic integration will bring benefits for both countries and for all of North America. In this context it is possible to identify at least five challenges that will impact the economic future of the region:

1. The Trans-Pacific Partnership (TPP). Will it be ratified? If so, how can it best be used?

2. The Transatlantic Trade and Investment Partnership (TTIP) between the
The Trans-Pacific Partnership

TPP ratification would help reduce U.S. protectionist tendencies and “shield” NAFTA. Its ratification by the U.S. is of vital importance and the lessons from NAFTA can help this purpose and, in the event that it prospers, help in a thorough use of the mechanism.13

Should the U.S. not ratify the TPP, Mexico should seek a deepening of NAFTA using the elements that the agreement itself offers, especially Article 1504 on cooperation in competition policy and Articles 1907.

What to do and how

Economy and trade are essential components of foreign policy. In its relationships with the rest of the countries in North America, Mexico must promote joint actions to ensure the flow of goods and services, investment and human capital. This is vital for the prosperity and therefore the security of the country. There are no magic recipes for meeting the challenges of the economic relationship with the United States and among the countries of the region, but Mexican actions at the national, bilateral and regional levels can strengthen its economic insertion in North America. Below are some proposals involving this complex subject:

1. The U.S. and the European Union (EU). If TTIP negotiations are successful, each country in North America will have its own trade agreement with the European Union. Without close coordination, there is a risk of trade diversion and production chain segmentation.

3. Growing nationalism and the risks of protectionism in the U.S. The rise of Republican presidential candidate Donald Trump is a reaction to an underlying problem: the growing dissatisfaction fueled by stagnating wages, income concentration, fear of globalization and pessimism about the economic future. Even if Trump loses, the conditions that enabled his rise will remain.

4. Inadequate infrastructure. Mexico cannot take full advantage of NAFTA nor the big trade agreements in the making if it continues to invest less in this sector than other countries in Latin America, China and India.11

5. Corruption in Mexico and the tarnished image of Mexico in the U.S.12

Geography is destiny, and Mexico’s economic fate is inextricably tied to that of the United States
and 2022, which allow strengthening of dispute settlement mechanisms.

The actions of foreign economic policies could also be strengthened in order to emphasize Mexico’s role as a natural bridge between North America and Latin America, particularly through the Pacific Alliance.

The Transatlantic Trade and Investment Partnership (TTIP)

It must be ensured that there is no trade diversion nor that the production chain operation is blocked in North America. Mexico will have to adjust its trade agreement based on the recent Canada-Europe Union agreement and an eventual TTIP.

Protectionism in the U.S. and the image of Mexico

Changing the image and reputation of Mexico in the U.S. will not be achieved in the short term nor merely through a public relations campaign. The importance of its economic links with Mexico is not well understood in the United States. Clear and accessible information in this regard should be provided to the key decision makers.

Research on Mexico in the U.S., both in universities and think tanks, needs to be fostered. Mexico’s profile in the U.S. is lower than that of other countries that are much less relevant to U.S. security and prosperity.

Corruption

Without changes in international rankings on corruption, it will be difficult for Mexico to use trust as a comparative advantage in attracting foreign investment. Public statements, media campaigns, legal initiatives and channeling of financial or human resources will be absolutely irrelevant so long as there are no tangible results and real accountability.

Infrastructure and connectivity

Improvements in international rankings on infrastructure competitiveness are necessary for Mexico to attract more investment. The improvement in physical infrastructure must be accompanied by the necessary regulatory framework for costs and transport times between Mexico and the U.S. to be the lowest possible.

There have been advances in cross-border connectivity, like the Joint Customs Clearance Program and the Single Cargo Manifest. Infrastructure has been improved in some crossings...
and in August 2016 a new Mexico-
United States Bilateral Air Agreement
came into force, which will boost
cargo and passenger connectivity
between the two countries. These
are important advances, but much
remains to be done.

From issues to mechanisms

There are two key mechanisms driving
the bilateral economic relationship: the
High Level Economic Dialogue (HLED)
The HLED facilitates coordination
between agencies in each country
that affect the bilateral economic
relationship, as well as coordination
between authorities of both countries.
The relationship is multidimensional,
and with segmented actions it will
not be possible to solve complex
obstacles or strategically promote the
relationship. A central challenge will
be to ensure that the HLED transcends
the current administrations in Mexico
and the U.S.

The U.S.-Mexico Business Dialogue
was established in 2013 as an initia-
tive of the U.S. Chamber of Commerce
and Mexico’s Business Coordinating
Council (CCE). It aims to establish joint
policy positions on issues that impact
bilateral economic relations and has al-
lowed the private sectors of Mexico and
the United States to have a shared vision
and a more strategic dialogue with the
authorities on both sides of the border.

Decision-making in the U.S.
In 2014, the Council on Foreign Relations
(CFR) issued a report on the future of
North America. Among its recommenda-
tions it highlighted one: the designation
of “a senior U.S. official as the North
American ‘champion’, who will press for
the implementation of consistent poli-
cies across all public organizations
and on all the topics”.14

U.S. policy on North American is-
issues is at times somewhat fragment-
ed and reactive. If there is no change
in the U.S. that enables the designa-
tion of a “champion,” Mexico will
have to redouble its efforts so that the
common destiny of shared prosperity
for both countries prevails.

The notes of this article are available in the
web version, which can be consulted at
It suits certain politicians to present Mexico as a failed State and a threat. Nothing could be further from the truth. Originally published in the Wall Street Journal, this article dismantles a series of myths about Mexico in areas such as lack of safety, the effects of commercial integration and migration.

A dozen Mexican states held elections on Sunday, and—ho-hum—the center-right National Action Party, or PAN, appears to have won seven of the races. The Journal reports that voters in the world’s 15th-largest economy were turned off by the ruling party’s failure to cut debt and tackle crime, and by a boy-wonder president, Enrique Pena Nieto, whom they now regard as more boy than wonder.

I mention this to illustrate that Mexico is a functioning democracy whose voters tend to favor pro-business conservatives, not a North American version of Libya, exporting jihad and boat people to its neighbors. Somebody ought to explain this to Republican voters, whose brains, like pickles in brine, have marinated too long in anti-Mexican nonsense.

Elements of that nonsense:

**Mexico is a failed state.** Mexico’s struggles with drug cartels—whose existence is almost entirely a function of America’s appetite for dope—are serious and well known. So are its deep-seated institutional weaknesses, especially the police forces that collude with the cartels and terrorize rural areas.

Then again, Mexico’s 2014 homicide rate of about 16 murders per 100,000 means that it is about as dangerous as Philadelphia (15.9) and considerably safer than Miami (19.2) or Atlanta (20.5). Are these “failed cities” that you don’t dare visit and that should be walled off from the rest of America?

**Mexico is a threat to U.S. security.** The most serious terrorist attempt to enter
Then again, Mexico is the second-largest purchaser of U.S. products; the Wilson Center’s Christopher Wilson has estimated that “six million U.S. jobs depend on trade with Mexico.” That is especially true for border states. “Mexico is the top export destination for five states: California, Arizona, New Mexico, Texas and New Hampshire, and is the second most important market for another 17 states across the country.”

**Illegal immigrants are a drain on the system.** This whopper should be sold at Burger King, since illegal immigrants pay billions in state and local taxes, along with about 15 billion USD a year to Social Security—the benefits of which they are unlikely ever to get back. Entire U.S. industries, agriculture above all, depend on illegal migrants, without whom fruits and vegetables would simply rot in the field.

If there is a drain, it’s Mexicans going home—roughly one million returnees between 2009 and 2014, according to the Pew Research Center, outpacing the number of Mexicans moving north by about 140,000. That owes something to growth and stability in the Mexican economy, which is largely a function of the North American Free Trade Agreement.

This makes Mr. Trump’s opposition to NAFTA all the more misjudged. Without it, Mexico could easily have become Venezuela, run by a Hugo Chavez-like strongman that would have posed a real threat to U.S. security as opposed to the one in Mr. Trump’s imagination.

This is a foul electoral season, one conservative voters (or their children) will look back on with political regret and personal remorse. Mr. Trump’s “Mexican” slur about federal judge Gonzalo Curiel is the most shameful word uttered by a major presidential candidate since Dixiecrat Strom Thurmond thundered in 1948 against the “Nigra race.” As in 1948, Mr. Trump is appealing to constituents who have stuffed themselves on a diet of bad statistics and misleading anecdotes—people who fancy themselves victims but behave like bigots. Republican leaders who think they can co-opt or tame Mr. Trump will instead find themselves stained by him.

Meanwhile, let’s state clearly what shouldn’t need saying but does: Americans are blessed to have Mexico as our neighbor and Hispanics as our citizens. On this point, disagreement is indecency.}

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1 June 6, 2016.

HECHO EN AMÉRICA DEL NORTE
Origen, actualidad y tendencias de la producción compartida

MADE IN NORTH AMERICA
Origin, the present day and trends in shared production