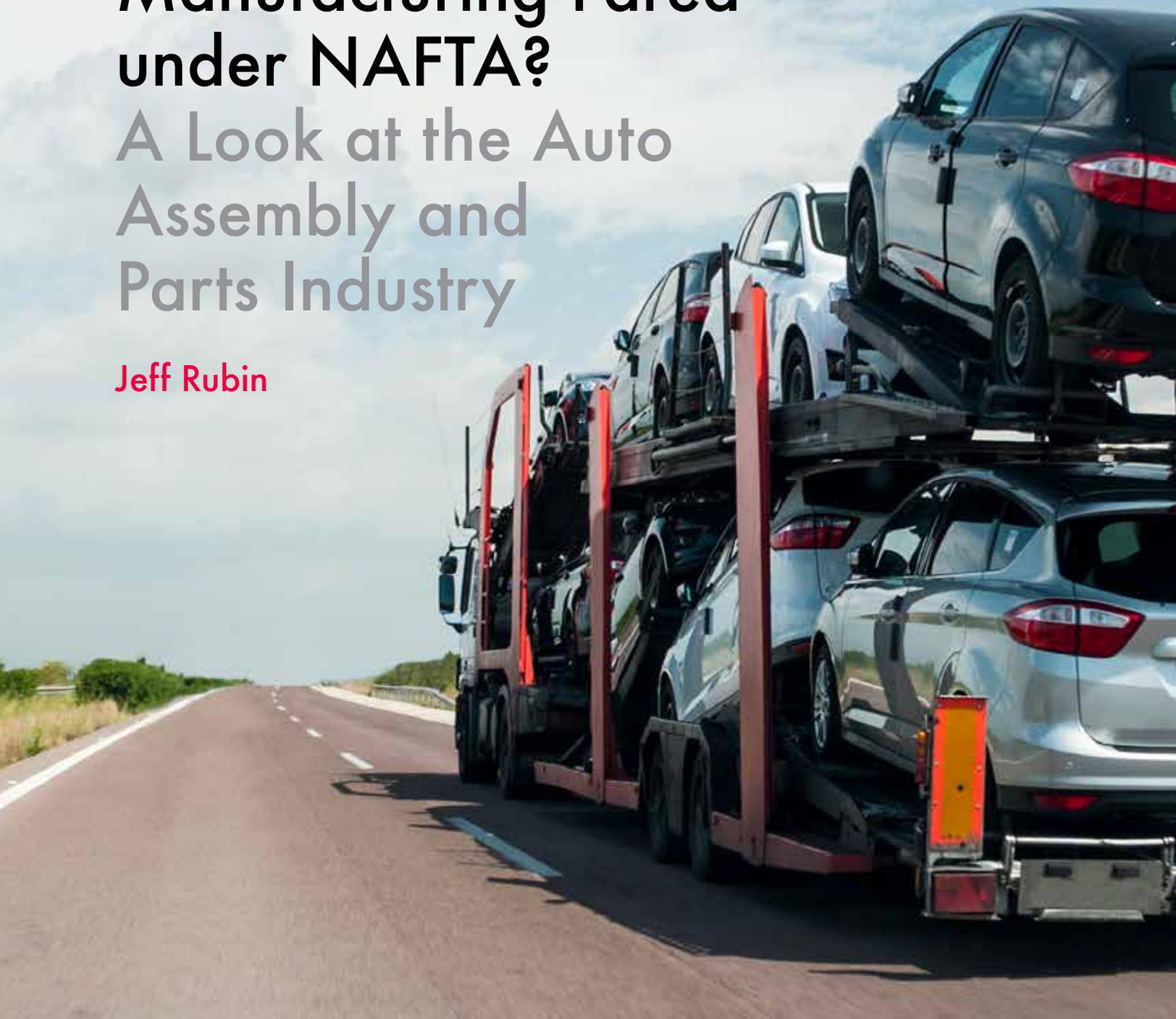


CIGI Papers No. 138 – August 2017

How Has Canadian Manufacturing Fared under NAFTA?

A Look at the Auto Assembly and Parts Industry

Jeff Rubin



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Table of Contents

vi	About the Author
vii	About the Global Economy Program
1	Executive Summary
1	Introduction
1	A Shifting Landscape for Global Trade?
3	A Brief History of Canada-US Trade in the Industry
5	How Has Canada's Vehicle Sector Fared under NAFTA?
7	Production Shift Follows Massive Diversion of Investment to Mexico
7	Soaring Imports from Mexico Turn Industry Trade Surpluses into Growing Deficits
10	Trade outside of NAFTA
10	Shrinking Payrolls in Canada as Huge Wage Differentials Incentivize Production Shift to Mexico
12	Impact of Repatriating Jobs on Vehicle Prices
12	Conclusion: Canada Should Not Rule Out a Bilateral Approach to Trade Negotiations in This Sector
13	Works Cited
14	About CIGI
14	À propos du CIGI

About the Author

Jeff Rubin is a CIGI senior fellow. A Canadian economist and bestselling author, Jeff is a world-leading energy expert and former chief economist and chief strategist at CIBC World Markets.

In his first research mandate at CIGI, Jeff explored the future of Canada's oil sands in an emissions-constrained world, the case for a national carbon tax, as well as that for divestment from Canadian fossil fuels, and the opportunities that climate change itself might bring to the Canadian economy.

Jeff is currently researching the implications of shifting US trade, energy and environmental policies on the Canadian economy under the Trump administration, including a critical assessment of how Canada's auto industry has performed relative to its NAFTA trading partners, an exploration of whether globalization has left Canadian workers behind and an examination of whether shifts in US energy and environmental policies will have a discernible impact on the future of Canada's fossil fuel industries.

Jeff began his career in 1982 at the Ontario Ministry of Treasury and Economics, where he rose to become the senior policy advisor for the Macroeconomic Forecasting and Analysis Group. In 1988, Jeff left the Ontario government to join the brokerage firm Wood Gundy as their senior economist. In 1991, he was appointed chief economist and managing director at the investment bank CIBC World Markets, where he served for two decades. During that time, he received 10 number one citations from Brendan Wood International as the top-ranked economist in Canadian financial markets. In 2007, Jeff was appointed as the firm's chief equity strategist in addition to his responsibilities as chief economist.

Jeff resigned from CIBC World Markets in 2009 to pursue a career as an author. His first book, *Why Your World Is About to Get a Whole Lot Smaller*, was an international bestseller, and was favourably reviewed in both Time and Newsweek. The book was the number-one-selling non-fiction book in Canada and won the National Business Book Award, as well as being long-listed for the Financial Times and Goldman Sachs Business Book of the Year Award. Since then, he has written two other bestsellers, *The End of Growth* and *The Carbon Bubble*.

About the Global Economy Program

Addressing limitations in the ways nations tackle shared economic challenges, the Global Economy Program at CIGI strives to inform and guide policy debates through world-leading research and sustained stakeholder engagement.

With experts from academia, national agencies, international institutions and the private sector, the Global Economy Program supports research in the following areas: management of severe sovereign debt crises; central banking and international financial regulation; China's role in the global economy; governance and policies of the Bretton Woods institutions; the Group of Twenty; global, plurilateral and regional trade agreements; and financing sustainable development. Each year, the Global Economy Program hosts, co-hosts and participates in many events worldwide, working with trusted international partners, which allows the program to disseminate policy recommendations to an international audience of policy makers.

Through its research, collaboration and publications, the Global Economy Program informs decision makers, fosters dialogue and debate on policy-relevant ideas and strengthens multilateral responses to the most pressing international governance issues.

Executive Summary

Under duty-free trade provided by the North American Free Trade Agreement (NAFTA), local vehicle assembly and parts jobs and production in both the United States and Canada have been traded to Mexico for higher industry profit margins and lower vehicle prices for North American consumers. US President Donald Trump has pledged to change that basic economic trade-off in favour of repatriating production and restoring the industry's once sizeable economic footprint in the US economy through resurrecting trade barriers against soaring levels of vehicles and parts production from Mexico, where wages are much lower. While cross-border, value-added supply chains are often said to blur distinctions on where vehicles are actually made, trade, investment, production and employment data all point to a large-scale migration of the industry to Mexico over the last decade. By most industry metrics, Canada's vehicle and parts industry has been as adversely impacted as that of the United States — and in some cases more so — by the shift in production to Mexico under NAFTA. With the Trump administration serving notice that it will be renegotiating NAFTA and specifically targeting Mexico's burgeoning assembly and parts industries, what are the best trade policy options for Canada's largest manufacturing sector and exporter?

Introduction

After winning office on a pledge to bring back lost manufacturing jobs, President Trump has formally served notice to Congress that the United States intends to renegotiate NAFTA with Canada and Mexico. Conjuring up arguments that were made against including Mexico in NAFTA back in 1992 by then presidential candidate Ross Perot, President Trump vows to redress the exodus of manufacturing jobs and production and the large trade imbalances that have followed in their wake.

Are President Trump's noted criticisms of the treaty's shortcomings for US auto workers valid for Canadian workers as well? On the eve of a formal renegotiation of NAFTA, it seems an opportune time to assess how the vehicle assembly and

parts industries in the country have fared under the treaty and consider the best options for the future. This paper assesses industry performance since NAFTA, across a broad spectrum of economic indicators, including production, trade, investment and employment, and compares Canadian performance with the industry's performance among other NAFTA partners. It then assesses how the industry's fading footprint in the Canadian economy can be related to the current trading regime created under NAFTA and what other policy options might be considered should the United States follow through on imposing punitive tariffs on Mexican vehicles and parts that currently cross NAFTA member borders duty free.

A Shifting Landscape for Global Trade?

American calls for renegotiating NAFTA come at a time of a rapidly changing outlook for global trade and growing public concern over shrinking industrial employment and wage stagnation in many Organisation for Economic Co-operation and Development (OECD) countries. After decades of ever greater economic globalization spurred by successive rounds of multilateral trade liberalization, the policy pendulum around the world seems to, at a minimum, have halted and perhaps has even reached an inflection point. In countries that have historically been strong advocates of free trade, public support has tilted away from endorsing new trade agreements and, indeed, has led some to exit existing ones.

Donald Trump's stunning upset victory in the US presidential election, largely on a campaign to bring long-lost manufacturing jobs home, following Britain's equally shocking referendum vote to exit the European Union in a referendum last year, are both red flags challenging conventional wisdom that ever broader and all-encompassing free trade agreements are both inevitable and desirable.

What is particularly striking today is that opposition in OECD countries to free trade agreements and associated economic globalization has gained growing appeal across the political spectrum. In the United States, Bernie Sanders, representing the left wing of the Democratic

Party, ran a surprisingly strong campaign for the Democratic ticket nomination also calling for the United States to renegotiate its trade agreements, claiming, as does President Trump, that they have been injurious to the interests of American workers. Across the Atlantic, in the Brexit vote, support for Britain leaving the European Union jumped across party lines, claiming adherents in both the Conservative and Labour parties. In the recent French presidential election, the far-right National Front candidate, Marine Le Pen, and the communist-backed candidate, Jean-Luc Melenchon, both argued in favour of France not only leaving the European Monetary Union but the European Union itself (Frexit).

While immigration issues were an important factor, a recurrent and dominant theme in Brexit, as well as in the US and French presidential elections, was the impact of global trade on hollowing out the manufacturing sector and associated job losses borne by a rapidly shrinking middle class in those countries. In the French presidential election, the loss of 280 remaining jobs at a Whirlpool dryer factor that once employed 1,000 workers in Amiens in northern France, a region recently gutted by factory closures, to Poland served as a rallying call for Frexit in much the same way as the originally scheduled movement of a Ford assembly plant to Mexico played a role in the Trump presidential campaign. Opposition to new free trade agreements, and indeed calls for abrogating existing ones, follows growing debate in many OECD economies over the benefits of further globalization. While standard economic theory invariably predicts net gains for the economy from free trade, the distribution of those gains has become so skewed that a growing number of voices are questioning their legitimacy.

Undoubtedly, global trade liberalization has brought benefits. The massive movement of goods production to low-wage developing countries has lowered the cost of most goods, in some cases turning the clock back on prices to levels of decades ago. In doing so, global trade liberalization has boosted the purchasing power of consumers throughout the OECD. And the broad disinflationary forces unleashed by the movement of goods production from high-wage countries to low-wage countries has helped anchor record low interest rates in North America and Europe that have been critical for economic growth since the Great Recession.

But, in the process, the huge reduction in tariff rates in developed countries over recent decades has also led to the gutting of manufacturing industries and chronic and structural unemployment in the sector. The resulting lack of job and wage growth in the goods-producing side of the economy, which is the most vulnerable to displacement by imports from low-wage countries, has, in turn, been linked to an ever more skewed distribution of income and the disappearance of the middle class.

Defenders of globalization argue that the primary reason behind growing structural unemployment in the manufacturing sector flows from sweeping labour-saving technological change in the form of robotics and other forms of advanced automation, which have greatly diminished the sector's employment footprint. It is argued that due to huge productivity increases, the jobs that have migrated to cheap labour markets from the United States and other OECD manufacturing sectors over the past decades were far greater than those that could be repatriated through tariffs or other forms of protection today.¹

Critics of globalization, on the other hand, claim it is a race to the bottom, in particular insofar as wages, workers' rights and environmental regulations are concerned. Moreover, critics note that, for the most part, wages have not captured the productivity gains created by automation in today's highly mechanized factories, due to the ever-present threat of moving production to lower-wage jurisdictions around the world. While tariff walls once prevented this form of wage arbitrage, they have, for the most part, been dismantled.

Growing debate over the benefits of further globalization coincide with a pronounced slowdown in global trade itself, which is growing at its slowest pace since the 2008-2009 recession and at half the rate of preceding decades (World Trade Organization [WTO] 2016). While slower global economic growth is partly responsible for ebbing trade flows, so too is the shift in trade practices, in particular among Group of Twenty countries, which in 2016 collectively imposed the largest number of trade restrictions since the recession (ibid.).

That trend is now championed by the Trump administration in the United States, which has threatened to redress a US\$347-billion trade

1 For an example of this argument, see *The Economist* (2017).

deficit with China (2016) and a US\$63-billion deficit with Mexico (2016) with punitive tariffs running as high as 45 percent on imports from China and 35 percent on Mexican-made goods.²

While many question whether the Trump administration will make good on these threats, President Trump has already moved aggressively on the trade front since assuming office. He immediately pulled the United States out of the Trans-Pacific Partnership (TPP) agreement, effectively killing a free trade agreement that would have covered 12 Pacific nations, including Canada, which collectively account for nearly 40 percent of global GDP. He subsequently has fulfilled a major campaign promise by notifying Congress, and both Canada and Mexico, that the United States intends to renegotiate NAFTA and is prepared to exit the trade agreement if new talks fail to redress American concerns.

In the interim, and of course following a renegotiation of NAFTA, President Trump has widespread discretion to impose tariffs on specific countries and sectors. The original NAFTA legislation calls for the reversion to pre-1994 tariffs if the United States leaves the agreement. In the case of Canada, that would mean reverting to the terms of the pre-existing Canada-US Free Trade Agreement, which has been temporarily suspended while NAFTA is in effect. In Mexico's case, it would be reverting to the most-favoured nations tariffs that existed prior to NAFTA, although the Trump administration would be free to impose any tariff rate that it deems appropriate, including the threatened 35 percent rate.

For example, the United States has already moved aggressively in imposing an average 20 percent tariff against Canadian softwood lumber, a long-standing trade irritant between the two countries whose roots lie with provincial stumpage fees that Canadian forest product producers pay. President Trump has also threatened action against provincial dairy boards that have largely kept American milk products out of Canadian markets, although the United States is not the only trading partner that has complained about dairy marketing boards. In addition, the US aircraft manufacturer Boeing has sought trade remedy for what it

deems unfair government subsidies that aircraft manufacturer Bombardier has received in Canada.

While the list of trade irritants between the two countries seems to be getting longer with every passing day leading up to the start of formal NAFTA renegotiations, notably absent are the huge vehicle and parts industries that President Trump has specifically targeted in Mexico with threats of punitive tariffs. In fact, as both a candidate and as president, Trump has continually argued that the mass movement of production and jobs in the auto industry to Mexico is one of the primary failings of the existing NAFTA agreement, citing the United States' declining share of NAFTA vehicle production, a growing trade deficit with Mexico and sharply reduced employment in the industry. He has threatened that unless better terms are renegotiated to protect American industry jobs, his administration is prepared to impose tariffs as high as 35 percent on Mexican-produced vehicles and parts entering the US market (Younglai 2017).

Preserving the status quo duty-free trade in the sector between Canada and the United States could have profound new significance for the Canadian industry if indeed the Trump administration carries through with its threat to target Mexico's burgeoning assembly and parts industries with trade-diverting tariffs. The vehicle and parts sector represents Canada's largest manufacturing industry and largest exporter. The highly integrated cross-border industry is the source of both countries' leading export to each other.

A Brief History of Canada-US Trade in the Industry

The paramount role of vehicles and parts to Canada-US bilateral trade long predates NAFTA. Canada and the United States have enjoyed duty-free trade in vehicle assembly and parts since both signed the Auto Pact in 1965. In exchange for granting duty-free access to US vehicle producers, the Auto Pact guaranteed Canada production levels by American auto firms at least equivalent to the size of their sales in the Canadian market. The most efficient way to achieve that requirement

² Dollar figures are in Canadian dollars unless otherwise noted. See "US Trade Deficit by Country: Current Statistics and Issues," www.thebalance.com/trade-deficit-by-county-3306264, for the size of US bilateral trade deficits with China and Mexico.

was to grant plants north of the border mandates to produce vehicle models for a combined American and Canadian market, thus allowing Canadian factories to achieve scale economies otherwise unobtainable in a small and highly fragmented domestic auto market. Canadian vehicle production has typically exceeded domestic sales since the Auto Pact was first implemented.

Bilateral trade has soared in the industry ever since, as continental production became highly integrated across the border, with parts producers in one country supplying assembly plants in the other. The continental integration of the industry is today reflected in the fact that 85 percent of Canadian vehicle production is sold in the US market, as is two-thirds of parts production (Stanford 2017). The Auto Pact was superseded by the Canada-US Free Trade Agreement in 1988 and by NAFTA in 1994.³ The three agreements provided a continuum of duty-free trade between the two countries, subject to minimum content regulation,⁴ that spanned more than five decades. Over that time period, trade has been largely balanced and widely perceived to be positive to both countries' economies.

However, much like the industry in the United States, the Canadian industry has witnessed a steady migration of assembly and parts producers to Mexico over the last decade. Aside from swelling trade deficits with Mexico, the southward movement of production has seen both the US and Canadian workforce cut by more than one-quarter. Auto unions contend that Mexico has built an export platform based on cheap labour to serve American and Canadian markets that had previously been supplied by their own much higher-wage domestic plants. Hence, they attribute job losses in the industry largely to the lack of trade protection in their home markets, at least in part due to NAFTA provisions that allow for duty-free movement of vehicles and parts from Mexico.

Both the auto parts and assembly industries have argued strongly against imposing tariffs on Mexico, fearing that trade-diverting tariffs directed against their low-wage Mexican labour force will adversely impact profits, in particular on sub-compact and compact-sized vehicles where margins are typically thin. Moreover, the industry has argued that moving production back to American (or Canadian) plants would dampen vehicle sales and hence profit levels, given the pass-through onto vehicle selling prices of higher labour costs.

Auto producers and parts firms point to automation, not plants moving to Mexico, as the key culprit behind the industry's shrinking employment footprint in both the United States and Canada. Nevertheless, there has been a major shift in the industry's North American labour force toward Mexico, where wages are a fraction of rates paid in plants in either the United States or Canada. Per unit of output, today's highly automated manufacturing plants employ far fewer workers than those of the past; however, they still have very significant impacts on job creation. For example, Ford's recently cancelled assembly plant in Mexico would have employed nearly 3,000 workers. And while industry employment has shrunk by roughly one-quarter in Canada and the United States, it has risen spectacularly by more than four-fold in Mexico over the last decade, including the construction of eight new assembly plants.

While changes in trade policies may not be able to bring back the employment levels of past decades, the threat of such action can still have a meaningful impact on where new jobs are to be located. President Trump's jawboning of tariff threats seems to have already had an impact on altering investment decisions in favour of new capital spending on US plants. Ford cancelled plans to build a US\$1.6-billion assembly plant in the Mexican state of San Luis Potosi that would have directly employed almost 3,000 workers, although market conditions relating to weak demand for the small-sized vehicles that were to be built at the plant were also aligned with this move. Instead of proceeding with the planned investment in the San Luis Potosi plant, Ford decided to spend US\$700 million on an existing plant in Michigan, adding more than 700 jobs there, despite Ford's acknowledgement that its labour costs in Michigan are a multiple of its costs in Mexico (Keenan 2017). A month or so later, Toyota announced a US\$1.3-billion retooling of its

3 Technically, the Canada-US Free Trade Agreement is suspended while NAFTA is in force. The earlier Auto Pact was formally terminated in 2001 after its production guarantees were ruled illegal by the WTO in 2001, although effectively it had ceased having relevance once the Canada-US Free Trade Agreement came into force.

4 Rules of origin under NAFTA require that 62.5 percent of a vehicle must contain North American (Canadian, American or Mexican) content in order to qualify for duty-free movement across the three countries' borders. The Trump administration has floated the idea of insisting on new rules of origin regulations that would require 25–33 percent minimum specific US content, and total NAFTA content of 75 percent to qualify for duty-free access.

massive Georgetown, Kentucky, plant, keeping 8,200 workers there producing the Toyota Avalon and Lexus ES 350 (Vlasic 2017). Yet north of the border, the exodus continues. General Motors recently announced a cut of 600 jobs at its CAMI assembly plant in Ingersoll, Ontario as production is being shifted to Mexico (CBC News 2017).

How Has Canada's Vehicle Sector Fared under NAFTA?

Once the fourth-largest auto producer in the world (in 1999), Canada has received relatively little new investment in its vehicle or parts industry over the last decade, while numerous production facilities in the country have been closed. As a result, Canadian production levels have languished despite a very robust post-recession recovery in North American vehicles sales aided by record low borrowing rates. Since 2008, Mexico has surpassed Canada in vehicle production, and today produces more than one and half million more vehicles (DesRosiers Automotive Consultants 2016). Under NAFTA, Canada's share of North American auto production has fallen to less than 13 percent, its lowest level since the mid-1980s. Meanwhile, Mexico's share of continental production has almost tripled — from seven percent before NAFTA to 20 percent — and is expected to continue to climb (DesRosiers Automotive Consultants, Ward's Automotive Reports, Asociación Mexicana de la Industria Automotriz, AC and Automotive News, cited in DesRosiers Automotive Consultants 2016).

Falling Canadian Production Levels

Canadian vehicle production rose steadily throughout the 1990s on the back of strong North American auto demand, with output peaking at just over three million vehicles in 1999 (ibid.). Production fell gradually between 2000 and 2007 to around the 2.5-million mark, as both US and Canadian vehicle sales plateaued while a soaring Canadian dollar exchange rate prompted a number of plant closures north of the border, including a General Motors (GM) assembly plant in St.

Thérèse, Quebec (2002) and truck plant in Oshawa (2008), while Chrysler closed a van plant (2003) and Ford closed a truck plant in Oakville (2004).

The rapidly appreciating value of the Canadian dollar over the period not only adversely affected the competitiveness of Canadian plants against those in the United States, but even more so against potential new plants arising in Mexico. Driven by soaring oil revenues and massive investment flows into the development of Alberta's oil sands, the Canadian dollar soared from an average of 67 cents against the US dollar in 2000 to parity by 2011, resulting in as much as a 40 percent loss in unit labour cost competitiveness in manufacturing vis-à-vis US industry (Bank of Canada 2012). While the Canadian dollar was steadily appreciating against the greenback, the Mexican peso was heading in the opposite direction. Since 2000, the peso has lost half its value against the US dollar.⁵

While currency movements were undermining the competitiveness of the industry in Canada, the "Big Three" (GM, Ford and Chrysler), which dominated Canadian production, were constantly losing market share as they pursued production of high-margin vehicles such as SUVs and pickup trucks, while triple-digit oil prices were pushing North American consumers toward smaller and more fuel-efficient vehicles. By the time the recession hit, their share of the US market had fallen from 70 percent in 1998 to barely above 50 percent, although the process had begun prior to the 2008-2009 recession, which forced both GM and Chrysler into bankruptcy, challenged the very foundations of the industry in Canada and the United States and served as a watershed event for moving much of the industry's production to lower-cost Mexican plants.

The US vehicle market, which the Canadian industry had become vitally dependent on, fell by almost two million units — a nearly 20 percent decline from the previous year.⁶ In both absolute and proportional terms, it was the largest drop in US vehicle sales faced by the North American auto

5 The US dollar-peso exchange rate has moved from 10 pesos per US dollar in 2000 to almost 20 today. While the country runs large and growing trade surpluses with both of its NAFTA partners, the value of the peso has been adversely affected by, among other factors, the country's overall trade deficits that have persisted for almost two decades. An equivalent percentage devaluation to that of the peso for the Canadian dollar since 2000 would peg it around 34 cents to the greenback.

6 All annual vehicle sales and production numbers for Canada, the United States and Mexico come from DesRosiers Automotive Year Book 2016.

industry since the 1973-1974 recession following the first Organization of the Petroleum Exporting Countries oil shock. Canadian vehicle production declined by more than one million units — a 40 percent decline from pre-recession levels. Both General Motors and Chrysler were forced into bankruptcy, prompting controversial taxpayer-funded bailouts on both sides of the border.

Congress, along with initially the Bush and subsequently the Obama administration, approved a US\$80-billion bailout of the two companies, with the bulk going to General Motors, America's largest auto manufacturer (Amadeo 2017). In Canada, the federal government, along with the Ontario government, followed suit, financing a \$13.7-billion bailout of General Motors and Chrysler to keep Canadian divisions of those companies in operation. Of that amount, only \$10.2 billion was eventually recovered, leaving Canadian taxpayers on the hook for more than \$3.5 billion of the bailout package (Keenan 2015a).

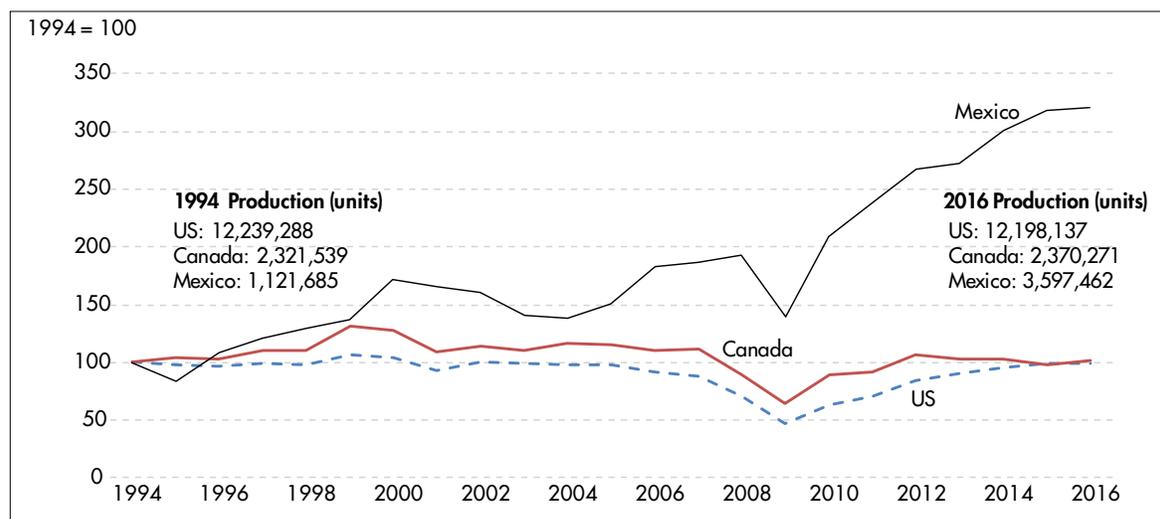
Despite government bailouts that kept GM's and Chrysler's Canadian operations afloat, Canadian production has not recovered to pre-recession levels. Most noticeable was the drop-off in production among the Big Three North American auto firms in Canada. While vehicle production from GM, Ford and Fiat Chrysler has increased in both the United States and Mexico, collectively the three firms now produce almost one-quarter

million vehicles fewer in Canada today than they did in 2012 (Center for Automotive Research 2016).

By 2013, Ontario had relinquished its crown — held since 2004 — as the largest vehicle-producing jurisdiction in North America to resurgent Michigan production, while Canada dropped to tenth place in world production. Within North America, Canada dropped behind Mexico to become the junior producer among the three NAFTA partners. Canadian vehicle production has just barely climbed back to its pre-NAFTA level (2.2 million units in 1993). By contrast, vehicle production has tripled in Mexico since NAFTA (see Figure 1). In the last five years alone, it has doubled to more than 3.5 million units, and production is expected to hit five million units by 2020, more than twice Canadian production levels.

Although Canada still produces marginally (17 percent) more vehicles than are sold in its market, Mexico's production has soared to more than twice the size of its domestic market as its auto industry has rapidly evolved into an export platform for the US market, where more than 70 percent of Mexico's vehicle production is sold.

Figure 1: North American Motor Vehicle Production under NAFTA (1994–2016)



Data source: DesRosiers Automotive Consultants, Ward's Automotive Reports, Asociación Mexicana de la Industria Automotriz, AC and Automotive News as cited in DesRosiers (2016).

Production Shift Follows Massive Diversion of Investment to Mexico

Soaring levels of investment have already catapulted Mexican vehicle production into becoming the seventh-largest car producer in the world and the fourth-largest car exporter. In the process, Mexico has replaced Canada as the single largest source of imported vehicles in the United States.⁷ Ford, GM, Fiat Chrysler, Volkswagen, Nissan, Toyota, Honda and Mazda all have production facilities in the country, while Audi, BMW, Mercedes and Kia have announced plans to build production facilities there by the end of the decade. Automobile assembly and parts have grown to represent almost one-fifth of Mexico's total manufacturing output, and have been one of — if not the — most dynamic component of the Mexican economy.

The production shift toward Mexico was facilitated through a massive diversion of new industry investment inside NAFTA, much of which, by historical norms, would have otherwise been expected to take place in Canada. Between 2010 and 2015, Mexico's vehicle and parts industry received a staggering \$US24 billion in investment, including the construction of eight new assembly plants with hundreds of parts and supplier companies clustered around them. By comparison, Canada attracted roughly one-fifth of these investment levels (US\$5.4 billion) and no new assembly plants. In 2014 alone, the US\$7 billion invested in Mexico's industry was greater than the total amount invested in Canada over the entire six-year period (Center for Automotive Research 2016, 34).

Based on announced intentions of vehicle producers operating in the country, Canada faces the prospect of a further reduction of its share of North American production and the loss of as much as roughly half a million vehicles per year by 2020. Of the five vehicle producers operating in Canada, only Honda plans a marginal increase in production by the end of the decade. GM plans

to reduce Canadian output from 2016 to 2020 by some 200,000 vehicles and Ford by 88,000 vehicles, while Fiat Chrysler is expected to trim Canadian production by 39,000 vehicles and Toyota by 137,000 vehicles (Cockburn 2017).

By contrast, most auto manufacturers plan significant increases for their Mexican production, with Toyota planning to more than double vehicle production in the country by 2020, while Ford plans an almost 40 percent increase. GM was planning to boost its Mexican vehicle production by more than 20 percent. Hyundai and Volkswagen, neither of which have production facilities in Canada, plan substantial increases, with Hyundai planning to triple its Mexican vehicle production by 2020 while Volkswagen plans an increase of more than 50 percent. Mexican production is expected to exceed five million units by 2020, although much of the new investment needed to achieve this production level could be vulnerable to NAFTA renegotiations (Center for Automotive Research 2016).

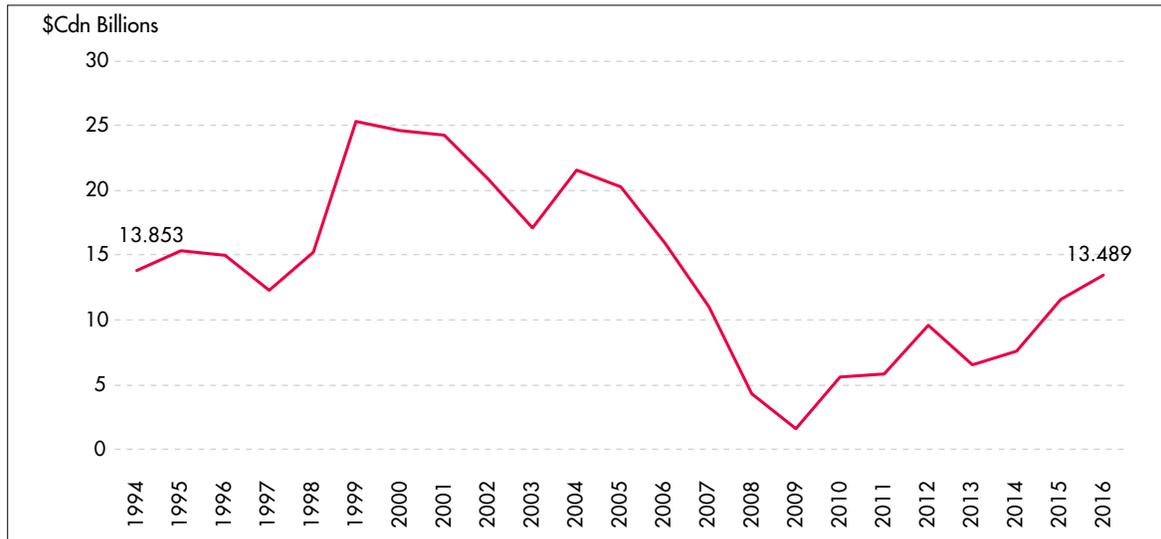
Soaring Imports from Mexico Turn Industry Trade Surpluses into Growing Deficits

The failure in the Canadian industry to keep pace with growth in North American vehicle sales and the attendant decline in Canada's share of continental vehicle production is mirrored in a dramatic swing in the sector's trade balance. Historically, Canada has run an overall surplus in vehicles and parts, with its positive balance within NAFTA more than offsetting a deficit with the rest of the world; however, due largely to a swelling trade deficit with Mexico, that is no longer the case. The sector has been in overall deficit for the last decade, with the trade position swinging from a peak surplus of \$15 billion in 2000 to a \$15-billion deficit last year.⁸

7 In first 10 months of 2016, Mexico exported US\$89.6 billion of vehicles and parts to the United States, almost 50 percent more than the next largest supplier, Canada (US\$54 billion) and twice as much as America's third-largest supplier, Japan (US\$44 billion) (US Trade Deficit by Country, www.thebalance.com/trade-deficit-by-country-3306264).

8 Statistics Canada, Canadian International Merchandise Trade Database (65F0013X), www5.statcan.gc.ca/olc-cel/olc.action?objId=65F0013X&objType=2&lang=en&limit=0.

Figure 2: Bilateral Trade Balance between Canada and the United States (Vehicles and Parts) (1994–2016)



Data source: Statistics Canada, Canadian International Merchandise Trade Database (65F0013X), www5.statcan.gc.ca/olc-cel/olc.action?objId=65F0013X&objType=2&lang=en&limit=0.

Just as the auto sector has been frequently blamed for the huge deterioration in the US merchandise trade deficit, the \$30-billion swing in the industry’s trade balance north of the border was a major contributing factor to Canada’s deteriorating trade performance over the last decade. During that time period, the country has consistently racked up annual merchandise trade deficits after historically running surpluses.

Canada’s deteriorating trade position, both in terms of the overall trade balance in merchandise goods and with respect to the balance in autos and parts, has had little to do with its trade with its largest partner, the United States. For the most part, it has been extremely balanced. Since the advent of the Auto Pact in 1965, which led to the widespread rationalization of the industry in Canada, the country has run trade surpluses with the United States in assembled vehicles and deficits in component parts. Duty-free trade flows have led to a highly integrated cross-border industry, where parts suppliers in one country would typically supply assembly plants in the other.

The net impact of the surpluses in assembled vehicles and deficits in parts was a combined modest trade surplus with the United States in vehicle and parts. From a balance-of-payments perspective, however, the combined merchandise trade surplus in assembly and parts with the

United States was at least partially offset by annual management fee payments and profit remittances from the Canadian subsidiaries of GM, Ford and Fiat Chrysler to their parent firms.

In an important structural sense, the overall size of Canada’s trade surplus in the sector with the United States was contained by counteracting movements in the separate trade balances of assembly and parts. As more vehicles were assembled in Canada, more parts would be imported from the United States to feed those assembly plants. Hence, as the surplus in assembled vehicles grew, so too did the corresponding deficit in parts. Canada’s combined trade surplus in auto and parts with the United States peaked at around \$25 billion (see Figure 2). In recent years, the combined trade balance with the United States in vehicles and parts has ranged well below historic norms. In 2016, the overall trade surplus with the United States in vehicles and parts (\$13.5 billion) was no more than the 1994 level, when NAFTA first came into effect. Moreover, since the recession (2010–2016), Canada’s bilateral trade surplus with the United States in vehicles and parts has averaged less than half its level prior to the recession (2000–2007).

The largely balanced, two-way flow of trade between Canada and the United States in vehicles and parts certainly meets the Trump administration’s goal of reciprocal and fair-trading

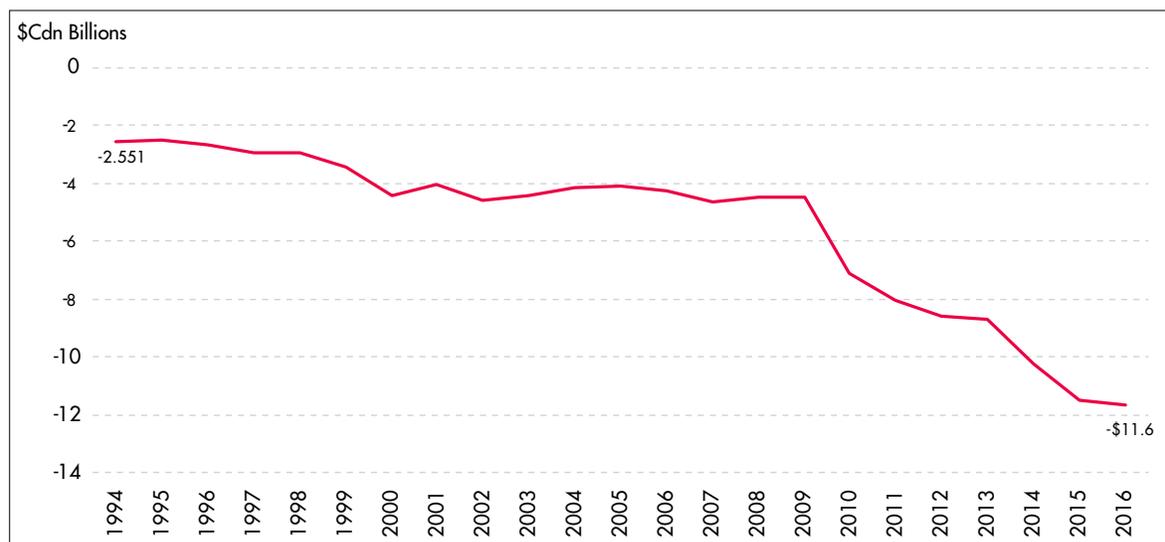
relationships and stands in sharp contrast to both Canadian and US trade flows with Mexico in the industry. The increase in Mexican exports to Canada in both assembled vehicles and parts dwarfs trade flows in the other direction. For example, in 2016, the value of Mexico's vehicle exports to Canada was 10 times the value of Canada's vehicle exports to Mexico, while Mexico's parts exports to Canada were almost six times the value of parts sent from Canada to Mexico. Combined, Mexico's trade surplus with Canada in assembled vehicles and parts has swelled five-fold, from \$2.5 billion at the time of NAFTA's implementation in 1994 to \$11.6 billion in 2016 (see Figure 3). The sector single-handedly accounts for almost half of Canada's total trade deficit with Mexico.

Mexico's bilateral trade performance with the United States in the industry closely resembles its performance with Canada. Mexico's vehicle production, like Canada's, is centred around supplying the vast US market. While Mexico touts bilateral free trade agreements with 45 different countries, more than 70 percent of its vehicle production is sold in the US market, as is the majority of its parts production (Center

for Automotive Research 2016). But unlike the more or less balanced nature of Canada-US vehicle and parts trade, Mexico's vehicle and parts trade with the United States, like that with Canada, is much more one directional.

Mexico's trade surplus with the United States in assembled vehicles has swelled from US\$16 billion in 2000 to more than US\$46 billion by 2014. The trade balance in parts has increased four-fold from US\$5.6 billion to US\$21.5 billion over the same time period. Together, the assembly and parts deficit has grown from US\$21.6 billion to US\$77.7 billion — an increase of three and a half. The United States now imports more vehicles from Mexico than it does from its traditional auto partner, Canada, yet it still exports about four times as many vehicles to the Canadian market as it does to the Mexican market (ibid.).

Figure 3: Bilateral Trade Balance between Canada and Mexico (Vehicles and Parts) (1994–2016)



Data source: Statistics Canada, Canadian International Merchandise Trade Database (65F0013X), www5.statcan.gc.ca/olc-cel/olc.action?objId=65F0013X&objType=2&lang=en&limit=0.

Trade outside of NAFTA

While a rapidly growing deficit with Mexico accounts for more than half of the \$30-billion swing in Canada's overall trade position in the auto and parts sector since 2000, Canada's trade balance in the industry has worsened significantly against its non-NAFTA trading partners as well. Only one, Japan, has production facilities in Canada (Toyota and Honda) and Canada's trade deficit with Japan in vehicles and parts has been more or less stable over the last 20 years. However, rapidly growing bilateral deficits with China (parts) and Korea (assembled vehicles) have led to a large increase in the trade deficit outside of NAFTA (Holmes 2015).

The significant increase in imports of Korean-made vehicles follows the Canada-South Korea bilateral free trade agreement, which has allowed Korean manufacturers Kia and Hyundai to gain duty-free access to the Canadian market. The deal effectively traded duty-free access to the Canadian vehicle market for a gradual phase-out of a 40 percent tariff against Canadian beef in the Korean market — mimicking the trade-off between autos and agriculture that the United States negotiated with Mexico in the NAFTA deal. Since the trade agreement with South Korea, the Canadian market has quickly become the Korean auto industry's fifth-largest export market and accounts for 12 percent of all vehicle imports into Canada. Despite their recent success in Canada, Korean car manufacturers have chosen to build new North American production facilities in Mexico instead. Meanwhile, there remains a 6.1 percent duty on Japanese vehicle imports, despite their domestic manufacturing presence.⁹

⁹ Japanese producers would have seen the Canadian tariff eliminated as part of the TPP, however, that trade agreement has now been scuttled with President Trump pulling the United States out of the agreement. It remains to be seen whether Canada will pursue a bilateral free trade agreement with Japan in its place.

Shrinking Payrolls in Canada as Huge Wage Differentials Incentivize Production Shift to Mexico

Nowhere has the industry's fading economic footprint in Canada been more apparent than in its shrinking payrolls. Employment has fallen steadily in the Canadian assembly and parts industry for more than a decade and a half. Like production, Canadian employment in the industry peaked around 1999-2000 with a combined workforce in assembly, body and trailer, and parts totalling 171,982. Since then, the industry has lost about 45,000 jobs (26 percent of its peak workforce), of which the majority, slightly over 27,000, were in the parts industry. Assembly jobs were about 17,000 fewer than the peak.¹⁰

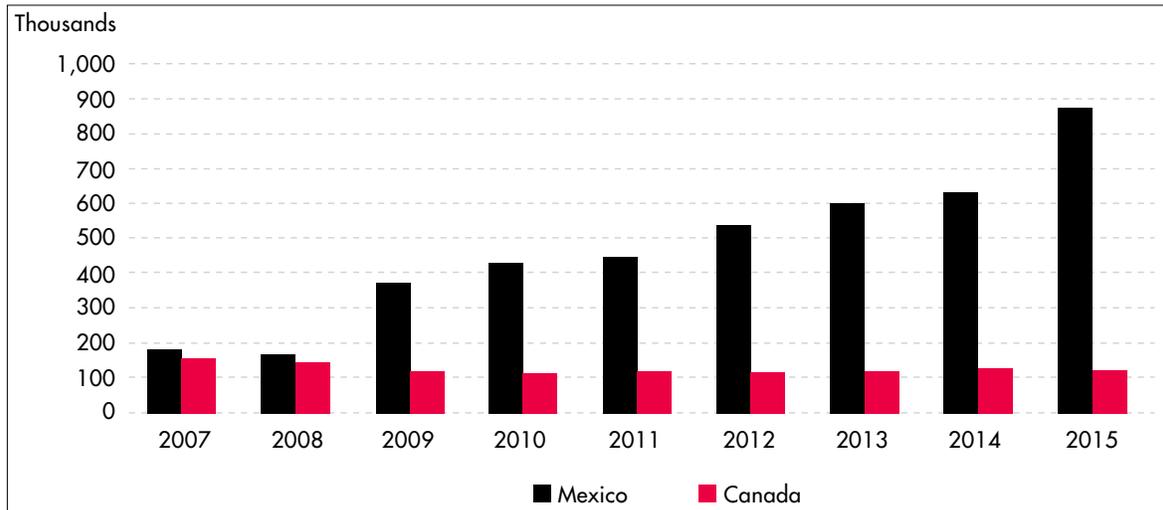
The trend in Canadian employment levels in the industry follows a similar trend in US payrolls. Total employment in the US industry peaked at the same time as it did north of the border in 1999, at just over 1.3 million workers. Employment declined in almost every year up to the recession when industry employment levels fell sharply and, as in Canada, have experienced only a partial recovery, remaining well below pre-recession levels. Measured from the peak in 1999, total employment in the US auto and parts industry is down by more than 370,000 jobs¹¹ — a loss of 28 percent of its workforce — a similar proportion to the drop in payrolls north of the border.

In sharp contrast to shrinking industry payrolls in Canada and the United States, as well as industry claims that automation has stunted job creation, employment in Mexico's parts and assembly industries has boomed over the last decade and are now a multiple of Canadian levels. As shown in Figure 4, Mexico's employment levels were basically comparable to those in the Canadian industry as recently as

¹⁰ Statistics Canada, Survey of Employment, Payrolls and Hours (SEPH), Cansim Table 281-0023.

¹¹ US Bureau of Labor Statistics, Nonfarm Payroll by Establishment (Table B-1 History).

Figure 4: Employment in Canadian and Mexican Auto Assembly and Parts Industries (2007–2015)



Data source: Statistics Canada, SEPH, Cansim Table 281-0023; Center for Automotive Research (2016)

2008; however, since then, they have more than quadrupled to almost 900,000, while Canadian levels have declined by more than one-quarter.

Together, some 875,000 jobs in assembly and parts now represent more than 40 percent of all the jobs in the North American vehicle and parts industry (ProMéxico 2016). Ironically, Canadian parts producers number among some of the largest employers in the Mexican industry. The giant Canadian-based parts manufacturer Magna has 30 plants in Mexico and employs more than 27,000 workers in the country, making the company the fourth-largest private sector employer in the whole country. Magna is by no means alone in employing a much larger North American workforce outside of Canada. Canadian parts companies employ more people in Mexico and the United States than the total workforce of the sector in Canada (Keenan 2015b).

Mexico's low wage rates remain its key attraction and have incentivized the location of auto assembly operations and the complex supply networks that typically cluster around them. While industrial unrest forced up wage rates in China's auto industry over the last decade, wage increases in Mexico's vehicle and parts industries have risen at a remarkably tame rate, leaving Mexico with one of

the lowest wage costs of any vehicle- and parts-producing country. While still a fraction of US or Canadian rates, wages in Mexico's booming auto industry are more than double the average manufacturing wages in the country (ProMéxico 2016, 64). With 13 percent of Mexico's labour force still in agriculture (compared to less than two percent for the United States and Canada), the auto industry can continue to count on an available supply of cheap labour that does not exist among its NAFTA partners.

Hourly wages average US\$5.50 for assembly workers and US\$2.45 in the country's sprawling parts plants, which account for more than 90 percent of the industry's employment in Mexico (Center for Automotive Research 2016). Those are roughly one-eighth the wages paid to US or Canadian auto workers. Total compensation rates, including benefits and vacation, are somewhat higher — US\$8 in assembly — but that is still one-fifth or less of comparable labour costs in the United States and Canada. With Mexican wage gains consistently trailing productivity increases, unit labour costs in Mexico's booming auto sector actually fell by five percent between 2008 and 2013, in contrast to a 10 percent rise in US plants (ibid.).

Impact of Repatriating Jobs on Vehicle Prices

It is commonly argued in the industry that trade policies that will force vehicle and parts plants back from Mexico to the United States (and possibly Canada as well) will result in significantly higher vehicle prices for North American consumers and, *ceteris paribus*, lower auto sales. That argument, of course, can be made not only with respect to autos and parts, but with the return of virtually every manufacturing industry that has migrated to cheap labour markets around the world.

While wage costs would certainly be higher, the impact on vehicle prices from repatriating production from Mexico could be mitigated by a number of factors.

First, it is important to recognize that production costs themselves on a typical vehicle are only 50–60 percent of final retail selling prices. The remainder of the price of a vehicle consists of advertising, sales, marketing, financing costs and dealership markups that are incurred in the country where the vehicle is sold, not where it is produced. These costs would not change with production shifts.

Secondly, not all production costs are aligned in Mexico's favour as are its labour costs. On average, it costs US\$900 to transport a vehicle to the United States. Mexican plants face significantly higher electricity prices than plants either in Canada or the United States, owing at least in part to natural gas shortages in the country. The cost of business crime is 50 percent higher in Mexico than in either the United States or Canada, requiring greater security outlays at Mexican plants and the payment of higher insurance premiums. Lastly, specialized materials, such as high-grade steel and carbon fibre used in vehicle construction, are generally more available in the United States and Canada, typically requiring that much of these components be imported into Mexico, with transit charges adding to their cost. For example, the United States, along with other suppliers, provides 90 percent of the steel used in Mexico's auto industry (Center for Automotive Research 2016).

Conclusion: Canada Should Not Rule Out a Bilateral Approach to Trade Negotiations in This Sector

A massive investment shift over the last decade toward low-wage vehicle assembly and parts plants in Mexico has left Canada's largest manufacturing sector badly lagging in the international competition for jobs and production. By most economic metrics — production, investment, trade balance or employment — the Canadian vehicle and parts industry has been as adversely affected by the sector's recent massive migration to Mexico as the US industry.

Canadian vehicle production has not recovered to pre-recession levels and with recent investment in the industry a fraction of past levels, output is expected to decline significantly over the course of the next decade. At the same time, a once-sizeable trade surplus in the industry has turned into a large and growing deficit, primarily as a result of a growing trade imbalance with Mexico.

While the Canadian government, fearing Washington wants to pursue a divide-and-conquer negotiating strategy, has steadfastly claimed solidarity with Mexico and has insisted on a common front for renegotiating NAFTA, the competitive dynamics between the Canadian and US industries are very different from those found between the US and Mexican industries.

Having specifically targeted Mexico's assembly and parts industry, there is a non-trivial chance that the Trump administration may ultimately follow through on such measures. If so, Canada might carefully consider a separate bilateral agreement with the United States that would extend a continuum of duty-free trade that has existed between the two countries in the sector since the advent of the Auto Pact in 1965.

With near wage parity between the two countries, Canadian and US trade in vehicles and auto parts has been relatively balanced for decades compared to the huge bilateral trade deficits

that both countries have recently incurred with Mexico in this sector. Hence, Canada is far more likely than Mexico to meet the requirements of reciprocal and fair trade agreements that the Trump administration is seeking in the upcoming trade negotiations. If so, Canada may be in a position to negotiate different terms for access to the US vehicle and parts market than Mexico, in particular given the long history of largely balanced duty-free trade in the sector between the two countries.

Reversion to the pre-existing terms of the Canada-US Free Trade Agreement, for example, could strategically position the Canadian industry inside a protected US market that it is already rationalized to supply. While separate bilateral agreements between the United States, Canada and Mexico in auto parts with differential tariff provisions would require adjustments in industry supply chains, the vast majority of parts that supply assembly production in Canada are sourced from the United States, not Mexico (by a ratio of five to one).

To the extent that threatened future US trade restrictions on imports of vehicles and motor parts from Mexico redirect investment and production back to the United States, they could do likewise for Ontario, providing that cross-border movement of vehicles and parts between Canada and the United States remains duty free, as it has for more than five decades. If so, renegotiating NAFTA could provide an essential reprieve for a Canadian industry that otherwise faces almost certain downsizing over the next decade.

Works Cited

- Bank of Canada. 2012. *Annual Report 2012*.
www.bankofcanada.ca/2013/04/annual-report-2012/.
- CBC News. 2017. "GM axing 625 jobs at Ontario plant, shifting some production to Mexico." CBC News, January 27. www.cbc.ca/news/business/gm-unifor-ingersoll-1.3955128.
- Center for Automotive Research. 2016. "The Growing Role for Mexico in the North American Auto Industry." July.
- Cockburn, Carrie. "Auto production's changing map." *The Globe and Mail*, February 11.
- DesRosiers Automotive Consultants. 2016. *DesRosiers Automotive Yearbook 2016*.
- Holmes, John. 2015. "What Happened to Canada's Automotive Trade Surplus? A Preliminary Note." March. Automotive Policy Research Centre, Queen's University.
- Keenan, Greg. 2015a. "Canadian taxpayers lose about \$3.5 billion on 2009 bailout of auto firms." *The Globe and Mail*, April 7.
- . 2015b. "Made in Mexico: An emerging auto giant powers past Canada." *The Globe and Mail*, February 13.
- . 2017. "Auto sector nervously awaits the Trump card." *The Globe and Mail*, January 7.
- ProMéxico. 2016. *The Mexican Automotive Industry: Current Situation, Challenges and Opportunities*. ProMéxico.
- Stanford, Jim. 2017. "Play the Trump cards right, and Canada's auto sector will benefit." *The Globe and Mail*, January 12.
- The Economist*. 2017. "Politicians cannot bring back old-fashioned factory jobs." *The Economist*, January 14.
- Vlasic, Bill. 2017. "Toyota to Invest \$1.3 Billion in Kentucky Plant." *The New York Times*, April 10.
- WTO. 2016. "Trade in 2016 to grow at slowest pace since the financial crisis." Press release, September 27.
- Younglai, Rachele. 2017. "What's at stake in NAFTA?" *The Globe and Mail*, March 7.

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