What's the Big Deal?

Understanding the Trans-Pacific Partnership

The Devil Is in the Details

The TPP's Impact on the Canadian Automotive Industry

John Holmes and Jeffrey Carey

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ISBN 978-1-77125-295-9

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ACKNOWLEDGEMENTS

The research for this paper was supported by the Automotive Policy Research Centre (APRC) at Mc-Master University. The APRC is a federally funded research partnership focused on maintaining a competitive and sustainable Canadian automotive industry. We were first encouraged to develop a paper on the automotive provisions within the TPP by Charlotte Yates, Principal Investigator at the APRC. The authors wish to acknowledge valuable feedback on a draft of this paper provided by Angelo DiCaro, Hadrian Mertins-Kirkwood, Bill Murnighan, Scott Sinclair, and Jim Stanford. Thanks to Stuart Trew, whose editorial assistance greatly improved the flow of our paper, to CCPA staff who worked on the layout, and to Scott Sinclair for skillfully guiding us through the process.

This is an independent study, the opinions expressed are those of the authors and do not necessarily reflect those of APRC or the CCPA.

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The Devil Is in the Details

The TPP's Impact on the Canadian Automotive Industry

Introduction

The Trans-Pacific Partnership Agreement (TPP), signed by twelve Pacific Rim countries at a formal ceremony held in Auckland, New Zealand in early February 2016, now awaits ratification by each country. A U.S. House of Representatives report claims the TPP is the largest regional trade agreement in history and "one of the most important trade agreements ever for the global automotive industry." The 12 member countries (Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, the U.S., and Vietnam) constitute a potential market of 800 million consumers of automotive products. Together they account for 30% of global auto production and include four of the world's top 10 automobile producers: the United States, Japan, Mexico, and Canada.3 A number of other Asia Pacific countries, including South Korea, Taiwan, Thailand, Indonesia, and the Philippines, which each have significant automotive industries, have signaled their future interest in joining the TPP. It is widely anticipated that China, currently the world's largest producer of automobiles, may also eventually seek membership.

If ratified, the TPP will likely be a game changer for the global automotive industry. Some commentators have argued that tariff reduction is one of the least important aspects of the agreement. In the case of the automotive industry, however, tariffs — especially the detailed rules of origin (ROO) that govern the levels of regional content-value (RCV) required for vehicles and automotive parts to qualify for preferential tariff treatment—are of prime importance.4 These rules are likely to have a significant impact on future firm strategies and what, where, and how automotive products will be produced within the wider TPP region. This paper assesses how such TPP-induced changes might affect the Canadian automotive industry.

Reactions to the Automotive Provisions in the TPP

Estimates in the media of the potential impacts of the TPP on the Canadian automotive industry range from a loss of over 24,000 automotive jobs, through virtually no impact, to a significant increase in Canadian vehicle production and employment. Industry stakeholders are split in their reaction to the agreement. The Canadian Motor Vehicle Association (CVMA), which represents the so-called Detroit Three (D-3) automakers — General Motors, Ford, and Fiat Chrysler — in Canada, expressed concerns over what they view as unequal terms in the deal, citing in particular Canada's pledge to reduce tariffs more quickly than the United States. Ford Canada's CEO, Dianne Craig, publicly denounced the deal, stating "there will be no positive outcome for Canadian manufacturing."8 In contrast, the Japanese Automobile Manufacturers Association of Canada (JAMA) endorsed the deal as a significant victory for Canadian-based automotive producers and consumers.9

Unifor, the union representing autoworkers in Canada, argued that eliminating tariffs on assembled vehicles will result in an influx into North America of vehicles from Japan and displace vehicles and parts previously made by Canadian-based assemblers and parts producers. Furthermore, very low RCV requirements for some parts will facilitate increased offshore sourcing and radically disrupt existing North American supply chains. 10 In this context, it is worth noting two earlier studies that used econometric modelling to assess the impact of possible free trade agreements (FTAs) on Canadian and U.S. automobile production and employment. 11 Both studies concluded that trade liberalization would have only a modest negative impact on domestic automotive employment due to the displacement of domestically produced vehicles by increased imports. However, both focused solely on

the impact of the removal of vehicle tariffs and did not consider impacts that might arise from changes in ROO and required RCV. As we shall see, these issues are of crucial significance in the case of the TPP.

In testimony before the House of Commons' international trade committee, the Automotive Parts Manufacturers Association (APMA) bluntly stated that, in its current form, the TPP "fails the auto supply sector, specifically the prospects of its small and medium-sized members and the Canadianbased production growth capacity of its larger members — it [the government] must approach ratification with caution."12 The APMA criticized the Canadian government's handling of the negotiations, stating "no one in a position of authority invested in industry consultation before being dealt a terrible hand by major trading partners.... Canada, and reportedly Mexico, handed over its negotiating obligations in automotive manufacturing rules of origin, safeguard measures and snap backs to the U.S. in bilateral discussions with Japan." This latter comment reflects the conflict that erupted when, at a ministerial TPP meeting held in Maui in July 2015, Canada and Mexico rejected the automotive ROO that formed part of a bilateral side-deal cut with Japan by the United States without consulting its NAFTA partners.¹³ This became a key issue that prevented finalizing the TPP agreement at that meeting.

Canada's Automotive Industry

Automobile production involves a highly complex and sophisticated manufacturing process. The end product – a motor vehicle assembled by an original equipment manufacturer (OEM) — is built from literally thousands of discrete parts and subassemblies supplied by a vast array of different firms organized into complex supply chains and production networks. Automotive parts manufacturers are commonly referred to as Tier 1, Tier 2, or lower tier suppliers, terms that refer to the commercial distance between the OEM automaker and supplier within the supply chain. Parts suppliers in Canada comprise: (1) foreign-owned, and especially U.S. and Japanese, global parts producers; (2) a handful of Canadian-owned parts producers, such as Magna International, Linamar, and Martinrea, that have a global footprint, and; (3) a large number of Canadian-owned small and medium-sized Tier 2 and Tier 3 firms that primarily feed assembly plants and higher tier component producers in both Canada and the United States.

Geographically, all ten Canadian vehicle assembly plants and over 90% of parts plants are concentrated within a narrow corridor in southern Ontario stretching from Windsor in the west to Oshawa in the east. This corridor is the cross-border extension of, and functionally highly integrated with, the long-established automotive production region centred on the U.S. Great Lakes states of Michigan, Ohio, Indiana, Illinois, and Wisconsin. Today, this regionally integrated production system competes for new North American automotive investment with more recent production complexes that have developed in the southern U.S. and in Mexico.¹⁴

From its very beginnings in the early 1900s, trade policy and trade agreements, especially in relationship to the United States, have played a significant role in shaping the Canadian auto industry. ¹⁵ One of the most influential was the Auto Pact, a managed free trade agreement negotiated with the U.S. in 1965, which facilitated the rationalization of Canadian automotive production and its full integration with the U.S. While the Auto Pact permitted tariff-free trade in automotive products between the two countries, valueadded content requirements guaranteed specified minimum levels of production in Canada. Continuing access to the U.S. market was secured by the Canada-U.S. Free Trade Agreement (1989) and by NAFTA (1994), which also led to full integration of Mexico into the North American industry.

Following several decades of sustained growth in output and employment, Canada's automotive industry faltered in the early 2000s. Only one new vehicle assembly plant has opened in Canada and five D-3 plants have closed since 2002. By 2008, annual output was a third lower than the peak of 3.06 million vehicles attained in 1999, and employment in the combined assembly and parts sectors fell by 20% between 2000 and 2008. Canada's overall automotive trade balance, which had been positive for decades, turned negative in 2007.16 The decline culminated in the 2008–09 crisis, which forced GM and Chrysler into bankruptcy restructuring in both Canada and the U.S.¹⁷ Since 2009, the restructured North American automotive industry has rebounded: the United States and Canada both recorded record vehicle sales in 2015, U.S. vehicle production has recovered substantially, and Mexico has experienced a surge in new assembly plant investment. In comparison, however, the recovery of production in Canada has been muted.¹⁸ Recently Greg Keenan reported in the *Globe and Mail* that, in 2015, vehicle production stood at 2.28 million and automotive employment had recovered by just 16% from the 2009 trough compared with a recovery of 65% in the U.S.19

TABLE 1 Current Non-Preferential Tariffs and TPP Tariff Phase-out Periods: Canada, U.S., Mexico, Japan, Malaysia, and Vietnam

Country	Product	Current Non-preferential Tariff	Tariff Phase-out Period under TPP
	Vehicles	6.1	Five years in steps
Canada	OE Parts	Zero	
	Aftermarket Parts	6.0	Immediate
	Cars	2.5	25 years starting in year 20
United States	Trucks	25.0	In Yr. 30
	Parts	3.1	Immediate on 87% of parts
	Vehicles	30.0	Immediate
Mexico	Parts	0 to 5	Immediate on majority of parts and five years in steps on others
lanan	Vehicles	zero	
Japan	Parts	zero	
Malaysia	Vehicles	30.0	13 years
Malaysia	Parts	30.0	Immediate
Vietnam	Vehicles	70.0	12 years
vietiidiii	Parts	27.0	11 years

Source TPP Agreement, Chapter 2, Annex 2-D

Until the TPP comes into force, Canada's automotive trade continues to be governed by existing rules regarding levels of NAFTA RCV required for duty free movement of automotive products between Canada, Mexico, and the U.S., and by existing tariffs on automotive trade with other countries (*Table 1*). Under NAFTA, the RCV requirement for cars and light vehicles, engines, and transmissions measured on a net cost basis is set at 62.5% and at 60% for other automotive parts. Vehicles built in the U.S. and Mexico that fail to meet the NAFTA RCV and vehicles built outside the NAFTA bloc incur a non-preferential tariff of 6.1% when imported into Canada. Since the late 1990s, automotive parts destined for OEM assembly in Canada have entered duty free, while aftermarket parts incur a duty of 6%. The corresponding non-preferential tariffs levied by the United States are 2.5% for cars, 25% for pick-up trucks, and 3.1% for OEM parts.

Canada is reliant on the U.S. market for over 90% of its vehicle and automotive parts exports (Tables 2A and 2B). This means that any assessment of the automotive provisions in the TPP must take into account not only their direct impact on Canadian automotive production, but also the indirect im-

TABLE 2A Canada's Trade in Motor Vehicles: 2005 and 2015 (NAICS 33610)

		estination of Motor Vehicle Exports by Value (%)		lotor Vehicle y Value (%)	Total Motor Vehicle Trade by Value (%)		
	2005	2015	2005	2015	2005	2015	
United States	98.4	97.7	65.6	60.1	86.8	81.2	
Mexico	0.9	0.8	7.36	13.5	3.25	6.4	
Japan	0.1	0.01	12.8	7.2	4.6	3.2	
Other TPP Partners	0.1	0.01	0.0	0.0	0.1	0.01	
EU	0.3	0.1	8.7	12.7	3.3	5.7	
South Korea	0.0	0.03	5.3	5.9	1.9	2.6	
China	0.02	0.7	0.01	0.02	0.01	0.4	
Rest of World	0.2	0.7	0.4	0.6	0.3	0.7	
All Countries	100.0	100.0	100.0	100.0	100.0	100.0	

Source Industry Canada Strategis Online Trade Database

 TABLE 2B
 Canada's Trade in Automotive Parts: 2005 and 2015 (NAICS 3363 + NAICS 326193)²¹

		of Automotive s by Value (%)		omotive Parts Value (%)	Total Automotive Parts Trade by Value (%)		
	2005	2015	2005	2015	2005	2015	
United States	92.3	92.0	80.5	66.8	84.8	74.8	
Mexico	2.0	4.4	6.9	13.3	5.1	10.4	
Japan	0.3	0.1	4.5	4.9	3.0	3.3	
Other TPP Partners	0.8	0.4	0.1	0.6	0.4	0.5	
EU	1.6	1.5	3.1	3.6	2.6	2.9	
South Korea	0.1	0.1	0.4	1.5	0.3	1.0	
China	1.3	0.7	2.3	5.7	1.9	4.1	
Rest of World	2.1	3.8	1.8	0.9	2.0	2.8	
All Countries	100.0	100.0	100.0	100.0	100.0	100.0	

Source Industry Canada Strategis Online Trade Database

pact caused by TPP-triggered changes in levels of automotive production in the United States.²⁰ Surprisingly, relatively few Canadian-made vehicles or parts are exported to Mexico. Canadian automotive trade with the eight TPP countries other than the U.S., Mexico, and Japan is minuscule, although imports of automotive parts to Canada from two aspiring future TPP members — China and South Korea — have risen sharply in recent years.

Potential Impact of TPP Automotive Provisions on Automotive Production in Canada

The TPP is a complex agreement with regard to the automotive industry with its highly integrated and dynamic supply chains. The roughly 600 pages that address the automotive industry include sections on tariff removal, "rules of origin," specified minimum levels of TPP RCV, and several important bilateral automotive side agreements between the United States and Japan, Canada and Japan, and the United States and Malaysia.²² For a vehicle or component to qualify for preferential tariff treatment it must "originate" in the TPP region; to "originate" it must contain a specified minimum level of RCV or be sufficiently processed within the region. Rules of origin are a highly technical and arcane aspect of trade law, but as Harvard Law School's Mark Wu notes, one that "greatly influence exporters' decisions on the sourcing of upstream components."23 The complex TPP automotive rules of origin will have a larger impact on automotive production and jobs in Canada than tariff reductions.

Tariff Elimination: Vehicle Exports

The Canadian and U.S. governments and other TPP supporters emphasize that, by phasing out tariffs, the agreement will provide improved access to TPP markets and opportunities for export growth by North American-based vehicle and parts manufacturers. The growth of North American automotive exports solely as a result of tariff reductions, however, is likely to be modest at best. Only two TPP countries with commercially significant markets — Malaysia and Vietnam – still have high import tariffs on automotive products (*Table 1*). While significant, the elimination of these tariffs will not occur for some considerable time. North American automotive products imported into Japan incur zero or very low tariffs and have done so since 1988.²⁴

The challenges faced by the D-3 in the Japanese market, the third largest automotive market in the world, are due not to tariffs per se but to an array of non-tariff rules and regulations:

Japan has long been the most closed auto market among industrialized nations, with imports from all countries constituting just 6% of the Japanese market. Although Japan currently imposes no tariffs on imports, it has effectively shut out foreign imports through a range of non-tariff barriers that include unique, Japan-specific safety and environmental regulations, high

auto-related taxes, zoning laws and other obstacles to establishing dealerships, service and repair center (sic) for foreign cars.²⁵

Prior to Japan formally joining the TPP negotiations, the United States and Japan reached a series of agreements addressing non-tariff issues.²⁶ The side agreements establish an accelerated dispute settlement procedure for the automotive sector including a mechanism to "snap back" tariffs on both vehicles and parts as a remedy. The U.S. Industry Trade Advisory Committee, however, reports that key auto industry stakeholders in the U.S. remain skeptical with regard to whether these commitments will result in a greater D-3 presence in the Japanese vehicle market.²⁷

Tariff Elimination: Vehicle Imports into the NAFTA Bloc

Any increase in vehicle imports from Japan will further squeeze D-3 North American market share and/or displace vehicles assembled in North America by Japanese automakers. Any reduction in North American vehicle production has attendant negative consequences for North American parts supply chains. How likely is this to happen? Currently Canada levies a 6.1% tariff on vehicles imported from outside NAFTA while the U.S. places a 2.5% tariff on cars and a 25% tariff on trucks. 28 TPP tariff elimination schedules vary between member states (*Table 1*). With tariffs scheduled to phase-out over five years, Canada has one of the shortest transition periods. The U.S. tariff phase-out is much longer — 30 years for pick-up trucks and 25 years for cars — and also back-loaded. Thus, any impact on U.S. vehicle production caused by tariff elimination on overseas imports is unlikely for at least two decades whereas the negative impact on Canadian vehicle production could be felt within five years.

Some safeguard for domestic production is provided by a separate Canada-Japan side agreement in which Canada reserves the right to reinstitute tariffs for up to 12 years following the phase-out period should there be a surge in vehicle imports from Japan.²⁹ The side agreement also contains a further snap-back provision allowing Canada, for a period of six years following the phase-out period, to reinstitute tariffs for a 100-day period if automakers are found to be in non-compliance with TPP obligations.

The very significant difference between Canada and the U.S. in the phase-out period for vehicle tariffs could adversely affect future new vehicle assembly investments in Canada. Vehicles built in the U.S. (or elsewhere in the TPP region) that meet TPP RCV rules will be able to enter Canada duty

free within five years, whereas vehicles built in Canada for export into the United States under TPP RCV rules would face tariffs for at least 25 years.³⁰ Thus, other things being equal, an incentive will exist for automakers to locate new assembly capacity in the U.S. rather than in Canada.

Tariff Elimination: Automotive Parts Exports

Under NAFTA, Canadian-based suppliers exporting to the U.S. enjoy dutyfree preferential access to the U.S. as compared to the 3.1% tariff levied on U.S. imports of non-NAFTA parts. Canadian parts exports are heavily weighted toward the United States (*Table 2B*). As soon as the TPP comes into force, the tariffs on 87% of auto parts including engines, brakes, and transmissions entering the U.S. will be eliminated. This will expose Canadian-based parts producers to increased competition for the U.S. market from TPP suppliers outside of NAFTA. As we shall see below, Canadian suppliers will likely come under further competitive pressure owing to the TPP's complex RCV rules. The removal of U.S. tariffs on parts imported from overseas also will remove the current advantage that Canadian-based assembly operations enjoy due to the zero tariff on parts imported for assembly in Canada.

TPP Rules of Origin (ROO) and **Regional Content-Value (RCV) Requirements**

A single set of RCV rules apply to all TPP member states. For assembled vehicles and certain "key" parts, including engines and transmissions, 45% of their net cost must originate from within the TPP in order for the vehicle or part to receive preferential tariff treatment. The vast majority of automotive parts fall into groups requiring either 40% or 35% RCV (Table 3). A number of potential consequences flow from these ROO and RCV rules, but it is important to remember that the ROO only come into play if the exporter is claiming preferential tariff treatment under the TPP.

a. Impact on Vehicle Imports into Canada

Once the current 6.1% non-preferential tariff on vehicles is phased out in five years, a vehicle built in Japan (or in any other TPP country) will enter Canada duty free as long as it contains at least 45% TPP content. The remaining 55% could originate from lower-wage non-TPP countries such as China, Thailand, or Indonesia. Any lowering of vehicle production costs, coupled with the elimination of the tariff, potentially makes imported Japanese-built

 TABLE 3
 TPP Regional Content-value Requirements: HS Codes

HS Code	Product	Percent TPP RCV Net Cost Method
HS 8407.33-34	Piston Engines for Motor Vehicles	45
HS 8408.20	Diesel Engines for Motor Vehicles	45
HS 8409.91	Parts for Spark Ignition ICEs Nes.	35
HS 8409.99	Parts for Diesel Engines Nes.	35
HS 8703	Cars	45
HS 8704	Vehicles for Transport of goods	45
HS 8706	Chassis Fitted with Engine	45
HS 8708.10	Bumpers and Bumper Parts	45
HS 8708.21	Safety Seat belts	45
HS 8708.30	Brakes and Brake Parts	45
HS 8708.40	Gearboxes (Transmissions) and Gearbox Parts	45
HS 8708.80	Suspension Systems and Parts (incl. Shock Absorbers)	45
HS 8708.94	Steering Wheels, Steering Columns and Steering Boxes	45
HS 8708.29	Parts and Accessories of motor vehicle bodies (incl. stampings, door assemblies, seat covers and floor mats, rear spoilers)	40
HS 8708.50	Drive Axles with Differential	40
HS 8708.95	Airbags with Inflator System	40
HS 8708.99	Other Motor Vehicle Parts (for power train, universal joints, wheel hubs, cooling system frames)	40
HS 8707.10	Bodies for Motor Cars (Stampings)	35
HS 8708.70	Road Wheels and Wheel Parts and Accessories	35
HS 8708.91	Radiators	35
HS 8708.92	Mufflers and Exhaust Pipes	35
HS 8708.93	Clutches and Clutch Parts	35

Source TPP Agreement Chapter 3, Annex 3-D

vehicles, for example, more price competitive in the Canadian market.31 Imported vehicles could displace domestically produced vehicles and have an attendant negative impact on both domestic assemblers and their component suppliers.

Through their well-developed supplier networks that extend into China, Thailand, and Indonesia, Japanese automakers source growing volumes of parts from non-TPP countries for assembly into vehicles in Japan (Table 4).32 This is why Japan sought lower TPP RCV thresholds in order to ensure that such vehicles would qualify for TPP tariff preference.33

TABLE 4 Shares of Japanese Automotive Parts Imports (HS Codes) from China, Thailand, Vietnam, and Indonesia: 2008 and 2014

HS Code	Description	Chi	ina	Thai	land	Viet	nam	Indo	nesia	Total Value of Imports US\$ 000's
		2008	2014	2008	2014	2008	2014	2008	2014	2014
'870810	Bumpers and parts for motor vehicles	8.0	31.4	3.6	4.2					84,418
'870821	Safety seat belts for motor vehicles	10.2	27.9	85.2	50.9					165,439
'870829	Parts and accessories of bodies nes for motor vehicles	28.5	41.1	10.9	15.2					1,145,819
'870830	Brakes and servo-brakes and their parts, for tractors, motor vehicles	16.4	48.8	1.4	9.6					587,863
'870840	Transmissions for motor vehicles	2.4	14.9	0.9	2.3	2.7	15.8	0.8	2.2	1,260,871
'870850	Drive axles with differential for motor vehicles	16.7	33.5	19.1	10.3			0.6	4.33	228,225
'870870	Wheels including parts and accessories for motor vehicles	50.0	62.6	9.0	2.3			13.6	12.8	1,370,578
'870880	Shock absorbers for motor vehicles	8.2	23.8	2.4	3.2					340,652
'870891	Radiators for motor vehicles	13.3	25.3	7.8	9.7			21.8	13.7	108,025
'870892	Mufflers and exhaust pipes for motor vehicles	22.6	34.2	2.1	3.2	1.4	1.0			121,130
'870893	Clutches and parts for motor vehicles	14.0	24.6	3.1	3.1	5.0	3.0	0.4	8.5	428,340
'870894	Steering wheels, steering columns and steering boxes for motor vehicles	30.6	28.7	1.2	16.6	6.8	12.6	4.2	1.8	323,771
'870895	Safety airbags with inflator system and parts thereof, for tractors, motor vehicles	19.0	33.6	14.4	16.0	9.4	16.4			640,337
'870899	Other motor vehicle parts	24.1	39.6	6.7	11.7			2.1	2.6	871,861

Source ITC Trade Map

b. Impact on Vehicle Production and Trade within the NAFTA Bloc

Under NAFTA, vehicles currently built in North America must contain at least 62.5% RCV originating from the U.S., Canada, or Mexico to qualify for duty free movement between the three countries. Following the tariff phaseouts, the TPP will permit duty free movement for vehicles containing as little as 45% TPP RCV. There is no limit on how much of this 45% can originate from TPP countries such as Japan, Vietnam, or Malaysia. The remaining 55% can come from non-TPP countries anywhere in the world, including, for example, China, Indonesia, Thailand, or India.

At first glance, there is a difference of 17.5 points between the RCV required for vehicles under the TPP as compared to NAFTA. The actual difference, however, may be more or less depending on the different RCV calculation methods used in the two agreements. Estimating the real difference is very complicated and subject to debate, but a NAFTA RCV of 53% (i.e., a difference of eight points) probably allows for a more accurate apples-toapples comparison with the TPP.34

The complications regarding RCV do not end there. Additional rules contained in a special appendix negotiated between the United States and Japan, but applicable to all parties, permit the required TPP RCV for vehicles to be even lower than 45%.35 The appendix contains both a list of parts (e.g., safety glass, bodies, body stampings, bumpers, and drive axles) and a list of operations including complex assembly, complex welding, machining, moulding, metal forming, casting, extrusion, stamping, laminating, and heat treatment. If one of the operations is performed in a TPP country on one of the listed parts, the part, which may have originated from a non-TPP country, is deemed as "originating" and its value counts as originating content for purposes of calculating the RCV for the finished vehicle.

Once vehicle tariffs are phased out under the TPP, automakers who today build vehicles in the U.S., Canada, or Mexico for export to NAFTA partners will be able to substitute more parts sourced from low-cost third countries for parts currently produced and sourced from within the NAFTA region and still qualify for preferential tariff treatment of the vehicles. This would have an obvious negative impact on production and employment in the Canadian automotive parts industry in Canada.

c. ROO and RCV Requirements for Automotive Parts

For automotive parts to enjoy preferential tariff treatment under the TPP, the required minimum RCV ranges from 35% to 45% (Table 3). Similar to finished vehicles, however, the special appendix provides the flexibility to use non-originating materials in the manufacture of a part and have those materials count as originating. A third table in the appendix pertains to automotive parts and includes engines, chassis, bumpers, brakes, seat belts, drive axles, steering wheels, and suspension systems. As long as one of the operations noted earlier is applied in a TPP country to non-originating material being incorporated into a listed part, the material, subject to a cap set at either 5% or 10% depending on the specific part, qualifies as originating.³⁶ This is an important rule since even a 5% difference in what can count as regional content can make an enormous difference to the price competitiveness of a component. The rule will force firms to think very carefully about where and how to produce particular parts.

To illustrate the significance of this "flexibility" in calculating RCV for parts, the U.S. House of Representatives report uses the example of vehicle engines.³⁷ Engines that are subject to "complex assembly" in a TPP country may contain up to 10% non-originating material according to the appendix. Thus, the required RCV of the engine effectively drops from 45% to 35% and the engine will still meet the RCV requirement for preferential tariff treatment even if up to 65% of the engine parts are sourced from outside the TPP region. Furthermore, when the engine is built into a finished vehicle, the full value of the engine will count toward the 45% RCV required for the finished vehicle to qualify also for preferential tariff treatment. A similar analysis applies to other major vehicle components such as suspension, steering, and brake systems.

The flexibility provided by these rules will benefit large global parts producers of major automotive components and negatively affect parts producers close to the beginning of the supply chain for such components. This helps explain the divided support among Canadian automotive parts suppliers for the TPP deal.³⁸ The large Canadian-owned parts producers that support the deal have established global footprints and will benefit from the flexibility of being able to source less expensive parts from outside the TPP region. The engine producer, in our example above, will be able to source discrete engine parts that contribute up to 65% of the value of the engine from outside the TPP region and still meet the required TPP RCV for the assembled engine. Currently, under NAFTA the engine-maker is constrained to source more regionally by the higher RCV (62.5%) and by NAFTA tracing-list restrictions that prevent non-originating engine parts from becoming originating.

On the other hand, lower tier Canadian producers of discrete engine parts, and, in turn, their material suppliers, will suffer from the engine producer's increased flexibility to source parts from outside the NAFTA region. In general, the further back along the supply chain the parts supplier is from the vehicle assembler, the greater the risk that the supplier will lose any preferential advantage currently enjoyed under NAFTA.39

Some commentators argue that tariffs and ROO do not necessarily drive sourcing decisions and that the TPP's lower RCV rules will not have a dramatic effect on North American automotive production. For example, Greig Mordue, a former senior executive with Toyota Motor Manufacturing Canada (TMMC), argues that existing NAFTA content requirements have had minimal effect on sourcing decisions. 40 As evidence he points to the fact that vehicles currently built in Canada are well above the 62.5% RCV threshold demanded by NAFTA, even though Canadian assemblers have been able to

import components from anywhere in the world duty free for at least the last 15 years. So why, he asks, will the TPP be any different?

Mordue also suggests that "long supply chains and six-week lead times — what you tend to get from far-flung locations — are not consistent with lean manufacturing, build-to-order and just-in-time manufacturing." His argument has merit with regard to certain classes of parts. Colour-insequence parts such as seats and fascias are usually manufactured in close proximity to final assembly plants, as are vehicle bodies due to their bulk and susceptibility to damage in transit. 41 The sourcing of complex and highly engineered components over great distances may lead to significant delays and costs if the supply chain is disrupted or the part is subject to a recall.⁴²

In summary, Canadian producers whose components are relatively complex, do not currently face significant competition from China, and/or for which proximity matters more than cost may remain largely unaffected by the change in ROO and RCV. Nevertheless, as discussed above, the impact will be negative on those Canadian parts producers whose components are less complex, face competition from China or other low-cost producers, and/ or for which cost is more important than proximity.

Conclusion

The TPP automotive provisions and rules are complex, especially regarding rules of origin and regional content-value. Assessing their potential impact on the Canadian automotive industry is complicated by the fact that the industry is so highly integrated with U.S. production, and so dependent on the U.S. market for the sale of both finished vehicles and automotive parts. Consequently, one must be mindful not only of the direct impact of the TPP on Canadian automotive production, but also the indirect effect caused by changes to U.S. production levels. Our analysis suggests the following:

- TPP rules of origin (ROO) and regional content-value (RCV) requirements will have a much greater impact on the automotive industry in Canada than the removal of tariffs per se;
- growth in Canadian vehicle exports to markets outside North America will be limited at best;
- the very great difference in vehicle import tariff phase-out periods between U.S. and Canada will favour locating new assembly investment and reinvestment in the U.S. rather than Canada;

- increased Canadian import penetration by vehicles built in Japan is possible with an attendant negative impact on domestic vehicle production and, in turn, domestic parts production;
- small and medium-sized Canadian parts makers will face increased competitive pressure from parts produced in low-cost non-TPP countries due to the weaker rules of origin for both vehicles and parts. Suppliers furthest from the assembler in the supply chain and producing discrete parts for components such as engines, suspension and brake systems will be most vulnerable; and
- the same rules will provide new growth opportunities outside of Canada for Canadian-based global parts makers.

While undoubtedly there will be winners and losers, we agree with those who assert that the automotive provisions in the TPP, if implemented, will have overall negative consequences for automotive production and employment in Canada.

Notes

- 1 If the agreement has not been ratified by all partner countries prior to February 4, 2018, it will enter into force after ratification by at least six states, which represent a combined GDP of more than 85% of the GDP of all signatories.
- 2 U.S. House of Representatives. "TPP Issue Analysis: Trade in the Automotive Manufacturing Supply Chain." U.S. House of Representatives, Committee on Ways and Means, 114th Congress Minority Staff Report. January 8, 2016. Available at: http://democrats.waysandmeans.house.gov/ sites/democrats.waysandmeans.house.gov/files/documents/TPP%20Issue%20Analysis%20 -%20Autos.pdf.
- 3 Conference Board of Canada. Canada's Motor Vehicle Manufacturing Industry. Canadian Industrial Outlook Autumn 2015. Ottawa: Conference Board of Canada. 2015. p. 4.
- 4 Arguably the most important detail in terms of potential negative impact on the Canadian automotive parts industry – a rule allowing non-originating material to be counted as originating - is buried deep in an appendix to an annex to the agreement; perhaps one reason why it has attracted so little media attention to date.
- 5 Matthiesen, B. and D.R. Hamill. "The Trans Pacific Partnership: Scrubbed and Released." Lead, Reach and Connect, Winter 2016. Toronto: Automotive Parts Manufacturers' Association. Available at: http://apma.ca/wpcontent/uploads/2015/11/APMB_Winter-16-FINAL.pdf.
- 6 See, for example, Stanford, J. "TPP: Renegotiating NAFTA By the Back Door." Progressive Economists Blog. September 22, 2015. Available at: http://www.progressive-economics.ca/2015/09/22/ tpp-renegotiating-nafta-by-the-back-door/; Unifor. "Auto Provisions of the TPP." 2015. Available at: http://www.unifor.org/sites/default/files/attachments/tpp_summary_3.pdf; Moffat, M. "No, the TPP won't cost Canada 20,000 auto manufacturing jobs." Macleans, January 25, 2016. Available at: http://www.macleans.ca/economy/economicanalysis/no-the-tpp-wont-cost-canada-20000-auto-manufacturing; Mordue, G. "TPP won't curb car sales." Financial Post, November 18, 2015. Available at: http://business.financialpost.com/fp-comment/tpp-wont-curb-car-sales; Head, K. and T. Mayer. "The Trans-Pacific Partnership is a trade agreement, and then some." VOX CEPR's Policy Portal, November 10, 2015. Available at: http://www.voxeu.org/article/tpptrade-agreement; Keenan, G. "An opening for Japan as levy lifts." Globe and Mail, October 6,

2015. Available at: https://secure.globeadvisor.com/servlet/ArticleNews/story/-gam/20151006/ RBCDTPPAUTOS; DesRosiers, D. "TPP - Implications for the Canadian Automotive Sector." Observations, Volume 29, Issue 12, December 15, 2015. Toronto: DesRosiers Automotive Consultants. Recently, the C.D. Howe Institute released a report seeking to quantify the TPP's macroeconomic impact on Canada. The authors find that "the automotive sector stands to see a decline in shipments of C\$420 million, both through erosion of the domestic market share and through a loss of export sales due to preference erosion in the key US market." Ciuriak, D., A. Dadkhah and J. Xiao. Better in than Out? Canada and the Trans-Pacific Partnership. Toronto: C.D. Howe Institute. 2016. Available at: https://www.cdhowe.org/public-policy-research/better-out-canada-andtrans-pacific-partnership. p.10.

- 7 Canadian Vehicle Manufacturers Association. CVMA Statement Regarding Trans Pacific Partnership (TPP) Announcement. October 5, 2015. Available at: http://www.cvma.ca/eng/news/2015/ article 20151005 01.asp.
- 8 Posadzki, A. "Ford Canada CEO to Raise Concerns over TPP with Ottawa." The Canadian Press. November 2, 2015. Available at: http://www.metronews.ca/news/canada/2016/02/11/ford-canadaceo-to-raise-concerns-over-trans-pacific-partnership-with-ottawa.html.
- 9 Worts, D. "Why the TPP Will Benefit the Auto Industry and Consumers." 2015. Available at: http://www.jama.ca/aq/news/index.asp?yr=2015#A201511252.
- 10 Stanford, J. "TPP: Renegotiating NAFTA By the Back Door." Progressive Economists Blog. September 22, 2015. Available at: http://www.progressive-economics.ca/2015/09/22/tpp-renegotiatingnafta-by-the-back-door/.
- 11 See McAlinden, S.P. and Y. Chen. The Effects a U.S. Free Trade Agreement with Japan would have on the U.S. Automotive Industry. Ann Arbor, MI: Center for Automotive Research. 2012; Van Biesebroeck, J., H. Gao and F. Verboven. Impact of FTAs on Canadian Auto Industry. Report prepared for Department of Foreign Affairs and International Trade, Ottawa. 2012.
- 12 Automotive Parts Manufacturers Association. Statement to the House Committee on International Trade, House of Commons, Ottawa, Tuesday, March 8, 2016. Available at: http://www.parl.gc.ca/ HousePublications/Publication.aspx? Language=e&Mode=1&Parl=42&Ses=1&DocId=8142029.
- 13 Chase, S. "NAFTA auto parts makers mount drive to sweeten terms of TPP deal." Globe and Mail, September 9, 2015. Available at: http://www.theglobeandmail.com/ news/politics/naftaauto-parts-makers-mount-drive-to-sweeten-terms-of-tpp-deal/article26268934/.
- 14 For an analysis of the Canadian auto industry in the context of the Great Lakes Region see Rutherford, T.D. and J. Holmes. "Manufacturing resiliency: Economic restructuring and automotive manufacturing in the Great Lakes region." Cambridge Journal of Regions, Economy and Society, 7 (3): 359-378. 2015.
- 15 See Holmes, J. "The Auto Pact from 1965 to the Canada-United States Free Trade Agreement (CUSFTA)." In The Auto Pact: Investment, Labour and the WTO, edited by M. Irish. The Hague: Kluwer Law International. 2004. pp. 3-21; Anastakis, D. Auto Pact: Creating a Borderless North American Auto Industry 1960-71. Toronto, ON: University of Toronto Press. 2005; and Anastakis, D. Autonomous State: The Struggle for a Canadian Car Industry from OPEC to Free Trade. Toronto, ON: University of Toronto Press. 2013.
- **16** Holmes, J. Whatever Happened to Canada`s Automotive Trade Surplus? A Preliminary Note. Hamilton, ON: Automotive Policy Research Centre, McMaster University. 2015. Available at: https://aprc.mcmaster.ca/sites/default/files/pubs/aprc-canada-trade-deficit-holmes-report.pdf.
- 17 See Stanford. J. "The geography of auto globalization and the politics of auto bailouts." Cambridge Journal of Regions, Economy and Society, 3 (3), pp. 383-405. 2010.

- 18 See Rutherford, T.D. and J. Holmes. "Manufacturing resiliency: Economic restructuring and automotive manufacturing in the Great Lakes region." Cambridge Journal of Regions, Economy and Society, 7 (3): 359-378. 2015.
- **19** Keenan, G. "Boost in Equinox production to save 200 GM jobs in Oshawa." Globe and Mail, March 18, 2016. p. B1. Available at: http://www.theglobeandmail.com/report-on-business/ industry-news/gm-to-boost-crossover-production-saving-jobs-at-oshawa-plant/article29279008/.
- 20 One important finding noted in the Biesebroeck, Gao and Verboven study is that a U.S.-Korea FTA would have a larger negative impact on vehicle production in Canada than a Canada-Korea FTA due to the much higher level of U.S. sales of vehicles produced in Canada as compared with domestic sales. Van Biesebroeck, J., H. Gao and F. Verboven. Impact of FTAs on Canadian Auto Industry. Report prepared for Department of Foreign Affairs and International Trade, Ottawa. 2012.
- 21 NAICS code 326193 covers plastic parts for motor vehicles (formerly filed under 3363), which are an important component of the Canadian auto parts industry.
- 22 The full text of the TPP agreement can be found at https://ustr.gov/trade-agreements/freetrade-agreements/trans-pacific-partnership/tpp-full-text
- 23 Wu, M. "Presentation to Trans-Pacific Partnership Roundtable on Auto Manufacturing Supply Chain". US House of Representatives — Committee on Ways and Means. Washington, D.C. January 11, 2016. Available at: http://democrats.waysandmeans.house.gov/sites/democrats. waysandmeans.house.gov/files/documents/Wu%20-%20TPP%20Roundtable%20on%20 Autos%20-%20Jan%202016.pdf.
- 24 Industry Trade Advisory Committee. "The Trans Pacific Partnership Trade Agreement: Report of the Industry Trade Advisory Committee on Automotive Equipment and Capital Goods." ITAC 2 Advisory Committee Report to the President, the Congress, and the United States Trade Representative. December 2, 2015. Washington, D.C. Available at: https://ustr.gov/sites/default/files/ITAC-2-Automobile-Equipment-and-Capital-Goods.pdf
- 25 U.S. House of Representatives. "TPP Issue Analysis: Trade in the Automotive Manufacturing Supply Chain." U.S. House of Representatives, Committee on Ways and Means, 114th Congress Minority Staff Report. January 8, 2016. Available at: http://democrats.waysandmeans.house.gov/ sites/democrats. ways and means. house. gov/files/documents/TPP%20Issue%20Analysis%20A-%20Autos.pdf. p. 4.
- 26 These agreements are contained in an appendix (TPP Agreement, Chapter 2, Annex 2-D, US Appendix D) and in side letters attached to the Agreement (TPP Agreement, JP to U.S. Letter on Safety Regulations for Motor Vehicles and U.S.-Japan Motor Vehicle Trade Non Tariff Measures).
- 27 Industry Trade Advisory Committee. "The Trans Pacific Partnership Trade Agreement: Report of the Industry Trade Advisory Committee on Automotive Equipment and Capital Goods." ITAC 2 Advisory Committee Report to the President, the Congress, and the United States Trade Representative. December 2, 2015. Washington, D.C. Available at: https://ustr.gov/sites/default/files/ITAC-2-Automobile-Equipment-and-Capital-Goods.pdf. p. 8.
- 28 The import into Canada of vehicles built in Japan has declined over the last decade (Table 2A) as Japanese automakers expanded the production of their mass-market vehicles within North America. Vehicles imported from Japan by Honda and Toyota are luxury or niche market cars. Companies such as Subaru and Mazda import much larger proportions of vehicles sold in the NAFTA from Japan. Hence, the impact of the removal of import tariffs under TPP differentially affects Japanese automakers.
- 29 TPP Agreement, Chapter 2, Annex 2-D, Canada Appendix D, Appendix between Japan and Canada on Motor Vehicle Trade.

- 30 It is important to remember, however, that the TPP does not replace NAFTA; the two agreements will coexist. When exporting vehicles to the United States, a Canadian-based OEM could continue qualifying for preferential tariff treatment by meeting the NAFTA RCV rule of 62.5%.
- 31 At present, cars built in Japan and imported into Canada or the United States are not required to meet any RCV rules; they simply have to pay the tariff. Since ROO only become relevant if the exporter is claiming a tariff preference under the trade agreement, the TPP ROO would not directly impact vehicles imported into the U.S. from Japan until the U.S. tariffs on cars and trucks are phased out in years 25 and 30 respectively.
- 32 For more on the development of these networks at the time when Japanese automakers, faced with the appreciating value of the yen, came under pressure to lower production costs, see Natsuda, K. and K. Otsuka. "Dawn of industrialisation? The Indonesian automotive industry." Bulletin of Indonesian Economic Studies 51 (1): 47-68. 2015; Kasuga, T., O. Toshiko, Y. Yamaguchi, Y. Higa, and K. Hoshino "The Expansion of Western Auto Parts Manufacturers into Thailand, and Responses by Japanese Auto Parts Manufacturers." JBICI Review, 11 (1). JBIC Institute. Tokyo: Japan Bank for International Cooperation. 2002; Tanruangvechjaroon, M. "Tough road lies ahead for auto-parts makers." The Nation, April 5, 2013. Available at: http://www.nationmultimedia. com/business/Tough-road-lies-ahead-for-auto-parts-makers-30203382.html; Wu, M. "Presentation to Trans-Pacific Partnership Roundtable on Auto Manufacturing Supply Chain". US House of Representatives — Committee on Ways and Means. Washington, D.C. January 11, 2016. Available at: http://democrats.waysandmeans.house.gov/sites/democrats.waysandmeans.house.gov/ files/documents/Wu%20-%20TPP%20Roundtable%200n%20Autos%20-%20Jan%202016.pdf.
- 33 Global Trade Online reported that in the initial U.S.-Japan bilateral agreement that preceded Japan's formal entry into the TPP negotiations the RCV for many parts was set as low as 30% (Global Trade Online, October 8, 2015. Available at: http://www.bilaterals.org/?tpp-rule-of-originis-45-for). This raised the ire of the Canadian and Mexican negotiators at the Maui meeting. In early September 2015, the Globe and Mail reported that associations representing automotive parts makers in Canada, Mexico, and the U.S. had sent a letter to their respective governments urging them to fight for a RCV of 50% for both vehicles and parts (Chase, S. "NAFTA auto parts makers mount drive to sweeten terms of TPP deal." Globe and Mail, September 9, 2015. Available at: http://www.theglobeandmail.com/ news/politics/nafta-auto-parts-makers-mount-drive-tosweeten-terms-of-tpp-deal/article26268934/). The RCVs contained in the signed agreement, including the important "flexibility" provision allowing additional non-originating content to be counted as originating, appear to represent a compromise.
- 34 See U.S. House of Representatives. "TPP Issue Analysis: Trade in the Automotive Manufacturing Supply Chain." U.S. House of Representatives, Committee on Ways and Means, 114th Congress Minority Staff Report. January 8, 2016. p. 12.
- 35 TPP Agreement Full Text, Chapter 3, Appendix 1 to Annex 3-D.
- **36** Ibid.
- 37 U.S. House of Representatives. "TPP Issue Analysis: Trade in the Automotive Manufacturing Supply Chain." U.S. House of Representatives, Committee on Ways and Means, 114^{th} Congress Minority Staff Report. January 8, 2016. p. 14.
- **38** For comment on the split in support from auto parts manufacturers, see Keenan, G. "An opening for Japan as levy lifts." Globe and Mail, October 6, 2015. Available at: https://secure.globeadvisor. com/servlet/ArticleNews/story/-gam/20151006/RBCDTPPAUTOS and Panetta A. "Trans-Pacific Partnership: a look at winners and losers in the auto sector." Canadian Manufacturing, September 30, 2015. Available at: http://www.canadianmanufacturing.com/manufacturing/transpacific-partnership-a-look-at-winners-and-losers-in-the-auto-sector-155233/.

- 39 During the 2015 federal election campaign, the Harper government attempted to allay fears regarding TPP-related automotive job losses by promising, should they be re-elected, up to \$1 billion over 10 years in grants for the establishment of new Canadian assembly and parts facilities. The current Liberal government has yet to affirm any commitment despite recent calls by Canada's "Automotive Czar," Ray Tanguay, to restructure existing automotive innovation funds (Posadzki 2016).
- **40** Mordue, G. "TPP won't curb car sales." *Financial Post*, November 18, 2015. Available at: http:// business.financialpost.com/fp-comment/tpp-wont-curb-car-sales
- 41 With highly synchronized just-in-time vehicle manufacturing, parts such as seats and fascias must be delivered in exact sequence to the final assembly line to match the colour and, in the case of seats, material options designated for the specific vehicle in which they are to be installed. Hence, plants building such colour-in-sequence parts are usually located within a few kilometers of the assembly plant so that production can be synchronized with the main assembly line.
- 42 Even larger components, however, are not immune to being sourced over great distances. In support of its contention that production and jobs in the United States could well be displaced by offshore sourcing under the TPP, the U.S. House of Representatives (2016: 17) report notes: "in 2014 Japan exported \$347 million worth of certain engines to the United States, a 37.5% increase over the previous year. Even body stampings are imported, with \$70 million coming from Taiwan – the leading exporter, above Mexico and Canada – in 2014."



