PUBLIC POLICY AND THE ECONOMICS OF THE CANADIAN AUTOMOTIVE INDUSTRY WITH PARTICULAR REFERENCE TO THE CANADA-UNITED STATES AUTOMOTIVE PRODUCTS TRADE AGREEMENT

by

ZENON D. ZALUCKY

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MASTER OF ARTS

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ABSTRACT

This thesis is a study of the economics and public policy of the Canadian automotive industry. It deals primarily with the automobile assemblers and to a lesser extent the automotive parts industry. It examines the industrial organization of the North American automotive industry and focuses on the Agreement linking the Canadian and United States industries into a North American automotive industry.

The study finds that since the establishment of the industry it has undergone major changes in industry structure, behaviour and performance. Beginning as an industry truly competitive in industrial organization it soon evolved into a tightly-knit oligopoly not seriously challenged until the coming of the automotive products from Japan. In addition, although the industry in Canada is not truly Canadian, i.e., it is made up predominantly of subsidiaries of parent companies from the United States, Europe, and more recently the Far East, it can be molded through public policy to function for the benefit of Canada.

The principal focus of the study is the Canada-United States Automotive Products Trade Agreement which became effective in 1965. This Agreement was designed to liberalize automotive economics in North America, provide the basis for

rationalizing the Canadian industry to make it viable, and to provide Canada with a fairer share of the benefits from the North American automotive industry. The strength and special operating methods of the Japanese automotive industry have posed problems for Canada as the Japanese have been reluctant to operate within the Agreement. However, a gradual process of adjustment between the Japanese and the U.S. and Canadian industries appears to be in process.

The study concludes that the Agreement achieved its objectives. Further, the offshore producers have acted to globalize the industry and have re-injected competition into North America. The industry has become more responsive to consumers and has significantly improved its performance.

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Chapter I

INTRODUCTION

Among Canadian industries the automotive industry is of outstanding significance and influence. Yet this industry is not truly Canadian. Rather, its ultimate control lies within the United States. With this in mind, this thesis focuses on the Canadian government's public policy through tariff administration, followed by the Canada-United States Automotive Products Trade Agreement, to mold the automotive industry in Canada to perform for the benefit of Canadians and to achieve viability for the Canadian automotive industry.

Government reports, industry released statistics, books, articles from journals and magazines, and information from newspapers make up the primary reference sources of this thesis. Observation and analysis of information from these sources will show the trends in the North American automotive industry and will place the industry's structure and viability in perspective.

This study will be divided into seven chapters. After this introductory chapter, the second chapter will be devoted to presenting and analysing the historical and economic development of the United States automotive industry. Eco-

nomic conditions and factors in the evolution of the industry's structure and conduct will be examined in detail. The chapter will show the industry's development from its beginning up to and including 1941.

The third chapter will continue the examination of the development of the United States automotive industry for the years 1946 to 1984. The chapter will first focus on the powerful oligopolistic solidification in the industry, and will be followed by an analysis of the impact and response the industry experienced as a result of the successful infiltration into the North American market of the Japanese automotive producers.

The fourth chapter will review the establishment of the automotive industry in Canada. It will focus on the series of Canadian automotive tariff policies from the industry's start up to and including 1964, and will examine the effects of tariffs on the development of the Canadian automotive industry. The basic economic conditions and factors behind the industry's historical evolution are similar to those found in the United States industry and are not repeated in this chapter. However, distinctively Canadian industrial and market conditions and factors related to Canadian tariff policies will be studied.

The fifth chapter will cover the economic and public policy aspects of the Canadian automotive industry from 1965

to early 1987. It will present the substance of the Canada-United States Automotive Products Trade Agreement and will examine the effects of the Agreement on the Canadian automotive industry. The sixth chapter will analyze major problems the industry has faced and continues to face in its struggle to maintain viability. It will then evaluate Canada's current situation.

The seventh chapter, which summarises and concludes the thesis, will be followed by four appendicies. The first of these will include a number of statistical tables. The second appendix will provide additional theoretical information on the economic implications of the costs of style changes for automotive firms. The third appendix will provide theoretical information on technological advance and industry structure. Finally, the fourth appendix will be a reproduction of the Canada-United States Automotive Products Trade Agreement.

Chapter II

EARLY DEVELOPMENT OF THE AMERICAN AUTOMOTIVE INDUSTRY: 1900 - 1941

The historical development of the American automotive industry can be divided into periods representing distinct changes in the character of the industry. This chapter is divided into two stages covering the industry's early period within which an examination of the development and changes in industry structure, behaviour, and performance is carried out.

2.1 BEGINNING YEARS: 1900 - 1928

Although the exact year signifying the start of the American automobile industry can be disputed[1], it was not until 1900 that the automobile was produced on a serious commercial basis. During the 1900-1928 period there existed a large number of firms operating on a highly competitive basis with product improvements and other innovations. By the end of the period the industry became a significant sector of American industry with considerable influence on the welfare of the economy. In 1900, 4,192 passenger cars were produced at a value of $4,899,000, but by 1928 a generally healthy and unsaturated demand[2] allowed the production of passenger cars, motor trucks and buses to increase to

4,358,759 units at a value of $3,032,708,000. (See Appendix A, Table 38.)

The American automobile manufacturing industry was very active in the beginning years as financial and technological factors were easy to overcome, making industry entry relatively simple. The manufacturing of automobiles basically involved the assembly of various parts into finished vehicles. The "bulk of the fixed capital required for the production of automobiles was not provided by the producers themselves, but by the parts-makers"[3]. Thus, barriers to entry were practically non-existent, especially in the early part of this period. As well, the rapid and substantial growth in total market demand meant that new firms could grow without having to steal sales from other firms. As a result a large number of firms were able freely to enter the industry. R. Epstein, in his work on the automobile industry writes that:

> Between 1903 and 1926, inclusive, a total of 181 companies engaged in the manufacture of automobiles. That is, the 24 companies found actually to have been in production at the beginning of 1903, plus the companies which entered subsequently, made a total of 181 producers who, up to and through the year 1926, had built and sold passenger cars upon a commercial scale[4].

Exit was also frequent. From the above 181 companies, only 44 were actively involved in production by 1926, and, of these, only eleven were in operation throughout the entire period. Subtracting 44 from 181 gives us 137, which is the number of firms that exited the industry during the peri-

od[5]. It is interesting to note that, of these 137 companies, 60 percent were in the passenger car business for six years or less, and in the later years of the period, the average life span of the exiting companies increased to about twelve years[6]. Table 1 yields information on the entry and exit of firms in the industry and the percentage of firm failures between 1903 and 1928.

Conditions in the automobile manufacturing industry were very volatile with changes in engine types, car styles, standardized parts and accessories, and market demand changes from high-priced to low-priced vehicles. Much of the early firm failures, through poor quality control and a resistance to change by many firms, were linked to adjustment problems related to the growing product variations. However, from about 1912 a great expansion of the low-priced car market, a growing drive for parts standardization, and an overall stabilization in the conditions of production, gave rise to an increase in the average length of life of the existing firms[7]. The drive for parts standardization, which acted to increase industry stabilization and confidence, especially for the smaller firms in the industry, came about in part from what has been called an "Early Attempt At Monopoly"[8] in the industry.

During the early years of the period, through the exclusive rights to the Seldon Patent and with the power to grant sublicenses, the Electric Vehicle Company attempted to

TABLE 1

Entry, Exit and Percentage of Failures of Firms in the Passenger Automobile Industry

Year	Entries	Exits	Remaining Firms	Percentage of Firm Failures
1902	...	...	12	...
1903	13	1	24	4
1904	12	1	35	3
1905	5	2	38	5
1906	6	1	43	2
1907	1	0	44	0
1908	10	2	52	4
1909	18	1	69	1
1910	1	18	52	26
1911	3	2	53	4
1912	12	8	57	12
1913	20	7	70	10
1914	8	7	71	9
1915	10	6	75	7
1916	6	7	74	9
1917	8	6	76	7
1918	1	6	71	7
1919	10	4	77	5
1920	12	5	84	6
1921	5	1	88	1
1922	4	9	83	10
1923	1	14	70	15
1924	2	15	57	21
1925	0	8	49	14
1926	1	6	44	12
1927*	1	3	42	7
1928*	0	2	40	5

* Estimated from Chart 1 of "Pricing Policies in the Automotive Industry."

Sources: Ralph Epstein, Charts 28 and 29, The Automobile Industry, pp. 176-177.

Homer B. Vanderblue, "Pricing Policies In The Automobile Industry." Harvard Business Review, vol. 17 no. 4 (Summer 1939): 388.

gain a monopoly control of the industry. In 1903, the Asso-

ciation of Licensed Automobile Manufacturers was formed by the Electric Vehicle Company and 18 other manufacturers whereby Association members recognized the validity of the patent and agreed to pay royalties to the Association in return for patent use. The Ford Motor Company, along with some other manufacturers, challenged the Seldon Patent and, after eight years of legal battles, a U.S. circuit court of appeals ruled that although the Seldon Patent held for the Brayton two-cycle engine it did not apply to the Otto four-cycle engine used by Ford and virtually all other American automobile manufacturers. It is of interest to note that this early attempt of monopoly probably did not greatly affect the industry entrance and exit of firms or greatly influence industry competition as royalty fees of individual firms were not overwhelmingly large. The manufacture of vehicles was in no way restricted and competition between members was never discouraged[9]. However, defeat of the attempt to restrict competition by patent control meant that a potentially important absolute cost barrier to entry was not to be part of the industry's history.

Shortly after the court ruling the Association of Licensed Automobile Manufacturers (A.L.A.M.) dissolved. However, the standards records and the concept of the A.L.A.M.'s Mechanical Branch, (committed to setting inter-company standards for spark plugs, rims, screw-thread dimensions, and steel specifications as a service to member com-

panies between 1905 and 1909), were absorbed and carried on by the succeeding Society of Automotive Engineers. Society members rightly believed that technical standardization would allow the realization of scale economies through mass production facilitated by interchangable parts. Besides aiding the parts and accessories manufacturers, standards also benefitted the automobile manufacturers. The reduction in the number of part varieties would reduce tooling and set-up costs and enable employment of long production runs yielding general economies of high output[10]. This in turn reduced the cost of obtaining parts for the automobile manufacturers and developed an increased sense of security for both parts and automobile manufacturers. The increasing use of standards brought about a growing independence between producers. An automobile manufacturer was no longer dependent on the fortunes of a single supplier specializing in the production of unique parts designs required by the automobile manufacturer. The situation was similar for the parts and accessories manufacturers as the potential market expanded for both the buyers and the suppliers.

During the beginning years the demand for automobiles was predominantly made up of consumers who were to purchase a vehicle for the first time. Under this condition firms could secure high-volume new car sales by cutting prices, or by providing a low-priced car. Selling and producing vehicles in volume implied increasing returns in an expanding

industry[11]. A multiplier type effect arose from this as large volume sales and mass production brought about lower unit costs which allowed lower prices and even greater sales. The boom for low-priced cars left producers who specialized only in high-price car lines vulnerable. R. Epstein attributes the outstanding number of firm exits in 1910 to the failure of many manufacturers to take notice of the absolute falling off of the demand for high priced cars in that year[12].

The abundant new car demand for automobiles in the first stage suggests that demand would have been quite elastic and shifting to the right with price competition being the rule. Henry Ford's Model T was used to introduce assembly line type mass production which yielded economies of scale and reduced production costs. Ford produced more cars with greater efficiency and this enabled him to pass on at least part of the savings to consumers, including his own workers, in the form of a price decrease and an increase in the overall quantity of cars sold.

During the 1920's the industry saw some new and important product and marketing innovations. These innovations included an increased use of closed car body designs, more emphasis on comfort, convenience, power, style and yearly design changes, and an increase in used car trade-ins. The practice of instalment selling also became acceptable at this time[13]. As well, the 1920's saw the growth in the

importance of product diversification. General Motors realized the growing potential of product diversification and released a variety of models so as to attract consumers from all income brackets. This product policy not only acted to spread the company's risk (by providing models in every price range and thus guaranteeing sales at any given time) but it also placed General Motors in a position to challenge Ford's dominance. Ford apparently overlooked the growing importance of product and marketing innovations and the increasing sense of utility they gave the consumer. In 1926, the fourteen-millionth Model T Ford chassis had virtually the same type of chassis which Ford produced in 1908. Although Ford's policy of never-changing design and ever-lowering of selling price brought him production economies of superior magnitude and placed him in a position of industry dominance for many years it seems that this policy had become too rigid. R. Epstein points out the important and interesting fact that to produce cars at low cost is one thing, but to produce cars that consumers want is another. Further, he notes that there is little doubt that purchasers of second-hand cars, and some of the purchasers of Chevrolets and Essexes between 1924 and 1927, probably would have purchased Fords instead, if only its design had progressed[14]. In 1927, Ford discontinued production of the Model T due to growing competition and declining profits and prepared the production of his new product, the Model A.

In the meantime, General Motors experienced success in management innovations and set the trend that the automotive and other industries would follow. Perhaps its major achievement in this area was to develop a decentralized type of organizational structure to suit the needs of a large industrial enterprise. A. D. Chandler, Jr. writes that:

> It [the decentralized organizational structure] became a model for much of American industry because it supplied a viable alternative to the centralized, functionally departmentalized structure (that is, a department for each major function - production, sales, purchasing, research, and so forth) that had been developed in the second part of the nineteenth century first by the railroads and then by the early large integrated industrial enterprises. It provided as well a more effective administrative form than did the loosely controlled holding company in which only financial ties connected the several operating subsidiaries with each other and with the general office[15].

Ford again overlooked the potential benefits a large industrial enterprise such as his could achieve by decentralizing firm organization. He strongly believed that where resposibilities were not specific to any certain position and titles were kept to a limited few, work would be done more efficiently than in firms operated like General Motors. Ironically, during these same years, many of Ford's more competent executives were leaving to work for General Motors[16]. Consequently, the Ford Motor Company's passenger car factory sales dipped below General Motor's passenger car factory sales for the first time in 1926 and remained below until 1929, the year of Ford's Model A[17].

Corporations are basically faced with two methods of growth. The first - internal growth, through direct mobilization of resources and the second - external growth through mergers. Two structural characteristics affected by mergers are industry concentration and integration. The motor vehicle industry sustained much of its development through merger activity which enhanced the growth of concentration and integration in the industry.

Most of the more successful firms in the industry took part in some form of merger activity. The company with the most notable success in merger activity was the General Motors Corporation. However, this activity can also lead to failure, as shown by the United States Motor Company which failed in 1912, after just two and a half years in operation and after acquiring the control of eight other companies[18].

Horizontal mergers were common with G.M. from its beginning. The General Motors Company was organized by W.C. Durant in September of 1908. As Chairman of G.M.'s Finance Committee, Durant was able to start the growth of the company in 1909 with the purchase of the Buick Motor Company. Soon after, G.M. "acquired 90 percent of the stock of the Olds Motor Works" and near the end of 1909 "it acquired the shares of Cadillac Motor Car Co., the Carter Car Co., Elmore Manufacturing Co., Ewing Automobile Co.," and the Garlon Motor Car Company. In addition it also acquired most of the

"outstanding stock of the Oakland Motor Car Co., the Marquette Motor Co., and the Reliance Motor Truck Co."[19]. With many of these acquisitions a multiplier type effect arose giving G.M. various levels of control of the stock of other companies. For example, when G.M. acquired the Buick Motor Company it also acquired the stock which Buick held, which was 97 percent of the Welsh Motor Car Company, 75 percent of the Champion Ignition Company, 65 percent of the Oak Park Power Company, 50 percent of the Michigan Motor Casting Company, 50 percent of the McLaughlin Motor Car Company Limited, and 3.7 percent of the Brown-Lipe-Chapin Company. This form of merger activity typified G.M.'s early growth and it can be argued that throughout its early period it was responsible for the elimination of at least 15 previously independent motor vehicle producers[20].

In 1910, the company was threatened with insolvency and Durant was forced to resign from his active management position of General Motors. However, within six years Durant became president of the Chevrolet Motor Company and was able to have the Chevrolet Motor Company absorb a controlling interest in the stock of the General Motors Company so that in 1916 he once again gained control of the General Motors Company. In that same year the Chevrolet Motor Company formed the General Motors Corporation as a holding company which ultimately acquired (by 1918) the assets of the General Motors Company and the Chevrolet Motor Company. In 1919, with

Durant's expansionary management, the General Motors Corporation gained control of the Fisher Body Corporation, a tractor company, and a refrigerator company. The incorporation of the Fisher Body Corporation into the General Motors organization in 1926 was G.M.'s first major push for parts security through backward integration. "...Except through the special organization of the Fisher Body Corporation, which ... consists of several body-building plants, factories for plate glass and hardware, and lumber mills..." General Motors apparently made "...no attempt of any size to build up a chain of production toward the raw materials"[21] side.

The Ford Motor Company, incorporated in 1903, achieved growth quite differently from G.M.'s process of combination and concentration. While G.M. integrated on a horizontal scale, Ford integrated on a vertical scale in a "backward" form, with most of its growth through internal growth and development. By continually reinvesting large proportions of the company's profits Mr. Ford was able to gain control of the production of many of the more important materials necessary for automobile production. In this way he was able to secure a high level of economic independence. In a study on integration in the automobile industry E. Flugge informs us that the Ford Motor industries:

> are mining iron ore, lead, and coal; they are coking the coal and turning the iron into steel in Ford-owned blast furnaces, to be further manufactured and machined in Ford-owned rolling mills, foundries, and machine shops; they quarry silica

> and make plate glass on a large scale; they own standing timber, lumber camps, dry kilns, and saw mills providing the wood for the bodies; furthermore they own textile mills, and factories for artificial leather, fordite, and wire. The Ford factories proper machine an unusually large quantity of automobile parts themselves. Ford has also embarked on a tire manufacture of his own which has just been emerging from the experimental state[22].

This demonstrates the high degree of backward integration achieved by the Ford Motor Company since the 'Beginning Years'.

The Ford Motor Company's first major acquisition through merger activity took place in 1922, when it acquired the Lincoln Motor Company. In 1923 it acquired most of the capital stock of C.E. Johansson, Inc., makers of precision gauges. However, other than these acquisitions, the Ford Motor Company grew "...neither by combinations and consolidations nor by the aid of a large body of investors." Its growth is attributed to "Competitive superiority in the largest field of automobile manufacture - the field of low-priced," mass-produced "automobiles - and the continuous reinvestment of much of the large profits of the enterprise"[23].

The Chrysler Corporation entered the automobile industry with its establishment in 1925 as successor to the Maxwell Motor Company. Chrysler's release of the Plymouth and De Soto cars enabled it to become an effective competitior with Ford and General Motors in the high volume, low-priced

automobile market. Its first and largest acquisition was that of the Dodge Brothers Inc. in June 1928. Dodge had approximately $127 million in total assets, $19 million in liabilities and reserves, and outstanding debentures of $59 million yielding a net balance of approximately $49 million. To make payment for this, Chrysler issued 1,253,557 shares of Chrysler no par common stock[24]. This concluded the Chrysler Corporation's growth through merger activity in the 'beginning years'.

As for the rest of the firms in the industry the general trend was not one of integration and concentration through active merger policies. There was an inclination of the "independent" firms to integrate towards the immediate sources of supply, but this had not been significantly "backward" in nature and the likelihood of extensive successful combinations was quite limited[25]. The industry tendency towards an increasingly differentiated product through an increasing number of models and more frequent model changes implied increasing costs, especially to manufacturers who also produced a large quantity of parts. However, because this burden of cost was able to be transferred, at least temporarily, to the parts makers, the small or medium-sized firms in this segment of the industry felt little need to become actively involved in the costly area of backward integration. Of the large-scale independent producers only Studebaker and, to a lesser extent, Willys-

Overland "have ever attempted to extend factory-owned manufacture of half-manufactured products,..." and "...as far as this group of producers is concerned,..." Only Studebaker provides an "...example of a deliberately planned integration, and even this stops before reaching the raw materials"[26].

Figure 1 shows that at least since 1911 the industry was dominated by one or two firms, and that the Ford Motor Company was the leading firm in the industry up through

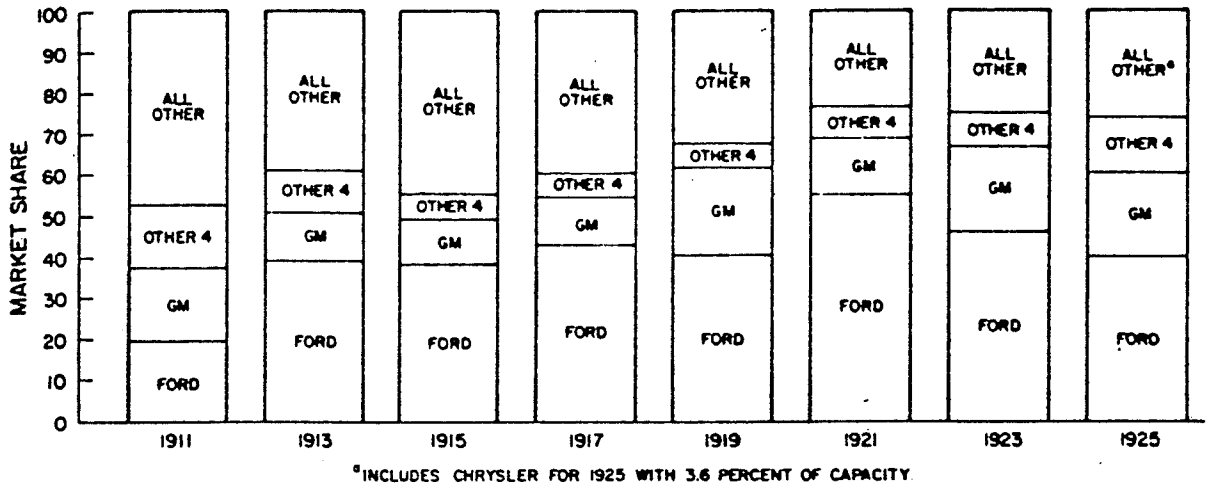

Figure 1: Market Shares Of Leading Passenger Car Producers 1911-1925

Source: Boyle "Why Not Try Competition?" Industrial Organization Review, vol. II, nos. 1 and 2, 1974. Figure 5, p. 61.

1925. In 1911 Ford held a market share of approximately 20 percent and, together with G.M., held approximately 38 per-

cent of the market share. Ford's market share expanded almost continually so that in 1921 Ford reached a peak market share of about 55.7 percent[27]. Ford, if combined with General Motors, accounted for over 68 percent of the total passenger car production. On the other hand the "other" firms faced an almost continually decreasing market share which fell from about 62 percent in 1911 to a low of about 31 percent in 1921. As well, in 1911, the "other" firms totalled 51 in number, while in 1921 they totalled 86. Therefore, it seems that while the number of individual firms increased, they held a shrinking market share. This situation culminated in 1921. After this year, firm exits exceeded firm entrants (refer to Table 1) to give a continuous decline of firm numbers each year from 1921 to 1928.

It appears that, although large numbers of firms provided greater price variations and provided many of the benefits of a competitive market structure, this does not necessarily provide viability to competitors. Rather it may often be the relative size distribution of firms which will be of greater importance in determining competitiveness in an industry. The dominant size of one or two firms in an industry may act eventually to suppress the nature of competition and provide a less volatile climate[28].

2.2 THE CONTENTIOUS YEARS: 1929 - 1941

The second stage of the industry's development was characterized by times of low and/or variable demand. In the years of the depression the major firms minimized price declines by output restriction. The number of firms in the industry continued to decline as the relative market power of the major firms continued to grow. Relative stagnation prevailed throughout the economy in general. The number of motor vehicles produced fell rapidly from approximately 5.3 million in 1929 to approximately 1.3 million in 1932, but then rose to over 4.8 million by 1941. The value of shipments during this period varied from approximately $3.4 billion in 1929 to just under $0.8 billion in 1932, then increased to over $3.6 billion in 1941. (See Appendix A, Table 38.) Production of motor vehicles and the value of shipments during this period closely paralleled one another.

The latter part of the 'Beginning Years' also brought about changes in the structure of the industry. These changes grew in importance and shaped the trends the industry would follow in the 'Contentious Years'. The conditions[29] allowing ease of entry in the first stage of the industry were no longer present in the second stage and entry into the industry had become increasingly difficult. H. G. Vatter writes that, with exception of the Kaiser-Frazer Corporation, "The cessation of effective entry, from the standpoint of new enterprise, occurred with the founding of

the Chrysler Corporation in 1923..." and "...The cessation of effective entry, from the standpoint of make of car, occurred with the birth of the Plymouth in 1928..." Further to this he writes that, "after Plymouth had cut into the low-price field no new make, either of an existing or a new firm, was able to offer a serious challenge to the control of this field by the big three"[30]. This indicated that barriers to entry had been effectively established in the 1920's and were an industry reality in the 1930's and later years. The structural changes which solidified in the industry's second stage appear to be synonymous with industry maturation and market saturation[31]. The automobile market transformed into a primarily replacement market. Demand was expected to increase through replacement demand or purchases of cars based on increasing population and improvements in purchasing power and standards of living (often leading to multiple ownership)[32].

During this time the industry not only experienced an increased intensity in competition for market shares between individual firms but also experienced a change in the style of competition. Competition evolved from price competition to product competition. Competition now focussed on service and vehicle quality in certain price categories rather than on price fluctuations for relatively basic products.

During the second stage the demand for automobiles grew more inelastic. Replacement demand became the dominant form

implying that most consumers were out to supplant their old car with a new one or add a second vehicle. Consumer tastes also changed. Consumers wanted something more than just four wheels, a frame, and an engine. They became more discriminating when shopping for a car, desiring a vehicle which would reflect their pride and make neighbours envious.

By the mid to late 1920's demand for the basic car (such as Ford's Model T) began to lose ground to vehicles of various qualities, styles, and sophistication. The days of Ford's policy of producing an affordable, basic utility vehicle for consumers was nearing its end. To meet this change in demand and in an attempt to increase its market share the innovative General Motors emphasized variations in style and quality in their automotive products. They succeeded, as their market share soon surpassed Ford's during the 'Contentious Years'. In this process demand became more inelastic for several reasons. First, demand became primarily replacement orientated. Second, cars were durable goods which when once purchased were held for several years - infrequently purchased. Related to their durability was the fact that consumers could postpone future purchases until a product they desired came out and the life span of the automobile gave the consumer an alternative market - the used car market. Manufacturers not only had to compete among themselves and with models of various price classes, but also with earlier models.

The relatively inelastic demand meant that prices became more stable in the short term with an overall price increase in the long term, as added quality within a conventional price range became the dominant factor. Significant price decreases with increased production costs through increased styling and quality improvements with only minimal sales increases would cut into company profits or even create company losses. Price competition became something to be avoided. H.B. Vanderblue notes[33], however, that the elasticity of demand and the industry's general pricing policy[34] may be less important in determining the willingness of consumers to buy automobiles than the intensity of demand which is a function of the state of prosperity in the economy. Vanderblue, in "Pricing Policies In The Automobile Industry," explains that a firm's pricing policy for automobiles must take into account both the supply side and the demand side for a product. Between these two sides, a price must be set which will be competitive with other sources of supply and will fit estimates which the market will absorb at specific prices. In addition, dealers must also be given a sufficient profit margin to sustain their operation as selling outlets and service areas to consumers.

The 1930's brought about problems which were especially harsh for the small and medium sized producers. The durability of the automobile was put to the test and proven during this economic crisis as the ages of cars in use were

extended, often through repair. The prolonged use of the automobile was not something the industry looked forward to and it was a disaster for most of the smaller producers. The small and medium producers manufactured vehicles which mainly sold in the mid to upper price levels. Sales in these levels fell dramatically during the depression[35], and accordingly resulted in the disappearance of numerous firms. Firms which survived were forced to bring out lower-priced models[36]. For the Big Three the depression, although difficult, was never really life-threatening as it was for their smaller competitors[37].

As the market became saturated, competition between firms increased. Firms realized that in order to gain sales they would have to produce a superior product which would replace the sales of rival firms. It was a type of constant sum game. Manufacturers placed greater emphasis on product differentiation as a means to make sales and began to promote their product to the public by emphasizing devices which they claimed would augment economy and efficiency of operation. Such devices included overdrive, automatic transmissions and 3-point rubber mounted engine suspensions. This did much to improve the mechanical quality and variety of the car. However, this type of competition further increased the difficulties of the smaller firms in the industry. "Whatever the smaller companies could do, the big ones could do just as well - frequently better, because they had

greater resources for development, testing and marketing"[38]. As a result the large firms grew larger, and the small firms in relation to the large firms became smaller with fewer in between.

It is interesting to note that the newly installed devices manufacturers used to attract consumers were not invented during this stage[39]. Most had been invented earlier, but they were not introduced to consumer models until the 1930's when competition for market shares became an industry norm and emphasis on the mechanical qualities of the automobile was renewed. Many of these developments inadvertently and sometimes intentionally resulted in the development of significant entry barriers. The growth in plant and firm size meant that in order to be successful a new entrant must meet large fixed investment costs. As well, the fact that the market had basically become a constant sum meant that the entering firm could only make sales by taking away sales from other firms. Given the size and market position of the Big Three, this was a near impossibility. Large firms in themselves act as entry barriers as they enjoy advantages in costs and competitive power over potential entrants through their existing network of marketing and servicing facilities, the economies of scale they experience from mass production, their involvement in consumer financing and their established business knowledge.

The economies that these firms achieve through large scale production may also allow them to emphasize frequent style changes, with relatively little or no additional production cost. This is a market weapon against smaller rivals, and an entry barrier to potential firms. (See Appendix B). It was noted that "The Big Three, GM in particular, apparently have been fairly successful in forcing a type of market practice" based on frequent style changes "on smaller firms which results in ever mounting costs for those firms while GM's costs and Ford's costs remain virtually the same"[40]. The style changes can eventually exhaust the smaller firms' capital forcing them to close down.

Counting previously independent companies which merged or fell under the control of another company (for example, count Buick, Cadillac, Chevrolet, Olds, and Pontiac as one company, ie. General Motors Corporation rather than five individual firms) the number of passenger car producers fell from sixteen in 1930 to eight in 1941[41]. From about 1925 the industry experienced rapid increases in concentration. The swiftness of its growth, and its effect on competition, can be seen from the data in Table 2. Between 1929 and 1941 the market share of the Big Three (Ford, General Motors, and Chrysler) increased from 75.6 percent to 89.3 percent. The market share of Willys, Hudson-Essex, Nash, Studebaker, and Packard together accounted for 17.9 percent of the passenger car market in 1929, but by 1941 their share had declined to

TABLE 2

Market Shares of Leading U.S. Car Producers: 1925-1941

Firm	Market Share 1929a	1931a	1933b	1935b	1937b	1941b
Ford	33.9	27.9	21.0	30.2	22.7	18.8
G.M.	32.8	43.3	41.5	38.5	40.6	47.3
Chrysler	8.9	12.0	25.8	22.9	25.4	24.2
Big Three	75.6	83.2	88.3	91.6	88.7	89.3
Willys	5.1	2.7	c	c	c	c
Hudson-Essex	6.5	3.2				c
Nash	2.7	2.1	6.7	7.3	9.2	c
Studebaker	2.4	2.7				c
Packard	1.2	.8				c
Other	17.9	11.5	6.7	7.3	9.2	c
All Other	6.5	5.3	5.0	1.1	2.1	10.7

a. Automotive Industries, February 28, 1931, Feb. 23, 1929, Feb. 25, 1933.
b. Simon N. Whitney, "Automobiles," Antitrust Policies, vol. II, Twentieth Century Fund New York, 1958, p. 468.
c. Included with all other.
d. FTC, [sic.] Report on Motor Vehicle Industry, Government Printing Office, Washington D.C. 1938, p. 31.

Source: S. Boyle, "Why Not Try Competion?" Industrial Organization Review, vol. II, nos. 1 and 2, (1974): Table 36, p. 62.

less than 10.7 percent. This shows a remarkably strong trend towards industry concentration of power.

In review it may be seen that the United States automotive industry began under an economic system emulating perfect competition, with many producers of relatively equal size but soon started on the path which set in motion a

trend to oligopoly. In its early years, a system of perfect competition governed the industry's organization. Low financial and technological requirements, in conjunction with abundant original demand, allowed firms to enter the industry with minimal resistance. The process of mass production meant that more vehicles could be produced and be produced with greater economic efficiency. In turn this passed on savings to both producers and consumers.

Mergers played an important role as a form of growth for many companies early in the industry's history. For others, re-investment of earnings acted as the main form of company growth. Rapid successful growth of a few firms led to the industry's domination by one or two firms through sheer size. However, abundant numbers of firms still served to provide a competitive market structure.

Increasing costs of entry in the industry, greater emphasis on product differentiation, and the transformation of the automobile market towards replacement demand, shifted the industry from being price competitive to becoming product competitive. Harsh rivalry for market shares, in conjunction with the Great Depression, brought about the elimination of many firms which were small and undiversified in their product lines. As firms grew in size, the number of competitors decreased.

The early circumstances of the industry indicated that the greater a firm's size the stronger its economics while the market eventually dictated a limit to the number of growing firms which could be supported. By the end of the second stage it became apparent that the industry had become simpler and less competitive in structure and had entered a phase of oligopolistic organization.

NOTES

[1] In his book The Automobile Industry, R. Epstein argues that, "Automobile manufacturing, as distinguished from experimental building commenced in 1900," while J. Rae, in his book, The American Automobile, claims that, "The year 1897 marks the effective start of the automobile industry in the United States, if production of a few vehicles of various types in previous years is discounted." Ralph C. Epstein, The Automobile Industry (Chicago: A.W. Shaw and Company, Limited, 1928), p.30 and John B. Rae, The American Automobile (Chicago: The University of Chicago Press, 1965), p. 21.

[2] P.J. George and E.H. Oksanen in their study on "Saturation in the Automobile Market in the Late Twenties: Some Further Results," Explorations in Economic History vol. 11 no. 1. (Fall 1973): 73-85 conclude that it was highly unlikely that saturation existed in the automobile market in the late twenties.

[3] Lawrence H. Seltzer, A Financial History Of The American Automobile Industry (Cambridge: The Riverside Press, 1928.), p. 20.

[4] Epstein, The Automobile Industry, p. 163.

[5] Ibid., p. 164.

[6] Stanley E. Boyle, "Why Not Try Competition? A Suggestion to Achieve Competition in the Motor Vehicle Industry in the United States." Industrial Organization Review, vol. II nos. 1 and 2, (1974): 61.

[7] Ibid., pp. 184, 185, 191.

[8] Robert F. Lanzillotti, "The Automobile Industry," in The Structure of American Industry, 4th ed. Edited by Walter Adams (New York: The Macmillan Company, 1971), p. 259.

[9] For a more detailed account of the Seldon Patent and its influence on the automobile industry see Epstein, The Automobile Industry, pp. 227 - 239 and Seltzer, A Financial History Of The American Automobile Industry, pp. 39-44.

[10] George V. Thompson, "Intercompany Technical Standardization in the Early American Automobile Industry," Journal Of Economic History vol. 14 no. 1 (Winter 1954): 2-6.

[11] Homer B. Vanderblue, "Pricing Policies In The Automobile Industry: Incidence Of Demand," Harvard Business Review vol. 18 no. 1 (Autumn 1939): 69.

[12] Epstein, "The Rise And Fall Of Firms In The Automobile Industry." Harvard Business Review vol. 5 no. 2 (January 1927): 169.

[13] Leslie Szeplaki, "Structure, Conduct And Performance In Modern American Automobile Manufacturing," South African Journal Of Economics vol. 40 no. 3 (September 1972): 216-217.

[14] Epstein, "Leadership In The Automobile Industry, 1903-1924," Harvard Business Review vol. 5 no. 3 (April 1927): 292.

[15] Alfred D. Chandler, ed., Giant Enterprise Ford, General Motors, And The Automobile Industry (Burlingame: Harcourt, Brace and World, Inc. 1964), p. 15.

[16] Ibid., pp. 15-16.

[17] See Szeplaki, "Structure, Conduct and Performance," Table I, p. 217.

[18] Boyle, "Why Not Try Competition?", p. 61.

[19] Ibid., p. 36.

[20] Ibid., pp. 36, 39.

[21] Eva Flugge, "Possibilities And Problems Of Integration In The Automobile Industry," Journal Of Political Economy vol. 14 no. 2 (April 1929): 170.

[22] Ibid., pp. 165, 166.

[23] Seltzer, A Financial History Of The American Automobile Industry, pp. 86, 87.

[24] Boyle, "Why Not Try Competition?, p. 41.

[25] C.C. Edmonds, "Tendencies In The Automobile Industry," American Economic Review vol. 18 no. 3 (September 1923): pp. 437-438.

[26] Flugge, "Integration In The Automobile Industry," p. 173.

[27] Some estimates of Ford's Market Share in 1921 run up to about 60 percent. See Szeplaki, "Structure, Conduct And Performance," p. 216.

[28] Boyle, "Why Not Try Competition?, p. 61.

[29] Some of these conditions included abundant and growing market demand, low financial requirements, profitable returns, and a relatively simple design, engineering,

and assembly process.

[30] Harold G. Vatter, "The Closure Of Entry In The American Automobile Industry," Oxford Economic Papers vol. 4 no. 3 (October 1952): 219.

[31] Clare Elmer Griffin in his work on the "Evolution Of The Automobile Market," Harvard Business Review vol. 4 no. 4 (July 1926): 407-416, argues that the automobile industry of the mid twenties was in a pre-saturated state and would probably under normal conditions become saturated within the next few years. Vatter in his work on "The Closure Of Entry In the American Automobile Industry," argues that the automobile market became saturated in 1923, and George and Oksanen in their study on "Saturation in the Automobile Market in the Late Twenties," argue that dynamic saturation in the automobile market was highly unlikely as early as the late twenties. Although the exact year the automobile market became saturated can be disputed, it can be assumed that by the early thirties the market demand became predominately one of replacement demand and so was indeed saturated.

[32] Griffin, "Evolution Of The Automobile Market," pp. 408-409.

[33] Vanderblue, "Pricing Policies In The Automobile Industry," pp. 68, 80.

[34] Microfilms Limited, 1970. Harvard Business Review vol. 17 no. 4 (Summer 1939): 396.

[35] Ibid., see Table I, p. 392 and Chart III, p. 394.

[36] Some firms such as Nash and Hudson were successful at producing and releasing a car (Nash's Lafayette, 1934-1938, and Hudson's Terraplane, 1933-1937) which could compete in the low-priced market. Initially sales were on the increase and the future looked bright, perhaps too bright as the producers began to toy with price and quality and soon the car was out of the low-priced field and into the medium-priced field. Soon both brands were out of the market completely. It seems Nash, Hudson, and similar others outcompeted themselves. For more on this see Vatter, "Closure Of Entry," pp. 220-224.

[37] For a good discussion on the effects of the depression on producers in the automobile industry see Rae, The American Automobile, pp. 109-120.

[38] Ibid., p. 114.

[39] Ibid.

[40] John A. Menge, "Style Change Costs As A Market Weapon," Quarterly Journal Of Economics vol. 76 no. 4 (November 1962): 634. Menge also points out, however, that the smaller firms which refuse to play this style change game, have at least some chance of survival and prosperity as style changes may be offset by emphasizing economy and function instead. He points to A.M.C. and Volkswagen as examples.

[41] Boyle, "Why Not Try Competition?" p. 62.

Chapter III

POSTWAR DEVELOPMENT OF THE AMERICAN AUTOMOTIVE INDUSTRY: 1946 - 1984

This chapter continues the examination of the economic development of the American automotive industry. It is divided into two stages based on changes in the characteristics of the industry. Within these two postwar periods an examination of the developments and changes in industry structure, behaviour, and performance will be made.

3.1 YEARS OF DOMINANCE: 1946 - 1972

The third stage of the industry's development is characterized by substantial growth in output, increases in concentration, substantial profits, additional declines in the number of producers, and the full establishment of oligopolistic control. Sales and production of motor vehicles from U.S. plants during this period grew consistently until 1965. After 1965 the sales of U.S. passenger cars dropped slightly while sales of trucks showed a further increase. This reflects the maturing of the passenger car industry while the relative importance of truck and bus production tended to increase. In 1960 truck and bus factory sales accounted for 16.7 percent of total motor vehicle factory sales and by 1972 they accounted for 21.7 percent of total factory sales.

In 1946 factory sales of motor vehicles totalled approximately 3.1 million with a shipment value of about $3.0 billion and reached over 11.2 million of sales with a shipment value of just under $31.0 billion by 1972. (See Appendix A, Table 39.)

The pause in automobile production during World War II temporarily restored a number of the conditions present during the early years in the industry. These conditions included an abundant demand for new cars based on a shortage of both new and used cars and increased average age of cars in use (Table 3), a limited supply of competing new cars,

TABLE 3

Average Age Of Passenger Cars In Use In The U.S.A.
Selected Years: 1941-1955

Year	Years Old
1955	5.9
1953	6.5
1950	7.8
1946	9.0
1941	5.5

Source: Motor Vehicle Manufacturers Association Inc. MVMA Motor Vehicle Facts and Figures '79. Detroit: Motor Vehicle Manufacturers Association of the United States, Inc., 1979, p. 38.

and a surplus supply of relatively inexpensive war-time in-

dustrial plants and equipment which could be converted to automobile manufacture. With demand for new cars greater than the number producers could provide, most firms refrained from making any significant model changes. It was under these conditions that Crosley and Kaiser-Frazer entered the industry. Their influence on the industry, however, was quite minimal and both companies ended passenger car production in 1952 and 1955 respectively. Kaiser-Frazer merged with Willys-Overland in 1953 and their joint production of passenger cars ceased in 1955.

These entry failures resulted because the cars were over-priced and lacked the quality and image enjoyed by established makes of cars. Increasing supplies of competitive makes cut into their sales while demand diminished in response to the 1948-1949 recession[1]. The tapering off of demand in the late 1940's induced the firms in the industry to turn once again to the pattern of product rivalry in the 1950's. The subsequent frequent changes in style may also have been decisive in shortening the life-span of Crosley, Kaiser-Frazer, and other small independents, with their inability to amortize fully their tooling costs before the next change in style. As a result, the smaller firms experienced higher per unit production costs and were forced to price their products above those of the large volume producers (General Motors, Ford, and Chrysler) and they suffered losses from reduced sales[2].

As for the profitability of the American automobile producers from 1946 to 1972, 1946 was a year of reconversion and profits were relatively low. By 1947 most firms had completed reconversion to peacetime levels and, through to 1950, generally all U.S. automobile firms had high levels of profitability, with exception of Kaiser and Crosley. It is believed that the depression and the restraint measures of World War II led to the development of excess demand, and an increase in consumer holdings of cash and liquid assets. These conditions allowed the automobile manufacturing companies to earn high, if not record, levels of profits between 1947 and 1950. By 1951, however, the excess demand began to taper off, forcing the automobile companies once again to compete for consumer sales[3].

Appendix A, Table 39, presents data on the factory sales and value of U.S. passenger car, truck and bus sales from 1942 - 1972. This table shows that, between 1946 and 1960, motor vehicle sales increased from almost 3.1 million to almost 7.9 million units, yielding an increase of approximately 155 percent. At the same time, the value of sales increased from about $3.0 billion to about $14.5 billion or by approximately 383 percent. Between 1961 and 1972 motor vehicle sales increased by approximately 69 percent, while the value of sales increased by approximately 148 percent, The value of sales showed much larger gains during both time periods and the overall pattern presented in Appendix A, Ta-

ble 39 and in Table 4, shows that average price increased

TABLE 4

Average Motor Vehicle Value: 1942-1972

Year	Average Passenger Car Value	Average Truck And Bus Value	Total Average Value
1942	$ 735.05	$ 1,743.65	$ 1,527.83
1943	733.81	2,074.91	2,074.65
1944	732.79	2,306.27	2,304.97
1945	823.43	1,802.63	1,708.75
1946	921.39	1,108.70	978.43
1947	1,106.19	1,397.17	1,181.36
1948	1,245.87	1,366.35	1,277.24
1949	1,299.13	1,229.11	1,286.43
1950	1,270.37	1,277.11	1,271.50
1951	1,356.44	1,628.69	1,413.86
1952	1,493.96	1,904.33	1,584.22
1953	1,471.74	1,731.84	1,514.59
1954	1,478.37	1,592.84	1,496.44
1955	1,572.30	1,617.94	1,578.51
1956	1,677.23	1,880.91	1,709.74
1957	1,831.79	1,881.11	1,839.36
1958	1,881.33	1,972.00	1,896.82
1959	1,884.09	2,056.22	1,913.19
1960	1,822.41	1,967.96	1,844.51
1961	1,855.73	1,901.35	1,863.48
1962	1,885.37	2,081.78	1,915.17
1963	1,888.92	2,112.76	1,924.90
1964	1,913.98	2,092.61	1,943.59
1965	1,975.17	2,131.32	1,999.91
1966	2,041.60	2,283.81	2,082.19
1967	2,104.87	2,333.31	2,144.05
1968	2,193.57	2,463.15	2,241.26
1969	2,280.13	2,566.94	2,334.49
1970	2,234.71	2,847.81	2,360.65
1971	2,493.98	2,904.58	2,573.23
1972	2,621.62	3,128.23	2,731.61

Source: Calculated from Appendix A, Table 39.
Value/Number = Average Value.

almost every year regardless of sales. The examination of similar figures for the industry in its earlier stage, as shown in Table 5, indicates that the pattern varied consid-

TABLE 5

Value of Motor Vehicle Production and Shipments: 1929-1941

Year	Number of Vehicles a	Value of Shipments b	Average Value c
1929	5.3	$ 3.4	$ 1,559
1930	3.4	2.0	1,700
1931	2.4	1.4	1,714
1932	1.3	.8	1,625
1933	1.9	.9	2,111
1934	2.7	1.5	1,800
1935	4.0	2.1	1,905
1936	4.7	2.5	1,880
1937	4.8	2.8	1,715
1938	2.5	1.6	1,563
1939	3.6	2.3	1,565
1940	4.5	2.9	1,552
1941	4.8	3.6	1,333

a. Millions of motor vehicles
b. Billions of dollars
c. Current dollars. Value of shipment divided by number of vehicles.

Source: Boyle, "Why Not Try Competition?" Industrial Organization Review, vol. II nos. 1 and 2 (1974): Table 32, page 58.

erably. During this period the number of vehicles and value of shipment figures fluctuated and moved in similar directions. The average value figures fluctuated in response to

production and value of shipment figures and at no time moved in the same direction for more than two consecutive years. This pattern indicates the greater influence competition had on price fluctuations in those years[4].

Structually the industry had become increasingly concentrated. The number of passenger car producers fell from a high of ten, between 1946 and 1952, to a low of four by the late 1960's (See Table 6). The four producers in 1972 were General Motors, Ford, Chrysler, and American Motors. In 1946, the ten producers and their percent of new car registrations were: G.M. 37.8 percent, Ford 22.1 percent, Chrysler 25.7 percent, Nash (which merged with Hudson to form American Motors in 1954) 4.7 percent, Hudson 4.0 percent, Studebaker 3.2 percent, Packard 2.0 percent, Crosley 0.2 percent, Willys-Overland 0.1 percent, and Kaiser-Frazer 0.2 percent. The Big Three (G.M., Ford, and Chrysler) increased their market share from 80.4 percent (1948) to 96.8 percent in 1972[5].

Although the number of truck producers had been larger than the number of car producers since 1946, the patterns of change in truck production parallels those for car production in many respects. Truck producers, other than the "Big Three", are not integrated into passenger car production. In the early 1970's, the major truck producers in order of production were General Motors, Ford, Chrysler, International Harvester, Jeep, White, Mack, Kenworth, Diamond Reo, Pet-

TABLE 6

Number of U.S. Producers of New Passenger Cars in Selected Years: 1946-1972

Year	Number of Producers a	Share of Passenger Car Product "Independents"
1946	10	15.5
1952	10	13.3
1954	6	5.6
1956	5	3.4
1966	5	3.2
1968	4	3.0
1972	4	3.2

a. Does not include Checker Motors Corporation which began operation in 1958. *

Source S. Boyle, "Why Not Try Competion?" Industrial Organization Review, vol. II nos. 1 and 2 (1974): Table 39 p. 64.

* Checker Motors, a specialty producer has manufactured taxi-cabs since the 1920's and since 1958, has also produced vehicles on a small scale for the general public. See Robert R. Ebert, "Entry Into The Automobile Industry: The Case of Specialty Producers", Bulletin Of Business Research, vol. 50 no. 8 (August 1975): 6.

erbuilt, Brockway, FWD, Devco, Oshkosh and a few other small producers. In 1948 the "Big Three" held 69.8 percent of total truck production while the "other" producers held 30.2 percent. By 1972 The "Big Three" had increased their production share to 85.4 percent and the "other" producers had dropped to 14.6 percent with International Harvester and Jeep accounting for 10 percent of the "other" total[6]. Thus, both sectors of the industry were characterized by

high levels of oligopoly control, with the smaller firms experiencing a shrinking market share.

It may be argued that the reason for the prevalence of the high level of concentration in the automotive industry is the existence of substantial manufacturing economies of scale. Or, put in another way, "One condition that could lead to concentrated market structures is the existence of substantial scale economies, permitting relatively large producers to manufacture and market their products at lower average cost per unit than relatively small producers"[7]. Although there are some industries where the economies of scale may be sufficient to justify high levels of industry concentration, the determination of the structure of the automobile industry is more complex.

Joe Bain estimated the optimal scale of an automobile plant and found that the optimum scale of a plant was between five and ten percent of national automobile output, and that outputs which were substantially less than optimum did not result in significantly higher costs[8]. Lawrence White, dealing with the estimation of economies of scale and minimum efficient plant size, found the minimum efficient plant size to be one which operates at a rate of about 60 units per hour on a two shift basis, giving an output of between 200,000 and 250,000 units a year. For transmissions, engine casting, and machining, an output of between 260,000 to 280,000 units would fully exhaust economies to scale.

Stamping operations contain the largest volume economies with the optimum economies of scale achieved at around 400,000 units per year. The relative production-cost relationship was estimated by White[9] to be as follows:

Annual production	Relative unit costs
50,000 units	120
100,000 units	110 - 115
200,000 units	103 - 105
400,000 units	100
800,000 units and up	99

These data indicate that the average cost curve for the automotive industry is reasonably flat over a long range of output, and that smaller plants producing 100,000 units per year face only moderate cost increases.

The process in the automotive industry which may require a higher level of output to achieve optimum scale economies is the production activity of metal stamping for vehicle bodies. This process needs extensive tooling and heavy presses where sheets of steel are molded into previously determined body designs. However, C.F. Pratten found that sheet metal stamping and pressing accounted for merely nine percent of value added as a percentage of total cost[10]. Therefore a relatively sizable increase, say ten percent, in metal stamping costs at suboptimal levels would translate into a one-percent or less increase in total cost when the entire system is taken into account[11]. It is clear that, although there may be some scale economies in body stamping, they do not greatly influence the industry,

as substantial increases in the price of stamped parts could occur without increasing automobile costs substantially.

However, as mentioned in the previous chapter and in Appendix B, the more rapid the changes in style the greater the expense involved and these costs may even act as a substantial barrier to entry for new U.S. producers. Because "Style changes raise unit costs without guaranteeing offsetting increases in volume...,several major independent firms like Studebaker, Packard, and Kaiser-Frazer found competing too expensive and have exited from the automobile industry"[12]. Economies to scale in automobile production may be summarized as follows:

> Automobile producers need not be large to achieve economies of scale in production. In the absence of style change the average cost curve becomes horizontal at 200,000 units for integrated producers and 30,000 units for nonintegrated producers. But when styling is introduced as a market weapon, higher annual production is needed to attain profitable operations and lowest average cost[13].

As for firm economies, White estimates that a firm should have an output of about 800,000 units per year, producing at least two makes of automobiles in different price categories in, most likely, four plants. He explains that "the best hope for survival in the automobile industry lies in being a multiple-make producer, the only producer who can weather the uncertainties of the industry"[14]. With 800,000 vehicles being produced in a year the firm should be able efficiently to produce three or four distinct engines

and transmissions enabling the firm to offer consumers an attractive variety in each make.

In 1964 there were forty-five automobile assembly plants in the United States. Of these, thirty, or 67 percent, were in the 1.0 percent to 2.9 percent range of U.S. production. Nine, or about 20 percent of the plants, had outputs of 250,000 automobiles or more per year. By 1972, a near record year in U.S. motor vehicle production, thirty-one, or 71 percent of the forty-four automotive assembly plants in operation at that time, had outputs between 1.0 percent and 2.9 percent of total U.S. production. There was no change in the number of plants with outputs of 250,000 automobiles or more per year. This shows that very few changes took place in terms of the median plant size and the number of large plants in operation. As well, between 1964 and 1972, with the exclusion of 1966, the average size assembly plant in the United States accounted for between 2.17 percent and 2.27 percent of U.S. production. In 1966 it reached 2.43 percent. As for the number of automobiles produced by the average size plant, this fluctuated from a high of 207,500 in 1966 to a low of 164,000 in 1971[15]. This shows further that only a moderate variation in average plant size occurred during this period and that the average size of these plants was relatively small. In addition it seems that White's minimum efficient size estimate of 200,000 to 250,000 automobiles per year is a fairly accurate

and adequate description of necessary plant size in this industry.

It appears that there has been, on a percentage basis, a decline in the size of motor vehicle production plants. For example, in 1960, there were two plants in operation accounting for between six and seven percent of industry output, while there was none in 1965 or 1971. Likewise, in 1965, two plants had outputs between five and six percent, but in 1971 there was none[16]. It seems that the type of adjustment has generally been for firms to adjust plant sizes up or down with relatively small changes in the number of plants operated. Confronted by the fact that the demand for automobiles has varied by 20 percent or more on a year-to-year basis, firms in the industry appear to have adjusted output by altering the rate at which their individual plants are operated[17]. This tactic avoids shut-down and reopening costs but involves some scale diseconomies where specialization of plants is limited.

Well established brand names, physical product differences, and tight, well run product distribution systems form a subtantial product differentiation barrier to entry. To be successful, automobile manufacturers require an effective dealer system which will build and maintain the product preferences of buyers. The dominant form of automotive distribution is the exclusive dealer organization system. This has evolved as producers prospered and became better able to

assume the financial burdens related to the development and maintainance of a network of closely controlled dealers. In this system the dealer is permitted to carry one or a combination of domestic products by the same manufacturer. Sometimes the dealer may carry some noncompeting foreign automobiles.

Table 7 shows that just over 26,000 franchised new car dealers were used for the distribution of automobiles in

TABLE 7

New Passenger Car Franchises, by Company: 1965, 1973

Company	Net 1965	Net 1973	Percent Dealers Exclusive * 1965	Percent Dealers Exclusive * 1973
American Motors	2,968	1,952	100.0	100.0
Chrysler Corp.	6,276	5,418	46.9	36.2
Ford Motor Co.	7,527	6,676	70.8	58.6
General Motors	13,680	12,050	66.9	59.7
Total	30,451	26,096		
%Intercorporate **	.036	.025		

* Exclusively output of single make, ie., Ford, Dodge, Chevrolet, etc. shown as a percent of the net total for each company.
** Number of dealers carrying brands of 2 or more different U.S. producers.

Source: Boyle, "Why Not Try Competition?" Industrial Organization Review, vol. II nos. 1 and 2 (1974): Part of Table 59, page 94, and Table 6, page 19.

1973, and that there was a downward trend in the number of franchised new car dealers along with changes in the number of exclusive and intercorporate dealers. The decrease in the number of exclusive dealerships signifies that a larger percent of dealers are carrying more than just a single brand (e.g. Dodge, Plymouth, and Chrysler). The decline in the number of intercorporate dealers can be used to show the lack of competition in the industry, as declines imply that consumers can view only one company's car at a time, and buyers are given fewer opportunities to engage in direct comparison shopping of different brand makes in the same building. Further, as White explains, "Besides strengthening the companies' supervision and control over retailing, exclusive dealing encourages product differentiation and discourages price competition among makes..." and "...the preference for exclusive dealings by the Big Three may have served in the past to have helped weaken the smaller Independents and to have raised the barriers to entry, since the best dealers have probably gravitated toward the larger, better established, less risky companies"[18].

Dealers in the smallest size class, of under 100,000 dollars in assets, earned an average rate of return of 5.1 percent over the period 1968-69 to 1970-71. As the size of firms went up, the rate of return went down, (ie., from 5.1 percent for firm asset size class of under $100,000 to 3.8 percent for firm asset size class of between $100,000 -

$500,000, to 2.9 percent for firm asset size class of between $500,000 - $1,000,000, to 2.7 percent for firm asset size class of between $1,000,000 - $5,000,000, to a low of 1.7 percent for firms with assets of five million dollars or over). This indicates that, for the dealers, there do not seem to be scale economies[19].

Financing activities of major automobile companies also strengthen entry barriers. Major automobile producers are not only significant in financing the purchase of passenger cars, buses, trucks, and even some household durables but they are also widely engaged in financing the formation and operation of new car dealers. This gives the major motor vehicle producers, who are heavily involved in financing activities, a big advantage over any competitor or potential competitor who is not so strongly integrated in this area. The former are able to provide financial services to potential customers as well as to the automobile dealers themselves.

The financing of automobiles originally involved finance companies on an experimental basis. After the competitive advantages of automobile financing were realized the major automobile manufacturers entered the market with their own automobile finance comapanies. General Motors founded the General Motors Acceptance Corporation (GMAC) in 1919. It is the oldest and largest producer-owned motor vehicle financing corporation. The Ford Motor Company established

the Ford Motor Credit Company (FMCC) in 1959, and the Chrysler Corporation formed the Chrysler Financial Corporation (CFC) in 1966. Although Ford and Chrysler were involved in financing activities before the 1950's and 1960's, they were forced to dispose of all their interests with installment finance affiliates in 1938, under a consent decree arrangement. This was a result of cases filed against Ford, Chrysler, and General Motors by the Federal Trade Commission and the Department of Justice. These cases basically attacked the producer owned finance companies for their practices of pressuring the use of their financing on dealers and customers, and for their excessively high rates. However, General Motors fought against these charges and was eventually able to work out a consent decree in July 1952, which allowed it to maintain ownership of GMAC[20].

In 1971, GMAC and CFC financed a total of $36 billion of sales. Approximately 75 to 80 percent of the total, or about $28 billion, was used to finance the wholesale purchase of their products by dealers. It is estimated that Ford accounted for an additional $10 billion of financing. Together the three companies handled approximately $45 billion[21]. With more than one-half of all sales to dealers being financed by the finance companies, it is clear that the dealers have been tied quite closely to the producers, as their suppliers also act as their bankers. As a result S. Boyle has argued that it is not surprising to find low

bankruptcy rates in the industry and that the bankruptcy rates in the retail sector of the industry are essentially predetermined, as the automobile producers keep bankruptcy levels where they want them to be[22].

Huge advertising expenditures constitute yet another substantial barrier to entry. Table 8 shows the enormous advertising expenditures made by the major automobile companies in selected years between 1957 and 1971. It can be argued that automobile advertising is relatively effective, as the companies involved would probably not have undertaken such large expenditures if they experienced little or no benefits from advertising. Since 1957 total advertising expenditures by the major U.S. automobile producers have steadily increased. Table 8 indicates advertising on television and in magazines by these producers totaled just under a $100 million in 1957 and, by 1971, it grew to almost $230 million. Firms may use advertising as an aggressive tool in an attempt to expand sales and demonstrate the superiority of their product(s). For smaller firms this situation can become quite challenging and costly. White points out that, where there is a small firm and a large firm, the smaller firm will basically be faced with two choices. It can either match the larger firm's total advertising expenditures or the larger firm's advertising expenditures per unit of sales. If the smaller firm matches the larger firm's total advertising expenditures it will suffer a

TABLE 8

Television And Magazine Advertising Expenditures Of Major U.S. Automobile Producers, Selected Years: 1957-1971 ($000)

Year	AMC	Chrysler	Ford	GM	Total
1957	1,854	30,558	27,640	36,005	96,057
1961	4,265	17,659	31,883	56,063	109,870
1963	8,546	24,935	41,761	69,930	145,172
1965*	10,077	35,251	46,504	74,518	166,350
1969	12,620	46,575	62,271	99,157	220,623
1970	14,816	40,261	50,615	57,715	163,407
1971+	13,884	42,839	69,410	103,074	229,207

* Newspaper advertising data are not available on an annual basis. Data for 1965 show the four-company total to be $83,600,568, divided in the following manner: AMC, $5,890,917; Chrysler, $16,203,271; Ford, $22,182,227; and General Motors, $39,324,153.

+ Radio advertising data are not available on an annual basis. Data for 1971 show the four-company total to be $38,870,900, divided in the following manner: AMC, $1,881,100; Chrysler, $5,936,500; Ford, $6,420,100; and General Motors, $22,633,200.

Source: Boyle, "Why Not Try Competition?" Industrial Organization Review, vol. II nos. 1 and 2 (1974): Part of Table 68, p. 107.

greater per unit advertising cost disadvantage. If it matches the larger firm's expenditures per unit of sales it will suffer from less quantitative advertising coverage[23]. Table 9 indicates that although American Motors, the smallest of the major American automobile producers, spent the least total dollar amount on advertising its product, its relative advertising expenditure per car, was the greatest.

TABLE 9

Passenger Car Production and Advertising Expenditures*

	A.M.C.	Chrysler	Ford	G.M.
1969				
Advertising (thousands)	$ 12,620	$ 46,575	$ 62,270	$ 99,157
Unit Production (thousands)	242	1,392	2,163	4,420
Ave. Advertising Per Car	$ 52	$ 34	$ 29	$ 22
1970				
Advertising (thousands)	$ 14,816	$ 40,261	$ 50,615	$ 57,715
Unit Production (thousands)	276	1,237	2,017	2,979
Ave. Advertising Per Car	$ 54	$ 32	$ 25	$ 19
1971				
Advertising (thousands)	$ 13,884	$ 42,839	$ 69,410	$103,074
Unit Production (thousands)	236	1,313	2,176	4,853
Ave. Advertising Per Car	$ 59	$ 33	$ 32	$ 21

* Television and magazine expenditures and advertising expenditures per car.

Source: Part of Table 8, and 1973-1974, Automobile Facts and Figures, Detroit: Automobile Manufacturers Association, Inc., p. 10.

General Motors, the largest of the major American automobile producers, spent the most dollars on advertising but its average per car was the least. This situation seems to parallel the one described previously. American Motors suffered from a serious advertising cost disadvantage. It

seems apparent that the size of advertising expenditures may also act to forestall new possible entrants from entering the industry.

Additional oligopoly power through a further barrier to entry lies in automobile parts production. Once again it is General Motors, Ford and Chrysler who dominate the industry, making up the majority of the sales and production of automotive parts and accessories. Their parts production plants benefit greatly as they face a reliable demand from their own substantial production.

Using pre-World War II data, R. Crandall shows that the automobile manufacturers earned a large share of profits from repair and parts sales. With the exclusion of Packard, the profit margins in parts sales were enormous in comparison to the profit margins in vehicle sales. Recognition of the differences in these profit margins may even have been instrumental in the drive for integration into the parts industry[24].

General Motors, Ford, and Chrysler, have accounted for as much as 75 percent of total automotive parts and accessories production and sales. S. Nelson, in a 1970 Federal Trade Commission study using 1963 data, estimated that the sales of automotive parts was about $5.4 billion, of which around $2.4 billion in sales were made in the aftermarket. The "Big Three" manufacturers made direct sales of approxi-

mately $548 million to their franchised dealers and were responsible for 64 percent of the $5.4 billion in sales in 1963[25].

The Census Bureau indicated that, in 1967, there were approximately 1,400 parts and accessories producers. These companies can be considered small when their sales are compared with the sales of the "Big Three" automobile producers. Only five of these companies had sales of parts and accessories in excess of $100 million. Besides these, there were 12 firms with sales between $50 and $100 million, and 41 more firms with sales of $10 million or more, leaving over 1,300 of the firms in the industry with sales of $5 million or less[26]. Although some of the larger firms produced a variety of products other than automotive parts, the majority are essentially involved only in the production and distribution of parts and accessories. It should be noted that the vast majority of these relatively small size firms have been able to survive in the industry despite the dominance of the "Big Three".

The data in Table 10 indicate that, in 1973, the three large U.S. motor vehicle manufacturers operated a total of 89 parts and accessories plants in activities other than stamping, forging, and casting. With these activities taken together, the "Big Three" operated approximately 160 plants in the motor vehicle parts and accessories industry in the early 1970's. The three product groups in Table 10 can be

TABLE 10

Motor Vehicle Parts and Accessory Plants of the Big Three: 1973

Company	Product Group I	II	III	Total	Stamping Plants	Foundry and Casting Plants	Total
Chrysler	5	7	17	27	7	6	40
Ford	5	9	6	20	9	16 a,b	35
G.M.	15	16	11	42	23	10 c	75
Total	25	32	32	89	39	32 d	160

a. Plant at Sheffield, Ala., makes primarily cast aluminum products.
b. Ford also operates steel plant at Detroit Mich.
c. Cast aluminum parts are made at Massena, N.Y. plant and at Bedford, Ind. plants.
d. Three of 32 plants produce cast aluminum parts.

Source: Boyle, "Why Not Try Competition?" Industrial Organization Review, vol. II nos. 1 and 2 (1974): Tables 16, 17, and 18 pp. 29, 30, and 31 respectively.

broken down as follows: Group I includes, mechanical parts such as transmissions, axles, steering gears, drive shafts, etc.; Group II includes, engines, engine parts, and electrical machinery; and Group III includes, adhesives, heaters, air conditioners, etc.

The activity of the "Big Three" indicates that they are well diversified. They are highly successful in many of the product areas, occupying a high percentage of the leading positions. Taking data on the sales in the replacement market for a total of 29 product lines, "General Motors was

listed among one of the four leading sellers in twelve product lines. Chrysler was listed twice and Ford once...None of the other producers," such as Champion Spark Plug, Yale and Town, and Borg-Warner, to name a few, "are listed among the leading four firms more than five times"[27].

In an examination of the relative rate of return earned by 20 firms in which auto parts sales made up at least 50 percent of their total sales, it is apparent that most of them earned healthy profit levels. The data in Table 11 show that 65 percent of the firms earned a rate of return of five percent or more on sales in 1967 and that the largest firms tended to earn greater rates of return than the smaller firms. This suggests that large size is not a necessity in order to operate a parts production firm successfully but that it may be advantageous. It should be noted that firms such as Champion and Monroe, which produce spark plugs and shock absorbers respectively and almost exclusively, have attained the highest rates of return in their size class. Their success can be credited largely to their practice of specialization.

In the distribution of parts the major automobile producers have been protected by another entry barrier. Approximately 139 regional parts depots were operated by the four U.S. automobile producers in 1972. American Motors Co. operated 27 depots, Chrysler Corp. operated 24, Ford Motor Co. operated 22, and General Motors oprerated 66 depots[28].

TABLE 11

Profitability of Companies Primarily Engaged in the Production of Automotive Parts, by Sales Size Class: 1967

Sales Size Class (a)	Rate of Return (b) 10.0% or more	5.0% to 9.9%	2.4% to 4.9%	2.4% or less
$ 100.0+	1	2	-	-
50.9 - 99.9	1	2	-	-
25.9 - 49.9	-	3	1	-
10.0 - 24.9	-	3	3	2
5.0 - 9.9	-	1	-	1
Total	2	11	4	3

a. Millions of dollars
b. Net profit after taxes as a percent of sales.

Source: Boyle, "Why Not Try Competition?" Industrial Organization Review, vol. II nos. 1 and 2 (1974): Table 56 p. 88.

Their establishment of depot systems, which provide single firm storage and distribution functions, appear to be costly in their duplicative and overlapping nature, but provide added strength to established firms.

Thus it seems that the automobile producers play a large role in the original and aftermarket for parts and accessories and that this sector is heavily concentrated, almost as concentrated as the production of motor vehicles.

To avoid price competition and a possible outbreak of price wars, the U.S. automobile industry appears to use the

oligopolistic practice of price leadership. It has been common for the largest firm to take on the role of price leader. During the post-war period General Motors has generally been the price leader with Ford and Chrysler being price followers. Prior to the postwar period Ford, the largest firm in the industry (at that time) and the firm known for its low price endeavours, was the price leader.

The practice of price leadership acts to discipline a kinked demand curve oligopolistic market. With General Motors acting as price leader, a firm such as Chrysler will find that if it initiates a relatively small price increase, it may end up loosing a large amount of automobile sales. In this case Chrysler's demand curve tends to be price elastic. See Figure 2. Conversely, if Chrysler reduces it's price below G.M.'s, it will find that G.M. and all other ri-

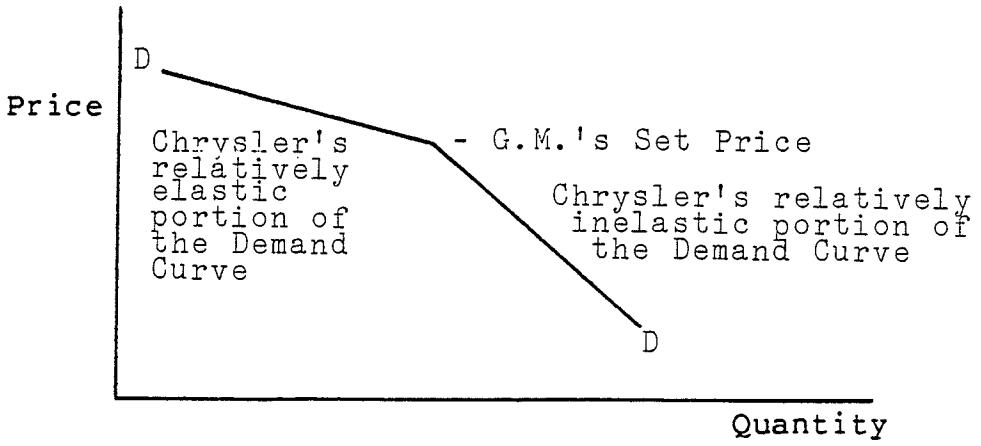

Figure 2: Kinked Demand Curve Of An Oligopolistic Automobile Producer (Chrysler)

vals who wish to maintain their market shares will also reduce prices in accordance with Chrysler's. In this case Chrysler's demand curve tends to be inelastic. Kinked demand curves, which are elastic with price increases and inelastic with price decreases, act to discourage price changes as a competitive weapon to increase market share and give rise to the use of non-price competition as the means of increasing ones market share[29].

With various brands and models a large set of prices have to be determined. Models are generally priced in relation to each other within a company, and each company's makes are then priced in relation to comparable models of other companies. Prices of car models of the automobile companies are generally set while still in the design and development stage. Quality aspects to be standard on the car model are kept within the initial price setting. Prices and quality aspects are revised accordingly as development proceeds. Final prices are set only a few days prior to the appearance of the new models on the market[30]. In general, "the advertised prices of General Motors cars set the pattern for the industry. Ford usually priced its cars very close to those of General Motors, while Chrysler and the independents often chose prices somewhat above those of General Motors and Ford cars of comparable specifications, at least before the compact car boom"[31]. The recognition of the interdependence between the "Big Three" in this manner

has meant that price competition has lost its ability to play a serious role as a competitive weapon in the industry.

Table 12 shows the direction of price changes for automobiles in the industry between 1957 and 1974. In the span of 18 years average automobile prices rose 16 times and fell twice (in 1961 and 1962). The figures in the table represent the actual average prices for all automobiles sold to buyers.

Over the same period new car prices increased by a total of $ 1,438.90 or by 42.77 percent. One may question this by pointing out that we are dealing with different automobiles each year. However, it should also be realized that the automobile offered for sale in 1957 was no longer available in 1974. This difference can be resolved through the use of the wholesale price index in Table 12 to estimate what a 1957 automobile would cost, new, in 1974. According to the Bureau of Labour Statistics, W.P.I., the price of this automobile increased by 18.7 percent. This price increase is noticeably smaller than the previously given price increase of 42.8 percent. Although both methods clearly show that automobile prices have increased over time, the first of the actual price change data (ie., the 42.77 percent increase) is much more realistic than the latter 18.7 percent W.P.I. increase, since people purchase actual automobiles rather than statistical creations[32].

TABLE 12

Annual Price Changes for U.S. Produced Automobiles: 1957-1974

Model Year	Average Change From Previous Year		W.P.I. (1967=100)	Percentage Change From Previous Year
	Dollars	Percent		
1957	+$ 198.09	+6.90	99.4	+4.1
1958	+ 104.85	+3.35	102.2	+2.8
1959	+ 89.61	+2.68	104.5	+2.3
1960	+ 11.17	+0.30	103.3	-1.1
1961	- 10.33	-0.33	102.8	-0.5
1962	- 17.89	-0.57	101.8	-1.0
1963	+ 7.41	+0.24	101.0	-0.8
1964	+ 2.17	+0.07	100.8	-0.2
1965	+ 28.70	+0.94	100.1	-0.7
1966	+ 64.55	+2.17	99.2	-0.9
1967	+ 67.81	+2.20	100.0	+0.8
1968	+ 116.25	+3.63	102.0	+2.0
1969	+ 60.33	+1.83	103.3	+1.3
1970	+ 121.36	+3.51	106.4	+3.0
1971	+ 206.88	+5.90	112.2	+5.5
1972	+ 101.46	+2.62	114.9	+2.4
1973	+ 83.85	+2.18	115.2a	+0.3a
1974	+ 201.63	+5.15	117.7b	+2.2
Total change 1956-1974	+$1,438.90	+42.77		+18.7

Average change in auto prices for average of all automobiles.
a. First five months of calendar year.
b. April, 1974.

Source: S. Boyle, "Why Not Try Competition?" Industrial Organization Review, vol. II nos. 1 and 2, (1974): Table 69 p. 111.

Thomas Hogarty, in his 1975 study on price-quality relations for automobiles, found that increases in automobile prices tend to reflect improvements in automobile quality.

He analysed price and characteristics data for 992 models manufactured by American producers for a 15 year period. Between 1957 and 1971 (the span of his study period) automobile prices were found to increase by about 18 percent after adjustments for changes in quality were made[33]. His findings tend to coincide with the wholesale price index list in Table 12. It seems that 18 to 19 percent of price increases over this period can be attributed to factors[34] other than the cost of quality improvements, while 23 to 25 percent of the total actual average price increases of 42.77 percent were related to quality improvements. Figure 3 presents a comparison of the sales and the corresponding change in average prices of motor vehicles from 1956 to 1974. It indicates that although both prices and sales have generally followed an upward trend, their pattern of movement on a year to year basis has differed substantially. It appears from the figure that although sales declined on five occasions, covering a total of seven years, only once (in 1961) did prices decline. For six of the seven years, when sales declined, prices had actually increased (in years; 1958, 1966, 1969, 1970, and 1974). Under competitive industries it is normal for prices to decline when sales decline and prices to increase when sales increase. Under oligopoly this pattern need not be followed. The information from Figure 3, suggests that oligopoly patterns prevailed in the automotive industry, as even when sales declined, prices of automobiles have risen[35].

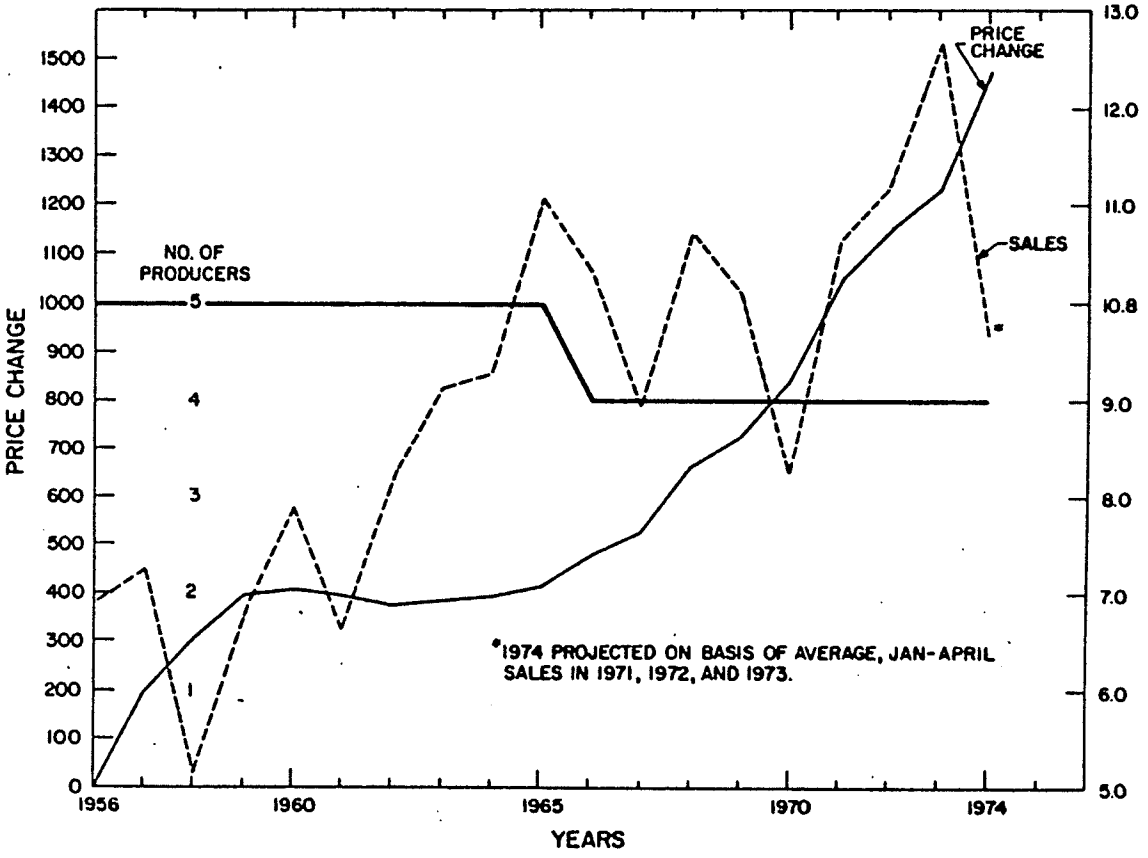

Figure 3: Change In Average Motor Vehicle Prices And Motor Vehicle Sales: 1956 to 1974

Source: Boyle, "Why Not Try Competition?" Industrial Organization Review, vol. II, nos. 1 and 2, 1974, Figure 8, p. 112.

From the 1920's up to the early 1970's automobile industry concentration increased and prices tended to become ever less responsive to changes in demand. "Between 1920 and 1936, prices declined in 10 years while increasing in only 6 years." But, "between 1956 and 1974," a period of significant and increasing concentration, "prices declined

in only 2 years but increased in each of 16 years"[36]. The industry indeed shifted from being predominately competitive in nature to becoming predominately oligopolistic in nature.

An area where price competition among the manufacturers occasionally breaks through is in the fleet and lease sales market. This market is characterised by a limited number of buyers who are well informed, make large purchases, and are quite price-conscious. This encourages the manufacturers periodically to indulge in a practice known as price "chiseling" to earn large fleet sales. However, price conformity is the norm and this is particularly favoured by the two largest firms, General Motors and Ford. If a firm persistently moves away from the established modes of pricing practices it will face disciplinary actions by the industry leaders. For example, in 1962, Chrysler became more aggressive in its fleet market operations by providing special fleet programs, leasing cars through the Chrysler Leasing Corporation at favourable rates, extending the warranty time from the standard 12 months/12,000 miles to 5 years/50,000 miles, and by offering large rebates to it's customers. As a result, Chrysler increased its fleet business from 10 percent in 1962 to almost 24 percent in 1967. Ford followed with its own aggressive policies in fleet markets in 1963. General Motors on the other hand did not follow with new aggressive policies until 1965, after its fleet sales share fell rapidly from 37.2 percent in 1958, to 13.5 percent in

1964. According to Lawrence White, General Motors cut prices in the 1965 - 1968 period not only to remain competitive with its rivals but also to demonstrate to its rivals that price cutting eventually fails to benefit any of the manufacturers. Ford and General Motors increased their fleet discounts for the 1969 model year and often made sales at a loss. By 1970, these predatory type actions by both Ford and General Motors were believed to have significantly weakened Chrysler's financial position and shortly after, Chrysler took on new less aggressive fleet policies which it felt would be more acceptable to its rivals[37].

Table 13 shows the amount of price increases requested by the U.S. automobile producers in 1973. It indicates that the larger the market share held by the firm and the more profitable it is, the greater the requested price increase. Between 1967 and 1972, G.M. earned an average rate of return on net worth of 15.4 percent, Ford earned 11.8 percent, Chrysler earned 6.1 percent, and American Motors earned -0.4 percent. These are unweighted averages, but by weighting the averages the figures would increase and the earnings for American Motors would become positive[38]. With such healthy rates of return, the requested price increases become questionable. In a competitive industry such actions would be not occur.

Vertical integration by the "Big Three" can be viewed in terms of the behaviour and performance in the industry.

TABLE 13

Price Increase Requests by U.S. Producers, November, 1973

Firm	Percent Increase	Dollar Increase
A.M.C.	3.97	$ 114
Chrysler	4.28	136
Ford	4.97	188
G.M.	5.57	208

Source: S. Boyle, "Why Not Try Competition?" Industrial Organization Review, vol. II nos. 1 and 2 (1974): Table 73, p. 117.

The "Big Three" have vertically integrated in almost all segments of the industry and as a result have gained significant levels of control in almost all industry aspects. This power granted them the ability to foreclose the market for motor vehicle production in the U.S. to any new potential competitor. Their control of dealerships alone plays a major role in this area. However, their ability to have indirectly controlled new entry may not have resulted in the most significant economic losses. Rather, as Boyle points out, "The greatest losses are those which result from the foregoing of opportunities to gain, ie., the developments that never occur for lack of trying"[39], - a lack of progressiveness.

In competitive industries failure to keep up with competitors in the rate of innovation is most likely to be fatal. If a firm fails to introduce new technologies into its production processes as soon as they become available and are used by competitors, then it will most probably find itself vulnerable economically. This is so because innovating firms will have lower costs and the competitive process will lower prices. The unprogressive firm will lose sales and/or incur losses.

Monopolists and large oligopolists appear not to face the same degree of pressure to become involved in the search for innovations as felt under more competitive industries, and therefore may give second priority to the introduction of new innovations and give even less attention to the research and development for new inventions and innovations[40]. Such behaviour can be seen to exist with the "Big Three". White argues that automotive technology in the postwar period has significantly lacked progressiveness. A car built in 1968 was fundamentally no different from a car built in 1946. He describes the behaviour of the automotive companies, with respect to technological progress, as being concerned with technological refinements and innovational advances which bring basic inventions to a marketable state rather than being concerned with inventions themselves. Much of the industry's technological advances have come from the raw materials and components suppliers. Each firm,

whether through their own initiative or through their supplier's initiative, tends to take part in the development of new technologies, usually leading the way in certain areas, rather than following one technological leader. White also points out that components or items which were more highly visible, and thus more easily saleable to the consumer as options were adopted much more quickly than internal items which were less obvious to the consumer, and thus less able to attract his attention[41].

The development and introduction of pollution emission devices for automobiles occurred only because of Federal and State government policies designed to reduce the social cost of pollution. Similarly, the recent development of the more fuel efficient automobile results from a combination of government persuasion on the U.S. automotive firms, increasing fuel prices and thus pressure from consumers, and outside competitive pressure from foreign automotive producers. It appears that the industry wanted to avoid the social cost problems. In the face of oligopolistic power, outside coersion was necessary to attain socially desirable outcomes. This form of behaviour suggests that the level of performance in the automotive industry, especially during the latter part of the third stage, may not have been where it should or could have been.

3.2 THE CHALLENGING YEARS: 1973 - 1984

The fourth stage of the U.S. industry's development saw the rise of exogenous factors which have seriously threatened the industry order. These factors are largely made up of intense competition, as never before, from foreign producers offering more economical and efficient cars, fuel price increases, and a lagging recession. The factory sales of motor vehicles in 1973 reached a record high of 12,637,335 units and set yet another record high in 1978 of 12,871,429 units before dipping down to 6,955,639 units in 1982, reaching a 21 year low. However, model year 1984 (ie., fourth quarter 1983 plus first, second and third quarter 1984) saw an increase in motor vehicle sales to approximately 11,260,000 units. (See Appendix A, Table 40.)

A lack of effort in producing a well-designed small car that could effectively compete with small car imports, which began entering the market in the late 1950's, became a major factor behind the U.S. automotive industry's problems in the 1970's. The large American automotive producers generally felt that the small import car was just a temporary phenomenon[42]. Traditionally, the American automobile was viewed as large and powerful for use in a large country with an ever growing highway network. Economy played a minor role as low fuel prices never really warranted much concern over mileage ratings.

The "Big Three's" interdependence further hindered effort in the small car market. A major concern they had was whether there was sufficient demand for the small car to make their efforts worth while, ie., was the market large enough to support each member of the "Big Three"[43]? Another factor, perhaps just as important, was that they viewed the small car as a less profitable rival product to their larger cars which would shift sales from their more profitable car lines. In dealing with the earlier infrequent import booms the "Big Three" had simply increased imports from their overseas subsidiaries and denied the desirability and profitability of producing small cars in North America. Only after the demand for small cars grew large enough to support their collective entry did the "Big Three" (in the late 1960's - early 1970's,) become seriously involved in the production and sale of small car lines. Their attitude toward this segment of the market was that "Low profit customers were better than no customers at all"[44], and their prime intent was to steal away the sales of the small foreign cars.

Table 14 shows the general trend of exports of U.S. automobiles. Although exports to the rest of the world have decreased, total U.S. exports have nevertheless increased. This increase is a result of the growth of exports to Canada. Although U.S. automobile exports to the rest of the world have fallen, it may not necessarily imply that the

TABLE 14

U.S. Passenger Car Exports, Selected Years: 1948-1980

Year	Production	Exports to Rest of World	Exports to Canada	Total Exports
1948	3,910,213	230,067	3,110	233,177
1951	5,338,820	233,651	13,314	246,965
1954	5,509,550	187,048	19,496	206,554
1957	6,115,458	144,060	16,572	160,632
1960	6,696,108	118,040	26,830	144,870
1963	7,637,173	187,038	7,168	194,206
1966	8,598,917	139,625	121,821	261,446
1969	8,219,463	130,847	286,392	417,239
1972	8,821,737	89,005	382,463	471,468
1973	9,667,152	56,820	452,370	509,190
1974	7,324,504	84,314	516,588	600,902
1975	6,716,951	89,493	550,808	640,301
1976	8,497,893	106,988	573,470	680,458
1977	9,213,654	105,696	591,509	697,205
1978	9,176,635	164,106	542,341	706,447
1979	8,433,662	191,957	600,840	792,797
1980	6,375,506	107,229	509,666	616,895

Sources: Boyle, "Why Not Try Competition?" Industrial Organization Review, vol. II nos. 1 and 2 (1974): Table 43, p. 69.

Phillips, Way, Lowry, and Laing, et al. Auto Industries of Europe, U.S. and Japan, Cambridge, MA: Abt Associates Inc., 1982, part of Table 11, p. 153.

MVMA's Motor Vehicles Facts and Figures '83, p. 9.

U.S. producers have also reduced sales abroad. The strategy of the U.S. automobile firms seems to have been to supply foreign markets by increasing production from their foreign operations. Thus the substantial drop of U.S. exports to the rest of the world during the first half of the 1970's

may be the result of "increased European passenger car production by the "Big Three" automobile firms and not an inability to compete in foreign markets"[45].

Table 15, shows the rapid increase in U.S. foreign production. In 1972 total "Big Three" production was about 16.5 million units. Of these, about one million units were

TABLE 15

Domestic and Foreign Factory Sales * of Passenger Cars and Trucks Annually by "Big Three" Automobile Corporations, Selected Years: 1951-1972

Year	U.S. Total	Canadian Production	Other Foreign	All Foreign	Total
1951	5,696.6	381.0	344.9	726.1	6,422.6
1955	8,559.1	435.0	774.0	1,209.0	9,768.1
1958	4,637.0	346.7	1,092.7	1,439.4	6,076.4
1961	5,890.9	368.7	1,459.9	1,828.6	7,719.5
1965	10,387.2	794.5	2,660.3	3,454.8	13,842.0
1968	10,321.0	934.9	3,108.2	4,043.1	14,364.1
1970	8,105.0	768.1	3,729.2	4,497.3	12,602.3
1971	10,467.0	1,004.0	3,998.3	5,002.3	15,469.3
1972	11,100.6	1,036.4	4,392.5	5,428.9	16,529.5

* In thousands of units.

Source: Boyle, "Why Not Try Competition?" Industrial Organization Review, vol. II nos. 1 and 2 (1974): Part of Table 46, p. 74.

produced in Canada, 4.4 million units in other foreign countries, and 11.1 million in the United States. By comparing these figures to those of 1951, it becomes obvious that the

growth of U.S. overseas firms were enormous, ie., from just under 350,000 units to just under 4.4 million units in just a little over twenty years.

The "Big Three's" foreign production of motor vehicles led to rapid increases in foreign employment, perhaps at the expense of employment in the United States. This is so because by increasing foreign production a strong and growing export employment expansion in the United States was foregone[46]. This implies that what may be good for the "Big Three" by operating plants in foreign nations may not necessarily be good for the work force. For example, between 1959 and 1972, Ford's expansion of foreign operations had resulted in an increase of 117,828 foreign employees in Ford's overseas plants. At the same time, only 73,328 employees were added by Ford to its operations in the United States[47].

Table 16, indicates this pattern of U.S. foreign operations continued into the 1980's[48]. Although in 1980 almost 9.4 million motor vehicles were produced in North America, the North American companies were responsible for the production of almost 12.4 million motor vehicles, i.e. some 3 million vehicles[49] were produced by North American companies in plants outside North America. No other company or group of companies can boast such extensive foreign operations as the North American producers, and even though the size of North American foreign production has dropped since

TABLE 16

World Motor Vehicle Production: 1980-1981

Produced By:	Cars and Commercial Vehicles 1980	1981
North American Companies	12,395,274	12,238,032
Japanese Companies	11,097,709	11,255,564
Western European Companies	10,906,961	9,740,115
Eastern European Companies	2,879,800	2,961,003
Produced In:		
U.S. and Canada	9,384,000	9,266,000
Europe	15,530,000	14,561,000
Japan	11,043,000	11,180,000
Other	2,538,000	2,223,000

Source: Motor Vehicle Manufacturer's Association, Facts and Figures '83, pp. 30-31.

the early 1970's, (see Table 15), it is still quite significant and accounts for almost one quarter of their total motor vehicle production.

Information on the market shares held by imports in the United States, and the number of imports which were sponsored by U.S. producers is given in Table 17. Following the success of OPEC's (Organization of Petroleum Exporting Countries) demand for higher oil prices and subsequently the world's first major fuel crisis in late 1973, along with an ensuing recession, imports increased their penetration of the United States market by capturing 18.2 percent by 1975.

TABLE 17

Import Penetration Of U.S. Retail Passenger Car Sales

Year	Import Total	Percent Japan	U.S. Sponsored Imports	Imports By AMC (000)	Chrysler (000)	Ford (000)	G.M. (000)
1970	15.2	3.7	123,299	N/A	N/A	N/A	N/A
1971	15.2	5.7	206,785	"	"	"	"
1972	14.7	5.7	212,112	"	"	"	"
1973	15.3	6.5	223,642	"	"	"	"
1974	15.8	6.7	178,694	"	"	"	"
1975	18.2	9.4	155,198	"	"	"	"
1976	14.8	9.3	119,359	"	"	"	"
1977	18.5	12.4	213,336	-	121.3	63.3	29.1
1978	17.7	12.0	202,738	-	103.3	80.2	19.2
1979	21.9	16.6	248,839	18.9	138.1	78.1	13.8
1980	26.7	21.2	223,310	25.4	129.4	68.6	-
1981	27.3	21.8	174,665	30.9	110.9	32.9	-
1982	27.8	22.6	139,767	37.5	102.2	-	-

N/A - Not Available

Source: MVMA Motor Vehicle Facts and Figures '83, pp. 17-18.

After some fluctuation, between 1976 and 1979, they increased their share of the United States passenger car market to a record 27.8 percent in 1982. What really is astonishing however, is that the Japanese automobile producers increased their share of the total import penetration from 24 percent in 1970 to a dominating 81 percent in 1982.

It should be noted that a number of the imports were produced by the "Big Three". For example, in 1972, 211,919 motor vehicles were imported by the "Big Three" which were

from their foreign plants. These vehicles consisted mainly of small economy cars such as the Capri, Colt, and Cricket. In 1972, its third year of import, Capri, manufactured in West Germany by Ford, increased sales to 91,000 units. In the same year 34,000 Colts and 13,000 Crickets were imported from foreign plants linked to Chrysler[50]. It appears from this that the United States manufacturers would increase their imports from affiliated firms in foreign countries, rather than seriously involve themselves in the domestic production of small cars. This seems to have continued at least up into the early to mid seventies, as U.S. sponsored imports increased from 123,299 units in 1970, to 223,642 units in 1973, and "the first really fuel-efficient American car came out in 1975 - the Chevette"[51]. However, it seems that the smaller American producers, such as American Motors and, to a lesser degree Chrysler Corporation, relied more heavily on importing vehicles from affiliate firms than the larger American producers which were in a better position (in terms of risk and finances) to promptly bring out domestic small car lines after the first major small car import boom of the mid seventies.

Table 18 provides information on United States domestic and import passenger car and new truck sales. It is clear from the table that both passenger car and new truck imports made substantial gains from 1965. Although the retail sales of passenger car imports fell by almost 350,000 units be-

TABLE 18

U.S. Retail Passenger Car and New Truck Sales (in thousands of units)

Year	Passenger Car Imports					U.S. TOTAL (CAR)
	Domestic (CAR)	From Japan	From Germany	Other	Total	
1965	8,763.0	25.5*	377.0*	157.0*	559.4*	9,332.0
1970	7,119.5	312.8	750.3	217.3	1,280.4	8,399.8
1971	8,681.4	579.0	769.5	212.4	1,560.8	10,242.2
1972	9,326.8	628.9	770.2	214.6	1,613.7	10,940.5
1973	9,675.8	742.6	787.6	217.9	1,748.1	11,423.9
1974	7,454.0	592.1	595.3	211.6	1,399.1	8,853.1
1975	7,053.0	807.9	492.5	271.0	1,571.5	8,624.5
1976	8,611.3	941.7	370.6	186.5	1,498.8	10,110.0
1977	9,109.0	1,387.9	459.7	226.8	2,074.4	11,183.4
1978	9,311.7	1,357.3	436.0	209.1	2,002.4	11,314.1
1979	8,341.1	1,769.6	352.3	210.4	2,332.3	10,673.4
1980	6,581.3	1,906.0	305.2	186.7	2,397.9	8,979.2
1981	6,208.8	1,858.9	283.6	185.5	2,328.0	8,536.8
1982	5,758.6	1,801.5	246.7	174.1	2,222.2	7,980.8

Year	Domestic (TRUCK)	New Truck Imports From Japan	Total	U.S. TOTAL (TRUCK)
1965	1,539.0	N/A	14.0	1,554.0
1970	1,746.0	N/A	73.0	1,819.0
1971	2,011.3	82.5	84.8	2,096.1
1972	2,485.9	142.2	143.1	2,629.0
1973	2,915.5	232.1	232.8	3,148.4
1974	2,511.8	175.4	176.2	2,687.9
1975	2,248.9	228.1	229.3	2,478.2
1976	2,943.9	236.2	237.4	3,181.3
1977	3,352.3	321.4	323.2	3,675.5
1978	3,773.2	333.7	335.9	4,109.1
1979	3,009.9	465.7	469.9¬	3,479.8
1980	2,000.7+	480.6	486.6	2,487.2
1981	1,809.2	443.5	451.1	2,260.3
1982	2,146.0	407.5	414.0	2,560.0

N/A - Not Available
* - U.S. Imports of New Assembled Passenger Cars - not necessarily retail import sales.
¬ - Includes sales of Volvo trucks starting in 1979 and Renault trucks starting in 1980.

tween 1973 and 1974, their counterpart in domestic sales at this time fell by over 2.2 million units yielding the imports an increase in market share. During the latter mid 1970's domestic sales once again improved and temporarily held back the thrust of the imports. However, by 1979, domestic sales took a second major downturn and the already strong position of the imports grew even stronger. Between 1978 and 1982 the market share of the imports grew from 17.7 percent to 27.8 percent (see Table 19). Not since the decade of the 20's have the major producers faced such threatening pressure on their market shares. A similar picture is apparent in the sale of new trucks, as the import share of the market increased from 4 percent in 1971, to 20 percent in 1981, but then dropped to 16 percent in 1982, due to a strengthening in domestic sales.

One of the primary factors behind the 1979 downturn in domestic sales was the sharp rise in gasoline prices in the United States as a result of the shut down of Iranian oil production facilities following the revolution in Iran. R.S. Duncan in a statistical study on the effect gasoline

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+ - Starting in 1980, Plymouth Voyager, Dodge Sportsman, Ford Club Wagon, and Chevrolet Sportsvan previously reported as passenger cars are now included with trucks.

Sources: MVMA, Facts and Figures '83, pp. 18, 19, and 33, and 1973/1974 Automobile Facts and Figures, p. 20.

prices have on automobile sales found "that a change in gasoline prices will not affect total car sales but only the distribution between large and small autos"[52]. Therefore, with increases in gasoline prices we may assume there will be a shift in the type of product demanded. In this case, demand will shift from large cars to small cars. Some "estimates indicate that sales of small cars increase by almost 3 percent for each 1 percent increase in the price of gasoline, while sales of full-size cars fall approximately 2.5 percent"[53]. By comparing United States new car sales by class, with the cost of motor fuel between 1970 and 1982, it becomes possible to observe a distinct relationship between the two. Table 19 makes such a comparison. In 1970, with low fuel costs, the subcompact, compact and import groups captured 36.8 percent of the market while the larger car groups held 63.2 percent. After the first oil shock and sharp increase in motor fuel in 1974, the smaller size car group (including imports) increased their market position to 49.1 percent and the larger car group fell to 50.8 percent as consumers shifted their purchases towards vehicles which could provide an improved fuel economy.

The marked shift in demand from large cars to small cars soon eased and somewhat reverted back towards the full-sized models with full fuel availability and the moderation and stabilization of oil prices from 1975 until early 1979. Acts by Congress to renew oil controls with the aim of pro-

TABLE 19

U.S. New Car Retail Sales By Class And The Price Of Regular Gasoline

Year	Sub-compact	Com-pact	Inter-mediate	Stand-ard	Lux-ury	Im-port	Total	Price per Gallon ($1980)
1970	1.8%	19.8%	23.5%	36.8%	2.9%	15.2%	100%	$ .71
1971	7.4	15.8	20.8	37.1	3.7	15.2	100	.70
1972	8.2	15.3	22.6	35.4	3.8	14.7	100	.68
1973	10.7	16.8	23.4	29.8	3.9	15.3	100	.71
1974	10.6	22.7	24.4	22.7	3.7	15.8	100	.84
1975	12.3	22.9	23.9	17.9	4.7	18.2	100	.83
1976	9.9	24.1	27.8	18.8	4.7	14.8	100	.82
1977	8.5	21.2	26.4	20.4	5.0	18.5	100	.83
1978	8.8	22.9	26.6	18.4	5.6	17.7	100	.84
1979	12.9	20.9	23.8	15.1	5.5	21.9	100	1.07
1980	15.4	21.0	21.4	11.1	4.5	26.7	100	1.30
1981	17.1	20.2	20.4	10.2	4.9	27.3	100	
1982	16.7	17.5	19.0	13.4	5.6	27.8	100	
1983*	21.5	11.0	23.6	17.4¬		26.5	100	
1984*	25.0	9.5	24.4	17.6¬		23.5	100	

* - Estimates from Chart 8 of "Motor Vehicles Model Year 1984."

¬ - Luxury models included with Standard models.

Sources: MVMA Motor Vehicle, Facts and Figures '83, p. 18.

N.P. Kannan, K.K. Rebibo, and D.L. Ellis, Downsizing Detroit: The Future of the U.S. Automobile Industry, part of Figure 2.5, p. 22.

U.S., Department of Commerce, Bureau of Economic Analysis, Survey Of Current Business, vol. 64, no. 10, (October 1984), "Motor Vehicles, Model Year 1984," by D.R. Fox. p. 21.

viding a continuation of cheap fuel and its imposition of CAFE standards (Corporated Average Fuel Economy) for in-

creasing passenger car fuel efficiency, and the return of large sized car demand, stimulated the domestic industry to supply this market demand and plan accordingly for future products while temporarily placing full-scale small car production on a back-burner. As a result of the CAFE standards the domestic fleet's average fuel economy increased from 13.2 miles per gallon in 1974, to approximately 22 mpg in 1980[54]. From 1976 to 1978 the standard size group stabilized and slightly increased its market share from the previous year. However, its market position was at a level far below that which it held prior to the oil supply shock. Intermediates increased their share during this time, perhaps gaining sales from the standard size group.

The second oil shock in 1979 lead to hefty increases in the price of gasoline, long line ups at filling stations and a dramatic shift in consumer demand towards smaller cars. The larger car market share fell to 44.4 percent in 1979, and to 37 percent in 1980, while the smaller car and import shares increased to 55.7 percent in 1979, and to 63.1 percent in 1980. This strong growth of consumer demand for small cars was generally unanticipated and left the domestic industry in a position of being inadequate in production capacity for the newly designed small cars, but with surplus capacity for large cars. The inability to meet small-car capacity left the door open for the Japanese car manufacturers. In addition, many of the domestic small car models,

such as the Vega and the Pinto, had unfavorable reputations for engineering and assembly quality and suffered greatly in sales when consumers compared them to the fuel economy and quality of the Japanese and other imports in 1979[55].

The Japanese car manufacturers were in a position of excess capacity during this period, and took advantage of the situation by increasing their exports and penetration of the United States market. They were highly successful in their venture mainly because they were efficiently producing the type of vehicle which American demand turned to favour. V.J. Adduci, president of the U.S. Motor Vehicle Manufacturers Association, explains that since high fuel costs and narrow roads were normal long term conditions in Japan, the Japanese vehicle manufacturers had evolved as producers of small, fuel-efficient vehicles and had, by the 1973-74 oil embargo, been ready for the subsequent boom in demand for small vehicles in the United States[56].

In addition, the U.S. automobile industry had been, until the 1970's, generally insulated from international competition. It supplied the type of product that was predominantly demanded in their home market, i.e. larger and more luxurious cars than those generally produced in other countries. In comparison to other automobile producing countries the U.S. large car demand was effectively supported by higher per capita incomes, lower gasoline prices, longer driving distances, wider roads etc. Foreign manufacturers

hesitated to produce a U.S.-styled multi-modeled car which they would find difficult to sell in significant numbers in their home markets. Imports into the United States, of foreign produced vehicles, were thus basically made up of standardized small and specialty or sports cars which could also be sold in their home markets[57]. Rather than changing their product, foreign producers had only to wait until demand in the United States changed towards the small car to enter the U.S. market successfully.

Another major factor behind the 1979-81 downturn in domestic automobile sales was the sharp rise in financial rates for new car loans. The rates for new car installment loans offered by both the finance companies and the commercial banks began their upward swing during the latter part of 1979 and peaked during the latter part of 1981. Rates offered by finance companies increased from approximately 14 percent in the fourth quarter of 1979 to approximately 17.7 percent in the fourth quarter of 1981. Similarly, rates offered by commercial banks jumped from about 13 percent to about 17.2 percent during the same time. See Table 20. The record high interest rates experienced at this time, along with the 1980 recession acted to reduce affordable credit and contributed further to the downturn of new car sales. With approximately three-fourths of all new car sales being bought on credit a reduction in the number of sales was inevitable[58].

TABLE 20

Financial Rates On New Car Installment Loans

Year Quarters	Finance Companies	Commercial Banks	Year (1/4's)	Fin. Cos.	Comm. Banks
1974			1980		
1	12.35%	10.63%	1	15.25%	15.50%
2	12.58	11.00	2	14.25	13.83
3	12.88	11.50	3	15.25	14.19
4	13.06	11.48	4	15.46	15.75
1975			1981		
1	13.08	11.38	1	16.00	16.00
2	13.10	11.31	2	15.56	16.78
3	13.13	11.23	3	16.00	17.22
4	13.14	11.18	4	17.67	17.22
1976			1982		
1	13.13	11.00	1	15.33	17.22
2	13.14	11.06	2	16.89	17.11
3	13.19	11.00	3	16.00	17.10
4	13.18	11.13	4	12.44	17.00
1977			1983		
1	13.11	10.75	1	11.93	14.00
2	13.10	10.88	2	12.29	13.67
3	13.13	10.85	3	13.50	13.61
4	13.15	10.84	4	13.98	13.37
1978			1984		
1	13.13	10.81	1	14.12	13.50
2	13.11	11.00	2	14.71	13.50
3	13.13	11.25			
4	13.25	11.50			
1979					
1	13.38	11.63			
2	13.36	11.75			
3	13.63	12.81			
4	14.00	13.13			

Note - Most common finance rates (annual percentage rate) at reporting institutions.
- Finance company loans are made up primarily by automaker's subsidiaries.

Source: U.S. Department of Commerce, Bureau of Economic Analysis,
Survey Of Current Business, vols. 61, 63, and 64 (October 1981, 1983, and 1984), "Motor Vehicles, Model Year," by Douglas R. Fox, estimates from charts 7, 5, and 7, pages 23, 21, and 21, respectively.

Very little could be done by the U.S. producers in the short-run as much time and capital is needed to substantially change the mix of production by vehicle size. At least a two year lead time is neccessary to complete the conversion of assembly plants to accommodate the production of a new product and even more time may be necessary for adequately developing the production capacity for new components. For instance, the designing and tooling of a new engine or transmission may take between 4 and 5 years and may cost billions of dollars. The industry, in 1980 and 1981 alone, spent over $19 billion to retool, rebuild or re-equip engine, transmission and assembly plants in an effort to develop new products, processes and plants for future years[59]. Thus, the industry is inherently vulnerable to rapid changes in demand.

Taking the industry's vulnerability into account, the U.S. administration entered into negotiations with Japan to set a U.S. import quota for Japanese vehicles. The U.S. proposed a three-year freeze on Japanese imports, limiting the import number to 1.65 million vehicles in each of the three years. In 1981 Japan voluntarily agreed to limit its exports to the United States by the proposed amount so as not to provoke harsher protectionist measures. The agreement was to grant the U.S. automobile firms the necessary time required to update production methods, reduce costs, and to establish themselves as a positive force in the small

car market. Extended for a fourth year the agreement allowed (in its final year) 1.85 million vehicles to be imported from Japan and was to expire in April 1985[60].

In 1983, financial conditions improved with a downturn in interest rates and a greater availability of credit. Interest rates on loans offered by both commercial banks and finance companies fell from highs hovering near the 18 percent range to rates in the 13 and 14 percent range in the first half of 1983. In an attempt to promote automobile sales the automakers instructed their financial subsidiaries to vary their rates widely during 1981 and 1982 to offer below-market financing. This generally kept their usually higher rates below those offered by the commercial banks[61].

Information on disposable personal income and its rate of growth in annual (nominal) and in constant (real) 1972 dollars is given in Table 21. The rate of growth in real disposable personal income actually fell in 1974 and had decreased substantially in 1980 and 1982. These years also showed notable decreases in the number of motor vehicle sales (see Table 18) and the third mentioned year brought sales to a 21 year low. However, with an increase in economic activity, an increase in real personal disposable income, a decrease and more stability in gasoline prices, and a more favourable financial climate, motor vehicle sales increased to 11.7 million units in model year 1983, and to

TABLE 21

Disposable Personal Income (in billions of dollars)

Year	DPI	Change in DPI	DPI in (1972) Dollars	Change in DPI in (1972) dollars
1970	695.3		751.6	
1971	751.8	56.5	779.2	27.6
1972	810.3	58.5	810.3	30.8
1973	914.5	104.2	864.7	54.4
1974	998.3	83.8	857.5	-7.2
1975	1,096.1	97.8	874.9	17.4
1976	1,194.4	98.3	906.8	31.9
1977	1,314.0	119.6	942.9	36.1
1978	1,474.0	160.0	988.8	45.9
1979	1,650.2	176.2	1,015.7	26.9
1980	1,828.9	178.7	1,021.6	5.9
1981	2,047.6	218.7	1,054.7	33.1
1982	2,176.5	128.9	1,060.2	5.5
1983	2,340.1	163.6	1,095.4	35.2

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Survey Of Current Business, vol. 63 and 64, (October 1983 and 1984), pp. 43 and 12 respectively.

14.2 million units (10.3 million new passenger cars and 3.9 million new trucks) in model year 1984[62]. The increase in sales came mostly from the sale of large domestic cars of the full size (standard and luxury) and intermediate size categories (showing perhaps how the market share may shift in response to the importance of fuel economy which is related to the availability and cost of motor fuel)[63]. The full size and intermediate size vehicles increased their market share from a low of 35.5 percent in model year 1981

to a respectable 42 percent in 1984, while the imports' market share fell from a high of 27.8 percent in 1982 to 23.5 percent in 1984 (refer to Table 19). This increase in large car sales came even in the face of rising prices for large car models[64].

Recently, Detroit has frozen, and even lowered, prices for compacts and subcompacts, to promote small car sales. Detroit acted to increase small car sales for two main reasons. First, with increased capacity in small car production and a shift in the composition of sales towards larger cars, Detroit became faced with excess small car capacity. Second, and more importantly, Detroit (especially G.M. and Ford) pushed small car sales in order to achieve the government's Corporate Average Fuel Economy (CAFE) standards. If these standards were not met "a fine of $5 for every shortfall of one-tenth mile per gal. - multiplied by a company's entire car sales volume for the year"[65] would be levied on the company. With the increase in large car sales the standards became harder to meet and in 1983, the 26.0 miles per gallon standard was missed by General Motors and Ford. However, they avoided fines by applying credits earned in previous years when they exceeded the standards through a greater percentage of small car sales.

The increasing mean average age of passenger cars in use in the United States may also have played a role in the turnaround in automobile sales. The mean age of automobiles

in the United States reached 7.2 years in 1982, an age level which was unsurpassed since 1950[66]. Since much of the existing fleet in the early 1980's was purchased prior to the two major oil shocks, and the development and sale of more fuel efficient engines, it probably also suffered from high operating costs. These are factors which favoured the eventual revival of new car sales experienced in 1983 and 1984.

The import quotas, previously mentioned, gave the U.S. firms time to undertake new strategies of consolidation and re-advancement, and by 1983 profit levels jumped back to their pre-recession levels[67]. The:

> U.S. automakers have been scrapping old plants, building new ones, and struggling to adopt radical changes in the way they design and build cars. All told, they have spent more than $50 billion on new plant and equipment since 1979 vs. $23 billion in the preceding four years, and there's no end in sight[68].

The American automobile companies have taken steps to increase automation and improve factory management and organization in order to increase productivity and cost effectiveness. An increase in the use of robots and the reorganization of the plant and product (ie., through a greater use of the just-in-time inventory system in more plants to reduce uneconomic inventory build up, an increase in employee participation - known as quality of worklife, and a change in the type of product produced - with greater emphasis on parts interchangeability to increase economies to scale) have worked towards this aim[69]. The 1983 earn-

ings of Chrysler equaled $ 701 million, G.M.'s earnings were $ 3.7 billion, Ford earned profits of $ 1.9 billion, and profits in the industry for 1984 were expected to be even greater[70].

The import quotas, however, not only acted to grant U.S. producers time for readjustment, they also acted to inflate the price of Japanese imports. The shortage of supply of Japanese cars in relation to demand, created by the quota, has allowed dealers of Japanese cars in America to mark up the sticker price of the imported vehicles significantly. For example, "the popular Honda Civic CRX, which lists for $6,773, will set customers of some dealerships back as much as $9,000"[71]. In addition, the Japanese have reduced shipment of their low-priced economy cars, (subcompacts) and increased shipment of their more costly models, (compacts, luxury, and sports) to earn a greater per-unit profit on each sale. Until this time, quota year 1981, the average expenditure per new import car was below the average expenditure per new domestic car and made up the only major source of price competition in the industry in the 1960's and 1970's. See Table 22. With the shift in the product mix of imports, towards higher priced luxury and sports cars, quality competition, or non-price competition is becoming the standard form of competition in this area[72].

Table 22 shows the average expenditure per car between 1960 and 1982, the dollar change in price per year between

1961 and 1982, and the percentage change in price per year between 1961 and 1982 for both domestic and import automo-

TABLE 22

Average Expenditure Per New Car*

Year	Domestic Expenditure per car	Domestic $Change in price from previous year	Domestic %Change in price from previous year	Import Expenditure per car	Import $Change in price from previous year	Import %Change in price from previous year
1960	$2,918	$	%	$2,063	$	%
1961	2,897	-21	-0.72	2,027	-36	-1.75
1962	2,981	84	2.90	1,992	-35	-1.73
1963	3,018	37	1.24	2,017	25	1.26
1964	3,011	-07	-0.23	2,058	41	2.03
1965	3,074	63	2.09	2,120	62	3.01
1966	3,140	66	2.15	2,174	54	2.55
1967	3,310	170	5.41	2,272	98	4.51
1968	3,531	221	6.68	2,363	91	4.01
1969	3,697	166	4.70	2,496	133	5.63
1970	3,708	11	0.30	2,648	152	6.09
1971	3,919	211	5.69	2,769	121	4.57
1972	4,034	115	2.93	2,994	225	8.13
1973	4,180	146	3.62	3,343	349	11.66
1974	4,523	343	8.21	4,022	679	20.31
1975	5,083	560	12.38	4,376	354	8.80
1976	5,504	421	8.28	4,912	536	12.25
1977	5,985	481	8.74	5,057	145	2.95
1978	6,481	496	8.29	5,937	880	17.40
1979	6,906	425	6.56	6,705	768	12.94
1980	7,593	687	9.95	7,342	637	9.50
1981	8,660	1,067	14.05	8,854	1,512	20.59
1982	9,580	920	10.62	9,874	1,020	11.52

* - The market-weighted transaction price of the vehicle including optional equipment, destination charge, taxes and title.

Source: MVMA Motor Vehicle, Facts and Figures '83, p. 42.

biles. During the first six years of the 1960's the average expenditure per new car changed by rather steady and unsurprising amounts. However, the later 1960's and the 1970's saw dramatic increases in the average expenditures for new cars. The average expenditures for new imported cars increased more rapidly than those for domestic cars in the late 1970's so that, by the early 1980's, expenditures for the former exceeded those for the latter. Together, both domestic and import average expenditures have risen by nearly 1,000 dollars in each year between 1980 and 1982. This is the largest and most rapid increase of such expenditures in the history of the U.S. automobile industry. It appears that it is the consumer who must bear the cost of remedying the industry's problems.

The American automobile industry throughout it's history has gone through many dramatic and often challenging changes. The development of excess demand following World War II, restored competition in the industry with a revival of price rivalry and the provision of improved conditions for entry into the industry. This was, however, short-lived as the industry reverted back to qualitative competition as demand decreased to normal levels, and concentration in the industry once again increased. Oligopolistic control of the industry's structure solidified and became an industry norm affecting industry behaviour and performance.

The industry's concentration appears to be a result of the oligopolistic tendencies practiced by the industry's leading members. Oligopoly control, established and maintained by the industry's leaders, supported by entry barriers in almost all levels of industry activity, and acts to obstruct possible entry into the industry.

Large and often unwarranted price increases, huge profits, and tardy technological advance reveal industry behaviour which resulted in uneconomic industrial performance.

Uncontrollable exogenous factors greatly affected the industry. The industry's oligopolistic overconfidence and lack of foresight allowed rising fuel prices and changes in product demand to create threatening problems. Foreign automotive producers (mainly from Japan) shook the oligopolistic structure of the American automotive producers with wave after wave of automobile exports to the United States. Responding to this, the American automotive industry had to re-examine and reconsolidate it's production process and market position. With some help from government import quotas, and a return of more favourable demand, the industry recovered much of its former strength. However, the industry has changed, as competition now appears to have taken on a new and significant form. The companies in the American automotive oligopoly do not only have to compete among themselves; they must also compete with powerful foreign companies.

NOTES

[1] Lawrence J. White, The Automobile Industry Since 1945 (Cambridge: Harvard University Press, 1971), pp. 69 - 71.

[2] See Charles E. Edwards, Dynamics Of The United States Automobile Industry (Columbia: University of South Carolina Press 1965, Second Printing 1966), pp. 204 - 213, and Bradford C. Snell, "Annual Style Change in the Automobile Industry as an Unfair Method of Competition," Yale Law Journal vol. 80 no. 3 (January 1971): 586 - 588.

[3] Boyle, "Why Not Try Competition?" pp. 118-119.

[4] Ibid., pp. 58-59.

[5] Ibid., pp. 63-64.

[6] Ibid., pp. 63, 64, and 66.

[7] Scherer, Industrial market structure and economic performance, (Chicago: Rand McNally College Publishing Company, 1980), p. 81.

[8] Joe Bain, Barriers to New Competition: Their Character and Consequences in Manufacturing Industries (Cambridge: Harvard University Press, 1956; Fourth Printing, 1967), p. 244.

[9] White, The Automobile Industry, pp. 22-24, 38, 39.

[10] C.F. Pratten, "Economies of Scale in Manufacturing Industry," Department of Applied Economics, University of Cambridge, occasional paper, Number 28, 1971.

[11] Boyle, "Why Not Try Competition?", pp. 129, 130.

[12] Robert R. Ebert, "Entry Into the Automobile Industry: The Case of Specialty Producers." Bulletin Of Business Research vol. 50 no. 8 (August 1975): 7, 8.

[13] Ebert, "Economies of Scale in the Automobile Industry: A Case Study of Studebaker." Bulletin Of Business Research vol. 47 no. 7 (July 1972): 8.

[14] White, The Automobile Industry, p. 47.

[15] Boyle, "Why Not Try Competition?", pp. 131, 132.

[16] Ibid., p. 133.

[17] Ibid., p. 133. In reality the closing and re-opening of plants in the industry may not be as simple as eco-

nomic theory might suggest. For instance the auto worker's union may strongly object to complete sporadic plant shut downs and the company may find difficulty in keeping a knowledgeable work force under such postulated conditions.

[18] White, The Automobile Industry, p. 152.

[19] Boyle, "Why Not Try Competition?", pp. 97-98.

[20] Ibid., pp. 100-103.

[21] Ibid., p. 21.

[22] Ibid., pp. 103-105.

[23] White, The Automobile Industry, p. 223.

[24] Robert Crandall, "Vertical Integration And The Market For Repair Parts In The United States Automobile Industry," Journal Of Industrial Economics vol. 16 no. 3 (July 1968): 221-222. For information on average annual data on vehicle sales, parts sales, the net profit on vehicles and the net profit on parts for assemblers for the years 1929-37, see Table III, p. 227. Crandall explains that, if we assume a vehicle manufacturer is able to gain market power in the distribution of repair parts for his vehicles and if the demand for the vehicle manufacturer's repair parts is less price elastic than the demand for his vehicles, then the vehicle manufacturer could decrease the price of his vehicles, creating greater vehicle sales. In turn this creates an increase in demand for his repair parts which he sells at a price considerably above incremental cost. (This is because repair parts and automobiles are complements in demand and he has market power.) In this way the vehicle manufacturer extracts a large share of his profit from the parts market while his profit from the sale of new vehicles falls. Nonetheless the total profit derived from parts and vehicle sales greatly exceeds that available only from automobile sales. In addition he writes that if the sales of repair parts are made at prices considerably higher than their incremental cost, then it may be argued, the vehicle manufacturers have developed and maintained a method of 'monitoring' the demand for vehicles.

[25] Boyle, "Why Not Try Competition?", pp. 80-81.

[26] Ibid., p. 81.

[27] Ibid., p. 86.

[28] Ibid., p. 21.

[29] Ralph Keith Cowan, Effects Of The United States-Canadian Automotive Agreement On Canada's Manufacturing, Trade And Price Posture (PhD Dissertation, University of Michigan, 1972. Ann Arbor: Xerox University Microfilms, 1975), pp. 61-62.

[30] White, The Automobile Industry, pp. 109-116.

[31] Charles E. Edwards, Dynamics Of The United States Automobile Industry (Columbia: University of South Carolina Press First Copyright 1965, Second Printing 1966), p. 237.

[32] Boyle, "Why Not Try Competition?", p. 113.

[33] See Thomas F. Hogarty, "Price-Quality relations for automobiles: a new approach," Applied Economics vol.7 no. 1 (March 1975): 41-51.

[34] Other such factors may include increased wage costs, increased material costs, profit increases, etc.

[35] Boyle, "Why Not Try Competition?", p. 111.

[36] Ibid., p. 115.

[37] See White, The Automobile Industry pp. 133-135, White, "A Legal Attack on Oligopoly Pricing: The Automobile Fleet Sales Case," Journal Of Economic Issues vol. 9 no. 2 (June 1975): 271-281, and, Boyle and Hogarty, "Pricing Behavior In The American Automobile Industry, 1957-71," Journal Of Industrial Economics vol. 24 no. 2 (December 1975): 89-91.

[38] Boyle, "Why Not Try Competition?", p. 119.

[39] Ibid., p. 137.

[40] It is generally believed that some in between mix of competition and monopoly (or oligopoly) is best for industry progressiveness. See Appendix C.

[41] White, The Automobile Industry, pp. 211-215.

[42] William Hughes Cunningham, Segmentation In The United States Compact-Car Market, Studies in Marketing No. 16 (Austin: University of Texas, Bureau of Business Research, Graduate School of Business, 1972), p. 10, citing Automotive News, 30 August, 1965 p. 37.

[43] In a study by Toder, Cardell, and Burton, it was found that, "Optimal scale" of production "is higher for small cars than for larger cars, and in addition, the percentage cost penalty from producing 300,000 or fewer units per year is much greater than for small-car, es-

pecially minicar, production than for large-car production." (p. 142.) This may also have been a major factor behind the Big Three's delay in seriously producing a small size car in North America until sufficient demand was clearly evident. See Eric J. Toder, Nicholas S. Scott, and Ellen Burton, Trade Policy and the U.S. Automobile Industry, (New York: Praeger Publishers, 1978), pp. 129-142.

[44] Ibid., p. 178.

[45] Boyle, "Why Not Try Competition?", p. 70.

[46] A different and opposing view is offered by F.G. Donner, who argues that the expansion of American automobile firms (with reference to G.M.) into foreign countries , outside of the United States and Canada, is beneficial in achieving industrial world growth and development wherever markets seemed promising and political environments non threatening towards private enterprise. Donner explains further that although our domestic and overseas operation compete with each other, "it does not follow that as our manufacturing operations are enlarged overseas, our potential for exporting from the United States is reduced accordingly." He claims that, "On the contrary, our experience shows that our investments overseas have improved our ability to export, sell and service our products made in the United States." (p. 111.) See Frederic G. Donner, The World-Wide Industrial Enterprise: its challenge and promise (New York: McGraw-Hill Book Company, 1967), pp. 3-5, 109-114.

[47] Boyle, "Why Not Try Competition?", pp. 73-76.

[48] Most of the recent U.S. foreign operations have been carried out by Ford and General Motors. Chrysler, facing financial difficulties in the late 1970's sold a number of its foreign operations, including Chrysler Europe (renamed Talbot), Chrysler Motors do Brazil, and Chrysler Fevre Argentina. As a result of its European sale in 1978, Chrysler now holds about 15 percent of Peugeot SA (Peugeot/Citroen/ Talbot), which make up its European holdings. In 1976, Chrysler's North American operations accounted for approximately 62.7 percent of its consolidated assets. However, by the end of 1980 it's North American operations accounted for approximately 85.7 percent of its consolidated assets. This indicates a large decrease in Chrysler's foreign operations. See Richard Phillips et al., Auto Industries of Europe, U.S. and Japan (Cambridge, MA: Abt Associates Inc., 1982), pp. 44-49, 113, 160-161, and 217-224.

[49] Perhaps more, since Volkswagen of America, Volvo, and, Mercedes-Benz (Western European based companies) pro-

duced in combination approximately 236,365 motor vehicles in plants in North America. See M.V.M.A.'s Facts and Figures '83, p. 11.

[50] Boyle, "Why Not Try Competition?", pp. 71-73.

[51] Marina v. N. Whitman, "Automobiles: Turning Around on a Dime?" Challenge, May/June 1981, p. 36.

[52] Roger S. Duncan, "The Effect Of Gasoline Prices On Automobile Sales," American Economist vol. 24 no. 1 (Spring 1980): 65.

[53] Charles Pearson and Wendy Takacs, "Should the U.S. Restrict Auto Imports?" Challenge, May/June 1981, p. 46.

[54] Motor Vehicle Manufacturers Association Inc., MVMA Motor Vehicle Facts and Figures '83 (Detroit: Motor Vehicle Manufacturers Association of the United States, Inc., 1983): 74.

[55] N.P. Kannan, Kathy K. Rebibo, and Donna L. Ellis, Downsizing Detroit: The Future of the U.S. Automobile Industry (New York: Praeger Publishers, 1982), p. 25.

[56] Seth Kentor, "How U.S. Automakers Are Fighting Back," Nations Business, May 1983, p. 29.

[57] Jose A. Gomez-Ibanez and David Harrison Jr. "Imports and the Future of the U.S. Automobile Industry," The American Economic Review: AEA Papers And Proceedings vol. 72 no. 2 Supplement (May 1982): pp. 319-320.

[58] U.S. Department of Commerce, Bureau of Economic Analysis, Survey Of Current Business, vol. 61 no. 10, "Motor Vehicles, Model Year 1981, by Douglas R. Fox, p. 22.

[59] U.S. Department Of Commerce, Bureau of Industrial Economics, 1981 U.S. Industrial Outlook for 200 industries with projections to 1985 "Motor Vehicles," by Robert V. Coleman, (Washington, D.C.: Government Printing Office, January 1981), p. 319, see also The Competitive Status of the U.S. Auto Industry, by N. Bruce Hannay, Chairman (Washington, D.C.: National Academy Press, 1982), pp. 20-25, and MVMA Motor Vehicle Facts and Figures '83 p. 2.

[60] See Anne B. Fisher, "Can Detroit Live Without Quotas?" Fortune, 25 June 1984, p. 20, and see "Profits Rev Up But The Road Is Still Bumpy," Businessweek, 9 January 1984, p. 52.

[61] U.S. Department of Commerce, Bureau of Economic Analysis, Survey Of Current Business, vol. 61 and 63 (October 1981 and 1983), "Motor Vehicles, Model Year 1981

and 1983," by D.R. Fox, pp. 22, and 20, respectively.

[62] Ibid., vol. 63, and 64, pp. 20-21 and 20-23 respectively. Note: "A model year is considered to begin in October and to end in the following September." Of the 10.3 million new car sales, 7.9 million were from domestic production, up about 1.1 million from 1983 and of the 3.9 million new truck sales, 3.36 million were from domestic production.

[63] See "Bigger cars fuel Detroit recovery," Winnipeg Free Press, 11 February 1984, p. 28. The article points out that a survey done by Value Line Investment, indicates consumers aimed their automotive purchases towards the small, fuel-efficient cars when fuel prices were high and rising. However, their mood has changed in accordance to the fuel situation as consumers have turned their attention towards the "elaborate models that Detroit has always done best." (p. 28.)

[64] Demand for the intermediate sized models has been positive enough so that General Motors will reopen their idle Pontiac, Mich., assembly plant early in 1985 and keep open their Fisher Body division plant in Flint, Michigan. To keep up with demand G.M. indicated "it would increase the line rate at its Arlington, Texas, assembly plant,"..."from 56 to 60 cars an hour on both shifts." See "GM to reopen idle plant." Winnipeg Free Press, 14 July 1984, p. 13.

[65] "Detroit's Feverish Maneuvering To Sell Small Cars," Businessweek, 9 January 1984, p. 27.

[66] The mean average age of automobiles rose as follows: 1950 - 7.8 years; 1960 - 5.9 years; 1970 - 5.6 years; 1975 - 6.0 years; 1980 - 6.6 years; 1981 - 6.9 years; and 1982 - 7.2 years. Of the nearly 107 million cars on the road in the United States, more than five million are at least 16 years of age, while nearly 50 million are between 5 and 12 years old, and more than 20 million are between 3 and 5 years old. See MVMA's Facts & Figures '83, p. 26.

[67] It has been argued that although "restrictions on imports from Japan...have helped tilt the odds in the North American favor...the U.S. companies' share of the business probably would have improved...even without them...because of their comparatively strong position in the larger-car market." (p. 28.) "Bigger cars fuel Detroit recovery," Winnipeg Free Press, 11 February 1984, p. 28.

[68] Anne B. Fisher, "Can Detroit Live Without Quotas?" Fortune, 25 June 1984, p. 20.

[69] See Charles G. Burck, "Will Success Spoil General Motors?" Fortune, 22 August 1983, pp. 94-101, and Steven Flax, "Did GM Give Away The Store?" Fortune, 15 October 1984, pp. 223-228.

[70] Chrysler's earnings in the first quarter of 1984 were reported at $705 million - higher than its total profit earnings of 1983. Ford's earnings for the first quarter of 1984 were announced to equal $897 million, nearly half of its 1983 earnings, and G.M. reported earnings of $1.6 billion in the first quarter of 1984. Solid profit earnings were expected to continue in the remaining three quarters. See Fisher, "Can Detroit Live Without Quotas?" p. 20, and "GM reaps record profit," Winnipeg Free Press, 28 April 1984, p. 31.

[71] See Fisher, "Can Detroit Live Without Quotas?" p. 20, and Anne McGrath, "Import quotas: the Honda dealer's best friend," Forbes, 5 December 1983, p. 43. In the article by McGrath, dealer profits on a 1984 Honda Accord were claimed to be as much as $2,000, and were credited with many thanks by the dealers to the quotas.

[72] Perhaps this will change if and when the import quotas are lifted, as the Japanese may revert back to shipping a greater mix of their low priced economy cars once freed of their export restrictions.

Chapter IV

DEVELOPMENT OF THE CANADIAN AUTOMOBILE INDUSTRY: 1904 - 1964

This chapter will discuss the historical development of the automotive industry in Canada up to the signing of the Canada-United States Automotive Trade Products Agreement. It will present the various phases of public policy including tariff implementation and will discuss the influence tariffs may have had in the industry's evolution. Finally it will identify some of the major problems preventing the industry from achieving efficient production.

4.1 ESTABLISHMENT OF THE INDUSTRY

The automobile industry in Canada has been closely linked from its beginning to its counterpart in the United States. The major automobile producers in Canada have been subsidiaries of the United States automobile producers. These were not only attracted by the Canadian market but also by the favourable tariff access for branch plants to other British Commonwealth and Empire countries.

The incorporation of the Ford Motor Company of Canada in 1904 marked the commercial start of the industry in Canada. With exclusive rights obtained from Henry Ford, a group

of Canadian businessmen led by Gordon M. McGregor, proceeded to produce and sell Ford vehicles in Canada. After being re-incorporated under a Dominion Charter in 1911, they expanded their exclusive rights throughout the British Empire, with the exception of the British Isles. Initially production was relatively simple and consisted primarily of fitting wheels and bodies on chassis which were ferried across the river from Detroit to Windsor.

In 1907 R.S. McLaughlin entered the automobile industry after producing a car in the plant of the McLaughlin Carriage Company of Oshawa, Ontario, subsequently renamed the Mclaughlin Motor Car Company. Through contractual agreement McLaughlin secured the rights to manufacture the Buick automobile in Canada, purchase engines from the Buick Motor Company of Flint Michigan, and receive information on all of Buick's developmental work. In 1915 McLaughlin acquired Chevrolet rights from the Chevrolet organization in the United States and formed the Chevrolet Motor Company of Canada to manufacture Chevrolets in Canada. In 1918 both McLaughlin companies merged to form a Canadian subsidiary known as General Motors of Canada.

After acquiring the Everitt-Metzer-Flanders Company in 1910, Studebaker entered the Canadian market with production facilities at Walkerville, Ontario. International Harvester also began production in Canada in 1910. Chrysler became incorporated in Canada in 1925, and the Nash Motor Company,

predecessor of American Motors of Canada, began production of automobiles in Canada in 1946[1].

Although the automobile industry in Canada initially evolved from the carriage, bicycle, and wagon-building trades, the majority of plants and successful companies became tied to the larger firms in the United States. The American companies developed the technology necessary to achieve mass production and enable the automobile to become a practical, commercial, and profitable product. In addition, the relatively small Canadian market implied prohibitively high costs of producing certain components in low volume, especially engines. This made importation of engines and other key components from the larger and more efficient plants in the United States economically necessary. Therefore, the structure of the Canadian automobile industry from its beginning was one which precluded total independence. Even the Ford Motor Company of Canada, Canada's major automobile producer during the early years, turned to importing a part which could not be produced economically in Canada. C. Aikman points out that, "The only part which it receives from the Detroit factory is the carburetor, which by reason of its specialized nature it is unprofitable to make in Canada. Moreover, as in the case of the parent organization, and unlike other Canadian motor industries, the business is a complete manufacture and not an assemblage"[2]. The other early automobile producers in Canada

were basically assemblers rather than manufactuers who relied on importing technical parts from their parent corporations and parts producers in the United States. However, less technical parts were purchased from local Canadian producers[3].

It should be pointed out that in the early years of the industry, competition took the form of price competition and the Ford Motor Company of Canada, a producer of only one vehicle model, could manufacture vehicles with minimal dependence on parts importation (with exception to the carburetor mentioned earlier). This, in addition to the combined size of the Canadian and British Commonwealth markets enabled Ford of Canada to maintain its status of "complete manufacturer". Later, as competition shifted from price competition towards product competition, Ford of Canada, like its Canadian competitors, became more dependent on imports from its affiliate in the United States.

Production of motor vehicles in Canada increased from approximately 117 in 1904 to 93,810 (passenger cars and trucks) in 1917, the first year of compiled industry production figures. Production continued to expand rapidly during the 1920's so that by 1929 the industry achieved a production peak of 262,625 vehicles. The 1930's saw a drastic reduction in the number of vehicles produced, hitting a low of 60,789 units in 1932. Production recovered slowly in succeeding years and reached 207,463 units in 1937, but

dropped again to 155,426 units in 1939. Between 1942 and 1945 production was directed towards the manufacture of military vehicles and it was not until September, 1945, that production of passenger cars resumed. A strong demand for automobiles allowed production to reach a new peak of 263,760 in 1948, narrowly passing the previous peak recorded in 1929. Production passed the 400,000 mark in the 1950's but declined once more in 1960. In 1955, 452,000 vehicles were produced while 1960 saw only 398,000 vehicles produced. (See Appendix A, Table 41).

4.2 PHASES OF PUBLIC POLICY

The Canadian automobile industry from its beginning to 1926 received the same protection as that accorded to the carriage, buggy and bicycle manufacturing industries through a 35 percent tariff. The British Preferential rate was set at 22.5 percent. The tariff was to encourage automobile production in Canada by taxing imported vehicles so as to eliminate the price advantage imported vehicles may have had upon entry into Canada. In addition, as an attempt to ensure that Canadian plants developed beyond the assembling stage, a tariff scheme was placed on automotive parts averaging about 30 percent. This was designed to encourage assemblers by a small bonus or subsidy[4] to develop the automobile industry in Canada. However, the tariff preference Canada enjoyed from several countries of the British Empire

also acted to encourage growth of the industry because United States firms located subsidiary plants in Canada from which they could export motor vehicles to Empire countries at preferential rates. Export figures reflect the benefits the Canadian automobile industry derived from receiving special tariff treatment. For example, in 1924, 132,580 motor vehicles were produced from which 56,655 or 42.5 percent were exported. Of the vehicles exported 72.2 percent were shipped to Empire ports[5].

To reduce the price differential of similar cars produced in the United States and in Canada the General Tariff on automobiles was reduced to 20 percent on passenger vehicles which sold at prices under $1,200, and to 27.5 percent on passenger vehicles which sold at prices above this amount. Similarly, the British Preferential tariff was reduced to 12.5 percent for cars valued under $1,200, and to 15 percent for cars valued over $1,200. The General Tariff on component parts however, remained unchanged, averaging at approximately 30 percent.

In conjunction with the reduction of the tariff rates a Canadian content scheme was initiated. This was designed to encourage automobile production in Canada, reduce the across the border price differentials, and aid parts manufacturers who lost a part of their protection from the reduction in the tariff on completed vehicles. Certain parts not produced in Canada were imported free of duty when classified

as original equipment and a duty drawback of 25 percent was granted on imported parts provided that 40 percent (50 percent by April 1927) of the completed vehicle's value was acquired in Canada. In addition, Canadian produced automobiles achieving the content requirement would be exempt from the 5 percent excise tax levied on vehicles selling at under $1,200[6].

O.J McDiarmid, in an article on the Canadian automobile industry, noted that "The position of the Canadian manufacturers on the domestic market was not seriously damaged by the 1926 revision of the tariff..." and that "Although some qualitative change did occur in imports at this time, cheaper cars in the category most affected by tariff reductions made up a larger percentage of imports than formerly."[7]

The next change in the tariff came in 1931 when a third value bracket was added for duty purposes. The General Tariff on vehicles which sold for under 1,200 dollars remained at 20 percent. However, the tariff was raised to 30 percent for vehicles which sold at values between 1,200 and 2,100 dollars, and for vehicles which sold for more than 2,100 dollars the tariff was set at 40 percent. In 1932 British vehicles were granted duty-free entry under the British Preferential Tariff. The generally high tariff rates protecting the industry in Canada led once more to an excessive widening of the price differential between automobile prices in Canada and the United States. A new trade agreement be-

tween Canada and the United States reclassified imports from the United States to fall under the Intermediate Tariff (later renamed the Most Favoured Nation Tariff) rather than the General Tariff, as of January 1, 1936. This brought about a fall in duty rates on automobiles imported from the United States. The change was as follows[8]:

	General Tariff	Intermediate Tariff	Difference
Vehicles valued at under $1,200	20%	17.5%	2.5%
Vehicles valued between $1,200 - $2,100	30%	22.5%	7.5%
Vehicles valued at over $2,100	40%	30%	10%

After a comprehensive inquiry into the Canadian automobile industry and a review of recommendations suggested to the Tariff Board, the Government of Canada established a considerably revised tariff and content scheme in May, 1936. This scheme remained basically unchanged until the early 1960's. The revisions eliminated automobile value classifications so that all motor vehicles imported from "Most Favoured Nations" faced a rate of duty of 17.5 percent under the Intermediate Tariff, while the General Tariff fell to 27.5 percent. Imported parts of a class or kind made in Canada were subject to the following tariff levels: British preferential tariff, free; intermediate tariff, 17.5 percent; general tariff, 30 percent. Imported automobile and motor vehicle engines, stripped, and complete parts thereof,

were subject to a 25 percent intermediate tariff, a 35 percent general tariff, and a free British preferential tariff[9]. Vehicles and parts imported from empire origin retained their duty free status under the British preferential tariff. The government, however, reserved the right to be able to increase the intermediate tariff to 22.5 percent if the revised intermediate tariff was felt to be creating excessive hardships for the Canadian automobile industry.

The revised content scheme replaced the domestic duty drawback system and allowed a wide range of automotive parts and accessories to be imported free of duty if they were of a class or kind not produced in Canada and if the automobile producers using or importing the parts for production achieved the required Empire (later Commonwealth and actually Canadian) content in their Canadian factory output. Content requirements were 40 percent for production under 10,000 units annually, 50 percent for annual production between 10,000 and 20,000 vehicles, and by 60 percent for companies annually producing over 20,000 vehicles[10]. It was of little significance at this time whether it was Empire, Commonwealth, or Canadian content since the United States made up the only source of imported parts for Canadian production. Imported parts failing to meet these two conditions were subject to the Most Favoured Nation tariff of 17.5 percent, but free under the British preferential tariff. V. Bladen, in his Royal Commission study of the auto-

motive industry, summarized the logic of conditional free entry of automotive parts as follows:

> There are many parts the cost of which in the United States, with its high volume of production, is so much lower than in Canada, with its much lower volume of production, that even high rates of duty would not suffice to induce the Canadian automobile manufacturer to buy or produce them in Canada. If a duty were imposed, these parts would still be imported, the Government would collect revenue, the Canadian consumer would pay more for his automobile, and the Canadian parts manufacturers might well find that the higher prices of automobiles would reduce sales and thus reduce the demand for those parts which they could and did produce. Such is the logic of free entry if the parts are of a "class or kind not made in Canada"[11].

Shortly after the 1936 tariff revisions, a number of smaller, low-volume automotive producers decided to cease production in Canada. It was claimed that the 17.5 percent measure of protection was too low, and the revised tariff acted to enhance the competitive disadvantage of the low-volume producer, making high-volume production a necessity[12]. This was so because the low-volume producer in comparison to the high-volume producer could not afford to purchase certain parts in Canada due to the cost disadvantage of low-volume production. Faced with the need to import certain parts, the low-volume producer found duty payments necessary for parts with duplicates produced in Canada for the greater run of the higher-volume producer. From evidence submitted to the Bladen Royal Commission it was found that "on average, General Motors incurs duty on imported parts to the extent of some $20 per vehicle, while at the

other end of the scale, Studebaker-Packard incurs a duty of some $85 per vehicle"[13], a difference of some $65.

The 1936, tariff did, however, lead to growth in plants and equipment producing automotive parts in Canada. Between 1936 and 1939 the industry's employment of capital increased by 26 million dollars, including a 14 million dollar increase in buildings and equipment and a rise in employment of 2,837 persons[14].

The fall of 1939 saw the first order for gun carriers for World War II, and by 1940 the Canadian automotive industry geared production away from passenger cars and trucks to military vehicles and equipment. Industry growth and prosperity were impressive as capital utilization on buildings, equipment, inventory, cash, and receivable accounts increased 142 percent between 1939 and 1943. With the end of the war production reverted to consumer vehicles. Pent-up demand for cars and trucks in the domestic market kept producers scrambling to keep up and temporarily offset the negative effects of diminishing export markets[15].

In the 1950's the Canadian automotive industry faced stiff competition in domestic and foreign markets from European automotive industries. The success of foreign producers, through relatively low wages and advanced technology and machinery, acted to reduce Canadian exports, increase Canadian imports (by virtue of increased public demand for

foreign produced cars), and made Canada a net importer of

TABLE 23

Canada - World Trade In Automotive Products

Year	Passenger Cars Imp. Units	Passenger Cars Exp. Units	Comm. Vehicles Imp. Units	Comm. Vehicles Exp. Units
1904-1920	83,724	93,435	N/A	N/A
1921-1930	207,847	447,005	27,288	159,768
1931-1940	85,602	297,097	14,734	179,341
1941-1950	192,387	151,708	32,278	852,682
1951-1960	793,306	196,798	103,017	106,242
1961	106,965	9,495	12,304	2,945

N/A: Not Available
Note: Commercial Vehicles, Imports include: Trucks and Chassis MGVW 6,000 lbs, New: Trucks and Chassis, N.E.S.; Trucks and Truck Trailers, Used; Buses and Chasis; off-Highway Trucks; Motor Vehicles, N.E.S., Comm. Vehicles, Exports include: Trucks and Chassis MGVW 6,000 lbs; Trucks and Chassis N.E.S.; Motor Vehicles N.E.S. (Motor Vehicles, N.E.S., export category revised in 1970 to exclude snow-mobiles.)

Source: Statistics Canada (Cat. No. 65-004 and 65-007). Motor Vehicle Manufacturers' Association Facts and Figures Of The Automobile Industry In Canada, February 1, 1985.

passenger cars. See Table 23. In addition, Canada's duty free allowance of motor vehicles imported from the United Kingdom, through the 1932 tariff, helped make Britain the largest exporter of motor vehicles to Canada in the latter 1950's. Table 24 shows the impressive headway the European automotive industry made into the Canadian market at this time.

TABLE 24

Canadian Production And Imports From Europe

Year	Canadian Production (units)	European Imports (units)	European Imports as a percent of Canadian Production
1955	374,602	48,546	13.0%
1956	374,727	78,070 *	20.3%
1957	340,381	70,796	20.8% *
1958	297,373	104,081 *	35.0%
1959	301,237 *	153,932	51.1%

* - Calculated from given figures.

Source: J. Dykes, Canada's Automotive Industry, p. 62.

J. Laxer argues that after the Second World War the Canadian automobile industry simply became a branch of the American car industry producing for Canada's domestic market. "Gone was its special advantage in the markets of British Empire countries."[16] The zenith it reached in the 1920's became a thing of the past. Losing its position as major supplier to the British Empire countries the Canadian automobile industry found itself in a position of producing too many automobile models for too small a market. This implied inefficient operations, as such production limits the possibility of achieving economies to scale, full utilization of plant, and high productivity.

The decrease in the ability of Canadian automotive production to maintain its dominant position in supplying the Canadian market in the later 50's and early 60's caused much concern. Table 25 indicates that Canadian production, as a percent of apparent consumption, fell from 110 percent in 1952, to only 71 and 72 percent in 1959 and 1960 respectively.

TABLE 25

Basic Indicators Of The Canadian Automotive Industry 1952, 1955, 1959, And 1960 (Thousands of Motor Vehicles)

	1952	1955	1959	1960
(1) Production in Canada	434	434	368	396
(2) Exports	80	35	19	23
(3) Imports	39	58	166	180
(4) Net trade (2 minus 3)	+41	-23	-147	-157
(5) Apparent consumption (1 minus 4)	393	477	515	553
(6) Domestic production as a percent of apparent consumption	110%	95%	71%	72%

Source: P. Morici, A.J.R. Smith, and S. Lea, Canadian Industrial Policy, Table A-1 p. 100.

It was in this context that the Bladen Royal Commission was appointed in 1960 to investigate the problems and prospects of the motor vehicle and parts industries, and recommend measures to increase Canadian motor vehicle production and exports. In his report Bladen recommended measures which would act to reduce the industry's tax burden and in-

crease its competitive position. This he felt could be achieved by eliminating the 7.5 percent excise tax on passenger vehicles and by making changes in the sales tax base. Further, Bladen recommended that "Commonwealth Content" be replaced by "Canadian Content" to prevent the possibility of manufacturers using United Kingdom parts to satisfy content requirements and suggested a 10 percent tariff be levied on British automobiles and parts.

One of Bladen's most important recommendations, however, was an "extended content" plan of the 1936 content requirements under which the Canadian content required to qualify for duty free entry would increase in adherents to a schedule based on the volume of vehicles produced in Canada or imported[17]. He argued the increase in world competition in the automotive industry as well as the increase in the scale of production necessary to achieve economical operation had changed the conditions of operation for the Canadian automotive industry. In 1936 the emphasis was on promotion of an assembly function in Canada from which a parts manufacturing base could develop and grow. Under his plan assembly was still to increase but a greater emphasis was to be placed on the growth of the parts industry. Bladen felt that extended content should be applicable to the total Canadian automotive market so that parts produced in Canada may be counted as "Canadian content" if they are embodied in vehicles produced outside Canada for sale anywhere, or if the

parts are to be sold in Canada or elsewhere for repair or replacement purposes. He elaborated further his contention that "the industry would find it as advantageous to manufacture engines, for instance, for vehicles assembled in Detroit as it would to assemble vehicles in Canada embodying important elements manufactured in the United States"[18]. Thus Bladen envisioned and recommended a plan of freer trade for the Canadian automotive industry in which Canadian production of auto parts for export would play a larger role, and the industry as a whole would expand in relation to the growth of Canadian automotive and automotive products consumption.

Although the Canadian government did not use Bladen's proposals and recommendations to improve the situation of the Canadian automotive industry, it did remove the 7.5 percent excise tax on automobiles on June 21, 1961, and used a variation of Bladen's proposals in two duty remission plans. Both duty remission plans acted to promote exports, especially exports of parts, and in this way the government unilaterally "hoped to stimulate Canadian employment, improve the current account balance, and contribute to the efficiency of the Canadian industry by making possible longer production runs"[19].

The first duty remission plan, often refered to as a pilot plan, commenced on November 1, 1962. It basically consisted of reinstating and enforcing the statutory most

favoured nation tariff of 25 percent on imported automatic transmissions. For at least ten years prior, this duty was regularly waived by an Order-in-Council. In addition a similar rate of duty was applied to imported engine blocks. Manufacturers could, however, on a dollar-for-dollar basis earn a remission on the automatic transmission duty and the engine block duty (on up to 10,000 engine blocks per motor vehicle manufacturer) by increasing the export of Canadian-produced parts above the level attained in the base year, November 1, 1961, to October 31, 1962. For example, for every dollar of parts exported over the base year amount a corresponding dollar would be earned as duty remittence on automatic transmission and engine block imports. In 1961 the deficit on automobiles, trucks and parts was approximately $500 million, of which more than $300 million was due to parts importation[20]. The government felt that the duty remission plan, through its incentive to increase the exportation of parts, would act to reduce this deficit. As an extension of the first plan they released a full-scale duty remission plan on October 22, 1963.

The extended plan allowed Canadian automotive manufacturers to earn duty remissions on one dollar's worth of any imported vehicle or original equipment part for each dollar of Canadian content in either vehicles or parts exported in excess of the original base year, November 1, 1961 to October 31, 1962. The Canadian government hoped that the new

plan would fulfill three main objectives: "first, to increase production and create additional employment in Canada; second, to take an important step to improve Canada's balance of payments position; and third, to give producers of parts for vehicles and producers of vehicles a valuable incentive to achieve longer production runs and a greater degree of specialization thus assisting them to reduce their costs"[21].

The Canadian automotive industry's development was closely linked not only to Canadian tariff policies but also tariff policies of foreign countries. For instance, the tariff preference Canada enjoyed as a member of the Commonwealth can be seen to have been influential in encouraging U.S. companies to invest heavily in Canada during the industry's early years. In addition, United States tariffs also acted to influence the industry's development in Canada. In order to produce many major automotive products efficiently, Canadian producers needed to market their production in foreign markets such as in the United States. Such producers were often discouraged from attaining efficient production levels because, even though the United States automotive tariffs were relatively lower than their Canadian counterparts, they were high enough to prevent the Canadian products from competing effectively in the United States market[22]. See Table 26 for a comparison of Canadian and United States Automotive Tariffs in 1964.

TABLE 26

Automotive Tariffs, Canada And The United States, 1964

	Canadian Tariff	U.S. Tariff
1. Completed vehicles	17.5%	
A) Passenger cars		6.5%
B) Trucks		8.5% a
C) Buses		7.5%
2. Parts		8.5% (generally)
A) Specified parts:		
i) when of a class or kind manufactured in Canada	17.5%	
ii) when of a class or kind not manufactured in Canada		
a) and manufacturer does not meet content requirements	17.5%	
b) and manufacturer meets content requirements	Free	
B) All other parts (including, for example, passenger-car engines and brake linings)	25.0%	

a As a result of the "chicken war" with the European Economic Community, trucks valued in excess of $ 1,000 were dutied at a "temporary" rate of 25 percent.

Source: C. Beigie
The Canadian-U.S. Automobile Agreement, Table 3 p. 17.

Further, the Canadian automotive industry's practice of emulating its United States counterpart in product competition by providing consumers with a wide range of models, made establishment of export markets difficult and limited even more the possibility of ever achieving the high-volume specialization needed to reduce production costs for Canadian automotive products.

In 1962 there were five passenger car producers in Canada. These included; General Motors of Canada, Limited, Ford Motor Company of Canada, Limited, Chrysler Corporation of Canada, Limited, American Motors (Canada) Incorporated, and the Studebaker Corporation of Canada, Limited. Together these five firms produced 428,189 units of passenger cars. Of the total, GM produced 229,639 units, Ford produced 118,190 units, Chrysler produced 50,560 units, AMC produced 21,852 units and Studebaker produced 7,948 units[23]. Of these producers only GM and Ford produced sufficient numbers to exhaust scale economies in assembly operations, (estimated by J. Bain to be between 60,000 and 180,000 vehicles per year)[24]. Assuming GM, Ford, and Chrysler produced only one make and model[25] and comparing these figures to L. White's minimum efficient plant size estimate of between 200,000 to 250,000 units, GM would be the only producer with the possibility of achieving White's minimum efficient plant size. GM, however, along with the other Canadian automotive producers failed to achieve White's minimum estimate for firm economies of an output of about 800,000 units annually of at least two makes of automobiles probably in four plants. This clearly demonstrates the Canadian automotive industry was operating at inefficient levels, plagued by short production runs due to the burden of supplying too many makes and models for too small a market.

As a direct result of these production inefficiencies, Canadian consumers found themselves paying higher prices than consumers just south of the border for similar models. C. Green states, that the automobile price differentials prior to the Auto Pact ranged from between 10 and 17 percent higher in Canada than in the United States, while measures of both productivity and wages in the Canadian automobile industry were estimated to be about 30 percent lower than in the United States[26].

The full duty remission plan (and subsequently, the Automotive Trade Products Agreement) was a government attempt to encourage the efficient production of Canadian automotive products. The plan's success seemed apparent as the value of Canadian automotive exports to the United States increased dramatically between 1962 and 1964. Table 27 yields information on Canadian policy developments and the value of Canadian automotive exports to the United States for the years 1961 to 1964. It appears that "the benefits to be gained by U.S. firms from remission of Canadian duties would encourage them to source components for U.S. vehicle assembly from Canada rather than from traditional and slightly lower cost U.S. suppliers"[27].

However, it should be noted that although the first duty remission plan was met with almost no objection in the United States, the second duty remission plan generated significant protest especially from independent parts producers

TABLE 27

Unilateral Canadian Automotive Tariff Policies Before The Automotive Agreement, And Exports To The United States

Year	Canadian Policy Developments	Canadian Automotive Exports to U.S.A. (in $U.S. millions) Automotive Parts	Completed Vehicles	Total
1961	No new policy (content requirements of 1936 in effect)	8.7	2.1	10.8
1962	From November, unilateral Canadian duty remission applied to imported engines and transmissions	9.5	2.6	12.1
1963	From November, unilateral Canadian duty remission extended to all imported vehicles and original equipment parts	30.3	3.5	33.8
1964	Extended duty remissions in effect. Bilateral negotiations leading to the Automotive Agreement began in April after U.S. Treasury investigations of the 1963 scheme began. (Canada removed all unilateral tariff rebate schemes on January 15, 1965 upon inauguration of the Automotive Agreement.)	65.3	24.1	89.4

Source: Morici, Smith, Lea, Canadian Industrial Policy Table A-2, p. 101.

in the United States. Even though the United States govern-

ment was sympathetic towards Canada's overall balance of trade deficit problem and initially chose not to challenge Canada's remission plan, it was forced into action after the Modine Manufacturing Company of Racine, Wisconsin filed a petition on April 15, 1964 with the U.S. Bureau of Customs. The full-scale duty remission plan conflicted with the provisions of Section 303 of the U.S. Customs Act of 1930, which states that "if the U.S. Treasury Department determined that the export of a certain product reaching the United States was being subsidized by a "bounty or grant," a countervailing duty had to be imposed whether or not the import in question was causing domestic injury."[28] The U.S. Bureau of Customs had no choice but to charge the Canadian duty remission plan of constituting a "bounty or grant" under the 1930 Act. The U.S. Treasury commenced a review and investigation of the Modine petition. However, prior to an outcome and recommendation of action[29], the Canadian and United States governments hastily completed (between April 1964 and January 1965) and signed a new agreement named the Canada-United States Automotive Trade Products Agreement, or, in short, the Auto Pact.

As in the United States, the Canadian automotive industry had become dominated by three major automotive manufacturers. The only producers of any real size since the 1920's were the subsidiaries of the 'Big Three'. General Motors, Ford, and Chrysler of Canada produced 98 percent of

the vehicles manufactured in Canada in 1960, imported approximately 43 percent of all imported motor vehicles, and made up 86 percent of total Canadian sales[30]. Despite its origin and similarity to the United States automotive industry, the Canadian automotive industry, through governmental tariff policies, content schemes, and manufacturing requirements, had been shaped and molded in an attempt to maintain a responsible and generally viable operation in Canada for both assembly and a certain amount of manufacturing functions.

It became evident, however, that if the Canadian automotive industry were to be a responsible and viable operation on a sustained basis it required policy initiatives which would act to improve the industry's economic efficiency. This, it was felt, could be accomplished through a new agreement which would deal with industrial fundamentals. This was the role of the Canada-United States Automotive Products Trade Agreement. It was to liberalize the Canadian and United States automotive industries in a North American context and strengthen the economics of the Canadian industry.

NOTES

[1] Report of the Royal Commission on the Automobile Industry, by V.W. Bladen, Chairman (Ottawa: Queen's Printer and Controller of Stationery, 1961, reprinted 1967), pp. 5-6. Inquiry into the Automotive Industry, The Canadian Automobile Industry, Performance and Proposals for Progress, Simon Reisman, Commissioner (Ottawa: Minister of Supply and Service Canada, 1978), pp. 1-2. Report of the Royal Commission on Canada's Economic Prospects, The Canadian Automotive Industry, W.L. Gordon, Chairman (Hull: Queen's Printer and Controller of Stationery, 1956), By The Sun Life Assurance Company Of Canada, pp. 2-3.

[2] Howard C. Aikman, National Problems of Canada: The Automobile Industry of Canada, McGill University Economic Studies, no. 8 (Toronto: The Macmillan Company of Canada, Limited, 1926), p. 16.

[3] Parts which were frequently imported from the United States included engines, carburetors, transmissions, axles, and some bodies, while parts which were manufactured by the automobile firms or purchased from local manufacturers included, radiators, tires, wheels, springs, mufflers, glass, paint, and windshields to name a few. Ibid., pp. 16-17.

[4] Ibid., pp. 27-30. Aikman notes that it is the manufacturer of parts that receives a high rate of protection and not the assembler of automobiles. The parts producer may import his raw materials free of duty if brought in as an ore, or, if in a semi-manufactured state, at a low rate. The assembler, however, only receives the amount of protection afforded by the difference between the rate of completed cars and that on parts. p. 29.

[5] Ibid., p. 31.

[6] Ibid., p. 38. R. Cowan, Effects Of The United States-Canadian Automotive Agreement On Canada's Manufacturing, Trade And Price Posture Ph.D. dissertation, University of Michigan, 1972. (Ann Arbor: Xerox University Microfilms, 1975), p. 6. Reisman, The Canadian Automobile Industry, pp. 4-5.

[7] O.J. McDiarmid, "Some Aspects Of The Canadian Automobile Industry," Canadian Journal Of Economics And Political Science, vol. 6 no. 2 (May 1940): 242.

[8] Bladen, Report, p. 8.

[9] Dominion of Canada, Official Report Of Debates (House Of Commons), First Session - Eighteenth Parliament, III, (1936): 3070-3075.

[10] For a complete list of automobile and automobile parts tariffs in effect from 1936 to 1960 (actually November 1962) see Bladen, Report, Appendix V, pp. 91-100.

[11] Ibid., pp. 9-10.

[12] Such producers included: Studebaker Corporation of Canada, Limited; Hudson Motors of Canada, Limited; and Packard Motor Car Company of Canada, Limited. Their claim of a "too low" level of protection appeared to be true as these three companies "did better exporting to Canada than they had when they built cars in Canada." [Dykes: p.55] These companies did however, at a later date, re-open production facilities in Canada, and as an attempt to strengthen their positions merged with other small companies. For instance, in 1954, Studebaker and Packard joined to form the Studebaker-Packard Corporation, and Hudson joined with Nash Kelvinator to form American Motors Corporation. See J. Dykes, Canada's Automotive Industry, (Toronto: McGraw-Hill Co. of Canada, 1970), pp. 49, 55, and 62.

[13] Bladen, Report, p. 31.

[14] J. Dykes, Canada's Automotive Industry, p. 55.

[15] Ibid., pp. 55-61.

[16] James Laxer, Canada's Economic Strategy, (Toronto: McClelland And Stewart Limited, 1981), p. 130.

[17] For passenger automobiles content requirements would be as follows: 30 percent content on up to 5,000 units; 45 percent content on 20,000 units; 54 percent content on 50,000 units; 59.5 percent content on 100,000 units; and 64.75 percent content on 200,000 units. For commercial vehicles content requirements would be 30 percent for up to 5,000 units; 45 percent for 20,000 units, 51 percent for 50,000 units and 55.5 percent for 100,000 units. See Bladen, Report, pp. 72-73.

[18] Ibid., p. 69.

[19] P. Wonnacott, "Canadian Automotive Protection: Content Provisions, the Bladen Plan, And Recent Tariff Changes," Canadian Journal of Economics and Political Science, volume 31 no. 1, February 1965. p. 98.

[20] Dominion of Canada, Official Report Of Debates (House Of Commons), First Session - Twentyfifth Parliament, II, (1962/63): 1007.

[21] Ibid., First Session - Twenty Sixth Parliament, IV, (1963): 3999.

[22] C. Beigie, The Canadian-U.S. Automotive Agreement: An Evaluation (Montreal: Canadian-American Committee, 1970), pp. 16-19.

[23] Figures from 1985 Market Data Book Issue, Automotive News p. 18.

[24] Bain, Barriers to New Competition pp. 245.

[25] In 1962, the number of models offered by U.S. auto makers equaled 296. Since prior to the auto pact Canadian auto producers tended to produce a complete variety of vehicles to supply the Canadian market, it is safe to assume the number of models offered by the Canadian auto makers not to be too much different from those offered by their U.S. counterparts. It should be noted as well, however, that the number of models usually exceeds the number of makes by 2,3, or 4 times. For instance one make may consist of 3 models which share the same basic shell. In addition, two makes may even share similar shells. The Plymouth Horizon and the Dodge Omni makes, provide a good example of this. Automotive News, November 4, 1985 p. 49.

[26] C. Green, Canadian Industrial Organization p. 302. and Beigie, Automotive Agreement, pp. 21-31.

[27] P. Morici, A. Smith, and S. Lea, Canadian Industrial Policy (Washington D.C.: National Planning Association, 1982), p. 100.

[28] Beigie, Automotive Agreement, p. 38.

[29] It is most probable that without the Automotive Agreement of 1965, the U.S. Treasury would have ruled to place a countervailing duty which would have acted to nullify Canada's duty remission plan of 1963. See R. Cowan, Effects Of The United States-Canadian Automotive Agreement, p. 11.

[30] Bladen, Report, p. 21.

Chapter V

THE CANADA-UNITED STATES AUTOMOTIVE PRODUCTS TRADE AGREEMENT

This chapter discusses the Canadian government's endeavor to increase the economic efficiency and position of the Canadian automotive industry through the rationalization of important ties to the United States industry and market. The Canadian government had to ensure that viability for the automobile industry would include benefits to Canada through lower automobile prices, increased employment, and an improvement in Canada's automotive products trade balance with the United States. The chapter will identify the basic framework of the Automotive Agreement and discuss and evaluate the impact on Canada's public interest and the Canadian automotive industry as the operation of the Agreement evolved.

5.1 THE AUTO PACT AND ITS PERFORMANCE

On January 16, 1965, Prime Minister Pearson and President Johnson signed the Canada-United States Automotive Products Trade Agreement. The "Auto Pact" (reproduced in Appendix D) rationalized the production of automotive products in North America by permitting free trade of new vehicles and original equipment parts under certain agreed to

conditions. The basic concept behind the agreement was to enable the Canadian automotive industry to limit the number of makes and models it produced, thus increasing efficiency in production, (through specialization and greater scale economies), and to provide duty-free access to the United States market for Canadian output. At the same time a large variety of automotive makes and models produced by the larger United States automotive industry would be imported duty-free into Canada to satisfy Canadian consumer demand for vehicle choice. The agreement excluded, however, trade in aftermarket parts and accessories, batteries, tires and tubes (except when mounted on new automobiles), and used vehicles.

Listed in Annex B, Article 3 of the Agreement were automotive agreement conditions allowing the duty-free import of certain Canadian automotive products (i.e. new vehicles and original equipment parts) provided that they came from Canada and contained at least 50 percent North American content. Through this the United States felt it could prevent third-country producers, including producers with limited North American production (i.e. Volvo, Renault- Peugeot, and Toyota) using Canada to circumvent the United States tariff[1].

Listed in Annex A of the Agreement, Canada's conditions allowing duty-free imports from the United States, were more numerous and significant. Termed safeguards, Canadian con-

ditions acted to influence the pattern of Canadian automotive production. Vehicle manufacturers alone were allowed to import automotive products duty-free. This ensured stability in the small Canadian industry, inasmuch as consumers could not directly import United States produced vehicles duty-free into Canada. In general, all duty-free automotive imports into Canada could only be made by Canadian automotive manufacturers who also had to meet certain qualifications and restrictions. These safeguards were as follows:

> (1.) Each designated manufacturer must maintain a certain ratio between the net sales value of vehicles made in Canada and the net sales value of vehicles sold here. The ratio for each class of vehicle - car, truck or bus - is to be either 75% or the level achieved in the base year beginning August 1, 1963 [the 1964 model year - August 1, 1963 to July 31, 1964] whichever is greater. In practice, these ratios are 95-100% for cars and 75 to over 100% commercial vehicles.
>
> (2.) The amount of Canadian value added for all classes of vehicles made in Canada is to be at least as great as the amount that was achieved in the base year[2].

The first safeguard acted to maintain the assembly side of Canada's industry, while the second safeguard benefitted Canadian parts producers as it ensured that a certain minimum level of "Canadian value added" would be present in motor vehicles produced in Canada[3].

In addition, the Canadian government required further commitments from the manufacturers, in the "letters of undertaking", which would also act to ensure basic Canadian content over and above the base year requirement. In these letters the participating automotive producers agreed that:

> (1.) In each model year, the value added in Canada should amount to at least 60% of the growth in the value of cars sold in Canada over the value of cars sold in the base year; for commercial vehicles (e.g., trucks), the value added should amount to at least 50% of the growth in the value of commercial vehicles sold over the value of commercial vehicles sold in the base year.
>
> (2.) Designated vehicle manufacturers were collectively to increase the amount of value added in Canada between 1965 and 1968 by a further $260 million[4].

Of the $260 million General Motor's share was $121 million, Ford's share was $74.2 million, Chrysler's share was $33 million, American Motors' share was $11.2 million and the Others' share was $20.6 million. Share figures were calculated in approximate correspondence to the firm's share of the Canadian market in 1965. For instance, GM's market share in 1965 was 46.5 percent, so that GM's share of the $260 million was $121 million[5].

Beigie notes, however, that the letters of undertaking did not stipulate the area or areas in which the growth in Canadian automotive activity, due to increased levels of required Canadian value added, were to take place. The manufacturer was thus left with the option of increasing either production of vehicles or parts, or both, for either the Canadian, United States, or third-country markets[6].

The Canadian safeguards and letters of undertaking provided the main source of friction between Canadian and United States officials. The United States argued and viewed the Canadian safeguards as a limited-time feature of the

Auto Pact which was to operate only for a transitional period. After this, "market forces" were to decide patterns of investment, production and trade. Canada, on the other hand, argued that nothing in the agreement stipulated the safeguards were to be of a transitional nature and responded that the oligopolistic nature of the United States automotive industry could easily act to offset the working of "market forces" and prevent Canadian companies from participating in the industry on a fair and equitable basis[7]. Despite their disagreements neither government, to this date, has exercised its right to terminate the agreement on a year's notice.

The United States' allowance of duty-free automotive imports from Canada, under the agreement, breached the most-favoured-nation principle of the General Agreement on Tariffs and Trade (GATT). The United States thus found it necessary to apply for a waiver from GATT, which it received on December 20, 1965. Canada, however, faced no difficulties with GATT, since it implemented the Auto Pact on a multilateral basis. Canada's position was to allow any manufacturer which satisfied the qualifications set for bona fide Canadian vehicle manufacturers to import specified products into Canada duty-free from any country.

The Automotive Agreement, unlike the Bladen plan and the duty remission plans, eliminated the United States tariffs imposed upon Canadian automotive exports. The agree-

ment only paralleled the Bladen and full-duty-remission plans in stipulating that all automotive production for export would be counted as Canadian content. In almost every other respect, however, they differed. For instance, the agreement excluded replacement parts entirely, while the other plans specified special incentives for Canadian replacement-parts exports. Further, the agreement, through the production-to-sales ratio requirement ensured that Canadian assembly operations would grow in relation to Canadian vehicle sales. The Bladen plan provided no special assembly incentive, and while the full duty-remission plan offered an indirect incentive for assembly, manufacturers could essentially trade assembly operation for large increases in parts production[8].

The Auto Pact has led to the rationalization and increased integration of the North American automotive industries. For Canada this meant greater efficiency in operations, and an improvement in Canada's market share[9]. Overall, the industry reduced the number of vehicle lines produced in Canada and increased the volume of production of the vehicle lines selected for specialization in Canada. An observation of the actions taken by the major Canadian automotive producers after the signing of the Auto Pact, will show how each firm proceeded to meet its Pact commitments.

Table 28 presents a general overview of production trends for the major Canadian automotive producers. It com-

pares new vehicle production and registrations (assumed to be a fairly acurate representation of new vehicle sales[10]) in Canada by the major producers for selected years between 1962 and 1968. The production to registration ratios of each manufacturer's car and truck production in 1964 gives the minimum ratios necessary for future production as stipulated in the agreement. For example, Chrysler's production to sales (actually registration) ratio in 1964 equaled 103.7 percent; therefore Chrysler's production to sales ratio in future years should be equal or above this amount in order to continue participating in the Auto Pact.

The Ford Motor Company of Canada commenced its commitments by rapidly accelerating truck production in Canada. By 1968, Ford's production of trucks reached a level where less than one truck in every three produced in Canada went to fill domestic requirements. Furthermore, Ford also rationalized its passenger car production so that it also became a major exporter of cars by 1968. Ford's integration of car operations began with the phasing out of the Comet and Fairlane lines in 1967. Late in 1967 Ford shifted Falcon production operations from its Oakville, Ontario, plant to its new St. Thomas, Ontario, plant and in early 1969 changed production of the Falcon to the Maverick line. By the early 1970's it was estimated that between 50 to 70 percent of the total North American production requirements for the Maverick came from the Canadian St. Thomas facility[11].

TABLE 28

Production And New Automotive Registrations In Canada, By Manufacturer, Selected Years: 1962-1968

Company	Calendar Years 1962	1964	1966	1968
American Motors				
Cars:				
Production	21,928	35,129	32,912	41,726
Registrations	20,229	31,802	27,448	21,867
Difference	1,699	3,327	5,467	19,859
Chrysler				
Cars:				
Production	50,560	104,734	172,960	219,151
Registrations	53,443	100,961	131,091	147,020
Difference	(2,883)	3,773	41,869	72,131
Trucks:				
Production	6,390	13,062	16,691	16,573
Registrations	6,149	11,147	16,133	15,819
Difference	241	1,915	558	754
Ford				
Cars:				
Production	118,190	153,243	198,498	247,286
Registrations	115,058	150,945	165,678	183,127
Difference	3,132	2,298	32,820	104,159
Trucks:				
Production	25,562	37,136	97,149	157,815
Registrations	21,078	29,708	38,746	49,878
Difference	4,484	7,428	58,403	107,937
General Motors				
Cars:				
Production	229,639	246,466	285,984	338,016
Registrations	225,454	246,113	280,077	269,782
Difference	4,185	353	5,907	68,234
Trucks:				
Production	37,579	47,123	69,647	86,288
Registrations	35,041	45,694	54,200	55,274
Difference	2,538	1,429	15,447	31,014

Source: Beigie, Canadian-U.S. Agreement, part of Table 10, pp. 62-63.

To meet its commitments under the Pact, Chrysler Canada increased the volume of new passenger car assemblies, and proceded to export large numbers of vehicles to the United States. Impressive gains in passenger car production had been made by Chrysler by 1968. To accomplish this Chrysler integrated its North American assembly operations by reducing the number of car lines produced in Canada. R. Cowan notes that, initially, two body shells made up Chrysler's Canadian car production. They were the Plymouth Fury model on one shell and the Dodge Polara and Monaco models on the other. Production of all other automobile models was transfered to the United States. By 1970 integration shifted to one car line on one body shell, the Duster. Little attention, however, was given to its production of trucks and it is believed that Chrysler failed to meet its required production to sales ratio in truck production[12].

Although, between 1964 and 1968, new car registrations in Canada of American Motor's vehicles steadily declined, the company still managed to rationalize its Canadian operations and expand production in 1968, so that a production to registration ratio of nearly two to one was achieved. American Motors Corporation discontinued Canadian production of the Javelin and Ambassador lines and expanded the assembly of the Rebel and Rambler lines in an attempt to satisfy its Auto Pact commitments.

In order to fulfill its Auto Pact commitments General Motors of Canada, unlike its major competitors, turned towards an increase in parts export. This is reflected in the relatively small increase found in General Motors' car and truck assembly in Canada during the period following the signing of the agreement. It may also suggest, "that General Motors' assembly operations in Canada compared more favourably in terms of the level of costs in the United States prior to the agreement than did the assembly activities of the other Canadian producers, a factor, no doubt, of the scale of General Motors' Canadian activities"[13]. Even though General Motor's production figures grew faster than its new vehicle registration figures, the increase had been significantly smaller than the increases achieved by both Chrysler and Ford.

Thus, through specialization and rationalization of North American operations, the major automotive producers in Canada were able to achieve greater levels of economies to scale[14]. The obligations placed on the Canadian automotive manufacturers by the automotive agreement have largely been met through increases in assembly operations rather than parts production. The uneven growth in assembly and parts production induced by the agreement could be seen as a negative aspect of the Auto Pact. However, other major benefits of the agreement in Canada included: increased levels of employment and wages; increases in production and produc-

tivity, lower prices for the Canadian consumer, and expanded levels of trade. D.A. Wilton, in an econometric study of the Canadian automotive manufacturing industry, compared actual results with simulated results (assuming no agreement was signed) to show that by 1968: "(i) retail automobile prices are 10 per cent lower than expected in Canada; (ii) industry output is 68 per cent higher than expected in Canada; (iii) production worker employment is 32 per cent higher than expected in the Canadian automobile industry; (iv) U.S.-produced imports are 993 per cent higher than expected in Canada"[15]. In addition, he claimed that, in absolute terms, approximately 9,000 new production jobs and nearly one billion dollars worth of additional annual output in the Canadian automotive industry could be attributed to the signing and implementation of the agreement.

In 1965 the Canadian automotive industry (motor vehicle and parts and accessories manufacturers) employed 74,414 workers. 1969 saw this number increase to 83,457 and, by 1978, this number reached 107,703. It then fell to 91,196 in 1980, and then rose to 112,349 in 1983 and to 121,100 in 1984, as the impact of the recession was removed. It is of interest to note that, at least during the early years of the Auto Pact, the Agreement has "been of primary stimulus to the level of Canadian output rather than to the level of Canadian employment," or in other words, "the Agreement has not caused a marked shift of jobs away from the United

States to Canada but has instead made the Canadian segment of the automotive labour force considerably more efficient"[16].

Further, the Canadian motor vehicle assembly workers, in comparison to their United States counterparts, earned hourly wages of $2.68 to the U.S. level of $3.57 or 75 percent of U.S. earnings in 1964. In 1969 the differential narrowed, as Canadian wages increased to $3.71 in comparison to the U.S. level of $4.53 (i.e. 82 percent of U.S. earnings). By 1974 the figures changed to $5.94 and $6.06 respectfully and the wage differential in Canada narrowed to only 98 percent of United States earnings. However, by mid-year 1982, with Canada's declining exchange rate the gap widened as the average U.S. automotive worker earned 19.37 U.S. dollars an hour compared to the average Canadian automotive worker's 16.65 Canadian dollars an hour, or 13.50 American dollars an hour. As a result the Canadian percent of U.S. earnings dropped to 70. In addition, Canada's share of North American automotive employment by the major automotive companies increased from about 6.6 percent in 1973 to a record high of 8.8 percent in 1981[17].

After a series of major disagreements[18] between the United States and Canadian automotive segments of the Detroit-based international union, on contract negotiation acceptance, the Canadian members of the United Auto Workers (UAW) organization decided to demand complete autonomy in-

side the international union. By December 1984 White led the Canadian segment of the UAW out of the international union and held a founding convention in the fall of 1985. Although the union split added an extra variable in the automotive companies investment planning models, (i.e. the uncertainty of the behaviour of Canadian auto labour), the companies had already poured in a collective annual average of about $1 billion in new investments in Canada from 1980-83, and did not appear willing to abandon this. The Canadian cost of labour, of between $8.00 to $9.00 per hour, less than in the United States (due primarily to the exchange rate) has meant that, "the U.S. auto planners will look upon their Canadian operations as a good place to do business for some time to come"[19]. However, analyst Arthur Davis indicates that, all automakers are expected to "be cautious about sourcing entire product lines in Canada," and "in Chrysler's case...the company may consider looking for an additional site, probably in the US, for minivan production, now exclusively in Windsor"[20].

Table 29 gives information on North American vehicle production for the years 1960 to 1984 and presents information on Canada's actual and required share of total North American motor vehicle production. Canada's required share is that stipulated by the Auto Pact, i.e. any Canadian motor vehicle manufacturer wishing to qualify for duty-free treatment must ensure a production-to-sales ratio for vehicles in

TABLE 29

North American Vehicle Production: 1960-1984

Cars and Commercial Vehicles (thousands+ of units)

Year*	United States	Canada Actual	Canada Required	Total	Canada's Share of Total (%) Actual	Canada's Share of Total (%) Required
1960	7,905	398		8,303	4.79	
1961	6,653	387		7,040	5.50	
1962	8,197	505		8,702	5.81	
1963	9,109	631		9,740	6.48	
1964	9,308	671		9,979	6.72	
1965	11,138	847	(810)	11,985	7.06	(6.75)
1966	10,396	902	(813)	11,298	7.98	(7.20)
1967	9,024	947	(792)	9,971	9.50	(7.95)
1968	10,820	1,180	(836)	12,000	9.84	(6.97)
1969	10,206	1,326	(845)	11,532	11.50	(7.33)
1970	8,284	1,160	(667)	9,444	12.28	(7.06)
1971	10,672	1,347	(793)	12,019	11.21	(6.59)
1972	11,311	1,430	(884)	12,741	11.22	(6.94)
1973	12,682	1,548	(1,090)	14,230	10.88	(7.66)
1974	10,071	1,526	(1,159)	11,597	13.16	(10.00)
1975	8,987	1,385	(1,225)	10,372	13.35	(11.81)
1976	11,498	1,528	(1,200)	13,026	11.73	(9.22)
1977	12,703	1,691	(1,213)	14,394	11.75	(8.42)
1978	12,899	1,742	(1,260)	14,641	11.90	(6.60)
1979	11,480	1,586	(1,329)	13,066	12.14	(10.17)
1980	8,010	1,324	(1,222)	9,334	14.19	(12.02)
1981	7,943	1,289	(959)	9,232	13.96	(10.39)
1982	6,986	1,293	(702)	8,289	15.62	(8.48)
1983		1,524	(875)			
1984		1,829	(1,067)			

\+ - Rounded to nearest thousand
* - Calendar year

Sources: Beigie,
Canadian-U.S. Agreement, part of Table 16, p. 79.

Motor Vehicle Manufacturers' Association,
Facts And Figures In Canada, p. 31.

MVMA Motor Vehicle,
Facts & Figures '83, p.9.

Canada to be at least as high as the ratio attained during the 1964 model year. Since 593,233 cars and 109,742 trucks and buses were produced in Canada in the 1964 model year, and 548,737 cars and 105,939 trucks and buses of Canadian or United States origin were sold in Canada in 1964, the ratio, in the aggregate, for cars equaled 1.081, and for trucks and buses it equaled 1.036. By multiplying these ratios with yearly sales figures in Canada of North American produced vehicles it is possible to determine the number of Canadian produced vehicles required to satisfy the production-to-sales condition[21].

As shown in Table 29 the actual production levels continually exceeded calculated required levels. In the years immediately following the Auto Pact the actual production levels grew most rapidly so that by 1968 the Canadian share of total vehicle production was more than double its 1960 level. Beigie notes that, prior to 1965, the growth in Canada's share of vehicle production reflected the rate of growth of sales in Canada and the impact of Canada's duty-remission plans after 1962. However, after the signing of the Auto Pact in 1965, "the growth in Canada's share was due primarily to the response of manufacturers seeking to meet their commitments in the letters of undertaking"[22]. Even during the recessionary periods, 1974-75 and 1979-82, Canada held its ground in terms of exceeding its required share of total North American motor vehicle production. Conditioned

by Canada's generally lower exchange rate (especially after 1976) and lower wage rate, the parent companies of Canada's automotive industry continued to fulfill their commitments to the auto pact.

Table 30 gives information on automotive products trade between Canada and the United States between 1951 and 1985. It indicates that prior to the Auto Pact, Canada imported both motor vehicles and motor vehicle parts at a substantially higher rate than it exported. With the Auto Pact Canada's export of motor vehicles generally exceeded, quite often substantially, it's import of motor vehicles. However, parts importation continued to exceed parts exportation leading to a major source of Canada's generally negative trade balance of automotive products with the United States. Thus it appears that, although the parts sector of the industry had traditionally been a sore spot in the industry, the Auto Pact tended to favour the Canadian assembly side of the industry over the parts production side.

The total value of two-way trade between Canada and the United States in automotive products increased from $2.4 billion in 1966, to $62 billion in 1985. Cumulatively the value of two-way trade between Canada and the United States in automotive products between 1966 and 1983 totaled $275 billion, of which $256 billion was traded under the Automotive Products Trade Agreement (APTA) and $19 billion outside the agreement[23]. Over this time Canada experienced a

TABLE 30

Canada-U.S. Trade In Automotive Products: 1951-1985

Year	Motor Vehicles Imports	Motor Vehicles Exports	Parts Imports	Parts Exports	Total Balance
	Units		Value ($000)		
1951-60	275,241	1,125	N/A	23,940	
1961	24,114	193	326,730	8,749	
1962	23,500	1,136	441,077	12,725	
1963	11,800	3,504	554,704	36,358	
1964	18,469	19,094	649,481	73,436	
1965	53,655	51,146	841,749	142,995	
	(Canadian $ Millions)		(Canadian $ Millions)		
1966*	371	481	990	339	(541)
1967	773	988	1,216	458	(543)
1968	1,073	1,588	1,706	789	(402)
1969	1,121	2,248	2,168	954	(88)
1970	880	2,115	2,005	1,038	268
1971	1,284	2,474	2,314	1,386	263
1972	1,539	2,738	2,719	1,645	126
1973	2,010	3,040	3,236	2,048	(158)
1974	2,444	3,391	3,547	1,817	(783)
1975	3,000	3,726	4,040	1,909	(1,405)
1976	3,130	4,704	4,801	2,767	(460)
1977	3,846	5,943	6,218	3,488	(633)
1978	4,283	6,972	7,425	4,421	(315)
1979	5,564	6,622	7,780	4,072	(2,650)
1980	4,543	6,612	6,890	3,008	(1,813)
1981	4,945	8,142	8,364	3,671	(1,497)
1982	3,705	11,023	9,056	4,292	2,555
1983	5,866	12,976	10,967	6,207	2,350
1984+	8,124	18,965	15,446	10,287	5,682
1985+	11,136	21,699	17,438	11,512	4,637

( ) - Figures in brackets indicate a deficit.
* - From 1966 on, trade carried out is under the Automotive Products Trade Agreement.
\+ - Canada-United States Trade in Automotive Products, on a Reconciled Basis.

Source: Motor Vehicle Manufacturers' Association Facts And Figures In Canada, pp. 39, 41, 43, and 44.

greater number of years with a deficit trade balance. See

Total Balance column of Table 30. Between 1966 and 1983, under APTA, Canada realized a cumulative trade imbalance of $5.7 billion. However, the reconciled trade figures for 1984 and 1985 indicate that Canada now holds a cumulative trade surplus of approximately $3 to $4 billion dollars under APTA trade[24]. Between 1966 and 1983 the trade balance between Canada and the United States for automotive products outside of APTA have been negative each year for Canada, with the exception of 1982 when a trade surplus of $156 million was realized. The cumulative trade balance for this period was a $4.89 billion deficit for Canada.

Canada-overseas trade in automotive products under APTA, between 1966 and 1982, has resulted in a cumulative surplus balance of $5.6 billion from a cumulative total of two-way trade of $10.7 billion. However, Canada-overseas trade in automotive products outside of APTA during this same time period resulted in a cumulative deficit balance of $9.5 billion from a cumulative total of two-way trade of $13.6 billion[25].

Turning now to the effect that the Auto Pact had on productivity, it has been estimated that prior to the Auto Pact, Canadian output per employee in the automotive industry was less than 65 percent of that in the United States industry. However, with the Auto Pact, several studies have found that this productivity gap has essentially been eliminated and that the U.S. rate has in some cases been sur-

passed. Further, in terms of quality of production, Canadian plants have been rated equal to, or even better than, their U.S. counterparts[26].

A measurement of productivity can be obtained by examining the number of persons employed in an industry and the number of units produced in that industry. Table 31 yields information on unit production, production and related workers, and productivity for the motor vehicle manufacturers for selected years between 1950 and 1984. The table indicates that, prior to Auto Pact and the duty remissions plans, productivity in the industry averaged below 20. Following the introduction of the Auto Pact, productivity impressively jumped and then generally leveled off at an above 40 value. Downward trends are also apparent following the two major oil price shocks and subsequent recessions.

The Auto Pact's rationalization of the industry has led not only to improved productivity but also, through greater production efficiency, it has enabled the United States-Canadian price differential on automobiles to narrow, so much so that in the 1970's Canadian prices, excluding taxes, fell below those in the United States. In 1965, the average manufacturer's wholesale price, omitting federal and provincial sales taxes but adjusting for the exchange rate, was estimated to be 9 percent higher in Canada than in the United States. This differential narrowed to 6 percent by 1968, and in 1982, the factory costs of a two-door sub-compact se-

TABLE 31

Productivity in the Canadian Motor Vehicle Manufacturing Industry. Selected Years: 1950-1984

Year	Units Produced	Production and Related Workers	Productivity Units/Workers
1950	390,102	23,756	16.42
1955	453,597	26,136	17.36
1960	395,613	19,835	19.95
1965	846,609	30,014	28.21
1966	872,214	29,746	29.32
1967	919,508	28,333	32.45
1968	1,150,218	26,965	42.66
1969	1,326,478	29,278	45.31
1970	1,159,504	25,303	45.82
1971	1,346,765	29,480	45.68
1972	1,430,084	30,580	46.77
1973	1,548,307	32,770	47.25
1974	1,525,582	35,099	43.47
1975	1,385,137	31,694	43.70
1976	1,527,852	35,122	43.50
1977	1,691,084	38,636	43.77
1978	1,741,966	37,233	46.79
1979	1,586,238	39,008	40.66
1980	1,323,999	32,521	40.71
1981	1,289,231	32,869	39.22
1982	1,293,417	30,914	41.84
1983	1,524,413	36,226	42.08
1984	1,829,384	41,732	43.84

Sources: Appendix A Table 41, and MVMA, Facts And Figures In Canada, pp. 31, 36.

dan and a full-sized sedan were 8.8 percent and 6.9 percent lower, respectively, for Canadian consumers than for United States consumers. A higher incidence of sales tax in Canada, however, eliminated this favourable cost differential in the purchase price of motor vehicles[27].

The Auto Pact has enabled the Canadian automotive industry to efficiently gear production on a "Continental" basis. The agreement is both an instrument of free trade and a protectionist tool. It has enhanced the free trade of automotive products and at the same time has provided protection for the smaller Canadian industry and market through the production to sales ratios and the Canadian value added safeguards.

Released from its confinement of producing predominately for only the small Canadian market, the agreement gave access to the much larger United States market, and allowed increases in Canadian employment and productivity through model specialization and greater economies to scale. Automotive products trade between both countries has impressively expanded, yielding Canada a positive automotive trade balance under the agreement, and automotive price and wage differentials have narrowed. In general, viability of the Canadian automotive industry has been achieved accompanied by a range of public interest benefits.

Notes

[1] Beigie, Automotive Agreement, p. 46, Report of the Federal Task Force on The Canadian Motor Vehicle and Automotive Parts Industries, Patrick J. Lavelle and Robert White, Co-chairmen, An Automotive Strategy For Canada, (Ottawa: Minister of Supply and Services Canada, 1983), p. 17, and Reisman, The Canadian Automotive Industry, pp. 26-27.

[2] Lavelle and White, Automotive Strategy, pp. 17-18.

[3] Beigie, Automotive Agreement, pp. 46-47.

[4] Lavelle and White, Automotive Strategy, p. 18.

[5] Separate data for "Others" is not publicaly available. Paul Wonnacott, and R.J. Wonnacott, "The Automotive Agreement of 1965", The Canadian Journal of Economics and Political Science, vol. 33 no. 2 (May 1967): 271, Beigie, Automotive Agreement, p. 48, and Cowan, Effects of the United States-Canadian Automotive Agreement, p. 18.

[6] Biegie, Automotive Agreement, p. 49.

[7] Reisman, The Canadian Automotive Industry, pp. 30-32.

[8] Beigie, Automotive Agreement, pp. 48-50.

[9] Canada's market share can be defined as the relationship which exists between "the value of Canadian automotive production and the value of Canadian purchases of North American-produced motor vehicles." A fair and equitable position is claimed to be reached when any gap between production and sales disappears. Ibid., p. 77.

[10] As noted by Beigie, since Canadian sales statistics are not published for individual producers, new registrations become a good proxy for sales, and that although new vehicle registration consistently understate, in the aggregate, the level of total sales in Canada of North American-produced vehicles, it is never greater than 5 percent. This difference, he explains, can be due to among others, a lag in registrations and sales of motor vehicles for off-highway use which are never registered. Ibid., p. 60.

[11] See Cowan, Effects Of The Agreement, pp 32-33, and Beigie, Automotive Agreement, pp. 64-65.

[12] Ibid., pp. 32 and 64 respectively. In 1964, Chrysler's production to registrations ratio equaled approximately 13.1/11.1 = 118 percent, and in 1968 it equaled approximately 16.6/15.8 = 105 percent. As a result it ap-

peared Chrysler would become subject to duty payments, however, as outlined in the agreement, the production to sales ratios "in practice" are 95-100 percent for cars and 75 to over 100 percent for commercial vehicles.

[13] Beigie, Automotive Agreement, p. 65. See also Cowan, Effects Of The Agreement, p. 33.

[14] It is felt, as C. Beigie notes, that the realization of maximum efficiency in the industry had been hampered by certain conditions in the agreement. They were namely; the vehicle production-to-sales ratios; and especially the in-vehicle Canadian content requirements. The former condition affected North American efficiency as a manufacturer could not allow the production-to-sales ratio to fall below a fixed percentage for each class and thus it was impossible for the manufacturer "to phase out, say, truck assembly in Canada in return for an increase in passenger-car assembly or, for that matter, parts production."(p.59) The latter condition, on the other hand, tended to affect efficiency in Canada, as each manufacturer could not allow the amount of Canadian content in each class of vehicle assembled in Canada to fall below the level achieved in the 1964 model year, and thus, "it was impossible to integrate all parts production immediately, although a rapid rate of growth in Canadian assembly would reduce the significance of this factor."(p. 59) Together, these two agreement conditions acted to favour Canadian assembly over parts production. See Beigie, Canada-U.S. Agreement, pp. 59, 66-69.

[15] David A. Wilton, "An Econometric Model Of The Canadian Automotive Manufacturing Industry And The 1965 Automotive Agreement," Canadian Journal of Economics, vol. 5, Feb. to Nov. 1972, p. 181.

[16] Beigie, Automotive Agreement, p. 85.

[17] Lavelle and White, Automotive Strategy, p. 21, Government of Canada, Department of Regional Industrial Expansion, Report On The Canadian Automotive Industry In 1984, p. 23, Canadian Imperial Bank Of Commerce, "Canada's Motor Vehicle Industry," Commercial Letter, 2 (1976): 7, information from Table 4, Motor Vehicle Manufacturers' Association, Facts And Figures Of The Automotive Industry In Canada, (Toronto: MVMA, 1986), pp. 36-37, and MVMA Motor Vehicle, Facts & Figures '83, (Detroit: Motor Vehicle Manufacturers Association of the United States, Inc., 1983), p. 67.

[18] Sparked finally by the Canadian division's union negotiator Bob White's refusal to accept a similar profit-sharing, lump-sum payments contract negotiated between

the international union and General Motors in the United States in 1984. Rather, White demanded and recieved, after a two week strike, a contract providing for yearly wage increases. See, "Autonomy from UAW called likely," Winnipeg Free Press, 10 December 1984, p. 14.

[19] "New UAW: Auto firms' wild card," The Financial Post, 14 September 1985, p. 11. See also, "Canadian UAW takes own road," Winnipeg Free Press, 11 December 1984, pp. 1, 4, "Auto workers' union split approved," Winnipeg Free Press, 31 March 1985, p. 1, Government of Canada, Report In 1984, p. 23, and Wilfred List, "The Boundless Ambition Of Bob White," Report On Business Magazine, March 1985, pp. 31-36.

[20] Wayne Lilley, "In the footsteps of Lee Iacocca," Canadian Business, June 1985, p. 151.

[21] Beigie, Automotive Agreement, pp. 78-80. Also, sales in Canada of North American produced vehicles were as follows:

Calendar Year	Cars	Commercial Vehicles	Calendar Year	Cars	Commercial Vehicles
1960	321,804	68,324	1973	782,914	235,449
1961	336,122	68,149	1974	796,840	287,686
1962	427,127	78,674	1975	835,679	310,590
1963	506,311	94,323	1976	793,201	331,027
1964	550,823	106,754	1977	797,752	337,914
1965	633,641	120,205	1978	815,994	364,241
1966	626,986	130,629	1979	863,554	381,562
1967	605,049	133,330	1980	740,767	310,273
1968	637,393	142,241	1981	646,942	250,775
1969	638,270	149,597	1982	489,435	166,986
1970	497,185	124,664	1983	625,088	192,609
1971	592,319	147,001	1984	724,932	273,604
1972	653,933	189,577			

Source: Motor Vehicle Manufacturers' Association, Facts And Figures In Canada, p. 50.

[22] Beigie, Automotive Agreement, p. 78.

[23] Calculated from Motor Vehicle Manufacturers' Association, Facts And Figures In Canada, pp. 40, 43-44.

[24] Since the export of motor vehicles under APTA constitutes Canada's major area of surplus trade, the large increase in motor vehicle export in 1984 and 1985, in table 30, tends to support the $3 to $4 billion estimate of the cumulative trade balance surplus under APTA.

[25] MVMA, Facts And Figures In Canada, pp. 43-45.

[26] Lavelle and White, Automotive Strategy, p. 22.

[27] Ibid. This higher incidence of sales tax is evident when comparing sales tax rates in both countries. For example, "in Michigan sales tax adds only 4% to the retail sales price of a typically equipped intermediate-sized sedan, while in Ontario provincial sales tax adds about 7% to the retail sales price of the same car in addition to the 9% federal sales tax on the manufacturers' wholesale price." (p. 22.)

Chapter VI

CHALLENGES AND DIRECTIONS

This chapter examines some of the recent major problems faced by the Canadian automotive industry. It begins with an investigation of the relatively new, highly efficient source of competition from the Far East and how it has affected the automotive industry in Canada and North America. Next, an examination of the fear of United States disinvestment in the Canadian automotive industry will be examined. This will be followed by a section underlining the current direction the North American industry is taking in its drive to re-establish its position. Finally, alternatives for the Canadian industry will be discussed.

6.1 THE JAPANESE FACTOR

The Canadian automotive industry has encountered many challenges in recent years. A major challenge has been the major changes in the world automotive industry and Canada's ability to adjust to these. As in the United States, Canadian automotive producers have met with intense competition from offshore producers, who were greatly assisted in their penetration of the Canadian market when product demand shifted as a result of oil shortages, fuel price increases,

and a lagging recession. Although an analysis of how intense offshore competition was able effectively to penetrate the North American market has been given in Chapter 2, part 2.2, it is now appropriate to examine the effects of this competition on the Canadian segment of the North American automotive industry.

For most of the 1970's Canadian factory sales of motor vehicles from North American plants averaged over one million units annually and reached a record high in 1979 of 1,245,116 units before slipping down to 656,421 units in 1982, a 12 year low. However, 1985 saw factory sales increase once more to over a million units when 1,139,836 units were sold. See Appendix A, Table 42.

In part the 1982 low was the result of a shift by an increasingly large number of Canadian consumers from the traditional large North American car to the economical small fuel-efficient overseas imports, especially from Japan. The economic climate and the market conditions in North America in the late 1970's and the early 1980's meant that Canadian consumers in the 1980's greatly welcomed the exports of offshore motor vehicle producers. In Canada the market share of new passenger car sales for offshore producers impressively jumped from 17.5 percent and 13.9 percent in 1978 and 1979, respectively, to a record high of 31.4 percent by 1982, before dropping off to 25.3 percent in 1984, but increasing once again to 30.1 percent in 1985. See Table 32.

TABLE 32

Market Share Of New Passenger Car Sales, By Origin: 1978-1985

Year	North American (%)	Japan (%)	Other Off-Shore Countries (%)
1978	82.5	11.4	6.1
1979	86.1	8.0	5.9
1980	79.5	14.8	5.7
1981	71.5	23.0	5.5
1982	68.6	25.0	6.4
1983	74.1	20.9	5.0
1984	74.7	17.6	7.7
1985	69.9	17.5	12.6

Source: Motor Vehicle Manufacturers' Association, Facts And Figures In Canada, p. 55.

The commercial vehicle segment of the industry was likewise heavily penetrated by imports of especially Japanese light pick-up trucks. James Cook notes that this Japanese product actually created the North American market for light compact trucks shortly following the series of energy crises. The imported vehicles share of the market increased from 6.5 percent in 1980 to 19 percent in 1983. Although mini-vans and light duty pick-up trucks catagorically are classified as trucks and thus are fully exempt from the quotas, 1984 saw their share drop to 12.3 percent. This was mainly a result of the displacement effect created by Chrysler's successful production of it's mini-vans and Ford's and GM's entry into compact truck production. In the United

States such imports declined in 1982, following the imposition of a 25% tariff on light pick-up trucks and the production of North American produced compact pick-up trucks by Ford and General Motors[1]. It is of interest to note that, "instead of using the tariff as a competitive weapon, the U.S. truck-makers raised their prices to a hair below imported truck prices"[2].

The Japanese automotive industry was "producing the right vehicle at the right time." This was especially true between 1979 and 1980 as United States and Canadian consumers found themselves paying world level fuel prices and near world level fuel prices, respectively, as a result of changes in energy policies. Previously these policies cushioned North American consumers from rapid increases in world oil prices between 1973 and 1979. The Japanese automotive producers traditionally produced only small, economical, high performance cars for their home market, so that when consumer demand in Canada (and in the United States) shifted towards smaller vehicles, the Japanese were well prepared as a source of supply. The North American automotive industry was caught "off-guard" in it's ability to provide the product in demand. Whether or not the industry foresaw and expected rapid, drastic changes in demand, it found itself in a position where it was forced to make changes to regain and maintain viability[3].

The success of the Japanese automotive producers was based on several factors. The first, and perhaps foremost, reason for Japan's competitive edge was the excellence of its work force and capital equipment not only within the automotive industry but also in key supplier industries. R. Perry indicates that in mid-1981 the "total hourly compensation in the Japanese automotive industry was estimated to be 62 per cent of that in Canada and 46 per cent of that in the United States...," and that "...in overall manufacturing, Japanese total hourly compensation stood at 63.3 per cent of that in Canada and 57.0 per cent of that in the United States"[4]. In addition, he notes that labour productivity both in vehicle manufacturing and in key supplier industries has been found to have been superior in Japan to that in Canada and the United States.

A second and very significant factor behind the success of the Japanese automotive industry is the close and mutually cooperative relationship between the industry and the Japanese government. The Japanese government has not only stimulated the motor vehicle industry through tax concessions and minimum regulation, it has also acted to assist the industry to expand into foreign markets. The latter was accomplished mainly by protecting the home market through import and foreign investment restrictions and by involving itself in the development of industrial strategy and by supporting an industry-wide research and development program[5].

A third element is the high degree of vertical and horizontal integration in the Japanese industry which adds to its stability and success through efficiency. For example, R. Perry informs us that Toyota is part of Mitsui, a large industrial-financial group of companies of approximately 2,000 firms. Mitsui acts as a communicative link between these firms. A cross-ownership and interlocking management system exists which gives Toyota equity and a working interest in some major industrial firms and, conversely, certain banks and steel companies hold equity in Toyota and its member group of firms. To get an idea of the extent of this integration Perry further notes that:

> Toyota heads a tightly integrated structure of major core companies such as Hino (trucks), Daihatsu (mini-cars), and about eighty parts suppliers. Companies within the Toyota group are involved in vehicle and parts production, equipment and machine tools manufacture, housing construction, shipbuilding, steel making, real estate, transportation, electronics, trading of industrial materials, aerospace, and other area. Toyota's corporate structure, diversity and integration, both downward and through the Mitsui group, is unparalleled in the North American automotive industry but is duplicated by other Japanese vehicle producers, such as Mitsubishi and Nissan[6].

In addition Perry claims the "integration of the automotive production process in Japan is the foundation for the efficiency of the industry..." in that "...the tight scheduling of production within the corporate structure...enables the levels of inventory within the system to be held to a matter of hours, as opposed to days in North America"[7].

These factors have been supported by the behaviour of the Japanese yen, which has been described as a competitve element which compounds the Japanese cost advantage since it tends not to react to changes in purchasing power[8]. This combination has yielded the Japanese vehicle companies a landed cost advantage before duty of approximately $1,500 to $2,100 per small car over Canadian manufacturers[9].

In an attempt to give the North American automotive industry time to adjust and modernize its production facilities, without becoming totally over-run by the highly competitive and efficient vehicle exports of Japan, the governments of Canada and the United States negotiated with the government of Japan temporary Voluntary Restraint Agreements beginning in 1981[10]. Besides yielding protection and time for the Canadian and United States automotive industries to reconsolidate their position in the structurally changing industry, this acted to influence the type and price of vehicle the Japanese producers would send to the North American market.

Traditionally the Japanese vehicle producers entered North America with products aimed at the low-priced segment of the market. These low-priced economy cars impressively swallowed up large chunks of the North American market share following the two oil supply shocks. However, after establishing a position of economy, quality and affordability among North American consumers, the imposition of export re-

straints has encouraged the Japanese manufacturers to successfully shift their mix of exports towards more expensive models. The artificially created shortage actually became favoured by the Japanese producers as well as the North American producers. The Voluntary Restraint Agreement has acted to calm temporarily the Japanese fear of an export surge which "could lead to both painful price cuts and a protectionist backlash,..." and allowed the Japanese producers to "boost profit margins to levels unheard of back home"[11]. The North American producers also benefitted as a result of the restraint placed on offshore competition through increased sales, prices, and profits. For instance, "Wharton Econometrics estimated in 1983 that the quotas added an average of $625 for each car sold in the U.S."[12].

Table 33 provides information on the average price of passenger cars in Canada by origin from 1976 to 1985. The table indicates that since 1976 there have been no decreases in the average prices of passenger cars produced in North America or Japan. Indeed the average prices of North American produced cars have increased from between 5.2 percent and 11.6 percent per year, while for Japanese produced vehicles price increases ranged from between 3.0 percent and 26.1 percent per year. The only source from which an average price decrease occurred was the "other" offshore producers when in 1984 their average price decreased by 11.9 percent and then again by 6.8 percent in 1985. This decrease

TABLE 33

Average Prices Of Passenger Cars, By Origin: 1976-1985

Year	North America $Amount	North America %Change*	Japan $Amount	Japan %Change*	Other Off-shore Countries $Amount	Other Off-shore Countries %Change*
1976	5,702	+9.5	4,076	+9.4	5,902	+9.6
1977	6,097	+6.9	4,200	+3.0	6,209	+5.2
1978	7,359	+8.2	5,066	+20.6	7,162	+15.3
1979	7,359	+11.6	6,387	+26.1	8,037	+12.2
1980	8,193	+11.3	6,619	+3.6	10,047	+25.0
1981	9,312	+13.7	7,835	+18.4	12,462	+24.0
1982	9,922	+6.4	8,706	+11.4	13,733	+10.5
1983	10,719	+8.0	9,566	+9.9	15,641	+13.9
1984	11,279	+5.2	11,262	+17.7	13,777	-11.9
1985	12,007	+6.5	11,675	+3.7	12,840	-6.8

* - Percentage changes shown are year-to-year change.

Note: The value of sales as reported to Statistics Canada by respondents is the selling price to the consumer, i.e., the manufacturer's invoice price plus estimated dealer's markup, charges for standard equipment and options, less provincial sales tax.

Source: MVMA, Facts And Figures In Canada, p. 54

in average price could perhaps have been the result of the increasingly popular Korean import from the Hyundai Motor Company. Entering the market near the end of 1983 the Hyundai Pony filled the low cost sub-compact niche neglected by the Japanese producers who, after the voluntary trade agreement, opted to maximize profits by exporting a greater mix of larger, higher priced models with more options[13].

Although the annual rate of increase in the average price of North American passenger cars increased at a generally slower rate from 1981 onwards, the price competition re-introduced by the Japanese producers was short-lived as Japanese passenger car prices quickly caught up to their North American counterparts. It appears that, when given the opportunity, producers in the long run eventually favour the more profitable form of product competition over price competition. However, in fairness it should be noted that the North American consumers' revival of demand for larger and less economical cars may have also played a role in determining the form of market competition practised by the industry. The longevity of the price competition offered by the Hyundai Motor Company is yet to be seen.

The Canadian government has actively encouraged Japanese automotive investment in Canada. Japanese investments in Canada include an aluminum wheel manufacturing plant in British Columbia by Toyota, and plans by Toyota to open a $400 million vehicle assembly plant in Canada in 1988 near Cambridge, Ontario, which can produce 50,000 cars annually; a $200 million Honda plant near Alliston, Ontario to produce 19,000 cars in 1987, and 80,000 cars by 1989 employing about 700 people on a two shift basis; and a joint venture by General Motors of Canada and Suzuki Motor Co., of Japan which will build a $500 million car assembly plant to be completed by 1989 for the production of 200,000 mini-cars and four-

wheel-drive utility vehicles a year in Ingersoll, Ontario. In addition the Korean Hyundai Motor Company has plans to invest approximately $300 million in building a vehicle assembly plant in Bromont, Quebec, which will have an anuall production rate of 100,000 cars by 1991[14].

The recent establishment of Japanese automotive firms in North America with their general reluctance to operate under the conditions of the Auto Pact raises questions about the adequacy and suitability of the agreement. When the Auto Pact was designed it focused on rationalizing North American automotive production and trade on a continental basis. The Japanese producers' entry into vehicle production in North America has changed the scenario. However, it may not be so much that the Auto Pact requires change to encourage offshore producers to participate in it, but rather that unionized production practices (considered uneconomic by the Japanese) of the Auto Pact producers are unattractive to the offshore companies. For instance, the majority of Japanese automotive producers establishing production facilities in North America dislike the presence of the United Automobile Workers Union in its work force. When the union's presence is necessary, such as under certain joint ventures with North American producers, the Japanese usually bargain strongly with the UAW to obtain innovative flexible labour contracts[15].

The rigidity of the North American automotive production process is commented on by Jeremy Main. Main explains that North American manufacturers' attempts to adopt Japanese techniques by getting workers more involved in improving quality and productivity have run into various obstacles. Citing Japanese systems of "quality circles" (a system in which groups of usually 12 workers meet weekly with 1 or 2 managers to discuss methods of improving quality, output, work effort, and worker-management relations) and "just-in-time" (a system which restructures supply methods in order to reduce on-hand inventory and ensure that the majority of parts arrive at the time they are needed) he writes that when GM first attempted to introduce quality circles in 1977, "it failed to enlist the support of...the United Auto Workers"[16], and although it got underway in 1981, two years later the union became split over whether the circles should continue. As for the just-in-time system, Main explains, factories have been found to be of the wrong shape and size and in the wrong place in order for it to work smoothly. Future designs of new plants and locations of suppliers will be of prime importance for firms wishing to operate efficiently under the just-in-time system which cuts inventory costs.

Japanese automotive producers in Canada generally appear to have taken a wait and see strategy. It seems that they do not wish to commit themselves to the Auto Pact until

they feel that Canadian labour and suppliers can operate under conditions similar to those found in Japan. The joint ventures undertaken with North American producers (especially in which Agreement conditions are to be met) may act to serve two purposes. The first, and more obvious one, is to act doubly to pacify the movement, especially evident in the United States Congress, to impose harsh protectionist trade policies on imports and to guarantee market access, even though many more parts may have to be purchased or manufactured in North America (depending upon the political climate). The second is to act as a probe to analyse the possibility and feasibility of further North American investments.

Although offshore producers are willing to make major investments in Canada the Big Three in Canada argue that, in relation to the share of the passenger car market they hold (30.1 percent in 1985), their cumulative investment (approximately $ 800 million) is relatively small and does little to match the capital outlay of the domestic producers. For example, American Motors Canada Inc., with only 2 percent of the market, has invested $764 million in its Brampton plant, almost matching the combined total of the foreign manufacturers[17]. In addition the Canadian government is placed in a dilemma as Japanese automobile makers, with the exception of Toyota, have indicated their opposition to meeting auto pact conditions in their Canadian operations. Susumu

Yanagisawa, chairman of the Japan Automobile Manufacturers' Association of Canada has noted that the imposition of Canadian content requirements would act to oppose Ottawa's efforts to encourage new foreign investments. "Such a move" he said "would not only discourage further Japanese investment but would result in a readjustment of current investment based on trade protection rather than efficient resource allocation, imposing further economic costs of inefficient production affecting both component and assembly operations"[18]. The Canadian government thus finds itself wishing to promote new investment in Canada while at the same time being urged, by the established automotive producers, to ensure that this investment meets Auto Pact conditions.

However, if the Japanese, and other offshore automotive producers continue to invest in Canada, without committing themselves to the conditions of the Auto Pact, (by building "kit assembly" plants in which the bulk of their operations are cheaply located overseas) then Canada can expect major losses in auto employment. General Motors of Canada Ltd. president George Peapples, has estimated that up to 40,000 Canadian automotive jobs may be threatened by the early 1990's due to industry over-expansion and that this job threat could be avoided if domestic-content rules were imposed on foreign carmakers. In support of his claim he points out that "most Japanese and Korean automakers are not

committed to getting parts from domestic manufacturers" and that "in Canada, domestic companies create 40 jobs for every 1,000 vehicles in fully-integrated operations but offshore automakers and their "kit assembly" plants generate just 10 to 15 jobs for the same number of units"[19].

Part of the problem, as pointed out by Rod McQueen, is that Canada erects few trade barriers and places no limits on the number of imports allowed into the country. Thus the country is easily flooded with imports by manufacturers who have little interest in making investments which will comply with the conditions of the Auto Pact. In comparison McQueen points out that Britain restricts imports to only 10 percent of the market, while Italy restricts imports of foreign cars to 2,000 annually. He attributes Hyundai's phenomenal success, which achieved Canadian sales of 79,000 in 1985, up from 25,000 in 1984, to be mainly due to its duty-free status as a developing nation[20]. As of January 1, 1987 however, Canada imposed a duty of 6 percent on vehicles imported from developing nations, with all other imported vehicles not achieving pact requirements facing a 9.2 percent duty. The 6 percent duty is intended to alleviate the cost advantage of non-pact imports from developing nations and encourage such offshore producers to take a more serious look at meeting auto pact conditions and to invest in Canada and/or purchase Canadian made parts. The 9.2 percent duty, down from 10.7 percent[21] in 1985, however, can and has been

easily absorbed by offshore producers from developed nations such as Japan.

6.2 UNITED STATES DISINVESTMENT - FACT OR FALLACY?

In view of the North American industry's need for change there has been deep concern in Canada that "the Canadian automotive industry, comprised primarily of a group of subsidiaries of American firms, is vulnerable to changes in corporate strategy and government policy occurring in the United States."[22] The primary fear is that the Canadian segment of the North American automotive industry may become forgotten in the United States automotive industry's investment planning for new production technologies, improved efficiency and a restored internationally competitive position.

This disinvestment can be defined as "the net outflow of funds from Canadian subsidiaries to their U.S. parent corporations," and "it occurs when annual outflows (payments) of dividends, interest, and fees and royalties exceed annual inflows from the parent corporation of equity, loans, and retained earnings."[23] The net capital flow between Canadian subsidiaries and United States parent corporations in the transportation equipment industry (dominated by the automotive industry) for the years 1966-70 has been estimated as a Canadian inflow of $119 million in current U.S. dollars. Between 1971 and 1975 this inflow decreased to $11

million, and between 1976 and 1980 became an outflow of $1,065 million[24].

The Canadian automotive parts industry sector of the industry was also faced with the need to adjust to structural changes in the industry. The Canadian parts industry consists of three general sectors. These are: in-house producers - firms of the automotive companies, foreign-owned multinationals - predominantely branch plants of United States parent companies, and Canadian-owned firms. Firms from these groups produce components and subassemblies for the original equipment and aftermarket segments. About eighty percent of Canadian parts production is destined for the United States and between seventy and eighty percent of production is for the original equipment market[25].

Table 34 lists the value of shipments and the share of the market held by each sector in 1981 and 1984. As in the assembly industry, the parts industry is dominated by United States parent corporations. The increase in the Canadian-owned market share of the industry in 1984 largely resulted when Canadian ownership increased "with the formation of Epton Industries, Complas Ltd., Long Manufacturing Ltd. and A.P. Parts all formerly subsidiaries of B.F. Goodrich, General Electric, Borg Warner and A.P. Parts respectively in the United States"[26].

TABLE 34

Structure of the Canadian Automotive Parts Industry

	1981 Value of Shipments ($millions)	1981 Share (%)	1984* Value of Shipments ($millions)	1984* Share (%)
In-house	2,016	41.3	4,624	45.2
Foreign-Owned	2,326	47.7	4,236	41.4
Canadian-Owned	537	11.0	1,371	13.4
Total	$4,879	100.0%	$10,231	100.0%

* - APMA Projection based on Statistics Canada figures.

Source: Government Of Canada, Report On The Canadian Automotive Industry In 1984, Table 5, p. 16.

Although the Canadian parts industry impressively more than doubled the value of shipments between 1981 and 1984, the value of parts imports grew substantially enough to eliminate any potential gain in the parts trade balance (see Table 30). The root of the parts industry's recurring trade deficit seems to lie within the Automotive Products Trade Agreement. Put simply by J. Shepherd of the Science Council of Canada, "The problem is, we negotiated the agreement around the assembly of vehicles and not around parts. We've bought the consequences of that negotiation. The more vehicles we assembled, the greater our deficit in parts became"[27].

Even though the Auto Pact has succeeded in capturing a fairer share of new jobs and investment for Canada, it is feared that the lack of reference to technology in the agreement has allowed the high-technology end of the industry (the area of research and development expenditures, technological spinoffs for other industries, and the promising possibilities of generating new investments and skilled jobs) increasingly to focus mainly in the United States[28]. As a result the Canadian segment of the industry will certainly find itself "playing an increasingly menial role: rote assembly of finished automobiles using complex parts developed and manufactured in the US; and a network of small Canadian parts manufacturers which, with a few notable exceptions, tend to make nuts and bolts, hub caps and other low technology items"[29]. In order to survive, massive investments in new technologies are required by the Canadian branch of the automotive industry. John Shepherd estimated in 1979 that between $6 billion to $8 billion in investments over the next several years would be necessary to keep the Canadian industry competitive. Apprehension about this problem is based on Canada's R and D weakness and on fierce competition from other regions which may make Canada a less attractive area for automotive investment[30].

The United States automotive producers have realized the need to re-invest and convert plants to produce a new type of vehicle. Between 1978 and 1982 the American "Big 4"

invested over 60 billion dollars for this purpose. However, between 1978 and 1984 the Canadian subsidiaries of the American "Big 4" also took part in major re-investment operations, as nearly 5.5 billion dollars went into investment expenditures with the bulk of these expenditures coming during and after 1980, as shown in Table 35. It appears that plans for these plant re-investments in Canada materialized only after expenditures for United States plant re-invest-

TABLE 35

Capital Expenditures for Plant, Equipment and Tools by the Big 4: 1978-1984

($millions)

Year	GM	Ford	Chrysler	AMC	Total
1978	N/A	N/A	N/A	N/A	445*
1979	N/A	N/A	N/A	N/A	586*
1980	760.1	462	64	15	1,301.1
1981	1,064.6	229	76	10	1,379.6
1982	324.2	90	100	11	525.2
1983	342.1	197	322	13	874.1
1984	276.5	164	19	30	489.5

N/A - Not Available
* - Includes special tooling for all four companies and investments overseas by Ford of Canada.

Sources: Government of Canada,
1983 Report on the Canadian Automotive Industry, Table 4, p. 22, and
Report On the Canadian Automotive Industry In 1984, Table 9, p. 42.

ments were underway. This perhaps added to, or created, the "disinvestment" fear mentioned previously. However, this delay in beginning major re-investment operations in Canadian automotive plants can be explained by the following reasons. First, the rapid decline in the large car market occurred after 1980 in Canada, while in the United States it occurred between 1979 and 1982. Second, approximately 77 percent of total Canadian automobile production was concentrated in intermediate and full-size models between 1978 and 1983, and although U.S. plants closed for conversion, companies still needed capacity. Canadian plants thus became major, and even exclusive, suppliers of many existing model lines. For instance, "the Ford Motor Company's Oakville plant became the sole source in North America for the Ford LTD"[31]. Third, when U.S. gasoline prices started to moderate in 1982, consumer demand for large cars in the United States made a come-back. Canada, still being a major supply source of such models, benefitted as a result. Fourth, up to and including 1984, General Motors of Canada Ltd. postponed some plant conversions due to the strong continued demand for large cars, while Ford of Canada changed plans at its St. Thomas plant, retooled in late 1983 for two sizes of passenger vehicles, to produce only full size vehicles. Fifth, the nature of the Auto Pact (i.e., that a motor vehicle manufacturer be able to import parts and vehicles into Canada duty free only if the manufacturer fulfills the required level of production in Canada in relation to its

sales in Canada) in effect quaranteed that production would continue even if at reduced levels, and that plant conversions (from large to smaller cars) would not be done all at once but rather on a plant to plant basis. If new plants were to replace existing plants, then production in the existing plants would continue at least up to the opening year of the new plants[32].

6.3 CURRENT EVENTS AND THE RESTORATION OF THE NORTH AMERICAN AUTOMOTIVE INDUSTRY

In general, the structure of the world automotive industry changed during the 1970's to become much more competitive internationally. The North American market, in which the North American automotive manufacturers had built a relatively safe base, had lost its exclusiveness by the 1980's as offshore producers successfully invaded the largest and richest single market. Along with this change in structure there was a trend towards greater producer equality as the North American companies declined in a relative world position when some ten or more global companies grew in size to attain substantial "mid-size" status[33].

As part of this increasingly powerful multinational industry, the North American producers have established links through joint ventures with the competition, and have begun an attempt to emulate Japanese automotive production techniques. GM, Ford, and Chrysler have established joint ven-

tures with Japanese manufacturers in the production of small cars and have turned towards purchasing more parts abroad in an attempt to reduce costs and improve productivity. Links have also been made between the Big Three and Korean and Taiwanese automotive producers[34].

An example of one such joint venture is that between GM and Toyota with the formation of the New United Motor Manufacturing Inc. to produce a version of the Toyota Corolla to be sold under the Chevrolet Nova nameplate. Through this joint venture GM hoped to gain valuable information on Japanese techniques of production and on labour relations. Against Toyota's wishes the company yielded to pressures to hire a work force organized by the UAW. The plant however, is believed to be able to achieve Japan-like efficiency and quality since the UAW, after tough bargaining, allowed the traditional union work rules to be scrapped for the new plant. It is felt that these traditional work rules may have been largely responsible for the difference in the man-hours of labour required for the actual assembly of a sub-compact car between the United States and Japan (27 hours and 15 hours respectively). It has been argued that:

> The main difference [between American and Japanese manufacturers] is not superior automation but smarter organization of assembly jobs and greater flexibility in the use of labor. Traditional work rules prevent an assembly worker from doing any job outside his own narrow classification, and segregate skilled maintenance workers into anywhere from ten to 15 separate trades - welders, millwrights, pipefitters, electricians, repairmen - none of whom can touch a pipe or a fuse if it falls outside his classification[35].

As a result it appears that much of the North American automotive efficiency problems may be a result of poor labour practices and the difficulty in trying to improve them. Stephan Sharf, executive vice-president for manufacturing at Chrysler Corporation, estimates "that about 70% of the productivity gains being made by U.S. auto makers these days comes from technology. Labor is contributing the remaining 30% - often by agreeing to more flexible work rules." In addition he claims that when labour refuses to be flexible, " the increase in productivity from the new machinery drops to about 50% of its potential"[36].

The Japanese automotive producers have not only entered the North American market through exports and joint ventures but they have also developed manufacturing plants in the United States and, more recently, in Canada. Shoichiro Irimajiri, president of Honda of America Manufacturing Inc., boasts that his (non-union) plant near Marysville, Ohio, is able to produce a car in the United States for only $500 more than it costs to build in Japan, questioning the Big Three's cant about the $1,500 to $2,000 gap. Statistics, he claims, show that his plant has almost twice the productivity of other automobile producers in the United States. Part of this productivity difference could be attributed to the Japanese just-in-time inventory management system although Irimajiri notes the difficulty in receiving supplies from North American parts suppliers to meet quality and delivery targets[37].

The apparent success of the Japanese in producing vehicles in North America more efficiently than the North American producers "suggests that the problem is not so much American workers as it is American ways of manufacturing and of dealing with employees"[38]. The problem, as identified in a Businessweek article, appears to have originated as a result of the long term "prosperity without competition" climate experienced in North America up to the late 1970's. As a consequence of this, both automotive company and union negotiators allowed efficiency and quality to decline. Executives at GM and Ford have pinpointed at least 80 percent of the industry's problems on management and, as claimed by James Harbour, an automotive consultant, the automotive producers may spend all they want "on automation and technology, but they'll never spend their way out of the problems they're in"...unless they realize the..."solution lies in better management systems."[39] For this reason, North American manufacturers have been studying new ways to produce their products by introducing new strategies in management-labour techniques and new technological manufacturing processes. In the United States, GM's investment in its newly developed project-subsidiary the Saturn Corporation, and Ford's Alpha and Chrysler's Liberty projects have all been designed to cut manufacturing costs by decreasing the number of man-hours involved in producing cars. This is to be accomplished through widespread plant automation, the application of robots to production and the control of ordering by computers[40].

The vehicle assembly industry in Canada also underwent major changes during this time, even though the volume of output was acutely reduced between 1979 and 1982. Advanced process technologies were introduced with extensive plant modernization programs, plant conversions, and plans of plant conversions to enable assembly plants to produce the new generation front-wheel drive vehicles[41]. For instance, on May 9, 1983, Chrysler Canada ceased production of its traditional North American type vehicle to become Chrysler's sole source of vans and mini-vans as the last of a new, smaller Chrysler New Yorker was driven off the assembly line of the Windsor Assembly Plant. After a month, conversion on the plant began for retooling in order to build Chrysler's revolutionary front-wheel-drive Magic-Wagons and vans. With 125 robots and an operating system emulating Japan's just-in-time, it became one of the world's most advanced and efficient vehicle production facilities. After only a 17 week conversion period, it made industrial history. Conversions have taken place in the plants of the other major automotive producers in Canada as well. This includes construction currently taking place in Brampton, Ontario, where American Motors (Canada) Inc. has invested $764 million (Canadian) to build a new "state-of-the-art" assembly plant to produce a new mid-size passenger car starting in July 1987. Ford and General Motors have been implementing the use of robots and other new technologies in their Canadian operations. General Motors has committed an investment

of $6.2 billion to its Oshawa manufacturing complex which will produce a new line of mid-size cars and new light-duty trucks, while Ford Motor Company of Canada Limited has invested $1.2 billion in new automation in its plants and has worked on improving quality by increasing employee involvement in the planning stages of new products[42].

General Motor's investment in the Oshawa site is one of only three in North America where state-of-the-art production methods will be implemented (Kansas and Georgia are the other two sites). The project, named Autoplex, is to redesign the three assembly plants currently in use in Oshawa and add a new adjacent stamping plant. Computer-controlled automatic guidance systems, which will move vehicles to a series of work islands and 750 robots are to be used under Autoplex. Work teams or "employee clusters" of between eight to 15 workers will man the work islands, and vehicles will be sent to the next island only after each team is satisfied with the quality of their work. In addition, the system is to restructure supply methods to enable the majority of parts to arrive on a just-in-time basis[43].

The Canadian Auto Workers Union feel that systems like Autoplex will change the structure of the labour force. Job security and seniority are feared to be a thing of the past, as simulations of Japanese-style worker productivity require fewer job classifications and far greater worker flexibility. Automotive analyst Arvid Jouppi indicates that "the

earlier idea of seniority - yesterday, today and forever - does two things that no longer quite fit. It creates a worker who is far too limited in what he can do. Second, it tends to reduce quality by letting the senior worker take over a junior worker's job whether the senior worker knows the job or not"[44]. In the past, a company proposing a change in the traditional nature of labour, such as is demanded by GM's Autoplex, would warrant a major fight with the UAW. However, given the strong competition from offshore producers the UAW, it appears, is now, although unwillingly, resigned to the fact that such changes are inherently better than plant closures[45].

The Canadian General Motors-Suzuki joint venture received co-operation in negotiating a flexible labour contract with the Canadian Auto Workers Union. In addition, the venture is to meet agreement conditions within a two year period[46]. This may signify the union's slowly growing acceptance of the management-labour changes necessary to upgrade the competitiveness of the Canadian automotive industry. More importantly, however, it may also act as a symbolic break-through for automotive producers inasmuch as North American labour is shown to be flexible. It may provide a signal to Japanese automotive producers to ease their fear of North American labour and increase investment in North America (and, in this case, Canada) to the extent that they may participate in the Auto Pact.

Confidence in the products produced by the North American automotive producers is apparent in a new round of product competition set off with announcements of longer and better warranty coverage[47]. Besides indicating the strengthening and revival of product competition in the industry, this more importantly indicates that significant changes and improvements in product design, engineering, and quality have occurred, and that the limit in the market size has once again been realized. These improvements and product confidence have been promoted to consumers in advertising campaigns highlighting product quality and protection differences. This can be demonstrated by Chrysler's advertising slogan "best built, best backed". The Big Three, in making significant warranty extensions, seem to have aimed their approach to convince consumers of the product improvements in quality to rebuild their image and to regain valuable market shares which they had previously lost to the offshore producers. Their efforts may prove successful if the Japanese producers refuse to respond with similar warranty extensions.

The strategy of centering new production on improved quality mid-sized cars is hoped to protect the traditional sovereignty of the North American producers in the main market segment[48]. It appears that producers of passenger cars (traditional North American producers and now Japanese producers) for the North American market judge that their

new generation mid-size cars will be ideal for satisfying the North American consumers' taste for power, size, quality, and fuel efficiency. However, even though the fuel economy of this class of car has been significantly improved over similar models of the 1970's, the North American automobile producers' lack of enthusiasm for small cars, other than in joint ventures and sponsored imports, may leave them once again vulnerable (although probably not to the same degree) to offshore products if and/or when fuel prices increase significantly and if consumer preference radically shifts towards small cars.

The Canadian automotive parts industry has also undergone major changes and investment in response to the changes realized in the assembly industry. Although the large parts firms had or could obtain sufficient supplies of funds for investment expenditures during the recession, many of the smaller parts firms found difficulty in securing funds for capital expenditures, especially after cash flows tightened and interest rates increased following 1980. With the extreme importance of investment to provide products demanded by the assemblers, the federal government announced in January, 1982, that automotive parts firms would be able to gain access to special assistance under the Industry and Labour Adjustment Program. Approximately $23 million was granted to the parts sector by 1983 in order to spur innovation, modernization or conversion of plant and equipment, and to

aid companies to engage in major incremental projects. In addition, the government of Ontario announced in late 1984 the creation of a $30 million Automotive Parts Investment Fund aimed at small and medium sized firms to assist in product development, plant modernization and manpower training which, it is hoped, will increase the competitive edge of the industry[49].

Table 36 gives information on the capital expenditures in the Canadian motor vehicle parts and accessories industry for the years 1972 to 1984 and indicates that the bulk of these expenditures occurred in 1980 and 1981. In fact, of

TABLE 36

Capital Expenditures In The Canadian Motor Vehicle Parts And Accessories Industry: 1972-1984

Year	Motor Vehicle Parts & Accessories ($ millions)	Year	Motor Vehicle Parts & Accessories ($ millions)
1972	55.9	1979	330.9
1973	78.7	1980	780.9
1974	119.9	1981	666.5
1975	81.2	1982	189.8
1976	62.5	1983	164.0
1977	109.6	1984	181.1
1978	203.9		

Source: Motor Vehicle Manufacturers' Association, Facts And Figures Of The Automotive Industry In Canada, p. 30.

the total expenditures in the industry between 1972 and 1984, almost 60 percent occurred between 1979 and 1981, with almost 50 percent occurring in 1980 and 1981. Over 50 percent of the total motor vehicle parts and accessories expenditures made between 1979 and 1981 were made by the in-house producers of the major vehicle manufacturers, and were largely a result of investments made by Ford in opening a new engine plant and by General Motors in opening a new transmission facility in 1981[50].

Thus capital expenditures in the automotive industry (assembly and parts) totalled approximately $7.47 billion between 1979 and 1984[51]. This figure matches the previously mentioned figure of between $6 to $8 billion estimated by John Shepherd of the Science Council of Canada as required to keep the Canadian automotive industry competitive. However, it appears that most of the innovations in new products continue to be centered in the United States as Moe Closs, president of Chrysler Canada, concedes that "most of the product plans come from Detroit"[52].

Much of the change experienced by the parts manufacturers came as a result of the growing importance and need to employ new technological innovations in the industry. Computer-Aided-Design and Computer-Aided-Manufacturing are two such areas of new technology in the industry, and they enable parts manufacturers to comply with the assembler's desire to have the parts industry take a more active role in

component design work. Vehicle downsizing and increased fuel efficiency requirements have also meant that parts suppliers have made changes in the type of materials used in automotive components. Aluminum castings, electronic components, motors and systems, and plastics and plastic components are prime areas of research and opportunities for the parts manufacturers[53].

The automotive parts sector thus found itself in a position which necessitated adjustment in response to the pressures for change placed on the assembly sector. The ties in global production, created as a result of joint ventures undertaken by major automotive producers located in different parts of the world, have favoured the growing trend towards globally integrated parts sourcing. For the Canadian parts manufacturers this has meant an increased need to compete on the world market to retain their position as major suppliers in the Canadian automotive industry and in the United States imported parts market, and to be able to acquire new business[54].

The Canadian automotive parts manufacturers, like the assemblers, have also undertaken, although to a lesser degree, joint ventures with Japanese vehicle manufacturers and auto parts makers following the March, 1984, Canadian incorporation of the Japanese firm, Pacific Automotive Co-operation Inc. (PAC). Acting as an intermediary between Japanese and Canadian auto parts makers, PAC's major goals are: "to

promote and facilitate capital investment in the Canadian parts industry by Japanese companies; to encourage industrial co-operation between Japanese and Canadian enterprises; and to help promote the purchase of Canadian parts by Japanese automakers"[55]. The success of PAC was evident with the announcement of five joint ventures prior to the close of 1984.

6.4 ALTERNATIVE POSSIBILITIES

Most recently the Auto Pact has been the subject of controversy about the inclusion or non-inclusion of the 22-year-old agreement in the current free trade talks between Canada and the United States. American trade negotiators led by Peter Murphy indicated an interest in having Canada drop its production and Canadian content safeguards. It seems that the American negotiators feel that Canada's scrapping of its safeguards may act to ease the current automotive trade deficit the United States is experiencing with Canada. However, the safeguards cannot truly be credited with Canada's automotive trade surplus with the United States. Rather, the surplus has more directly originated from the North American consumer's renewed demand of large cars (of which the bulk of large cars were continued to be produced in Canada) and Canada's relatively cheap dollar (making Canada a good place for automotive production). Indeed, if the Auto Pact safeguards were strictly adhered to,

Carl Beigie calculates that they would leave Canada with a $3 billion trade deficit[56]. Industry performance in Canada is comfortably above the safeguard levels and Canada's chief free trade negotiator, Simon Reisman, has strongly stated that he has no intention of allowing the Canadian safeguards to be scrapped, "as part of a free-trade deal with the United States," and just because the "industry is way above it," (the safeguard levels) it "doesn't mean you shouldn't leave it in place"[57]. Reisman argued further that the safeguard provisions are valuable as a type of production guide for new industry arrivals, and that the only acceptable changes to the Auto Pact would "be those that enhance Canada's employment, production and trade"[58].

To date, three alternatives have emerged reguarding the Auto Pact and the possibility of its modernization within the Canada-United States free trade negotiations. The first would be to institute no change and continue the status quo. The second would eliminate all tariffs between Canada and the United States, and the third would restrict the Pact "to a true bilateral agreement"[59] by allowing free trade of automotive products produced in North America only. However, each of these alternative options do not fully "address the changes in the North American auto trade created by the influx of Japanese and South Korean-owned car assembly plants that will be turning out almost 1.5 million cars a year in North America by 1990"[60].

The vehicle makers in Canada, the parts makers and the unions, strongly oppose "any suggestion that the pact be placed on the table as a package"[61] during the current free trade talks between Canada and the United States. In dealing with foreign automobile producers Robert White, Directer for Canada's United Automobile Workers Union, advocates the use of the Auto Pact safeguards. In the 1983 task force report, White and P. Lavelle, president of the Automotive Parts Manufacturers' Association of Canada, urged the government to apply a minimum Canadian-content standard to Japanese and other foreign car manufacturers to include "up to 60% Canadian content in their vehicles if exports exceed 28,000 units a year"[62]. In addition, industry members have argued that the federal government should impose Auto Pact conditions on Asian companies opening operations in Canada and that quotas on Japanese and Korean car imports (with exception of cars imported by the domestic producers) should remain (i.e. the voluntary restraint agreement) and be imposed respectively[63]. Government officials have, however, favoured negotiations, including duty remission schemes[64], with major offshore automobile exporting companies to make investments in Canada, promising easy access to the United States market over minimum local-content legislation[65].

Although the recession of the early 1980's and the subsequent poor performance of the automotive industry in Cana-

da gave rise to questions on the adequacy of the Auto Pact, the recent (especially 1983-1986) significant rebound in the economic strength of the industry, in conjunction with the industry's overall relatively strong position since the signing of the agreement, indicates the general success of the Auto Pact. Proof of the adequacy of the Auto Pact can be seen by the positive performance of the major automotive producers in Canada. For instance, General Motors of Canada is not only General Motors Corporation's largest subsidiary, it is also the most lucrative part of the entire operation. "With 6.4% of GM's employees (48,100 of 748,000), Canada generates $19 billion in sales, or about 12% of total revenues, and its return on invested capital in this country is in the 70% range." Further, the strong performance and importance of the automotive industry in Canada is evident since without it "there would have been no growth in Canada's gross national product in the past three years."[66]

In addition, as revealed in Table 37, the actual Canadian value added (CVA) as a percentage of cost achieved by the vehicle makers operating under the agreement in Canada has generally exceeded, often substantially, their Canadian value added Pact commitments. The exception lies in 1980, when industry performance narrowly missed CVA requirements, due in a large part to the sudden drop in vehicle demand. Further, the table indicates that since the enactment of the Auto Pact, CVA has been found to have risen in relation to

TABLE 37

Canadian Value Added

Actual Canadian Value Added as a Percentage of Cost of Sales Compared to CVA Commitments of all Auto Pact Producers and the Percentage of Canadian Value Added in Relation to the Total Value of North American Vehicle Production for the Four Major Vehicle Manufacturers (1964 - 1984)

Year	Total CVA committed by all Auto Pact producers as a percentage of cost of vehicle sales	Total CVA Achieved as a percentage of Cost of Sales	Canadian Value Added as a Percentage of Canada/U.S. Motor Vehicle Production
1964			3.7%
1965	58%	65%	3.4%
1966	58%	69%	4.2%
1967	58%	69%	4.6%
1968	71%	72%	4.4%
1969	70%	81%	5.1%
1970	70%	92%	6.7%
1971	69%	95%	5.2%
1972	66%	90%	5.5%
1973	64%	79%	5.5%
1974	62%	71%	6.6%
1975	61%	66%	6.4%
1976	61%	67%	6.0%
1977	60%	72%	5.5%
1978	59%	74%	5.2%
1979	58%	64%	5.7%
1980	57%	53%	6.3%
1981	58%	62%	6.9%
1982	59%	91%	7.4%
1983	60%	87%	
1984	60%	83%	

Sources: Lavelle and White, Report Of The Federal Task Force, An Automotive Strategy For Canada, part of Appendix 5 Table A-8, pp. 172-3.

Government of Canada, Department of Industrial Expansion, 1983 Report on the Canadian Automotive Industry, Part of Statistical Appendix Table 5.8, p. 80.

the total value of Canada-United States motor vehicle production.

6.5 RECOMMENDATIONS

If the Auto Pact were to be further liberalized a change which would be not only acceptable but also beneficial would be the inclusion of aftermarket parts and tires and tubes into the agreement. In a study on this concept, focusing on shock absorbers and mufflers, Henrik Helmers and Alex Murray, found that the "rationalization of the production of shock absorbers for a North American market rather than separate production for Canadian and American markets is both preferable and feasible, at least from the point of view of the most efficient use of overall resources"[67]. Similarly they found that the rationalization of the production of mufflers would be "substantially enhanced if there were no statutory requirement for separate distribution to the Canadian and U.S. replacement markets"[68]. With this they further deduced that since "mufflers and shock absorbers move through the same channels as most other replacement parts and if these two products remain relatively unaffected as far as distribution is concerned," then "it is

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Government of Canada,
Department of Industrial Expansion,
Report On The Canadian Automotive Industry In 1984
part of Statistical Appendix Table 5.6, p. 83.

reasonable to assume that the same conclusion can be reached for other replacement parts and accessories"[69].

A Canadian government study estimates that North American automotive production may reach 15 million by the late 1980's and early 1990's. Of the 15 million production figure, approximately two million vehicles will be produced in North America by Asian parent companies. These two million vehicles are also assumed, due to the current and future estimated popularity of offshore type vehicles, to have no problem being sold in North America. Thus it is important, whether or not the Asian companies meet agreement conditions, that Canadian parts suppliers establish major supplier links with the new vehicle assemblers to support continued employment in the industry[70].

If the free trade talks lead to very substantial elimination of tariffs at the Canada-United States border, then the Auto Pact would be made largely redundant[71] and the possibility of scrapping the Auto Pact may arise[72]. This could be devastating to the Canadian automotive industry because the dominating focus of economic power in the industry is ultimately in Detroit. Although the United States government may wish to also institute a form of production safeguards[73] it is only realistic to be aware of the strength of Detroit-based decision-making in the North American industry. Adjustments to the Auto Pact in recognition of the growing international nature of the industry are

necessary to spur industry research and development in the light of oligopolistic sluggishness[74]. Canada needs to ensure its full participation in technological change and modern technological production. Any major adjustment of change to the Auto Pact must be approved by both the Canadian and United States governments and it is of extreme importance to the industry that these governments recognize that the traditional North American industry operates as a highly intergrated unit.

If taken as a long term policy, the notion of raising the duty and restricting the importation of non-Pact vehicles may in effect be contrary to the foundation of the agreement itself. One of the primary reasons for the agreement was to reduce the price of vehicles for Canadian consumers while at the same time to provide consumers with a broad range of vehicle selection. By restricting imports and raising duties a restraint is placed on competition in the industry resulting in higher priced automobiles.

In a broader context free trade would, of course, provide Canadian consumers with the lowest possible automobile prices. However, if Canada wanted only this it could have received this from the Detroit producers since the 1930's. To have an automotive industry in its boundaries Canada is able to attempt to balance its trade in automotive products, employ a significant number of its citizens, receive spin-off benefits including the industry's purchases of material

from other related (supplier) industries, the conversion of Canadian raw resources into finished products in Canada, and also the provision of important tax revenues to the Government of Canada.

Conversely, if Canada wished a truly Canadian industry it could have achieved this by placing exorbitantly high tariffs on all automotive imports, to protect an industry which would most likely have been a highly inefficient, high priced producer of automobiles, or at the most an efficient producer of one or two makes of automobiles with infrequent changes in design. This however, would not satisfy the Canadian consumer's demand for product variety.

The Automotive Agreement, was designed to both allow the free trade of automotive products while at the same time ensure a level of protection to enable the industry to remain in Canada. This combination of free trade and protection has allowed the Canadian automotive industry to produce automotive products efficiently, within the North American "Continental" industry. The limited protection, as provided for in the agreement, can thus be justified.

The entrance of the Japanese producers (who are exceptionally well protected in their home market) into the North American industry has injected more competition into the system. The temporary import restrictions placed on Japanese automobiles has been beneficial in allowing time for

the North American industry to adjust to this competition, and has also acted to encourage Japanese producers in establishing branch plant operations in North America. Since import restrictions as a long term policy would be undesirable, and the North American automotive producers have restructured themselves to be more competitive internationally, it may be favourable to now remove these restrictions. However, upon doing so it is imperative that Japanese producers locate automotive production plants in Canada, rather than having Canada be overwhelmed with automotive products produced totally outside of its borders. Of importance, also, is that the Japanese meet Auto Pact conditions, providing Canada with a fair share of industry benefits. If the automotive producers located in Canada cannot offset imports from offshore producers who refuse to operate under the conditions of the agreement, then perhaps Canada may have no choice but to reimpose short term import restrictions on those products.

In general, however, it would seem that movement towards getting Japanese firms to accommodate themselves to the Auto Pact is the most promising prospect. The Auto Pact has provided liberalization of the automotive industry in North America while protecting Canada from much of the abuse of oligopolistic power. Now that the automotive industry is evolving into a multinational and international oligopoly, Canada may be able to capitalize further on the advantage

that the Pact offers. Adjustment to labour and other practices may point the direction to further success of a non-restrictive nature with the Japanese.

The Automotive Agreement is not a barrier to the achievement of efficiency. The level of protection it institutes is not unreasonable and can be easily met by sincere automotive producers. The fact that automotive plants in Canada are as efficient producers of automotive products as their counterparts in the United States attests to this. With adjustments in the use of labour techniques and firm management, there appears to be no reason (despite currency, wage, and tax rate differences) why Japanese or Korean automotive plants should not be operated in Canada under the Auto Pact and achieve the same, or very similar levels, of efficiency achieved in the automotive plants of their home countries.

Notes

[1] Lavelle and White, Automotive Strategy, p. 35, Government of Canada, Report In 1984, p. 12, James Cook, "We started from ground zero," Forbes, March 12, 1984, pp. 101-104, and Lilley, Footsteps of Iacocca," p. 151.

[2] Cook, "We started from ground zero," p. 104.

[3] In a study by M. Fuss and L. Waverman, it was found that the major problem felt by North American producers, was that "they simply couldn't sell as many cars as their plants were designed to manufacture," and "in 1980, the primary place where North American producers could not compete with the Japanese was in the design of automobiles with appropriate quality and size characteristics, rather than in relative production costs." In conclusion, they argued that the competitive pressures obtainable by unrestricted trade liberalization is needed to influence the oligopolistic nature of the North American industry to become more cost competitive. "Japans car advantage overrated, study says," The Globe and Mail, 14 June 1986, p. B3.

[4] R. Perry, The Future of Canada's Auto Industry: the Big Three and the Japanese Challenge (Toronto: James Lorimer & Company, 1982), p. 31.

[5] C.S. Chang, The Japanese Auto Industry And The U.S. Market (New York: Praeger Publishers, 1981), p. 70, and A. Padmos, "What makes Japanese Industry Successful?" cost and management, July-August 1983, p. 8.

[6] Perry, Future of Canada's Auto Industry, p. 38.

[7] Ibid.

[8] Lavelle and White, Automotive Strategy, p. 57. In their report, Lavelle and White state that, "over the 1978-1981 period, the yen...averaged 186 to the" Canadian "dollar. Over this period producer prices...rose 9.4% per year in Canada, while a similar measure for Japan showed a 5% annual increase. This 4.4 percentage point per year differential should have caused the Japanese yen to appreciate in value, but it did not." Similarly in 1982, producer prices in Canada rose 6 percent, while they rose by only 1.2 percent in Japan. "Again, this inflation differential should have caused the Japanese yen to appreciate against the Canadian dollar, but it actually depreciated in value." p. 57.

[9] Ibid., p. 55. To better understand the influence of exchange rates on the landed costs of imported vehicles, if, as what did indeed occur in 1982, the yen declined by 35 (from 186 yen to 221 yen/Canadian dollar) it would

have the effect of yielding a 16% or $800 cost advantage on a motor vehicle with a (before freight and duty) landed cost value of $5,000. p. 57. In addition, duty costs in 1981, as estimated by R. Perry were found to equal $717 based on the average Japanese import valued at $5,275. Perry, Future of Canada's Auto Industry, p. 33.

[10] However, economists C. Beigie and J. Stuart, of Dominion Securities Ames Ltd. of Toronto, argue that the temporary restraint agreement must be seen to be just that - temporary, and industry actions should be monitored to ensure that this temporary protection is not taken advantage of by bargaining for uncompetitive wage increases or by laxing effort in improving industry efficiency. If industry members are seen to be taking advantages then, "the degree of protection should be reduced accordingly." See "Auto quotas should not be licence to remain inefficient," Globe and Mail, 15 March 1984, p. B2.

[11] Larry Armstrong, Maralyn Edid, and Boyd France, "Why Carmakers Will Mourn If Export Quotas Die," Business Week, 18 February 1985, p. 46.

[12] Ibid.

[13] Government of Canada, Report In 1984, pp. 1, 10.

[14] Government of Canada, 1983 Report, p. 4, Regional Industrial Expansion, Automotive Industry: Canada, "GM, Suzuki announce plans for joint car assembly plant," The Edmonton Journal, 28 August 1986, p. E2, "Honda investment called breakthrough," Winnipeg Free Press, 5 June 1984, p. 15, and "Honda to double Alliston investment,' Globe and Mail, 19 December 1985, p. B1.

[15] See Brody, "Toyota Meets U.S. Auto Workers," pp. 54-64, Cook, "We started from ground zero," pp. 98-106, Michael Cieply, "Meanwhile back in Marysville," Forbes, March 12, 1984 p. 127, "Gm, Suzuki announce plans for joint car assembly plant," The Edmonton Journal, 28 August 1986, p. E2, and Waddel, "Automotive: After three years of recovery from recession, the auto industry's pedal is close to the floor," Report On Business Magazine, June 1985, pp. 82-84. In Waddel's "Automotive," he writes that the Japanese are privately wary of their Canadian-Japanese joint ventures. This is so because the Japanese view Canadian companies as appearing too complacent - "satisfied that the good times have returned to the North American auto industry," and that "Canadian companies are reluctant to consider investments in new technological processes, changes to labor-management relations and increasing the ratio of production to non-production employees. These steps are

essential, the Japanese argue for Canadian companies to meet the quality and output demanded by buyers for Japanese vehicle manufacturers." (p. 84.)

[16] Jeremy Main, "The Trouble With Managing Japanese-Style," Fortune, April 2, 1984 pp. 50, 54, 56.

[17] McQueen, "General Motors: No.1," p. 44.

[18] "Japanese automobile makers oppose auto pact conditions," The Edmonton Journal, 28 August 1986, E2.

[19] "Auto job loss predicted," Winnipeg Free Press, 20 January 1987, p. 11.

[20] McQueen, "General Motors, No.1," p. 44. McQueen notes that these tariffs are small in relation to Australia's duty on imported vehicles of 57.5 percent.

[21] "Autopact a success, but import threat looms," Globe and Mail, 26 August 1985, p. B17.

[22] Perry, Future of Canada's Auto Industry, p. 50.

[23] Ibid., p. 56.

[24] Ibid., p. 57, information from table 3-2, table source: U.S. Department of Commerce, Bureau of Economic Analysis, unpublished data from United States Direct Investment Abroad.

[25] Government of Canada, Department of Regional Industrial Expansion, 1983 Report on the Canadian Automotive Industry, p. 24, and Report In 1984, p. 16.

[26] Government of Canada, Report In 1984, p. 16.

[27] Mark Witten, "Why the Auto Pact is obsolete," Canadian Business, February 1979, p. 35.

[28] Ibid., pp. 33, 35.

[29] Ibid., p. 33.

[30] Ibid.

[31] Government of Canada, 1983 Report, p. 17.

[32] Government of Canada, 1983 Report, pp. 17, 22, 23, and Report In 1984, p. 6.

[33] Government of Canada, 1983 Report, pp. 37, 48-50.

[34] See Louis Kraar, "Detroits New Asian Car Strategy," Fortune, December 10, 1984, pp. 172-178. The article

indicates GM is running a 50% venture with Korea's Daewoo automotive company, Chrysler is establishing links with the large Korean conglomerate Samsung, and if granted government approval, will jointly produce automobiles in Korea, and Ford has established the Ford Lio Ho Motor subsidiary in Taiwan. In addition the article points out GM's presence in Korea will provide it with a share of Korea's growing domestic market which is expected to reach 250,000 cars annually by the late 1980's.

[35] Michael Brody, "Toyota Meets U.S. Auto Workers," Fortune, July 9, 1984, p. 60.

[36] See "Showdown In Detroit," Businessweek, September 10, 1984, p. 110.

[37] Christopher Waddell, "The Drive To Catch Japan," Report On Business Magazine, November 1985, pp. 30, 34.

[38] Cook, "We started from ground zero," p. 106.

[39] "Showdown in Detroit," Businessweek, September 10, 1984, p. 104.

[40] Waddell, "The Drive To Catch Japan," p. 30. The article notes that with its Saturn project, GM aspires to equal Honda's current output per worker. For instance, "when the Saturn plant opens in 1989 or 1990, GM hopes to make 2,060 cars a day using 6,000 workers, a 2.91 worker-per-car ratio." In contrast Honda currently has a ratio of 2.94 workers per car, employing 1,855 workers to produce 630 Accords daily, and by the time the Saturn plant opens, Honda's productivity at Marysville should have further improved as "Honda's plans call for a 2.09 worker-to-car ratio - using 2,778 employees to produce 1,330 vehicles daily at Marysville." (p. 30.) Thus the drive to catch Japan may be increasingly difficult as the Japanese are highly dynamic and are likely "to remain elusive pacesetters, adjusting their production methods constantly to the forces of technology and competition." (p. 34.)

[41] Government of Canada, 1983 Report, pp. 23, 28.

[42] Government of Canada, Report In 1984, pp. 6, 44-45, MVMA, Facts And Figures In Canada, pp. 10, 12, Lilley, "Please check the timing," Canadian Business, June 1984, p. 217, "The Remaking Of A Chrysler Plant," Fortune, November 14, 1983, p. 178, Brian Milner, "Automotive: The automakers say their stand against imports in the mid-size car market is a do-or-die affair," Report On Business Magazine, July 1986, p. 88, and "New AMC auto plant to create 1,800 jobs," Globe and Mail, 12 June 1984, p. B1. The Government of Canada Report

In 1984, also makes note that, "although the mini-van is included in truck production statistics, it is classified as a passenger vehicle under the Automotive Agreement and much of the production of this vehicle is aimed at the passenger car market." (p. 6.)

[43] Rod McQueen, "General Motors: No.1 and trying harder," Canadian Business, June 1986, pp. 32-33.

[44] Ibid., p. 44.

[45] Ibid., p. 49. Such appears to be increasingly the case as the GM-Suzuki joint venture plant mentioned previously received a flexible labour contract from the Canadian Auto Workers Union. See "GM, Suzuki announce plans for joint car assembly plant," Edmonton Journal, 28 August 1986, p. E2.

[46] McQueen, "General Motors: No.1," pp. 47,49, and "GM, Suzuki announce plans for joint car assembly plant," Edmonton Journal, 28 August 1986, p. E2.

[47] General Motors began this round of product competition by improving its three year, 57,000 kilometres warranty to six years or 100,000 kilometres on engines, transmissions and drive components and by offering protection against corrosion for six years or 160,000 kilometres on its 1987 models. Ford soon responded by matching GM's warranty coverage, while Chrysler upped its coverage on engine and powertrain to 7 years or 115,000 kilometres and increased its rust-through protection to 7 years or 160,000 kilometres. See "GM improves warranties," Winnipeg Free Press, 24 January 1987, p. 37, and "And If That Isn't Enough," - Chrysler advertisement, Winnipeg Free Press, 25 March 1987, p. 27.

[48] Milner, "Automotive: The automakers say their stand against imports in the mid-size car market is a do-or-die affair," p. 88, and Waddell, "The Drive To Catch Japan," p. 34, and "Oshawa auto plant expected to get nod to assemble GM10s," Globe and Mail, 13 March 1986, p. B13. In his article Waddell indicates that the Japanese too have, "decided to concentrate on larger, more expensive intermediate-size cars at their U.S. plants, directly challenging the formerly exclusive preserve of the Big Three." (p. 34.)

[49] Government of Canada, 1983 Report, p. 29, and Report In 1984, p. 4.

[50] Government of Canada, 1983 Report, pp. 24, 29-30.

[51] From tables 35 and 36. The total should even be higher if capital expenditures of the 'Other' (non Big 4) au-

tomotive producers were included.

[52] Lilley, "Footsteps of Iacocca," p. 150.

[53] Government of Canada, 1983 Report, pp. 26-27, and Cohen, "Brave New World of the Global Car," Challenge, May/June 1981, p. 30.

[54] The Canadian parts producers held approximately 50 percent of the United States imported parts market in 1984. This was largely attributed to the ability of many of the members of the Canadian parts industry to "adapt to the changing automotive environment and make major investments in new manufacturing and quality control processes" in conjuction "with the high value of the U.S. dollar." See Government of Canada, Report In 1984, p. 18.

[55] Ibid., p. 4.

[56] "Auto Pact snaggs free trade talks: U.S. seeks way to cut car trade deficit," Winnipeg Free Press, 20 January 1987, p. 7, and "Auto pact debate simple-minded," Winnipeg Free Press, 24 January 1987, p. 35.

[57] "Auto pact safe in trade talks, U.S. envoy says," The Globe and Mail, 14 January 1987, p. A2.

[58] "Auto pact concerns U.S., but big changes unlikely," The Globe and Mail, 15 January 1987, p. B5.

[59] see "Asian competition new factor in reassessment of auto pact." The Globe and Mail, 2 March 1987, p. A4.

[60] Ibid.

[61] "Autopact a success, but import threat looms," Globe and Mail, 26 August 1985, p. B17.

[62] "Cars can't be divorced from politics," Financial Post, 15 October 1983, p. 9.

[63] Milner, "Automotive: The automakers say their stand against imports is a do-or-die affair," p. 88, and "Continuaton of auto restraints sought," Globe and Mail, 13 March 1986, p. B17.

[64] The present duty remission scheme with Japan "allows Japanese car makers to earn a one dollar reduction in the value of imported parts or vehicles upon which duty is levied for every dollar of parts they purchase in Canada." See "Asian competition new factor in reassessment of auto pact," The Globe and Mail, 2 March 1987, p. A4.

[65] It is believed that if Canada would legislate minimum local-content requirements on overseas imports the United States White House may fall prey to Congresses call for stringent auto protectionism which may even lead to the demise of the auto pact. In addition it has been found by Wharton Econometric Forecasting Associates that local content legislation in the United States would lead to higher automobile prices, fewer jobs, and assumes a significant drop in World trade (due to retaliatory actions) leading to increasing world prices due to shifts in production away from least-cost sources. See "Cars can't be divorced from politics," Financial Post 15 October 1983, p. 9, "Car content rule unjustified in terms of employment gain," Globe and Mail, 18 October 1983 p. B2, and "Auto pact concerns U.S., but big changes unlikely," Globe and Mail, 15 January 1987, p. B5.

[66] McQueen, "General Motors, No.1," p. 36.

[67] Henrick O. Helmers and J. Alex Murray, Explorations Into Trade Liberalization: The Case Of The U.S./Canadian Automotive Aftermarket (Toronto: Gage Educational Publishing Limited, 1970), p. 37.

[68] Ibid., p. 39.

[69] Ibid., p. 43.

[70] The Department Of External Affairs and The Department Of Regional Industrial Expansion, Automotive Technology Transfers: The Japanese Challenge And Opportunity, February 1986, pp. 8-12.

[71] "Auto pact concerns U.S. but big changes unlikely," The Globe and Mail, 15 January 1987, p. B5.

[72] This concept raises the question, whether the North American automotive producers under total free trade would continue to invest in Canada, keeping the Canadian division of the industry a viable operation. The generally strong record of Canada's automotive production being above agreement obligations tends to suggest that the North American parent companies would continue to keep a healthy Canadian industry. After all, Canada has proven that it can indeed be more than just a supplier of raw resources. However, only time could tell the exact outcome, and for this reason Canada should demand a type of "veto" power which would allow Canada to re-impose safeguard type conditions after a 5 or 10 year leeway period if the Canadian segment of the industry in comparison to its United States parent would be found to be intentionally neglected.

[73] "Auto pact snags free trade talks," Winnipeg Free

Press, 20 January 1987, p. 7.

[74] "Japan's car advantage overrated, study says," The Globe and Mail, 14 June 1986, p. B3. The article notes that "the oligopolistic nature of the industry" allowed "...pressures to reduce costs" to be "minimal, and the auto pact 'did nothing to increase them'." (p. B3.)

Chapter VII

SUMMARY AND CONCLUSION

Throughout its evolution the North American automotive industry has witnessed major changes in its industrial organization. Originating primarily in the bicycle and carriage industries the industry began under conditions of small firm, large number rivalry. Automobiles were not standardized. The range of profits and losses was substantial and entry and exit of firms was frequent. As the industry matured, mass production was introduced and systematic price competition began. The industry became consolidated into a few major firms as a result of mergers and corporate failures. Subsequently price competition was largely replaced by non-price rivalry and barriers to entry became very substantial. The industry became dominated by three large firms, General Motors, Ford, and Chrysler.

The general development of the Canadian segment of the North American automotive industry closely paralleled that of the United States industry. The Canadian automotive industry, however, has been affected by a series of Canadian tariff policies, without which the industry may never have been firmly established in Canada. Firms in Canada started out as independents or as subsidiary firms of United States

companies, but all of the successful firms quickly formed ties with the major United States automotive producers. Difficulties in achieving economies to scale of certain automotive components in Canada acted to strengthen the Canada-U.S. industry links from the early days. Thus the Canadian automotive industry evolved into a subsidiary of the United States industry.

The small Canadian market and the need for product variety eventually placed serious limitations on the efficiency and economic viability of the Canadian automotive industry. This and the closing of export markets prompted the Canadian government to negotiate the Automotive Products Trade Agreement with the government of the United States. The Agreement, signed in January 1965 has done much to increase the efficiency of the Canadian automotive industry by rationalizing the Canadian and United States automotive industries and markets into a highly integrated unit to form a "Continental" North American automotive industry. The Agreement, providing for conditional free trade in the industry between Canada and the United States has helped to make the Canadian segment of the North American industry a viable operation and has brought price, employment and balance of payment benefits to Canada.

The security of the continental North American automotive oligopoly was disrupted by substantial fuel price increases and the invasion into North America of economic and

technologically advanced automotive products from Japan. Record numbers of consumers in the North American market preferred the well designed, lower priced, fuel efficient, vehicles from Japan over North American products. The rise in prominence of non-North American (especially Japanese and more recently Korean producers) producers restored more active competition. It has signified a structural change in the world automotive industry which has become truly international in nature.

In response to this new competition the North American automotive industry has committed major re-investment projects to redesign and improve its product by better planning, design, and production processes. Especially important has been the industry's effort to improve the productivity of labour through new management-worker techniques, learned mainly from studying Japanese techniques of labour management through joint venture establishments. With government assistance in the formation of the Voluntary Import Restraint Agreement with Japan, the North American industry has been given the time to make the necessary adjustments to regain much of its former strength. In this international context automotive companies have been placing a greater emphasis on global parts sourcing to reduce costs and become more competitive.

The Canadian automotive industry has fared very well in trade within the Agreement. A favourable trade balance in

automotive products with the United States has in recent years been aided by the downsizing of automotive products in the United States at a time when consumers shifted their preference back to larger sized vehicles still being produced in Canada.

The continental character of the Agreement poses problems in view of the internationalization of the automotive industry. However, the Agreement provides a vehicle for inducing investment by the Japanese and others in the Canadian industry - a better solution than restrictive trade practices. While Japanese firms have been slow to invest in Canada some progress has been made and, with further adjustments within Canada and by the Japanese, substantial results should be possible.

In the light of the internationalization of the automotive industry it is important that Canadian parts makers work to participate in global parts sourcing by using the latest technology backed by serious research and development and implemented by effective marketing. Cooperation with the United States industry will be necessary to make such efforts effective.

If the Auto Pact, a generally successful agreement, were to be modified, inclusion of aftermarket parts and accessories in the Agreement would seem highly favourable, as this would act to strengthen the effectiveness of Canadian

firms in the aftermarket industry and work towards decreasing the traditional Canadian negative balance of payments in this segment of the industry.

Appendix A

STATISTICAL TABLES

TABLE 38

Motor Vehicle Factory Sales, U.S. Plants

Year	Passenger Cars Number	Passenger Cars Value (000)	Motor Trucks and Buses Number	Motor Trucks and Buses Value (000)
1900	4,192	$ 4,899	.....	.....
1905	24,250	38,670	750	$ 1,330
1910	181,000	215,340	6,000	9,660
1915	895,930	575,978	74,000	125,880
1920	1,905,560	1,809,171	321,789	423,249
1921	1,468,067	1,038,191	148,052	166,071
1922	2,274,185	1,494,514	269,991	226,050
1923	3,624,717	2,196,272	409,295	308,538
1924	3,185,881	1,970,097	416,659	318,581
1925	3,735,171	2,458,370	530,659	458,400
1926	3,692,317	2,607,365	608,617	484,823
1927	2,936,533	2,164,671	464,793	420,131
1928	3,775,417	2,572,599	583,342	460,109
1929	4,455,178	2,790,614	881,909	622,534
1930	2,787,456	1,644,083	575,364	390,752
1931	1,948,164	1,108,247	432,262	265,445
1932	1,103,557	616,860	228,303	137,624
1933	1,560,599	773,425	329,218	175,381
1934	2,160,865	1,140,478	576,205	326,782
1935	3,273,874	1,707,836	697,367	380,997
1936	3,679,242	2,014,747	782,220	463,719
1937	3,929,203	2,240,913	891,016	537,315
1938	2,019,566	1,241,032	488,841	329,918
1939	2,888,512	1,770,232	700,377	489,787
1940	3,717,385	2,370,654	754,901	567,820
1941	3,779,682	2,567,206	1,060,820	1,069,800

Note: A substantial proportion of the trucks and buses consists of chassis only; therefore the value of the bodies for these chassis is not included. Value is based on vehicles with standard equipment. Certain firms included tactical vehicles in factory sales data. Federal excise taxes are excluded.

Source: Automobile Manufactures Association, Automobile Facts and Figures 1971. p. 3.

TABLE 39

Annual Motor Vehicle Factory Sales From U.S. Plants: 1942-1972

Year	Passenger Cars Number	Passenger Cars Value (000)	Motor Trucks And Buses Number	Motor Trucks And Buses Value (000)
1942	222,862	$ 163,814	818,662	$ 1,427,457
1943	139	102	699,689	1,451,794
1944	610	447	737,524	1,700,929
1945	69,532	57,255	655,683	1,181,956
1946	2,148,699	1,979,781	940,963	1,043,247
1947	3,558,178	3,936,017	1,239,443	1,731,713
1948	3,909,270	4,870,423	1,376,274	1,880,475
1949	5,119,466	6,650,857	1,134,185	1,394,035
1950	6,665,863	8,468,137	1,337,193	1,707,748
1951	5,338,435	7,241,275	1,426,828	2,323,859
1952	4,320,794	6,455,114	1,218,165	2,319,789
1953	6,116,948	9,002,580	1,206,266	2,089,060
1954	5,558,897	8,218,094	1,042,174	1,660,019
1955	7,920,186	12,452,871	1,249,106	2,020,973
1956	5,816,109	9,754,971	1,104,481	2,077,432
1957	6,113,344	11,198,379	1,107,176	2,082,723
1958	4,257,812	8,010,366	877,294	1,730,027
1959	5,591,243	10,534,421	1,137,386	2,338,719
1960	6,674,796	12,164,234	1,194,475	2,350,680
1961	5,542,707	10,285,777	1,133,804	2,155,753
1962	6,933,240	13,071,709	1,240,168	2,581,756
1963	7,637,728	14,427,077	1,462,708	3,090,345
1964	7,751,822	14,836,822	1,540,453	3,223,569
1965	9,305,561	18,380,036	1,751,805	3,733,664
1966	8,598,326	17,554,326	1,731,084	3,953,473
1967	7,436,764	15,653,436	1,539,462	3,592,049
1968	8,822,158	19,352,035	1,896,078	4,670,325
1969	8,223,715	18,751,176	1,923,179	4,936,683
1970	6,546,817	14,630,217	1,692,440	4,819,752
1971	8,584,592	21,409,824	2,053,146	5,963,525
1972	8,823,938	23,133,051	2,446,807	7,654,180

Notes: Prior to July 1, 1964 some firms included tactical vehicles in factory sales. After July 1, 1964 all tactical vehicles are excluded.

A substantial proportion of trucks and busses consists of chassis only; the value of the bodies for these chassis is not included. Value is based on vehicles with standard equipment. Federal excise taxes are excluded.

TABLE 40

Annual Motor Vehicle Factory Sales From U.S. Plants: 1973-1984

Year	Passenger Cars	Motor Trucks And Buses	Total Vehicles
1973	9,657,647	2,979,688	12,637,335
1974	7,331,256	2,727,313	10,058,569
1975	6,712,852	2,272,160	8,985,012
1976	8,500,305	2,979,476	11,479,781
1977	9,200,849	3,441,521	12,642,370
1978	9,165,190	3,706,239	12,871,429
1979	8,419,226	3,036,706	11,455,932
1980	6,400,026	1,667,283	8,067,309
1981	6,255,340	1,700,908	7,956,248
1982	5,049,184	1,906,455	6,955,639
1983*	6,500,000	2,480,000¬	8,980,000¬
1984*	7,900,000	3,360,000¬	11,260,000¬

* Domestic sales per Model Year, ie., running from October 1, to September 30, of the following year. For example, model year 1984 includes the fourth quarter of 1983 and the first three quarters of 1984.

¬ Does not include Bus production.

Sources: MVMA, Motor Vehicle Facts and Figures '83. Detroit: Motor Vehicle Manufacturers Association of the United States, Inc., 1983, for years 1973-1982, p. 9.

U.S. Department of Commerce. Bureau of Economic Analysis. "Motor Vehicles, Model Year 1984," by Douglas R. Fox. Survey Of Current Business. vol. 64 no. 10 (October 1984): pp. 21-23.

Source: Motor Vehicle Manufacturers Association of the U.S., Inc. Automobile Facts and Figures 1975, p. 12.

TABLE 41

Production Of Motor Vehicles In Canada Selected Years: 1904-1984

Year	Passenger Cars	Commercial Vehicles
1904	117*	
1917	93,810 n.a.s.	
1926	166,887	37,840
1929	203,307	59,318
1932	50,694	10,095
1937	153,046	54,417
1939	108,369	47,057
1946	91,871	79,657
1948	166,819	96,941
1950	284,076	106,026
1952	283,534	150,176
1955	375,028	78,569
1960	326,496	69,117
1961	323,638	63,285
1964	559,603	111,387
1965	706,810	139,799
1968	889,386	260,832
1973	1,216,504	331,799
1975	1,027,242	357,895
1976	1,119,005	408,847
1977	1,120,157	570,927
1978	1,107,874	634,092
1979	960,614	625,624
1980	820,114	503,885
1981	796,378	492,853
1982	851,431	441,986
1983	968,774	554,550
1984	1,062,183	815,783

* 117 Ford chassis were imported from Detroit and assembled with wheels and bodies in Windsor.

n.a.s. - not available separately.

Sources: Report of the Royal Commision On Canada's Economic Prospects, The Canadian Automotive Industry. By W.L. Gordon, Chairman. Hull: Queen's Printer And Controller Of Stationery 1956 (Sun Life Assurance Company Of Canada.) Table II, p. 6.

TABLE 42

Canadian Annual Motor Vehicle Factory Sales From North American Plants: 1973-1985

Year	Passenger Cars	Commercial Vehicles	Total Vehicles
1973	782,914	235,449	1,018,363
1974	796,840	287,686	1,084,526
1975	835,679	310,590	1,084,526
1976	793,201	331,027	1,124,228
1977	797,752	337,914	1,135,666
1978	815,994	364,241	1,180,235
1979	863,554	381,562	1,245,116
1980	740,767	310,273	1,051,040
1981	646,942	250,775	897,717
1982	489,435	166,986	656,421
1983	625,088	192,604	817,697
1984	724,932	273,604	998,536
1985	794,965	344,871	1,139,836

Source: MVMA, Facts And Figures Of The Automotive Industry In Canada 1986, p. 50.

Inquiry into the Automotive Industry, Simon Reisman Commissioner, The Canadian Automotive Industry, Performance and Proposals for Progress. Ottawa: Minister of Supply and Services Canada, 1978. p. 1.

Report (of the) Royal Commission on the Automotive Industry. By V.W. Bladen, Chairman. Ottawa: Queen's Printer and Controller of Stationery, 1961, reprinted 1967. Appendix VI, Table I, p. 101.

Motor Vehicle Manufacturers' Association, Facts And Figures Of The Automotive Industry In Canada. MVMA, February 1, 1985 p. 9.

"1985 Market Data Book-Production." Automotive News, 24 April 1985, p. 4.

Appendix B

ECONOMIC IMPLICATIONS OF STYLE CHANGE COSTS WITH RESPECT TO LARGE FIRMS AND SMALL FIRMS IN THE AUTOMOTIVE INDUSTRY

Assume, for simplicity,[1] that there are two firms in the industry, large firm A, and small firm B. Assume also that both firms share identical cost curves (AC) but attain different outputs, and that prices are constant (at P). It can be shown how their average costs are affected through the implementation of annual style changes.

Figure 4 shows their position on the average cost curve prior to the practice of annual style changes. In one year both firms produced a sufficient amount of vehicles so as to achieve the minimum level of output required for optimally

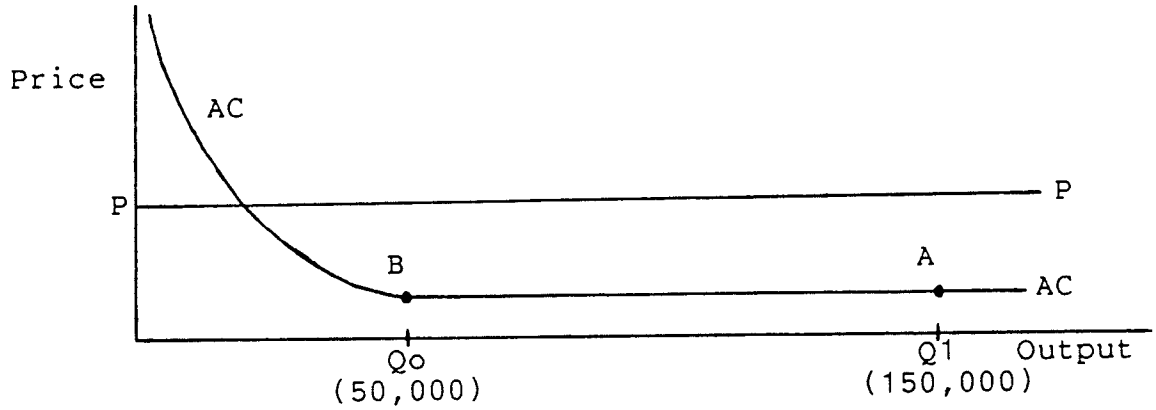

Figure 4: Style Change As A Minor Element

efficient assembly operations (at Qo, say 50,000 units).

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[1] For a detailed analysis on this topic see John A. Menge, "Style Change Costs As A Market Weapon," Quarterly Journal Of Economics, 76 (November 1962): 634-643, and Bradford C. Snell, "Annual Style Change in the Automobile Industry as an Unfair Method of Competition," Yale Law Journal, 80 (January 1971): 581-583.

Suppose that the special tools and dies used for styling could be used to produce 150,000 vehicles before becoming physically deteriorated.[2] Under these conditions firm B would use its special tools and dies for three years producing the same model in each year so as to fully amortize its styling equipment. Firm A, on the other hand produces 150,000 vehicles in a year and fully amortizes its styling equipment in that same year, exhausting exactly one set of special tools and dies.

For next year's production firm A can replace its tools and dies with identical equipment or with different equipment at no extra cost. Assume firm A chooses to replace its styling equipment with different equipment creating a new model style as an attempt to capture greater consumer appeal and thus increase market sales. With this firm B may also feel the need to replace its special tools and dies for next year's production with new different ones yielding a new vehicle style so as to compete with firm A's style change. However, by making this style change firm B would consume its tools and dies by only one-third their physical usefulness, by scrapping last years equipment which could still have styled another 100,000 vehicles, and thus its equipment would be only partially amortized.

As a result of this drive for a style change firm B would experience a higher average cost for any level of output below 150,000 units. See figure 5. Firm B moved to B' on the higher average cost curve AC1 after the style change

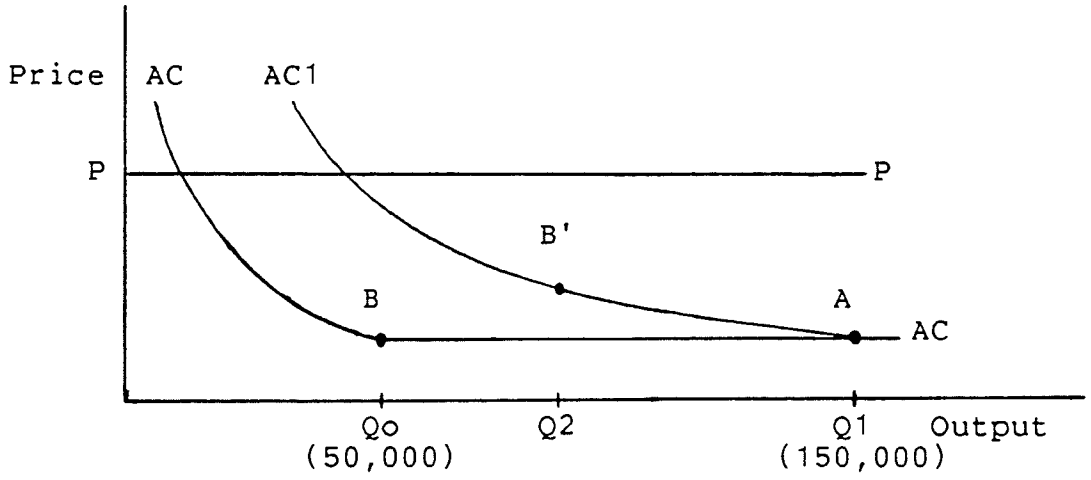

Figure 5: Style Change As A Major Element

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[2] In fact, styling equipment have been found to have useful lives of around 400,000 stampings. See White, The Automobile Industry Since 1945, p. 38.

while firm A remains unchanged on AC.

If we assume further that firm B's production output does not exceed that of its previous year then its costs are greater than price and it is consequently forced out of the

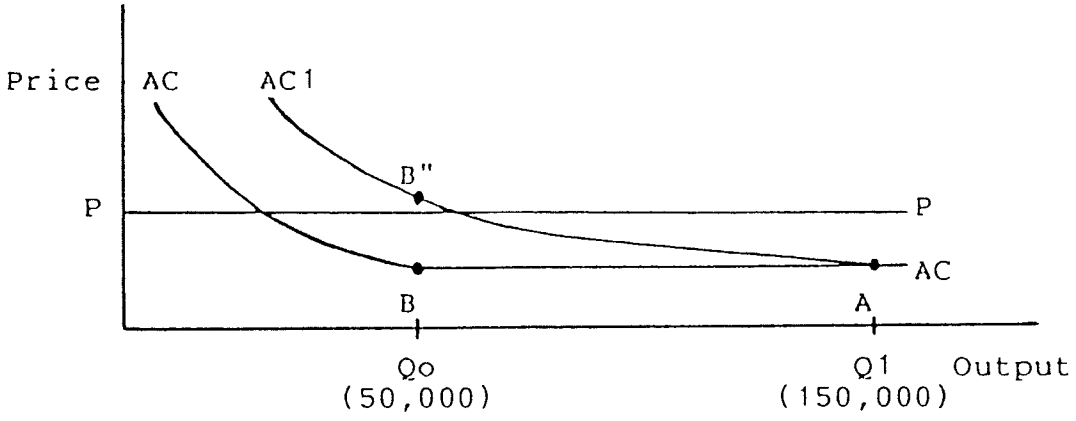

Figure 6: Style Change As A Major Element: The Next Year

market. See Figure 6. Firm B moves to B" on AC1 above P.

The objective of style changes is, of course, to improve the demand for the product of an individual firm by product differentiation. Analytically, this occurs when the average revenue curve of an individual firm is made more inelastic, reflecting an increase in market power for the firm, and shifts to the right.

Appendix C

TECHNOLOGICAL ADVANCEMENT AND INDUSTRY STRUCTURE

Under an industry highly competitive in structure with many small sized firms the industry's technological progressiveness may be hindered. Their small size would probably leave most firms in the industry unable to afford the high cost usually associated with research and development. On the other hand, an industry described as being highly oligopolistic in nature, containing perhaps two or three large size firms may find it's industry progressiveness to suffer as well. This is so because the large firms may not feel the need to place research and development on their top priority list since they lack large numbers of rivals, and of the rivals they do have, they are usually well informed of one another's rate of progress.

Rather, technological progressiveness may be best nurtured under an industry which has firms that are moderately large and moderate in number. This combination, ie., "...a subtle blend of competition and monopoly, with more emphasis in general on the former than the latter,..." is "what is needed for rapid technical progress."[3] Here firms are large enough to afford the costs and risks of research and development and have enough of a competitive climate so as to keep them from stagnating in this area. As well, this will keep them at a level which will ensure efficient resource allocation.[4]

It appears that the United States automobile industry, during the third stage has since, with the competitive pressure placed on the industry by foreign producers in recent years, experienced an increase in the industry's technological progressiveness.

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[3] F.M. Scherer, Industrial market structure and economic performance, (Chicago: Rand McNally College Publishing Company, 1980), p. 438.

[4] For more on this topic see Schere, pp. 413-438, and Christopher Green, Canadian Industrial Organization and Policy, (Toronto: McGraw-Hill Ryerson Limited, 1980), pp. 135-138.

Appendix D

AUTOMOTIVE PRODUCTS AGREEMENT BETWEEN THE GOVERNMENT OF CANADA AND THE GOVERNMENT OF THE UNITED STATES OF AMERICA

I
Agreement Concerning Automotive Products Between The Government Of Canada And The Government Of The United States Of America

The Government of Canada and the Government of the United States of America,

Determined to strengthen the economic relations between their two countries;

Recognizing that this can best be achieved through the stimulation of economic growth and through the expansion of markets available to producers in both countries within the framework of the established policy of both countries of promoting multilateral trade;

Recognizing that an expansion of trade can best be achieved through the reduction or elimination of tariff and all other barriers to trade operating to impede or distort the full and efficient development of each country's trade and industrial potential;

Recognizing the important place that the automotive industry occupies in the industrial economy of the two countries and the interests of industry, labor and consumers in sustaining high levels of efficient production and continued growth in the automotive industry;

Agree as follows:

Article I

The Governments of Canada and the United States, pursuant to the above principles, shall seek the early achievement of the following objectives:

(a) The creation of a broader market for automotive products within which the full benefits of specialization and large-scale production can be achieved;

(b) The liberalization of Canadian and United States automotive trade in respect of tariff barriers and other factors tending to impede it, with a view to enabling the industries of both countries to participate on a fair and equitable basis in the expanding total market of the two countries;

(c) The development of conditions in which market forces may operate effectively to attain the most economic pattern of investment, production and trade.

It shall be the policy of each Government to avoid actions which would frustrate the achievement of these objectives.

Article II

(a) The Government of Canada, not later than the entry into force of the legislation contemplated in paragraph (b) of this Article, shall accord duty-free treatment to imports of the products of the United States described in Annex A.

(b) The Government of the United States, during the session of the United States Congress commencing on January 4, 1965, shall seek enactment of legislation authorizing duty-free treatment of imports of the products of Canada described in Annex B. In seeking such legislation, the Government of the United States shall also seek authority permitting the implementation of such duty-free treatment retroactively to the earliest date administratively possible following the date upon which the Government of Canada has accorded duty-free treatment. Promptly after the entry into force of such legislation, the Government of the United States shall accord duty-free treatment to the products of Canada described in Annex B.

Article III

The commitments made by the two Governments in this Agreement shall not preclude action by either Government consistent with its obligations under part II of the General Agreement on Tariffs and Trade.

Article IV

(a) At any time, at the request of either Government, the two Governments shall consult with respect to any matter relating to this Agreement.

(b) Without limiting the foregoing, the two Governments shall, at the request of either Government, consult

with respect to any problems which may arise concerning automotive producers in the United States which do not at present have facilities in Canada for the manufacture of motor vehicles, and with respect to the implications for the operation of this Agreement of new automotive producers becoming established in Canada.

(c) No later than January 1, 1968, the two Governments shall jointly undertake a comprehensive review of the progress made towards achieving the objectives set forth in Article I. During this review the Governments shall consider such further steps as may be necessary or desirable for the full achievement of these objectives.

Article V

Access to the Canadian and United States markets provided for under this Agreement may by agreement be accorded on similar terms to other countries.

Article VI

This Agreement shall enter into force provisionally on the date of signature and definitively on the date upon which notes are exchanged between the two Governments giving notice that appropriate action in their respective legislatures has been completed.

Article VII

This Agreement shall be of unlimited duration. Each Government shall however have the right to terminate this Agreement twelve months from the date on which that Government gives written notice to the other Government of its intention to terminate the Agreement.

In witness whereof the representatives of the two Governments have signed this Agreement.

Done in duplicate at Johnson City, Texas, this 16th day of January 1965, in English and French, the two texts being equally authentic.

For the Government of Canada:

LESTER B. PEARSON
PAUL MARTIN

For the Government of the United States of America:

LYNDON B. JOHNSON
DEAN RUSK

II
ANNEX A

1. (1) Automobiles, when imported by a manufacturer of automobiles.

(2) All parts, and accessories and parts thereof, except tires and tubes, when imported for use as original equipment in automobiles to be produced in Canada by a manufacturer of automobiles.

(3) Buses, when imported by a manufacturer of buses.

(4) All parts, and accessories and parts threof, except tires and tubes, when imported for use as original equipment in buses to be produced in Canada by a manufacturer of buses.

(5) Specified commercial vehicles, when imported by a manufacturer of specified commercial vehicles.

(6) All parts, and accessories and parts thereof, except tires, tubes and any machines or other articles required under Canadian tariff items 438a to be valued separately under the tariff items regularly applicable thereto, when imported for use as original equipment in specified commercial vehicles to be produced in Canada by a manufacturer of specified commercial vehicles.

2. (1) "Automobile" means a four-wheeled passenger automobile having a seating capacity for not more than ten persons;

(2) "Base year means the period of twelve months commencing on the 1st day of August, 1963 and ending on the 31st day of July, 1964;

(3) "Bus" means a passenger motor vehicle having a seating capacity for more than 10 persons, or a chassis therefor, but does not include any following vehicle or chassis therefor, namely and electric trackless trolley bus, amphibious vehicle, tracked or half-tracked vehicle or motor vehicle designed primarily for off-highway use;

(4) "Canadian value added" has the meaning assigned by regulations made under section 273 of the Canadian Customs Act;

(5) "Manufacturer" of vehicles of any following class, namely automobiles, buses or specified commercial vehicles, means, in relation to any importation of goods in respect of which the description is relevant, a manufacturer that

(i) produced vehicles of that class in Canada in each of the four consecutive three months' periods in the base year, and

(ii) produced vehicles of that class in Canada in the period of twelve months ending on the 31st day of July in which the importation is made,

(A) the ratio of the net sales value of which to the net sales value of all vehicles of that class sold for consumption in Canada by the manufacturer in that period is equal to or higher than the ratio of the net sales value of all vehicles of that class produced in Canada by the manufacturer in the base year to the net sales value of all vehicles of that class sold for consumption in Canada by the manufacturer in the base year, and is not in any case lower than seventy-five to one hundred; and

(B) the Canadian value added of which is equal to or greater than the Canadian value added of all vehicles of that class produced in Canada by the manufacturer in the base year;

(6) "Net sales value" has the meaning assigned by regulations made under section 273 of the Canadian Customs Act; and

(7) "Specified commercial vehicle" means a motor truck, motor truck chassis, ambulance or chassis therefor, or hearse or chassis therefor, but does not include:

(a) any following vehicle or a chassis designed primarily therefor, namely a bus, electric trackless trolley bus, amphibious vehicle, tracked or half-tracked vehicle, golf or invalid cart, straddle carrier, motor vehicle designed primarily for off-highway use, or motor vehicle specially constructed and equipped to perform special services or functions, such as, but not limited to, a fire engine, mobile crane, wrecker, concrete mixer or mobile clinic; or

(b) any machine or other article required under Canadian tariff item 438a to be valued separately under the tariff item regularly applicable thereto.

3. The Government of Canada may designate a maufacturer not falling within the categories set out above as being entitled to the benefit of duty-free treatment in respect of the goods described in this Annex.

III
ANNEX B

(1) Motor vehicles for the transport of persons or articles as provided for in items 692.05 and 692.10 of the Tariff Schedules of the United States and chassis therefor, but not including electric trolley buses, three-wheeled vehicles, or trailers accompanying truck tractors, or chassis therefor.

(2) Fabricated components, not including trailers, tires, or tubes for tires, for use as original equipment in the manufacture of motor vehicles of the kinds described in paragraph (1) above.

(3) Articles of the kinds described in paragraphs (1) and (2) above include such articles whether finished or unfinished but do not include any article produced with the use of materials imported into Canada which are products of any foreign country (except materials produced within the customs territory of the United States), if the aggregate value of such imported materials when landed at the Canadian port of entry, exclusive of any landing cost and Canadian duty, was-

(a) with regard to articles of the kinds described in paragraph (1), not including chassis, more than 60 percent until January 1, 1968, and thereafter more than 50 percent, of the appraised customs value of the articles imported into the customs territory of the United States; and

(b) with regard to chassis of the kinds described in paragraph (1), and articles of the kinds described in paragraph (2), more than 50 percent of the appraised customs value of the article imported into the customs territory of the United States.

I
ACCORD ENTRE LE GOUVERNEMENT CANADIEN ET LE GOUVERNEMENT DES ÉTATS-UNIS D'AMÉRIQUE CONCERNANT LES PRODUITS DE L'INDUSTRIE AUTOMOBILE

Le Gouvernement canadien et le Gouvernement des États-Unis d'Amérique,

Résolus à renforcer les relations économiques entre leurs deux pays;

Convaincus qu'ils y parviendront le mieux en stimulant la croissance économique et par l'expansion des marchés accessibles aux producteurs des deux pays dans le cadre de la politique établie des deux pays, qui consiste à développer le commerce multilatéral;

Convaincus qu'ils réaliseront le mieux l'expansion des échanges commerciaux par l'abaissement ou l'élimination de toutes les barriéres, douanières ou autres, qui entravent ou faussent le plein et efficace développement du commerce et du potentiel industriel de l'un et l'autre pays;

Convaincus de l'importance de la place qu'occupe l'industrie automobile dans l'économie industrielle des deux pays, et de l'intérêt qu'ont l'industrie, les travailleurs et les consommateurs à maintenir des niveaux élevés de production efficace et une croissance continue dans l'industrie automobile;

Sont convenus de ce qui suit:

Article I

Le Gouvernement canadien et le Gouvernement des États-Unis, conformément aux principes énoncés ci-dessus, s'efforceront d'atteindre rapidement les objectifs qui suivent:

(a) Création pour le produits de l'industrie automobile d'un marché plus large au sein duquel il sera possible de bénéficier à plein de la spécialisation et de la production à grande échelle;

(b) Libéralisation du commerce des produits de l'industrie automobile entre le Canada et les États-Unis en ce qui concerne les barrières douanières et autres facteurs qui tendent à entraver ce commerce, afin de mettre les industries des deux pays en mesure de prendre une part juste et équitable du marché en voie d'expansion de l'ensemble des deux pays;

(c) Développement et conditions grâce auxquelles les forces du marché pourront jouer efficacement dans le sens du développement le plus économique des investissements, de la production et du commerce.

Chacun des deux Gouvernements évitera par principe tout ce qui irait à l'encontre de la réalisation de ces objectifs.

Article II

(a) Le Gouvernement canadien, au plus tard lors de l'entrée en vigueur de la mesure législative prévue à l'alinéa (b) du présent Article, accordera l'entrée en franchise de douane aux produits des États-Unis énumérés à l'Annexe A.

(b) Le Gouvernement des États-Unis, au cours de la session du Congrès des États-Unis qui commencera le 4 janvier 1965, s'efforcera de faire adopter une mesure législative autorisant l'importation en franchise de douane des produits canadiens énumérés à l'Annexe B. Lorsqu'il demandera l'adoption de cette mesure législative, le Gouvernement des États-Unis demandera aussi l'autorisation d'accorder ladite franchise de douane rétroactivement jusqu'a la date la plus voisine possible administrativement de cella à laquelle le Gouvernement canadien aura accordé la franchise douanière. Aprés l'entrée en vigueur de ladite mesure législative, le Gouvernement des États-Unis accordera sans délai la franchise douanière aux produits canadiens énumérés à l'Annexe B.

Article III

Les engagements pris par les deux Gouvernements aux termes du présent Accord ne leur interdisent ni à l'un ni à l'autre de faire quoi que ce soit en conformité des obligations souscrites à la Partie II de l'Accord géneral sur les tarifs douaniers et le commerce.

Article IV

(a) A un moment quelconque, et à la demande de l'un ou l'autre des Gouvernements, les deux Gouvernements se consulteront relativement à toute question ayant trait au présent Accord.

(b) Sans restreindre ce qui précède, les deux Gouvernements se consulteront, à la demande de l'un ou l'autre desdits Gouvernements, relativement à tous problèmes susceptibles de se poser en ce qui concerne les producteurs d'automobiles des États-Unis qui ne possèdent pas actuelement d'installations au Canada

pour la fabrication de véhicules automobiles, et en ce qui concerne les conséquences, relativement à l'application du présent Accord, de l'établissement de nouveaux producteurs d'automobiles au Canada.

(c) Le 1er janvier 1968 au plus tard, les deux Gouvernements procéderont conjointement à un examen complet et détaillé des progrés accomplis en vue de réaliser les objectifs fixés à l'Article I. Au cours de cet examen, les Gouvernements étudieront les mesures supplémentaires qui pourraient être nécessaires ou désirables en vue de la pleine réalisation de ces objectifs.

Article V

L'accés aux marchés du Canada et des États-Unis, que prévoit le présent Accord, pourra à des conditions semblables être accordé à d'autres pays.

Article VI

Le présent Accord entrera en viguer à titre provisoire à la date de sa signature et à titre définitif à la date à laquelle des notes seront échangées par les deux Gouvernements avisant l'un l'autre que leurs legislatures respectives ont pris les mesures appropriées.

Article VII

Le présent Accord est conlu pour une durée indéfinie. Il sera loisible à chacun des deux Gouvernements, toutefois, de le dénoncer moyennant préavis écrit de douze mois.

EN FOI DE QUOI les représentants des deux Gouvernements ont signé le présent Accord.

FAIT en double exemplaire à Johnson City, Texas, le 16 janvier 1965, en anglais et en français, les deux textes faisant également foi.

Pour le Gouvernement du Canada:

LESTER B. PEARSON
PAUL MARTIN

Pour le Gouvernement des États-Unis d'Amérique:

LYNDON B. JOHNSON
DEAN RUSK

II
ANNEXE A

1. (1) Automobiles, lorsque importées par un fabricant d'automobiles.

(2) Toutes les pièces, et les accessoires et leurs pièces, sauf les pneus et chambres à air, lorsque importées pour servir d'équipement primitif d'automobiles devant être produites au Canada par un fabricant d'automobiles.

(3) Autobus, lorsque importés par un fabricant d'autobus.

(4) Toutes les pièces, et les accessoires et leurs pièces, sauf les pneus et chambres à air, lorsque importées pour servir d'équipement primitif d'autobus devant être produits au Canada par un fabricant d'autobus.

(5) Véhicules commerciaux spécifiés, lorsque importés par un fabricant de véhicules commerciaux spécifiés.

(6) Toutes les pièces, et les accessoires et leurs pièces, sauf les pneus, chambres à air et machines ou autres articles dont le numéro 438a du Tarif canadien exige une évaluation distincte en vertu des numéros tarifaires régulièrement applicables en l'espèce, lorsque importées pour servir d'équipement primitif de véhicules commerciaux spécifiés devant être produits au Canada par un fabricant de véhicules commerciaux spécifiés.

2. (1) <<automobile>> signifie une automobile à quatre roues destinée aux voyageurs et ayant au plus dix places assises;

(2) <<année de base>> signifie la période de douze mois commençant le 1er août 1963 et se terminant le 31 juillet 1964;

(3) <<autobus>> signifie un véhicule automobile à voyageurs ayant plus de dix places assises, ou le châssis d'un tel vehicule, mais ne comprend aucun des véhicules énumérés ci après ni le châssis d'un tel véhicule, à savoir un électrobus, un véhicule amphibie, un véhicule à chenilles ou semichenillé ou un véhicle automobile destiné à être utilisé principalement sur des chemins autres que les grandes routes;

(4) <<valeur canadienne ajoutée>> a la signification que lui attribuent les règlements établis en vertu de l'article 273 de la Loi canadienne sur les douanes;

(5) <<fabricant>> de véhicles de toute catégorie énumérée ci-aprés, à savoir les automobiles, autobus ou véhicules commerciaux spécifiés, signifie, relativement à toute importation de marchandises à l'égard de laquelle la description est pertinente, un fabricant qui

(i) a produit des véhicules de cette catégorie au Canada dans chacune des quatre périodes consécutives de trois mois dans l'année de base, et

(ii) a produit des véhicules de cette catégorie au Canada dans la période de douze mois se terminant le 31 juillet dans laquelle l'importation est faite,

(A) dont la valeur marchande nette par rapport à la valeur marchande nette de tous les véhicules de cette catégorie vendus pendant ladite période par le fabricant aux fins de consommation au Canada est une proportion égale ou supérieure à la valeur marchande nette de tous les véhicules de cette catégorie produits au Canada par le fabricant dans l'année de base par rapport à la valeur marchande nette de tous véhicules ce cette catégorie vendus pendant l'année de base par le fabricant aux fins de consommation au Canada, et de toute façon non inférieure à soixante-quinze par rapport à cent; et

(B) dont la valeur canadienne ajoutée est égale ou supérieure à la valeur canadienne ajoutée de tous les véhicules de cette catégorie produits au Canada par le fabricant dans l'année de base;

(6) <<valeur marchande nette>> a la signification que lui attribuent les règlements établis en vertu de l'article 273 de la Loi canadienne sur les douanes; et

(7) <<véhicule commercial spécifié>> signifie un camion automobile, un châssis de camion automobile, une ambulance ou son châssis, un corbillard ou son châssis, mais ne comprend

(a) aucun des véhicules énumérés ci-après ni un châssis principalement conçu pour un tel véhicule, à savoir: autobus, électrobus, véhicule amphibie, véhicule à chenilles ou semi-chenillé, chariot de golf ou d'invalide, chariot cavalier ou tout véhicule automobile destiné a être utilisé principalement sur des chemins autres que des grandes routes, ou tout véhicule automobile construit et équipé spécialement pour remplir des fonctions ou

des services particuliers, comme par exemple mais sans s'y limiter, un camion à incendie, une grue mobile, un camion remorqueur, un malaxeur de béton, un dispensaire mobile; ou

(b) aucune machine ou aucun autre article dont le numéro 438a du Tarif douanier canadien exige une évaluation distincte en vertu du numéro tarifaire réguliérement applicable en l'espèce.

3. Le Gouvernement canadien peut désigner comme ayant droit à la franchise, quant aux marchandises mentionnées à la présente annexe, un fabricant qui n'est pas compris dans les catégories ci-dessus.

III
ANNEXE B

(1) Les véhicules automobiles, ou leur châssis, destinés au transport des personnes ou des articles prévus aux rubriques 692.05 et 692.10 du Tarif douanier des États-Unis, à l'exclusion des trolleybus, des tricycles, ou des remorques dont sont accompagnés les tracteurs automobiles, ou de leur châssis.

(2) Les éléments fabriqués, à l'exclusion des remorques, pneus, ou chambres à air, destinés à être utilisés à titre d'équipement d'origine dans la fabrication des véhicules automobiles des types décrits au paragraphe (1) ci-dessus.

(3) Dans les articles des types décrits aux paragraphes (1) et (2) ci-dessus est inclus tout article fini ou non, mais n'est pas inclus tout article fabriqué à l'aide de matériaux importés au Canada et qui sont de provenance étrangére (sauf les matériaux produits en territoire sous contrôle douanier des États-Unis), si la valeur globale desdits matériaux importés, à leur débarquement dans un port d'entrée canadien, non compris les frais de débarquement ou de douane canadienne, s'élevait

(a) en ce qui concerne les articles des types décrits au paragraphe (1), non compris les châssis, à plus de 60 p. 100 jusqu'au 1er janvier 1968, et par la suite à plus de 50 p. 100, de la valeur douaniére estimée de l'article importé dans le territoire sous contrôle douanier des États-Unis; et

(b) pour ce qui est du châssis des types décrits au paragraphe (1), et des articles des types décrits au paragraphe (2), à plus de 50 p. 100 de la valeur douaniére estimée de l'article importé dans le territoire sous contrôle douanier des États-Unis.

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