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Learning from the Past - Volume 1: The Automotive Industry and Economic Development in Ontario; a Historical Perspective (1904 to the Present)

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Learning from the Past – Volume 1: The Automotive Industry and Economic Development in Ontario; a Historical Perspective (1904 to the Present)

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This report is dedicated to the late Simon Reisman (1919 – 2008), Chief Negotiator for the Canada U.S. Auto Pact (1965) and the Canada U.S. Free Trade Agreement (1989) and to Professor Joe Martin, whom has inspired me in the appreciation of business history.

Introduction

The purpose of this research is to examine the automotive industry and economic development in Ontario from a historical perspective to draw lessons in guiding economic policy going forward. The automotive sector was selected because of its important role in Ontario's economy, accounting for over one third of its exports and in a province that is the most reliant on exports as a percentage of GDP compared to other provinces in Canada. The automotive sector was also selected as the focus of this report given the significant challenges today facing this sector in Ontario and globally in the wake of a financial crisis and uncertain economic times ahead.

For this report, key historical developments in Ontario's automotive sector are analyzed in order to understand why this sector is what it is today and to gain insight into what makes an economy both resilient and competitive in the long-run. The evolution of Ontario's automotive sector was greatly influenced by important developments in government policies. In some cases, government policies helped build up, over time, key competitive advantages that could be leveraged. In some cases policy in the past has been misguided and counter-productive. Learning from mistakes is as important as learning from our successes.

Lessons and insights from the past are also enhanced by examining the context and the macro-environment that played a role in shaping the development of Ontario's automotive sector, such as overall socio-economic development in Canada and key historical events such as the Great Depression. It is also useful to contrast Ontario to other automotive jurisdictions like Michigan and even other jurisdictions heavily reliant on single industries such as Alberta. The report is structured as follows:

1. Beginnings – the National Policy of High Tariffs (1904 to 1925)
2. The need to Revise Trade Policy; the 1926 Robb Budget
3. Lessons unlearned; the Great Depression (1930 to 1938)
4. Decline and Re-invigoration through the 1965 Auto Pact
5. The Rise of Ontario and the Fall of Michigan (1980 to 2007)
 - a. Quotas; Ontario strikes a different path from Michigan
 - b. The FTA and NAFTA
 - c. Death of the Auto Pact
 - d. The Aftermath
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7. References
8. Appendices; charts and figures

For parts 1 to 5, each part has the following two components:

- Historical discussion and context
- Risks, benefits and key lessons drawn

The report begins with the birth of the automotive industry in Canada.

Part I: Beginnings – the National Policy of High Tariffs (1904 to 1925):

The Automotive industry in Ontario began under a protective tariff that was a central theme of the National Policy adopted by Prime Minister John A. Macdonald in 1878. While the policy of high tariffs pre-dated the arrival of the automobile, a 35% tariff was applied to automobiles just as they were applied to horse drawn wagons manufactured outside Canada. The tariff wall forced American automotive firms to develop a manufacturing base in Canada to avoid the tariff.

The tariff policy provided an opportunity for business people of entrepreneurial spirit to approach Henry Ford and Will Durant of Buick (to become part of General Motors) to set up production in Canada; Ford Motor Co. being the first to set up in Canada in 1904. Later, Studebaker, Chrysler and Packard among others would also set up automotive production in Canada in order to avoid the tariff wall with the vast majority of capacity residing in Ontario. Of importance is that governments (at all levels) did not take steps to protect the buggy/wagon industry which would in time die and be replaced by the automotive industry.

Further, the fledgling Canadian automotive industry also benefited from the Imperial Preference introduced by Prime Minister Wilfrid Laurier in 1896. Imperial Preference gave Canadian firms preferential trade conditions in trading with other Empire nations. Imperial Preference offered special advantage to the Canadian auto industry because U.S. based automotive companies used their Canadian units to export to British Imperial nations around the world. By the 1920s, over 80% of Canadian auto exports were destined for Imperial markets.

As an example, the Ford Motor Company gave Ford Canada exclusive rights to manufacture and sell Ford products throughout the British Empire (excluding the United Kingdom and Ireland). Only two years after the Canadian subsidiary's founding, Ford-Canada shipped its first Canadian-built cars to Australia as part of the quarter proportion of its production designated for export. The preferential tariff arrangements conferred by Imperial Preference allowed Canadian automotive manufacturers to develop greater scale economies by taking advantage of superior trade arrangements with the British Empire as compared to the United States:

These exports provided Ford-Canada with greater economies of scale than would have been possible through producing solely for the domestic market and helps to explain the company's fantastic growth before 1930.¹

Risks, Benefits and Lessons in Managed Trade (Part I)

The policy of high tariffs and the negotiating of preferential treatment with select countries provided the impetus to develop a domestic manufacturing base and achieve greater economies of scale than would otherwise have been achievable serving only Canada's small domestic market. These policies were effective at the time but also carried with them some risk.

While it is true that the advantageous trade arrangements under Imperial Preference allowed Canadian manufacturers to achieve greater economies of scale, it also meant manufacturers built up capacity that exceeded the needs of the domestic market. Canadian subsidiaries of automotive firms exported a much higher percentage of their production than did their American parents (*see Appendix A*). In the 1920's, exports would average close to one third of total production, the great majority of which went to Empire countries.

¹ Dimitry Anastakis., 2004, "From Independence to Integration: The Corporate Evolution of the Ford Motor Company of Canada, 1904-2004," *Business History Review*, 78: page 221.

The risk at the time was what would happen should Imperial Preference be repealed by Great Britain. In such a hypothetical case, Canadian firms would lose their competitive advantage over American firms in exporting to Empire countries. Given that most export was to such countries, the Canadian producers risked a demand shock resulting in over-capacity since the domestic market could not make up for the reduced exports. Over-capacity in the automotive industry was, and is, a serious issue given the long-run nature of building manufacturing capacity with its high fixed costs.² Indeed, after WWII Imperial Preference was abolished as per the agreements entered into between the United States and Great Britain as a condition for Lend Lease³ to Great Britain. With Canada no longer having the advantage of Imperial Preference, combined with a relatively small domestic market and need for large economies of scale in automotive production, the automotive industry in Ontario entered into a period of decline post-WWII (to be re-invigorated by the 1965 Auto Pact – see Part IV). Given Canada's small domestic market, export has been an ongoing theme in Canada to achieve economies of scale by tapping into larger markets abroad. To maintain access to markets for our exports is of great importance.

Canada as an Exporting Nation

Canada's economic history is a tale of two nations; Great Britain and the United States. In the nineteenth century, Canada was heavily reliant on Great Britain and her empire for trade, defense and foreign investment. Over the course of the twentieth century, as the economies of Canada and the United States grew, the balance of trade and investment shifted away from Great Britain to the United States. This was not an unexpected development:

The closeness of the Canada-US economic relationship was built on proximity, similar business cultures, consumer preferences, linkages between related industries and an inter-dependence between US capital and technology and Canadian resources and markets... a market integration that was logical by economic terms⁴

² Once a plant is built with a set capacity for production, it represents significant sunk costs and on-going high fixed costs that require high capacity utilization to be profitable. Thus, loss of markets can have severe consequences.

³ Lend Lease was an agreement for the USA to provide financial support and material to Britain during WWII

⁴ Laura Ritchie Dawson (2005) Nationalism Versus Interdependence in the Evolution of Canada's Post-War Investment Policies, paper presented at the Centre for Trade Policy and Law Investment Conference, Ottawa, November 2004, p. 4



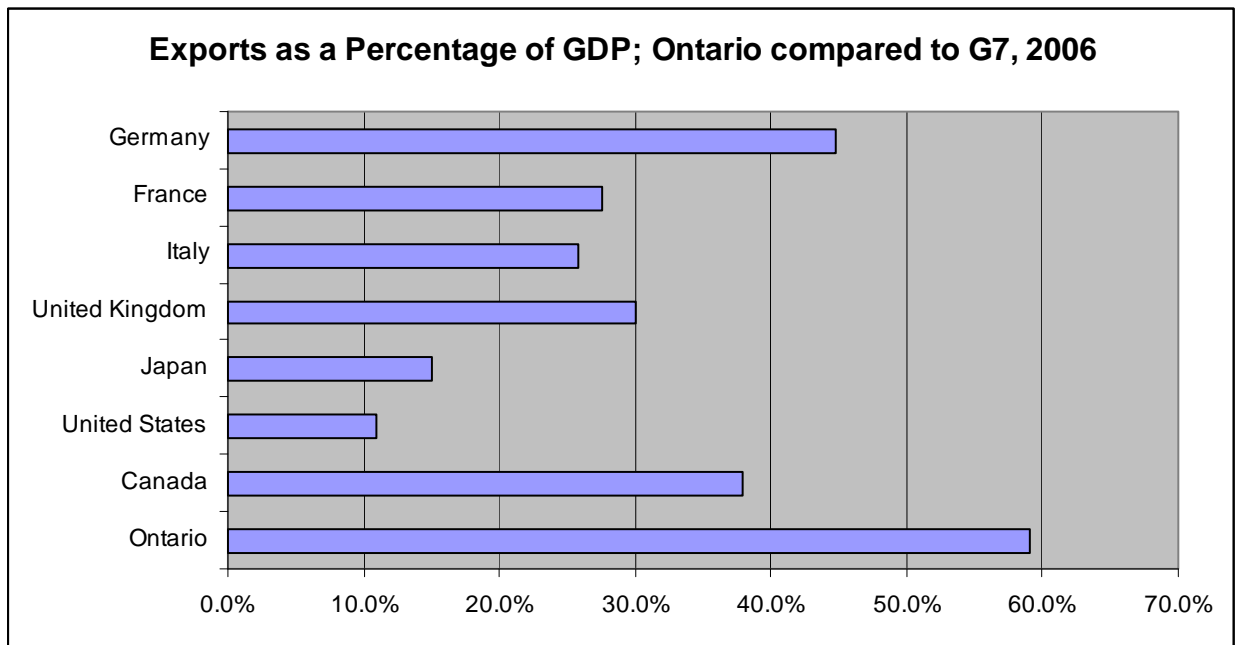
Source: Statistics Canada

Canada is a nation that is heavily dependent on exports and is thus dependent on the destiny of others:

“...the Great Depression had different causes and took somewhat different courses in the two countries... Canada’s was a far more open economy than the United States, highly dependent on international trade. [Canada] could not recover its vitality until the major export industries regained their health. Canada depended on world markets which its government was virtually powerless to influence.”⁵

The United States currently dominates our trade and has for much of the twentieth century. The United States accounts today for approximately 77% of our exports, so we are to a great extent dependent on the United States. With respect to Ontario as a jurisdiction, we are the most dependent province on exports as a share of her GDP compared to other provinces and the G7.

⁵ Michael Bliss, *Northern Enterprise: Five Centuries of Canadian Business*, McClelland and Stewart, Toronto, 1987, p. 412



Source: OECD Economic Outlook; Ontario Ministry of Finance, Budget 2007, October 2007

Ontario is also more dependent than Canada as a whole on exports to the United States (86% of Ontario exports are destined for the United States – see Appendix B). Being highly dependent on the United States ties our fate with theirs and it has been said that when the United States sneezes, Canada gets a cold. This holds true for Ontario as well and as the economic woes of the United States deepen, its effects are already affecting Ontario, particularly in the automotive sector.

Although it can be expected, by virtue of geographic proximity, that reliance on the United States will remain high into the foreseeable future, diversifying the destinations for our exports beyond the United States is encouraged – particularly to high growth emerging economies such as those in Asia.

Part II: Need to Revise Trade Policy; the 1926 Robb Budget

By 1922, following the deep post-WWI recession, the Canadian automotive industry had consolidated such that hundreds of companies had disappeared, either through bankruptcy or after having been bought out. The 1920's would see no independent Canadian automobile company surviving.⁶ Consolidation and maturation of the once entrepreneurial automotive industry gave Ford, General Motors and Chrysler oligopolistic dominance as the smaller independents disappeared.

Despite the disappearance of Canadian automotive firms, Canada emerged after the First World War as the second largest producer of vehicles in the world. However, per capita car ownership in Canada was below that of the United States even after taking into account lower GDP in Canada compared to the United States. It was believed that the tariff wall made Canada a captive market⁷; with the 35% tariff wall it was forcefully argued that it allowed for artificially high prices in Canada which suppressed demand.

The argument was strengthened by the fact that price differentials between similar models in the USA and in Canada were quite close to the tariff rate. These arguments were put forth by the populist movement in the West which was seeking relief from the higher prices of automobiles. Also irritating to the West was that, unlike Ontario, they did not possess any large scale automotive industry from which to benefit. By 1926, in the face of a weakened coalition government under Mackenzie King and populist Western resentment, a tariff adjustment was proposed as well as the limited abolition of the excise tax by the then Dominion Minister of Finance, James Robb.

The tariff on non-Canadian vehicles was adjusted from 35% to 20% for all cars valued at less than \$1,200. Vehicles costing over \$1,200 had their tariffs reduced from 35% to 27.5%. The Robb budget also abolished the excise tax of 5% on the retail price of cars valued up to \$1,200. In addition to the tariff reduction, the Robb budget introduced a Canadian content scheme as a novel form of protection. The measure gave provision for a 25% drawback on duties paid on foreign parts if “at least fifty percent of the value of the completed vehicle was produced in the British Empire; effectively that meant Canada.”⁸ These measures encouraged expansion of the Canadian automotive parts industry and reduced prices that spurred greater demand and consequently increased automotive production and capacity.

Risks and Benefits (Lessons in Managed Trade for Part II)

In 1928, the Dominion Bureau of Statistics reported an estimated reduction of 10% from 1926 automobile prices⁹ and all the Canadian auto companies had by then qualified for the exemption with respect to Canadian content. The Canadian content provisions boosted demand for Canadian parts and from 1926 to 1929, Canadian parts manufacturers nearly doubled their sales. As prices for automobiles dropped, sales of completed automobiles increased nearly

⁶ Dimitry Anastakis., 2004, “From Independence to Integration: The Corporate Evolution of the Ford Motor Company of Canada, 1904-2004,” *Business History Review*, 78

⁷ Canadian consumers were captive because if they attempted to purchase a car from the United States, they would have to pay an additional 35% due to the tariff. As such, vehicle prices were higher in Canada due to the tariff.

⁸ Reisman, S., *Inquiry into the Automotive Industry*, 1978, page 5.

⁹ Anastakis D., 2004, *From Independence to Integration: The Corporate Evolution of the Ford Motor Company of Canada, 1904-2004*, *Business History Review*, 78 (Summer), page 221

30%.^{10 11} Chart 3 in Appendix C provides a supply and demand diagram that illustrates the effect of the Robb budget as a stimulus to the economy. However, while the Robb budget was a step in the right direction, it was not optimal:

- Communication between industry and government was poor and led to uncertainty about production decisions at G.M. Canada; while all eventually turned out well, government needed to communicate effectively its policy rationale to industry in advance to get business on board. The lesson for today is following this guidance will improve relations and the likelihood of favourable long run production capacity decisions for Ontario.¹²
- The Robb budget measures would have been better if implemented in the early 1920's since the manufacturing base was already established and as an economic stimulus, the budget provisions would have accelerated recovery from the post-WWI recession.
- The tariff, while lower, still shielded the Canadian automotive producers and thereby reduced incentives for innovation and efficiency. Given Imperial Preference was still in effect, the tariff could arguably be lowered even further and production in Canada would still be maintained for export purposes while providing increased incentive for efficiency and innovation and spurring demand through even lower prices
- The parts industry expanded in Ontario which deepened the automotive sector in the province and spurred more economic activity, but also increased Ontario's dependence on a single industrial sector, particularly if you consider the multiplier effect: "Every job with one of the 'Big 3' has a multiplier of about 7.5 – for every job at Ford, GM and Chrysler, another seven and a half jobs are created in other companies and in other industries."¹³ This multiplier effect holds also for Ontario and so dependence on single industries ties the fate of the economy to the fate of that industry.

The National Policy of high tariffs had been successful in building a manufacturing base, but by the end of WWI and with recession, tariffs suppressed economic activity. The Robb budget measures, if they had been implemented after WWI, would have stimulated the economy at the time it was most needed.

Further, the tariff wall, once it has served its purpose of creating manufacturing capacity in Canada (Ontario) should be revisited for possible repeal or scaling back since the sunk costs in manufacturing facilities have been made already and the facilities cannot simply be moved back to the USA. Tariff walls shield industry from competitive forces, reducing innovation and pressures to increase efficiency over the long-run. Thus, protectionism acts to reduce firm competitiveness and is not a long-run strategy for competitive advantage. Further, as has been illustrated in this section, tariff walls can result in price distortions that are harmful to consumers (pay higher prices) and the economy in general (suppresses demand and economic activity). Lastly, the Robb budget also served to deepen Ontario's dependence on the automotive sector as a single industry which carries with it its own set of risks. These risks will be discussed and illustrated in later sections of this report.

¹⁰ Traves, T., *The State and Enterprise: Canadian Manufacturers and the Federal Government 1917-1931*, University of Toronto Press, Toronto, 1979, p.112. Estimates vary (see also Appendix A)

¹¹ O. J. McDiarmid, "Some Aspects of the Canadian Automobile Industry", *Canadian Journal of Economics and Political Science*, 6 (1940)

¹² Melanson S.J. (2006) *The Canadian Automobile Industry in War, Prosperity and Depression*, Teaching Case in Canadian Business History, University of Toronto, see pages 12-14

¹³ Economic Development Administration U.S. Department of Commerce, by Kim Hill, Director, Automotive Communities Program

Part III: Lessons Unlearned; the Great Depression (1930 to 1938)

When the depression hit, disposable income dropped precipitously and discretionary purchases plummeted – the concept of the car as a durable good hit home as car owners would hold onto their car and would drive them “into the ground”. The result was disaster for auto manufacturers in North America as consumer demand for vehicles in Canada and the United States collapsed.

In Canada, exports of automobiles plunged from 102,000 in 1929 to only 13,000 in 1932. Production levels in the face of collapsing consumer demand fell to levels not seen since 20 years prior, yet production capacity with its high fixed costs were at least five times the capacity of 20 years earlier. (See appendix A and exhibits 1 and 2). With high fixed costs and severe overcapacity, the automotive sector in Ontario and the United States were in great distress. What was needed was to stimulate demand to reduce overcapacity and generate revenue to cover fixed costs. However, despite the lessons of the Robb budget on how to do just that, the opposite measures were taken.

Reversal of Tariff Policy (1931 to 1935)

By 1931, the economic downturn was deepening into a major economic crisis. The government of R.B. Bennett, which had campaigned on a platform of increased protectionism, instituted a series of reactionary measures (the reactionary measures were in response to steps taken in the United States to increase tariffs and protectionism) that served to increase the tariff from 27.5% to 30% on imported vehicles valued over \$1,200 and a new general tariff of 40% on imported vehicles valued over \$2,100. Further, a 3% excise tax was imposed on the duty paid on imported parts.¹⁴

While at first glance these changes seemed modest, they had considerable impact on demand due to the combined effects of a severe drop in consumer income and consequently demand, along with a widening of the price difference between Canada and the United States on vehicle prices (due to the higher tariff wall and Canada as a captive market). Demand plummeted and populist resentment outside Ontario that had prompted the 1926 Robb budget re-emerged:

“The resentment over the price differential [between Canada and the U.S.] was reinforced in the regions beyond central Canada by the fear that moves by the government to protect secondary manufacturing generally were contributing to a world-wide movement toward protection, which had the effect of reducing or eliminating international markets for the primary products which they produced.”¹⁵

This statement implies that the move towards increased protectionism would not help but instead would exacerbate the situation; reducing demand at the very time stimulus for demand was needed to take up the enormous slack in automotive capacity utilization (and in other industries as well). To demonstrate, a supply and demand diagram illustrating the effects of the depression and the Bennett measures are provided in Appendix D. The Bennett measures made matters worse, undoing many of the positive effects of the Robb budget at the time economic stimulus was most needed.

¹⁴ McDiamid, O.J. (1940) Some Aspects of the Canadian Automobile Industry, *Canadian Journal of Economics and Political Science*, pp. 269-272.

¹⁵ Reisman, S., *Inquiry into the Automotive Industry*, 1978, p. 8.

In response to the negative impact of the Bennett protectionist measures and populist resentment, finance minister, E.N. Rhodes, under Bennett, directed in 1935 that the Tariff Board conduct an inquiry into the affairs of the Canadian automotive industry. A year later, the Tariff Board tabled their report.¹⁶ During the inquiry, testimony presented to the Board often expressed “grave doubts... as to the economic wisdom of maintaining and encouraging an automobile industry in Canada”¹⁷ (this due to resentment and backlash at the industry for the artificially higher prices). However, the Board’s findings also showed that while the tariff burden with respect to vehicle purchases was \$14 million in 1934, the benefits of an auto industry were found to be many times greater; estimated to be between \$40 and \$47 million in that year. As a result of these findings, the Tariff Board concluded in its report:

“...that it is good business for Canada reasonably to encourage maintenance and expansion of the Canadian automotive industry.”¹⁸

Still, “the Tariff Board found that tariffs on imported vehicles, while deemed necessary, should be revised downward.”¹⁹ The Board’s recommendations were eventually implemented and the tariff on imported vehicles under \$1,200 was reduced from 20% to 17.5% and to 25% from 30% for vehicles valued at more than \$1,200.²⁰ The tariff changes between the United States and Canada that revised downward tariffs to intermediate rates would become known as “most favoured trading nation status” and began a trend between the United States and Canada towards reductions in trade barriers and improved mechanisms for dispute resolution.

Risks, Benefits and Lessons in Managed Trade (Part III)

The changes to the tariff policy undid much of the damage caused by the Bennett measures but why did they have to happen in the first place? It is strange that the lessons of the Robb budget of 1926 appeared to be unlearned at the very time the automotive industry was suffering from severe over-capacity in the face of a demand shock due to severe declines in consumer income. What was needed, much like after WWI, were measures and policies to reduce prices and spur trade to mitigate the impact of the depression through greater capacity utilization.

If Bennett had taken a different approach to US protectionist measures, could Canada and the United States have come to an accommodation to reduce trade barriers and encourage increased trade to stimulate rather than suppress economic activity? Given the successful outcome for Canada and U.S. trade relations in implementing the Tariff Board’s recommendations, it seems plausible that an earlier accommodation would have been possible.

The Bennett government took the easy route by retaliating against US protectionist measures. What was needed was a bolder vision for bilateral relations with the United States. Bennett paid for taking the easy route, losing the election to Mackenzie King in 1935. The risk of failure in negotiations with the United States were outweighed by the risk of not negotiating at all and given the current economic uncertainties today, these lessons are most salient. In the next section, the Auto Pact is discussed, representing a truly visionary approach to managed trade

¹⁶ Note that Bennett would be out of power by the time the report was presented as he lost to King in the election of 1935 and it would be King’s Liberal government that implemented the reports recommendations

¹⁷ Op. cit., Reisman, p. 9.

¹⁸ Op. cit., Reisman, p. 9.

¹⁹ Melanson S.J. (2006) *The Canadian Automobile Industry in War, Prosperity and Depression*, Teaching Case in Canadian Business History, University of Toronto, page 17

²⁰ Op. cit., O. J. McDiarmid, p. 273.

and one of the finest examples of cooperation between government, industry and labour across national borders.

Part IV: Decline and then Re-invigoration through the 1965 Auto Pact

By the early 1960's, the Canadian automotive industry was in decline. Canada no longer enjoyed the benefits of Imperial Preference and her small domestic market could not support significant scale efficiencies. The need for major scale economies in the automotive industry was recognized from the outset when Sam McLaughlin was told by Will Durant, founder of General Motors: "...it was futile to make cars a hundred at a time... this is a volume business and if you didn't have volume, you were dead."²¹ The need for ever larger scale economies increased in time with evolving technology in mass production methods centred on the production of a single model per plant. Thus, the production of a vehicle model in Canada for only Canada's small market was inefficient when compared to the United States which had a much larger market.

The result was the 'rusting' of the Canadian automotive sector as plants were not kept up to date and efficiency went from bad to worse. This also led to a deepening trade deficit in automotive products.

Table 3; Canada's trade with the United States, automotive products, (Figures in Can\$ Millions)

| Year | Imports | Exports | Total | Balance |
|------|---------|---------|-------|---------|
| 1955 | 361 | 4 | 365 | -357 |
| 1956 | 439 | 4 | 443 | -435 |
| 1957 | 356 | 6 | 362 | -350 |
| 1958 | 324 | 9 | 333 | -315 |
| 1959 | 369 | 17 | 386 | -352 |
| 1960 | 407 | 4 | 411 | -403 |
| 1961 | 398 | 9 | 407 | -389 |
| 1962 | 519 | 16 | 535 | -503 |
| 1963 | 555 | 40 | 598 | -515 |
| 1964 | 723 | 105 | 828 | -618 |

Source: Dimitry Anastakis, *The Auto Pact*, University of Toronto Press, 2005, page 27, 48

The automotive crisis in Canada was part of a larger policy debate in Canada over protectionism and her relationship with the United States:

"Greater protectionism or freer trade, the two choices for the auto industry with which Canadian policy makers grappled, reflected the larger currents that were shaping discussions of Canada's economic future. The 1960's were a decade during which ideas of free trade and of protection co-existed uneasily and jockeyed for attention. Many Canadians had begun to think of working towards an economically integrated North America... At the same time a new nationalism was emerging in Canada, led by the mercurial Walter Gordon – [Prime Minister] Pearson's finance minister – that was calling on Ottawa to protect Canadian industry and resist the creeping continental integration with the colossus to the south."²²

²¹ Bliss, *Northern enterprise*, 1987, p. 396

²² Dimitry Anastakis, *The Auto Pact*, University of Toronto Press, 2005, pages 4 to 5

The Big 3 automakers preferred an integrated market where they could use a single plant to produce a vehicle model for both markets, thereby achieving greater efficiency in scale and more production flexibility. Canadian policy makers ultimately agreed and with the benefit of the expert negotiating skills of Simon Reisman, designed an ingenious trade agreement that showed extraordinary vision in how it set up free trade and an integrated market with the USA. At the same time it satisfied the concerns of nationalists through minimum guarantees for Canadian production.²³ The Auto-Pact ensured an export market to the United States by rationalizing production for both markets and with guaranteed exports, the trade deficit in automotive soon disappeared and by 1970 turned into surplus.²⁴

Table 4; Canada's trade with the United States, automotive products, (Figures in Can\$ Millions)

| Year | Imports | Exports | Total | Balance |
|------|---------|---------|-------|---------|
| 1964 | 723 | 105 | 828 | -618 |
| 1965 | 1,022 | 237 | 1,259 | -785 |
| 1966 | 1,511 | 854 | 2,364 | -657 |
| 1967 | 2,117 | 1,600 | 3,717 | -518 |
| 1968 | 2,910 | 2,444 | 5,354 | -466 |
| 1969 | 3,498 | 3,317 | 6,815 | -181 |
| 1970 | 3,065 | 3,269 | 6,334 | +204 |

Source: Dimitry Anastakis, *The Auto Pact*, University of Toronto Press, 2005, page 152

Risks, Benefits and Lessons in Managed Trade (Part IV)

Given the current economic climate, the lessons learned from the ill-advised Bennett measures during the great depression and the Auto Pact of 1965 are relevant and instructive. The Auto Pact is an excellent example of managed trade that was visionary as opposed to reactive.

Suppose that the reaction of Prime Minister Bennett was different and instead he negotiated and implemented an Auto Pact like the one of 1965. To illustrate the possible effects, see Appendix E. If it had been implemented during the depression, the Pact would have gone a long way to alleviating the most severe aspects of the depression such as unused production capacity in both Canada and the United States.

First, the negative effects of the reactionary protectionist policies would have been avoided. Further, the large reductions in tariffs would have lowered prices and spurred demand. Also, the rationalization of production such that a vehicle model for an integrated market would be manufactured from a single plant in Canada would achieve large gains in efficiency due to much greater scale in the Canadian plants. This would have reduced costs to produce (reducing likelihood of plant shut-down in the short-run) and lowered prices further to spur demand. Such an enabling policy would have done wonders for the automotive industry and with the multiplier effect, wonders for Ontario's economy in general.

²³ The Auto Pact was not a simple matter to negotiate and was a protracted affair lasting over two years with moments of breakdown and imminent blow up into a trade war between Canada and the United States.

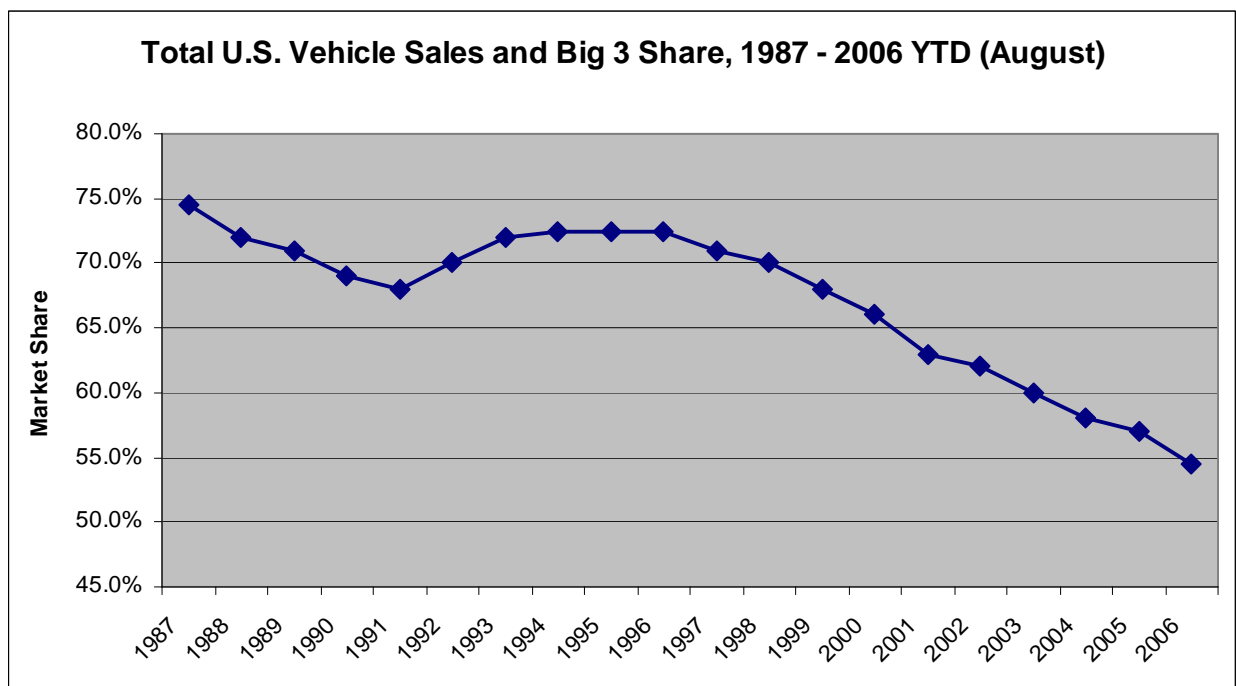
²⁴ Dimitry Anastakis, *The Auto Pact*, University of Toronto Press, 2005

Part V: Rise of Ontario and fall of Michigan (1980 – 2007)

Quotas; Ontario strikes a different path from Michigan (1980 to the FTA)

During the negotiation of the Automotive Pact between the United States and Canada, the negotiators would not have envisioned the rise of Japanese auto makers to the point they would challenge the hegemony of The Big 3. By 1980, however, Japanese imports into North American markets had come to be seen as a grave threat to Ford, G.M. and Chrysler and in response, they pushed for limitations on Japanese imports through legislating quotas that restricted Japanese imports into the United States. In Canada, a different path was taken as an alternative to import quotas.

Ontario has developed a world class automotive sector that has, importantly, diversified the competitive mix away from total reliance on The Big 3 North American based auto makers. Ontario has Japanese production resident within Ontario unlike Michigan that is dependent on production by The Big 3. This came about due to astute policy initiatives to trade off import quotas in the 1980's for a policy of no quotas as long as production capabilities are built in Ontario. This was successful and Ontario is now home to significant production by Toyota and Honda. As the fortunes of the big three North American auto makers wane, Toyota and Honda's fortunes have risen such that they can grow their facilities in Ontario to offset some of the decline in the production facilities of The Big 3. The figure below illustrates how the Big 3 have experienced declining market share for many years:



Source: Drake D.C., A Look at Michigan's Emerging New Economy, Public Policy Associates Inc. October 11, 2006, page 4

Further, the Japanese plant additions brought to Ontario's automotive cluster additional expertise, knowledge, technology and enhanced agglomeration effects; for example, the

development of Just in Time (JIT) and 'Lean' production methodologies.²⁵ These benefits illustrate the importance of placing broader economic policy above the influence of individual companies, regardless of how large and important to Ontario's economy.²⁶

In the case of Michigan, import quotas were used to shield The Big 3 from foreign imports with negative consequences:

"...Others [in the USA] argue that quotas should be extended to allow U.S. automakers to become 'competitive' with the Japanese. This is an old protectionist refrain, refuted by the facts. History shows that trade protection removes the incentives for companies to make the difficult decisions needed to become more cost competitive. Currently, the Japanese can produce a sub-compact car for around \$2,000 less than the Americans. This is not due merely to less expensive Japanese labour... [it is] estimated that it takes 200 hours of labour to produce a U.S. car compared to 100 hours of labour per Japanese car. There is little indication that Chrysler or Ford, the companies seeking an extension of the quotas, are narrowing this gap significantly."²⁷

Protectionism reduces competitiveness and innovation over the long run. Quotas have not served Michigan well compared with Ontario as Ontario would ultimately overtake Michigan in labour productivity and efficiency while Michigan would fall behind other automotive producing jurisdictions with negative implications for her economy (this decline is amply illustrated in later sections).

The FTA and NAFTA (1989 to 1997)

The Auto Pact had proved itself to be an enormous success for Ontario's automotive sector, even more so than had been anticipated by the Canadian negotiators in 1965. Why was the Auto Pact so successful? Who would imagine that two countries would both import and export the same product? Adam Smith argued that countries would develop competitive advantages in specific industries and then trade between them according to their individual competencies and advantages. However, Paul Krugman recently won the Nobel Prize in Economics for his research into trading patterns that explains how nation states might trade the same products with each other. His research gives insight into the enormous success of the Auto Pact:

"It becomes advantageous for a country to specialize in manufacturing a specific car, and to produce it for the world market, while another country specializes in a different brand of car," the Swedish Academy wrote in a commentary that explained Krugman's work. "This allows each country to take effective advantage of economies of scale, thereby implying that consumers worldwide will benefit from greater welfare due to lower prices and greater product diversity, as compared to a situation where each country produces solely for its own domestic market, without international trade."²⁸

By 1983, one year prior to the election of the Conservatives under Mulroney, automotive production in Canada stood at 1.55 million units, about 14% of North American production

²⁵ Rutherford T.D. and Gertler M.S. (2002) Labour in 'Lean' Times: Geography, Scale and the National Trajectories of Workplace Change, *Transactions of the Institute of British Geographers*, 27(2): 195-212

²⁶ The building of foreign automotive plants in Ontario would not be welcomed by the big three where in Michigan, quotas were employed to shield The Big 3 from imports.

²⁷ Hudgins E.L. The Costly Truth About Auto Import Quotas, Executive Memoranda #74, February 1, 1985

²⁸ Rosenwald M.S., Krugman Wins Nobel for Economics, *Washington Post*, October 14, 2008; Page D01, In the case of the Auto Pact, individual vehicle models are built in one plant for both markets to achieve scale economies

while the Canadian population stood at between 6 and 7% of the North American total; Canada exported nearly as many vehicles as she consumed for her domestic market.²⁹

After the 1984 Federal election, Canada entered into negotiations with the United States for a comprehensive free trade zone between the United States and Canada. The result was the implementation of the Canada-U.S. Free Trade Agreement (FTA) in 1989. The FTA was important because the United States insisted that Honda and Toyota in Ontario remain frozen out of the Auto Pact benefits, setting up a two-tiered manufacturing system within the FTA zone. This two-tiered system was continued under the North American Free Trade Agreement (NAFTA), implemented in 1994, causing friction between Japanese auto-makers and Canada.³⁰ With respect to the Auto Pact, NAFTA effectively 'hollowed' out the pact, allowing for companies to source anywhere in Canada, USA and Mexico, ending the protections for Canadian content enjoyed under the Auto Pact. Yet despite this, Canadian auto parts manufacturers continued to flourish:

Many Canadian companies such as Magna International, Wescast Industries, ABC Group, and the Woodbridge Group, for example, became giants and innovators in the industry, enabled by the Canada-U.S. auto pact. While their initial successes were largely derived from selling to the Big Three automakers in Canada under the terms of the pact, in time they thrived against global competition, as well.³¹

The Canadian parts manufacturers had built up the ability to compete globally and stand on their own feet and no longer required the protective provisions of the auto pact.³² Far from declining post-NAFTA, Canada's automotive industry continued to grow and there is little evidence free trade under NAFTA and its weakening effects on the auto pact had a harmful effect on Canada's automotive sector.

Death of the Auto Pact (1998 to 2001)

As noted previously, NAFTA continued some of the special provisions of the auto pact that were advantageous to The Big 3 and this was deemed by foreign auto makers to be unfair treatment to them compared to The Big 3. As such, the stage was set for a formal challenge before the World Trade Organization (WTO) of the Canada-U.S. Automotive Pact. In mid-1998, Japanese and European auto makers launched a complaint to the WTO claiming "they were being discriminated again under the auto pact, since the agreement created an unfair two-tiered automotive industry."³³ By October of 1999, it had been leaked to the press that the WTO was preparing to rule against Canada and strike down the auto pact. The rumours proved correct and Canada was given until February of 2001 to abolish the provisions of the auto pact, representing the "end of an era" in Canada's automotive history.

Reactions to the demise of the auto pact were varied with some predicting doom and others seeing the end of the auto pact as actually a blessing for Ontario's automotive sector. Even recently, some analysts viewed the Auto Pact demise as a major blow to the Ontario economy: "Since the end of the 1990s, this economic foundation [for Ontario] has been badly shaken. In

²⁹ www.ic.gc.ca/epic/site/auto.nsf/en/am0161e.html

³⁰ Forsyth D. (1999) End of an Era? International Challenges to the Auto Pact, Members' Briefing, Conference Board of Canada, Nov. 1999, under highlights

³¹ Dimitry Anastakis, *The Auto Pact*, University of Toronto Press, 2005, page 180

³² The rise of Magna International as an important global player was recognized in 1999 when *Forbes Magazine* named Magna International the world's top auto-parts company.

³³ Dimitry Anastakis, *The Auto Pact*, University of Toronto Press, 2005, page 176

1999, the Auto Pact was struck a death blow by the World Trade Organization (WTO).³⁴ Yet others disagreed. In a November 1999 briefing report by the Conference Board of Canada, it was stated that “Canada’s auto industry will not be permanently damaged by the success of the WTO challenge, and there may be some long-term benefits.”³⁵ The Conference Board of Canada Report cited as reasons; Ontario having a low-cost skilled productive work force and an efficient industry with guaranteed access to the U.S. market.

So who is right? Was the demise of the auto pact a grave threat or a blessing? These are important questions given the large role of the automotive sector in Canada in 1999; over 150,000 directly employed in Canada (assume 7 additional jobs indirectly employed for every job in the automotive industry through the multiplier effect), and automotive accounts for 12.5% of Canada’s manufacturing GDP (for Ontario, the automotive heartland, it is more like 25% of Ontario’s manufacturing GDP).³⁶ Of course hindsight is 20/20 but data existed at the time for government policy makers. As the WTO deliberated on the Auto Pact, data existed for 1996 and 1997 that government policy makers could review in order to assess what the effect of the demise of the Auto Pact might be for Ontario’s automotive sector.

If one looks at the data and charts (see Appendix F), it is clear that Canada (essentially Ontario) possessed competitive advantage over the United States (primarily Michigan) and the demise of the Auto Pact might then represent less of a threat to Ontario. The automotive industry in Canada (Ontario) had advantage in labour productivity and costs and lower effective tax rates. Further, Canada ranked among automotive producing countries 3rd in availability of skilled labour (the United States ranked 7th).³⁷ With respect to post-secondary school enrolment, Canada ranked among automotive producing countries 1st (the United States ranked 2nd).³⁸ Given the advantages, it could even be expected that production decisions might favour Ontario. Perhaps of concern to policy makers is that too much success could lead to over-reliance on a single industry sector.

The Aftermath of the Demise of the Auto Pact (2002 to 2007)

In 2002 and 2003, studies pointed to data (see Appendix G) that indicated that Ontario continued to maintain an advantage over US automotive manufacturing in productivity and assembly costs. Despite the weakening of the auto pact under NAFTA and then the total demise of the pact in 2001, the trend continued to be an increasing share of total automotive output in Ontario as a percentage of the North American total. In 1983 Canadian light vehicle production was 1.55 million units, about 14% of North American production. In 2002, Canadian light vehicle assembly grew to 2.6 million units, representing 16% of total NAFTA production.³⁹ Given that Canada accounts for less than 7% of the population of North America, this amount of production as a percent of total output is a testament to the success of our automotive sector.

³⁴ Drummond D. (2008) Time for a Vision of Ontario’s Economy; Much of the Foundation of Past Economic Success has Crumbled, TD Canada Trust Economic Report, September 29, 2008, page 3

³⁵ Forsyth D. (1999) End of an Era? International Challenges to the Auto Pact, Members’ Briefing, Conference Board of Canada, Nov. 1999, under highlights

³⁶ Forsyth D. (1999) End of an Era? International Challenges to the Auto Pact, Members’ Briefing, Conference Board of Canada, Nov. 1999, under highlights

³⁷ Based on the World Competitiveness Yearbook (1997), published by the International Institute for Management Development. Automotive producing countries included at the time: Brazil, Canada, France, Germany, Italy, Japan, Korea, Mexico, Sweden, United Kingdom and the United States.

³⁸ The World Economic Forum, Global Competitiveness Report, 1997

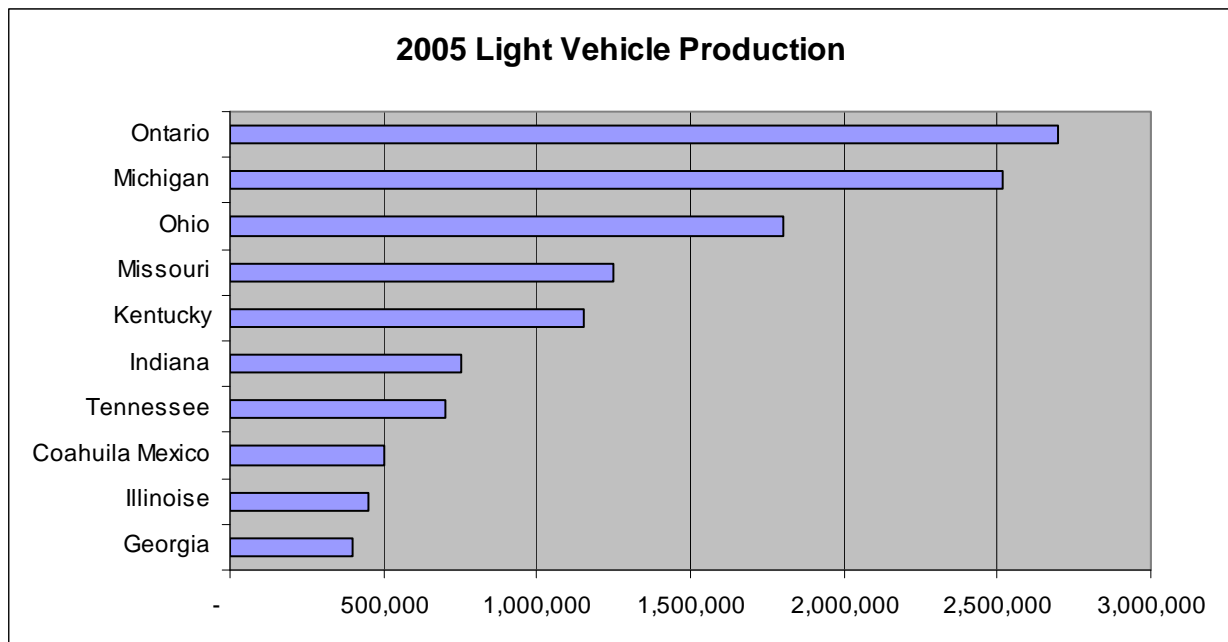
³⁹ Part of the advantage stems from the currency exchange rates. It is estimated that the jurisdictional advantages for Ontario would disappear if the Canadian dollar surpassed 90 cents on the U.S. dollar.

Further, instead of employment losses, total employment grew from just over 150,000 in 1999 to about 165,000 in 2002.⁴⁰ In fact, so successful has Ontario been, that manufacturing accounted for a greater percent of its GDP than Canada as a whole: Ontario percentage of GDP in manufacturing (2006) is 19%⁴¹ versus Canada’s percentage of GDP in manufacturing (2006) is 15%⁴²

This success carries with it a downside as well. Ontario is heavily dependent on the automotive sector for its economic health as it dominates other manufacturing industries in the province, representing 24% of the GDP contribution of manufacturing to Ontario’s economy as well as 37% of exports.⁴³ While the automotive sector is important and worth supporting, efforts to develop a more diversified economic base are also encouraged. In the current economic situation, it is advised to support new technology industries that can develop energy efficiency and green technologies that have broad application beyond just the automotive sector. With respect to automotive vehicle production, Ontario has surpassed jurisdictions in the United States, including even Michigan:

Ontario to Overtake Michigan as “Auto Kingpin”

By 2005, Ontario became North America’s ‘auto kingpin’⁴⁴, a remarkable achievement. In 2004, Ontario produced 2.66 million vehicles compared to 2.58 million vehicles in Michigan (as reported in the January 2005 issue of Ward’s Auto World). Canadian output also represented 16.7% of total NAFTA vehicle production in 2004. Thus, as of the end of 2004, Ontario surpassed Michigan in total vehicle production and as seen by the chart below, maintained the lead in 2005; a feat that would hardly have been dreamed of at the time of the negotiations for the 1965 Auto Pact.



⁴⁰ www.ic.gc.ca/epic/site/auto.nsf/en/am0161e.html

⁴¹ Ontario Ministry of Finance, Ontario Economic Accounts, October, 2007 (see also Appendix B)

⁴² Statistics Canada

⁴³ Ontario Ministry of Finance, Ontario Economic Accounts, October, 2007

⁴⁴ By ‘Kingpin’, it is meant that Ontario is North America’s most important automotive production jurisdiction

Source : www.2ontario.com/industry/automotive.asp

Explanations have been put forward for Canada's success in the automotive industry. One factor cited is Canada's universal health care system:

Canada is attractive, in part, because of Medicare, which negates perhaps the largest competitive burden faced by U.S. manufacturers. GM spends roughly \$1,400 a vehicle produced in the United States on health care, more than it spends on steel.⁴⁵

However, Canada's healthcare system is but one factor, a summary of the key factors follows:

Sources of Competitive Advantage

- National Healthcare – Ontario administers universal health care and this represents a significant cost to automotive makers in the United States.
- Excellent location for destination markets and transportation infrastructure.
- Highly skilled and educated workforce in a stable political environment that has a history of openness to foreign direct investment (FDI).
- Specific jurisdictional trajectory of the labour movement in Canada has provided advantage with respect to just in time (JIT) and lean manufacturing processes which are important in automotive production efficiency (see below for elaboration).

JIT/lean manufacturing and the Canadian Auto Workers (CAW) Union

Although the United States and Canada have developed closer and more integrated economies, their labour movements have taken distinctly different paths. In the early 1980's, the Big 3 came under stress as their combined market share eroded in the face of Japanese imports and as a result, pushed for labour concessions including increased outsourcing and greater flexibility in negotiating national agreements with the United Auto Workers (UAW), with the aim of weakening the power of the unions.⁴⁶ The UAW submitted to the Big 3 but not the Canadian auto workers which split off from the UAW in 1985 to form the Canadian Auto Workers (CAW) union. Further, the CAW maintained much more grassroots activism compared to the UAW, such as opposition caucuses to keep pressure on the union leadership to resist concessions to the auto makers.

Since the split, Canada, in contrast to the United States, has nearly double the unionization rate, higher rates of union certification as well as generally higher labour standards along with firms in Canada being less opposed to unions and unionization than their counterparts in the USA.⁴⁷ Arguably, increased unionization and more powerful unions might set the stage for high cost labour that would weaken jurisdictional competitive advantage compared to other jurisdictions. However, the nature of the CAW has actually conferred advantages with respect to evolving manufacturing practices; specifically Just in Time (JIT) and 'Lean' manufacturing processes.

⁴⁵ From 'Ontario to Overtake Michigan as Auto Kingpin', Globe and Mail, A8, November 29, 2004. 'Auto Kingpin' refers to Ontario becoming the largest light vehicle production jurisdiction in North America.

⁴⁶ The United Auto Workers (UAW) and the Canadian Auto Workers (CAW) were prior to 1985 combined.

⁴⁷ Rutherford T.D. and Gertler M.S. (2002) Labour in 'Lean' Times: Geography, Scale and the National Trajectories of Workplace Change, Transactions of the Institute of British Geographers, 27(2): 195-212

The CAW, unlike the UAW, maintains more control as it directly provides training and strong national (provincial) positions on team working and cooperation in consultation with management. As a result, the CAW has developed competencies to “evaluate the best strategies to deal with lean production.”⁴⁸ JIT and ‘Lean’ production processes are complex and difficult to implement and manage. The CAW has been active applying the best approaches to their implementation and management. Further, the CAW has cooperated with management in implementing production improvements such that Canadian auto plants rank consistently among the highest in North America. Indeed, the case can be made that “these high levels of productivity and quality [at Canadian plants] have been fostered by a strong union influence in the workplace.”⁴⁹

It could be argued that the CAW has fostered an entrepreneurial spirit in the labour force, that combined with high levels of education and skills training have led to productivity and quality gains that otherwise may not have occurred. As a result, the CAW pushes hard to share with the Big 3 the fruits of these efforts that benefit the manufacturers. In the opinion of the author of this report, it is reasonable and fair for the union to expect to share in the gains that it plays a significant role in creating. Further, JIT and ‘Lean’ manufacturing processes are particularly vulnerable to work stoppages, making harmonious management/labour relations all the more important. It is then not surprising that in Canada, attitudes towards unionized labour are more sympathetic and cooperative; both sides have more to gain by cooperating than with adversity. Thus, a combination of astute government policies and big business cooperating with an entrepreneurial labour force has provided Ontario additional jurisdictional advantage. However, success can bring its own set of risks.

Risks, Benefits and Lessons in Managed Trade (Part V)

Industry diversification is important to reduce over-reliance on single industries. While Ontario possesses a number of key industries, a broad economic base needs to be maintained while supporting our provincial champions. Michigan and Alberta are good examples of jurisdictions that are overly reliant on a single industry. In the case of Michigan, it is noted:

“...the State’s dependence on automobile production has caused grave and persistent economic problems since the 1950’s. Michigan’s unemployment rates in times of recession have far exceeded the national average, since auto sales are among the hardest hit in such periods... Although the state was relatively prosperous during the record automotive production years of the 1960s and 1970s, the high cost of gasoline and the encroachment of imports on domestic car sales had disastrous effects by 1980, when it became apparent that the state’s future economic health required greater diversification of industry.”⁵⁰

Consider the chart below; Michigan is still heavily reliant on the automotive sector for its exports as it represents nearly half of total exports and dominates all other sectors.

⁴⁸ Ibid, page 201

⁴⁹ Ibid, page 201

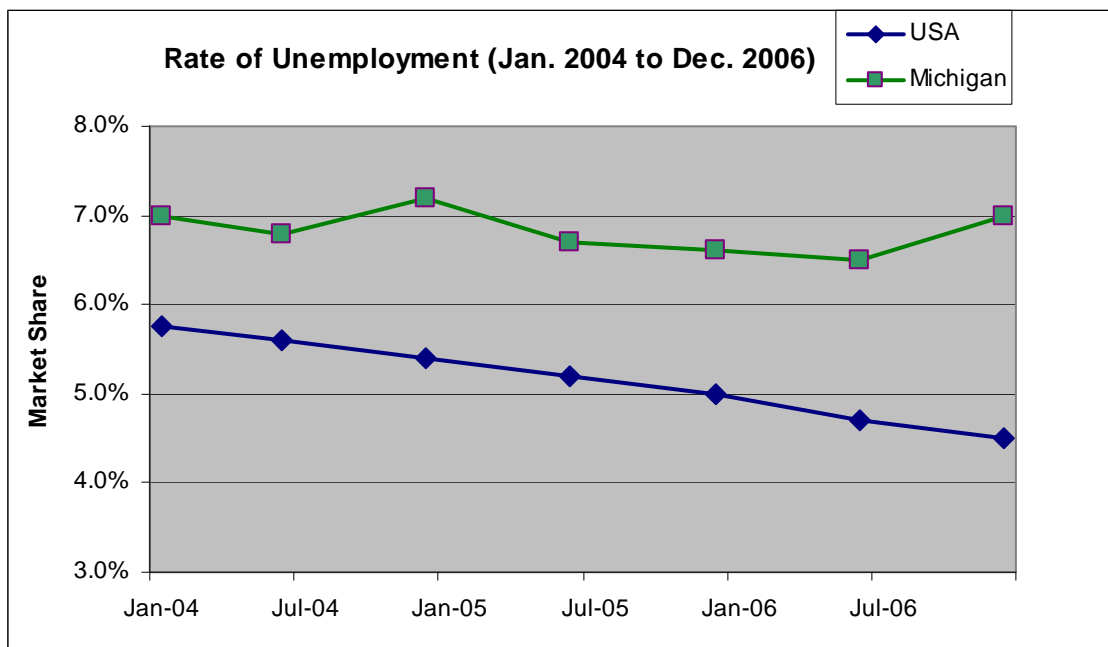
⁵⁰ City-Data-Michigan (www.city-data.com/states/Michigan.html)

Michigan Top 10 Exports by Industry, 2007, (Billions of Dollars)

| | |
|---------------------------------|------|
| Vehicles, Parts | 19.9 |
| Industrial Machinery, Computers | 6.4 |
| Coal, Petroleum, Natural Gas | 2.1 |
| Electronics | 2.0 |
| Plastics, Plastic Products | 1.8 |
| Instruments, Optics | 1.2 |
| Office Furniture | 1.0 |
| Iron, Steel | 1.0 |
| Iron, Steel Products | 0.7 |
| Chemicals | 0.7 |

Source: WISER; U.S. Department of Commerce, Bureau of the Census

The over-reliance on a single sector has had negative repercussions for Michigan as it is reliant on the Big 3 which are seeing declining market share; the Chart below shows how unemployment statistics compare for Michigan which is heavily reliant on the automotive sector versus the USA in general.



Source: Federal Reserve Bank of Chicago, February 5, 2007 Newsletter, Michigan Labour Market; Still Awaiting Recovery

While Ontario is not as dependent on Automotive as Michigan, the importance of the auto sector remains high. As the Table below indicates, the automotive sector is the largest component of Ontario's exports (37%) and combined with Ontario having the highest economic dependence on export, Ontario's economy is vulnerable to the ups and downs of the automotive sector. Policy objectives should be towards a more diverse economic base and to illustrate a recent example of developments that are in the wrong direction; over-reliance, see Appendix H to observe the current direction of Alberta with respect to capital projects inventory as of end of 2006. The capital projects in play tell us that the oil sands alone account for two thirds of all capital projects in Alberta. This is tantamount to putting "all your eggs in one basket".

Ontario's Top 10 Exports 2007

| | | | |
|---------------------------------|---------------|--|--------------|
| <i>Autos</i> | <i>22.33%</i> | <i>Medications – packaged for retail use</i> | <i>2.50%</i> |
| <i>Motor vehicle parts</i> | <i>7.04%</i> | <i>Engines</i> | <i>1.79%</i> |
| <i>Goods transport vehicles</i> | <i>5.19%</i> | <i>Telephone equipment (Includes modems)</i> | <i>1.30%</i> |
| <i>Gold – unwrought</i> | <i>3.28%</i> | <i>Nickel – unwrought</i> | <i>1.29%</i> |
| <i>Nickel mattes</i> | <i>2.64%</i> | <i>Furniture</i> | <i>1.14%</i> |

Source: Statistics Canada, International Trade Division, August 2008 (8/2008)

In addition to the dominant role of the automotive sector in export, Ontario is very dependent on exports in general to its GDP and U.S. markets represent close to 90% of Ontario's exports. If one draws from finance portfolio theory⁵¹, it is clear that putting your eggs into one basket (invest in a single stock) is risky and so it is true to an extent of Ontario's industrial and export mix (it is not well diversified).

Although supporting automotive as a jurisdictional champion is important, industrial diversification is no less important as a policy objective. For the automotive sector, intra-industry competitive mix diversification is also encouraged to bring in more Japanese and Korean automotive manufacturers to set up production in Ontario to buffer the declining trend of The Big 3.

Note that The Big 3 are losing market share to foreign auto makers and this trend was well underway before the formal demise of the automotive pact in 2001 yet Ontario has maintained production. This is partly due to Michigan suffering disproportionately compared to Ontario (thanks to Ontario's jurisdictional advantages). However, while Ontario has diversified its production to include Honda and Toyota, the big 3 still account for the great majority of automotive production (approximately 75%, for a full breakdown, see Appendix I). This has put pressure on the big three and over-capacity issues are leading to production shut-down and Ontario is not immune. Further, Ontario produces a lot of trucks for which demand has declined recently more than for cars (see appendix G where it states "The volume of light truck production has grown to almost equal that of passenger cars"). These factors represent significant challenges to Ontario's automotive sector going forward and implications are discussed in the next section that synthesize the overall findings of this research.

⁵¹ Finance portfolio theory suggests that an investor invest in many stocks rather than a single stock. This reduces overall risk since the investor is not dependent on the fortunes of a single company's stock and this is analogous to being dependent on a single industry sector.

Synthesis of Findings and Conclusion

While the automotive industry is the focal industry to draw historical lessons, it is useful to bear in mind that many of these lessons are generalizable to other industries and sectors. The story of the establishment and evolution of the automotive industry in Ontario is instructive for evaluating policy options in today's uncertain economic climate. The key lessons are encapsulated below:

1) Protectionist Policies:

- Protectionism suppresses innovation and competitiveness.
- Protectionism reduces economic activity through artificially higher prices
- Higher prices due to tariff walls and other protectionist measures dampens demand that in turn reduces capacity utilization and scale efficiencies

Protectionism is not a long run policy and should only be utilized to achieve set policy goals and once goals are met, protectionist measures should be eliminated or phased out.

2) Foreign Direct Investment (FDI)

- The automotive sector in Canada is entirely foreign owned yet Ontario has economically benefited immensely from the automotive sector.
- Foreign firms have consistently made production decisions based on competitive market forces rather than in the service of their home country interests.
- The automotive industry in Ontario is more competitive than Michigan and Ontario has surpassed Michigan in production despite the head offices of the Big 3 residing in Michigan.

The automotive sector in Canada, being wholly foreign based, provides a compelling case for the benefits of FDI to our economic health. FDI is therefore encouraged.

3) In portfolio theory, diversifying risk by investing in multiple stocks rather than in a single stock is recommended. So too does this lesson hold for Ontario's economic base and export markets. Diversification objectives are on three levels:

- Export diversification
- Industry sector diversification while supporting jurisdictional champions
- Intra-industry competitive mix diversification

While the United States is likely to always dominate our trade as a destination for our exports, other export markets such as emerging economies should be cultivated to diversify our export markets. Ontario needs to lessen its dependence on the automotive sector but at the same time, facilitate its evolution to meet new trends such as green technology and fuel efficiency and reversing our increased reliance on truck manufacturing. The competitive mix in Ontario's automotive sector can benefit from greater diversification by bringing in more Japanese manufacturers as well as Korean. This is particularly important given the declining fortunes of The Big 3 that are being displaced by the far more innovative Japanese auto makers.

In meeting these objectives, government policy initiatives need to recognize key competitive advantages within Ontario versus other jurisdictions. Key competitive advantages include:

- National Healthcare – Ontario administers universal health care and this represents a significant cost to automotive makers in the United States.
- Highly skilled and educated workforce in a stable political environment that has a history of openness to FDI
- Excellent location for destination markets and transportation infrastructure.
- Specific jurisdictional trajectory of the labour movement in Canada has provided an advantage with respect to just in time and lean manufacturing processes which are important in automotive production efficiency

While Ontario possesses significant competitive advantages over other jurisdictions, policy makers need to be on guard against undermining the sources of those advantages.

Threats to Competitive Advantage

- Labour unions negotiating away competitive advantage through higher labour costs. This threat is outlined on page 4 of a report titled “Time for a Vision of Ontario’s Economy” by Don Drummond, September 29, 2008. However, the reverse is also a threat – cut out labour in the share of profits in production when labour has significantly contributed to the success that generates the profits. Balance and harmony in industry and labour relations is to be encouraged as strikes are economically very harmful.
- Government sending signals that policies that confer competitive advantage could change in ways that undermine that advantage – for example, transition to a private health care system. Firms that model long run production decisions will take into account jurisdictional advantages and cost savings but will also factor in probabilities that the advantages may disappear. Government rhetoric as a signal of future policy needs to be carefully managed lest firms attach lower expected value to production models for Ontario due to heightened uncertainty.

As an example of the effects of uncertainty in the political climate, Imperial Oil’s 1977 Cold Lake project was a casualty of bickering between Ottawa and Alberta after the introduction of the National Energy Program (NEP) in the fall of 1980 under Prime Minister Trudeau:

In 1977, [Imperial Oil] proposed, subject to approvals, construction of a plant at Cold Lake [Alberta] for the extraction of 22,000 m³ of synthetic crude oil daily from bitumen deposits. Capital costs of the project estimated at \$12 billion and equity participation in about 50% of the project would be offered to interested companies. *The project was suspended July 8, 1981, pending resolution of energy issues by the federal and provincial governments.*⁵²

Twelve billion in 1980 was an enormous sum and further, many oil companies packed up and left the province of Alberta, increasing unemployment. The reaction by Alberta’s Premier, Peter Lougheed to the NEP was reactionary and counter-productive; for example, reducing oil production and holding up approvals for oil sands development

⁵² Current Information Card, Imperial Oil Ltd, The Financial Post Corporation Service, 1981, page 4, emphasis added

projects. Ontario can ill afford to allow such a conflict or even the potential for such a conflict to be on the radar in management's minds.

What also becomes clear from history is the need for cooperation between different levels of government, industry and labour, to agree upon policy objectives and in the approach to their achievement. Based on experience cited in this report, policy makers can trust industry and labour to rise up to the significant challenges ahead if government facilitates meeting the tough times through enabling government policies.

- Government propping up dying industries or impeding the evolution of industries that must adapt to changing conditions will only prolong the pain.

An example from the past would be to subsidize at the turn of the last century the dying carriage industry such that the early entrepreneurs (McGregor and McLaughlin) may not have shifted from being carriage makers to makers of automobiles. More recently, the National Post ran an article on the dying truck parts industry in Chatam-Kent-Essex County. According to the article, local union leaders intend to support the local Liberal candidate for Parliament because they believe the Conservative government has not done enough to and as they put it “we have to get behind a policy to protect jobs that will at least stop the bleeding”.⁵³ Fortunately the union leaders appear also to recognize that policy should focus on transition to growth industries and in the case of these municipalities, attempt to promote greater diversification of industry as we are over-reliant on truck parts.

- Undercutting advantages in skilled labour and education through program cuts in skills training and cuts in education (consider the lessons from JIT/Lean processes).

Given the threats to Ontario's position, it is recommended that policy makers be cognizant of the risks to cutbacks in education, health care and skill training. By funding education and skills training, Ontario will be positioned well for the eventual recovery.

New Challenges in the Automotive Sector; Challenge as Opportunity

According to Feldman and Martin (2005), it is not just maintaining jurisdictional competitive advantage that is important, but also to proactively construct jurisdictional advantage for the future to maintain long run competitiveness. To do this, Ontario needs to have a vision that is forward thinking, anticipatory and innovative.⁵⁴

Can we again develop and implement a new visionary policy; an Auto Pact of the twenty first century? Certainly such a vision is something worth striving for.

⁵³ National Post, A5, Don Martin, “Tories Rule in ‘Job Graveyard’”, September 29, 2008

⁵⁴ Is it possible to use comparative advantage to retain production in Ontario as world demand falls due to deep recession – essentially, production shuts down in disadvantaged jurisdictions such as Michigan while Ontario maintains significant production. Some thought is also needed on how to position Ontario as a centre for innovation in green technology, fuel efficiency and high tech production that translates to lower costs per vehicle.

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Appendix A

Exhibit 1 The Canadian Automobile Industry 1917-1931

| <i>Year</i> | <i>Production</i> | <i>Imports</i> | <i>Exports</i> | <i>Re-exports</i> | <i>Apparent Consumption</i> | <i>Registrations</i> |
|-------------|-------------------|----------------|----------------|-------------------|-----------------------------|----------------------|
| 1917 | 93,810 | 16,656 | 9492 | 567 | 100,407 | 197,799 |
| 1918 | 82,408 | 10,812 | 10,361 | 322 | 82,537 | 275,746 |
| 1919 | 87,835 | 11,750 | 22,949 | 305 | 76,331 | 341,316 |
| 1920 | 94,144 | 9145 | 23,012 | 542 | 79,735 | 407,064 |
| 1921 | 66,246 | 7270 | 10,726 | 254 | 62,536 | 465,378 |
| 1922 | 101,007 | 11,591 | 37,958 | 268 | 74,372 | 513,821 |
| 1923 | 147,202 | 11,822 | 69,920 | 438 | 88,666 | 585,050 |
| 1924 | 132,580 | 9301 | 56,655 | 326 | 84,900 | 652,121 |
| 1925 | 161,970 | 14,632 | 74,151 | 341 | 102,110 | 728,005 |
| 1926 | 204,727 | 28,630 | 74,324 | 370 | 158,577 | 836,794 |
| 1927 | 179,054 | 36,630 | 57,414 | 438 | 157,832 | 945,672 |
| 1928 | 242,054 | 47,408 | 79,388 | 467 | 209,607 | 1,010,664 |
| 1929 | 262,625 | 44,724 | 101,711 | 671 | 204,967 | 1,888,929 |
| 1930 | 153,372 | 23,233 | 44,553 | 818 | 131,234 | 1,232,486 |
| 1931 | 82,559 | 8738 | 13,813 | 726 | 76,759 | 1,200,907 |

Source: Tom Traves, *The State and Enterprise: Canadian Manufacturers and the Federal Government 1917-1931*, Toronto, 1979, p.102, citing the Dominion Bureau of Statistics, *Automobile Statistics for Canada, 1932*.

Data on production, imports, exports and consumption include passenger vehicles and trucks. Data on registrations include motor cycles, road tractors and government vehicles, as well as automobiles and trucks.

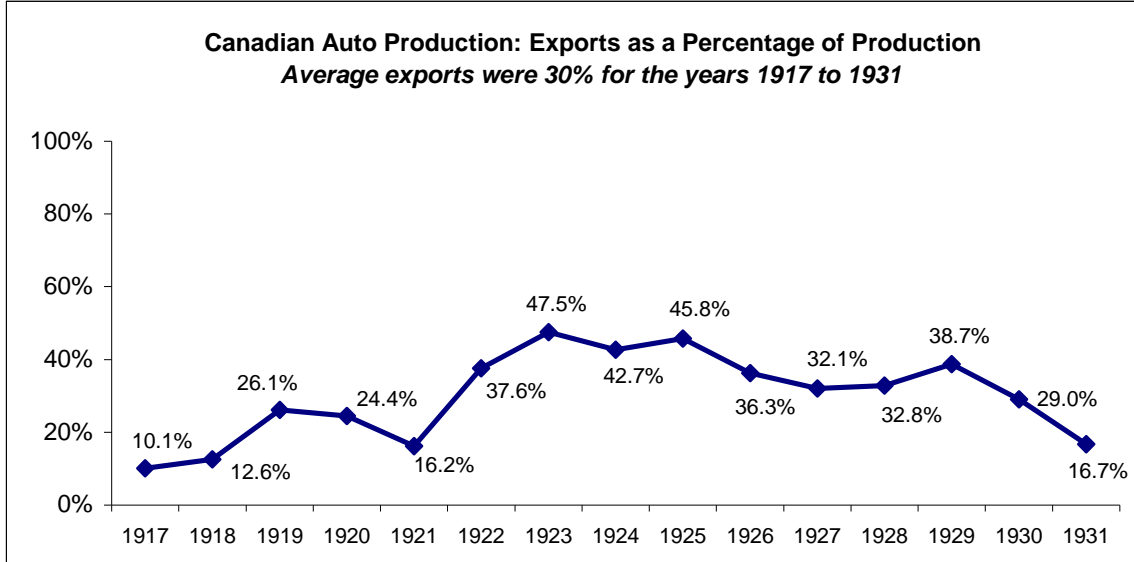
From 1904 to 1916 inclusive, approximately 135,000 vehicles were produced for domestic consumption with an average of 27% of production exported – in the U.S. the average was 10%.⁵⁵ In 1932, production dropped to a low of 62,000 with 13,000 exported. Eventually production rose to 207,000 in 1937 but fell again in 1938. Vehicle production would not truly recover until after the Second World War.⁵⁶

⁵⁵ O.J. McDiamid, "Some Aspects of the Canadian Automobile Industry," *Canadian Journal of Economics and Political Science*, 1940, pp. 259-274.

⁵⁶ Op. cit. Reisman, p. 6.

Appendix A (cont.)

Exhibit 2



Appendix A (cont.)

Table 1, Below are vehicle registrations in Canada for the years 1904 to 1938;

| YEAR | Total | Passenger | Commercial | Motorcycle |
|------|-----------|-----------|------------|------------|
| 1938 | 1,394,853 | 1,161,480 | 221,300 | 12,073 |
| 1937 | 1,319,702 | 1,104,859 | 203,741 | 11,102 |
| 1936 | 1,240,124 | 1,041,529 | 187,770 | 10,825 |
| 1935 | 1,176,116 | 992,114 | 173,518 | 10,484 |
| 1934 | 1,129,532 | 955,151 | 164,075 | 10,306 |
| 1933 | 1,083,178 | 919,917 | 153,261 | 10,000 |
| 1932 | 1,113,533 | 948,312 | 155,802 | 9,419 |
| 1931 | 1,200,668 | 1,028,100 | 162,920 | 9,648 |
| 1930 | 1,232,489 | 1,061,500 | 161,562 | 9,427 |
| 1929 | 1,187,331 | 1,030,880 | 147,594 | 8,857 |
| 1928 | 1,069,343 | 930,619 | 130,827 | 7,897 |
| 1927 | 939,651 | 830,001 | 102,088 | 7,562 |
| 1926 | 832,268 | 736,729 | 88,019 | 7,520 |
| 1925 | 724,048 | 641,186 | 74,938 | 7,924 |
| 1924 | 645,263 | 573,204 | 64,003 | 8,056 |
| 1923 | 575,985 | 513,075 | 54,564 | 8,346 |
| 1922 | 509,382 | 368,510 | 37,643 | 9,375 |
| 1921 | 464,805 | 333,621 | 29,294 | 7,806 |
| 1920 | 408,790 | 251,945 | 22,310 | 8,195 |
| 1919 | 342,433 | 196,367 | 14,444 | 8,017 |
| 1918 | 276,893 | 157,079 | 9,611 | 6,902 |
| 1917 | 203,502 | 115,596 | 6,053 | 6,787 |
| 1916 | 128,328 | 77,963 | 3,519 | 5,696 |
| 1915 | 95,284 | 60,688 | 533 | 5,412 |
| 1914 | 74,246 | 45,716 | 384 | 4,769 |
| 1913 | 54,380 | 29,295 | – | 3,702 |
| 1912 | 36,429 | 20,367 | – | 2,291 |
| 1911 | 21,783 | 13,775 | – | 264 |
| 1910 | 9,158 | 5,890 | – | 55 |
| 1909 | 4,809 | 3,160 | – | – |
| 1908 | 3,054 | 2,172 | – | – |
| 1907 | 2,148 | 1,530 | – | – |
| 1906 | 1,447 | 1,176 | – | – |
| 1905 | 565 | 553 | – | – |
| 1904 | 535 | 535 | – | – |
| 1903 | 178 | 178 | – | – |

Source: Historical Statistics of Canada, Statistics Canada, Roads and Road Transport (Series T142-194)

Appendix B

Ontario Fact Sheet (2007)

| Economy | | Per cent Distribution of GDP (2006) | |
|---|---------|---|---------|
| Nominal GDP, 2006 (\$millions) | 557,784 | Goods | 28.5 |
| % of Canada | 38.6 | Of which: Manufacturing | 19.1 |
| Personal Income (\$millions) | 438,030 | Services | 72.5 |
| % of Canada | 40.0 | NOTE: may not add to 100.0 due to rounding | |
| Personal Income Per Capita (\$) | | Total Trade 2006 (\$millions) * | |
| Ontario | 34,526 | Exports | 328,469 |
| Canada | 33,556 | Imports | 304,939 |
| CPI Inflation (2006) | 1.8% | Trade Balance | 23,530 |
| Unemployment Rate (2006) | 6.3% | <i>* International + Interprovincial</i> | |
| International Export Markets, 2006 (%) | | International Import Suppliers, 2006 (%) | |
| United States | 86.5 | United States | 65.2 |
| European Union | 6.2 | Asia (incl. Pacific Rim) | 16.6 |
| Asia (incl. Pacific Rim) | 3.1 | European Union | 8.5 |
| Latin America & Caribbean | 1.9 | Latin America & Caribbean | 7.1 |
| Europe (excl. E.U. members) | 1.5 | Europe (excl. E.U. members) | 1.0 |
| Middle East | 0.5 | Middle East | 0.4 |
| Africa | 0.3 | Africa | 0.3 |
| Top Five International Exports, 2006 (%) | | Top Five International Imports, 2006 (%) | |
| Motor vehicles, parts & accessories | 38.2 | Motor vehicles, parts & accessories | 22.3 |
| Machinery & mechanical appliances | 10.4 | Machinery & mechanical appliances | 17.1 |
| Electrical machinery & equipment | 5.9 | Electrical machinery & equipment | 11.1 |
| Non-ferrous metals & allied products | 5.6 | Plastics & plastic articles | 4.0 |
| Plastics & plastic articles | 4.0 | Scientific, professional & photo equipment | 3.5 |

Source: Ministry of Finance: Ontario Fact Sheet, November 2007 (11/2007)

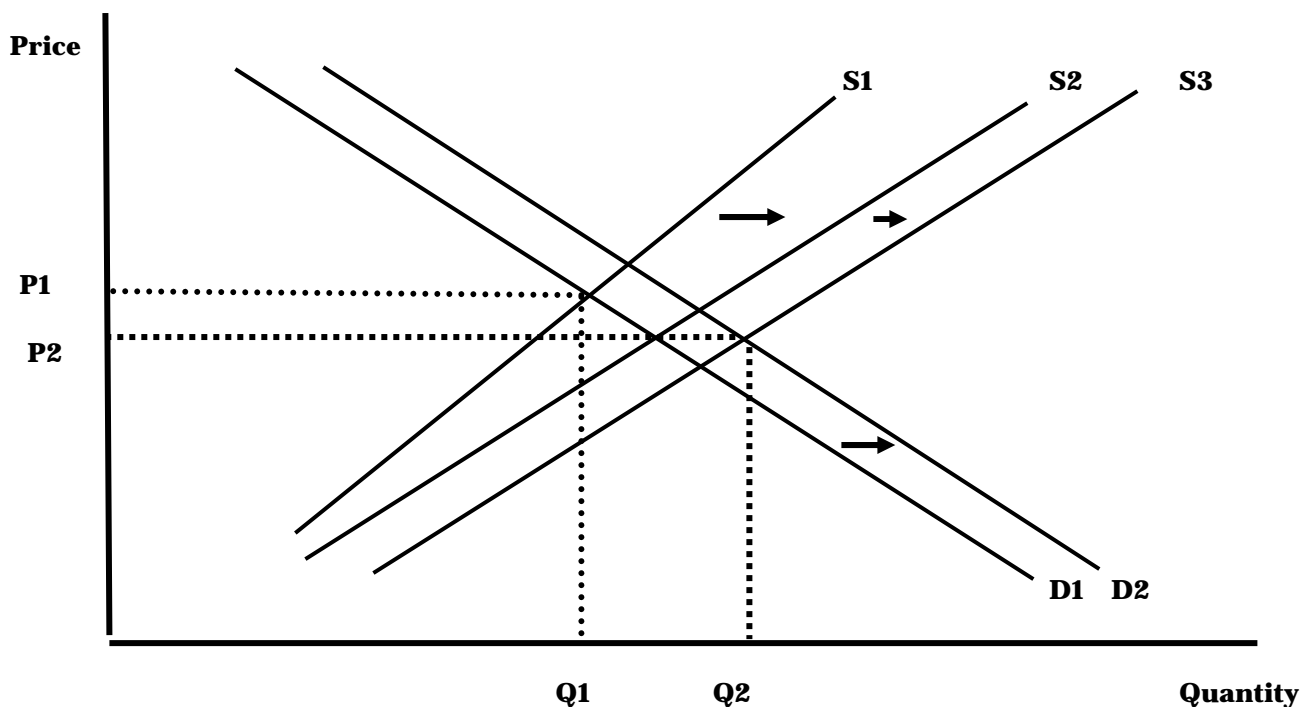
Appendix C

Below is a supply and demand function diagram that illustrates the effects of the Robb budget measures on the supply, demand and price for automobiles in Canada. The changes reflect:

- Reduction in *ad valorem* tax (tariff duty as percent of value)
- Elimination of the 5% excise tax
- Drawback on imported automotive parts if Canadian content requirements met
- Change in consumer income due to increased economic activity

Reduction of the *ad valorem* tax and also content drawback on imported automotive parts into Canada (drawback value dependent on value of parts) causes the supply curve to rotate clockwise (S1 to S2). Elimination of the excise tax shifts the supply curve to the right (S2 to S3). The budget was a stimulus to the economy due to expanding parts production in Ontario as well as increased vehicle production along with the multiplier effect that diffuses through the general economy. The stimulus acts to increase overall consumer income and this shifts the demand curve to the right (D1 to D2).

Effects of the Robb Budget on Price, Supply and Demand for Automotive Vehicles



As a result, the equilibrium price for the representative vehicle adjusts lower (P1 to P2) while production quantity supplied to the market increases (Q1 to Q2). Thus, the Robb budget acted as a stimulus to the economy. Note that when demand and supply curves both shift to the right, price can go either up or down but in this case, the price dropped due to the Robb Budget measures.

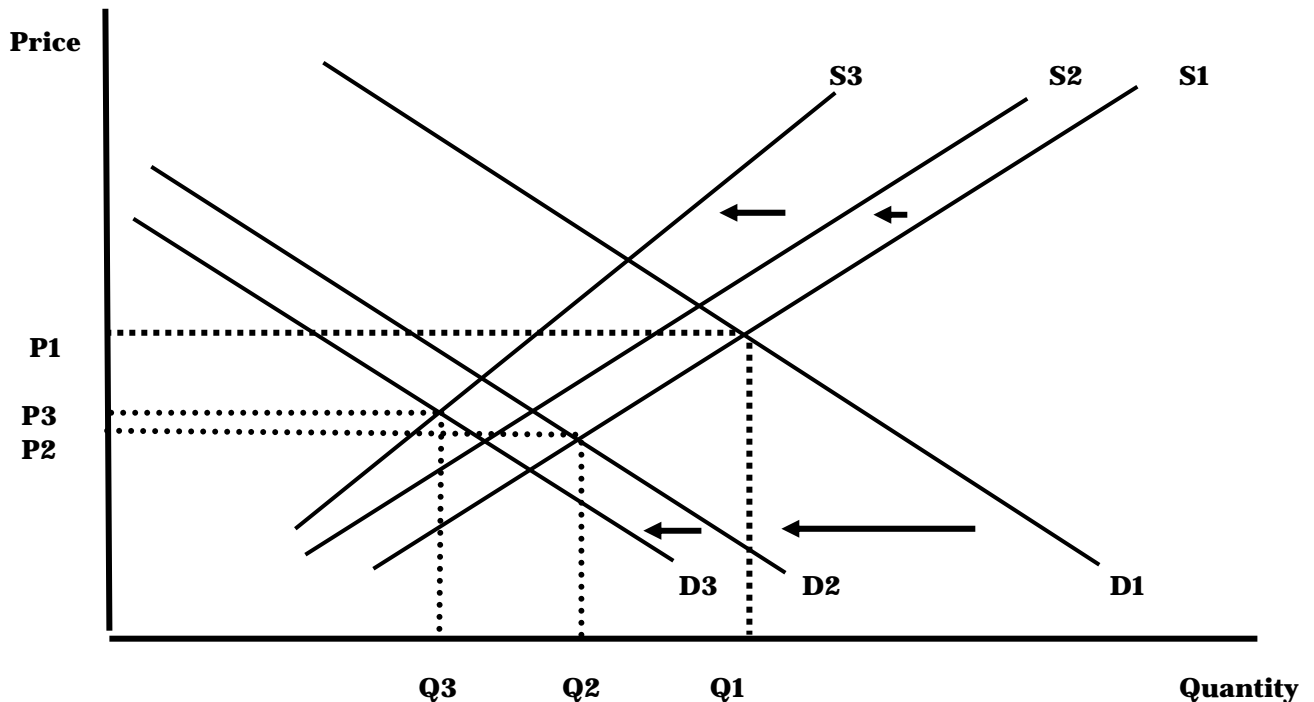
Appendix D

The changes due to the Bennett measures reflect:

- Increase in *ad valorem* tax (tariff duty as percent of value)
- Increase of the excise tax
- Change in consumer income due to decreased economic activity (depression)
- Bennett measures reduce consumer income

Increase of the *ad valorem* tax causes the supply curve to rotate counter clockwise (S1 to S2). Increase of the excise tax shifts the supply curve to the left (S2 to S3). The depression saw consumer income drop precipitously and this shifts the demand curve to the left (D1 to D2). These measures acted to reduce economic activity that decreases consumer income resulting in the demand curve shifting further to the left (D2 to D3).

Effects of the Bennett Measures on Price, Supply and Demand for Automotive Vehicles in the Face of an Economic Depression (1931 to 1935)



The depression without the Bennett measures results in a demand shift from D1 to D2 and price drops from P1 to P2 and importantly, quantity supplied drops from Q1 to Q2. The Bennett measures result in the supply curve shifting to the left from S1 to S3 and as a result, the equilibrium price for the representative vehicle adjusts higher (P2 to P3) while production quantity supplied to the market decreases more (Q2 to Q3), exacerbating the overcapacity problems while consumers pay higher prices than they otherwise would have.

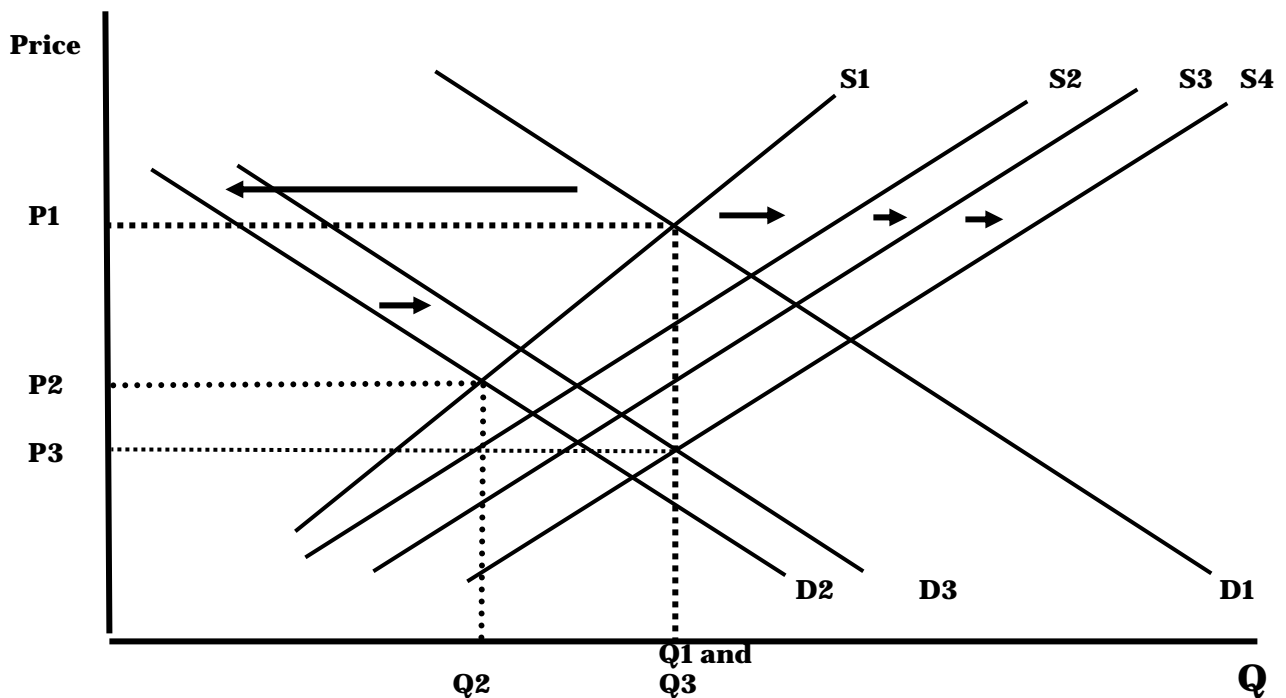
Appendix E

To demonstrate the hypothetical effect, we use a supply and demand function diagram that illustrates the effects of the depression and if the Auto Pact was implemented. The changes reflect:

- Free trade practically eliminates *ad valorem* tax (tariff duty as percent of value)
- Elimination of the excise tax
- Greater efficiency in scale reduces input costs
- Change in consumer income increased due to greater economic activity

Decreasing of the *ad valorem* tax causes the supply curve to rotate clockwise (S1 to S2). Elimination of the excise tax shifts the supply curve to the right (S2 to S3). Greater efficiencies in scale reduce input costs and this shifts the supply curve to the right (S3 to S4). The depression saw consumer income drop precipitously and this shifts the demand curve to the left (D1 to D2). These measures however acted to stimulate economic activity that increases consumer income resulting in the demand curve shifting to the right (D2 to D3).

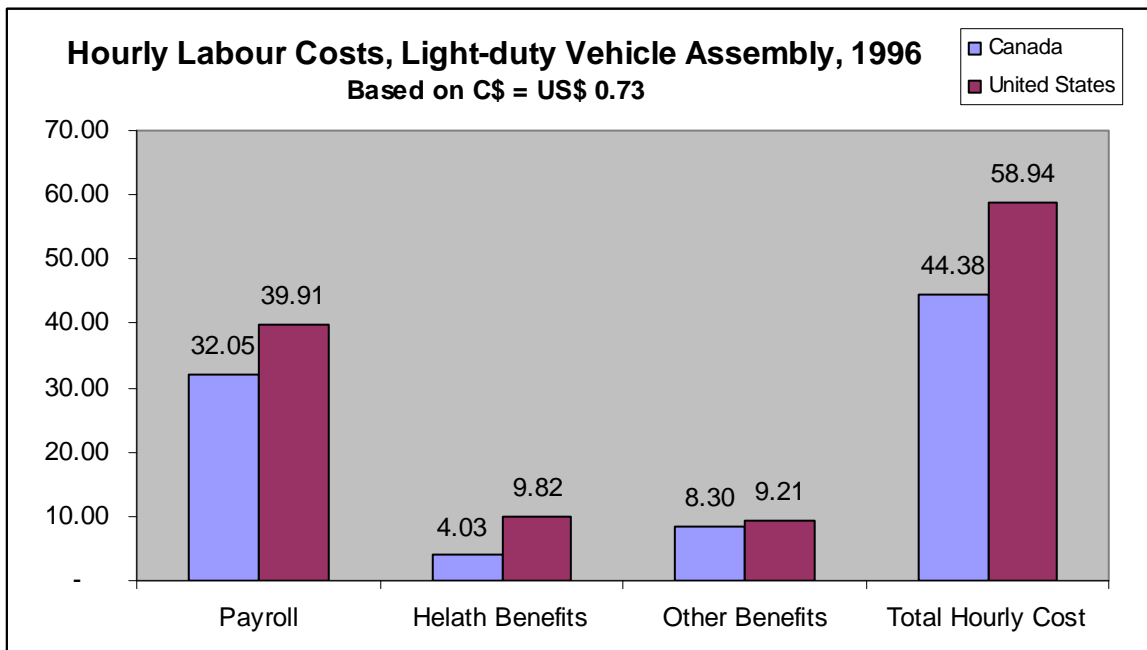
Hypothetical effects if the Bennett Measures were replaced by the visionary Auto Pact on Price, Supply and Demand for Automotive Vehicles in the Face of an Economic Depression.



As a result, the equilibrium price for the representative vehicle falls (P2 to P3) allowing production to be maintained (Q3 = Q1). While this is hypothetical, there is little doubt that such a visionary policy if implemented would have been enormously helpful in the face of an economic depression and unused production capacity with high fixed costs.

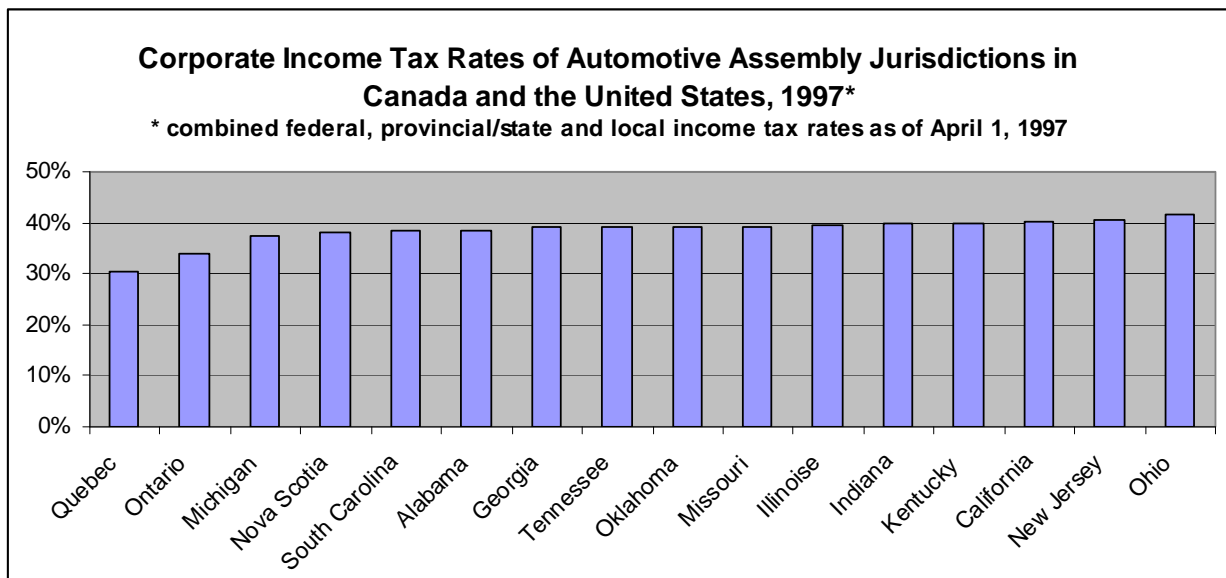
Appendix F

Chart 1-F:



Source: Draft report on assembly re-investment, by working group of AAC, 1998
www.ic.gc.ca/epic/site/auto-auto.nsf/en/am01165e.html

Chart 2-F:



Source: KPMG, Competitive Alternative: A Comparison of Business Costs in Canada, Europe and the U.S., 1997.

Appendix G

PRODUCTIVITY

TREND: Canadian automotive productivity has been constantly increasing in the last decade.

PRODUCTIVITY OF HIGH-VOLUME VEHICLE ASSEMBLY PLANTS

The 2002 report by Harbour and Associates Inc. estimated that Canada is 7.3% more productive than the United States in terms of labour hours per vehicle. On average, Canada uses only 23.25 labour hours per vehicle, whereas the United States uses 25.09 labour hours per vehicle.

INTERNATIONAL RECOGNITION

Several Canadian assembly plants have received international recognition in the following areas:

- Productivity: Canada has the 2nd and 3rd most productive plants in North America for car assembly and the 3rd most productive for truck assembly
- Quality: Canadian plants have won 13 of 39 J.D. Power Plant Quality Awards for North America

COMPETITIVENESS WITH THE U. S.

TREND: Canada continues to remain competitive in terms of productivity and labour cost.

LIGHT VEHICLE ASSEMBLY COSTS

Canada has an advantage over the U.S. in terms of assembly costs:

- Direct labour costs: 31% less per hour
- Productivity: 7.3% fewer labour hours per unit

The figures reflect an exchange rate of C\$1 to US\$0.664 (Average July 2002 to end of June 2003).

COMPONENT MANUFACTURING

According to a 2002 KPMG study which uses a sophisticated financial model that combines all cost factors (direct labour, payroll charges, transportation, currency exchange, taxes specific to a particular jurisdiction, special incentives, etc.), typical parts manufacturers can start up and operate in Canada with 11% lower costs than in the U.S.

TRADE

TREND: Canada maintained an overall automotive trade surplus of \$7.2 billion.

INVESTMENT

AUTOMOTIVE RESEARCH AND DEVELOPMENT

TREND: Vehicle assemblers increasingly delegate systems development to Tier I companies. The proximity of major Canadian parts makers to Detroit product design centres facilitates concurrent engineering development work. Canadian R&D activities are supported by attractive R&D tax credits.

NEW CAPITAL EXPENDITURES

TREND: Canada continues to attract a significant portion of investment in vehicle and parts manufacturing.

CANADIAN AND NAFTA VEHICLE PRODUCTION

- 1983 Canadian light vehicle production was 1.55 million units, about 14% of North American production. Canada produced about two cars for every light truck
- 2002 Canadian light vehicle assembly was 2.6 million units, 16% of total NAFTA production. The volume of light truck production has grown to almost equal that of passenger cars.

Source: www.ic.gc.ca/epic/site/auto.nsf/en/am0161e.html

Appendix H

This table speaks for itself (note the disparity between oil sands and conventional oil/gas)

| Inventory of Major Alberta Projects Summary, October 2006 | | |
|--|-------------------------|--------------------------------------|
| Sector | # Total Projects | Value of Projects(\$millions) |
| Agriculture & Related | 16 | \$ 323.3 |
| Chemicals & Petrochemicals | 5 | \$ 575.0 |
| Commercial/Retail | 125 | \$ 5,199.7 |
| Commercial/Retail and Residential | 6 | \$ 1,689.0 |
| Forestry & Related | 9 | \$ 1,094.6 |
| Infrastructure | 280 | \$ 13,151.9 |
| Institutional | 234 | \$ 10,520.3 |
| Manufacturing | 8 | \$ 178.0 |
| Mining | 6 | \$ 444.8 |
| Oil & Gas | 17 | \$ 2,245.6 |
| Oil Sands | 50 | \$ 90,386.0 |
| Other Industrial | 32 | \$ 628.4 |
| Pipelines | 28 | \$ 4,694.6 |
| Power | 21 | \$ 5,435.3 |
| Residential | 125 | \$ 2,694.0 |
| Tourism/Recreation | 156 | \$ 7,680.8 |
| Total | 1118 | \$146,941.3 |

Source: <http://www.alberta-canada.com/statpub/albertaConstructionProjects/mp0610.cfm>

“This Inventory lists projects in Alberta, valued at \$2 million or greater, that have recently been completed, are currently under construction, or are proposed to start construction within two years. Not all projects over this threshold are listed, due to reasons of confidentiality and/or due to information not being available at the time of printing... The cost of projects listed in the Inventory are estimated values only.”

Appendix I (Auto Production in Ontario)

ALLISTON, ONTARIO

Honda (368 000-unit capacity):

- vehicles
 - Acura EL
 - Civic
 - Odyssey minivan
 - Acura MDX
 - Pilot
- components
 - major stampings

CAMBRIDGE, ONTARIO

Toyota (211 000-unit capacity):

- vehicles
 - Matrix
 - Corolla
 - Solara
 - Lexus RX 300 (to be added in 2003)
- components
 - major stampings
 - L4 engines, 1.8L

INGERSOLL, ONTARIO

CAMI (107 000-unit capacity):

- sport/utility vehicles
 - Chevrolet Tracker
 - Chevrolet Equinox (to be added in 2004)
 - Chevrolet Traverse (to be added in 2004)
 - Suzuki Vitara
- components
 - major stampings

OAKVILLE, ONTARIO

Ford:

- minivans (294 000-unit capacity)
 - Windstar
 - Freestar (to replace Windstar in 2003)
- pickup trucks (208 000-unit capacity)
 - Ford F Series

OSHAWA, ONTARIO

General Motors:

- mid-size cars (566 000-unit capacity)
 - Chevrolet Monte Carlo
 - Chevrolet Impala
 - Buick Regal, Century
 - Pontiac Grand Prix (to be added)
- components
 - batteries
 - suspension components
 - exterior sheet metal stampings
- pickup trucks (234 000-unit capacity)
 - Silverado
 - Sierra

ST. CATHARINES, ONTARIO

General Motors:

- components
 - V8 engines and components
 - transmission final drives and differential assemblies
 - rear axles
 - brake and drum assemblies and components
 - front suspension

ST. THOMAS, ONTARIO

Ford:

- cars (237 000-unit capacity)
 - Ford Crown Victoria
 - Mercury Grand Marquis
 - Mercury Marauder

TORONTO, ONTARIO (METROPOLITAN REGION)

DaimlerChrysler:

- luxury cars (254 000-unit capacity)
 - Chrysler 300 M
 - Chrysler 300 N (to be added by 2003)
 - Chrysler Concorde
 - Dodge Charger R/T (to be added by 2003)
 - Dodge Intrepid
- components
 - aluminum castings
 - interior trim parts and sub-assemblies
 - major stampings

WINDSOR, ONTARIO

DaimlerChrysler:

- minivans (273 000-unit capacity)
 - Dodge Caravan/Grand Caravan
 - Chrysler Voyager/Grand Voyager
 - Chrysler Town and Country
 - Chrysler Pacifica
- large vans (111 000-unit capacity)
 - Dodge Ram Van/Wagon

Ford:

- components
 - aluminum castings
 - iron castings
 - V6 engines
 - V8 engines

General Motors:

- components
 - four-speed, electronic front-wheel drive automatic transmissions

More than 890 supplier plants, clustered in or near these cities, supply parts and system assemblies to the major plants. These strategic locations enable suppliers to provide just-in-time delivery to all major U.S. vehicle assembly sites.

Source: www.ic.gc.ca/epic/site/auto.nsf/en/am0161e.html

Author Bio

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Working Paper Series

This working paper is part of the *Ontario in the Creative Age* series, a project we are conducting for the Ontario Government. The project was first announced in the 2008 Ontario Budget Speech, and its purpose is to understand the changing composition of Ontario's economy and workforce, examine historical changes and projected future trends affecting Ontario, and provide recommendations to the Province for ensuring that Ontario's economy and people remain globally competitive and prosperous.

The purpose of the working papers in this series is to engage selected issues related to our report: *Ontario in the Creative Age*. The series will involve a number of releases over the course of the coming months. Each paper has been reviewed for content and edited for clarity by Martin Prosperity Institute staff and affiliates. As working papers, they have not undergone rigorous academic peer review.

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