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NAFTA at 20: Misleading Charges and Positive Achievements

Gary Clyde Hufbauer, Cathleen Cimino, and Tyler Moran

Gary Clyde Hufbauer *is the Reginald Jones Senior Fellow at the Peterson Institute for International Economics. He has written numerous books on international trade, investment, and tax issues, including* NAFTA Revisited: Achievements and Challenges *(2005).* **Cathleen Cimino** *and* **Tyler Moran** *are research analysts at the Institute.*

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Twenty years after its enactment, the North American Free Trade Agreement (NAFTA) continues to divide Americans and cast a shadow over the US trade agenda. Opponents of the most recent free trade agreements with Colombia and South Korea repeatedly cited NAFTA as a malignant precedent, charging that NAFTA cost millions of US jobs, suppressed wages, and deepened US economic inequality, and claimed that new trade agreements would do the same. Today NAFTA is being invoked again in debates over Trade Promotion Authority (TPA), which would give President Obama latitude to negotiate new trade deals, specifically the Trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP) (see Scott 2013 and 2014). One critic of the TPP recently labeled it "NAFTA on steroids."[1]

In truth the claims on both sides of the NAFTA issue 20 years ago were overblown. Since the Mexican economy is less than one-tenth the size of the US economy, it is not plausible that trade integration could dramatically shape the giant US economy, even though integration could exert a substantial impact on the relatively small Mexican economy. But exaggeration and sound bites are the weapons of political battle, and trade agreements have been on the front line for two decades. President Bill Clinton, for example, declared that NAFTA would "create" 200,000 American jobs in its first two years and a million jobs in its first five years. Not to be outdone, NAFTA opponents Ross Perot and Pat Choate projected job losses of 5.9 million, driven by what Perot derided as a "giant sucking sound" emanating from Mexico that would swallow American jobs.[2] Both of these claims turned out to be overblown, especially the one advanced by Perot and Choate.

One reason NAFTA remains controversial is that, for the United States, NAFTA marked the first major trade deal with a poor country, namely Mexico.

In recent debates, NAFTA seems to have had few vocal defenders. Yet because of the central role it continues to play in the US consciousness, this is an opportune moment to separate fact from fiction in the long-running disagreement over NAFTA. The purpose of this Policy Brief is not to rehash old claims that may have been overstated but to clear the air so that the benefits and challenges of trade can be examined in an objective light.

NAFTA took effect on January 1, 1994, alongside the previously negotiated Canada-US Free Trade Agreement (CUSFTA). NAFTA committed the United States and Mexico to eliminate all US and Mexican tariffs over a ten-year period, except on a handful of agricultural exports that

1. Lori Wallach, "NAFTA on Steroids," *Nation*, June 27, 2012, http://www.thenation.com/article/168627/nafta-steroids# (accessed on March 13, 2014).

2. The contemporaneous debate is summarized in Hufbauer and Schott (2005).

were to be phased out over 15 years. The accord also aimed to lower cross-border barriers to services and investments while setting standards for patents, trademarks, and other forms of intellectual property rights. One reason that NAFTA remains controversial is that, for the United States, which had previously embraced a series of global trade accords after the Second World War, NAFTA marked the first major trade deal with a poor country, namely Mexico.

The NAFTA partners encountered rough waters in the pact's inaugural year, and enduring perceptions of NAFTA were adversely shaped by three Mexican shocks. First, on January 1, 1994, the Zapatista rebellion erupted in the southern Mexican state of Chiapas. While the rebellion had little direct connection to NAFTA provisions, it was deliberately timed with the pact's entry. One of the rebels' many grievances was opposition to NAFTA for providing a "symbolic manifestation of the huge attention the Mexican government paid to the modern northern states and the neglect of the historically poor southern states" (Hufbauer and Schott 2005 p. 10). On March 23, 1994, the Chiapas uprising was followed by the assassination of presidential candidate Luis Donaldo Colosio, the heir apparent to then Mexican President Carlos Salinas. The culprits were never identified, and the assassination triggered alarms in the investor community. Finally and most damaging came the abrupt and progressively more severe devaluation of the Mexican peso, initially on December 20, 1994. The peso crisis followed the huge buildup of debt, denominated in US dollars, issued both by the Mexican government and Mexican firms, to finance a widening current account deficit. Beginning in the spring of 1994, investors began fleeing Mexico, depleting the Banco de Mexico's holdings of foreign exchange, as the central bank attempted to defend the peso's fixed rate to the dollar. When the peg was finally abandoned in December 1994, the steep devaluation of the peso led to a collapse of imports and a surge of Mexican exports. For many NAFTA critics, the "temporal connection between NAFTA ratification and Mexico's economic collapse was too powerful to be mere coincidence" (Hufbauer and Schott 2005 p. 9). While bad policy choices in preceding years had set the stage for the financial crisis, NAFTA was blamed for inadequate monitoring of Mexico's macroeconomic policies. While this criticism had some merit, NAFTA also played a decisive role in the recovery of the Mexican economy, both by fostering a large financial rescue package and by enabling a sharp turnaround in Mexico's external trade balance.[3]

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Despite NAFTA's inauspicious launch and subsequent charges made against it, the agreement can be credited with making important strides toward intraregional integration and higher living standards in all three countries. The interdependence of the United States, Canada, and Mexico is striking. For example, goods imported from Canada are estimated to contain 25 percent of US inputs and from Mexico, 40 percent of US inputs (Koopman, Powers, Wang, and Wei 2010). In 2013, about 14 percent of US merchandise exports went to Mexico, exceeding the combined total of merchandise exports to Germany, France, the United Kingdom, and the Netherlands. Since 1993, US trade with Mexico quintupled in nominal terms, whereas trade with the rest of the world increased three times. NAFTA promoted the integration of the regional energy market—particularly between the United States and Canada—which somewhat mitigated US reliance on imports from sources across the Atlantic, while encouraging greater energy independence within the region.[4]

Many US jobs depend on exports—an estimated 2.6 million on exports to Canada and 1.9 million on exports to Mexico.[5] Following the approval of NAFTA, Mexico went into a financial crisis that discredited its policies in the eyes of many. But the mid and late 1990s were a period of boom times in the United States, and fears that NAFTA would cause a surge of unemployment subsided. Indeed almost 17 million jobs were added to the US economy in the seven years following enactment of NAFTA, and the unemployment rate dropped from 6.9 percent to 4.0 percent.

On the other hand, the last two decades have seen growing inequality in the United States and concerns that low-skilled jobs have been hollowed out both by advances in technology and the signing of trade agreements. Inevitably, in the 2000s,

3. For a longer discussion, see Hufbauer and Schott (2005), pp. 8–12.

4. The US shale revolution could well convert the United States into a net exporter in the coming decade, thereby altering the traditional dynamic of intraregional energy trade. Partial privatization of oil and gas production in Mexico might also release substantial new supplies. The combination of shale energy and Mexican liberalization could rapidly bolster the prospects of physical energy independence in North America.

5. The job estimates assume a coefficient of 7,500 direct and indirect jobs per billion dollars of exports. US exports to Canada in 2013 were $366 billion, and US exports to Mexico were $256 billion. The jobs coefficient is derived from the input-output analysis reported in table 2 of Lawrence (forthcoming 2014). Direct export jobs are approximately 5,100 per billion dollars of exports, and indirect jobs are another 2,400.

NAFTA again became a proxy for fear over job losses. But concerns about jobs during the initial NAFTA debate were badly distorted, and misstatements then are repeated today. It is widely understood that an expansion of two-way trade will shuffle jobs between sectors of the economy: Import-competing sectors will lose some jobs and export-oriented sectors will gain some. Yet most economists took the view that the *net number* of jobs gained or lost owing to NAFTA would be statistically insignificant in a US labor force that then numbered 110 million. In their analysis, Hufbauer and Schott (1993) calculated that the agreement could create 170,000 net US jobs "in the foreseeable future." Advocates of NAFTA, including those at the Peterson Institute for International Economics, argued that the main payoff from NAFTA would be *better* jobs, not more jobs, as the US and Mexican economies were restructured according to the law of comparative advantage. But what economists had to say was lost in the political din of the 1990s and is often ignored in the contemporary debate over TPP and TTIP.

Economic analysis of the channels by which trade agreements potentially lead to higher national output has made significant advances since the 1990s,[6] as has the understanding of the costs of job churn that inevitably accompanies economic restructuring in the wake of trade liberalization.[7] (Churn refers to the phenomenon of large numbers of workers loosing and gaining jobs over a fixed time period.) Yet the US political rhetoric surrounding trade agreements essentially channels the NAFTA debate of two decades ago. Proponents claim job gains and higher living standards; opponents claim job losses, lower wages, and corporate enrichment.

No proponent argues that North America entered a golden age after NAFTA. But critics are wrong when they blame NAFTA for ills that should not be laid at the agreement's doorstep and wrong when they dismiss the genuine achievements of the tripartite pact.[8] In this Policy Brief, we first answer six charges voiced by NAFTA critics and then sketch the positive case. The six central charges and our short responses are:

- NAFTA fostered a growing US trade deficit.
  - Short response: Not perceptible.
- Trade with Mexico raised US unemployment.
  - Short response: Not perceptible.
- Job loss depressed US wages, especially in manufacturing.
  - Short response: In some cases, but not across the board.
- The boom in US agricultural exports turned rural Mexicans into illegal emigrants.
  - Short response: No connection.
- Apart from agriculture, NAFTA abetted illegal immigration.
  - Short response: The opposite.
- Mexican growth has not achieved the rate anticipated by NAFTA proponents.
  - Short response: A fair criticism.

While dubious at best, these charges have been repeated so often that they have congealed into conventional wisdom and are parroted even by mainstream journalists.[9] Before addressing the charges, it's worth emphasizing that they are all directed at the US-Mexican experience. Yet NAFTA is a tripartite pact, and hardly anyone criticizes the US-Canada experience. In fact two-way trade and investment outcomes across the northern US border have been strong and almost uniformly positive.

US TRADE DEFICIT WITH MEXICO

Larger US trade deficits are often cited by critics of NAFTA and other trade agreements as a sure consequence of these pacts and an unhealthy outcome for the United States. Political leaders frequently decry trade deficits, arguing that exports support jobs at home whereas imports substitute for products that could be produced by American workers. These broadside attacks against trade deficits are misguided. Bilateral US trade deficits are not necessarily bad. In a world of multilateral trade, even if the United States achieved overall balance in its external accounts, US trade would not be in balance with each country. For example, the United States might be in deficit with Mexico but in surplus with Canada.

Those who measure the "success" of preferential trade negotiations in terms of the consequent *bilateral trade balances* among the participants overlook the fact that it is logically impossible for all members of a preferential trade agreement to end up with bilateral trade surpluses as a result. This observation pertains just as much to the upcoming TPP and TTIP negotiations as to NAFTA. It is possible that some members of a preferential trade agreement will improve their *global trade*

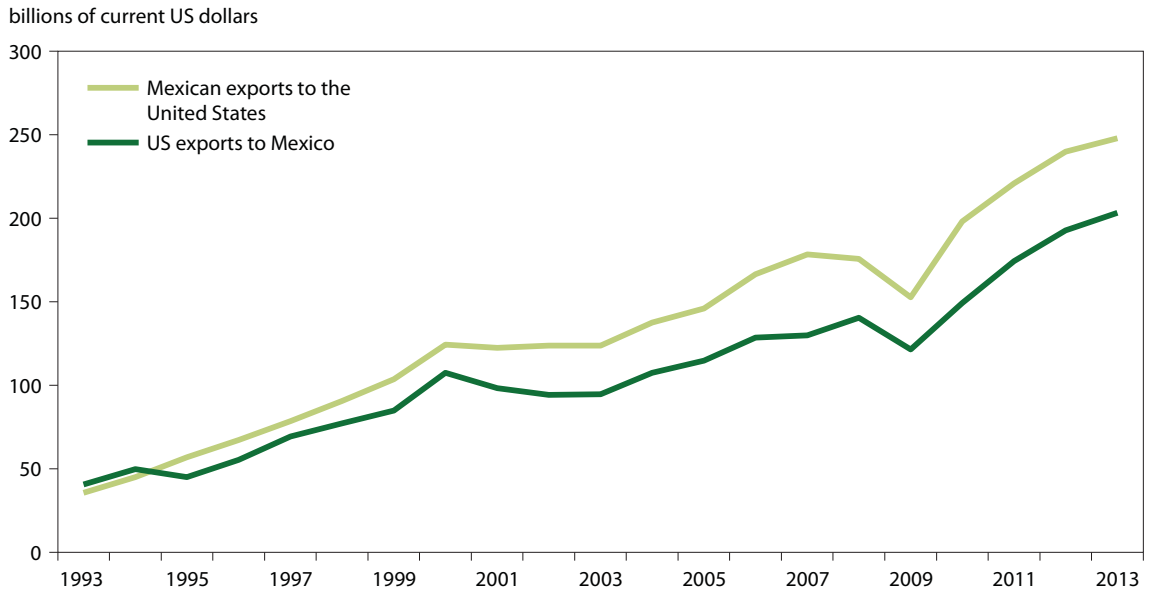
6. For a survey of the multiple payoff channels to the United States, see Bradford, Grieco, and Hufbauer (2005). For a summary of the payoff channels from foreign direct investment to a developing country host economy, see Moran (2011).

7. Lawrence (forthcoming 2014) summarizes the literature on job churn.

8. For examples of ills laid at NAFTA's doorstep, see Public Citizen's Global Trade Watch (2014).

9. See, for example, Christopher Caldwell, "Popular sentiment is hardening against free trade," *Financial Times*, February 28, 2014, http://www.ft.com/intl/cms/s/0/a538be0a-9ee9-11e3-8663-00144feab7de.html# axzz2vJckoimC (accessed on March 3, 2014).

Figure 1 US-Mexico bilateral merchandise trade (nonfuel), 1993–2013



Note: Mexican exports to the United States are based on US import data. Nonfuel merchandise trade based on Standard International Trade Classification (SITC) codes minus SITC 3 (mineral fuels/lubricants).

Source: World Bank's World Integrated Trade Solutions (WITS) database, https://wits.worldbank.org/.

balances after the completion of an agreement, but this will be because of two distinctive factors: first, increased efficiency in the use of resources and second, internal changes in the relationship between income and expenditure within the partner state.

As explained in the appendix to this Policy Brief, the United States is bound to run an overall trade deficit with the rest of the world when combined US savings of the household, business, and government sectors are negative, as they have been for some years. To finance the trade deficit, the United States is obliged to borrow from the rest of the world. In such circumstances, a global US trade deficit is inevitable. At best, trade agreements exert a second-order impact, possibly changing the pattern of bilateral surpluses and deficits but exerting a marginal impact on the size of the global trade deficit.

With these precepts in mind, a look at US two-way trade, and the trade deficit with Mexico since NAFTA was agreed in 1993, may be instructive. Our analysis excludes petroleum and natural gas trade from the picture for the simple but powerful reason that if the United States did not import petroleum and gas from Mexico and Canada, it would import fuels at higher cost from other countries. Figure 1 charts US exports of goods and services to Mexico, and Mexican exports to the United States, excluding fuel in both directions. Two-way trade has expanded enormously, by a factor of five in current dollars. Just as the critics say, the US bilateral trade deficit with Mexico has also grown, going from a surplus of $5 billion in 1994 to a deficit of $45 billion in 2013.[10] But this was not because of a "giveaway" deal by US trade negotiators. As appendix table A.1 shows, at the time NAFTA was launched, the average US tariff on imports from Mexico was 4.3 percent, while the average Mexican tariff on imports from the United States was 12.4 percent. Since both tariff averages went to zero fairly quickly, the country "giving away," measured by tariff concessions, was Mexico, not the United States.

The main reason for the growing US bilateral trade deficit with Mexico over two decades was the growing imbalance between income and spending within the United States. Reflecting this widening imbalance, between 1994 and 2013, the US nonpetroleum goods deficit with the world expanded from $120 billion to $510 billion.[11] The global enlargement of the trade deficit is not an outcome of NAFTA or other free trade agreements, as the appendix clearly shows. Rather,

10. Trade data from the World Bank's World Integrated Trade Solutions (WITS) database. Adjusted for inflation, two-way trade grew by a factor of three between 1994 and 2013. The 1994 US bilateral surplus with Mexico was largely illusory because, in that year, Mexico was running an unsustainable current account deficit with the world.

11. The 2013 figure is based on the first three quarters of 2013 (US Bureau of Economic Analysis).

it reflects the fact that the United States gradually altered its status from small net borrower to huge net borrower driven largely by rising federal budget deficits and falling household savings. Moreover, the Mexican share of the 2013 global US goods deficit, about 9 percent ($45 billion versus $510 billion), was much smaller than the Mexican share of US nonpetroleum merchandise imports, about 13 percent ($248 billion versus $1,939 billion).

As mentioned, when NAFTA was launched, the average Mexican tariff was much higher than the average US tariff: 12.4 percent *versus* 4.3 percent.[12] In 1993, Mexican nonpetroleum exports to the United States were $39 billion, and US nonpetroleum exports to Mexico were $41 billion. Applying a simple trade-elasticity approach, and assuming an elasticity of 3.0 (a high value), eliminating these average tariffs would suggest an increase of $5 billion in Mexican exports to the United States and an increase of $14 billion in US exports to Mexico. Such calculations made it seem likely, in the view of some analysts, that US exports to Mexico would expand much more than Mexican exports to the United States. Nonetheless, the opposite happened, but for reasons that had little to do with the warnings of critics. The main reasons were Mexico's newfound openness to investment, much-improved access to US parts and components (owing to lower tariffs), and regulatory reforms.

The main reason for the growing US bilateral trade deficit with Mexico over two decades was the growing imbalance between income and spending within the United States.

Just as NAFTA was being implemented, in late 1994, Mexico was decimated by the unforeseen peso crisis (devaluing the peso from 3.97 to the dollar in December 1994 to 7.76 to the dollar in December 1995). The peso crisis erupted because the Mexican government and firms, in the preceding two years, had imprudently issued tens of billions of debt effectively denominated in US dollars.[13] Seeing an unsustainable situation, Mexican and foreign investors alike headed for the exits during the spring and summer of 1994, depleting the central bank's holdings of foreign exchange as it tried to maintain a fixed rate between the peso and the dollar. When the central bank abandoned the exchange rate peg, the sudden peso devaluation led to a collapse of imports and a rise of exports. Mexicans could no longer afford American shopping trips to San Diego and, facing a depressed home market, Mexican firms did their best to sell into the US market. The nonpetroleum US bilateral trade surplus of $5 billion in 1994 turned into a deficit of $12 billion in 1995.

To its credit, the Mexican government responded to the crisis by cutting regulations that prevented foreign investors from coming into the country, accelerating a trend that had started earlier. Mexico laid out the welcome mat for foreign investors of all nationalities, rather than just its NAFTA partners. Foreign companies (led by US auto firms) expanded their plants in Mexico, integrating them with all of North America. The outcome was a sustained burst in Mexican exports, enlarging the nonpetroleum US bilateral trade deficit from $12 billion in 1995 to $45 billion in 2013.

What if NAFTA had never been agreed? Would the US trade deficit with the world be $45 billion lower in 2013? Most unlikely. Viewing the no-NAFTA scenario from a macroeconomic perspective, a lower deficit with Mexico would have been like squeezing a balloon—most of the deficit would have popped out someplace else, because US expenditures would still have exceeded US earnings by ever larger amounts during the late 1990s and 2000s. Viewing the no-NAFTA scenario from a microeconomic perspective, US and foreign companies, in search of lower costs for their worldwide supply chains, would probably have opened additional plants elsewhere in Latin America and Asia.

To conclude, it may well be true—thanks initially to the peso crisis and over a longer period to Mexican reforms—that NAFTA fostered a larger bilateral trade deficit *with Mexico*. But it is not true that NAFTA fostered an equally larger US trade deficit *with the world*.

TRADE WITH MEXICO AND US UNEMPLOYMENT

With or without trade, over 4 million Americans are separated involuntarily from their jobs each year by plant shutdowns and mass layoffs, even when the United States is adding overall jobs to the national payroll. But only a small fraction of the jobs lost are caused by imports in general or imports from Mexico. Growing US trade with Mexico (and with the world) clearly contributes to churn in the US job market, but trade is hardly the sole explanation. About 5 percent of this job churn (around 200,000 workers annually) can be explained by rising trade with Mexico (discussed below). Two-way trade expands some industries and shrinks others; this is the real-life face of compar-

12. Tariff figures from the UN Conference on Trade and Development Trade Analysis and Information System (UNCTAD TRAINS) database.

13. Mexican government short-term debt, called *tesobonos*, contained an exchange rate guarantee clause that linked the debt to the US dollar. Mexican firms simply borrowed in dollars.

ative advantage. Within industries, growing trade downsizes less efficient firms and upsizes more efficient firms; this is the real-life face of the "sifting and sorting" phenomenon better understood since NAFTA was ratified (see Bernard, Jensen, and Schott 2003). Empirical evidence demonstrates that comparative advantage and sifting and sorting are exactly what happen when two-way trade grows. The inevitable outcome is that some Americans lose their jobs, identifiably because of increased imports, while other Americans gain new or better jobs, far less identifiably but because of increased exports.

Identifiable job losses are the stock-in-trade of NAFTA critics. At the Economic Policy Institute, Scott (2011) estimates that between 1994 and 2010 nearly 683,000 US jobs were lost due to US trade deficits with Mexico (about 40,200 jobs per year). His estimates of the net employment impact of NAFTA use direct and indirect labor requirements of producing output in a given industry and assume that industry trade deficits displace domestic production (and thus labor), dollar-for-dollar. Other accounts are more anecdotal. In 1997, Public Citizen interviewed more than 60 US companies and found that just three years after NAFTA, 90 percent of the promises made by pro-NAFTA companies to create domestic jobs or expand exports were not fulfilled, citing General Electric, Johnson & Johnson, Siemens, and Xerox, among others that laid off workers or shut down facilities and shifted production to Mexico.[14] Public Citizen (2014) also points to tangible job losses based on the number of workers receiving Trade Adjustment Assistance (TAA), reporting that more than 845,000 workers were certified for TAA based on jobs lost to imports from Canada and Mexico or relocated factories between 1994 and 2013, on average about 44,500 per year.

At most, 5 percent of dislocated [US] workers can be traced to imports from Mexico.

Moreover, the general perception that job losses are associated with free trade agreements remains strong. A 2010 survey conducted by the Pew Research Center on the public view of FTAs, including NAFTA, found that 55 percent of respondents held the view that FTAs lead to US job losses, while only 8 percent view trade pacts as supporting job creation (24 percent said FTAs make no difference).[15] Public perceptions mirror the observation that jobs supported by exports are often invisible and forgotten.

Job displacement is painful for the losers, but it pays off enormously for Americans as a whole. According to calculations by Robert Z. Lawrence, looking just at US trade with China over the last decade, for every net manufacturing job lost to trade with China (taking into account both jobs displaced by imports and jobs supported by exports), the US economy gained about $900,000 in 2008. The gains reflect enhanced productivity, a broader range of goods and services, and lower prices at the checkout counter for households.[16] The arithmetic of national gains relative to net jobs lost would be roughly similar for US trade with Mexico: several hundred thousand dollars of gains to the economy for every net manufacturing job lost.

However, for individual workers facing import competition, what counts most is "jobs displaced," not "net jobs lost." Between 1994 and 2013, US imports from Mexico (many of them parts and components used in American plants) expanded from $48 billion to $302 billion.[17] In recent years (2009 through 2013), the expansion has averaged about $27 billion annually. The direct and indirect US labor equivalent of every billion dollars of imports is currently about 7,500 workers.[18] What these numbers imply is that in recent years additional imports from Mexico displaced about 203,000 jobs that are lost annually to the churn. These are painful numbers for displaced workers. However, in the overall picture of involuntary job churn, the contribution of Mexican imports is small. From the beginning of 2009 to the end of 2011, about 13 million workers were "dislocated" (meaning the victims of mass layoffs), indicating an annual dislocation of about 4 million workers—mainly because of technological and competitive forces *within* the giant US economy.[19] At most, 5 percent of dislocated workers can be traced to imports from Mexico. Moreover, the churn number associated with imports from Mexico, about 203,000 jobs displaced annually, is much

14. "NAFTA's Broken Promises: Failure to Create U.S. Jobs," Public Citizen's Global Trade Watch, January 1997, http://www.citizen.org/trade/article_redirect.cfm?ID=1767 (accessed on April 2, 2014).

15. "Public Support for Increased Trade, Except with South Korea and China: Fewer See Benefits from Free Trade Agreements," Pew Research Center, November 9, 2010, http://www.people-press.org/2010/11/09/public-support-for-increased-trade-except-with-south-korea-and-china/ (accessed on April 2, 2014). Similarly, 45 percent have the view that FTAs lower wages in the United States, while 8 percent view FTAs as increasing wages.

16. The $900,000 figure is based on estimated gains to the US economy from Chinese manufacturing imports of 0.6 percent of US GDP in 2008, which works out to $88 billion, or about $250 per US citizen. See Lawrence (forthcoming 2014). A full explanation of the channels by which increased two-way trade delivers gains to the US economy can be found in Bradford, Grieco, and Hufbauer (2005).

17. Trade figures from the US Bureau of Economic Analysis.

18. The figures are derived from US manufacturing imports and their direct and indirect US employment equivalent (total jobs) in 2012; see table 2 from Lawrence (forthcoming 2014).

19. US Bureau of Labor Statistics, "Worker Displacement: 2009–2011," news release, http://www.bls.gov/news.release/pdf/disp.pdf (accessed on March 7, 2014).

larger than the "lost jobs" number calculated either from trade deficits or TAA certifications (about 45,000 jobs lost annually). The reason is that many displaced workers land another job within a short period of time.

But focusing on jobs lost through imports is only half the story. It is important not to forget the export side of the job equation. As the Pew surveys on public perception of FTA effects on jobs seem to confirm, American workers who owe their jobs to rising exports are usually oblivious to their dependence on foreign sales (in sharp contrast to workers who lose their jobs to rising imports). Based on the increase in US exports to Mexico, averaging $25 billion annually between 2009 and 2013, about 188,000 new US jobs were supported each year by additional sales to Mexico. The figure is almost as large as the jobs lost, but the jobs gained in other sectors pay better. On average, the export-related jobs pay 7 to 15 percent more than the lost import-competing jobs.[20] The wage differential, while positive, is only part of overall US gains from trade with Mexico. In recent years, net US jobs lost on account of two-way trade with Mexico have averaged about 15,000 annually (203,000 jobs displaced by imports minus 188,000 jobs supported by imports). Lawrence's calculations, cited earlier, suggest that gains to the US economy average several hundred thousand dollars per net job lost.

A large portion of two-way trade among the NAFTA economies represents imported intermediates that raise the competitiveness of US firms, enabling them to improve their export profile in world markets.

Amidst the arithmetic of jobs lost and gained, it should not be forgotten that a large portion of two-way trade among the NAFTA economies represents imported intermediates that raise the competitiveness of US firms, enabling them to improve their export profile in world markets. In other words, imports benefit not just US consumers but also US firms that can acquire just the right intermediate components at the right price.

The uneven impact of gains and losses from trade liberalization has been partially addressed by public policy at least since the 1960s when the TAA was introduced. TAA offers assistance (e.g., extra unemployment insurance, training benefits, etc.) for workers who are displaced by imports.[21] The share of displaced workers certified as eligible for TAA is relatively small compared to the total number of displaced workers in the overall economy: In 2011, only 104,000 workers were certified for TAA, out of 4.3 million workers displaced for all reasons (Lawrence forthcoming 2014). Even though the costs per TAA participant remain relatively low, namely $3,600 in 2011 and $6,500 in 2012, the program is frequently attacked in Congress, especially by Republican members, who argue that the United States should not support an "entitlement program" aimed at sustaining and training workers who lose their jobs to import competition.

A separate issue relates not to jobs lost or gained but to the overall unemployment rate. Critics claim that larger trade deficits add to the unemployment rate. In a hypothetical economy where everything else is held equal (*ceteris paribus*, in economists' jargon), this is true. But historically everything else is not held equal, and *rising* trade deficits are usually associated with *falling* unemployment. Figure 2 charts the *inverse* correspondence between the US unemployment rate, expressed as a percent of the labor force, and the US global trade deficit, expressed in billions of US dollars. As the figure shows, almost without exception, when the trade deficit *rises*, the unemployment rate *falls*. Over the past 30 years, periods of high import growth in the United States have usually been associated with tight labor markets and fast economic growth, rather than weak labor markets and a slack economy.[22]

History is full of examples of a country at virtually full employment yet running a trade deficit. The United States enjoyed full employment in the late 1990s (unemployment below 4 percent), despite a surge in imports led by Mexico. The US economy reached close to full employment in 2007 despite rapidly rising imports from China and a large bilateral and multilateral trade deficit. History is also full of examples of a country with serious (if disguised) unemployment without a trade deficit (the last two decades in Mexico and China).

Thus the connection claimed by NAFTA critics between larger trade deficits and higher unemployment is seldom observed in real life.[23] But this is not to deny that an appro-

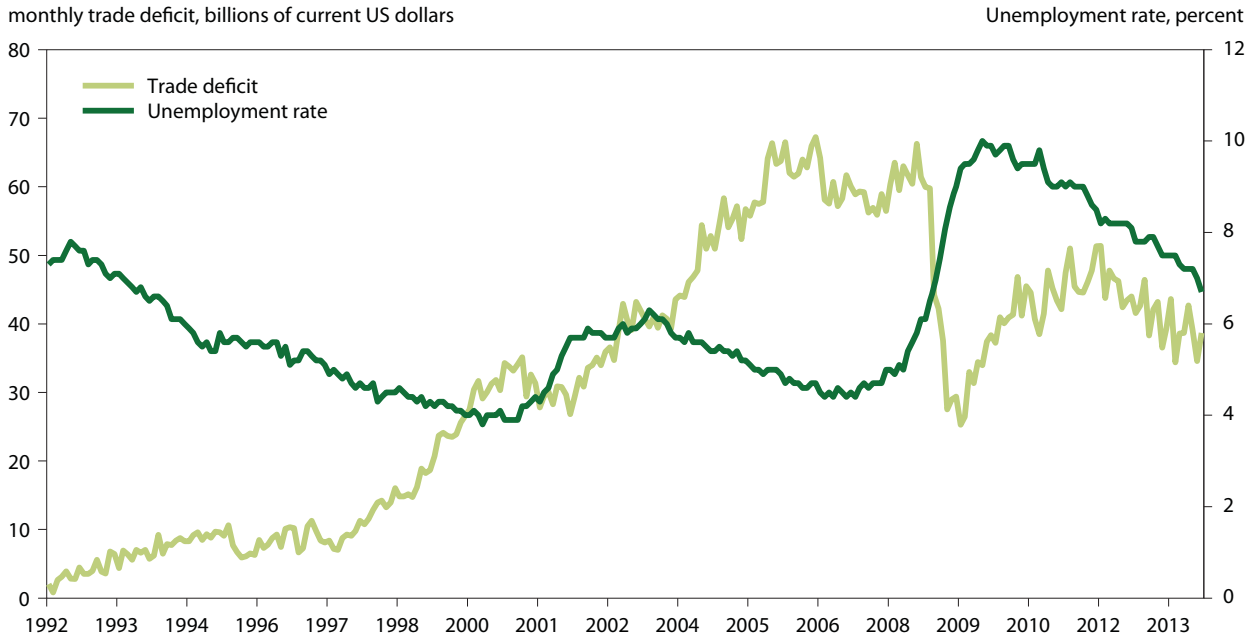
20. Richardson (2005) estimates that export jobs generally pay wages 10 to 11 percent higher and that US multinational firms pay 7 to 15 percent higher than firms that are not globally engaged.

21. To receive TAA benefits, a group of workers must petition the US Department of Labor and prove that international competition was the cause of their job loss.

22. Edwards and Lawrence (2013) emphasize the general disjunction between trade deficits and unemployment.

23. For examples of the misleading link between trade deficits and unemployment, see David E. Bonoir, "Obama's Free-Trade Conundrum," *New York Times*, January 29, 2014, http://www.nytimes.com/2014/01/30/opinion/obamas-free-trade-conundrum.html?_r=0 (accessed on March 3, 2014); and Robert E. Scott, "NAFTA's Legacy: Growing U.S. Trade Deficits Cost 682,900

Figure 2 US trade deficit and unemployment rate, 1992–2013



Source: Federal Reserve Bank of St. Louis, http://research.stlouisfed.org/.

priate policy measure that boosts exports at times of high US unemployment, without cutting investment or government spending, could both reduce the trade deficit and lower the unemployment rate. The policy tool kit contains few such measures, but a sharp realignment of exchange rates is one candidate.[24] Repealing NAFTA or any other trade agreement is not a plausible answer to excessive trade deficits, for the simple reason that US exports would surely drop as much as US imports, if not more.[25]

US MANUFACTURING WAGES

A powerful charge leveled by NAFTA critics is that trade with Mexico has enabled US firms to hold back wage gains and even cut wages. Their argument is straightforward. The current average manufacturing wage is $4.50 per hour in Mexico, against $19.50 in the United States.[26] Taking advantage of the wage difference, firms shift work to Mexico and build new plants there. This puts pressure on US wages, directly through layoffs and indirectly when firms threaten to close down in the United States and open in Mexico, unless workers accept a lower pay packet.

Exhibit A for wage criticism is the US auto industry. Because this industry and its links with Mexico and Canada are iconic symbols, we trace important developments since NAFTA in box 1.

Most NAFTA critics acknowledge that the world is more complex than suggested by a simple comparison of Mexican and US wages. Many factors come into play when considering whether competition from Mexico creates measurable downward pressure on US wages. High worker productivity, ready access to needed inputs, reliable power, and an honest business environment all offset low Mexican hourly wages as reasons to produce in the United States.

Scholars have attempted to sort out the balance between competition from low-wage countries, such as Mexico, and other factors that determine wage levels in the United States. A powerful analytical construct, the Stolper-Samuelson theorem, demonstrates that if "other factors" can be ignored—most

Jobs," December 17, 2013, http://www.epi.org/publication/nafta-legacy-growing-us-trade-deficits-cost-682900-jobs/ (accessed on March 13, 2014).

24. See Bergsten and Gagnon (2012). Other plausible candidates are tax preferences that favor production for export markets and official support of export finance through the Export-Import Bank.

25. Moreover, in the view of Theodore Moran (communication to the authors), the argument that the United States should try to eliminate the trade deficit via tougher trade negotiations or firmer market-access demands vis-à-vis its trade partners so as to increase US employment reflects faulty analysis.

26. The cited figures are from the US Bureau of Labor Statistics. The Bank of America reports a figure of $2.50 per hour for the Mexican manufacturing wage, but possibly that figure excludes extensive fringe benefits.

Box 1 Hard times in the US auto sector?

Table B.1 shows the total auto trade of the three NAFTA countries with the world in current US dollars. While US auto trade clearly expanded over 20 years, the direction of trade remained relatively constant, with US imports roughly double US exports in both 1993 and 2013. Of the three countries, Mexico saw the greatest growth by far in its global two-way auto trade, expanding more than 11 times since 1993, in current dollars. By comparison, in current dollars, two-way auto trade doubled in the case of Canada and nearly tripled for the United States. (Between 1993 and 2013, the US personal consumption expenditures [PCE] price index increased by 46 percent, so the nominal figures need to be deflated by that amount to calculate real growth in auto trade.)

Table B.1 North American auto trade with the world (billions of current US dollars)[1]

	1993		2013	
	Imports	Exports	Imports	Exports
Canada	25	35	69	58
Mexico	2	7	32	70
United States	85	40	249	118

1. Includes all road vehicle trade and parts thereof. Between 1993 and 2013, the US personal consumption expenditures price index increased by 46 percent.

Source: World Bank, World Integrated Trade Solutions (WITS) database.

The labor picture in the auto industry (parts plus assembly) among the NAFTA partners changed dramatically, as shown in table B.2. US employment of autoworkers fell by nearly a third between 1994 and 2013, while Canada experienced a 10 percent decline. By contrast, Mexico enjoyed a massive expansion of auto employment. Should the total decline of US auto employment be laid at the doorstep of NAFTA? Probably not. According to the US Bureau of Economic Analysis,[1] total value added by the vehicle manufacturing industry (parts and assembly) was slightly higher in 2012 than in 1993, after accounting for inflation. Correspondingly, over this period, real value added per worker increased by 41 percent (since the auto labor force dropped by 28 percent).

Table B.2 Persons employed in the auto manufacturing sector, parts and assembly (thousands)

	United States	Mexico	Canada[1]
1994	1,168	122	128
2013	820	552	115

1. 2012 data is the latest available for Canada.

Sources: US Bureau of Labor Statistics, Statistics Canada, and Instituto Nacional de Estadística y Geografía (INEGI).

The increase in labor efficiency, driven largely by advanced manufacturing technology, was not accompanied by a comparable increase in real US wages, as shown in table B.3.[2] Worker compensation (wages plus fringe benefits) increased by about 19 percent between 1994 and 2012, only 1 percent a year. At $37 per hour in 2012, average compensation in the auto industry was slightly higher than average compensation in all manufacturing, about $36 per hour in 2012.

(box continues)

1. US Bureau of Economic Analysis (BEA), GDP by Industry data, http://www.bea.gov/industry/gdpbyind_data.htm.

2. Adjusted for inflation by the chain-type PCE price index of the US BEA. It is important to note that the apparent Canadian wage increases were largely driven by appreciation of the Canadian dollar.

Box 1 Hard times in the US auto sector? *(continued)*

Table B.3 Real hourly compensation cost per hour for motor vehicles, trailers, and semi-trailers (2012 US dollars per hour)[1]

Country	1994	2012
Canada[2]	24.45	36.59
Mexico	4.84	7.79
United States	31.54	37.38

1. Compensation costs include direct pay, social insurance expenditures, and labor-related taxes. The figures are adjusted for inflation by the chain-type personal consumption expenditures (PCE) price index of the US Bureau of Economic Analysis.
2. Canadian 2012 data for ISIC 29 not available. Figures estimated using the Canadian compensation cost for all manufacturers.

Note: For 2012, the industry is defined as ISIC 29 and for 1994 it is defined as SIC 371. Includes the manufacture of motor vehicles for passengers or freight, parts and accessories, and trailers.

Sources: US Bureau of Labor Statistics, International Labor Comparisons, 2013, http://www.bls.gov/fls/ichccindustry.htm#29/; and Hourly Compensation Costs for Production Workers in Manufacturing, 2006, http://www.bls.gov/fls/flshcindsic.htm.

Data from the US Bureau of Labor Statistics shows that unit labor costs fell by some 40 percent in vehicle assembly and parts manufacturing over the past two decades.[3] NAFTA critics claim that the trade pact accounts for a large part of the disparity between productivity gains and wage gains. But another reason for this disparity is that the density of union membership in auto manufacturing fell over time. Table B.4 shows the clear downward trend since the 1980s, but it does not appear that the trend accelerated following the signing of NAFTA. The shift of US industry to the southern states was a major factor in declining union density, since those states are generally less friendly towards unions. In 1984, the southeastern states were responsible for just 11 percent of US automobile and parts production, a share that reached 26 percent in 2011.[4] Yet a third reason for the slow pace of wage growth in the auto industry was the bankruptcy, or near bankruptcy, of many auto firms in the Great Recession of 2008–09.

Table B.4 Union density in US auto manufacturing[1]

	1983	1994	2004	2013
Percent of workers unionized	58.8	44.4	29.4	18.2

1. Includes parts and assembly.

Source: Union Membership and Coverage Database from the Current Population Survey, http://www.unionstats.com.

3. US Bureau of Labor Statistics, Labor Productivity and Related Data, Division of Industry Productivity Studies, March 2014, http://www.bls.gov/lpc/#tables.

4. See US Bureau of Economic Analysis (BEA), Regional Data. Figures based on SIC code 95000 for 1984 and NAICS code 95000 for 2011. As defined by the BEA, the southeast region of the United States includes: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

importantly, technology differences between countries—and if wage changes ripple across the labor market just like interest rate changes ripple across the bond market, then import competition from low-wage countries will depress average US wage levels (see Stolper and Samuelson 1941). In reality neither assumption truly holds. The empirical question is whether the assumptions underlying Stolper-Samuelson are close enough to reality to generate the predicted outcome.

What does empirical research show? A recent study by Autor et al. (2013) found that increased US imports from

China between 1992 and 2007 did exert a modest negative effect on US wages in manufacturing, reducing average earnings in affected industries by roughly 3 percent from the base-year level.[27] By contrast, increased imports from Mexico and Central American countries had no significant effect on US wages in the manufacturing sector. This is true even though the United States has engaged in substantial trade liberalization with its Mexican and Central American trading partners and despite the fact that in 2007 imports from Mexico and Central America ($233 billion) totaled over two-thirds that of imports from China ($340 billion). Possibly the main reason the wage impact between Chinese and Mexican imports differs is that US trade with Mexico is roughly balanced and has a large intraindustry component (e.g., autos and parts shipped in both directions), whereas US trade with China is highly unbalanced and entails very large US imports of consumer goods in exchange for much smaller US exports of capital goods. Because of these features, US imports from Mexico compel considerably less job churn *between* industrial sectors than US imports from China, and this could account for the difference in estimated wage impact.

Increased imports from Mexico and Central American countries had no significant effect on US wages in the manufacturing sector.

Like Autor et al. (2013), McLaren and Hakobyan (2010) reported that, as a result of NAFTA, local US manufacturing wages were not reduced, nor was there an industry-wide depression of wages. A separate study by Autor, Dorn, and Hanson (2013) found that while the number of manufacturing jobs fell due to increased imports, average manufacturing wages within "commuting zones"—defined as metropolitan areas and their surrounding localities—were not significantly affected by rising imports. This finding will surprise observers who assume that labor markets are fungible, akin to bond markets. Reviewing the overall pattern of wages, Edwards and Lawrence (2013) found that while workers at the lower end of the pay scale did not experience much improvement over the past decade, they did not fare much worse than the middle class, suggesting that globalization has not significantly affected the distribution of wage outcomes within the middle 80 percent of the American economy. Whether globalization makes a major or minor contribution to the good fortunes of the "top 1 percent" is another question, one that we do not explore.[28]

NAFTA critics place far more emphasis on case examples ("anecdotes") than on the statistical analysis just reported. So do the public and many politicians. Instances can certainly be cited where import competition from Mexico led to wage cuts in US plants or where the threat of moving a factory to Mexico was used for leverage in wage negotiations. A study conducted by Cornell University for the North American Commission for Labor Cooperation found evidence that, between January 1993 and December 1995, over 50 percent of companies in the United States threatened to close all or part of their production plants in response to union activity or organizing campaigns of workers (Bronfenbrenner 1996). Specifically, companies made direct threats to relocate to Mexico in more than 10 percent of the cases, while other cases involved implicit threats, such as "given NAFTA we may need to reconsider our options" (p. 2). In one case, ITT Automotive in Michigan underlined the threat by setting up a dozen tractor-trailers full of production equipment from a closed site, plastered with signs reading "Mexico Transfer Job." In another case, a company handed out statistics to its workers on the differential between average wages of Mexican and US autoworkers. Bronfenbrenner (1996 p. 3) concluded that "NAFTA created a climate that has emboldened employers to more aggressively threaten to close, or actually close their plants to avoid unionization."

But the anecdotes and the Bronfenbrenner (1996) survey simply do not support the conventional wisdom that competition from Mexico has been a major force in suppressing the growth of average US wages over the past two decades. Empirical evidence in the cited studies indicates that increased imports do decrease the overall number of manufacturing jobs. However, increased imports of manufactures exert, at most, modest and highly localized downward pressure on wages. Import competition has not so far created measurable downward pressure on average wages, nor even on the wages of those who keep their jobs in the manufacturing sector.

27. In other words, if base-year manufacturing wages in an affected industry were $45,000 in 1992, manufactured imports from China would reduce the base year by $1,350.

28. Lawrence (2008) argues that the growing income share of the "super rich" is largely driven by forces other than international trade. Those forces include technology that amplifies the market scope of top entertainers (like Stephen Colbert) and computer geniuses (like Eric Schmidt), financial deregulation, plus changes in US corporate governance and rising share prices. Haskel et al. (2012) find "suggestive evidence" that globalization has contributed to rising earnings of superstars (defined as the small group of highly skilled, highly compensated workers), but likely through globalization channels other than merchandise trade, such as improved tradability of services and larger markets abroad (p. 136). Kaplan and Rauh (2007) argue that trade is a poor explanation of increasing inequality, since the shift towards top earners extends well beyond the sectors that produce tradable goods and services.

US AGRICULTURAL EXPORTS AND MEXICAN IMMIGRATION

Within a decade after the launch, NAFTA critics claimed that US agricultural exports to Mexico had driven peasant farmers from the land who then continued straight north to cross the US border as illegal immigrants.[29] The alleged damage was said to be especially severe for cultivators of corn (maize), a staple crop in hilly and arid agricultural districts, supposedly undercut by huge corn exports from US agribusiness.[30] To be sure, NAFTA required some liberalization of Mexican corn imports. But Mexico, of its own accord and in an effort to lower food prices and control inflation, unilaterally accelerated liberalization by allowing tariff-free imports of corn almost every year since 1994. But the cause-and-effect story that labels US corn exports as the cause of illegal Mexican immigrants does not stand up.

First, US corn exported to Mexico (the yellow variety) is predominantly consumed by animals, whereas most corn grown in Mexico (the white variety) is largely consumed by people (tortillas and the like). Huge US exports of yellow corn have enabled Mexicans to sharply increase the share of chicken and beef in their daily diet. It has not replaced white corn.

Second, as in other emerging countries, the Mexican population is moving from the countryside to cities. Rural life in most of Mexico is harsh, and incomes are barely 50 percent of the urban average according to 2012 statistics from Mexico's National Institute of Statistics and Geography.[31] However, in the NAFTA era, the rate of rural-to-urban migration has actually decelerated. In the 20 years between 1970 and 1990, the rural share of the Mexican population dropped 15 percentage points, from 42 percent to 27 percent. In the 20 years between 1990 and 2010 (the NAFTA era), the decline was only 5 percentage points, from 27 percent to 22 percent.

Third, to maintain rural incomes, the Mexican government has consistently supported the price of white corn with subsidies for farmers. In recent years, the average wholesale price of white corn in major producing states ranged from $5.30 per bushel in 2000 to $9.68 per bushel in 2013.[32] One consequence is that the area under corn cultivation in Mexico has declined only modestly in the NAFTA era, despite predictions that these areas would be wiped out. In 1994, Canada, the United States, and Mexico cultivated 1.0, 29.3, and 8.0 million hectares of corn respectively. By 2013, these figures reached 1.5 million hectares for Canada, 35.5 million for the United States, and 6.8 million for Mexico.[33] Mexican cultivation decreased modestly, but the big expansion of US corn cultivation reflects the ethanol mandate—which in turn raised the global price of corn—not exports to Mexico.

Fourth, there is little or no connection between the pace of illegal immigration from Mexico and the level of US corn exports to Mexico. Mexicans migrate to the United States to earn a better living. But depending on the state of the US economy, it can be easier or harder for an illegal immigrant to land a job. Figure 3 shows the general correspondence between the annual US unemployment rate and the number of border apprehensions (the best proxy for the annual number of illegal immigrants). No surprise: Higher unemployment discourages illegal immigration because Mexicans are less likely to cross the border if job opportunities are scarce. Tough border control has an effect as well. Figure 3 also shows the annual tonnage of US corn exports to Mexico (both yellow and white varieties). Visual inspection fails to reveal a positive correspondence between corn exports and apprehensions (if anything, the correspondence is negative). Even fancy econometrics cannot support the claim that US corn exports drive Mexican migrants across the Rio Grande. The corn-immigration story was a myth created by US critics in their stretch to create an alliance between anti-immigrant forces and anti-NAFTA forces.

THE BROAD ASSOCIATION BETWEEN NAFTA AND ILLEGAL IMMIGRATION

In the original NAFTA debate, President Carlos Salinas famously framed NAFTA as a "choice between getting Mexican tomatoes or tomato pickers," while President Clinton predicted that NAFTA would curb illegal immigration "because more Mexicans would be able to support their families by staying at home."[34]

In their assessment, Hufbauer and Schott (1993) were skeptical of both claims. In the short run, they argued, illegal immigration would likely increase, both because of the huge wage differential between the United States and Mexico and because of the general movement of the Mexican population to cities on the northern border (Tijuana, Juárez, Nuevo Laredo,

29. For an example, see Ellen R. Shaffer, "Immigration Is a NAFTA Problem. This Is Not Big News," *Huffington Post,* July 10, 2010, http://www.huffingtonpost.com/ellen-r-shaffer/immigration-is-a-nafta-pr_b_642484.html (accessed on March 12, 2014).

30. For a detailed exploration of this corn saga, see Hufbauer and Schott (2005), pp. 328–44.

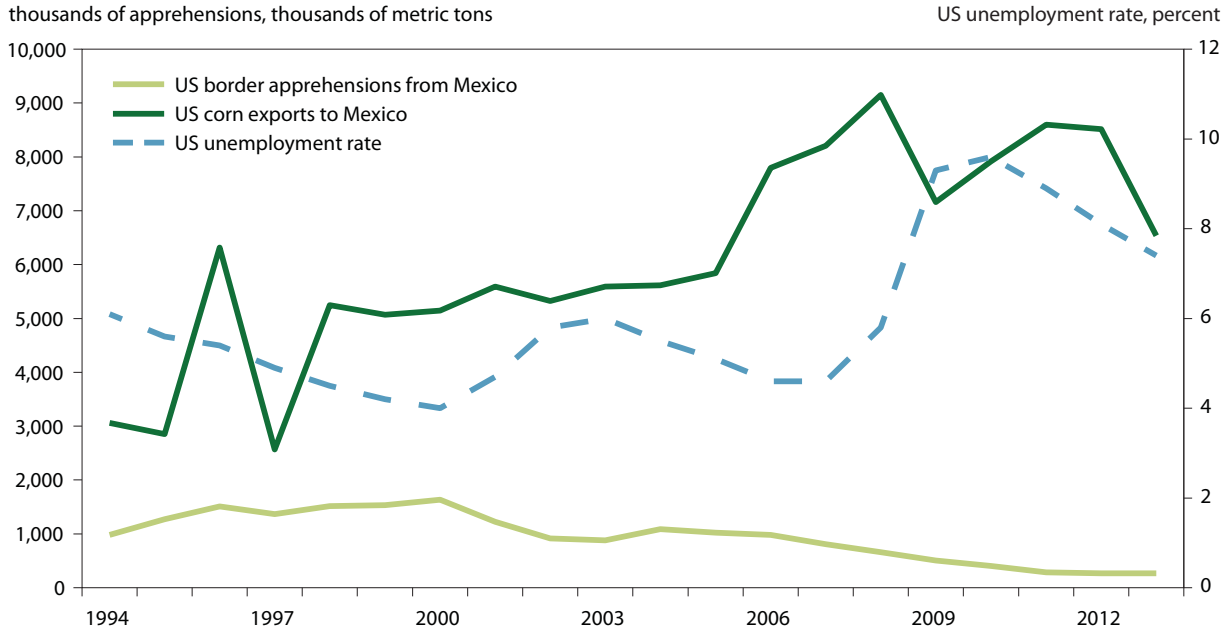
31. Based on the 2012 National Survey of Mexican Household Income and Expenditures, available at http://www.inegi.org.mx/est/contenidos/Proyectos/Encuestas/Hogares/regulares/Enigh/Enigh2012/tradicional/default.aspx.

32. According to the Food and Agriculture Organization (FAO) Global Information and Early Warning System (GIEWS) food price and data analysis tool, http://www.fao.org/giews/pricetool/. The original prices were expressed in US dollars per metric ton; these prices were converted to bushels using a conversion factor of 39.37 bushels = 1 metric ton.

33. Figures from the US Department of Agriculture, Production, Supply and Distribution database, http://apps.fas.usda.gov/psdonline/psdHome.aspx.

34. Quoted in Heyer (2012).

Figure 3 Illegal immigration, US unemployment, and US-Mexico corn trade



Notes: Due to data availability, total apprehensions for the US southwest border are used as a proxy for Mexican apprehensions for 1994–98. 1999–2013 is data for all apprehensions of Mexicans.

Sources: US Bureau of Labor Statistics; US Border Patrol Fiscal Year 2013 Statistics; USDA Foreign Agricultural Service, Global Agricultural Trade System (GATS), 2014.

and others).[35] In any event, immigration was essentially ignored in the NAFTA text; the only exception was a limited number of visas for business and professional migrants.

Taking a longer view, which Philip Martin (2005) does, as the Mexican fertility rate falls and the population ages, the number of young Mexicans who want to relocate in the United States will diminish. This is the famous "demographic hump," first analyzed by Martin as a cause of immigration pressure. In fact, as figure 3 shows, illegal immigration has noticeably diminished since 2000, a combined outcome of three forces: The demographic hump; higher US unemployment, especially since 2007; and much stronger border controls.

Moreover, if the Mexican economy performs better in the next two decades than in the past two (the subject of the next section), the flow of illegal immigrants will diminish further. To the extent that the Mexican economy flourishes as a result of integration between the United States and Mexico, fostered by NAFTA, the pact will serve as a positive force for higher incomes and better living standards in Mexico and therefore diminished immigration to the United States. President Clinton's optimistic forecast will eventually prove right, but it may take two generations for Mexican per capita incomes to converge to half of the US level.

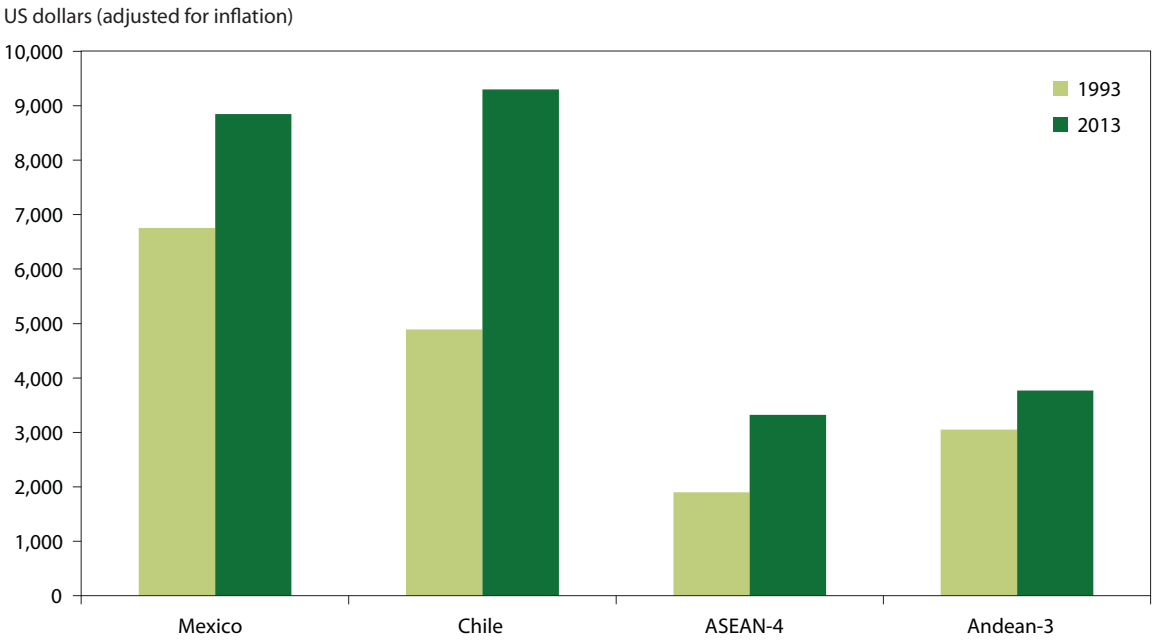
MEXICAN GROWTH IN THE NAFTA ERA

Mexican growth in the NAFTA era has been disappointing. In the wake of substantial economic reforms, Mexico should have delivered a performance as good as Chile's. It did not. Figure 4 compares real per capita GDP levels (adjusted for inflation), between 1993 and 2013, for four relevant countries and country groups: Mexico, Chile, the "ASEAN-4" (Indonesia, Malaysia, the Philippines, and Thailand), and the "Andean-3" (Bolivia, Ecuador, and Venezuela). Over the two-decade period, Mexican real GDP per capita expanded 31 percent, which works out to 1.3 percent annually (compounded), whereas Chile expanded 90 percent, 3.1 percent annually. The ASEAN-4 expanded 75 percent, 2.7 percent annually, while the Andean-3 expanded 24 percent, only 1.0 percent annually.

Why did Mexico perform more poorly than Chile or the ASEAN-4? Not because of NAFTA or lagging exports. Between 1993 and 2013, Mexican exports expanded 640 percent,

35. The portion of the Mexican population living in Mexican states that border the United States has grown from about 16 percent in 1990 to 18 percent in 2013, according to data from the Instituto Nacional de Estadística y Geografía (National Institute of Statistics and Geography).

Figure 4 Real GDP per capita levels for select countries



Note: ASEAN-4 consists of Indonesia, Malaysia, the Philippines, and Thailand. Andean-3 consists of Bolivia, Ecuador, and Venezuela.

Source: ERS baseline dataset, US Department of Agriculture.

Chilean exports expanded 730 percent, and ASEAN-4 exports expanded 420 percent.[36] Instead, Mexico suffered from three handicaps that were not nearly so burdensome in Chile and the ASEAN-4. Foremost was organized mayhem stemming from drug wars driven by the craving "made in the USA." Drug cartels have not only killed 70,000 people just since 2006,[37] spreading fear across Mexico; they have also knocked GDP growth down by around 1 percent annually. Other causes of the lagging Mexican performance include weak primary and secondary education; poor infrastructure (water, sewer, gas, electricity, roads) in major urban areas, discouraging the migration from farm to city; extensive corruption (compared to Chile); persistent monopolization of key sectors (telecoms, television, petroleum, electricity, cement); and sundry tax and regulatory obstacles that stifle small business firms.

In fact, a McKinsey Global Institute report (2014) finds that sectors of the Mexican economy oriented towards NAFTA—primarily large firms employing 500 persons or more—enjoyed productivity growth of 5.8 percent annually between 1999 and 2009. The Mexican productivity problem is concentrated in traditional small firms—employing 10 or fewer persons—which have little connection to NAFTA. These firms account for 42 percent of the Mexican labor force, but their productivity actually declined between 1999 and 2009, dragging down the overall growth of the Mexican economy.

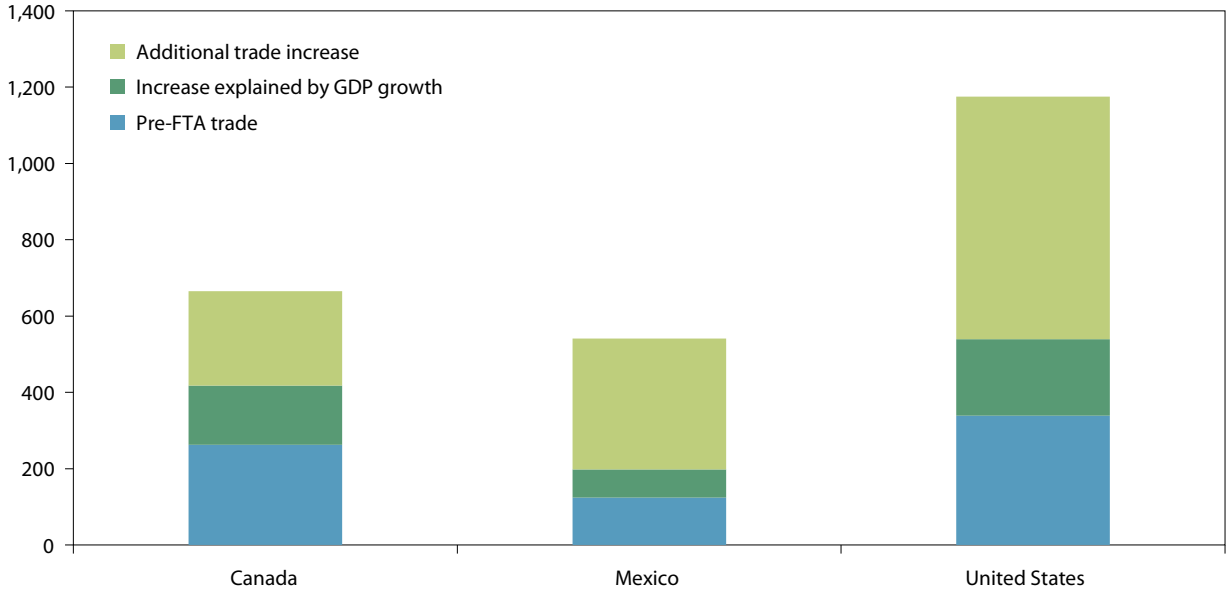
As mediocre as Mexican GDP performance was for two decades, it could have been worse. Look no further than the Andean-3 to see the adverse impact—in per capita income levels as well as growth—of populism, macroeconomic follies, and deep state intervention. Conceivably, if the US Congress had rejected NAFTA and refused to throw Mexico a financial lifeline following the peso crisis of 1994, Mexican political and economic policies might have taken a sharp left turn. Instead of growing real per capita GDP at 1.3 percent annually, the Mexican economy might have followed the trajectory of the Andean-3, possibly shrinking per capita GDP, and the Mexican political system might be rejecting new reforms rather than tackling the problems of the state-owned petroleum company Pemex and entrenched private monopolies.

36. Data from the International Monetary Fund (IMF), Direction of Trade Statistics. Total exports for 2013 estimated based on the first three quarters. The figures are in current dollars, not adjusted for inflation.

37. Nik Steinberg, "End Mexico's Disastrous 'War on Drugs' Once and For All," Human Rights Watch, December 2, 2013, https://www.hrw.org/news/2013/12/02/end-mexicos-disastrous-war-drugs-once-and-all (accessed on March 5, 2014).

Figure 5 NAFTA two-way merchandise trade

exports plus imports, billions of 2013 US dollars



FTA = free trade agreement

Note: Pre-FTA two-way trade is prior to the Canada-US FTA (1988) for Canada, and prior to NAFTA (1993) for the United States and Mexico. The middle part of each bar is the increase in two-way trade explained by growth in real GDP up to the year 2013 for all countries, annualized based on the first three quarters of 2013.

Source: International Monetary Fund, Direction of Trade Statistics, 2014.

WHAT CUSFTA AND NAFTA ACHIEVED

The Canada-US Free Trade Agreement (CUSFTA), signed in 1988, was the precursor to NAFTA, signed in December 1992, and should be grouped with the trilateral pact when considering achievements delivered by North American economic integration. CUSFTA and NAFTA were foremost trade and investment agreements, but of course they conveyed a larger message of North America cooperation. Thus we start with "hard" economic statistics and then move to "soft" political aspects.

Economic Payoffs

Figure 5 shows bar graphs for the North American two-way merchandise trade of the United States, Canada, and Mexico, respectively, expressed in 2013 dollars, adjusted for inflation. The bottom portion of each bar (blue) shows the country's two-way trade prior to CUSFTA (1988) for Canada and prior to NAFTA (1993) for the United States and Mexico.[38] The next segment of each bar (green) shows the amount of two-way trade in 2013 that corresponds to North American GDP growth—in other words, "business as usual" trade. The top segment of each bar (light green) shows the country's "extra" two-way trade. For reference, table 1 presents much the same data underlying figure 5 but expressed in current dollars.[39]

Judging from these simple bars, "extra" US merchandise trade is some $635 billion, about 55 percent of total North American trade for the United States; $247 billion and 37 percent for Canada; and $345 billion and 63 percent for Mexico. Of course CUSFTA and NAFTA cannot claim credit for all the "extra" trade, but the agreements can claim credit for a good portion.

CUSFTA and NAFTA have not exerted the same buoyant impact on North American services trade as they have on merchandise trade. Table 2 summarizes US services trade with Canada, Mexico, and the world in 1993 and 2013, expressed in current dollars. Imports and exports within North America grew no faster, and sometimes slower, than with the world.

38. To be precise, the start date for Canada-US trade is 1988, and the start date for US-Mexico and Canada-Mexico trade is 1993.

39. Table 1 is based on data from the US Bureau of Economic Analysis, while figure 5 is based on data from the IMF Direction of Trade Statistics.

Table 1 US trade in goods (billions of current US dollars)

	1993		2013	
	Imports	Exports	Imports	Exports
Canada	113	101	338	302
Mexico	40	41	287	227
World	779	589	2,294	1,590

Source: US Bureau of Economic Analysis.

Table 2 US trade in services (billions of current US dollars)

	1993		2013	
	Imports	Exports	Imports	Exports
Canada	9	17	30	64
Mexico	8	11	17	29
World	124	186	428	660

Source: US Bureau of Economic Analysis.

While CUSFTA and NAFTA both contained services chapters, and while investment in some service sectors was liberalized (e.g., banking and retail trade in Mexico), regulatory barriers to cross-border trade in services were not much reduced. To this day, they remain high: One recent study by Centre d'Etudes Prospectives et d'Informations Internationales, or CEPII (Fontagné, Guillin, and Mitaritonna 2011), estimates the average tariff-equivalent barriers to cross-border service imports as follows: 24.2 percent for Canada, 46.8 percent for Mexico, and 30.5 percent for the United States.[40]

Ample econometric evidence documents the substantial payoff from expanded two-way trade in goods and services. Through multiple channels, benefits flow *both* from larger exports *and* larger imports.[41] As a rough rule of thumb, for advanced nations, like Canada and the United States, an agreement that promotes an additional $1 billion of two-way trade increases GDP by $200 million. For an emerging country, like Mexico, the payoff ratio is higher: An additional $1 billion of two-way trade probably increases GDP by $500 million.[42] Based on these rules of thumb, the United States is $127 billion richer each year thanks to "extra" trade growth, Canada is $50 billion richer, and Mexico is $170 billion richer. For the United States, with a population of 320 million, the pure economic payoff is almost $400 per person.

Appraising trade through a mercantilist lens, figure 6 shows the percentage of growth in real US exports to Canada, Mexico, and the rest of the world in the CUSFTA-NAFTA era. The start point is indexed at 100 for each destination. While US exports to Canada have grown almost as fast as US exports to the rest of the world (which includes fast-growing Asia), US exports to Mexico have grown much faster. From the American perspective, NAFTA must be credited with this mercantilist payoff.

CUSFTA and NAFTA probably had little impact on inward foreign direct investment (FDI) to Canada and the United States, because both countries were already open, with settled commercial law and property rights. But for Mexico, NAFTA turned the page from policies that said to foreign investors "stay far away!" to policies that said "come on in!" And because of its new access to US and Canadian markets, Mexico became an attractive location for companies around the world. In 1993, Mexico's inward stock of FDI was just $52 billion, about 7 percent of GDP. By 2012, the stock reached $315 billion, some 27 percent of GDP.

Political Payoffs

Possibly the largest payoff—for the United States more important than the economic benefits—was the creation of a new foundation for US-Mexican relations through NAFTA. Unlike Canada, Mexico has not been a US military ally in a long list of wars, running from the First World War to the Afghanistan conflict. In international conflicts, Mexico plays a neutral role. Mexico was the only Latin American country to maintain ties with Cuba for the entire duration of the Cold War. More to the point, beginning with Mexico's expropriation of Jersey Standard and other foreign oil companies in 1938, the official Mexican attitude towards foreign investment originating in the United States was antagonistic. Generations of young Mexican schoolchildren learned that the United States had stolen vast swaths of Mexican territory by annexing the Texas Republic in 1845 and by seizing present day New Mexico, Colorado, Utah, Arizona, Nevada, and California in the Mexican-American War (which was concluded by the Treaty of Guadalupe Hidalgo in 1848). Bearing this history in mind, it is fair to characterize US-Mexican relations prior to NAFTA as cool.

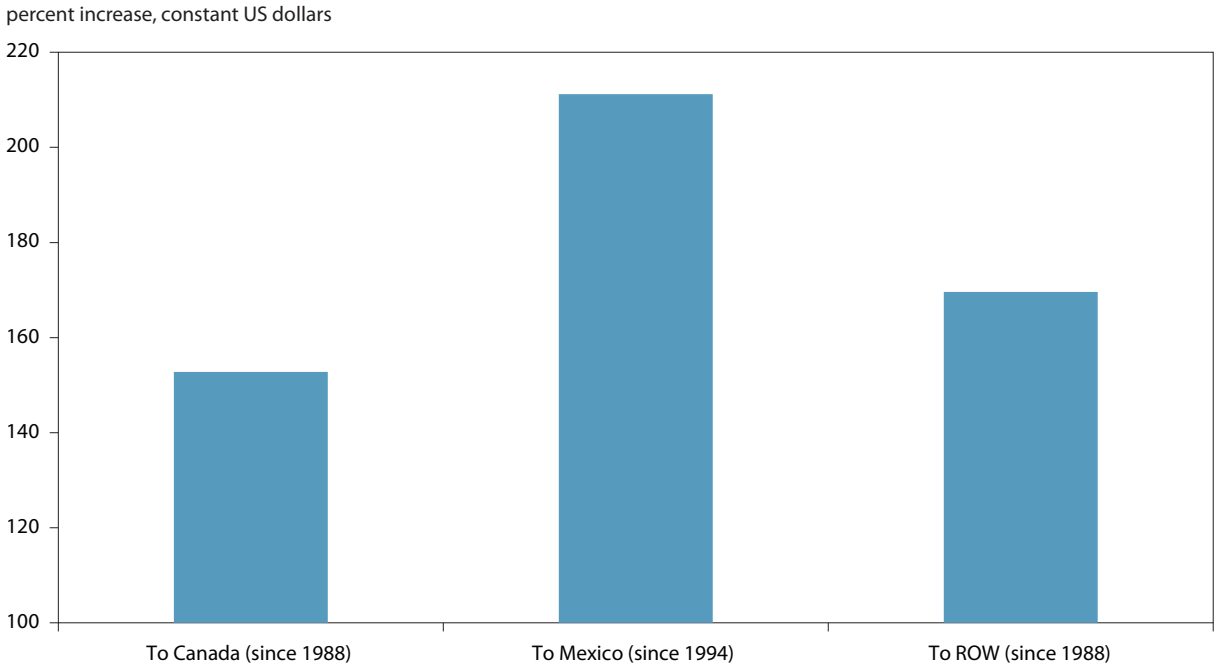
NAFTA dramatically improved the dynamic of official and private relations. The Clinton administration spearheaded bilateral and multilateral assistance to Mexico in the wake of the 1994 peso crisis. As drug wars escalated in the 2000s, the United States provided, and Mexico welcomed, intelligence

40. Based on the simple average of the *ad valorem* equivalents for communications, finance, insurance, other business services, and other services.

41. For a survey of the channels, see Bradford, Grieco, and Hufbauer (2005). The channels include more efficient use of resources through the workings of comparative advantage, higher average productivity of surviving firms through "sifting and sorting," and greater variety of industrial inputs and household goods.

42. See Hufbauer, Schott, and Wong (2010), appendix A, table A.2.

Figure 6 US real export growth since the pre-FTA level



FTA = free trade agreement; ROW = rest of world

Note: Pre-FTA for Canada is pre-CUSFTA; pre-FTA for Mexico is pre-NAFTA.

Source: International Monetary Fund, Direction of Trade Statistics, 2013.

assistance and military supplies. Cooperation was good on issues ranging from agricultural inspection to climate change to border inspections. Certainly the United States could have done more to foster integration with Mexico.[43] NAFTA did not address the thorny problem of a path to citizenship for 11 million undocumented Mexicans living in the United States, an issue which continues to flare up in congressional debates. But it seems highly unlikely that bilateral relations over the past 20 years would have been equally cordial without NAFTA.

In addition, NAFTA gets some credit for Mexico's transition from a one-party political system with extensive state capitalism to a multiparty market-oriented system—but of course most of the credit for these reforms goes to internal Mexican forces. NAFTA can also claim some credit for the rise in Mexico's ratings in the Heritage Foundation's Index of Economic Freedom, from 63 in 1995 to 67 in 2013.[44]

While political payoffs cannot be quantified in economic terms, over the course of the next 20 years they are likely to prove more consequential than the economic payoffs already realized from the NAFTA pact.

43. The late Robert Pastor was a forceful exponent of more energetic and generous US policies towards Mexico. See Pastor (2011).

44. For details on the Index of Economic Freedom, see http://www.heritage.org/index/.

APPENDIX A

TRADE AGREEMENTS AND TRADE DEFICITS

A favorite attack line of trade skeptics is that US free trade agreements inevitably worsen US trade deficits.[45] "Uncle Sucker" is their metaphor: US negotiators open wide the gates for foreign imports but gain precious little access for American exports. The predictable outcome, they reason, is larger US trade deficits. According to their arithmetic, trade deficits translate into lost US jobs. The main text spells out the normal *inverse* relationship between trade deficits and unemployment. In this appendix we examine the starting point in the critics' chain of logic: the supposed strong connection between trade agreements and trade deficits.

FOREIGN TRADE BARRIERS FALL MORE

At the launch of a free trade agreement (FTA), US trade barriers are almost always lower than the barriers of a prospective partner country. Why? Because, unlike many countries, the United States has progressively trimmed its trade barriers for 70 years, since the end of the Second World War. Lower US trade barriers at the launch of the agreement were true of the Canada-US FTA (CUSFTA) in 1989; NAFTA, which added Mexico in 1994; the US-Chile FTA in 2004; the US-Australia FTA in 2005; the US-Peru FTA in 2009; the US-Korea FTA in 2012; and others. Since the goal of any FTA is to reduce the trade barriers of *both* partners to zero, the US partner almost always has further to go.

In other words, the partner opens its markets to US exports *more* than the US opens its markets to partner exports. Using tariff data, table A.1 illustrates this basic and important fact, both for existing FTAs and the prospective Trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP). FTAs also lower nontariff barriers (NTBs, for example, quotas and regulatory obstacles) in both partners. Extensive research shows that, like tariffs, NTBs are generally higher in the partner country when an FTA is launched. Again, the partner has further to go. So, just looking at negotiated FTA texts, it is "Uncle Smart," not "Uncle Sucker."

45. Ross Perot started this line of attack, claiming that NAFTA would create a "great sucking sound." Prominent among current skeptics are David Bonior (former Congressman), Thea Lee (AFL-CIO), Clyde Prestowitz (Economic Strategy Institute), Robert E. Scott (Economic Policy Institute), and Lori Wallach (Public Citizen's Global Trade Watch).

Table A.1 US and FTA partner average tariffs at year of entry
(unweighted)

	US applied tariff	Partner applied tariff
Existing FTAs		
Canada (1989)	5.06	9.65
Mexico (1994)	4.32	12.36
Australia (2005)	3.11	5.10
Peru (2009)	2.98	8.57
Colombia (2011)	2.79	11.17
South Korea (2012)	2.79	10.08
TPP (2015?)		
Malaysia (2012)	3.4	6.5
Vietnam (2012)	3.4	9.5
Japan (2012)	3.4	4.6
TTIP (2016?)		
European Union (2012)	3.4	5.5

FTA = free trade agreement; TPP = Trans-Pacific Partnership; TTIP = Transatlantic Trade and Investment Partnership

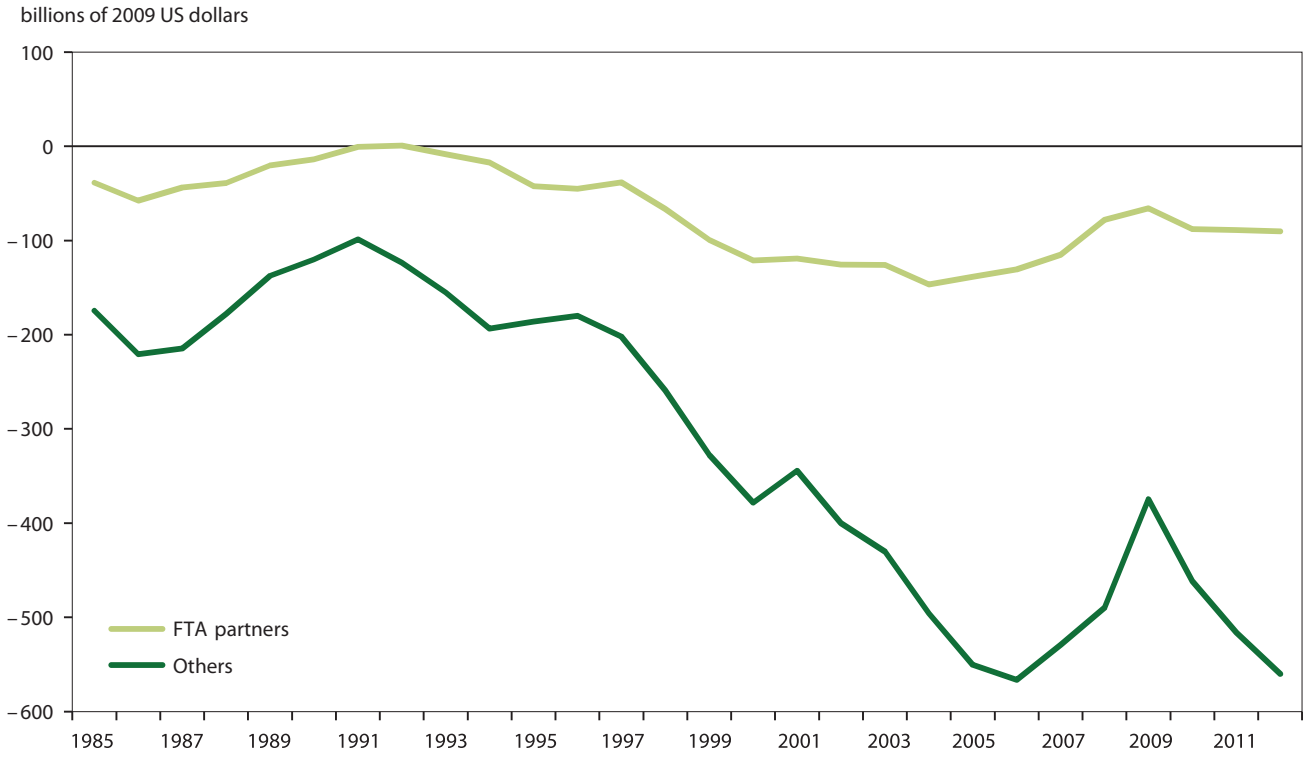
Note: Year of entry into force or closest earlier available year for US FTA partners, latest available year for prospective FTA partners. Tariff data is from 1993 for Mexico, 2004 for Australia, 2006 for Peru, and 2011 for South Korea.

Sources: World Bank, World Integrated Trade Solutions (WITS) database; WTO tariff profiles; UN Conference on Trade and Development Trade Analysis and Information System (UNCTAD TRAINS) database.

US TRADE DEFICITS WITH FTA PARTNERS AND OTHERS

According to the skeptics, the United States should be accumulating a mountain of trade deficits with its 20 FTA partners, starting with Israel in 1985, then Canada and Mexico in the 1990s, and moving along to Korea, Colombia, and Panama in the 2010s. But this hasn't happened. Figure A.1 tells the story. Excluding fuel imports and exports from the picture (if US oil imports did not come from Canada and Mexico, they would come at higher cost from Venezuela, Nigeria, and elsewhere), it is evident that US trade deficits with its FTA partners are coasting along at $50 billion to $100 billion annually, while US deficits are mounting with the rest of the world. It would be wrong to promise that the TPP or the TTIP would "cure" US trade deficits with those countries. But it's false to claim that NAFTA and other FTA pacts are the locomotive driving higher US trade deficits over the last two decades.

Figure A.1 US nonfuel merchandise trade balance, 1985–2012



Source: World Bank's World Integrated Trade Solutions (WITS) database, https://wits.worldbank.org/.

GLOBAL EXPERIENCE: TRADE AGREEMENTS AND TRADE DEFICITS

If the FTA skeptics were right, greater coverage of a country's imports by trade agreements should foreshadow larger trade deficits. Figure A.2 examines this hypothesis. The vertical axis portrays each country's 2012 trade surplus (positive) or trade deficit (negative) as a percentage of its GDP.[46] The horizontal axis shows the percentage of the country's imports that are covered by trade agreements (leading to tariff preferences). If more trade agreements meant larger trade deficits, the country dots would drift downwards, left to right in the figure. They don't. As far as the eye can tell, trade deficits are symmetrical around the horizontal axis in figure A.2: In other words, more import coverage by trade agreements doesn't foreshadow either larger trade surpluses or larger trade deficits. As the arrow in the graph indicates, the United States is a middling country when it comes to both trade agreements and trade deficits. In 2012, US preferential tariffs covered less than 20 percent of US imports, and the US trade deficit was about 3.4 percent of US GDP.

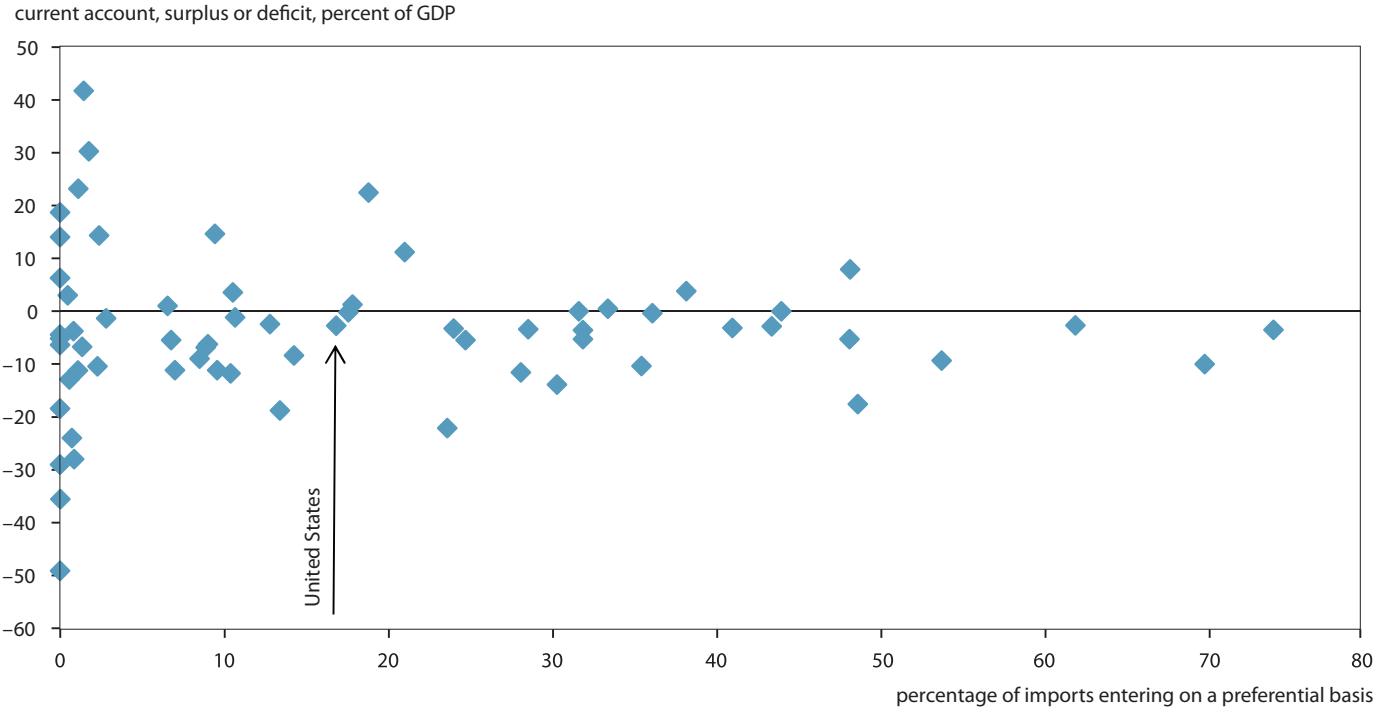
WELL, WHAT EXPLAINS TRADE DEFICITS?

Though a household budget analogy might seem simplistic, it's not far off the mark. When a household earns $100,000 and spends $105,000 on goods and services, that household has a deficit of $5,000. The deficit must be financed by a mortgage loan, credit card debt, or a generous relative. (We'll assume that neither Willy Sutton nor Bernie Madoff heads the household.) Likewise, when a nation earns $15.7 trillion and spends $16.2 trillion on goods and services (approximately the US case in 2012), the national trade deficit will be $500 billion. That deficit must be financed by loans or investment from abroad.

Figure A.3 portrays this basic and fundamental story in bar graphs. The annual US trade deficit closely matches, year by year, the combined deficiency in US net national savings (in other words, net national borrowing). The combined deficiency is the sum of household financial savings (or deficits), government deficits, and business savings (the difference between company profits and company investments). Adding these three

46. The technical term for trade surpluses and deficits is "current account balance," a concept which covers trade in goods and services and other current transactions such as remittances.

Figure A.2 Trade balances and preferential imports, 2012



Note: Preferential basis refers to the percentage of imports entering at less than half of the most favored nation rate. This corresponds closely to trade within free trade agreements.

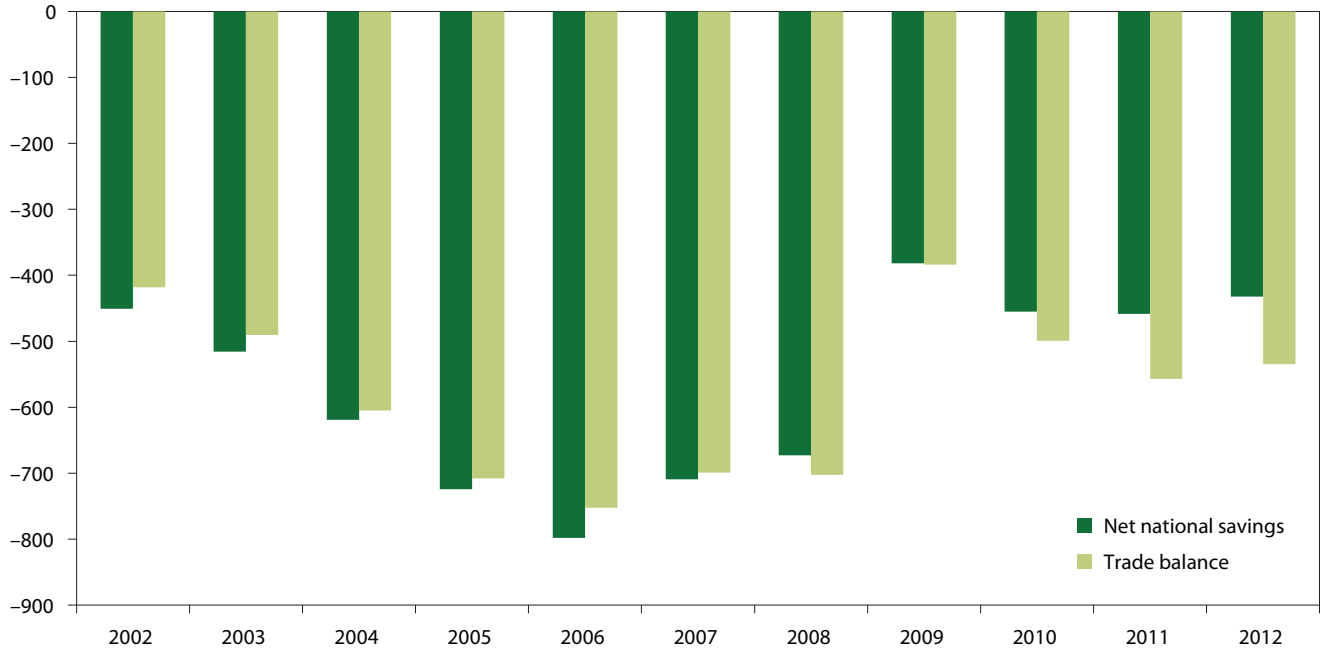
Sources: World Bank's World Integrated Trade Solutions (WITS) database, https://wits.worldbank.org/; authors' calculation.

components gives net national borrowing—in other words, negative national savings. When net national borrowing goes up, so does the trade deficit—because the borrowed money is spent on foreign goods and services (or, to put the relationship another way, because the United States spends more than it earns, it must borrow from abroad).

If the United States wants to reduce its trade deficit, it must reduce its net national borrowing. Many policies can help. Government deficits can be cut, household financial savings can be encouraged, foreign central banks can be asked to appreciate their currencies and buy fewer US Treasury bonds, and the US Export-Import Bank can enlarge its lending to foreign buyers of US exports. In addition, as Bergsten and Gagnon (2012) have urged, in periods of high US unemployment, the United States might reduce its trade deficit by policies that realigned the exchange rate—in plain English, a cheaper dollar relative to the euro, the yuan, or the yen. But one policy that makes no sense, and will do little or nothing to reduce the trade deficit, is to block new FTAs—such as TPP and TTIP. Instead, these agreements should be pursued vigorously for what they can bring: higher productivity and better living standards for all Americans. That's what NAFTA promised and that's what NAFTA delivered.

Figure A.3 US trade deficit and net national savings

billions of current US dollars



Note: Negative savings values indicate net borrowing. The trade balance reflects the current account balance, exlcuding investment income.

Source: Federal Reserve Bank of St. Louis, http://research.stlouisfed.org/.

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