NAFTA 2.0 – What should be Next?

Abstract

The Trump Administration's plan to renegotiate the North American Free Trade Agreement (NAFTA) has spurred renewed attention to the Agreement among scholars and analysts as well as in the media. Much of the commentary regarding the impacts of NAFTA on the United States has centered on the role of NAFTA-induced trade between the United States and Mexico. Trade-based analyses are clearly important and useful, but there are other, largely unstudied, ways by which NAFTA has impacted the US economy. In this article, we widen the scope of the debate by exploring the overall impact of NAFTA, with attention to trade, foreign direct investment (FDI), employment, immigration, technology, labor interests, and the environment. We then recommend policy changes, centering on updating the Agreement to bring it into line with more recent US trade agreements and with the realities of the current economic and technological landscape. We also recommend a more directed effort to help those who are harmed by free trade, by nudging them toward retraining in jobs that are more competitive and more in demand.

The Economic Impact of NAFTA

Introduction

The North American Free Trade Agreement (NAFTA) was signed by the governments of Canada, the United States and Mexico in December of 1992 and went into effect in January of 1994 after ratification by the legislatures of each country during 1993. The agreement was explicitly aimed at eliminating tariff barriers to trade among the three countries and implicitly at creating stronger ties that would generate greater production and more jobs in all three.

It is very difficult to separate the impacts of NAFTA from the impacts of other key phenomena that occurred during the 1990s, affecting one or more of the three economies. For example, in Mexico there was a national election in 1994 that was accompanied by a maxi-devaluation of the peso in which the currency halved in value between December of 1994 and April of 1995[1]. This made Mexican exports much more competitive in international trade, and it also led the Mexican government to open up ownership in Mexican firms (including banks) much more broadly to foreigners. A second example was the worldwide explosion of the Internet, which led to massive business restructuring to take advantage of the data processing and communications advances that occurred. The offshoring and outsourcing of production that occurred consequent to the new technology included a lot of manufacturing assembly activity that moved to Mexico and much more that moved to China. This was exacerbated by China's entry into the World Trade Organization (WTO) in 2001. The impact of the marginal reduction in tariffs among the three countries in NAFTA was of a much smaller order of magnitude, relative to these concurrent developments[2].

Regardless of the other phenomena that were taking place, it is useful to take stock of the impacts of NAFTA not just on exports and imports among the member countries but also on other business activities, from investment to movement of people to rules on labor and the environment. Such reflection is needed, as attention to these non-trade issues has been quite limited in the recent assessments of NAFTA stemming from the Trump Administration's calls for renegotiation (e.g. Knowledge@Wharton 2016; McBride 2017). This article examines the various economic impacts of NAFTA and suggests future avenues of adjustment to the original agreement that may produce even greater benefits, as well as offering support to people harmed by the economic adjustments that resulted from the original agreement. The range of impacts can be seen in Table 1, which identifies those areas and impacts that have been found.

Table 1 – Economic Impacts of NAFTA on USA

	Initial impacts	Medium-term impact	China impact	Who is helped (+)? Who is hurt (-)?
US exports	Increased auto parts, electronics parts, clothing parts, some fruits and vegetables	Restructuring of US industry in value chains	minimal	+US input producers and sales orgs; US consumers - US auto, clothing, electronics assembly workers
US imports	Influx of low cost goods, especially final products assembled in Mexico	Influx of low cost goods, mitigated by factor price equalization	Mexican exports to US increasingly being outcompeted by China, mostly since 2001	+ US consumers; MNCs that rely on inputs from Mexico. - US based import competing industries, US workers in areas where Mexico holds Comp. Adv.
FDI from US	Assembly FDI in Mexico: eliminated some assembly jobs in the US	Lower consumer prices and accompanying economic growth in the US; Transfer of tech and managerial knowhow to Mexico.		+ US consumers; US workers in non-assembly sectors. - US assembly workers.
US GDP	Modest growth	Modest growth		+ small GDP impact
US jobs	Loss of some assembly jobs, outpaced by growth of new jobs	Net gain of US jobs, as labor shifts to areas where US has comp advantage		- Low-skill US workers in affected industries and locations
Labor rules	Stronger enforcement of Mexican laws, deterring benefits of oursourcing and offshoring	Stronger enforcement of Mexican laws, deterring benefits of oursourcing and offshoring	Could prompt race to the bottom dynamic in Mexico, given current labor conditions in NAFTA.	+ US workers; - MNCs and US consumers
Immigration	Maybe an initial increase in immigration, if liberalization leads to short term displacement.	Reduction in immigration from Mexico, as trade becomes a greater substitute for migration.	If Chinese products displace Mexican exports to US, unemployment and accompanying emigration might increase.	+ US workers, in the long term - Industries like farming that rely on labor from undocumented workers, and consumers who benefit from low price agro goods.
Pollution	Stronger enforcement of Mexican laws, deterring benefits of oursourcing	Pollution decrease in the US, as some heavy polluting activities move	Could prompt race to the bottom dynamic in Mexico, given current	+ US workers - MNCs and US consumers.

	and offshoring	South	environmental conditions in NAFTA.	
Intellectual Property Protection	Solidified Mexico's 1991 law to protect IP	Continued protection at a high level	Makes China relatively less attractive for US FDI	+US firms with proprietary technology

The remainder of this analysis considers these issues in greater depth. The perspective of the United States is taken in this analysis; similar evaluations could be carried out for Mexico and for Canada. The discussion also is limited to bilateral US-Mexico issues, ignoring Canada for the most part.

After evaluating NAFTA's impacts, we turn our attention to areas in which NAFTA can be improved. In contrast to some other recent analyses (e.g. Ainsworth 2016; Auerbach and Devereux 2017), we take the position that reform efforts should not focus on responses to the value added tax. Instead, we believe that updating NAFTA to bring it into line with more recent US trade agreements and with the realities of the current economic and technological landscape (which are quite different from the landscape of the early 1990s) will have more consequential effects, including in the areas emphasized by President Trump and other US political leaders.

Conceptual View

The implementation of NAFTA took place during a period of relative political stability around the world (after the fall of the Soviet Union and before the rise of global terrorism and new Russian aggression). It also occurred during a period of relative economic transformation due to the internet's growing impact on global communication and on business more broadly. In this context we argue that it is feasible and useful to explore the specific impacts of NAFTA, in isolation from these other dynamics, on US macroeconomic features such as exports, imports, jobs, and national income, as well as on issues including the environment, labor protection, and technology transfer. It is also important in the current US political context to look at the impacts on specific groups of people such as workers in import-competing industries and workers in the manufacturing and agriculture sectors. The range of considerations are depicted in Figure 1.

Figure 1 – Impacts of NAFTA on the United States

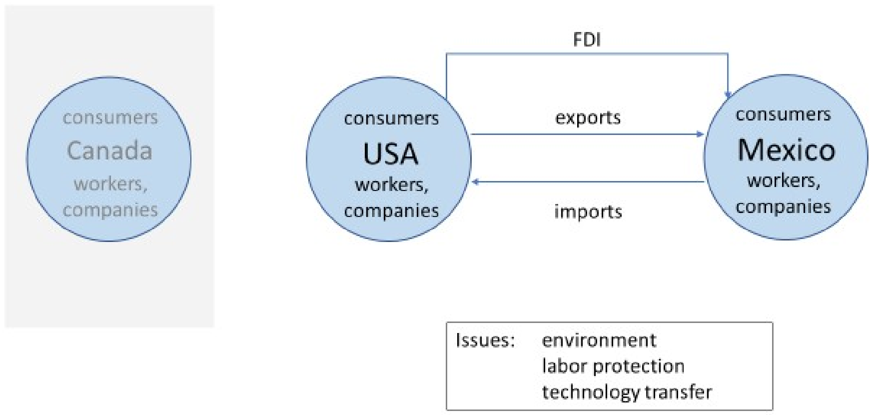
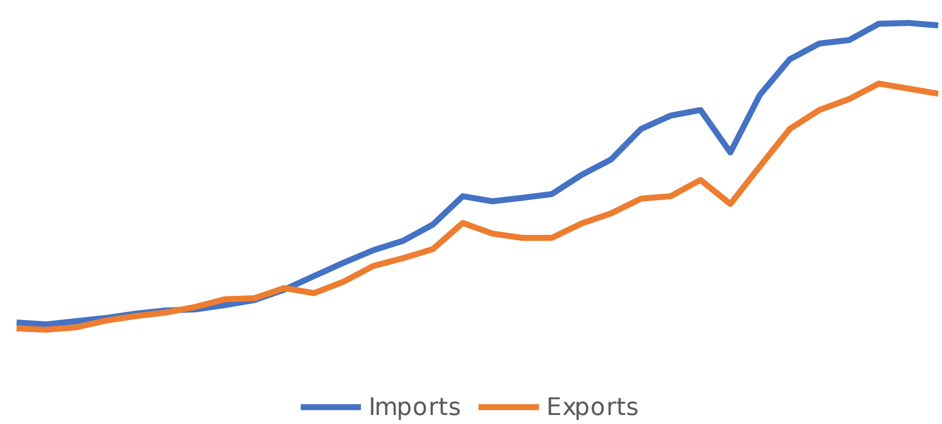


Figure 1 highlights, from the US perspective, the main directions of economic transfers, as exports and foreign direct investment flow from the US to Mexico and imports flow to the US from Mexico. These inflows and outflows have benefitted US consumers, as well as many industries and workers in the US, but they have also displaced some workers and industries. Our analysis identifies winners and losers and offers solutions that will mitigate negative repercussions by helping those harmed by trade to adjust.

Effects of NAFTA on Trade and Investment

US exports to Mexico and imports from Mexico grew quite dramatically after the passage of NAFTA, as shown in Figure 2.

Figure 2 – US Trade in Goods with Mexico (US$ MM)



Actually, the rate of growth of trade with Mexico followed a path consistent with growth during the previous decade, but under NAFTA imports grew more rapidly than exports (largely as a result of assembly operations set up in Mexico to assemble cars, car parts, clothing, and electronics products for final sale in the US). While the US trade deficit with Mexico did widen in the years after NAFTA, it should be noted that the US trade deficit with China has been considerably larger than its deficit with Mexico in the years since NAFTA went into effect. For 2016, US-China trade was 46% of the overall trade deficit (China deficit=$347 billion). In contrast, US-Mexico trade was 8.4% of the overall US trade deficit that year, such that China was 5.5 times more important as a source of the US trade deficit last year.

The composition of US exports to Mexico during the NAFTA era have strongly reinforced the offshore assembly (maquila) activity that began more than two decades before the agreement.

- The top US export categories (2-digit HS) in 2015 were: machinery ($42 billion), electrical machinery ($41 billion), vehicles ($22 billion), mineral fuels ($19 billion), and plastics ($17 billion).

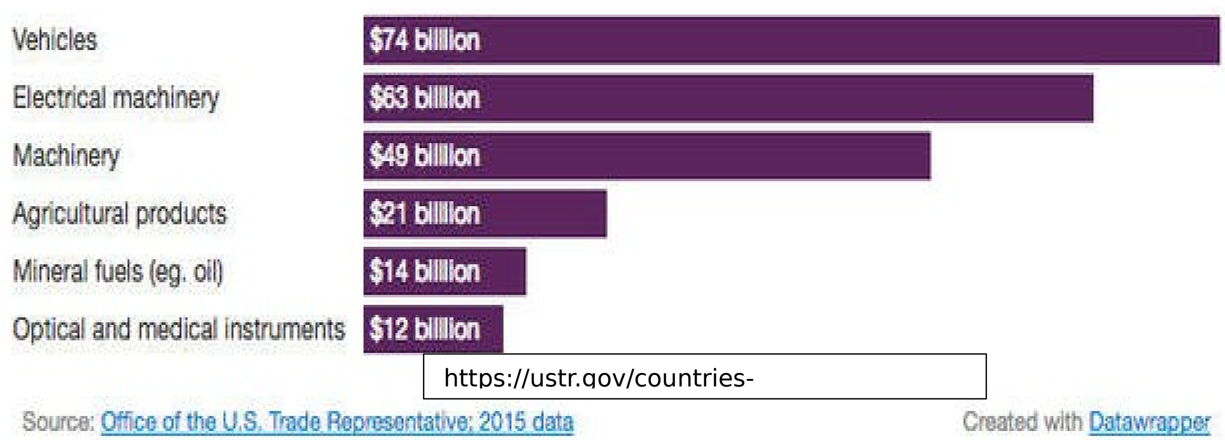
- US exports of agricultural products to Mexico totaled $18 billion in 2015, making Mexico the US's 3th largest agricultural export market. Leading categories include: corn ($2.3 billion), soybeans ($1.4 billion), dairy products ($1.3 billion), pork & pork products ($1.3 billion), and beef & beef products ($1.1 billion).

- US exports of services to Mexico were an estimated $30.8 billion in 2015, 2.7% ($807 million) more than 2014, and 36.7% greater than 2005 levels. It was up roughly 196% from 1993 (pre-NAFTA). Based on 2014, leading services exports from the US to Mexico were in the travel, transportation, and intellectual property (computer software) sectors. [source: USTR https://ustr.gov/countries-regions/americas/mexico]

In this context, we assume that workers in these industries have been beneficiaries of NAFTA.

We turn next to US imports from Mexico. The composition of US imports from Mexico in 2015 is illustrated in Figure 3. We can see that the bulk of imports come in the form of vehicles and machinery (electrical and otherwise). In particular, Mexico has become a primary location for the assembly of automobiles for the US market.

Figure 3 – What the US Imports from Mexico



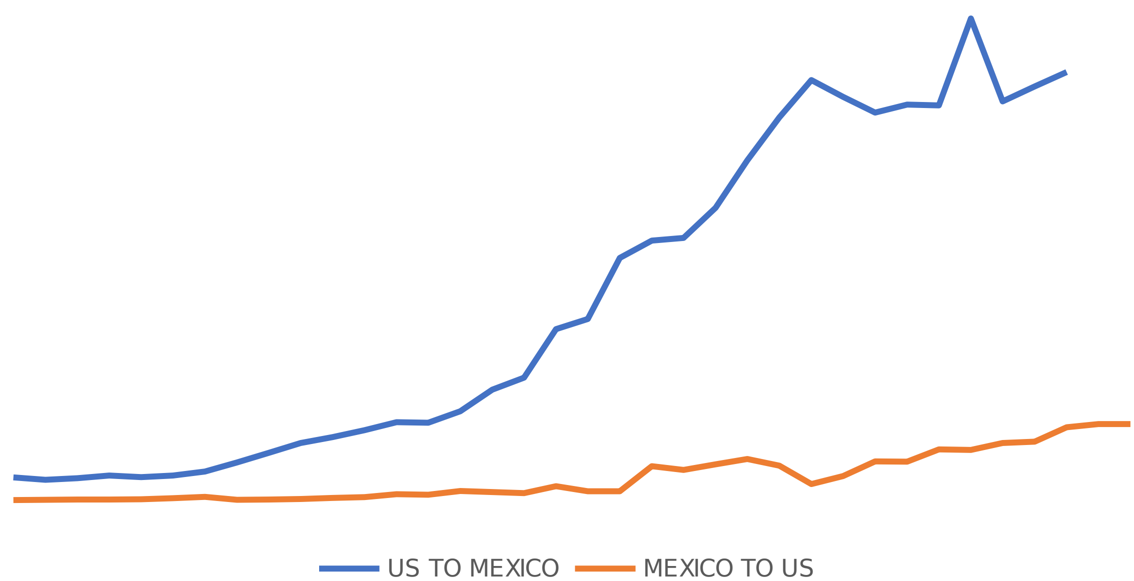
https://ustr.gov/countries-

The top US **export** categories (2-digit HS) in 2015 were: machinery ($42 billion), electrical

The conventional wisdom among many of NAFTA's critics is that NAFTA led to a shift of jobs from the United States to Mexico, and this import data could be indicative of such a dynamic. However, as is discussed below in greater detail, it is difficult to quantify the number of jobs lost due to NAFTA in this area, as assembly and low-skill-intensive manufacturing jobs would surely have moved to other locations characterized by low-cost production in the absence of NAFTA. Nevertheless, Hakobyan and McLaren (2016) did find that a large number of jobs were lost in the import-competing sectors harmed by NAFTA, as well as in the locations of that production in the US.

Foreign direct investment increased very significantly during the NAFTA era, due largely to US companies setting up assembly facilities in Mexico. These flows are shown in Figure 4.

Figure 4 – FDI Between US and Mexico (US$ MM)



This is much more striking than the growth in trade between the two countries, though in both cases of trade and US FDI the growth of bilateral transfers with Mexico has been faster than with the rest of the world. NAFTA's positive impacts on FDI flows to Mexico are likely attributable to the heightened credibility that Mexico gained as an investment destination[3]. Trade agreements, such as NAFTA, have been demonstrated in cross-national statistical analysis to have positive effects on foreign investors, as these agreements signal that developing country signatories are credible in their commitments to protecting the assets of investors (Büthe and Milner 2008). In the case of NAFTA these commitments were strengthened further through accompanying conditions regarding intellectual property rights protections (discussed further below).

Effects of NAFTA on the US Economy

US GDP was very marginally influenced by NAFTA, given the much greater impacts of technology change and of trade with China during the second half of the 1990s and the early 2000s. A 2014 report by the Peterson Institute for International Economics (PIIE) found that the economic growth attributable to NAFTA accounted for approximately $400 per US citizen per year (Knowledge@Wharton 2016). Likewise, estimates of overall impact of the NAFTA tariff reductions on US welfare are generally small and positive. Caliendo and Parro (2015) estimated the tariff reduction to produce a 0.08% increase in US GDP.

sidebar

Even the distribution of US GDP by sectors was not noticeably affected by NAFTA, though many jobs were lost in auto assembly and in production of some agricultural products such as sugar and avocados. This is because other jobs were gained in those same sectors, in auto design, production of components, and sales and service, while in agriculture US jobs were gained in corn, soybeans, dairy products, and pork & beef production.

The sugar industry was an interesting case of repeated re-negotiation after NAFTA was agreed. Initially, Mexico was allowed only a slight increase in the quota of sugar permitted to be imported into the US under the "tariff rate quota" system that is used to protect US sugar producers since 1934. Negotiations continued on the treatment of Mexican sugar after 1994, with Mexico retaliating to restrict US exports of non-sugar sweeteners and both countries negotiating a higher Mexican quota. In 2008 Mexican sugar was finally opened to free trade (along with all other agricultural products traded in both directions). Mexico by 2014 supplied 70% of the imported sugar into the United States, greatly reducing sales by producers in the Dominican Republic, Brazil, and several other countries (Schmitz & Lewis 2015).

In electronics products and in clothing the impact of NAFTA was more a choice of moving assembly of these products to Mexico versus moving it to China or other Asian countries. The less-costly transportation of these products (compared with automobiles) makes it much more viable to assemble and ship from Asia than to produce fully in the US, and also less expensive than assembling in Mexico.

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The net impact of NAFTA on US jobs is thus somewhat difficult to evaluate, since NAFTA produced both job losses and job gains. Moreover, jobs in auto assembly were moved from the US to Mexico, but even without NAFTA the same jobs would probably have been moved to China or another loss-cost location outside of the US. And while some jobs in clothing and electronics assembly were moved to Mexico, many more went to China and other Asian countries since 1994.

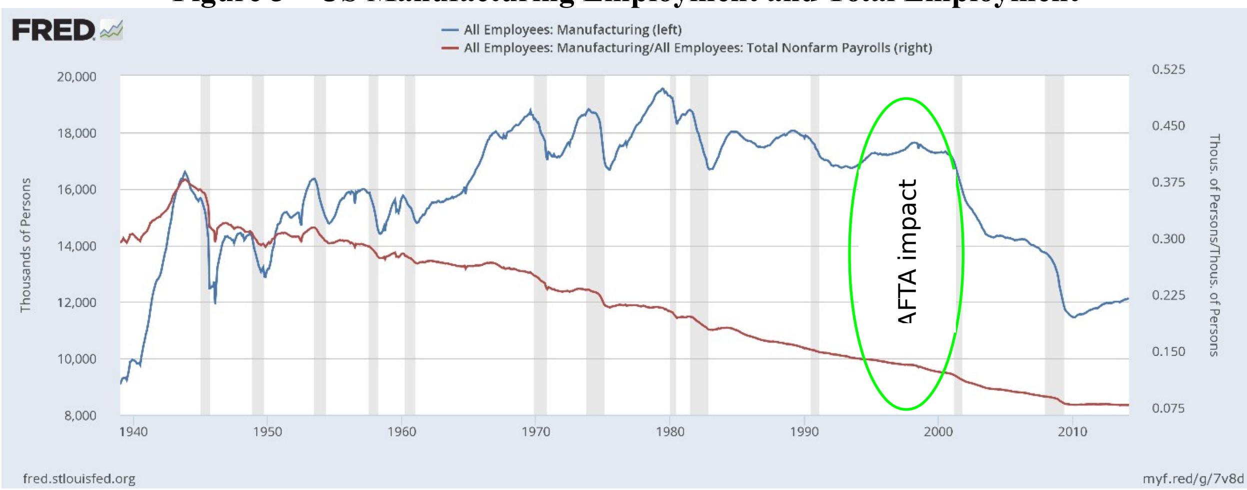
What is clear is that low-skill jobs in US auto manufacturing and electronics production and in clothing have been lost to overseas labor that costs much less and that can offer adequate quality in production. And in principle, any US jobs lost to imports from the NAFTA partners are losses that are intended to be compensated by some sort of transfer program to take funds from those who gained from NAFTA and share them with those who lost. More directly, in international trade theory the idea is that *trade adjustment assistance* should be offered to those harmed by the trade, to help them go through a period of retraining and perhaps moving to a new location where they can be employed in more-competitive business activities.

A red herring – loss of manufacturing jobs due to NAFTA

A major point of argument in the debate about NAFTA's impact is the question of how it affects US manufacturing employment. The question should be divided into two parts. First, the overall decline in manufacturing employment in the US is a decades-long phenomenon, due largely to technological change and less so to competition from imports. And second, the impact of NAFTA on the specific sectors that are intensive in maquila activity, such as autos and clothes.

The first part of the question of lost manufacturing jobs in the US is described in Figure 5 below. In the figure, the blue line signifies total manufacturing jobs, while the red line shows manufacturing jobs as a share of total non-farming jobs. The number of individuals employed in manufacturing jobs has declined only modestly since the late 1940s, but as a percentage of overall US employment they have dropped considerably.

Figure 5 – US Manufacturing Employment and Total Employment



Before discussing the reasons for the trends, note that in the Figure there has been a consistent decline in manufacturing jobs relative to total US jobs since at least 1945. There was clearly no separate impact of NAFTA on this trend. In fact, looking at manufacturing employment alone in the chart, it is clear that no change took place during the 1990s, and that something, most likely China's entry into the WTO and greater Chinese imports, along with the 9/11 impact, led to more rapid decline in US manufacturing employment in the first decade of the 2000s relative to the previous thirty years.

This phenomenon is no different from the decline in agricultural employment in the United States that began early in the 20th century. Agricultural employment dropped from 52% of the total in 1880 to less than 8% of the total in 1960. Manufacturing employment has now dropped from 24% of the total in 1950 to under 9% in 2016. In both agriculture and manufacturing, the output of goods in these sectors has remained fairly constant, but the mechanization of the sectors has led to declining employment in both cases. Service sectors, from computer software to hotel and restaurant employment, and from architectural design to commercial banking, have grown persistently to encompass today about 90% of US employment (and over half of total employment in most countries).

Additional issues

In addition to the macroeconomic impacts of NAFTA, we are interested in the impacts on other aspects of the economy, such as labor relations and environmental impact. NAFTA included side agreements on these two issues: The North American Agreement on Labor Cooperation (NAALC) and the North American Agreement on Environmental Cooperation (NAAEC). NAALC and NAAEC aimed to push Mexico to adhere to stricter policies on fair treatment of workers and on protecting the environment. They were included in NAFTA in large part to assuage concerns among US labor unions that NAFTA would foster a race to the bottom, whereby US-based multinational corporations would shift operations to Mexico in order to benefit from low-cost production associated with its lax regulations as well as low wages. While these side agreements do not focus on trade *per se*, they do force a more level playing field between the member countries as far as costs of compliance with these rules are concerned.

Similarly, the issue of intellectual property rights (IPRs), long a major concern in dealing with China, was incorporated into NAFTA as well. IPRs were particularly important in the case of NAFTA, given that Mexico had some of the world's least effective IPR protections and one of the largest pirate industries, prior to its passage of the Law for the Promotion and Protection of Industrial Property in 1991 and its accompanying amendment of federal copyright laws. NAFTA also featured IPR conditions, which effectively locked in the domestic reforms made by Mexico in prior years. Specifically, NAFTA's Chapter XVII requires members to protect invention patents, trademarks, trade secrets, and copyrights, and to establish enforcement procedures to protect IPR[4] (Garcia, 1993). As discussed above, these protections very likely contributed to the increase in FDI flows to Mexico in the years after NAFTA's implementation.

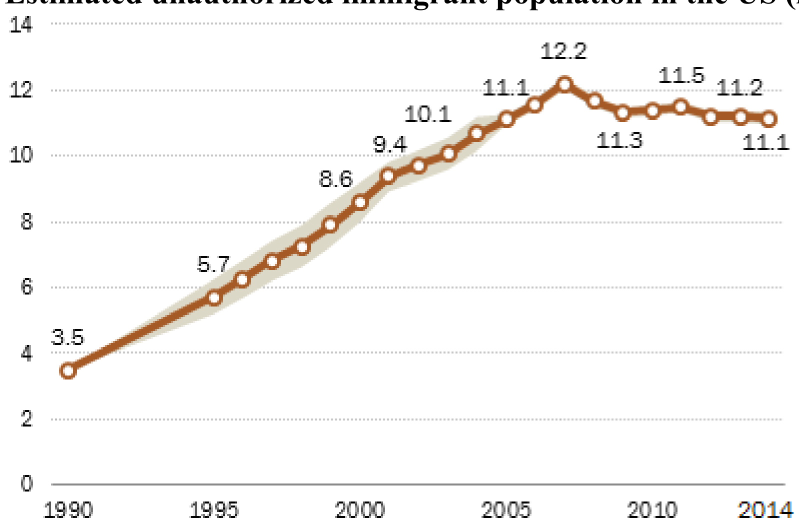
Immigration

Even though our discussion is about NAFTA and trade rules, the issue of immigration from or through Mexico into the United States is quite contentious as well. This issue is related to NAFTA because the NAFTA rules encourage offshore assembly in Mexico, and that activity absorbs more than one million Mexican workers in the maquila factories. If the assembly business were limited by greater trade protection or other US policy to force companies to manufacture more at home, then more Mexican workers would be unemployed, and this would put more pressure on for them to look to cross the border for jobs, illegally or otherwise.

While we expect that trade and migration are substitutes, such that NAFTA has encouraged Mexico to export goods as opposed to emigrants, it has been noted that migration actually increased in the years after NAFTA went into effect. To the extent that this increase is attributable to NAFTA, it is likely that trade and investment liberalization in Mexico led to some displacement of laborers, which in turn led those individuals to seek opportunity in the United States. In the long term, however, the jobs created in Mexico as a result of the trade and foreign direct investment generated by NAFTA should more than offset this short term increase. Indeed, as Figure 6 displays, after a steady increase since 1990, irregular migration from Mexico to the United States peaked in 2007 and the number of undocumented immigrants has declined in subsequent years. The slowing of immigration coincided with the 2008 financial crisis in the

United States, which likely resulted in fewer economic opportunities for would-be migrants. Interestingly, however, irregular immigration did not rise in the subsequent years as the US economy recovered. This suggests that jobs created by NAFTA began absorbing Mexican workers in greater numbers at this time. This “inverted-U” trend is indicative that the short-term displacement of Mexican workers and accompanying emigration produced in the early years of NAFTA has given way to job creation that has deterred would-be migrants. This suggests that the NAFTA/migration relationship is now to right side of the inverted-U, meaning that the trade generated by NAFTA is now likely leading to a reduction in illegal immigration to the United States.

Figure 6 – Estimated unauthorized immigrant population in the US (in millions)



Note: Shading surrounding line indicates low and high points of the estimated 90% confidence interval. The 2009-2014 change is not statistically significant at 90% confidence interval. Data labels are for 1990, 1995, 2000, 2001, 2003, 2005, 2007, 2009, 2011, 2013 and 2014.
Source: Pew Research Center estimates for 2005-2014 based on augmented American Community Survey data (IPUMS); for 1995-2004 based on March Supplements of the Current Population Survey. Estimates for 1990 from Warren and Warren (2013).
“Overall Number of U.S. Unauthorized Immigrants Holds Steady Since 2009”

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Policy recommendations

Our overall recommendation is to adjust NAFTA to reflect conditions of the 21st century that have changed since the original treaty was agreed upon, and also to focus on trade adjustment assistance so that people hurt by the agreement are supported for moving into alternative jobs in competitive sectors.

Trade Adjustment Assistance

Trade adjustment assistance (TAA) has existed in US law since 1962[5], and it is well-accepted within the WTO rules. However, it does not necessarily overcome the costs incurred by those people who lose their jobs to imports. The aim should be to give these people training to move into different jobs that are viable in an open economy. The reality is that people often are not easily persuaded to take up such training, and they are particularly unwilling to move to other locations where alternative jobs exist. In this context, the evidence suggests that TAA is not particularly effective, either in terms of helping displaced workers or in terms of assuaging opposition to free trade (D'Amico and Schochet 2012; Parilla and Muro 2017). Some creative work is needed to adapt trade adjustment assistance so that it really does move people into viable employment rather than leaving them unemployed and inadequately prepared for alternative jobs when the benefits run out.

In recent years, the insufficiencies of TAA have been observed and solutions have been suggested (Alden 2016; Parilla and Muro 2017). The general consensus among reform-minded critics is that TAA spending should be increased and its scope should be broadened to include, for example, wage insurance. Since the assistance is already offered for training, rather than just added unemployment insurance, it starts from the appropriate base. The problem is to 'nudge' people into receiving training for jobs that really will be sustainable, and often moving them to new locations where those jobs are. The TAA program is already fairly large, serving 47,000 people in 2015. But channeling the recipients into sustainable jobs remains a huge challenge. Our recommendation is to use the nudge of greater funding for training in job categories that are showing the fastest growth and/or largest size in the US (available from the US Department of Labor – for example https://www.bls.gov/emp/ep_table_104.htm).

The tax issue

Among NAFTA reforms put forward by politicians and in the media, tax reform has received the most attention. The idea that US firms are harmed relative to Mexican firms when exporting to Mexico is not accurate overall, though there is a need for US exporters to adjust their paperwork to avoid overpaying the value added tax in Mexico. That is, any company selling in Mexico, whether a local producer or an importer, must pay the 16% value added tax (essentially a sales tax). So, US companies are not forced to pay more than Mexican firms or companies from anywhere else on sales in Mexico.

The issue is complicated because Mexican firms receive a rebate for value added taxes paid by their suppliers. That is, each Mexican firm pays the VAT only on its own value added, and not that of its suppliers. So if we suppose that a company such as Telmex or Pemex or Televisa sells phone service or gasoline or TV programming in Mexico, it pays the 16% VAT to the government, and then receives a rebate for all of the VAT paid by its suppliers of equipment, services, and anything else purchased in the production of the final product. US companies should get similar treatment, which they do if they file tax documents with the Mexican government to demonstrate how much of their sales price is their own value added, and how much is cost from suppliers.

Going in the other direction, Mexican companies exporting to the US pay the same sales taxes in US States as any other company, US-based or otherwise, on their sales. Since US companies selling in the US do not get any tax relief for taxes paid by their suppliers, neither do Mexican exporters to the US. This is simpler, and there is no discrimination in this direction either.

Another complicating factor on the Mexican side is that a huge amount of US exports are parts and components that go into the offshore assembly of cars, clothes, TVs, etc., and then these products are actually sold in the US (i.e., re-exported to the US). These 'maquila' products receive an exemption from the Mexican VAT, since they are not sold in Mexico, and the US companies again have to file the proper paperwork with the Mexican authorities to avoid taxation on those goods. Any such products that are actually sold in Mexico rather than being re-exported must pay the VAT as with any other products sold locally.

The side agreements and intellectual property

The three provisions included in NAFTA that do not focus directly on tariffs and trade policy are labor issues, environmental protection, and intellectual property protection. While these accompaniments to NAFTA were quite groundbreaking in the early 1990s, US trade agreements in subsequent years have included stronger provisions on labor and the environment. Likewise, IPR protections in more recent agreements cover information and communication technologies (ICT) that were non-factors during NAFTA negotiations. As such, updating these provisions to better reflect current US trade policy and the modern international economy should be priorities for any revision of NAFTA. In contrast to possible border adjustment reforms related to the value added tax, updating NAFTA's side agreements would likely have discernable effects, helping to further level the playing field for US workers in industries that are subject to outsourcing operations to Mexico.

NAFTA's labor and environmental protections have been subject to criticism, particularly on the basis that their enforcement provisions are weak (e.g. Sagar 2004), but their significance should not be dismissed. NAFTA was the first free trade agreement (FTA) to include environmental conditions (Studer 2010) and the first FTA to systematically address labor rights (Bolle 2001). NAALC on labor and NAAEC on the environment committed each country to enforce existing domestic laws and provided enforcement mechanisms to ensure compliance.

NAALC includes a multi-tier system with enforcement mechanisms focusing on consultation and review, evaluation and recommendation, and dispute resolution and sanctions. Violations of individual labor laws, such as child labor, minimum wage and hour laws, and occupational health and safety, may be met with sanctions, although no such sanctioning may accompany violations of collective labor laws, such as the right to unionize or to collectively bargain (Compa 1994). Likewise, Mexico committed, with NAAEC, to insure that judicial and administrative mechanisms were in place to enforce domestic environmental laws (Jinnah and Lindsay 2016). NAAEC has dispute settlement mechanisms in place to mediate conflicts between parties and can also impose trade sanctions as a last resort, in the event of serial rule-breaking (Da Silva 1998).

In the years since NAFTA, the United States has strengthened the scope and enforcement mechanisms of labor and environmental conditions in its trade agreements. This followed a series of legislative actions in the United States: Executive Order 13141, of 1999, which requires the US Trade Representative to assess the impacts of all US trade agreements on the environment; the 2002 Trade Act extending Trade Promotion Authority (TPA), which required that all US trade agreements include labor and environmental standards; and the 2007 Bipartisan Trade Deal, which required that social standards in US trade agreements force partner countries to implement and enforce labor standards consistent with International Labour Organization

(ILO) recommendations and environmental standards consistent with multilateral environmental agreements (MEAs) (Kim 2012; Jinnah and Lindsay 2016).

Strengthening NAFTA's labor and environmental standards would bring NAFTA into line with subsequent agreements, such as those between the United States and Singapore, Chile, Morocco, Bahrain, and Oman, which require those countries to enforce both individual and collective labor laws, and those with Peru, Colombia, Panama, and South Korea, which include commitments to enforce and maintain rules that adhere to ILO and MEA standards, in addition to domestic labor laws (Bolle 2016). Additionally, strengthening these social standards would level the regulatory playing field between the US and Mexico, in terms of labor and environmental standards, thereby bringing up the costs of doing business in Mexico and reducing the incentives to shift production and assembly out of the United States.

NAFTA's IPR conditions were also important milestones in US trade policy. These conditions became the template for several years of subsequent agreements, including the WTO's TRIPs.[6] However, IPR conditions are also due for an update, as the nature of intellectual property has evolved considerably during the ICT revolution that has occurred since NAFTA. NAFTA was negotiated in the early-1990s, prior to the mass penetration of cellular phones, the Internet, and other new technologies that have introduced issues related to data transfers and cloud computing, among other things.

These new technological landscape is reflected in more recent agreements, that feature stronger and more ICT-oriented IPR conditions. US trade policy advanced in this area in 2002 with the renewal of the Trade Promotion Authority Act. With this renewal, the US Congress added protections for new and emerging technologies, including digital media, as an objective for US trade agreement negotiators (Ilias and Fergusson 2011)[7]. NAFTA's outdatedness with regards to ICT has been noted and updates in this area are surely in order.

In sum, NAFTA's side components should be upgraded to reflect the realities of the current economic and technological landscape. These upgrades will make NAFTA consistent with the most recent US trade agreements, which have stronger labor, environmental, and IPR conditions. NAFTA's labor rights and environmental side agreements should be strengthened to commit all parties to enforce their own laws and to abide by ILO and MEA standards. Likewise, upgraded IPR conditions in NAFTA should be expanded to include protections for digital technologies.

We believe that these reforms will have a stronger effect than, for example, new border adjustment taxes. Additionally, the Trump Administration could probably garner support for reforms along these lines from his Mexican and Canadian counterparts, as well as Democrats in Congress. Mexico's Economy Minister, Ildefonso Guajardo, has signaled Mexico's willingness to "modernize" NAFTA, while stating that tariffs are not acceptable[8]. Likewise, Canadian officials are reportedly eager to incorporate digital-economy provisions into the agreement.[9] Additionally, Democrats have been calling for renegotiations of NAFTA for years, with attention to its labor and environmental conditions. In 2008, Barak Obama, then a presidential candidate, called for renegotiation, a sentiment seconded by Democrats in Congress[10]. Presumably those sentiments have not soured among many Democrats, suggesting that renegotiating NAFTA may be a rare area of bipartisan agreement.

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Endnotes

1 See, for example, Sachs et al. 1996.

2 See, for example, Autor et al. (2015 2016) concerning the impacts of China trade and technology.

3 Cf. Burfisher et al. (2001).

4 All parties are required to authorize the judiciary to issue injunctions to stop infringement and preliminary injunctions to prevent infringing goods from reaching the market. Each party is also required to institute customs-level enforcement mechanisms to impound infringing goods from crossing borders – under the terms of the agreement, Mexico was given three years to create border enforcement institutions (Garcia 1993).

5 Trade Expansion Act of 1962, Public Law 87.794-Oct. 11, 1962. Title III. https://www.gpo.gov/fdsys/pkg/STATUTE-76/pdf/STATUTE-76-Pg872.pdf

6 NAFTA currently goes farther than TRIPs (which was in part derived from NAFTA's framework), as do other US trade agreements, so applying international standards (as suggested with regards to labor and environmental standards) is not a fruitful option.

7 The 2002 renewal also strengthened IPR objectives for trade agreements in other regards, seeking standards of protection that mirror IPR laws in the US. However, these new objectives were relaxed to some extent in the 2007 Bipartisan Trade Deal, due to concerns that LDCs would be unable to meet the standards and that pharmaceutical patents might endanger public health (Ilias and Fergusson 2011).

8 "Nafta Needs to Be Modernized: Mexican Economy Minister." *The New York Times*, https://www.nytimes.com/reuters/2017/03/03/world/americas/03reuters-usa-mexico-autos.html?_r=0.

9 "NAFTA in Dire Need of a Revamp, Says Original Negotiator." *The Toronto Star*, https://www.thestar.com/business/2016/11/17/nafta-in-dire-need-of-revamp-says-original-negotiator.html.

10 "Obama Needs to Keep Promise to Rewrite NAFTA." *The Nation*, https://www.thenation.com/article/obama-needs-keep-promise-rewrite-nafta/.