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Recent Trends in the Canadian Automobile Industry from 2007 to 2022: The Increasing Presence of Japanese Automakers in Canada¹

Tamiko Kurihara*

Abstract

This paper explores characteristics of the Canadian automobile industry from 2007 to 2022. An analysis of motor vehicle production units from 2007 to 2021 revealed three points. First, from a global perspective, the center of automobile production has shifted from developed countries to emerging economies such as China. Second, automobile production within the United States-Mexico-Canada Agreement (USMCA) has shifted toward Mexico. Finally, an increase in automobile production in Canada by Toyota and Honda substantially enhanced their presence in the country.

The United States, Canadian federal and Ontario provincial governments provided the Detroit Three with substantial amounts of financial bailout aid. Continuous financial support from Canadian federal and provincial governments has helped significantly enhance the international competitiveness of automakers.

In response to the dynamic changes in the political and economic environments and technological advancement, automobile companies have reorganized the global location of their assembly plants and redistributed their valuable resources to promising areas, such as electric vehicles, autonomous vehicles, and SUVs. The future prosperity of the Canadian automobile industry depends on its ability to adapt to the new trend of zero-emission transportation and to make effective use of Canada's locational advantages.

Keywords: Automobile Industry, Canada, Detroit Three, Japanese Automakers, USMCA

1 Introduction

The automobile industry is a core manufacturing industry that until the mid-1970s was regarded as the major engine of growth and is still seen as a key contributor to industrial development. Since the automobile industry is an assembly industry, it requires a large number and variety of parts and components. It has significant scale and linkages to other manufacturing industries, such as the iron and steel, chemical, machinery and electronic industries and to service industries, such as the financial and insurance, car dealership, and maintenance and repair services industries. As the automotive industry not only has strong connections with other manufacturing and service industries but also creates large-

¹ This paper is a revised and updated paper previously published as "Recent Trends in the Canadian Automobile Industry after the Lehman Shock" in Japanese with an English abstract. The Original paper was published in 2019 in the *Economic Review of Toyo University*, Vol. 45, No. 1, pp. 135-159.

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scale local employment, the closure of an assembly plant would have a domino effect. As a result of the automobile industry's profound influence on national and local economies, when automakers face financial difficulties, governments inject huge financial assistance into the automobile industry to prevent massive unemployment.

The purpose of this paper is to scrutinize recent trends in the Canadian automobile industry, focusing on the performance of individual automakers, from 2007 to 2022, and to illustrate the role of the Canadian federal and Ontario provincial governments during and after the financial crisis of 2008. The examination includes a clarification of the relative position of the Canadian automobile industry within the three North American Free Trade Agreement (NAFTA) countries, and an assessment of the significance of Japanese automakers in Canada. This paper is designed to supplement Part 3 of the author's book *A Study of the Contemporary Canadian Economy: Diverse Provincial Economies and the Automotive Industry*,² which included a discussion of the automobile industry up to 2008.

The theoretical framework of this paper depends on Dicken's hypothesis elaborated in *Global Shift*, which was published in 2007. According to Dicken, "the global economy is continually being transformed, especially through the interactions between transnational corporations and states (and other interest groups in civil society), set within a rapidly changing technological environment, in which digital technologies are increasingly dominant."³ Although many studies have examined the automobile industry after the Lehman Shock (financial crisis) of 2008, few studies in Japan have focused on the Canadian automobile industry. This paper first discusses previous research in Japanese on the American automobile industry and then on Canada.

2 Overview of Previous Studies

Before reviewing previous studies, it is necessary to summarize the bankruptcies and comeback of automakers in North America. After the Lehman Shock of 2008, one of the "Big Three"⁴ automakers, Chrysler, filed for Chapter 11 bankruptcy reorganization in the United States of America (hereafter United States or US) on April 30, 2009. Another of the "Big Three," the General Motors Corporation,⁵ also filed for Chapter 11 on June 1, 2009. The US, Canadian federal and Ontario provincial governments provided huge amounts of financial aid to bail them out. Consequently, these companies currently exist as "New Chrysler" and "New GM." The large shares held by the American government in New GM made it seem as if the company had been nationalized. Once all shares held by the government had been sold on the stock market, New GM became a private company once more.

New Chrysler emerged from bankruptcy proceedings with the United Auto Workers Pension Fund, Fiat, the American government, and the Canadian federal and Ontario provincial governments as principal owners. Fiat initially held 20% of the New Chrysler's shares and gradually increased its holding

² Tamiko Kurihara (2011), *A Study of the Contemporary Canadian Economy: Diverse Provincial Economies and the Automotive Industry*, (in Japanese with an English summary), University of Tokyo Press.

³ Peter Dicken (2007), *Global Shift: Mapping the Changing Contours of the World Economy*, 5th ed., London: Sage Publications, and New York: Guilford Press, p. xxi.

⁴ Ford, General Motors and Chrysler were referred to as the "Big Three," but are now referred to as the "Detroit Three."

⁵ The General Motors Corporation is now the General Motors Company. In this paper, both parent company and a Canadian subsidiary of General Motors are abbreviated as GM. Likewise, both parent company and a Canadian subsidiary of Ford Motor Company and Chrysler Corporation are abbreviated as Ford and Chrysler, respectively. In this paper, Chrysler is also written as FCA.

shares to 58.5%. In 2014, Fiat acquired the remaining 41.5% of shares from the United Auto Workers Pension Fund, and made the Chrysler Group a wholly owned subsidiary. In the same year, the company name was changed to Fiat Chrysler Automobiles N.V. (FCA). In 2021, FCA merged with the French PSA Group, and changed its name to Stellantis N.V.

Suzuki published a series of studies that directly discussed the US government's financial aid to the bankrupted GM and Chrysler. First, Suzuki (2012a) delineated the reconstruction process of New GM under the "Automotive Industry Financing Program (AIFP), a central program administered by the US government to rescue the troubled companies. His evaluation was that the AIFP contributed to stabilizing the production base of the American automobile industry from a short-term perspective. Furthermore, Suzuki (2012b) and Suzuki (2012c) discussed an industrial policy that indirectly assisted automakers, along with the AIFP in 2008. To put it concretely, although the Obama Administration's "American Recovery and Reinvestment Act of 2009" (ARRA) was designed to stimulate the economy, it included measures to invest in the development of new technologies such as electric vehicles (EVs). Thus, Suzuki considered ARRA an indirect industrial policy. He empirically analyzed the effect of the "Cash for Clunkers" program that provided financial incentives to car owners to trade in their old, less fuel-efficient vehicles for vehicles with better fuel efficiency.

Many studies in Japan examined the bankruptcies and recoveries of GM and Chrysler from the viewpoint of labor management relations. Yamazaki (2010) identified three major causes of the bankruptcies: a reduction in automobile markets, an increase in gasoline prices, and the existence of labor unions. He also examined the role of labor management relations as a real cause of bankruptcies. Based on their fieldwork, Ishida and Shinohara (2010) found that the system of labor management was a cause of bankruptcies and clarified GM's attempt to improve industrial relations in its factories and its failure to do so. Shinohara (2014) found that the reformation of production sites led to the recovery of New GM, and he indicated the areas that needed to be reformed. Yoshida (2018) investigated automobile production in the United States by Japanese automakers and the reorganization of labor management in the "Big Three." He argued that a model to explain the American automobile industry must move away from a domestic 20th century model to a global 21st century model. He stated that the American automobile industry and automakers had established their position in the world through international competitiveness.

The decline of the American automobile industry is interpreted in two books as a turning point of the automobile industry. According to Shimokawa (2009), the principal factor responsible for the decline of the "Big Three" was that the companies forgot the starting point of manufacturing in their pursuit of short-term profits and easy money through mergers and acquisitions. In the future, markets in emerging economies such as China, India and the ASEAN countries will be more important than those in developed countries, and the former markets will demand inexpensive and environmentally-conscious autos. Simokawa states that a new industrial paradigm will be required to replace the conventional mass-production paradigm.

Suzuki (2016) traced the history of the American automobile industry from the mass-production system introduced by Ford at the beginning of the 20th century to the bankruptcies of GM and Chrysler at the beginning of the 21st century. He elucidated that the diffusion of automobiles drastically changed not only the way of people's lives, but also industrial and economic structures. He envisaged an automotive culture facing large technological innovation, typified by electric vehicles and autonomous

vehicles in the future. Chapter 5 of Suzuki's book discusses the causes of GM's bankruptcies and describes the rescue programs operated by the US government.

A small number of studies written in Japanese focus on the Canadian automobile industry. In the latter half of his paper, Suzuki (2012c) discussed in detail the financial aid provided by the Canadian federal and Ontario provincial governments, along with the US government, to GM (Canada) and Chrysler (Canada) amounting to Canadian \$4 billion⁶ (US \$3.2 billion), with the US government providing the two companies with US \$17.4 billion. "The Canadian and Ontario governments' financial aid was approximately equivalent to one-fifth of the total aid. This 20%"⁷ was proportionate to the level of automobile production capacity in Canada of the Detroit Three. The implication was that the companies were expected to maintain their auto production capacity and capital expenditure in Canada.⁸

Ueda (2011) analyzed the automobile industries in the United States and Canada within the framework of his "international export processing model" and asserted that "a border economic region" has been established between the United States and Ontario, Canada. He further verified the validity of Porter's diamond theory and Rugman's double diamond model through an examination of the Canadian automobile industry.

In his translated paper, Anastakis (2016) surveyed the development of the Canadian automobile industry over a 100-year period. He identified that most of the Canadian automobile plants were located in border areas, which were adjacent to the automobile industrial areas in the United States. Anastakis showed that national industrial and trade policies have contributed to the development of the Canadian automobile industry. He expounded the argument that Japanese automakers were forced to manufacture automobiles in Canada, since they were placed at a disadvantage when they exported automobiles to Canada. However, Japanese automakers turned local production to their advantage, due to the NAFTA scheme and the high quality and high productivity of Canadian plants.

A great many books and papers on recent trends in the automobile industry from various perspectives are available in Canada. Statistics Canada has published a series of papers on the Canadian automobile industries.⁹ *Canadian Public Policy* published special issues on the Canadian automobile industries in Vol. 36 and Vol. 43 Supplements. One of the most relevant studies to this paper is a report prepared by Mordue and Sweeney (2019) for the Japan Automobile Manufacturers Association of Canada (JAMA Canada). The authors examined the economic contributions to Canada of the Japanese-brand automobile industry between 2001 and 2018 from four perspectives: (1) vehicle production, (2) direct employment, (3) earnings, income taxes and statutory contributions, and (4) intermediate and expenditure-induced employment. Mordue and Sweeney concluded that original equipment manufacturers of Japanese brands offered growth and stability during a period of widespread industry restructuring and contraction. Further discussion of studies in English is beyond the scope of this paper.

⁶ In this paper, Canadian dollars are regarded as dollars, unless otherwise indicated.

⁷ Naotsugu Suzuki (2012c), "Bei Renpou Seifu niyoru Jidousha Sangyo Shiensaku: Horon II," *The Monthly Bulletin of the Institute for Social Science, Senshu University*, No. 590, August 2012, pp. 16-17.

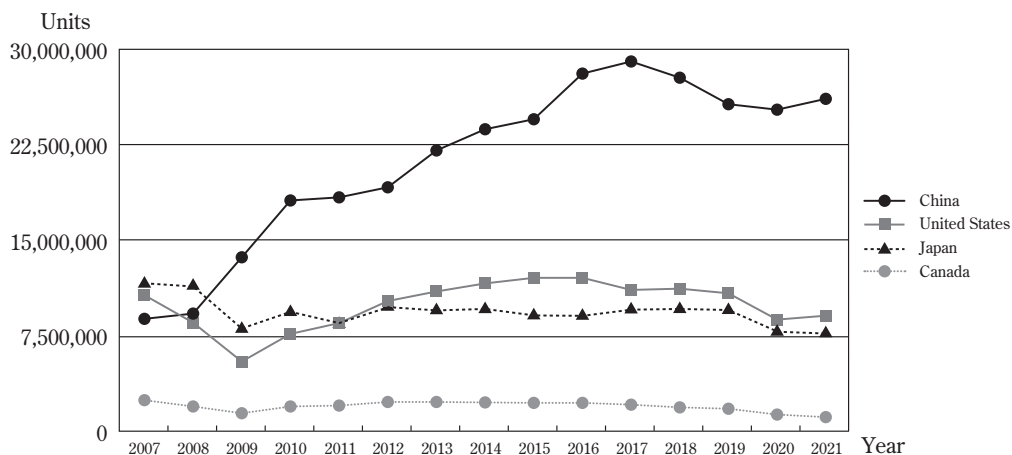
⁸ *Ibid.*

⁹ André Bernard (2013) "Recent Trends in Canadian Automotive Industries," Statistics Canada, *Economic Insights*, Catalogue No. 11-626-X, No. 26, Elizabeth Richards (2017), "Differences in Post-recession Performance for Auto Manufacturers and Service Industries," Statistics Canada, *Economic Insights*, Catalogue No. 11-626-X, No. 67, and Elizabeth Richards (2017), "Motor Vehicle Manufacturers Reposition in 2015," Statistics Canada, *Economic Insights*, Catalogue No. 11-626-X, No. 68.

3 Trends in World Motor Vehicle Production

This section explores trends in world motor vehicle production using production units as an indicator. This, in turn, reflects economic conditions of countries, governmental policies and strategies of multinational corporations. Figure 1 shows motor vehicle production by the United States, Japan, Canada and China from 2007 to 2021, based on production statistics from the Organisation Internationale des Constructeurs d'Automobiles (OICA).¹⁰

Figure 1: World Motor Vehicle Production by Country from 2007 to 2021 (Number of units)



Source : OICA, Production Statistics, from 2007 Statistics to 2021 Statistics, <http://www.oica.net/production-statistics/> (Accessed November 10, 2018, and September 12, 2022).

Since 2009, China has become the world's largest motor vehicle-producing country. The share of Chinese motor vehicle production, compared to the world motor vehicle production, was 12.1% in 2007. It grew to 29.1% in 2018, which was 2.4 times as high as in 2007.¹¹ Motor vehicle production in China was 8.88¹² million units in 2007, and increased considerably to 29.01 million units in 2017: about 3.2 times as many units as in 2007. Motor vehicle production in China survived the Lehman Shock, but was affected by the coronavirus disease (COVID-19) in 2020. In the pre-pandemic year of 2018, Chinese motor vehicle production was 27.81 million units.

Motor vehicle production in the United States was 10.78 million units in 2007, which was ranked second largest after Japan. Its share was 14.7% of world production. American motor vehicle production was severely affected by the Lehman Shock of 2008, and declined by 5.07 million units to 5.71 million units in 2009. Motor vehicle production in the United States had increased gradually since 2010, surpassing the production level of 2007 in 2013. In 2016, American motor vehicle production of 12.20 million units was the largest expansion from 2007 to 2021, but it substantially declined to 8.82 million

¹⁰ The English translation of OICA is the International Organization of Motor Vehicle Manufacturers.

¹¹ When shares are compared, numbers in 2007 and 2018 are used, since there were no influences by the Lehman Shock and the worldwide pandemic, respectively.

¹² Numbers in this paper are rounded off to nearest 10,000, unless otherwise indicated.

units in 2020 owing to COVID-19. The share of American motor vehicle production to world motor vehicle production was 14.7% in 2007, but it relatively declined to 11.8% in 2018. The United States has been the second largest motor vehicle producer since 2011, when it surpassed Japan.

In 2007 and 2008, Japan was the largest motor vehicle-producing country in the world. In 2007, 11.60 million units were produced, and in 2008, 11.56 million units. Because of the influence of the Lehman Shock, motor vehicle production in Japan declined to 7.93 million units in 2009, while in the same year Chinese production markedly increased to 13.79 million units, thereby taking over first rank from Japan. In 2011 the Great East Japan Earthquake and floods in Thailand broke supply chains of automotive parts, halting automotive production in Japan. As a result, Japan's motor vehicle production decreased to 8.40 million units, making Japan the third largest motor vehicle-producing country in the world after China and the United States. Japanese motor vehicle production increased afterward, and it fluctuated between 9.20 and 9.94 million units from 2012 to 2019. COVID-19 affected motor vehicle production in Japan in 2020 and 2021. The Japanese share of global motor vehicle production was 15.9% in 2007, which ranked first, but decreased to 10.2% in 2018, which ranked third.

Canada has had a close relationship with the United States through the automotive trade. Motor vehicle production in Canada, which was 2.58 million units in 2007, sharply declined by 1.08 million units to 1.49 million units in 2009 because of the Lehman Shock. However, production recovered to 2.07 million units in 2010, and subsequently remained between 2.14 million units and 2.46 million units from 2011 to 2017. From 2.02 million units in 2018, production substantially declined for three consecutive years to reach 1.12 million units in 2021. This was due to the lingering effects of the pandemic. The Canadian share of global motor vehicle production was 3.5% in 2007, but it decreased to 2.1% in 2018. By 2018, Canada, the 9th largest motor vehicle producer in the world in 2007, ranked 12th in the world.

To summarize the overall global vehicle production trends from 2007 to 2018, the combined share of the motor vehicle production by the United States and Japan was 36.0% in the world in 2007, and the Chinese share 12.1%. The share of motor vehicle production by China alone increased to 29.1% in 2018, whereas the combined share of the United States and Japan decreased to 22.0% in 2018. These figures show that China is the largest motor vehicle producer in the world, producing approximately 30% of the world motor vehicles. During the same period, Canada's motor vehicle production units declined both absolutely and relatively.

The above observations demonstrate that the focal point of world motor vehicle production has shifted from developed countries such as the United States and Japan to developing countries, including China and India. In accordance with the economic development of these developing countries, Shimokawa and Li point out that not only has the center of world motor vehicle production shifted, but also that these markets have shifted toward developing countries.¹³

4 Trends in Motor Vehicle Production in NAFTA Countries

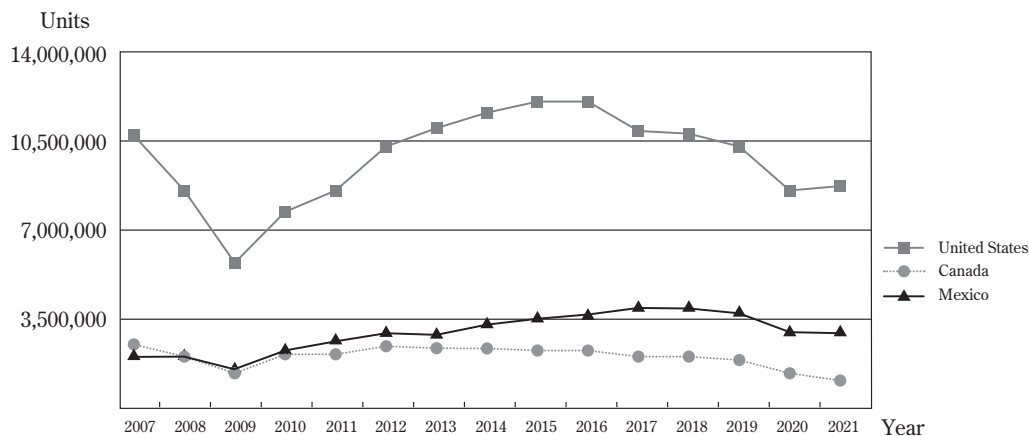
This section reviews trends in motor vehicle production in the NAFTA¹⁴ countries, namely the United

¹³ Koichi Shimokawa (2009), *Jidosha Sangyo*, Chuokoron-sha, pp. 77-79 and p. 245. Zejian Li (2016) clarified that Chinese markets of motor vehicles were different from the Indian markets, based on the growth patterns of motorization in these two countries.

¹⁴ NAFTA was replaced by the United States-Mexico-Canada Agreement (USMCA), which came into effect on July 1, 2020.

States, Canada and Mexico, from 2007 to 2021. The analysis is based on production units as compiled by DesRosiers Automotive Consultants (Figure 2).

Figure 2: North American Motor Vehicle Production from 2007 to 2021 (Number of units)



Note: Number of units includes medium and heavy duty trucks.

Sources: DesRosiers Automotive Consultants (2018 and 2022), *DesRosiers Automotive Yearbook 2018*, p. 103, and *DesRosiers Automotive Yearbook 2022*, p. 101.

In 2007, total motor vehicle production in the three NAFTA countries amounted to 15.43¹⁵ million units, which broke down to 10.76 million units in the United States (69.7% of North American¹⁶ vehicle production), 2.58 million units in Canada (16.7%) and 2.10 million units in Mexico (13.6%). The Lehman Shock severely affected motor vehicle production in the United States and Canada in 2008 and 2009, and, to a lesser extent, Mexican production in 2009. Consequently, total motor vehicle production in the NAFTA countries sharply declined to 8.73 million units, which broke down to 5.68 million units in the United States (65.1% of the total North American production), 1.49 million units in Canada (17.0%) and 1.56 million in Mexico (17.8%). In 2008, Mexican motor vehicle production (2.13 million units) surpassed Canadian production (2.08 million units) for the first time. Since then, Mexican production has exceeded that of Canada.

Motor vehicle production in NAFTA countries had increased gradually since 2010. Between 2010 and 2018, the largest US motor vehicle production figure was 12.09 million units in 2016. The largest Canadian motor vehicle production figure was 2.46 million units in 2012, while the largest Mexican production figure was 3.91 million units in 2018. In 2018, the pre-COVID-19 year, American motor vehicle production was 10.76 million units (64.4% of the total North American production), Canadian motor vehicle production was 2.05 million units (12.2%) and Mexican motor vehicle production was 3.91 million units (23.4%). Canadian motor vehicle production absolutely and relatively decreased within NAFTA.

¹⁵ Numbers of motor vehicle production units are different between Figure 1 and Figure 2, because the sources of the two Figures are different.

¹⁶ In this paper, the United States, Canada and Mexico are considered as North America, unless otherwise indicated.

Contrarily, Mexican motor vehicle production steadily increased from 2010, and its production units were 1.9 times greater than Canadian production units in 2018. These numbers indicate that Mexico has developed as a base that exports automobiles to the United States within the NAFTA scheme, provided that automobiles are made in accordance with local content requirements.

Similar trends in motor vehicle production in NAFTA are reflected in investment trends. In 2019, the Center for Automotive Research (CAR) published data on investment in North America by automotive companies. Between 2009 and 2018, automakers announced over US \$124 billion in investments in the North American region, of which Canada received 7%, Mexico 20%, and the United States the remaining 73%. Since 2009, automakers, on average, invested approximately US \$9.1 billion annually in the United States, and US \$2.5 billion annually in Mexico. However, annual investment in Canada was far lower at around US \$820 million.¹⁷ It is clear that Canada received a lesser amount of automobile investments than did Mexico.

The Canadian automobile industry seems to be tapering off in North America in terms of production units and investments. Some observers predict that the Canadian automobile industry faces a similar fate to that of the Australian automobile industry, in which all three global automakers shut down their operations by 2017. Stanford (2017) reviews factors contributing to closures in Australia and considers key structural, economic, and policy differences between Australian and Canadian cases. He points out that the Canadian industry enjoys several structural advantages compared with Australia; chief among them is its large and bilateral trade relationship with the United States dating back to the Automotive Products Trade Agreement of 1965 (known as the Canada–United States Auto Pact). However, Stanford indicates that Canada’s present automotive policy is inconsistent and contradictory, and the structural legacy of the one uniquely Canadian policy success (the Canada–United States Auto Pact) continues to erode. He advocates that Canadian policy-makers would do well to carefully study and learn from the painful experience of the Australian industry.¹⁸

The previous examination of motor vehicle production was based at the country level. The closure of automobile assembly plants that previously existed outside of the province of Ontario¹⁹ means that Ontario now accounts for 100% of Canada’s production of light vehicles, including passenger cars and light trucks, which consist of light pickup trucks, minivans, sports utility vehicles (SUVs) and crossover vehicles. In 2018, 2,004,828 units of light vehicles were manufactured in Ontario. In contrast, medium/heavy trucks are mainly manufactured in Quebec. In 2018, whereas only 3,465 units of Hino Motors (medium/heavy trucks) were manufactured in Ontario, 17,501 units of Kenworth Truck (medium/heavy trucks) were made in Quebec.²⁰ Ontario has the largest economy in Canada, with 38.9% of the nominal Gross Domestic Product (GDP) in 2021, and is the most populous Canadian province, with 38.8% of the total Canadian population in 2021.²¹ Exports²² from Ontario accounted for 33.8% of total Canadian

¹⁷ Center for Automotive Research, CAR (2019), “Automakers Announced \$4.8 billion in North American Investments in 2018,” <https://www.cargroup.org/automakers-announced-4-8-billion-in-north-american-investments-in-2018/> (accessed August 29, 2019).

¹⁸ Jim Stanford (2017), “When an Auto Industry Disappears: Australia’s Experience and Lessons for Canada,” *Canadian Public Policy*, Vol. 43, Supplement 1, pp. S57-S74.

¹⁹ Dimitry Anastakis (2016), “Sentakuteki Gurobaru-ka ni yoru Kokkyo Keizaiken e no Shuuseki, Jidousha II,” *Gurobaru Keizaishi*, ed. by Takeo Kikkawa, Takafumi Kurosawa, and Shigehiro Nishimura, The University of Nagoya Press, Figure 5-1, p. 136.

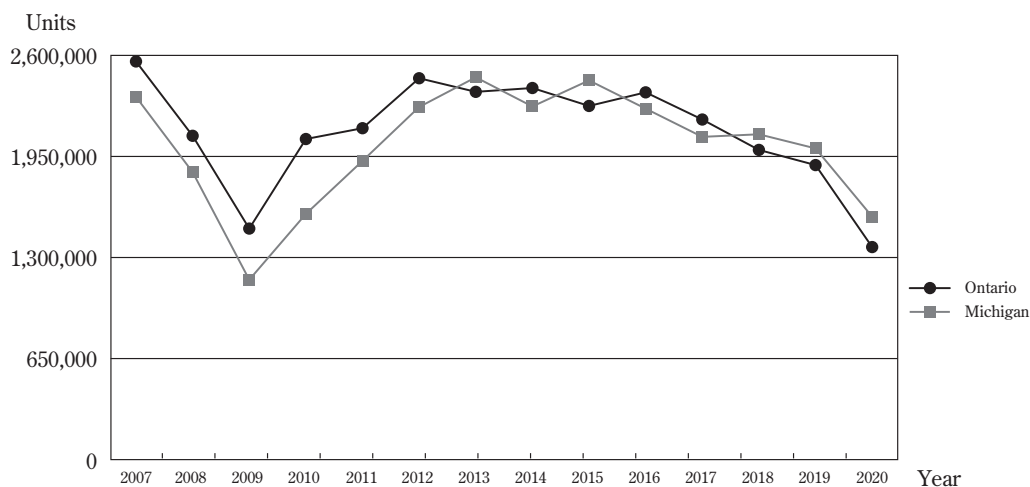
²⁰ *Ward’s Automotive Yearbook 2019, 81st ed.*, p. 91.

²¹ “Ontario Fact Sheet,” <https://www.ontario.ca/page/ontario-fact-sheet> (accessed October 14, 2022).

²² Exports in this paper is domestic exports, and does not include re-exports.

exports in 2021, whereas imports to Ontario made up 60.7% of total Canadian imports.²³ Ontario is the only province in Canada in which five major automobile manufacturers are located. GM, Fiat Chrysler Automobiles (FCA),²⁴ Ford, Honda and Toyota, along with Hino Motors, have assembly plants in Ontario. This phenomenon has not been observed in other parts of North America.

Figure 3: Motor Vehicle Production by Ontario and Michigan from 2007 to 2020 (Number of units)



Note: The number of units includes medium and heavy trucks.

Sources: WardsAuto InfoBank and *Ward's Automotive Yearbook*, various issues.

Figure 3 shows motor vehicle production based on the number of units produced by the Province of Ontario, Canada, and by the State of Michigan, United States, from 2007 to 2020. Production in Ontario was clearly greater than in Michigan from 2007 to 2012, although production in both Ontario and Michigan was adversely affected in 2008 and 2009 by the Lehman Shock, and in 2020 by COVID-19. Michigan is the leading auto-producing state and is where the headquarters of the Detroit Three²⁵ are located. Between 2013 and 2017, the production units of Michigan alternately exceeded that of Ontario, but Michigan's motor vehicle production has been greater than that of Ontario since 2018.

Statistically, motor vehicle production in Ontario was 2.57²⁶ million units in 2007, but sharply declined to 1.48 million in 2009. It gradually recovered to 2.45 million units in 2012 and retained a level above 2.01 million until 2018. However, motor vehicle production fell sharply to 1.36 million units in 2020, due to

²³ Ontario's shares of exports and imports are calculated based on the numbers obtained from statistics "Trade Data Online" by Innovation, Science and Economic Development Canada (formerly Industry Canada), <https://ised-isde.canada.ca/site/trade-data-online/en> (accessed October 15, 2022).

²⁴ FCA and the French automaker Groupe PSA were merged in 2021, and the new group was named Stellantis. (Source: FCA (2021), Press Release, "The Merger of FCA and Groupe PSA has been completed, London, January 16, 2021," https://www.stellantis.com/content/dam/stellantis-corporate/archives/fca/press-releases/2021/january/The_merger_of_FCA_and_Groupe_PSA_has_been_completed.pdf (accessed October 5, 2022)).

²⁵ Before the merger of FCA and Groupe PSA, the headquarters of FCA was located in London, United Kingdom, and the headquarters of FCA US LLC was located in Michigan, United States of America.

²⁶ Sources for Figure 3 are based on WardsAuto InfoBank and *Ward's Automotive Yearbook*, various issues. Thus, numbers in Figure 3 are slightly different from those of Figure 1 and Figure 2. Numbers of units in Figure 3 include medium/heavy duty trucks.

the COVID-19. Motor vehicle production in Michigan also showed a pattern similar to that of Ontario. In 2007, Michigan produced 2.33 million units of motor vehicles, but its production plummeted to 1.15 million units in 2009. Michigan's motor vehicle production steadily increased to reach 2.46 million units in 2013. Although its production was 2.44 million units in 2015, it declined slightly to 1.56 million units in 2020.

What will be the future trend in motor vehicle production in Ontario and Michigan? Answers to this question will depend on the policies pursued by the American and Canadian federal governments and the Ontario provincial government. It also depends on the strategies adopted by automobile manufacturers. Under the former Trump administration in the United States, President Trump advocated "America first," "Return of manufacturing industry to the United States," and "Renegotiation of NAFTA." Automobile companies that sold their products in the United States were encouraged to manufacture automobiles there, rather than manufacturing them in Mexico and exporting them to the United States under the NAFTA scheme. Consequently, Ford abandoned its plan to build a new plant in Mexico. Toyota did not change its plan to make an investment in Mexico, but promised another investment in the United States.

A new body was formed to replace NAFTA when governments of the United States, Mexico and Canada signed the United States-Mexico-Canada Agreement (USMCA) on November 30, 2018. The new Agreement came into effect on July 1, 2020. According to the US International Trade Administration, "(T)he USMCA includes upgraded rules of origin for automobiles and automotive parts that promote reshoring of vehicle and parts production and incentivize new investments in the U.S. automotive sector."²⁷ The following four points were agreed upon: (1) Regional Value Content (RVC) requirements were increased from 62.5% to 75%. (2) Core products such as engines, lithium-ion batteries, bodies, gear boxes, axles, and steering and suspension components must have 75% RVC. (3) New procurement requirements for steel and aluminum were introduced, and motor vehicle producers had to certify that 70% of their purchases by value of corporate steel and aluminum purchases were sourced from the USMCA countries. (4) A new labor content rule was introduced, and 40% of the imported automobile's content (by value) had to be sourced from manufacturing facilities in the USMCA countries paying workers at least US \$16 per hour.²⁸

Under the current USMCA scheme, local content requirements were increased to 75%, new procurement requirements for steel and aluminum were introduced, and a new labor content rule was introduced. These requirements and rules will encourage auto manufacturers to utilize automobile parts and components manufactured in the United States, instead of those made in Mexico, where workers are engaged in production work at lower wages. In a side letter, the United States excluded 2.6 million passenger vehicles imported from Canada on an annual basis from the measure.²⁹ In response to the changes in USMCA, newspapers reported that, as early as November, 2018, German BMW considered building an engine plant in the United States,³⁰ and that Nissan would manufacture engines for expensive

²⁷ The United States, International Trade Administration, "USMCA Automotive Sector Report," <https://www.trade.gov/usmca-auto-report> (accessed October 16, 2022).

²⁸ *Ibid.*, and US Trade Representative, "Estimated Impact of the United States-Mexico-Canada Agreement (USMCA) on the US Automotive Sector," <https://ustr.gov/sites/default/files/files/Press/Releases/USTR%20USMCA%20Autos%20White%20Paper.pdf> (accessed October 16, 2022).

²⁹ US Trade Representative, "Side Letter Text on 232 CA-US Response," https://ustr.gov/sites/default/files/files/agreements/FTA/USMCA/Text/Side_Letter_Text_on_232_CA-US_Response.pdf (accessed October 16, 2022).

³⁰ "BMW, Bei de Sinkoujou kentou," *Nihon Keizai Shimbun*, November 29, 2018, p. 10.

automobiles in the United States.³¹ The new requirements and rules of USMCA would require other automakers implement the new measures.

Newspapers reported the return of manufacturing production to the United States, including plans for expansion of the production facilities in Michigan by the Detroit Three. In February 2019, the FCA announced that it would invest US \$4.5 billion in total, to build a new plant in Detroit for the production of SUVs, and to enhance facilities of the existing five plants in Michigan. According to this plan, 6,500 new jobs would be created, and 3,850 workers would be hired at the new plant. FCA agreed to invest US \$1.6 billion to renovate an engine plant that had ceased production in 2012 and use it for the production of SUVs. It has been 28 years since a new automobile manufacturing plant was built in Detroit. At the same time, FCA had already conducted a restructuring plan to reduce the production of smaller-sized cars in the United States.³²

Ford had planned to construct a plant in Mexico in 2017 but dropped the idea following criticism from President Trump. Instead, the company decided to manufacture electric vehicles and autonomous driving vehicles in Michigan. In March 2019, the company announced that it would invest US \$900 million in total to facilitate the plan. Specifically, Ford would make an investment of US \$850 million in the Flat Rock plant in Michigan to add production line(s) for SUVs and would manufacture electric SUVs starting in 2023. Moreover, the company announced that it would begin manufacturing commercial vehicles using autonomous driving techniques in a manufacturing plant in South-East Michigan in 2021.³³

GM announced that the company would halt manufacturing production in four American plants, and identify one Canadian plant for possible closure, and eliminate up to 14,000 jobs in North America, including about 8,000 white-collar employees, or 15% of GM's North American white-collar workforce. In the factories, around 3,300 blue-collar workers could lose their jobs in Canada and another 2,600 in the United States, but some US workers could transfer to truck or SUV factories, that were increasing production.³⁴ President Trump then attacked GM over its decisions. In response to this criticism, chief executive officer (CEO) Barra said, "(T)his is an industry that is under just dramatic transformation. So we're taking the steps and being responsible to make sure that we can continue to grow in these areas, and continue to have a strong U.S. manufacturing base that creates a lot of good paying jobs."³⁵ GM committed to investing \$1.8 billion into plants in six states and to creating 700 new jobs. The bulk of the new jobs were to go to a factory in Michigan where GM was planning to add production of another fully electric vehicle. The automaker announced it would spend \$300 million and add 400 workers at the plant in Orion Township, north of Detroit, where the Chevrolet EV would be built alongside the Bolt model.³⁶

In the United States, recent demand for cars has shifted from passenger cars such as sedans to large vehicles such as SUVs. As a result, light trucks, including SUVs and small pickup trucks, account for

31 "Nissan, Bei deno Seisan-kakudai," *Nihon Keizai Shimbun*, February 24, 2019, p.1.

32 "Detroit ni Sinkoujou FCA," *Nihon Keizai Shimbun*, February 27, 2019, p. 3 and "FCA, Detroit Shinkoujou happyo Michigan shu ni 5 sen oku yen," *Nikkei Sokuhou News Archives*, February 27, 2019, <https://t21-nikkei-co-jp.stri.toyo.ac.jp/g3/CMNDF11.do> (accessed September 10, 2019).

33 "Ford, Beikoku de EV Seisan ni 1,000 oku yen Toushi," *Nikkei Sokuhou News Archives*, March 21, 2019, <https://t21-nikkei-co-jp.stri.toyo.ac.jp/g3/CMNDF11.do> (accessed September 10, 2019).

34 Tom Krisher (2018), "GM to slash up to 14,000 jobs in North America," AP Worldstream, November 26, 2018, ProQuest Document (accessed March 4, 2019).

35 "GM Spending Big in U.S.," *Prince George Citizen*, March 23, 2019, ProQuest Document (accessed October 18, 2022).

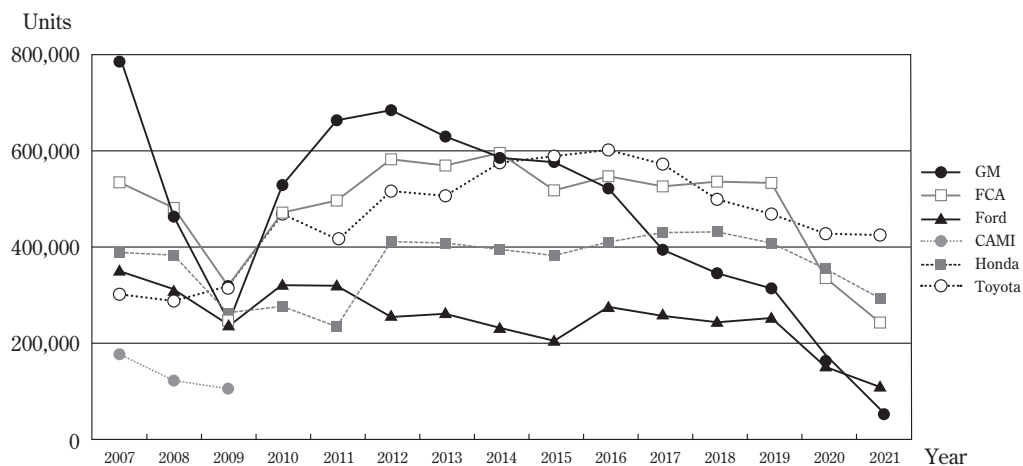
36 *Ibid.*

70% of new vehicle sales. Since the prices of light trucks are generally US \$10,000 higher than sedan passenger cars, the increased demand for lucrative light trucks results in more profits for automakers,³⁷ who, therefore, increase their SUV production. Correspondingly, the Detroit Three adopted strategies in which they closed their unprofitable plants in the United States, while returning automobile production to the state of Michigan.

5 Trends in Motor Vehicle Production in Canada

This section examines trends in the automobile industry in Canada based on production units from 2007 to 2021. In 2007, six companies manufactured automobiles in Canada: the three subsidiaries of the Detroit Three; the Canadian Automotive Manufacturing Inc. (CAMI), which was established in 1986 as a 50%-50% joint venture between GM and Suzuki; and the subsidiaries of Honda and Toyota. After the Lehman Shock, the joint venture dissolved and CAMI became a wholly-owned subsidiary of GM. By 2010, there were five automakers in Canada, all of which were foreign-owned subsidiaries.

Figure 4: Canadian Light-Vehicle Production by Company from 2007 to 2021 (Number of units)



Note : Chrysler became Fiat Chrysler Automobiles (FCA) in 2014.

Sources: DesRosiers Automotive Consultants, *DesRosiers Automotive Yearbook*, various issues.

Figure 4 shows light-vehicle production by company from 2007 to 2021 (light vehicles exclude medium and heavy trucks). In 2007, the total number of light vehicles produced by the six automakers was 2.54 million units.³⁸ The largest share was 30.9% by GM in Canada (with 786 thousand³⁹ units), followed by Chrysler (FCA) with 21.0% (manufacturing 535 thousand units), Ford with 13.8% (350 thousand units), Honda with 15.4% (391 thousand units), and Toyota with 11.9% (303 thousand units).

³⁷ "Toyota, Sinkoujou no Seisan shashu o Henkou, Sin-gata SUV ni," *Nikkei Sokuhou News Archives*, July 11, 2019, <https://t21-nikkei-co-jp.stri.toyo.ac.jp/g3/CMNDF11.do> (accessed September 10, 2019). In this newspaper, it was not clear that light trucks include minivans.

³⁸ Sources: DesRosiers Automotive Consultants, *DesRosiers Automotive Yearbook*, various issues.

³⁹ In this section numbers are rounded off to the nearest 1,000 in the case of thousand units, and are rounded off to the nearest 10,000 in the case of million units.

CAMI's share was 7.0% (178 thousand units of both GM and Suzuki brands).

As a result of the Lehman Shock, total light-vehicle production in 2009 declined sharply by 1.07 million units to 1.48 million units. Toyota became the largest automobile manufacturer in Canada with 317 thousand units (21.5% of the total), followed by Chrysler with 315 thousand production units (21.3%), a reduction of 220 thousand units on the 2007 figure.

Since 2010, the light-vehicle production of all companies in Canada had expanded. Although CAMI had previously produced both GM and Suzuki brands, it started to produce only GM brands after the dissolution of the joint venture. Consequently, the light-vehicle production of GM rapidly increased to 530 thousand units, because the production units of CAMI were added to those of GM. They accounted for 25.6% of total light-vehicle production in Canada. Chrysler's production also increased to 475 thousand units (22.9%). Toyota's production increased by 149 thousand units to 466 thousand units. Ford produced 321 thousand units, and Honda produced 280 thousand units.

From 2011 to 2021, light-vehicle production varied among the five automobile manufacturers. The production of GM increased to 683 thousand units in 2012, but the production level in 2021 was smaller than the production level of 786 thousand units in 2007, which did not include the production units of CAMI. GM's production gradually declined to 312 thousand units (15.8%) in 2019. The production of FCA (formerly Chrysler) expanded to 599 thousand units in 2014. Since then, FCA maintained a production level of above 500 thousand units, and produced 535 thousand units (27.1%) in 2019. Production of Ford reached a peak of 321 thousand units in 2010 but gradually declined to 248 thousand units (12.6%) in 2019.

The two Japanese automakers, Honda and Toyota, increased their production of light vehicles from 2009 to 2010. However, as previously discussed, natural disasters such as the Great East Japan Earthquake and its accompanying *tsunami* and floods in Thailand damaged factories and cut off the supply chains for parts. Consequently, motor vehicle production by these two companies decreased in 2011.⁴⁰ However, light-vehicle production by these two companies had increased since 2012. Toyota's production reached 602 thousand units in 2016, approximately twice as many as the 303 thousand units produced in 2007, then fell to 468 thousand units (23.8%) in 2019, a year of minor influence by COVID-19. Honda's production expanded to 433 thousand units in 2018. Honda's 2019 light-vehicle production was 408 thousand units (20.7%).

The years 2020 and 2021 saw a sharp decline in light-vehicle production by all five companies, particularly GM and Ford. This plummeting vehicle production was attributed to (1) the closure of plants due to COVID-19 (workers were simply not able to work due to illness or were locked out in an attempt to halt the spread of the virus), (2) the disruption of supply chains of auto parts and components, (3) a worldwide shortage of semiconductors for automobiles (due, in part, to the great demand for semiconductors for personal computers and smartphones), and (4) the changes in automakers' strategies (adjusting to the shift in market demand from passenger cars to SUVs and adjusting to worldwide locational advantages). In 2021, total light-vehicle production in Canada was 1.11 million units, which was less than half the 2.54 million units produced in 2007. The largest production of 427 thousand units (38.4%) was made by Toyota, and the second largest production of 292 thousand units (26.3%) was made

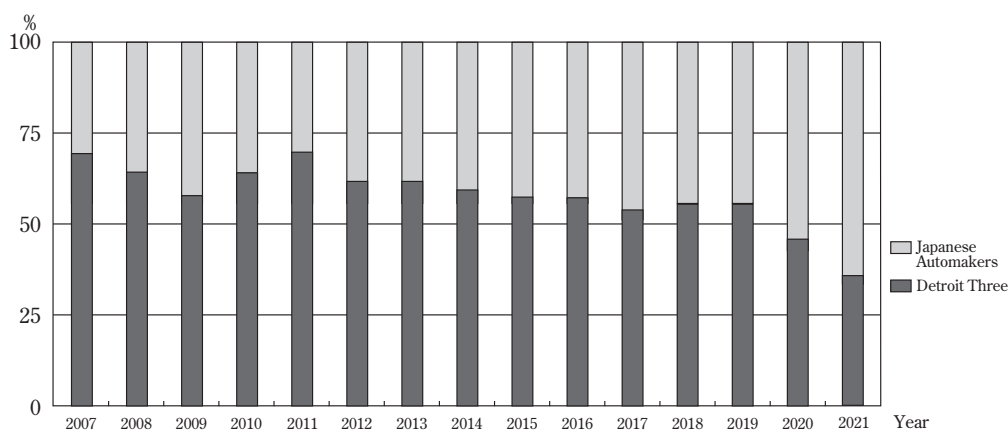
⁴⁰ E-mail correspondence with Mr. David Worts, Corporate Secretary, and Ms. Yumi Hirakawa, Executive Assistant, JAMA Canada, September 12, and September 13, 2019.

by Honda. The third largest producer was FCA with 236 thousand units (21.1%), followed by Ford with 104 thousand units (9.4%), and by GM with 52 thousand units (4.7%).

Vehicle production by the Detroit Three declined absolutely and relatively during the period from 2007 to 2021. Ford's production fell to 104 thousand units in 2021, less than one-third of the 350 thousand units produced in 2007. Production by FCA peaked at 599 thousand units in 2014 and sank to less than half that level with 236 thousand units in 2021. GM recorded the most striking decline in production among the five automakers in Canada with a dramatic drop from 786 thousand units in 2007 to 52 thousand units in 2021.

In contrast, the production levels of Japanese automakers meant that they were thriving in Canada compared with the Detroit Three: Toyota's was 303 thousand units, which ranked the company 5th in 2007, increased to 602 thousand units in 2016, before dropping back 427 thousand units in 2021, ranking it first. Honda's vehicle production increased from 391 thousand units in 2007 to 433 thousand units in 2018 before decreasing to 292 thousand units in 2021, ranking it second.

Figure 5: Canadian Light-Vehicle Production Shares of the Detroit Three and Japanese Automakers from 2007 to 2021(%)



Note: Chrysler became Fiat Chrysler Automobiles (FCA) in 2014.

Sources: DesRosiers Automotive Consultants, *DesRosiers Automotive Yearbook*, various issues.

These trends can be seen in Figure 5, which presents the shares of Canadian light-vehicle production by the Detroit Three and Japanese automakers from 2007 to 2021. In 2007, the share of light-vehicle production in Canada by the Detroit Three was 69.2%, while that of the Japanese automakers was 30.8%. Since CAMI manufactured GM and Suzuki brands equally, half of its shares were added to the Detroit Three and Japanese automakers, respectively. In 2009, the share of the Detroit Three declined to 57.5%, while that of the Japanese automakers increased to 42.5%. From 2010 to 2013, the Detroit Three share exceeded 60% but slipped to 55.5% in 2019. At the same time, the share of Honda and Toyota increased from a low of 30.4% in 2011 to 44.5% in 2019. During the pandemic, the share of the Detroit Three declined further to 35.3% in 2021, while the share of the Japanese automakers rose to 64.7%. These movements illustrate the significance of the Japanese automakers in the Canadian automobile industry.

As previously discussed in Section 4, the Detroit Three and the European and Japanese automakers in the United States had to review their planned plant locations, respond to new and amended rules in NAFTA, and respond to the changed requirements of USMCA, all the while bearing in mind the increased market demand for SUVs and pickup trucks. These automakers announced various plans, including the closure of plants producing unpopular motor vehicles, the production of more popular brands, the establishment of new plants, and the return to the manufacturing base in Michigan. They also set out their individual strategies for Canada.

In January 2017, Honda announced that it would invest more than \$408 million to upgrade its Alliston, Ontario, assembly plant, backed by grants from the federal and Ontario governments that would bring total spending on the plant to about \$492 million. The two governments would each spend approximately \$41.8 million. The automaker would upgrade the factory's paint shop to reduce greenhouse gas emissions by 44% and undertake research and development to support the production of future vehicle models.⁴¹ The federal government did not participate in Honda's \$857 million redevelopment of the plant in 2014 to build a next-generation Civic Compact. However, Ontario provided an \$87.5 million grant to the automaker. Honda assembles Honda Civic compact cars and the CR-V crossovers in Alliston, and they are the No. 1 and No. 2 sellers in Honda's lineup in Canada.⁴²

Honda's Alliston plant is the only manufacturing hub that produces the next generation of the Civic, outside Japan.⁴³ Toyota's plant in Canada was the only overseas plant producing Lexus until a US plant in Kentucky started producing Lexus vehicles in 2015.⁴⁴ The evidence reveals that both Honda and Toyota have faith in Canada's automobile industry.

Ford committed \$1.2 billion in Canadian investments in 2016-2017.⁴⁵ In March 2017, the federal government announced an investment of \$102.4 million in Ford. The Government of Ontario agreed to contribute an additional \$102.4 million in support of Ford's project.⁴⁶ Ford announced a \$700 million investment to transform Windsor Operations into a world-class powertrain facility and upgrade the Oakville Assembly Complex. Ford expanded its Canadian research and development presence with an additional \$500 million investment, extending its leadership of connectivity by adding more than 400 software and hardware engineers and revealing plans to establish the Ottawa Research and Engineering Centre. The additional 400 engineers, approximately 300 of whom would be based in Canada, more than doubled Ford's mobile connectivity engineering team.⁴⁷

In 2018, Toyota announced an overall investment valued at \$1.4 billion in its Ontario assembly plants to build the newest model of the RAV4 (crossover vehicles). Prime Minister Trudeau and Ontario

41 "Honda to invest more than \$400-million to upgrade Alliston, Ont. Plant," *The Globe and Mail*, January 9, 2017, ProQuest Documents, (accessed October 23, 2022).

42 *Ibid.*

43 Roboteer Henshu-bu (2017), "Honda ga Kanada Ontario-shu no Koujou ni 400 oku yen cho wo Toshi shi Oohaba Kaishu," <https://roboteer-tokyo.com/archives/7274> (accessed August 30, 2019).

44 Toyota (2013), "Toyota, Toyota Jidousha Kyushu deno Shingata-sha no Seisan to Bei Kentucky Koujou deno Lexus ES350 no Seisan wo Kettei," https://global.toyota/jp/detail/1835557?_ga=2.133254924.366183841.1567329010-637201833.1566894375 (accessed September 1, 2019).

45 "Ford Invests C\$500 Million for R&D in Canada; Doubles Connectivity Team and Opens New Research and Engineering Centre in Ottawa," *Canada News Wire*, March 30, 2017, ProQuest Documents (accessed October 23, 2022).

46 Justin Trudeau, Prime Minister of Canada (2017), "Prime Minister of Canada announces support to Ford of Canada to create and maintain almost 800 jobs for Canadian workers" March 30, 2017, <https://pm.gc.ca/en/news/news-releases/2017/03/30/prime-minister-canada-announces-support-ford-canada-create-and> (accessed August 31, 2019).

47 *Op. cit.*, "Ford Invests C\$500 Million."

Premier Wynne announced that the federal government and the province were each contributing \$110 million to the project, which was expected to create 450 new jobs.⁴⁸ The investment would support more than 8,000 jobs in Southwestern Ontario, and would create 450 new jobs as well as 1,000 new co-op placements. Toyota would also invest \$200 million in Canadian research and development over ten years. Toyota's project was funded under the Strategic Innovation Fund of the federal government, a \$1.26 billion program introduced in the 2017 budget to support the research, development, and commercialization of new products.⁴⁹

Prime Minister Trudeau and Ontario Premier Wynne welcomed Toyota's new investment, which would strengthen the province's long-term global competitiveness during this period of economic uncertainty. It would help establish Cambridge and Woodstock as Toyota's North American manufacturing hub for the RAV4, including the hybrid versions.⁵⁰ Toyota also announced that, starting in 2022, it would produce the Lexus "NX," which is a smaller-sized SUV, and includes both a gas-powered and a hybrid model. In 2003, Toyota chose Canada as the first overseas manufacturing base for Lexus and started the production of the Lexus RX. The company started the production of a hybrid model of the Lexus RX in 2014.⁵¹

In contrast to the additional investments made by Honda, Ford and Toyota to expand their automobile production in Canada, GM and FCA planned to reduce automobile production in Canada. On November 26, 2018, GM announced its plan to halt production at five factories in North America. It cut 14,000 jobs, as it abandoned many of its car models and restructured to reduce costs and focus more on autonomous and electric vehicles. The restructuring reflected the changing North American auto markets, as a dramatic shift away from cars toward SUVs and trucks continued. The three assembly factories included Detroit-Hamtramck in Michigan, Lordstown in Ohio, Oshawa in Ontario, and two plants that assembled powertrain components in Baltimore, Maryland, and Warren, Michigan. GM planned to lay off some 8,000 salaried employees and approximately 6,000 factory workers. In the factories, around 3,300 blue-collar workers were likely to lose their jobs in Canada and another 2,600 in the United States. GM stated that the moves would save US \$6 billion in cash by the end of 2020, including US \$4.5 billion in recurring annual cost reductions and a US \$1.5 billion reduction in capital spending.⁵²

According to GM's restructuring plan, the plant in Oshawa, Ontario, would stop making the Impala, Cadillac XTS and 2018 full-size pickups in the fourth quarter of 2019.⁵³ The Oshawa plant produced 98 thousand units in 2017⁵⁴ and employed 2,500 workers who belonged to the automobile union "Unifor." In addition to the assembly plant, Oshawa is home to the headquarters of GM Canada, and a technical

48 "Toyota investing \$1.4B in Cambridge, Woodstock plants," *Toronto Star Newspapers*, May 4, 2018, ProQuest Documents (accessed April 30, 2019).

49 Justin Trudeau, Prime Minister of Canada (2018), "Canada's investment in Toyota supports thousands of jobs in Ontario," May 4, 2018, <https://pm.gc.ca/en/news/news-releases/2018/05/04/canadas-investment-toyota-supports-thousands-jobs-ontario> (accessed August 30, 2019).

50 Office of Premier (2018), "Securing Thousands of Auto Manufacturing Jobs: Toyota Chooses Ontario as the Manufacturing Hub for its RAV4," <https://news.ontario.ca/en/release/49483/securing-thousands-of-auto-manufacturing-jobs> (accessed August 30, 2019).

51 Toyota (2019), "Kanada de Lexus 'NX' wo Aratani Seisan," April 30, 2019, https://global.toyota/jp/newsroom/lexus/27958437.html?_ga=2.132228234.548901045.1567146145-637201833.1566894375 (accessed August 30, 2019).

52 Tom Krisher (2018), "GM to slash up to 14,000 jobs in North America," *op. cit.*, and Jean Garcia (2018), "GM to slash 14,700 jobs in North America," *University Wire*, November 27, 2018, ProQuest Documents (accessed March 4, 2019).

53 *Ibid.*

54 DesRosiers Automotive Consultants (2018), *DesRosiers Automotive Yearbook 2018*, p. 117.

center.⁵⁵ GM and Unifor presented a work transition plan for GM Oshawa assembly employees. GM created new stamping jobs at the assembly plant, thereby retaining 300 jobs. The company offered the opportunity for qualified hourly employees to transfer from Oshawa to the St. Catharines' Propulsion Plant or the Woodstock Parts Distribution Centre, and offered enhanced retirement packages to 1,300 GM Oshawa employees eligible for retirement. The workforce transition plan included opening a "Jobs Action Centre" in Oshawa, where employees were supported in planning and retraining for new careers.⁵⁶ The closure of the assembly plant resulted in a rapid decline in GM's vehicle production, as shown in Figure 4.

In March 2019, FCA announced that it would cut 1,500 jobs by eliminating a third line at the facility that produced the Chrysler Pacifica and Dodge Grand Caravan. Thus, the Windsor assembly plant became the latest Canadian operation to be struck by both changing consumer tastes and the complex economic headwinds rattling the North American automobile industry. The Windsor plant is FCA's sole provider of minivans, a segment that has steadily lost its luster with drivers increasingly drawn to SUVs and crossover vehicles.⁵⁷ The decision to cut a third shift in Windsor was to result in a decrease in FCA's production units.

After years of decline, Canada's automobile industry is making a comeback. Mai pointed out that the transition toward electric vehicles provided new opportunities for Canada.⁵⁸ The Canadian government aims to achieve net-zero carbon emissions by 2050.

The U.S. climate legislation adds yet another gear. It provides tax credits to EV buyers, but only if the cars and batteries are largely made in North America, and the materials used in batteries, such as lithium or nickel, are mined locally. This gives Canada a clear advantage.⁵⁹

The subsidiaries of the Detroit Three announced substantial investments, including GM (US \$785 million), Ford (US \$1.5 billion), and FCA (US \$1.14 billion), to prepare their production lines for electric vehicles. Additionally, in early 2022, GM, Ford and FCA announced that they would be building their own facilities to manufacture batteries for electric vehicles.⁶⁰ In 2020, Ford invested in its Oakville Assembly Complex to make it capable of producing battery-electric vehicles. This project valued at \$1.8 billion, including federal and provincial contributions of \$295 million each, will help secure 5,400 jobs

⁵⁵ Robert Fife and Eric Atkins (2018), "General Motors to Shut Down Oshawa Plant in Global Restructuring," *The Globe and Mail*, November 25, 2018, <https://www.theglobeandmail.com/business/article-general-motors-to-shut-down-oshawa-plant-sources-say/> (accessed November 26, 2018).

⁵⁶ General Motors Canada (2019), Media Backgrounder, "GM Oshawa Workforce Transition Plan and 'Jobs Action Centre,'" <https://media.gm.ca/media/ca/en/gm/news.detail.html/content/Pages/news/ca/en/2019/May/0508-oshawa.html> (accessed June 21, 2019).

⁵⁷ JETRO (2019), "FCA, Ontario-Shu de yaku 1,500 Nin no Jin-in Sakugen Keikaku wo Happyo," *Bijinesu Tanshin (Biznews)*, April 5, 2019, and "Everybody's struggling': Fiat Chrysler's Windsor Plant to lose 1,500 Jobs, hit by Industry Slowdown and Changing Tastes," *National Post*, April 1, 2019, ProQuest Documents (accessed April 30, 2019).

⁵⁸ H.J. Mai (2022), "After Years of Decline, the Auto Industry in Canada is Making a Comeback," *NPR News*, <https://www.npr.org/2022/09/27/1125270243/after-years-of-decline-the-auto-industry-in-canada-is-making-a-comeback> (accessed September 27, 2022).

⁵⁹ *Ibid.*

⁶⁰ Stefan Popescu (2022), "Country Commercial Guides, Canada-Automotive," <https://www.trade.gov/country-commercial-guides/canada-automotive> (accessed September 17, 2022).

across Ford's production workforce in Canada.⁶¹ In 2022, FCA announced a project to support its plants in Windsor and Brampton, Ontario, implementing flexible vehicle platforms in both plants and increasing its production of electric vehicles. The federal government is investing up to \$529 million in this project, and the provincial government is supporting the project with an investment of up to \$513 million.⁶²

GM closed the Oshawa assembly plant in 2019 but reopened it in 2021. On November 10, 2021, GM announced that the first Chevrolet Silverado pickup rolled off the line at the reopened Oshawa assembly plant. The return of truck production to Oshawa provided a significant economic boost for Canada's automobile sector, creating 1,800 new jobs to support the two production shifts.⁶³ GM announced an investment of more than \$2 billion in Ontario to transform manufacturing facilities in Ingersoll and Oshawa by 2022. The CAMI assembly plant in Ingersoll will become Canada's full-scale electric vehicle manufacturing plant once it begins production of the BrightDrop, a fully electric delivery van, in the fourth quarter of 2022. The Oshawa assembly plant will add a third shift, bringing new jobs created at the plant since its reopening to more than 2,600.⁶⁴

In March 2022, Honda announced that it would invest \$1.38 billion over six years to upgrade its Alliston manufacturing plant in preparation for an electrified future. The federal and provincial governments announced that each government would provide a conditional contribution of \$131.6 million to the plan. The investment in the plant will allow the Alliston manufacturing facility to become a North American lead plant for the all-new 2023 CR-V Hybrid crossover. Honda's new hybrid products will reduce greenhouse gas emissions by 30% compared with traditional gasoline powered vehicles.⁶⁵ The plan will see Honda move production from gas-powered vehicles to hybrids as part of its shift to an all-electric fleet of models by 2040.⁶⁶

In March 2022, GM announced that, in partnership with the South Korean company POSCO Chemical, it would begin construction on a new \$500-million factory in Bécancour, Quebec. The plant will be operational by 2025 and will produce cathode active material, a major component of EV batteries that GM will assemble in the United States. Both the federal and Quebec provincial governments will provide funds for the new facility.⁶⁷ In March 2022, LG Energy Solution, one of the leading battery manufacturing companies in the world, and FCA announced that they would create a joint venture in Winsor, Ontario. The joint venture will see a total investment of over \$5 billion in a facility to manufacture batteries for

⁶¹ Justin Trudeau, Prime Minister of Canada (2020), "New Commitment to Battery-Electric Vehicle Manufacturing in Ontario," <https://pm.gc.ca/en/news/news-releases/2020/10/08/new-commitment-battery-electric-vehicle-manufacturing-ontario> (accessed September 20, 2022).

⁶² Justin Trudeau, Prime Minister of Canada (2022), "Investing in Canada's Auto Sector, its Workers, and our Clean Future," <https://pm.gc.ca/en/news/news-releases/2022/05/02/investing-canadas-auto-sector-its-workers-and-our-clean-future> (accessed September 17, 2022).

⁶³ General Motors Canada (2021), "General Motors Oshawa Assembly Plant Reopens Creating Thousands of Jobs and Boosting Economic Growth," https://media.gm.ca/media/ca/en/gm/home.detail.html/content/Pages/news/ca/en/2021/Nov/1110_oshawa-production.html (accessed September 26, 2022).

⁶⁴ General Motors Canada (2022), "GM Canada's \$2 Billion Transformational Investments Are Creating 2,600 New Jobs Now and Canada's First Electric Vehicle Production by the End of 2022," https://media.gm.ca/media/ca/en/gm/home.detail.html/content/Pages/news/ca/en/2022/mar/0404_gm-canadas-2-billion-transformational-investments.html (accessed September 26, 2022).

⁶⁵ Brian Lockhart (2022), "Honda will Invest \$1.3 billion to Prepare for Electrified Future," *The Canadian Press*, ProQuest Documents (accessed October 26, 2022).

⁶⁶ Brian Lilley (2022), "Honda's Investment a Show of Faith in Ontario's Auto Sector," *The Toronto Sun*, ProQuest Documents (accessed October 26, 2022).

⁶⁷ Adam Radwanski (2022), "GM to build EV Battery Supply Chain Plant," *The Globe and Mail*, March 8, 2022, ProQuest Documents (accessed October 27, 2022).

electric vehicles in Canada.⁶⁸ In July 2022, the Belgian company Umicore announced plans to build a \$1.5 billion battery supply chain near Kingston, Ontario. This project was supported by significant financial aid from the federal and provincial governments.⁶⁹

Based on plans announced by automakers, GM and FCA intended to reduce motor vehicle production in Canada in 2019, but they altered their plans, electing to manufacture electric vehicles instead. All three subsidiaries of the Detroit Three planned to shift toward manufacturing electric vehicles in Canada. As recently as 2022, GM and FCA started joint ventures for battery companies in Ontario and Quebec. Without a drastic reduction in automobile production, the presence of the Japanese automakers in the Canadian automobile industry has increased. Toyota has already produced hybrid vehicles, and Honda will begin manufacturing hybrid crossovers. Since the Canadian federal and provincial governments have been supporting the automobile industry with significant financial aid, clearly the role of governments is substantial in maintaining and enhancing the automobile industry in the future.

6 Conclusion

This paper clarifies the characteristics of the Canadian automobile industry from 2007 to 2021, a period characterized by the adverse influences of the Lehman Shock and the COVID-19 pandemic. The examination, based on motor vehicle production units as an indicator, revealed the following three points: First, from a global perspective, the center of motor vehicle production shifted from developed countries, such as the United States and Japan, to emerging economies, such as China. Second, within the NAFTA countries, the motor vehicle production units of the United States declined relatively. The motor vehicle production units in Mexico increased absolutely and relatively, while those in Canada decreased absolutely and relatively. Therefore, automobile production has shifted toward Mexico in North America. Finally, the motor vehicle production units of the Detroit Three declined in Canada, whereas those of Toyota and Honda increased. The presence of Japanese automakers has increased in the Canadian automobile industry.

The US government, along with the Canadian federal government and the Ontario provincial government, played a crucial role in providing the Detroit Three, GM and Chrysler (FCA, currently Stellantis) in particular, with huge amounts of financial aid to bail them out immediately after the Lehman Shock. In 2015, the Canadian federal and Ontario provincial governments, along with the Canadian Automotive Partnership Council, created an “Automotive Investment Committee,” and appointed Mr. Tanguay to a position of “Automotive Advisor.” Mr. Tanguay was the former chair and president of Toyota (Canada). Both the federal and provincial governments have received insights and recommendations from the Automotive Advisor.⁷⁰ The Canadian federal and Ontario governments, and, to a lesser extent,

⁶⁸ Innovation, Science and Economic Development Canada (2022), News Release, “Government of Canada Welcomes Largest Investment in Canada’s Auto Industry with the First Large-scale Domestic EV Battery Manufacturing Facility,” <https://www.canada.ca/en/innovation-science-economic-development/news/2022/03/government-of-canada-welcomes-largest-investment-in-canadas-auto-industry-with-the-first-large-scale-domestic-ev-battery-manufacturing-facility.html> (accessed September 27, 2022).

⁶⁹ Gabriel Friedman (2022), “Belgian Company Eyes Ontario for \$1.5B Battery Plant; Automotive; EV Materials,” *National Post*, July 14, 2022, ProQuest Documents (accessed October 27, 2022).

⁷⁰ Réal (Ray) Tanguay (2018), “Drive to Win: Automotive Advisor Report,” http://capcinfo.ca/images/PDF/CAPC_Automotive%20Report-en.pdf (accessed August 30, 2019), and Innovation, Science and Economic Development Canada (2018), “Canada Welcomes Report from Auto Advisor Ray Tanguay,” News Release, https://www.canada.ca/en/innovation-science-economic-development/news/2018/01/canada_welcomes_reportfromautoadvisorrraytanguay.html (accessed October 28, 2022).

the Quebec provincial government, have continuously provided financial support to automakers to enhance international competitiveness and to adjust to the emerging paradigm of electric vehicles in the Canadian automobile industry.

The Trump Administration in the United States advocated “America first,” “return of manufacturing industry to the United States,” and protectionist economic and trade policies. One of the outcomes is the newly created USMCA, which was largely based on a revision of the former NAFTA. From a global viewpoint, there has been a shift in the production and sales of motor vehicles from developed countries to emerging economies and from traditional vehicles with internal combustion engines to electric vehicles. In North America, consumer demand has shifted from passenger cars to SUVs and light trucks. These shifts and protectionist measures by governments at the country level have reinforced automakers’ strategies. Accordingly, they changed the locations of plants to areas that produced more profits, closed plants that were either unprofitable or produced unpopular brands, and opened or reopened plants to manufacture popular brands. Furthermore, automakers concentrated their valuable resources on the production of electric vehicles, autonomous vehicles, popular SUVs and engines, which show promise for the future. Right before USMCA came into force in North America, there were signs of a shift of motor vehicle production from Mexico to the United States. However, the effect of COVID-19 makes it unclear whether this shift has been reinforced or not.

It is unlikely that the Canadian automobile industry will follow a pessimistic path in the future like the Australian automobile industry. This is because of the special factor that deepens the integration of the Canadian automobile industry with the American automobile industry since the Canada-United States Auto Pact of 1965. After the Lehman Shock, GM took the radical step of closing the Oshawa plant, although it reopened the same plant two years later. Even the short-term closure of the plant caused a tremendous negative impact on the local economy through its impact on employment, supply chains and dealership, and corporate taxes. The Detroit Three are now back and engaged in the new production of electric vehicles in Canada.

The presence of Japanese automakers in the Canadian automobile industry has increased. They rank Canada as “very high” in strategic plans for electric vehicles, and make new and additional investments to establish facilities which will be the hub of production in the world. The closure of the JAMA Canada Office in 2021⁷¹ symbolizes the fact that its members have made meaningful and substantial contributions to the Canadian automobile industry. It seems that the tide is now turning in favor of the Canadian automobile industry, if it seizes the opportunity and imperative of electric vehicles.

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⁷¹ Since JAMA Canada successfully fulfilled its core mandate to improve trade and investment as well as to strengthen the economic partnership between Canada and Japan, it closed its office in Toronto in March, 2021. (Reference: NASDAQ OMX’s News Release (2020), “Statement on the Future of JAMA Canada and the Japanese-brand Auto Industry in Canada,” ProQuest Documents (accessed October 10, 2022)).

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