Canada

REPORT ON THE CANADIAN AUTOMOTIVE INDUSTRY IN 1984

Government of Canada
Gouvernement du Canada

Regional Industrial Expansion
Expansion industrielle régionale

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INTRODUCTION

Last year, as recommended by the 1983 Task Force on the Automotive Industries, the first Report on the Canadian Automotive Industry was published. This report is a continuation of the government's response to the ongoing demand for information on an industry that is a major contributor to the Canadian economy.

The present report covers the major events of 1984 and allows for comparison with events of the previous year. In addition certain significant international events have been highlighted. These will have an impact on the Canadian industry now and in the future, and it is essential that the public be aware of the changes taking place in the industry in order to have a better appreciation of Canada's position in the international context.

The issue of productivity in the Canadian Automotive Industry has also been addressed in this report. The intent is to indicate that problems associated with productivity in the Canadian industry are being addressed and positive results are being acheived.

The statistical information contained in the report is essentially an update of the previous years tabulations and should allow for continuing examination and evaluation of progress.

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CHAPTER I: THE CANADIAN AUTOMOTIVE INDUSTRY IN 1984

Synopsis

Following the recovery in 1983, the Canadian automotive industry in 1984 again experienced a year of increased production, sales, employment, profits and investment. Aided by a strong American economy, favourable U.S. gasoline prices, Japanese voluntary export restraints, and American monetary policies that kept the value of the U.S. dollar high, total Canadian vehicle production reached a record high of 1 830 043 units. The parts industry also recorded a significant 18 per cent gain in shipments over 1983. Commercial vehicle production had a particularly impressive 48 per cent increase over 1983. Domestic sales of North American vehicles rose nearly 16 per cent over the 1983 levels. Reflecting high production, total employment in the assembly and parts sectors was 121 100. These results and the effectiveness of measures taken to decrease costs resulted in strong profits for the vehicle assemblers.

Throughout the year a series of major investments were announced by the vehicle assemblers which demonstrated their confidence in the future of the Canadian automotive industry. Well over two billion dollars are to be invested in the next few years by GM, Honda, Ford and AMC in new plants and manufacturing processes employing state-of-the-art technology. This will substantially increase the number of highly automated plants stressing quality and efficiency.

In the independent parts sector a number of joint ventures between Japanese and Canadian firms were announced. These agreements are intended to bring Japanese quality and methods to Canadian companies so they may sell in the increasingly competitive international parts market.

Perhaps the most surprising story of the year was the sales success of the Hyundai Pony. Introduced at the end of 1983 this small, inexpensive Korean made vehicle immediately became popular. Filling a niche left vacant by Japanese manufacturers, the Pony appealed to first-time new car buyers. Sales far exceeded the manufacturer's market expectations, reaching over 25000 units.

Government Initiatives

In 1984 the Federal Government took a number of initiatives to assist the automotive industry. Several of these steps were recommended in the 1983 Automotive Task Force Report and discussed in the 1983 Report on the Canadian Automotive Industry.

Annual Report

The first Report on the Canadian Automotive Industry was prepared by the Department of Regional Industrial Expansion and published in 1984.

Tax Measures

The February 1984 federal Budget shifted the application of the manufacturers sales tax to the wholesale level. This resulted in all vehicles being taxed on their sale price to retailers in Canada irrespective of their origin and ended the inequitable treatment between domestic and imported vehicles.

Trade Policy

Canada is seeking a new trade policy framework whereby a fair share of Japanese automotive investment and sourcing would be placed in this country. The government continues to prefer a negotiated solution to this problem rather than the mandated one recommended by the Task Force.

Human Resources

In conjunction with the motor vehicle and automotive parts industries, the UAW, and the provinces of Ontario and Quebec, the Canadian Employment and Immigration Commission is carrying out a Human Resource study of the industry scheduled for completion in August 1985. It will provide an analysis of the critical factors affecting the future level and nature of employment in the industry, while considering its competitive situation in the North American and international markets. The results should lay the ground work for private and public sector policy development and provide a common basis for all parties to address human resource problems in the industry.

Parts Sector Study

The rapid internationalization of the world automotive industry in the 1980s has dramatically changed the nature and degree of competition faced by Canadian parts manufacturers. It presents both threats and opportunities to the industry. In response to these changes and to service the parts sector more effectively, the Department of Regional Industrial Expansion is undertaking a major study to make a thorough and careful analysis of opportunities for expanded parts production in Canada.

Significant Events of 1984

Investment Projects

In early June, Honda Motor Co. Ltd. of Japan announced its intention to spend $100 million on an assembly plant to be built near Alliston, Ontario. Construction of the plant is already underway with production scheduled for 1987. Production of 40 000 vehicles per year is planned, providing employment for about 350 people in the plant.

A week later, American Motors Canada Inc. announced that a state-of-the-art car assembly project would be built at Brampton. The plant will have a world product mandate to produce 150 000 new intermediate vehicles per year for the North American market. Scheduled to roll off the line in July 1987, the new model will have substantial Canadian content. In addition to the current payroll of 1 200 persons, the facility will require 1 800 new employees for AMC, and a further 4 200 jobs could be created in the auto parts industry. Financing for the project has been provided by a consortium of Canadian banks, American Motors Corp., its major shareholder Renault of France, and the governments of Canada and Ontario.

The largest package of new investments, over $1.25 billion, is to be made by General Motors of Canada. In St. Catharines, $255 million is being spent to retool the engine plant and foundry for production of a new fuel injected V-6 engine. Approximately $1 billion is being invested in Oshawa: $556 million for the expansion and modernization of the Oshawa truck plant; $228 million in a state-of-the-art stamping facility to supply body panels to its Oshawa car assembly plants; $220 million for expansion of the powerhouse and electrical equipment, increased capacity and product improvements in other areas, and the installation of a new paint facility. These new plants and improvements will ensure continued employment at Oshawa, give the company the capacity to manufacture almost 1 100 000 vehicles a year in Canada, and bring the latest advances in technology to the Canadian industry.

Parts Manufacturers

A number of positive developments took place in the parts industry which indicate the steps being taken to modernize and adapt to new technologies as well as to the changing requirements of the vehicle manufacturers.

Automotive Parts Investment Fund

In late 1984, the Ontario government announced the establishment of a $30 million Automotive Parts Investment Fund designed to sharpen the competitive edge of the Ontario auto parts industry. Oriented to small and medium sized firms, the fund was established to provide financial assistance for product development, plant modernization and manpower training in companies committed to becoming more competitive. Assistance will be in the form of repayable five year term loans covering one half the costs of eligible projects to a limit of $750 000 per company. Projects bringing innovative products and production technologies to Ontario could also be eligible for performance incentives - the deferral of principal repayment and waiving of interest up to a maximum of three years. Early indications are pointing to the success of this program.

Pacific Automotive Co-operation Inc.

The Japanese vehicle manufacturers and auto parts makers took a first step towards the development of better relations with the Canadian auto parts industry with the incorporation of Pacific Automotive Co-operation Inc. (PAC) in March, 1984. The basic objectives of the new Canadian company 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. To fulfill these goals PAC is acting as an intermediary between Japanese and Canadian auto parts industries. It provides information and consultation services, initiates research and other liaison services.

By the end of 1984, PAC had helped to facilitate a number of agreements between Canadian and Japanese firms. Magna International Inc. of Toronto has

agreed to produce electronic parts with Niles Parts Co., a Nissan affiliate; Marui International, a Nissan subsidiary, will invest in a joint venture on a 50-50 basis with G.S. Woolley Ltd. and Usui Kokusai Sangyo, a Nissan supplier has reached a sub-contract agreement with Progressive Moulded Products Ltd. The latest agreement involved technology transfer to Waterville Cellular Products Ltd., from Toyoda Gosei Co. Ltd., Japan's largest maker of rubber and plastic parts for autos.

Trucks

In the truck assembly sector, International Harvester restructured its North American production facilities. The company's Chatham facility, one of two manufacturing plants, has been designated its sole source for class 8 heavy duty conventional trucks and truck tractors. As a result of this decision Hayes Dana established a new axle plant to provide axles on a "just-in-time" basis to the IH Chatham plant.

Off-Highway Vehicles

Rationalization continued in the off-highway sector of the industry. After the North American facilities of Euclid were taken over by Clarke Equipment Company, the truck operations were consolidated in Guelph, Ontario. In April 1984, Clark Equipment merged with Volvo BM of Sweden. A new company was formed, the VME Construction Equipment Group, registered in the Netherlands. The other major change in 1984 was the purchase of Wabco of Paris, Ontario by Dresser Industries.

Activities of the Vehicle Manufacturers

Sector Structure

The major vehicle assemblers in Canada, General Motors of Canada Ltd., Ford Motor Company of Canada Ltd., Chrysler Canada Ltd., American Motors Canada Ltd., and International Harvester of Canada Ltd., account for 99 per cent of car and most of truck production. Facilities are fully integrated with those of the U.S. parent companies. This takes advantage of the market provided by the Auto Pact and resulted in 83.5 per cent of Canadian production being destined for the U.S. market in 1984.

General Motors

Continued demand for full-size, rear-wheel drive cars led General Motors to postpone, for a second time, conversion of its rear wheel drive assembly line in Oshawa. Conversion to mid-size, front-wheel drive vehicles finally started in November, with production of the "A" body cars to begin by late February 1985. Production of rear-wheel drive cars continued at the Ste. Therese Quebec plant. Despite the two week strike at GM in October and the halt at one of the Oshawa plants for production changes, total passenger car production was up 1.4 per cent over 1983, to 546 333 vehicles.

Ford

The continuing high demand for full-size cars also led Ford Canada to change its plans. Since February, the St. Thomas plant, retooled in late 1983 to produce two sizes of cars, has instead exclusively produced the full-size vehicles. Escort and Lynx production was moved to the Oakville plant which also produced the Tempo and Topaz models. Ford car production was up 63 per cent over 1983, reaching 443 305 units.

Chrysler

At Chrysler Canada the production of traditional North American type passenger cars ceased in 1983. Instead, Canada is the sole source for Chrysler's vans and mini-vans. Production of the new front-wheel drive mini-van reached 240 253 units, but this was still less than demand and customers throughout North America faced a minimum 4-6 week wait. Comparisons with previous production numbers are difficult in the Chrysler case as the plant was shut down for nearly four months in 1983 to convert to mini-van production. 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. Of the total mini-van production, about 85 per cent (the Voyager and Caravan models), were probably sold in the passenger car market.

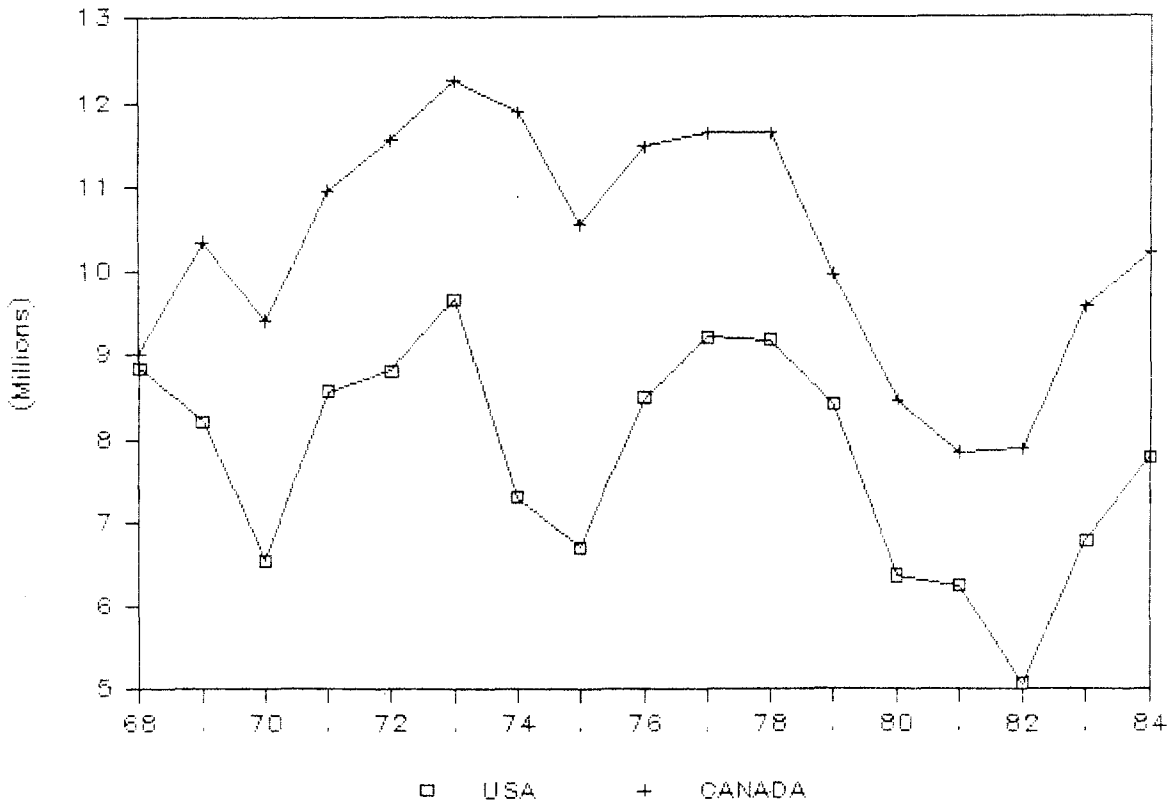
Passenger Car Production

Total 1984 passenger car production for Canadian assemblers rose seven per cent to 1 022 729 from the previous year's 955 498 units.

This was the best car output since 1978 and marked only the 10th time since 1921 that more than one million cars have been assembled in Canada. It must be remembered however that 1984 figures do not include the Chrysler mini-vans.

FIGURE 1

Passenger Car Production in Canada and the United States 1968-1984 (Canada 1/10 of scale)

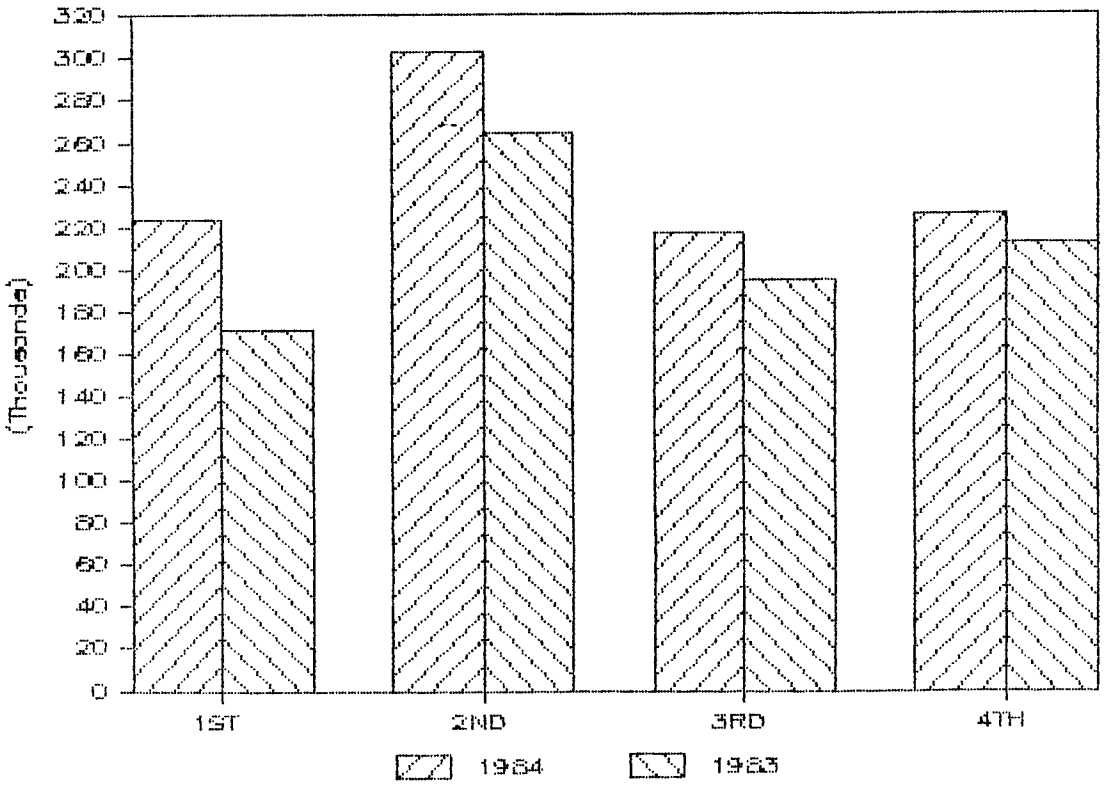


Source: Department of Regional Industrial Expansion.

While records were being set in Canada, it is important to note that U.S. passenger car production also continued to increase. Showing a much stronger growth than in Canada, production in the United States reached 7 773 200 vehicles, a 14.6 per cent increase over 1983, although still not attaining the 1979 level.

FIGURE 2

Passenger Car Sales in Canada by Quarter 1983 and 1984



Source: Department of Regional Industrial Expansion.

Passenger Car Sales

The trend which developed towards the end of 1983 continued to reflect slightly improved economic conditions, pent-up demand and stable interest rates. As a result, car sales increased by 14.2 per cent in 1984 and all quarters showed improvements. Towards the end of the year sales of domestic vehicles slowed due to low inventory of popular models and the shortage at GM as a result of the mid-October strike. Most of the market growth was captured by North American vehicle manufacturers. They held 74.6 per cent of the total market and achieved sales increases of 15.9 per cent over 1983. Sales of North American type cars were up by 99 844 units to 724 932. While continuing to improve their market share North American vehicle manufacturers were, however, unable to recoup all the losses sustained during 1981 and 1982.

TABLE 1

Passenger Car Sales in Canada (Thousands of Units)
1978-1984

Year	Domestic Sales	Total Import Sales	Total Import Market Share (per cent)	Japanese Import Sales	Japanese Market Share (per cent)	Total Sales
1978-80*	807	168	17.2	110	11.3	975
1981	647	257	28.4	208	23.0	904
1982	489	224	31.4	178	25.0	714
1983	625	218	25.9	177	20.9	843
1984	725	246	25.3	171	17.6	971

* Annual Average.

Source: Department of Regional Industrial Expansion.

In terms of vehicle size, the outstanding feature of the 1984 year was the huge increase in sales of intermediate North American produced vehicles which captured 28.99 per cent of the domestic car market. Unit sales nearly doubled to 206 740 from the 1983 total of 107 672. This increase was at the cost of sub-compact models that captured only 33 per cent of sales, a considerable reduction from the 39 per cent of 1983. The popularity of the larger vehicles reflected a consumer return to the more traditional North American type vehicle and the success of manufacturers in producing a more fuel efficient car. An additional factor may also be that the Canadian driver is now reconciled to higher fuel prices.

Increases in sales were not evenly spread across the country, as the western and Atlantic markets were softer than the industrial heartland of Ontario and Quebec. The latter provinces accounted for 71.4 per cent of all North American vehicles sold in Canada. Ontario alone accounted for 41.6 per cent of these vehicles. Quebec however, had the largest percentage increase with 218 119 vehicles sold in 1984, 20 per cent above the 1983 level.

Imported Passenger Car Sales

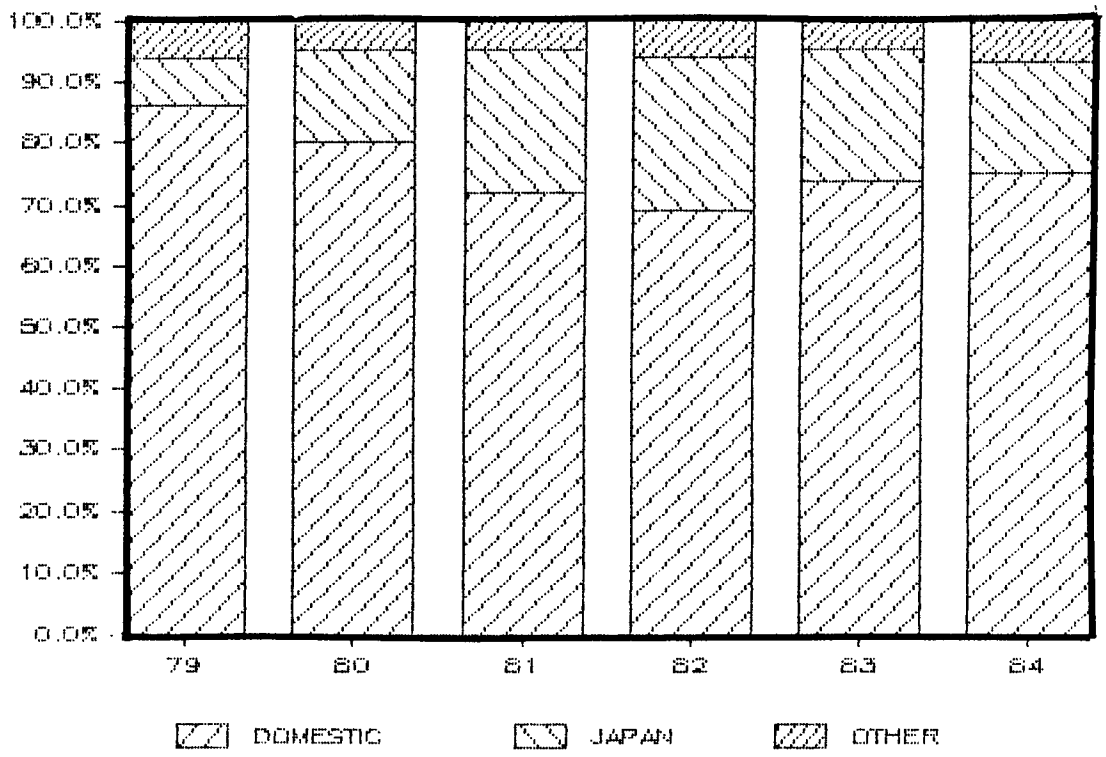
Imported passenger car sales increased in numbers while declining in percentage terms. Continuation of the export arrangements with Japanese manufacturers resulted in a further reduction of 5 321 vehicles sold to 171 204. Despite a decline in market share to 17.6 per cent of total Canadian sales, Japanese cars continued to dominate the import market, accounting for 69.5 per cent of all imports sold. The reduction in the Japanese share of the imported market was due to the phenomenal sales success of the Hyundai Pony.

Produced by the Hyundai Motor Company of Korea, the Pony filled the low cost sub-compact niche in the Canadian car market. This portion of the market had been neglected by Japanese automakers after they agreed to the current trade arrangements. In order to maximize profits, the Japanese exported larger, higher priced models with more options. This left the low-end of the sub-compact market open for Hyundai. Another advantage for the Korean manufacturer is the ability as a developing country to export to Canada duty-free. (Japanese manufacturers pay the Most Favoured Nations duty which is 10.8 per cent.) The duty free status along with low cost production allows Hyundai to price the Pony in the $6 400 to $7 500 price range, making it very attractive to first-time purchasers. Just over 25,000 were sold in 1984.

The success of the Pony has led to expectations that it could be the first or second largest selling import in the 1985 year.

FIGURE 3

Import and Domestic Shares of the Canadian Passenger Car Market 1979-1984



Source: Department of Regional Industrial Expansion.

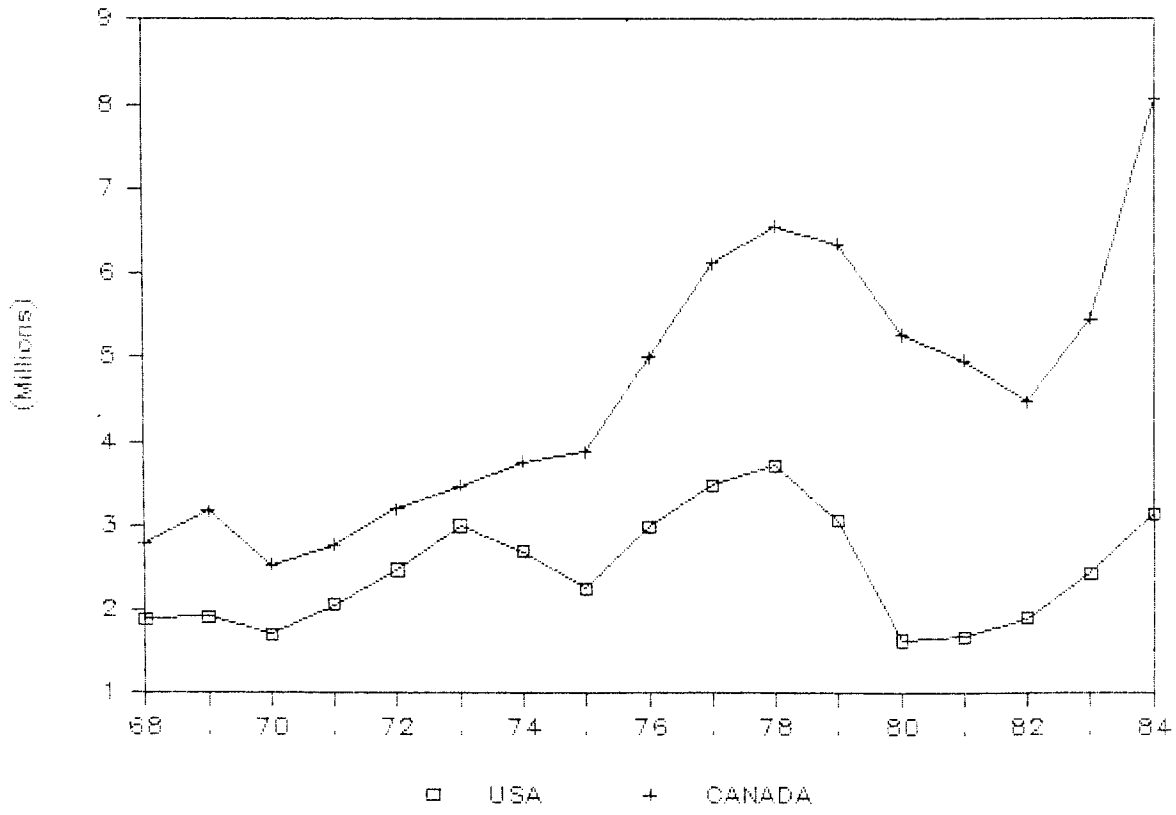
Commercial Vehicle Production

The commercial vehicle sector includes pick-ups, vans, light and heavy duty trucks and buses. Truck assemblies increased 48 per cent over 1983. The 1984 record of 807 314 units surpassed the previous high of 1978 by 23 per cent.

Taking the lead in 1984 was Chrysler with total van production of 363 277 vehicles. Of this 240 253, or 66 per cent, were mini-vans aimed at the passenger vehicle market. The other major producers all experienced increased production over 1983. A resurgence in the market for heavy duty class 8 trucks was particularly notable, with International increasing its production by 52 per cent, to 8 667 units. Mack Canada was even more successful, producing 3 427 vehicles for the U.S. and Canadian markets, an increase of 380 per cent over 1983.

FIGURE 4

Commercial Vehicle Production in Canada and the United States 1968-1984 (Canada 1/10 of scale)



Source: Department of Regional Industrial Expansion.

Commercial Vehicle Sales

Sales of commercial vehicles registered a large increase over the 1983 figures. Total sales reached 312 292 units, up by 74 522 or 31.3 per cent over the previous year. Of this increase domestic vehicles not only took the complete market increase from 1983, but also forced an actual decrease in the unit sales of imported commercial vehicles, which dropped by 6 473 to just 12.3 per cent of the market. This represents an abrupt turn-around from the previous three years when imported vehicles had increased market penetration from 6.5 per cent in 1980 to 19 per cent in 1983. Part of this change may be due to production of compact trucks by Ford and GM which replace previously imported models. In addition, sales of the Chrysler mini-vans again inflate the totals, although they by no means account for all of the resurgence in domestic commercial vehicle sales. Most models and sizes of

commercial vehicles experienced sales growth, with medium and heavy duty trucks joining the rest of the automotive industry recovery. Freightliner almost tripled sales of extra heavy duty vehicles while International also experienced large increases in both the medium and heavy duty range. Sales of domestic vehicles increased the most in Ontario and Quebec, with the latter province showing a 75 per cent growth over 1983, with sales of 50 049 units. Ontario again had the highest total sales of 99 342 units, a 53 per cent increase over the previous year. Sales in Nova Scotia, PEI, and New Brunswick grew 35 per cent, while in the West results were lower due to the continued depressed state of the resource industries.

TABLE 2

Commercial Vehicle Sales in Canada
1978-1984

YEAR	DOMESTIC SALES	TOTAL IMPORT SALES	TOTAL IMPORT MARKET SHARE (per cent)	JAPANESE IMPORT SALES	JAPANESE MARKET SHARE (per cent)	TOTAL SALES
1978	364,241	13,413	3.6	11,961	3.2	377,654
1979	381,582	11,832	3.0	10,904	2.8	393,394
1980	310,273	21,474	6.5	20,383	6.1	331,747
1981	250,775	35,912	12.5	33,487	11.7	286,687
1982	166,986	40,435	19.5	38,633	18.6	207,421
1983	192,609	45,161	19.0	43,691	18.4	237,770
1984	273,604	38,688	12.3	36,772	11.7	312,292

Source: Statistics Canada.

Buses

The Canadian bus manufacturing industry can be divided into two sectors: manufacturers of integral body-frame coaches for intercity use, and urban transit manufacturers.

Intercity Coach Industry

There are two intercity coach manufacturers in Canada. Motor Coach Industries Ltd. (MCI), a subsidiary of Greyhound Lines of Canada Ltd., operates a plant in Winnipeg employing 1,000 people. Vehicles are produced for the Canadian and overseas markets.

Prevost Car Incorporated, the second largest North American manufacturer is entirely independent and employs about 500 people at its Ste. Claire, Quebec

plant. The company supplies vehicles to independent bus lines. Innovative designs and the favourable exchange rates of the last few years, have been significant factors in the company's success.

Both manufacturers operate under the Auto Pact. However, the market is a mature one with little growth anticipated. This has resulted in the two companies investigating overseas markets. Prevost is actively pursuing North African and Middle East potential while MCI is involved in Australian sales as well as specialized vehicles for the Middle East.

Urban Bus Manufacturers

In Canada, the three principal urban bus manufacturers are: General Motors Diesel Division (GMD), a wholly owned subsidiary of the largest U.S. bus manufacturer; Flyer Industries, 90 per cent owned by the Manitoba government; and Ontario Bus Industries (OBI). These three manufacturers have a total production capacity of approximately 2 000 vehicles per annum but serve a smaller domestic market that is forecast to be in the range of only 250 units in the near future. In addition, competition in a declining U.S. market is expected to be extremely aggressive as U.S. producers also have considerable excess capacity.

In 1984 1 000 urban buses were produced. The only firm working at capacity was OBI which has found a niche in the small and special purpose markets.

Financial Performance in 1984

For all of the major assemblers, 1984 was a bumper year. GM Canada reported a record profit of $880.8 million, an increase of 303 per cent over 1983 despite the 13 day strike by the United Auto Workers. U.S. demand for full-size cars produced by GM Canada played a large part in the improved results, but sales in Canada also increased by 15 per cent.

The largest percentage increase in profits was at the Ford Motor Co. of Canada, which more than quadrupled its 1983 performance with profits of $352 million in Canadian operations. This profit increase reflected improved sales of vehicles, engines, castings and glass to Ford U.S., as well as an increase of 23 per cent in vehicle sales to Canadian dealers.

TABLE 3

Financial Performance of the Four Major Assemblers in Canada 1978-1984 ($ millions)

YEAR	NET SALES	NET INCOME (LOSS)	NET INCOME (LOSS) AS % OF SALES	CAPITAL EXPENDITURES PLANT AND EQUIPMENT*	WORKING CAPITAL	LONG TERM DEBT
1978	17 784	209	1.18%	445	847	55
1979	19 635	192	0.98%	586	700	164
1980	18 322	(217)	(1.18%)	1 170	533	709
1981	20 590	(168)	(0.82%)	1 288	242	1 363
1982	21 014	(184)	(0.87%)	606	(735)	595
1983	27 413	946	3.87%	882	313	407
1984	35 465	1609	4.54%	489	1031	108

* Includes special tooling for all four companies and investments overseas by Ford of Canada.

Source: Department of Regional Industrial Expansion and Company Annual Reports.

Chrysler Canada recorded its best single year profit of $280.6 million, more than doubling the previous record set in 1983. Demand for K cars allowed the company to retain second place position in Canadian car sales. Deliveries to Canadian dealers were up 28 per cent over 1983 while exports were up 47 per cent. The Windsor plant is the only North American source for the mini-van, now being produced at a rate of 1 000 per day.

Automotive Parts Sector

Sector Structure

The Canadian Automotive parts industry produces components and subassemblies for virtually every part of a motor vehicle. Traditionally it is divided into two major sub-sections. Original equipment manufacturers produce components used by the assemblers in the production of new vehicles. Aftermarket manufacturers produce a wide range of parts and accessories, destined for the replacement and repair sector, which are marketed to the consumer through a complex network of wholesalers, jobbers, retailers, vehicle dealers and service outlets. Many manufacturers produce for both sub-sectors.

TABLE 4

Canadian Motor Vehicle Parts and Accessories Shipments ($ millions) 1978-1984

Year	Value of Shipments
1978	5 119.7
1979	4 497.4
1980	4 034.2
1981	4 879.3
1982	5 538.9
1983*	8 357.9
1984*°	10 231.8

° Preliminary.
* 1980 Standard Industrial Classification.

Source: Statistics Canada.

TABLE 5

Structure of the Canadian Automotive Parts Industry

	1981		1984*	
	Value of Shipments ($ millions)	Share	Value of Shipments ($ millions)	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.

Seventy to eighty per cent of total Canadian parts production is destined for original equipment manufacturers (OEM's). The producers of these parts can be split into three categories. The largest are those owned by the vehicle assemblers. Independent foreign owned parts companies collectively make up the second largest group while Canadian owned companies make up the third category. 1984 saw an increase in Canadian ownership 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. It is also notable that Magna, the largest independent parts manufacturer in Canada with sales in excess of one half billion dollars, was joined by

Woodbridge Foam and A.G. Simpson in exhibiting very high growth rates in the period. Most are small firms with low capitalization, standard technology and a high labour content. Production is primarily located in Southern Ontario and to a lesser degree Quebec.

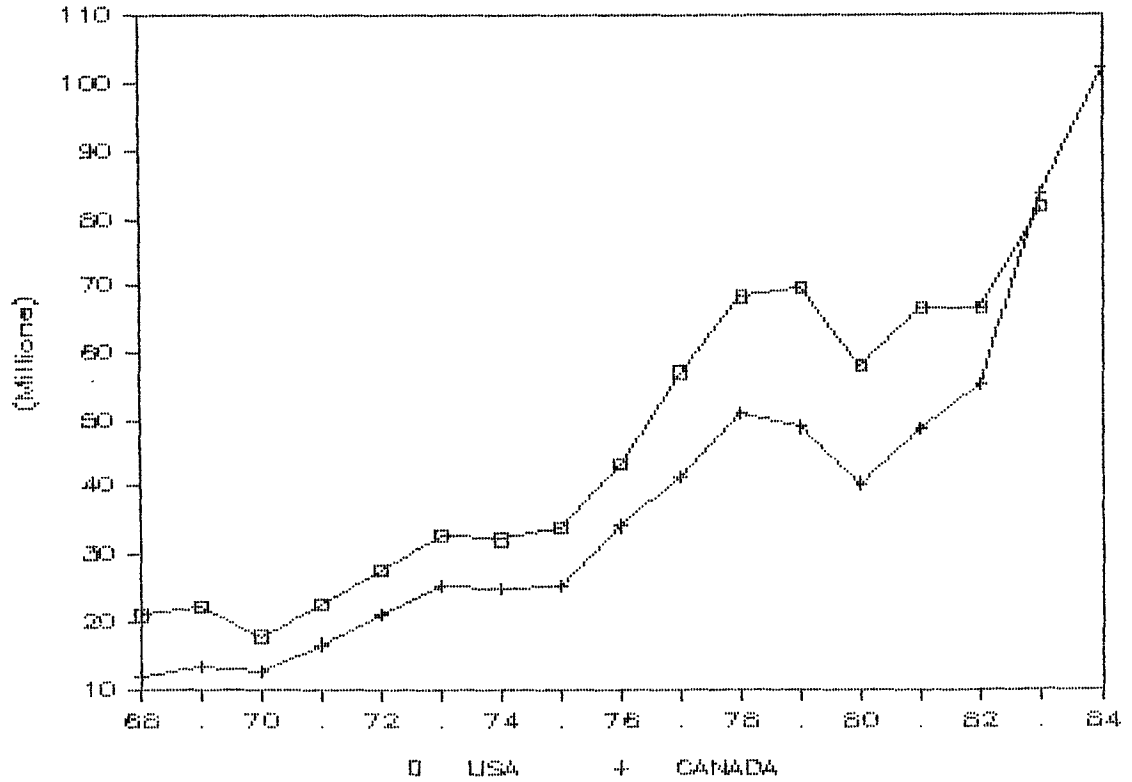
Recent strategic and structural changes made by the major vehicle producers have also forced significant changes in the parts sector. While major assemblers are looking to independent suppliers, they are also moving to consolidate their supply base by single-sourcing. Longer term commitments are offered to those companies that adapt to the "target costing" parts design concept. Future success for suppliers will require increased capital investment in technology, computer assisted manufacturing, flexible production processes and quality control to meet the market demands for sophisticated product design, high quality, low cost, and "just-in-time" delivery.

An example of this type of change is being undertaken by GM which has determined that 85 per cent of supplies must be within a 250 mile radius of its Detroit plants for the company's six hour inventory system to work. The Hayes-Dana company has recently established a facility in Chatham to serve the "just-in-time" delivery requirements of International Harvester. This type of restructuring will tend to further aggregate the parts industry in south-western Ontario. GM in the United States is also following the Japanese practice and demanding three to five per cent annual price reductions from suppliers in return for assistance in quality and productivity improvement and long term contracts.

Traditionally, few Canadian companies have produced original equipment or aftermarket parts for vehicles produced overseas and imported into Canada. A minor break in this situation occurred in 1984 with the announcement of five joint ventures arranged through PAC (see page 4). Another exception is Tridon which was one of only six companies winning a world quality award from Nissan. In a separate development, Hyundai of Korea has undertaken to obtain supplies from Canadian sources. In 1984 Hyundai purchased over $8.8 million worth of parts in Canada for export to Korea.

FIGURE 5

Automotive Parts Production Canada and the United States
1968-1984
(Canada 1/10 of scale)



Source: Department of Regional Industrial Expansion.

The ability of some members in the Canadian parts industry to adapt to the changing automotive environment and make major investments in new manufacturing and quality control processes, coupled with the high value of the U.S. dollar has enabled the Canadian industry to improve its share of the Canadian and U.S. markets. The value of production in the parts sector increased by $1.87 billion over 1983 to a new level of $10.23 billion. This growth has enabled Canadian parts producers to retain approximately 50 per cent of the U.S. imported parts market.

The Tire Industry

With the exception of the off-road sector, the tire industry experienced generally improved market conditions in 1984, allowing producers to use more of their potential capacity. Total

production increased, reflecting the growth in vehicle sales. Profits improved marginally but the industry still yields unacceptably low returns on investment.

Structurally there were no changes in the industry. However it is significant that while exports increased so did imports, the latter reflecting stronger import penetration in the area of high quality products. The degree of import penetration was aided by the high value of the Canadian dollar in relation to overseas currencies.

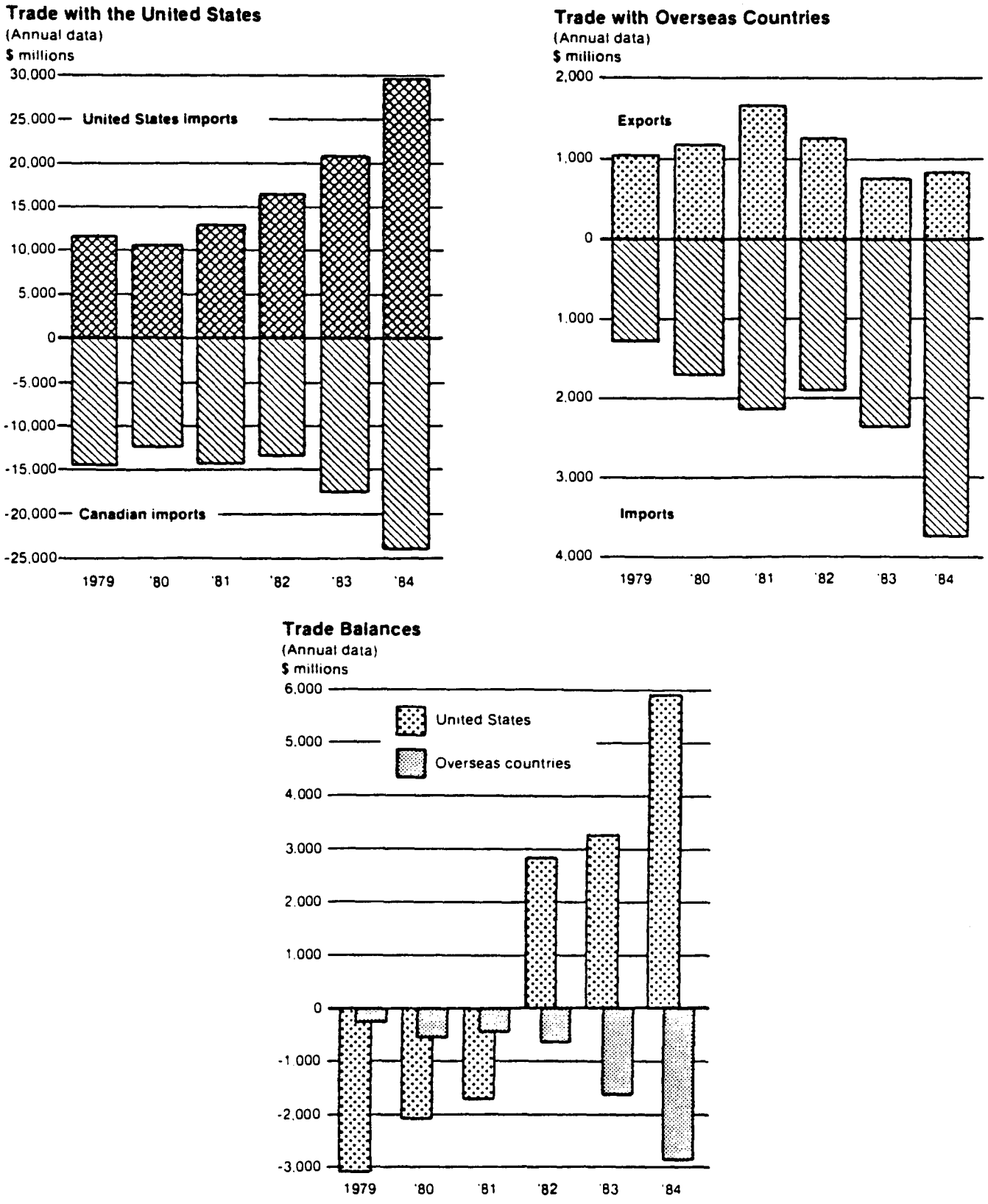
Canada/U.S. Trade Within the Auto Pact

The Canada-United States Automotive Products Agreement (Auto Pact), which has been in effect since 1965, has had a significant effect on the development of the automotive industry in Canada. Prior to the Auto Pact Canadian vehicle assemblers produced a wide range of models in relatively small numbers for the domestic market. This situation, along with high protective tariffs, led to high consumer prices relative to the American market place. The Auto Pact, by providing for free trade in new vehicles and original equipment parts under certain agreed to conditions, served to rationalize the production of Canadian and U.S. vehicles. Approximately 80 per cent of Canadian vehicle output is now directed to the U.S. market, while 30 per cent of Canadian requirements for North American type vehicles are met from domestic production facilities. Under the influence of the Auto Pact two way Canadian/U.S. trade in automotive products has grown from $1.2 billion in 1965 to over $52.1 billion in 1984.

It is generally agreed that the Auto Pact, despite some shortcomings has had a positive effect for both countries. It has enabled U.S. automotive companies to maintain a dominant share of the Canadian market while bringing more production, expanded trade, increased productivity, a larger share of industry employment and lower consumer prices to Canada. Over the 20 years the Auto Pact has been in existence, total automotive trade between the two countries has been in excess of $339 billion. Although Canada has had a continuing negative balance of trade within the Auto Pact for most of the 20 years, the total variation, in nominal dollars, has been less than one per cent of the value of total trade.

FIGURE 6

Canada-U.S. Trade Balance in Automotive Products: 1979-1984



Source: Department of Regional Industrial Expansion.

Total Canada/U.S. Trade in 1984

In 1984 Canada's total balance of automotive trade with the United States reached a surplus of $5.9 billion, an 80 per cent increase over 1983. This is accounted for by continued high U.S. demand for the larger sized vehicles produced in Canada. The return to vehicles that traditionally differentiated the North American from the world market was encouraged by lower gasoline prices and a booming U.S. economy. The total value of Canadian automotive exports to the U.S. rose to $29.8 billion, up 43 per cent from 1983. This increase was made up of $4.2 billion in passenger cars, $1.26 billion in trucks and other vehicles, $.58 billion in engines and engine parts and $1.85 billion in other parts.

On the import side there was also considerable growth. Passenger car imports from the U.S. increased in value by 24.5 per cent, to $6.095 billion. The import value of trucks and other vehicles was $2.15 billion, an 80.6 per cent increase over 1983. This growth was the result of surging Canadian truck sales. Imports of engines, engine parts and other parts also grew over 1983 to meet the demands of a 21 per cent increase in vehicle production in Canada. Although this resulted in a larger parts deficit than in previous years, the increase was more than offset by the increase in the value of vehicle exports and reflected the integrated nature of the North American industry. Part of this increase in the parts deficit to $4.9 billion from $4.11 billion in 1983, could also be attributed to decreased parts exports in the last quarter of 1984 following labour problems on both sides of the border.

Canada/Overseas Trade in 1984

Once again, the deficit in Canada's automotive products trade with overseas countries increased, this time by 69 per cent to $2.7 billion from the 1983 level of $1.6 billion. Imports of passenger cars increased to $1.8 billion in 1984 from $1.32 billion in 1983. Much of this was due to the increased price of Japanese vehicles sold in the Canadian market, and sales of the Hyundai Pony. The value of commercial vehicles imported grew to $518.7 million from the 1983 level of $301 million, and the value of parts imported was up by 95 per cent over 1983, reaching $1.198 billion dollars. The total automotive trade deficit with other countries rose to $2.7 billion.

TABLE 6

Canadian Imports of Automotive Parts from Selected Countries, ($ millions)

	1978	1984	Average Annual Growth 1978 to 1984
United States	7 336.0	13 967.3	11.3%
Mexico	11.1	568.1	92.8%
Japan	40.4	300.1	39.7%
Sweden	45.7	99.0	13.8%
Brazil	7.2	22.8	21.1%
Taiwan	0.5	15.6	79.6%
Hong Kong	0.7	4.0	34.6%
Korea	0.1	2.7	73.1%
United Kingdom	26.1	21.7	-3.0%
France	25.8	38.6	6.9%
West Germany	24.9	56.8	14.7%
All other countries	15.2	44.9	19.8%
Total Imports	7 533.7	15 141.6	12.3%
Total Non-U.S. Imports	197.7	1 174.3	34.6%

Source: Statistics Canada and APMA.

Exports of vehicles and parts to other countries reached only $821.9 million, although this was still an increase of 12.5 per cent over the 1983 value of $730.6 million. At present the growth rate in the trade deficit with other countries is higher than the rate of increase in the surplus with the United States.

The Labour Force

Employment increased in all sectors of the automotive industry during 1984. Average monthly employment rose to 121 000, 5.5 per cent more than the previous year. Despite record production in the industry, total employment has still not reached the levels of 1978 or 1979. The vehicle assembly sector had an increase of 5.4 per cent to reach a total of 46.8 thousand persons. The addition of only 500 persons in the truck body and trailer section represented a 9.5 per cent increase over 1983. At a total of 12 600 this is considerably below the 1970's when up to 15 000 people were employed. The smallest employment increase, only 2.17 per cent, occurred in the automotive parts and accessories sector. When compared with a 56 per cent increase in the value of goods produced by this sector, the small

increase in employment attests to the ability of parts manufacturers to adapt to the new high productivity environment.

TABLE 7

Employment in the Canadian Automotive Industry by Sector 1978-1983

Year	Vehicle Manufacturers	Automotive Parts and Accessories
1978	65 900	59 000
1979	67 400	56 400
1980	56 800	47 300
1981	55 500	51 900
1982	51 400	47 500
1983	55 900	59 700
1984	59 400	61 700

Source: Statistics Canada.
Figures based on average employment over each year.

Industrial Relations

Following a trend which began after 1980, new collective agreements reached between the UAW and management continued to reflect Canadian economic conditions. While the UAW in the United States made job security its major issue, Canadian members stayed with the traditional demands for increased wages and benefits to ensure income security. In the United States a contract agreement was reached after a number of selective strikes. While in Canada, a settelement was reached after a 13 day strike against General Motors. The collective agreement finally reached differed in format from that signed in the United States. The Canadian agreement provides for yearly increases in wages rather than the lump sum plus profit sharing approach taken in the United States. It also retained the $8.00 to $9.00 per hour lower Canadian labour costs, taking into account the exchange rate differential.

After the strike, continued problems between the Canadian and American organizations of the UAW led to a decision by Canadian members to demand complete autonomy within the International Union. When this was rejected in Detroit, the Canadian members decided formally, but amicably, to sever their relationship with the UAW in the United States.

CHAPTER II: THE INTERNATIONAL ENVIRONMENT

Introduction

The automotive industry is among the most important in the world. For many developed countries such as France, Germany, Canada, the United States and Japan it is a key element of the industrial economy. For many less developed countries, such as Brazil, Korea, Mexico and Taiwan, it is considered a spearhead for industrial development. In the last 25 years, three factors stand out in the development of the industry: its growth, its increasing internationalization, and the important role the state has played in every major automotive producing nation.

World production of motor vehicles has grown from just under 13 million in 1960 to around 30 million today. Increasingly these vehicles are being produced in a larger number of countries. However the internationalization factor is complicated. Not only are more countries producing, but more are exporting and importing greater numbers of vehicles and parts.

In 1980, a depressed year for the world industry, international trade in road vehicles represented 15.5 per cent of world trade in manufactured goods - and the figure does not include trade in parts, engines, and tires. In a number of countries, such as Japan and Canada, the industry is a major factor in the balance of payments. Canada's export of vehicles and parts (primarily to the U.S.), accounted for 26.1 per cent of total exports in 1984, compared to a mere 2.1 per cent in 1964. In Japan the industry has developed to the point where that country accounts for almost 45 per cent of world exports in cars.

TABLE 8

World Motor Vehicle Production
1982 - 1983

	1982			1983		
	Total	Passenger Cars	Commercial Vehicles	Total	Passenger Cars	Commercial Vehicles
North American Companies	11 501 381	8 688 766	2 812 615	14 106 409	10 781 063	3 325 346
Japanese Companies	10 807 978	6 937 190	3 870 788	11 240 076	7 247 764	3 992 312
W. European Companies	9 766 407	8 432 465	1 333 942	10 350 181	9 050 232	1 299 949

Source: MVMA.

This internationalization of the automotive industry means that political and economic developments in one geographic area increasingly impact on other areas. In Canada this is especially true, as our industry depends on the U.S. which, as the most important single world market, has been targeted for penetration by many other nations. The considerable cost advantages of Japanese production methods have meant that other competitive producers have had to adopt similar methods or face extinction in the international marketplace. It is clear then that the world automotive industry has become internationalized at a variety of levels. For this reason it may prove interesting to survey the recent events in the automotive industries of the United States, Europe, Japan and Korea in order to place Canadian developments in perspective.

The United States

In the United States the automotive industry continues its strong resurgence from the disastrous years of 1980-1982. After a dramatic turnaround in 1983, the industry in 1984 registered another 13 per cent increase in sales to 10 390 129 passenger vehicles. Domestic car sales increased market share from 74 per cent in 1983 to 77 per cent in 1984, for a total of 7 951 523 units.

The U.S. industry was particularly affected by the world-wide decline in production and sales of automotive vehicles during 1980-1982. This coupled with its inability to respond rapidly to the changes in consumer demand resulted in a dramatic decline in sales, production and employment. Production dropped by over 40 per cent between 1978 and 1982 and employment in the industry plummeted from 1 058 000 in 1978 to 648 000 in 1982, a reduction of 39 per cent. Reinforcing the poor competitive position of the U.S. industry was the surge in import sales, especially of Japanese vehicles. The rapid growth of the small car market, which jumped from 27 per cent in 1979 to 65 per cent in 1981, gave importers, especially Japanese producers a unique opportunity to penetrate the market. The imports' share of the U.S. market rose from 18 per cent in 1978 to 28 per cent in 1982.

The rapid decline in sales and market share forced the North American automobile industry to make vast changes in production, supply, investment and employee programs in order to survive in the new environment. Major investments, productivity gains and quality improvements in concert with the Japanese restraint on auto exports to the United States, the industry's highly favourable short-term tax situation, and a strong economic recovery, have resulted in a return to profitability for North American producers. In 1983 combined profits of the U.S. big four producers rose to $6.3 billion. The industry's rebound continued in 1984 with combined profits reaching $9.8 billion, a 55 per cent increase.

In order to secure their competitive position within North America and the world automotive market, the major American automakers are pursuing new strategies as well as improving productivity and lowering their break-even points. All three major companies (GM, Ford and Chrysler), are purchasing more parts abroad, producing small cars in joint ventures with Japanese manufacturers, and moving to highly automated plants. In addition however, each company is pursuing strategies that fit its individual needs.

General Motors

Perhaps the most aggressive strategy and the greatest changes are taking place within General Motors. Safely ensconced in the large and luxury vehicle market, its response to the new competitive situation has included: a restructuring of its organization into large and small car groups to reduce overhead costs, rationalize production and provide more accountable management; a strategy of joint ventures with low cost producing countries to provide small cars for the U.S. market; and a move into the high technology field with the announcement of the Saturn project, the purchase of Electronic Data Systems, a joint venture with Fanuc robotics company of Japan and a move into artificial intelligence with the investment in Tecknowledge.

Overseas Production

GM has also turned to production in the far east to supply the large U.S. market. In a joint venture with Daewoo of Korea (co-owned by GM), GM has contributed $100 million towards the cost of a new front-wheel drive vehicle to be produced in Korea for export to the U.S. It is expected that up to 80 000 of the vehicles will be sold per year under the Pontiac label.

To take advantage of low labour costs and fulfill local content requirements, GM has moved production of its El Camino and Cabellero models to Mexico. In addition, GM is heavily involved with two other Japanese companies: Suzuki and Isuzu. At the present time GM imports 17 000 Suzuki made vehicles into the United States per year, which are sold under the Chevrolet Sprint name. The two companies (GM owns 5.3 per cent of Suzuki), are also considering a joint venture to produce Japanese designed vehicles in North America, possibly in Canada. Isuzu Motors, (34.2 per cent owned by GM), has announced plans to build a plant in the United States to make commercial delivery trucks and chassis for buses. They will be distributed through separate Isuzu dealerships.

Ford

For its part, Ford is pursuing a number of different strategies to enhance its position in the North American and international markets. Like other producers it is adapting Japanese methods and technology to North American plants to increase productivity. The new Taurus and Sable mid-size vehicles, for example, are being built in highly computerized plants using a large number of robots. It is also moving to more overseas sourcing to reduce costs. Ford is placing much of its small car production overseas, leaving mostly medium and large-sized vehicle production in North America.

Joint Ventures

Like GM, Ford has close connections with a major Japanese manufacturer, in this case Mazda Motor Corporation, the producer of Mazda cars. Ford has about 25 per cent equity in Mazda and markets Mazda vehicles under the Ford label in Australia, South-east Asia and other parts of the world. In a recent move Ford has signed an agreement with Mazda under which Ford will assemble Mazda designed vehicles in Mexico for sale in North America under the Ford label. According to this agreement, Ford will invest $ 500 million in an assembly plant at Hermosillo, with a large percentage of components imported from Japan. Initial production, to begin in 1986, is targeted at 120 000 vehicles per year of which 100 000 are for the N.A. market. Full capacity of 200 000 vehicles per year could be reached within a few years. Ford also intends to

purchase over half the production of a Mazda plant now being built at Flat Rock, Michigan. This plant, with a capacity of 240 000 vehicles per year, is expected to produce the Mazda 626 replacement for sale in the U.S. by the 1988 model year. The vehicles, for sale under the Ford label, will have slightly different decorative features than those sold under the Mazda label.

Chrysler

The recession of 1980-82 hit the Chrysler Corporation harder than any other U.S. automobile manufacturer. At the end of the 1970s Chrysler had old, inefficient plants, excessive overhead costs and models that appealed mostly to older, blue collar buyers. The company's response to near bankruptcy at the height of the recession was to develop a strategy that included a large investment in new automated plants and machinery, a shift in product mix to higher-profit luxury and sport models that appeal to more affluent buyers, and an increase in the purchase of Japanese built sub-compacts for sale under the Chrysler name.

The early development and sales success of the front-wheel drive compact K-car, was a major factor in the Chrysler Corporation turnaround. In 1984, the mini-van, produced in the newly designed, highly automated plant at Windsor has also been a startling sales success. The latest new product developed by Chrysler is the Le Baron GTS-Lancer model being produced in the state-of-the-art facility at Sterling Heights, Michigan. This vehicle is a new design front-wheel drive, high-profit vehicle with luxury features that will appeal to the "upscale" market made up of younger, more affluent purchasers who might otherwise be considering European vehicles. Plans are also underway to produce a smaller version of this vehicle as a fully equipped car with larger and turbo-charged engines. New production methods and increased use of robots for welding and painting have allowed large cost reductions and productivity improvements for Chrysler. Chrysler officials state that labour productivity has doubled since 1980 to 20 vehicles per employee per year.

Mexican Production

Chrysler also became the first American producer to build vehicles in Mexico for sale in the U.S. Although present production is on an experimental

basis, and has only totalled 3 000 2-door K cars made from U.S. parts, the venture is being closely examined for its potential benefits. If the vehicles are accepted in the U.S. market, it is likely that production will be increased to take advantage of the extremely low Mexican wage levels. At an average of $2.00 (U.S.) per hour, Mexican wages offer a savings of $21.00 per hour over those prevailing in the U.S. In addition, new Mexican legislation requires local production for those companies wishing to sell vehicles in the Mexican market. These requirements can be reduced if the vehicles are produced for export.

American Motors

Unlike the other American automobile producers American Motors was in serious trouble long before the 1980-82 recession. In 1979 Renault of France paid $100 million for an equity stake of 22.5 per cent and agreed to provide another $50 million of working capital to AMC. Since that time another $200 million has been invested by Renault and its equity share has risen to more than 45 per cent.

In 1982 American Motors began to produce the French designed Alliance and Encore for the sub-compact market. In the short-term the new vehicle was a success with high sales in 1983, but the stabilization and then decline in gas prices brought a return to large cars by American buyers. However, for the next year and a half, the Alliance/Encore is the only high-volume vehicle AMC is producing, as the four-wheel drive Eagle and Jeep are aimed at smaller, specialty markets. The latter has been especially successful. The introduction of a pick-up version, later this year, should help the company survive until a new medium-size vehicle comes off the production line of its brand new plant in Brampton Ontario.

The Japanese Importers

Since 1981, when the "voluntary" export agreement was negotiated with the Japanese government to limit passenger car exports to the U.S. market, the Japanese share of sales has dropped to just over 18 per cent from the high of 22.6 per cent. The freezing of the number of Japanese vehicle imports has not had a totally negative effect for the producers however. Japanese vehicles have been increasingly offered in only the larger, more fully equipped and more profitable models.

Assembly in the U.S.

Japanese producers have also been moving towards the assembly of vehicles in the United States. Although this trend was already underway before restraints were imposed, it was probably enhanced by the restraint program. The first company to move to U.S. assembly was Honda, which announced plans in 1980 to build an assembly plant to produce the Accord model near Columbus, Ohio. Plant capacity is about 10 000 per month with production in 1984 reaching 138 000 vehicles. Production is slated to increase to 300 000 units despite the abolition of restraints. Honda has also announced that it will soon begin U.S. sale of a higher priced luxury vehicle through a completely new line of dealerships.

In the same year, 1980, Nissan announced that it would build a plant to produce small trucks. The plant, at Smyrna, Tennessee, reached production of just over 100 000 vehicles in 1984, and this year new additions will allow for 140 000 Sentra passenger cars to be assembled each year.

Since the restraints began, two other companies have also announced or developed assembly facilities in the United States. The Toyota joint venture with General Motors is well under way with production to begin in June. The other production facility is the Mazda plant under development at Flat Rock, Michigan. Although this is not a joint venture, half the anticipated production of 240 000 vehicles will go to The Ford Motor Company.

European Producers

The only European manufacturer producing vehicles in the United States is Volkswagen. The decision to produce in the United States was made in 1976 when the high value of the German currency and high German wages caused sales of the Volkswagen Rabbit to plummet by over 50 per cent from the 1970 peak. A plant in Pennsylvannia was built at a cost of $300 million, and in 1978 the first Rabbit rolled off the line with 25 per cent U.S. content. Production of the single model amounted to 200 000 per year, and by 1979 local content rose to 75 per cent. A peak output of 197 000 units was reached in 1980, but since that date sales have decreased with the result that only 76 000 vehicles were made in 1984. The company is hoping to recoup its market share with the all new, five-passenger Golf model now being produced in the U.S. plant.

European imports, except Volkswagen models, had a good year in 1984. Most are high priced luxury vehicles with a small share of the market. Audi posted the largest gain amongst the European manufacturers while BMW, Saab and Volvo, Mercedes Benz and Jaguar also increased their market share.

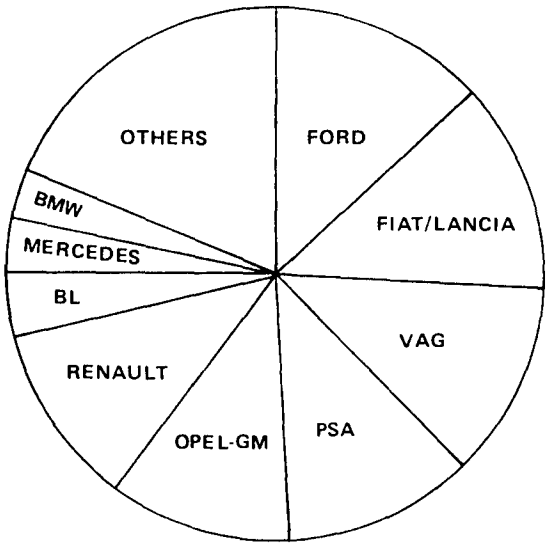
The European Automotive Industry

The European automotive industry has had to face many of the same problems as the industry in North America. However, the traditional structure of the industry in Europe, with six highly competitive companies producing a full line of vehicles, and governments anxious to protect their national industries, has resulted in a considerably different environment from that of North America.

At the present time the six major mass market producers share about 71 per cent of the total market of approximately 10 million passenger vehicles, with each producer taking from 10 to 15 per cent. The rankings within the six are fairly dynamic however. Government policies and national pride have reinforced the determination of major producers to hold national market shares with a full model line. This has resulted in a desperate battle to retain a share of other European markets. However, strong competition, heavy discounting and large financial losses have not yet resulted in product rationalization or industrial restructuring. Continued financial losses make it imperative for major producers to cut costs and there are some indications that these moves are now taking place.

FIGURE 7

Passenger Car Registration: Western Europe



Source: Automotive Industry Data Ltd., 1985.

The other major sector of the European industry, the small specialized producers of high quality vehicles, is doing very well. For these producers the profits are coming from extremely successful exports to the United States, where high prices are enhanced by the high relative value of the U.S. dollar. These companies, which include Saab, Volvo, BMW, Jaguar, Audi and Daimler-Benz continue to lead in the high quality engineering and luxury that commands premium prices. They face little competition from North American or Japanese producers.

The Recent Recession

The world economic recession of 1980-81 had a negative effect on the European automotive industry, although market decline was not as rapid as in North America. Other than immediate moves to further restrict Japanese imports, the response by the European mass producers has been ineffective. In 1983, an agreement was reached whereby Japanese auto exports to the EEC market as a whole would be "moderate in relation to past export and market performance and future market developments".

At the outset of the recent depression, European demand remained relatively level due to high employment policies of the various states. As the market gradually declined, dramatic shifts within the market were prevented by loyalty to national producers, the wide range of models sold by each major producer, and severe competition among producers to retain market share. The result has been over-capacity and price reductions that have placed severe financial constraints on all the major producers. Problems were further aggravated by severe competition from the Japanese in the traditional European overseas markets of N. Africa and the Middle East.

The European Industry Today

European producers have reacted to a certain degree by cutting costs and making heavy investments in new plant and technology. However the industry continues to be troubled by over-capacity and national economic policies which are sensitive to the impact of employment reduction. Nearly all of the major producers continue to lose heavily, with the exception of Fiat where strong cost recovery measures, a major workforce reduction and good sales led to profits in 1983, the first positive yearly results since 1979. In the first half of 1984 new model lines and competitive pricing resulted in Fiat capturing 14 per cent of the European market, taking over the lead from Renault.

Renault

Renault, a state-owned corporation, was Europe's major producer for many years. However, 1984 has witnessed continued heavy losses for this corporation with sales dropping by 13 per cent. The close control by the French government and strong unions have prevented significant manpower reductions. At the present time, the only profitable operations for Renault are its North American subsidiaries of AMC and Mack Truck, but the company faces heavy criticism from its unions for supporting employment overseas.

Peugeot

France's other major producer Peugeot, is a private company that is also in severe difficulty. Its acquisition of Chrysler subsidiaries proved to be a real albatross for Peugeot as it was immediately followed by the recession of 1980-81. The company was caught with a large number of antiquated plants and a huge

workforce from the earlier practice of hiring cheap unskilled labour to increase production. No profit has been made since 1979 when Peugeot had a 17 per cent market share. By 1983 this had dropped to 11 per cent. In 1984, moves to cut the workforce resulted in labour unrest and a five-week strike, but the company succeeded in achieving most of its goals. A new President, reduction in model range, and a very popular new medium-size 205 model may result in a small profit for the company this year.

Volkswagen

Germany's largest producer, Volkswagen, has also lost money over the past few years. In 1983, with the top-selling model in Europe, the Golf, VW managed to make a small profit, but a seven-week strike by metal workers in 1984 resulted in first half losses for the company, although sales continued to climb. With the new gains won by the strikers, a shorter work week and pay increase, and despite trade offs in flexibility, it will be even more difficult for the company to make the productivity increases it needs. The competitive market also makes it very difficult to pass on increased costs to the consumer. However, the takeover of SEAT of Spain will allow some sharing of components and enable both companies to benefit from economies of scale.

British Leyland

One of the few really bright spots on the European scene is the partial resurgence of British Leyland. Jaguar, with successful sales in the U.S. luxury car market, has improved productivity and dependability and when privatized showed it had a bright future. The Austin-Rover group is involved in joint design and production of a new luxury vehicle with Honda. This joint venture may be an excellent mix, the large-car expertise of the British combining with the efficient production capabilities of the Japanese. The new vehicle will be built in Britain and Japan and exported. In some countries, such as the U.S., the two models may compete with each other. Both companies have high expectations for the vehicle and it is touted as the best example of the benefits of international collaboration.

Ford

Ford and GM in Europe have both moved to increase productivity and market position through cost-saving measures and the introduction of new models. The new Ford Sierra and Orion have proved popular with European buyers. In 1983 the company

increased total production by 4.8 per cent to 1 340 000 units, and its market share to 12.5 per cent. Competitive price discounting has, however, resulted in a decline in net income and it is unlikely that the situation will change in the near future.

General Motors

GM has also managed to increase its market share in the past few years with the new Opel Kadett/Vauxhall Astra which is produced in Germany, Belgium and Great Britain. The new assembly plants include modular system techniques which allow all 17 versions of the model to be built at the same time. The success of this and other small GM vehicles in Europe has increased the company's share of the market dramatically, moving from 9.6 per cent in 1982 to 11.2 per cent in 1983.

In recent years both Ford and GM have taken advantage of low labour costs and government subsidies offered by Spain. Investment of over $500 million each in new production facilities have been significant in making Spain the world's third largest car exporter. GM manufacturers 250 000 Corsas in Zaragoza, of which four-fifths are exported. Ford produced 26 000 Fiestas in 1984 at Valencia, of which two-thirds were exported.

Conclusion

The general outlook for the six major European producers continues to be cloudy. The market is mature with little growth potential. Over-capacity that plagues prices and profitability is likely to continue so long as each country guards its national producer and insists on keeping its full model line in production. The long term problems will be immense if the situation continues, as the companies will be unable to produce the profits necessary to pay for new equipment and products to remain competitive. At the present time, only the smaller, luxury vehicle producers can afford to look ahead to a bright future.

Japan

The Japanese automotive industry is the most efficient and successful in the world. A relatively insignificant producer of less than half a million vehicles in 1960, the Japanese today have set a pattern in corporate organization, labour-relations and manufacturing philosophy that automotive companies around the world are trying to adopt in order to survive. In 1984, total vehicle

production in Japan reached 11 464 920 vehicles, an increase of 350 000 over 1983. A small decrease in passenger cars was more than offset by an increase in truck output of over 400 000. While these figures indicate that Japanese production of finished vehicles has plateaued since 1980, they do not include knocked-down vehicles which have gained steadily and in 1984 reached approximately 940 000, a 19 per cent increase over previous years. In 1983, Japan exported 51 per cent of total production and is by far the most important exporter of vehicles on the international scene.

With a mature home market that is highly competitive, the Japanese have depended upon exports, primarily to North America, for profits, as the home market is profitable only for Toyota. The industry response to these external and internal pressures has been to agree to limit exports, participate in some joint ventures, develop some assembly facilities overseas and invest in a limited number of overseas production plants. In these circumstances, the move to more KD production could be an effective way to counter some of the international protectionist moves as it does result in some investment and employment opportunities overseas, while retaining most of the cost advantages developed by the Japanese industry.

Korea

The Korean automotive industry has developed as a direct result of government policy. Financial assistance, legislation, state intervention in corporate decision-making and 95 per cent local content rules were all used to nurture and guide the industry. By 1979 the Hyundai company was producing 110 000 vehicles per year, of which 20 000 were exported. Daewoo and Kia also produced motor vehicles in smaller numbers, with a few being exported.

In 1980, automotive production in Korea was cut drastically by the world recession and a severe contraction in the Korean economy. Low domestic consumption underlined the problems of a state policy that encouraged automobile production, but discouraged domestic consumption through high taxes, licence fees, etc. One response by the Korean government was to force the auto industry to restructure. Hyundai and Daewoo, the other major producers, were forced to stop producing light

trucks. Kia industries, the largest truck producer was given sole responsibility for trucks and obliged to abandon auto production.

The Korean Industry Today

Renewed economic growth brought a resurgence of the automotive industry in 1983 and 1984. In 1983, total output grew 37 per cent to 211 000 units of which only 24 454 were exported. In 1984, over 25 000 Hyundai Ponys were exported to Canada alone and production at the Hyundai plant was increased. It is estimated that 250 000 vehicles were produced in 1984.

The immediate future will see a large increase in Korean production, with many being exported. The home market is estimated to be only 200 000 to 300 000 vehicles due to high taxes and government policies which discriminate in favour of mass transportation. Hyundai will continue to dominate the market with production of 300 000 new vehicles a year by 1986. A new front-wheel-drive vehicle is now being made, and plans call for exports of over 100 000 units to the United States in 1986. Although Hyundai is partly owned by Mitsubishi (10 per cent) and its four cylinder engine for the new Stellar is based on a design of Mitsubishi, the company's policies are made in Korea.

Another major Korean automotive company, Daewoo is 50 per cent owned by GM. In a joint venture with Daewoo, GM is investing about one half of the $490 million (U.S.) required for a new factory to produce a 1.6 litre car for the U.S. and Korean markets. Production is to be 167 000 vehicles per year, of which one half will be for the U.S. market, where they will be sold under the Pontiac name. GM is also giving considerable assistance with technological development and the design is based on that developed by GM's European subsidiary for the new Opal Kadett.

Samsung, a large Korean conglomerate, is now involved in exploratory talks with Chrysler Corporation. Pending approval by the Korean government for an assembly plant joint venture, the two companies have announced a joint component-making agreement whereby Samsung will manufacture parts for Chrysler products.

The Korean government is giving considerable support to these and other expansion plans in the

auto parts industry to help move the country out of the ranks of the under developed nations and ease the burden of a huge $42 billion foreign debt. As yet, the country does not have the required parts infrastructure, financing and technological expertise to be a serious challenger to Japanese and North American producers. However, the recent success of the Pony and the aggressive strategies of Korean companies, along with the low wages and low tariffs on Korean exports suggest that the ties with North American producers could put Korea in a strong position by the end of the decade.

Conclusions

The importance of the automotive industry in the world economy is apparent. The interrelated world market resulting from lower tariffs and converging consumer demands has led to a highly competitive industry. Established producers are fighting to retain their share of traditional markets while others are attempting, with apparent success, to gain access to these markets. Some national producers have turned to state intervention for protection and support while in some developing nations governments have taken specific steps to nurture and promote the growth of an automobile industry. On the corporate side, major world producers have reacted to the realities of the competitive world market by becoming more international. Interlocking ownership, joint ventures, joint product development and co-operative distribution within the industry have enhanced its multinational aspect. The attempts to resolve these conflicting trends of state intervention and international rationalization will provide the dynamics of the industry in the near future.

CHAPTER III: MEETING THE CHALLENGE

The world automotive industry is facing major changes, and Canada's vehicle producers and parts suppliers are no exception. A fundamental change in North American consumer demand towards smaller, more fuel efficient vehicles of high quality and good durability, coupled with a major expansion in world motor vehicle trade has led to increased competitive pressures on North American vehicle manufacturers. They must improve quality, control costs and develop new products that meet changing consumer preferences. If the Canadian industry, as one of the top seven world producers, is to maintain its position it must meet the challenge.

Changing consumer demands and increased world automotive trade were the result of developments taking place throughout the 1970s. The effects of the OPEC cartel on gasoline prices and the instability of supply are well known. Throughout the automotive industry, these problems were translated into demands for more efficient vehicles. In North America, the 1970s was also a decade of increased concern about the natural environment and emission controls were introduced. At the same time, motorists became more aware of automotive safety and demanded that certain safety features be built into North American vehicles. Paralleling these developments was the lessening of trade barriers around most major automotive markets, which resulted in a growing international trade in automotive vehicles and parts.

The full impact of all these developments was not evident until the second oil shock of 1979 and the ensuing worldwide recession. There was an abrupt drop in demand for larger vehicles, particularly in North America, and an increase in worldwide demand for smaller, less expensive but more fuel efficient vehicles. Decreasing tariff barriers allowed the new market to be supplied by the Japanese, who were at that time the only producers of small, high quality, fuel efficient vehicles. As the Japanese rapidly increased market penetration, especially in North America, it became clear that not only were they ready with the right vehicle at the right time, but also that they had developed production techniques and quality control measures that

allowed more efficient production than other major automotive producers. It quickly became apparent that if North American vehicle manufacturers were to survive and regain their traditional market share, new investments and new strategies were required to counteract these new Japanese production methods.

Canadian Environment

In this new competitive environment, the position of the Canadian automotive industry is somewhat different from that facing most other major producing countries. Here, the industry is a part of a fully integrated North American automotive economy. Business strategy, the design and development of new vehicles and new production technologies are developed at the U.S. headquarters of the producers. In order to retain their share, Canadian plants must be competitive.

Competitiveness

Canadian companies must be able to meet the objectives set for these products by the vehicle companies. Most of these objectives relate back to cost of production and competitive pricing. The direct costs such as labour rates, material and capital costs, energy, light and power and transportation are generally outside of the control of management and relate directly to the choice of location in setting up a new or expanding an existing operation. Other elements, however, have a major impact on costs and relate to managements' utilization of labour, capital and technology in improving productivity and the quality of the product.

Productivity

Productivity is generally expressed as the value of goods and services produced (output) divided by the number of hours people spend producing them (labour). This rather simplistic measure of productivity is used because measuring all of the inputs to the production process - capital, technology, energy, management skills, raw materials, etc. - is a complicated task. This simpler measure is thought to reflect the application of capital and resources to the production process. Using this measurement, of output per man-hour, the average annual per cent rise in the productivity by Canadian manufacturing industries in the period 1961 to 1973 was 4.5. In the following decade only 1.6 per cent average annual increases were achieved. Although the trend throughout the 1973-1983 decade was to lower relative increases of productivity, the decline was

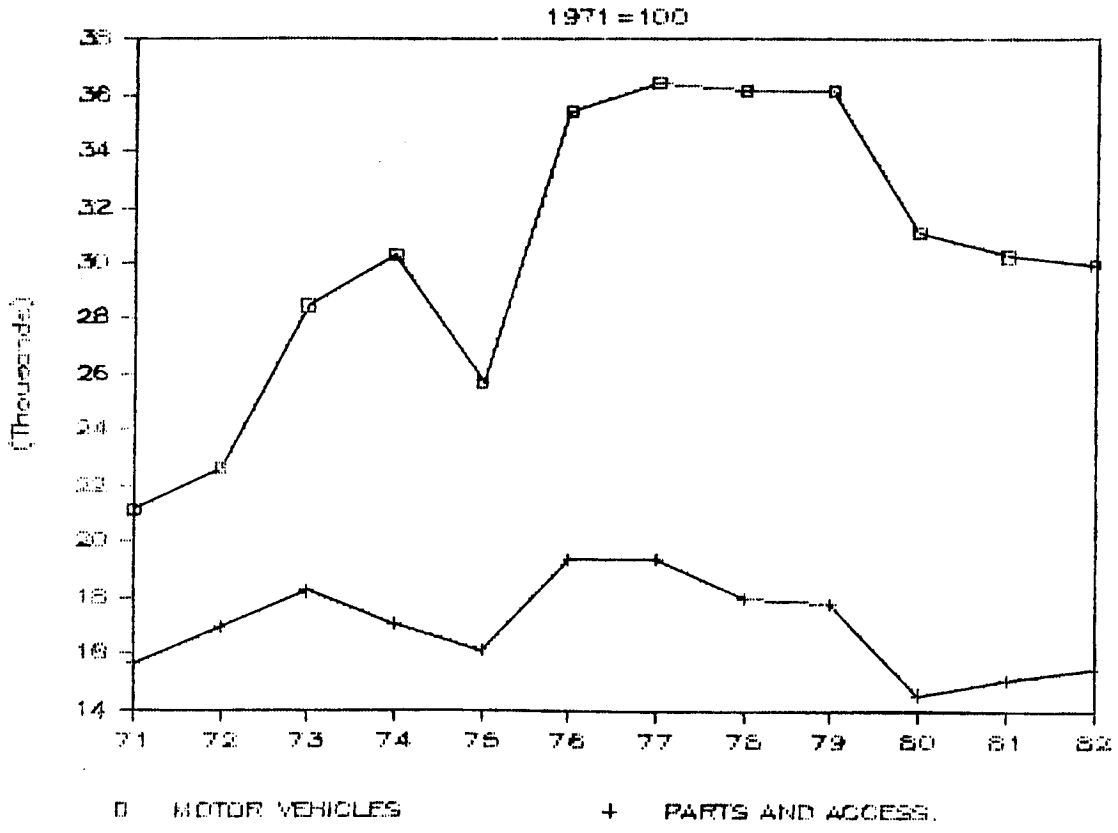
aggravated by the recession of 1980-82. In 1982 there was a drop in output per man-hour of 2.8 per cent but 1983 resulted in an increase in productivity of 6.4 per cent.

Productivity in the Automotive Industry

Although the automotive industry is a part of 'manufacturing industries', the overall productivity rate does not necessarily reflect that of any one industry. In an attempt to evaluate changes in productivity within the domestic automotive industry, the value added, or Gross Domestic Product (GDP), in Canada has been related to employment. The following figure indicates that improvements have been quite significant for the vehicle manufacturers.

FIGURE 8

GDP per person in the Automotive Industry 1971-1982



Source: Department of Regional Industrial Expansion.

In the period 1968-74 major gains in productivity were achieved by the benefits of scale accruing from the Automotive Agreement. The next five years saw manufacturers investing in technology to ensure that vehicles met the new standards of fuel efficiency, emission controls and safety required by legislation. Today the industry is once again turning to the production line and quality control.

Investments in new facilities have exceeded $2 billion since 1980 and indicate that the industry in Canada is attempting to meet the challenges in both vehicle cost and quality control. As a result of these new investments, some plants have been gutted and refurbished, new plants have been built and old plants shut down.

TABLE 9

Expenditures for Plant, Equipment and Tools by Big 4 1980-1984 (in millions of dollars)

	1980	1981	1982	1983	1984
GM	760.1	1064.6	324.2	342.1	276.5
Ford	462	229	90	197	164
Chrysler	64	76	100	322	19
AMC	15	10	11	13	30

Source - MVMA.

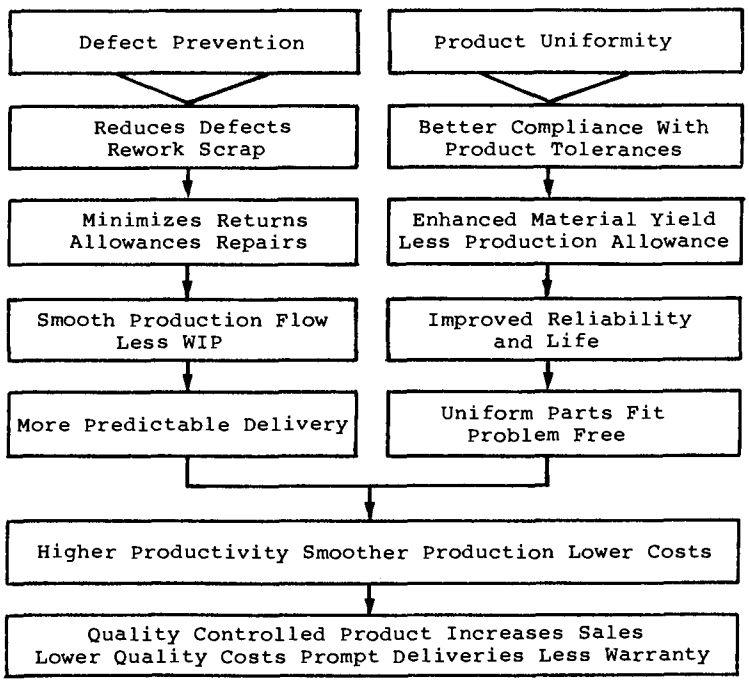
The production equipment installed in the new and refurbished plants represents state-of-the-art robotics for manufacture, assembly, painting and inspection. In addition, there are new methods of quality control and handling for the parts and assembly process.

Quality control is a major element of productivity. Traditionally the Canadian industry, similar to that in the United States, has relied on spot inspections and large inventories of replacement parts for changes at the end of the line. Now, however, a radical change is being made to copy the Japanese method of catching faults during the production process and correcting these to ensure that they do not happen again. The goal is perfect quality throughout the process. In this regard it is critical that parts suppliers have the same

requirements and techniques. While price and delivery are still major elements in sourcing requirements, quality control has become of prime importance.

FIGURE 9

Quality Control Benefits



Source: Productivity Vol. 1, No. 2 Oct. 1984, p. 12.

The new method of inventory control, also copied from the Japanese, has made quality control crucial to the production process. Instead of maintaining large stocks to feed the production line, "Kan Ban" or just-in-time delivery, requires that parts be delivered directly to the line as and when required. This cuts out large storage and movement costs but requires high quality control as there is no time for inspection and change.

These new production techniques require investment in employee development in order that the full benefits to productivity are realized. The spirit and culture of the working environment are now major determinants of success in the attempts to increase productivity. It is essential that management and line employees understand the new techniques and are able to participate in resolving problems that arise. In both the assembly sector and the parts sector, the new techniques rely on employee input at every level, and that this input be effectively communicated to those in a position to make changes. Thus a major element of the new production process is a move to co-operation between management and labour and between manufacturers and suppliers.

The Vehicle Manufacturers

All major Canadian vehicle manufacturers have invested large sums in renovation and modernization over the last few years. For all manufacturers the goal is the same, increased productivity. However, each manufacturer is pursuing this goal in its own distinctive way.

Chrysler

Although each of the major companies has introduced robotics into their operations over the last five years, Chrysler was the first with a major plant redesign in Canada. The Windsor Mini-Van plant was the most modern in North America when opened in September 1983. It was equipped with 125 robots for welding, brazing, painting, sealing and transferring assemblies, as well as many other innovative features aimed at producing a quality product. In addition to the equipment features, the plant started operation on a just-in-time basis. Although in North America J.I.T. has not yet achieved the same level as Japan, inventories have been reduced and considerable cost savings achieved. To prepare for this massive change in production techniques, training sessions for all employees were held in the new technologies. Information sessions were implemented on each phase of the various operations and input was solicited from the shop floor.

General Motors

General Motors in Canada has been introducing robots and other new technologies at a slower rate. The company, however, is now implementing a modernization program which includes an investment

in excess of $200 million for a new stamping facility in Oshawa. This plant will supply stampings directly to the assembly line and will be equipped with presses where dies can be changed quickly.

Although the stamping operation is a major component, the GM modernization program encompasses much more and includes all the parties involved in the production process from the material suppliers to the final assembly of the vehicle. This teamwork is a change from the traditional system where each group, the designers, industrial engineers, parts suppliers and purchasers all worked in relative isolation. In the new teams the majority may be from within the GM network but independent suppliers are also included. It is hoped that by using this system, design and development time can be reduced, production problems minimized and quality enhanced.

General Motors is also introducing a system for the evaluation and rating of supplier companies. A supplier must meet certain productivity and efficiency ratings set by the company to be eligible to bid on parts for General Motors. This type of system is essential for any assembly operation that is based on the just-in-time principle. In the last year the number of suppliers in Canada achieving the approved level has grown from 20 to 89, or some 50 per cent of GM Canada's current suppliers.

Ford

Ford in Canada has been moving forward in a much less publicized fashion which is probably more evolutionary than revolutionary. Major investments have been made in assembly plants in Oakville and St. Thomas, to introduce more robotics and other systems aimed at improving productivity. These developments included educational and training programs and considerable input from the shop floor on how the changes could be implemented more efficiently.

Ford's major thrust has been in stressing that "Quality is Job 1". This attitude moves right back into its supplier development program with its "Q'1" awards to suppliers. Achieving this status allows a supplier greater freedom in policing internal quality standards and ensures that Ford always obtains quality parts. "Q'1" also gives a

supplier a preferred position for future contracts. The Company is also moving to reduce inventories and has made significant progress in this regard. The Essex Engine plant in Windsor was able to reduce average inventory levels from 12 to 15 days to 6 days, a saving of $8 million dollars in the year.

AMC

The American Motors Brampton assembly plant is not amenable to new production techniques. In its new facility, to be completed in 1988, it will have a plant that will be the latest in state-of-the-art technology and design.

Vehicle manufacturers are thus moving in a similar direction but at different speeds. All are stressing productivity, in which quality is a major ingredient, to improve their competitive position. They are using every means available to them through high technology equipment, training, communication, supplier evaluation etc. to achieve this end and they recognize labour is a very important element in their efforts.

Automotive Parts Industry

The automotive part industry is composed of three major elements: the vehicle manufacturers, the large multinational parts companies, and the various independent Canadian firms. In their parts operations, the vehicle manufacturers are applying the new techniques of quality control and require the same quality criteria be met that apply to independent suppliers. A quality product must be produced at the right price and delivery time guaranteed. The fact that the supplier belongs to the organization no longer ensures a captive market.

The independent parts companies are also adopting the new production techniques. Many recognize that problems in productivity are a management responsibility and may reflect inadequate tooling, poor working conditions, chaotic scheduling, ambiguous engineering specifications and inadequate personnel training. In an attempt to overcome these problems, parts companies are operating directly with vehicle manufacturers through statistical process controls including such things as computer and CAD/CAM links, programming, parts scheduling, invoicing and many other functions. In addition, companies are emphasizing personnel training and investments in new technologies.

Because of the number of businesses involved, it is difficult to detail the actual company-specific changes, but most realize that survival requires adaptation to the new production environment. In one way or another, they are trying to ensure that new quality and delivery schedules are met.

The Future

The evidence presented indicates that assemblers and suppliers located in Canada have made, and continue to make, the improvements necessary to compete effectively in the rapidly changing automotive industry. For the future it is imperative that present strengths be reinforced and that a positive investment environment is continued.

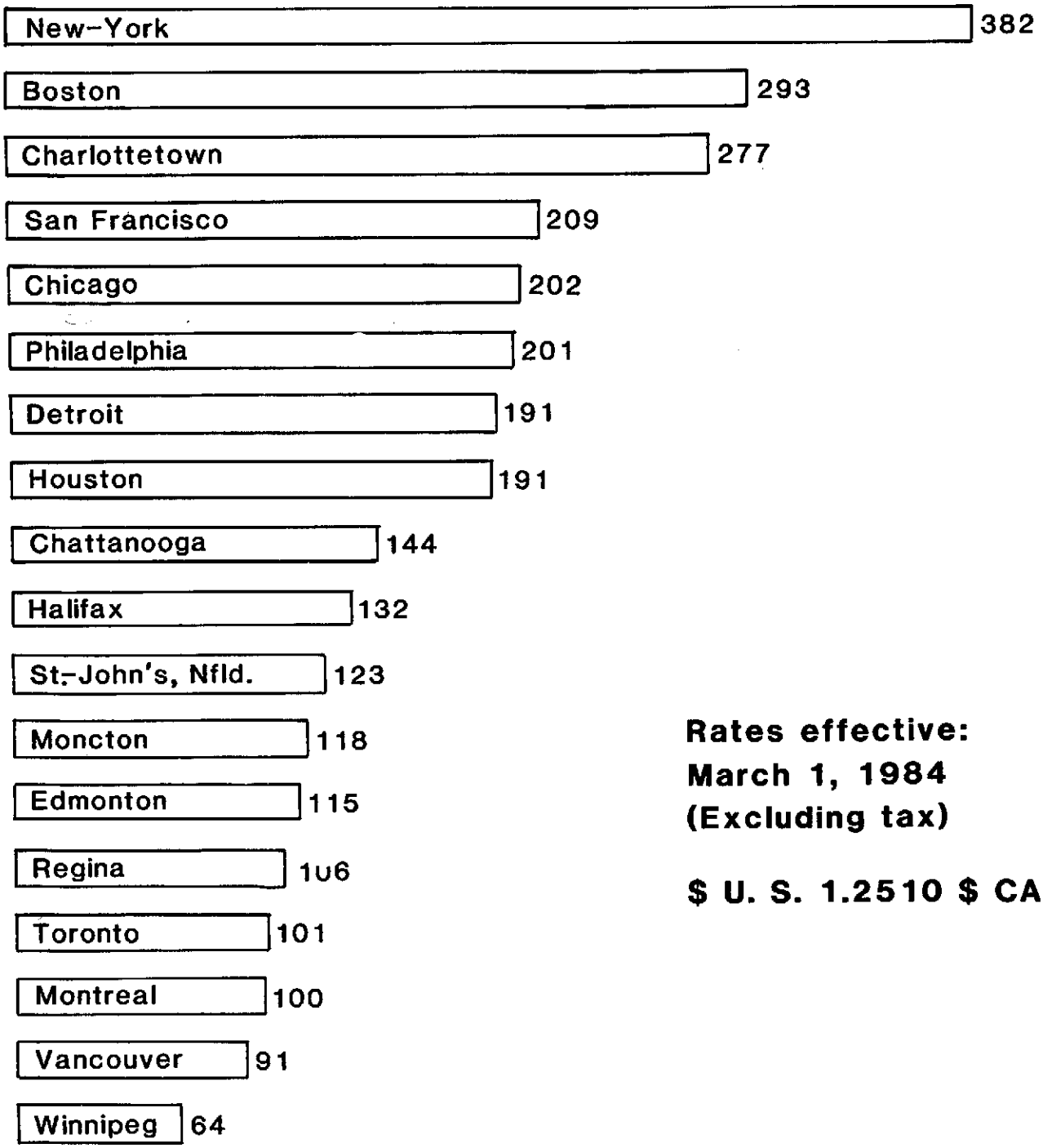
A key element of productivity is capital investment. In this regard Canada has much to offer the prospective investor. The present automotive industry is mature but dynamic, with a solid supplier base and a good industry infrastructure.

Basic inputs such as steel, aluminum, plastics, petro-chemicals and textiles are readily available. Energy, a major element in any industry, is plentiful in a number of forms and can be supplied at a reasonable price. The following tabulation shows comparative electrical costs between locations in Canada and the U.S.

Politically, Canada offers a stable environment with a positive attitude to industrial development at all levels of government. In the past, governments have been key players in fostering and protecting the automotive industry. The Automotive Products Trade Agreement, or Auto Pact, between Canada and the United States is the most obvious case of government involvement in developing the present structure of the Canadian industry. Other remission-type programs, the auto-trade 'arrangements' with Japan, and the various federal funding programs are further examples of federal support. Provincial and local governments also play key roles in nurturing a positive investment climate through tax incentives, funding programs, provision of services, support for research and development, etc.

FIGURE 10

Comparative Index of Electric Costs



Information obtained directly from the utilities

Labour is another major factor in investment decisions and productivity developments. Although labour costs are not directly competitive with those in less developed countries, Canada has a highly trained labour force that is well suited to sophisticated, highly technical industrial activities.

TABLE 10

Hourly Compensation Costs for Production Workers
Motor Vehicles and Equipment Manufacturing

1984 (Provisional Estimates)

Country or Area	Average Hourly Earnings in National Currency	Ratio of Additional Compensation to Hourly Earnings	Hourly Compensation U.S. Dollars	Hourly Compensation Index U.S.=100
United States	12.69	57.1	19.94	100
Canada	13.36	37.2	14.15	71
Brazil	2501	36.7	1.85	19
Japan (1)	1650	16.5	8.10	41
Korea	1176	15-20	1.71	9
Taiwan	67.68	15-20	2.00	10
Belgium	299.10	86.0	9.63	48
Denmark	60.69	18.8	6.97	35
France	38.14	89.1	8.26	41
Germany	17.87	91.0	12.00	60
Italy	7109	94.8	7.86	39
Netherlands	16.10	65.1	8.29	42
Spain (2)	648	40	5.64	--
Sweden	47.54	64.9	9.48	48
United Kingdom	3.60	38.1	6.64	33

(1) Including Motorcycle Manufacturing.
(2) Transportation Equipment.

Source: U.S. Bureau of Labour Statistics.

The long history of the automotive industry in this country has resulted in traditional family ties to the industry in major automotive centres. Nevertheless, this work force has proven, in the past few years, that members willingly and positively adopt to major changes in production techniques, working environment and industrial discipline.

There are, of course, many other factors that play a part in investment decisions. Economic analysis is relatively objective but is always tied in with the more subjective assessments of geographic and cultural environment, education, recreation facilities, and climate that are all taken into account but impossible to measure. In these areas Canada has much to offer to prospective investors.

CHAPTER IV: PROSPECTS FOR THE CANADIAN AUTOMOTIVE INDUSTRY

This report has concentrated on the state of the automotive industry in Canada and major producing countries. It is evident that there are many factors in the international scene that can have considerable impact on the future of the industry in Canada. Most important is the critical role played by the U.S. market, as approximately 80 per cent of Canadian production (84 per cent in 1984), is normally exported to that market. Due to the Auto Pact regulations, the Canadian market also plays a crucial role for Canadian producers. The average value of Canadian vehicle production must be at least equal to the value of vehicles sold in Canada by the participants in the agreement. This means that Canadian producers must evaluate the markets in both Canada and the United States to ensure that they maintain a balance of Canadian sales and Canadian production. Otherwise, the Auto Pact allows that significant monetary penalties be charged. Any assessment of the future Canadian automotive industry must take into account factors affecting the U.S. industry as well as factors affecting the industry in Canada.

International Developments Affecting the Canadian Automotive Industry

The increasing internationalization of the automotive industry, shifts in traditional production bases due to competition, slower market growth, and the entry of newly industrialized countries (NICs) into the industry could radically change the nature of the industry in the traditional producing areas.

Since 1981 the Voluntary Restraint Agreements (VRAs) negotiated by Canada and the United States with Japan have, to some degree protected the North American auto industry. The record profits generated by the major North American producers have been reinvested in new plants, products and processes, and have strengthened the financial health of the industry. However, producers will probably face intense foreign competition for the rest of the decade from Japanese producers, and others eager to penetrate the lucrative North American market. The termination of the VRA with the United States will result in more Japanese vehicles being imported both in the small car range and in the upscale product lines which have proven

to be so profitable. In addition, it has been estimated that Japanese production in the United States could reach over a million units per year before the end of the decade. Traditional U.S. vehicle manufacturers are also sourcing offshore as many as 800 000 vehicles through joint venture and other arrangements.

Market growth is expected to be slow if not stagnant over the next five years, resulting in considerable overcapacity by 1990. Most of this anticipated excess capacity will be in small car manufacturing, but with the Japanese moving into the mid-size market some excess capacity is expected in this area as well.

On the whole, these factors should not have a drastic effect on Canadian production which is concentrated on mid and large size vehicles. However, should the demand for large cars evaporate due to energy or other factors, the overcapacity in the mid and small car range would make it unlikely that these plants would be retooled. This scenario would have serious consequences for the Canadian automotive industry.

Factors Affecting Canadian Vehicle Demand

After two and one half years of strong recovery, Canadian vehicle sales are expected to stabilize at approximately 1.0 to 1.1 million units. After a period of constrained supply and high prices, the vehicle market is being propelled by incentive packages offered by manufacturers to promote sales. Other economic indicators point to a period of slow market growth and in changing vehicle sales mix:

a) a lower GNP growth in 1985 will eventually lead to a decline in consumer spending;

b) the replacement cycle which began in 1983 will come to an end;

c) modest interest rates could help car sales stabilize;

d) nominal non-farm earnings are expected to increase at less than inflation rates;

e) due to increased supply and competitiveness, vehicle prices are expected to moderate substantially. This will stabilize sales except at the lower end entry level where there may be substantial growth;

f) the unemployment rate may remain around 10 per cent and this will help keep sales lower than might otherwise be the case;

g) the average length of passenger car ownership is increasing as is the average life of new cars. Both factors point to slower market growth; and

h) demographic trends indicate the continued entry of women into the market-place and reduction in average household size that will probably result in sales of smaller and upscale specialty vehicles.

Canadian Market Forecasts

Forecasts by various agencies and institutions for the period 1985-1988 are presented in the following table:

TABLE 11

Passenger Car Sales Forecast for Canada (000 Units)

	1985	1986	1987	1988
Chase Econometrics	1 072	1 010	1 018	1 041
Data Resources Incorporated	1 049	1 004	1 032	1,207
Royal Bank of Canada	1 056	1 015	1 068	-
Power Associates	1 050	1 005	1 010	1 010
Bank of Commerce	1 050	955	1 020	-

Source: As shown above.

Based on the above forecasts, passenger car sales should be about 1.0 to 1.1 million units in 1985. A minor slowdown in the economy is expected to slightly reduce sales in 1986 but there should be a recovery in 1987 and 1988 to around the million unit mark. This would provide a compound average annual growth of about 1.5 per cent during the 1985-1988 period. After 1988 however, present forecasts call for a stagnant market.

Outlook for Canadian Vehicle Manufacturers

The North American vehicle producers are facing substantial market erosion from Japanese imports and Japanese production in North America. These manufacturers are therefore expected to suffer some decline in their production levels, resulting in overcapacity and employment losses. However, given the present low relative value of the Canadian dollar; some Japanese investment in Canada; and continued success at reducing the cost differential between North American and Japanese vehicle producers, the Canadian industry should remain relatively stable.

These types of forecasts are always subject to major risks and can be affected by changes in the political scene. In particular, at this time, any protectionist moves by the U.S. Congress to stop further erosion of the U.S. industry could have an adverse effect in Canada.

Outlook for Suppliers

Canadian suppliers face many of the same competitive pressures as vehicle manufacturers. The Japanese and Europeans are making continuous efforts to increase sales in the North American market not only by direct sales but by investing in facilities in the U.S. and Canada. In addition, parts makers from third world countries are also successfully penetrating this market. At the same time major manufacturers are outsourcing, often overseas, in order to reduce their own costs.

In this environment, parts suppliers are making greater efforts towards developing joint venture arrangements with offshore producers as well as entering into technology transfer and equity sharing agreements. However, suppliers must be prepared to meet required quality standards and improve their international competitiveness if they wish to avail themselves of these opportunities.

STATISTICAL APPENDIX
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6. Employment

7. Vehicle Assembly and Parts Manufacturing Plants in Canada

NOTE: Because of the variety of sources from which the following statistical tables have been taken, totals will not always agree. These differences can be attributed to the variety of methods used in obtaining the various statistics.

SALES

TABLE 1.1

Retail Sales of Motor Vehicles in Canada and the United States 1965 and 1970-84 (Thousands of Units)

YEAR	AUTOMOBILES NORTH AMERICAN TYPE	AUTOMOBILES OVERSEAS IMPORT TYPE	AUTOMOBILES TOTAL	TRUCKS NORTH AMERICAN TYPE	TRUCKS OVERSEAS IMPORT TYPE	TRUCKS TOTAL	TOTAL VEHICLES
1. CANADA							
1965	634	75	709	120	2	122	831
1970	497	143	640	125	9	134	774
1971	592	188	780	147	13	160	940
1972	654	205	859	190	17	207	1 066
1973	783	188	971	235	20	256	1 227
1974	797	146	943	288	19	307	1 249
1975	836	154	989	310	17	327	1 317
1976	793	153	946	331	14	345	1 291
1977	798	194	991	338	16	354	1 345
1978	816	173	989	364	13	377	1 366
1979	863	140	1 003	381	12	393	1 396
1980	741	191	932	312	22	334	1 266
1981	647	257	904	251	36	287	1 191
1982	489	224	713	167	40	207	920
1983	625	218	843	193	45	238	1 081
1984	725	246	971	274	39	313	1 284

Source: Statistics Canada.

YEAR	AUTOMOBILES NORTH AMERICAN TYPE	AUTOMOBILES OVERSEAS IMPORT TYPE	AUTOMOBILES TOTAL	TRUCKS NORTH AMERICAN TYPE	TRUCKS OVERSEAS IMPORT TYPE	TRUCKS TOTAL	TOTAL VEHICLES
2. U.S.							
1965	8 763	569	9 332	1 539	44	1 583	10 915
1970	7 120	1 285	8 405	1 746	65	1 811	10 216
1971	8 681	1 570	10 251	2 011	85	2 096	12 347
1972	9 327	1 623	10 950	2 486	143	2 632	13 575
1973	9 676	1 763	11 439	2 916	228	3 144	14 583
1974	7 454	1 413	8 867	2 512	171	2 683	11 550
1975	7 053	1 587	8 640	2 249	231	2 480	11 120
1976	8 611	1 498	10 109	2 944	237	3 181	13 290
1977	9 109	2 075	11 184	3 353	323	3 676	14 860
1978	9 312	2 000	11 312	3 776	337	4 113	15 425
1979	8 328	2 300	10 628	3 000	500	3 500	14 128
1980	6 578	2 398	8 976	2 002	484	2 486	11 462
1981	6 206	2 324	8 530	1 852	448	2 300	10 830
1982	5 757	2 222	7 979	2 151	410	2 561	10 540
1983	6 795	2 386	9 181	2 588	464	3 052	12 233
1984	7 951	2 439	10 390	3 484	607	4 091	14 481

Source: Motor Vehicle Manufacturers' Association and Ward's Reports.

TABLE 1.2

Canadian Sales of North American Cars by Size (Units)
Calendar Years 1970-1984

YEAR	SUB-COMPACT	PER CENT TOTAL	COMPACT	PER CENT TOTAL	INTER-MEDIATE	PER CENT TOTAL	FULL SIZE	PER CENT TOTAL	LUXURY	PER CENT TOTAL	TOTAL SALES
1970	8 882	1.80	101 192	20.46	156 136	31.57	214 785	43.43	13 556	2.74	494 551
1971	38 616	6.85	108 280	19.22	158 687	28.16	234 656	41.64	23 259	4.13	563 498
1972	45 645	7.41	132 550	21.51	185 856	30.16	206 830	33.57	45 308	7.35	616 189
1973	81 739	10.89	164 783	21.96	233 914	31.18	213 909	28.51	55 927	7.45	750 272
1974	89 969	11.61	183 062	23.63	239 003	30.85	209 102	26.99	53 600	6.92	774 736
1975	74 552	10.29	185 894	25.66	229 364	31.66	222 581	30.73	11 963	1.65	724 354
1976	70 483	8.89	245 047	30.91	249 235	31.44	215 451	27.18	12 502	1.58	792 718
1977	56 060	7.03	245 805	30.81	266 784	33.44	214 287	26.86	14 775	1.85	797 711
1978	96 154	11.80	248 046	30.43	263 448	32.32	191 113	23.44	16 435	2.02	815 196
1979	152 432	17.67	236 832	27.46	243 132	28.19	203 388	23.58	26 738	3.10	862 522
1980	140 214	18.92	228 745	30.86	205 813	27.77	148 145	19.99	18 350	2.48	741 267
1981	136 696	21.45	198 078	31.08	184 443	28.94	105 406	16.54	12 604	1.98	637 227
1982	156 874	32.36	124 944	25.78	145 237	29.96	50 705	10.46	6 959	1.44	484 719
1983	205 942	33.56	135 226	22.04	197 672	32.21	66 016	10.76	8 817	1.44	613 673
1984	235 429	33.01	178 527	25.03	206 740	28.99	79 030	11.08	13 531	1.90	713 257

SOURCE: MVMA.

TABLE 1.3

United States Sales of North American Cars by Size (Units)
Calendar Years 1970–1984

YEAR	SUB-COMPACT	PER CENT TOTAL	COMPACT	PER CENT TOTAL	INTER-MEDIATE	PER CENT TOTAL	FULL SIZE	PER CENT TOTAL	LUXURY	PER CENT TOTAL	TOTAL SALES
1970	138 259	1.93	1 157 250	16.18	2 434 906	34.04	3 033 092	42.40	389 280	5.44	7 152 787
1971	721 814	8.74	1 174 090	14.21	2 330 502	28.20	3 500 140	42.36	536 890	6.50	8 263 436
1972	809 014	9.75	1 267 350	15.27	2 360 920	28.45	3 332 215	40.15	529 277	6.38	8 298 776
1973	1 072 440	11.09	1 687 379	17.45	2 909 511	30.09	3 258 475	33.70	741 884	7.67	9 669 689
1974	791 901	10.63	1 557 854	20.91	2 539 193	34.09	2 016 375	27.07	543 598	7.30	7 448 921
1975	1 167 393	17.27	1 678 500	24.83	1 974 772	29.21	1 587 852	23.49	352 395	5.21	6 760 912
1976	1 041 050	12.10	2 436 219	28.31	2 845 207	33.06	1 898 857	22.06	385 240	4.48	8 606 573
1977	994 936	10.93	2 364 838	25.97	3 009 209	33.05	2 276 561	25.00	458 910	5.04	9 104 454
1978	1 209 320	13.20	2 224 380	24.28	3 007 774	32.84	2 137 160	23.33	581 547	6.35	9 160 181
1979	1 762 050	21.42	1 936 150	23.54	2 334 500	28.38	1 708 790	20.77	483 936	5.88	8 225 426
1980	1 670 721	25.40	1 674 755	25.46	1 835 799	27.91	1 075 267	16.35	321 710	4.89	6 578 252
1981	1 661 401	26.77	1 523 044	24.54	1 741 694	28.07	951 534	15.33	328 183	5.29	6 205 856
1982	1 738 589	30.20	1 104 083	19.18	1 618 078	28.11	928 467	16.13	367 441	6.38	5 756 658
1983	2 034 807	29.95	924 639	13.61	2 247 042	33.07	1 157 519	17.04	431 292	6.35	6 795 299
1984	2 306 206	29.00	1 309 390	16.47	2 457 048	30.90	1 232 368	15.50	646 511	8.13	7 951 523

SOURCE: 1964 THROUGH 1975 ARE REGISTRATIONS (FIGURES ARE LOW BECAUSE OF INCOMPLETE REPORTS FROM SOME STATES).
1976 AND SUBSEQUENT YEARS ARE RETAIL SALES - WARD'S AUTOMOTIVE REPORTS.

TABLE 1.4

Canadian Sales of New Passenger Cars by Origin, 1964-1984 Calendar Year (Units)

Year	Total Sales Volume	Domestic Volume	Domestic Per Cent	Total Imported Volume	Total Imported Per Cent	Japanese Volume	Japanese Per Cent
1964	616 759	550 823	89.3	65 936	10.7	-	-
1965	708 716	633 641	89.4	75 075	10.6	2 834	0.4
1966	694 820	626 986	90.2	67 834	9.8	2 742	0.4
1967	679 435	605 049	89.1	74 386	10.9	5 617	0.8
1968	741 915	637 393	85.9	104 522	14.1	15 859	2.1
1969	760 803	638 270	83.9	122 533	16.1	39 033	5.1
1970	640 360	497 185	77.7	143 175	22.3	65 569	10.2
1971	780 762	592 319	75.9	188 443	24.1	106 552	13.7
1972	858 959	653 933	76.1	205 026	23.9	116 860	13.6
1973	970 828	782 914	80.6	187 914	19.4	111 467	11.5
1974	942 797	796 840	84.5	145 957	15.5	87 609	9.3
1975	989 280	835 679	84.5	153 601	15.5	95 772	9.7
1976	946 488	793 201	83.8	153 287	16.2	101 558	10.7
1977	991 398	797 752	80.5	193 646	19.5	134 900	13.6
1978	988 890	815 994	82.5	172 896	17.5	113 166	11.4
1979	1 003 008	863 554	86.1	139 454	13.9	79 879	8.0
1980	932 060	740 767	79.5	191 293	20.5	138 107	14.8
1981	904 195	646 942	71.6	257 253	28.4	207 639	23.0
1982	713 481	489 435	68.6	224 046	31.4	178 174	25.0
1983	843 318	625 088	74.1	218 230	25.9	176 525	20.9
1984	971 210	724 932	74.6	246 278	25.4	171 204	17.6

Source: Statistics Canada.

TABLE 1.5

U.S. Sales of Passenger Cars by Origin, 1964-1984 Calendar Year (units)

Year	Total Sales Volume	Domestic Volume	Domestic Per Cent	Total Imported Volume*	Total Imported Per Cent	Japanese Volume*	Japanese Per Cent
1964	8 100 865	7 616 734	94.0	484 131	6.0	N/A	-
1965	9 232 504	8 763 219	94.9	469 285	5.1	18 067	0.2
1966	8 978 657	8 377 425	93.3	601 232	6.7	40 183	0.5
1967	8 286 472	7 567 884	91.3	718 588	8.7	69 188	0.8
1968	9 610 257	8 624 820	89.7	985 437	10.3	109 586	1.2
1969	9 545 295	8 464 375	88.7	1 080 920	11.3	189 160	2.0
1970	8 364 950	7 115 537	85.1	1 249 413	14.9	312 777	3.7
1971	10 209 375	8 676 284	85.0	1 533 091	15.0	578 977	5.7
1972	10 907 503	9 321 502	85.5	1 586 001	14.6	628 918	5.8
1973	11 402 261	9 669 689	84.8	1 732 572	15.2	742 621	6.5
1974	8 838 244	7 448 921	84.3	1 389 323	15.7	592 113	6.7
1975	8 614 524	7 050 120	81.8	1 564 404	18.2	807 931	9.4
1976	10 097 692	8 606 573	85.2	1 491 119	14.8	931 182	9.2
1977	11 168 708	9 104 454	81.5	2 064 254	18.5	1 399 338	12.5
1978	11 300 477	9 307 563	82.4	1 992 914	17.6	1 414 260	12.5
1979	10 647 442	8 328 055	78.2	2 319 387	21.8	1 833 927	17.2
1980	8 978 584	6 578 252	73.3	2 400 332	26.7	1 908 413	21.3
1981	8 533 135	6 205 856	72.7	2 327 279	27.3	1 858 896	21.8
1982	7 978 872	5 756 658	72.2	2 222 214	27.9	1 801 481	22.6
1983	9 182 071	6 795 299	74.0	2 386 772	26.0	1 915 621	20.9
1984	10 390 815	7 951 523	76.5	2 439 292	23.5	1 906 204	18.3

* Imported includes captive imports for 1980 and subsequent years.
** May include Japanese passenger car sales (1964 - other).
Source: Ward's.

TABLE 1.6

Road Motor Vehicle Registrations in Canada
1979-1983

	1979	1980	1981	1982	1983
Passenger Automobiles	9 985 146	10 255 511	10 199 388	10 530 355	10 731 520
Trucks and Truck Tractors	2 854 217	2 902 730	3 137 987	3 239 341	3 307 746
Buses	52 927	52 569	54 210	54 065	55 226
Motorcycles	332 933	388 680	406 871	431 453	466 411
Other	113 477	117 662	53 026	55 503	58 706
TOTAL	13 338 700	13 717 152	13 851 482	14 310 717	14 619 609

Source: Statistics Canada.

The statistics on road vehicle registrations shown in this table have been obtained from the 12 provincial and territorial governments across the nation, each of which has its own distinct registration system. While each provincial or territorial system may be comprehensive and consistent within itself, the inconsistencies between the different provinces and territories pose serious problems for anyone trying to make use of national totals.

For all provinces and territories the registration figures represent the total number of vehicles which held a registration in the reporting jurisdiction for all or any part of the licence year. However, there is some slight duplication when vehicles are registered in more than one province or territory during the same licence year. Although the Statistics Canada questionnaire asked for separate reporting of transfers from other provinces or territories, only Nova Scotia and British Columbia were able to supply this figure, therefore, no adjustment was made. An analysis of these reports indicates that less than 1.7 per cent of registrations of road motor vehicles represent transfers from other provinces or territories.

Since 1980, information from the province of Québec concerning registration for 1982 is based on a count of the number of vehicles in circulation. In previous years, data shown in tabulations for Québec were based on the number of registration transactions. However, because Québec registrations change each time a vehicle is sold (unlike in the other nine provinces where the licence plate stays with the vehicle), the transactions count tended to overstate the number of vehicles on the road in Québec.

TABLE 1.7

Top Ten Vehicle Manufacturers in the World by Total Output 1983

COMPANY	TOTAL OUTPUT (Units)
1. General Motors - U.S.A.	7 637 965
2. Ford Motor - U.S.A.	4 727 592
3. Toyota - Japan	3 274 835
4. Nissan - Japan	2 586 295
5. Renault - France	2 255 524
6. Volkswagen - West Germany	2 087 801
7. Peugeot - France	1 813 416
8. Fiat - Italy	1 718 283
9. Chrysler - U.S.A.	1 171 350
10. Mazda	1 339 127

Note: Includes Production from Plants Outside Parent Country.

Source: Motor Vehicle Manufacturers Association of the United States, World Motor Vehicle Data 1984.

Data compiled by the MVMA from various overseas sources. Information was obtained from published reports issued by various vehicle associations outside the U.S. and from a number of other sources considered reliable. Therefore, and becase of the numerous complex factors involved in determining vehicle ranking worldwide, the MVMA does not assume responsibility for the above classification.

TABLE 1.8

International Sourcing Pattern of Original Equipment Parts of the Five Major Motor Vehicle Manufacturers ($ millions Canadian)

Model Year	U.S. Purchases from In-house Suppliers in Canada (a)	Canadian Purchases from In-houses Suppliers in U.S.A. (b)	Column (a) Less Column (b) (c)
1965	17.4	522.2	- 504.8
1966	163.7	599.5	- 435.8
1967	209.0	716.1	- 507.1
1968	356.3	1 008.5	- 652.2
1969	406.8	1 298.7	- 891.9
1970	453.6	1 153.3	- 699.7
1971	639.0	1 428.1	- 789.1
1972	763.2	1 556.4	- 793.2
1973	801.7	1 804.0	-1 002.3
1974	713.0	2 083.2	-1 370.2
1975	796.7	2 209.1	-1 412.4
1976	1 165.6	2 772.2	-1 606.6
1977	1 520.6	3 365.8	-1 845.2
1978	2 222.0	N.A.	N.A.
1979	2 361.7	4 702.8	-2 341.1
1980	1 604.1	3 991.7	-2 387.6
1981	2 118.7	4 957.2	-2 838.5
1982	2 891.7	5 374.2	-2 482.5
1983	2 360.0	5 918.0	-3 558.0
1984	3 959.6	7 813.4	-3 853.8

Model Year	U.S. Purchases from Independent Suppliers in Canada	Canadian Purchases from Independent Suppliers in U.S.A.	
1965	74.3	236.4	- 162.1
1966	112.3	279.8	- 167.5
1967	172.1	304.6	- 132.5
1968	327.4	405.2	- 77.8
1969	430.9	485.5	- 54.6
1970	487.3	505.4	- 18.1
1971	574.5	484.4	90.1
1972	699.3	558.9	140.4
1973	888.4	748.8	139.6
1974	771.4	846.9	- 75.5
1975	875.8	1 051.1	- 175.3
1976	1 221.6	1 283.5	- 61.9
1977	1 530.0	1 519.9	10.1
1978	1 537.8	N.A.	N.A.
1979	1 812.0	1 560.0	25.2
1980	1 253.4	1 226.1	27.3
1981	1 385.1	1 450.7	- 65.6
1982	1 476.9	1 843.8	- 366.9
1983	1 922.1	2 067.4	- 145.3
1984	2 616.7	3 034.2	- 417.5

*The Big Four auto makers and International Harvester

Note: Canadian purchases are for use in vehicle assembly in Canada only. These figures do not include parts imported for further manufacture or parts imported for re-export either as parts or as CKD vehicles.

Source: Compiled from company responses to the Reisman Inquiry (1965-1977) and company Auto Pact reports (1979-1984). 1978 data not available from Auto Pact Reports.

TABLE 1.9

Consumption of Automotive Parts by Vehicle Manufacturers ($ millions Canadian)

Year	Canada	Within the United States	Canada as a Per Cent of Total
1972	3 239.2	32 483.2	9.1
1973	3 843.1	38 460.1	9.1
1974	4 314.1	34 338.1	11.2
1975	4 967.6	37 010.7	11.8
1976	6 090.8	48 796.2	11.1
1977	7 096.8	64 334.4	9.9
1978	8 378.8	76 966.0	9.8
1979	8 975.2	79 076.1	10.2
1980	8 752.3	64 364.5	12.0
1981	9 823.4	73 347.4	11.8
1982	10 597.8	-	-

Source: Statistics Canada, U.S. Department of Commerce and the APMA.

SHIPMENTS

TABLE 2.1

Value of Shipments in Canadian and U.S. Automotive Industries (1973-1983) ($ millions)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983*
CANADA											
323 Motor Vehicle Manufacturers	4715.8	5381.9	6024.4	7276.1	8610.4	10070.1	10724.4	10071.1	11402.8	12343.6	15590.7
3241 Truck Body Manufacturers	143.2	178.3	197.2	194.4	188.6	207.6	281.2	316.5	372.5	311.9	282.7
3243 Commercial Trailer Manufacturers	108.9	138.4	117.0	110.3	151.8	218.5	313.3	301.9	259.1	171.5	166.7
SUB TOTAL	4967.9	5698.6	6338.6	7580.8	8950.8	10496.2	11318.9	10689.5	12034.4	12827.0	16040.1
325 Motor Vehicle Parts & Access.	2304.6	2281.1	2325.8	3112.3	3790.2	4692.0	4472.8	3609.7	4358.4	5059.7	8357.9
188 Automobile Fabric Accessories	229.3	229.0	227.1	305.5	348.6	427.7	424.6	424.5	520.9	479.2	
SUB TOTAL	2533.9	2510.1	2552.9	3417.8	4138.8	5119.7	4897.4	4034.2	4879.3	5538.9	8357.9
TOTAL	7501.8	8208.7	8891.5	10998.6	13089.6	15615.9	16216.3	14723.7	16913.7	18365.9	24398.0
U.S.A.											
3711 Motor Vehicle & Car Bodies	50227.7	43868.5	45340.2	62717.4	76517.8	84900.9	85147.4	66257.4	74273.1	70739.7	95930.8
3713 Truck & Bus Bodies**	1595.8	1471.3	1739.9	2342.4	3329.1	2292.5	2355.4	2123.1	2314.9	2510.9	2833.6
3715 Truck Trailers	1369.5	1636.9	921.6	1297.3	1910.1	2498.0	3088.2	2435.8	2206.2	1773.3	2171.6
SUB TOTAL (U.S. $)	53193.0	46976.7	48001.7	66357.1	81757.0	89691.4	90591.0	70816.3	78794.2	75023.9	100936.0
3714 Motor Vehicle Parts & Access.	21606.5	21656.0	22030.1	29024.4	35750.8	40199.7	39807.2	32881.2	37080.9	36293.1	44415.4
3465 Automotive Stampings	6085.9	6103.0	6116.2	8070.5	9739.2	10697.6	10425.9	8497.3	8960.7	8777.4	11176.4
3592 Carburators, Pistons, Rings	1017.6	977.3	1009.0	1256.3	1400.6	1608.5	1904.1	1838.8	2130.9	2224.5	2485.0
3647 Vehicular Lighting Equipment	577.4	598.0	590.6	771.1	908.5	1057.2	1061.5	876.0	956.3	1013.6	1282.1
3694 Engine Electrical Equipment	2343.0	2388.1	2427.6	3100.3	3647.2	4097.9	4124.3	3684.3	4071.0	3464.3	4212.4
2396 Automotive Apparel Trimmings	1289.4	1234.4	1283.1	1658.5	2166.3	2280.8	2287.4	1939.5	2286.1	2130.8	2723.0
SUB TOTAL (U.S. $)	32919.8	32956.8	33456.6	43881.1	53612.6	59941.7	59610.4	49717.1	55485.9	53903.7	66294.3
TOTAL U.S.A. (U.S. $)	86112.8	79933.5	81458.3	110238.2	135369.6	149633.1	150201.4	120533.4	134280.1	128927.6	167230.3
TOTAL U.S.A. (CDN. $)	86121.4	78175.0	82867.5	108705.9	143965.6	170611.7	175960.9	140903.5	161001.8	170210.2	206094.6
NORTH AMERICAN TOTAL (CDN. $)	93623.2	86383.7	91759.0	119704.5	157055.2	186227.6	192177.2	155627.2	177915.5	195507.8	230492.6
CANADA as a percentage of the TOTAL	8.01	9.50	9.69	9.19	8.33	8.39	8.44	9.46	9.51	12.9	10.6

* Reported under 1980 SIC

** Revised in 1977. Excludes Motor Homes.

Source: Statistics Canada, U.S. Department of Commerce, APMA.

PRODUCTION

TABLE 3.1

North American Production of Motor Vehicles ('000 Units)

Year	Canada		U.S.A.		North America Total	
	Volume	Per Cent	Volume	Per Cent	Volume	Per Cent
1965	846	7.1	11 114	92.9	11 960	100.0
1966	902	8.0	10 363	92.0	11 265	100.0
1967	947	9.5	8 992	90.5	9 939	100.0
1968	1 180	9.8	10 794	90.2	11 974	100.0
1969	1 353	11.7	10 182	88.3	11 535	100.0
1970	1 193	12.6	8 263	87.4	9 456	100.0
1971	1 373	11.4	10 650	88.6	12 023	100.0
1972	1 474	11.5	11 297	88.5	12 771	100.0
1973	1 575	11.1	12 663	88.9	14 238	100.0
1974	1 564	13.5	9 984	86.5	11 548	100.0
1975	1 442	13.9	8 965	86.1	10 407	100.0
1976	1 647	12.5	11 486	87.5	13 133	100.0
1977	1 775	12.3	12 699	87.7	14 474	100.0
1978	1 818	12.4	12 895	87.6	14 713	100.0
1979	1 632	12.4	11 475	87.6	13 107	100.0
1980	1 374	14.6	8 010	85.4	9 384	100.0
1981	1 280	13.9	7 941	86.1	9 221	100.0
1982	1 236	15.0	6 985	85.0	8 221	100.0
1983	1 502	13.9	9 226	86.1	10 728	100.0
1984	1 830	14.4	10 924	85.6	12 754	100.0

Source: Ward's Automotive Reports.

TABLE 3.2

Motor Vehicle Parts and Accessories Production - Canada and the U.S.
($ millions Canadian)

YEAR	CANADA	U.S.	CANADA AS A PERCENTAGE OF TOTAL NORTH AMERICA
1972	2 106.0	27 765.3	7.1
1973	2 533.8	32 919.8	7.1
1974	2 510.0	32 231.8	7.2
1975	2 552.9	34 035.4	7.0
1976	3 417.8	43 271.2	7.3
1977	4 138.8	57 017.0	6.8
1978	5 119.7	68 345.5	7.0
1979	4 897.4	69 833.6	6.6
1980	4 034,2	58 119.3	6.5
1981	4 879.3	66 527.6	6.8
1982	5 538.9	66 516.4	7.7
1983	8 357.9*	81 701.0	9.3
1984	10 231.8 (est.)	N/A	N/A

Source: Statistics Canada and the U.S. Bureau of Census.

* Starting with 1983, Canadian parts production statistics are based on the 1980 Standard Industrial Classification (S.I.C.).

TABLE 3.3

Canadian Truck Production (Units)
1975-1984

YEAR	LIGHT	PER CENT OF TOTAL	MEDIUM AND HEAVY DUTY	PER CENT OF TOTAL	TOTAL
1975	367 142	94.74	20 397	5.26	387 539
1976	482 807	96.45	17 753	3.55	500 560
1977	576 297	95.64	26 263	4.36	602 560
1978	629 743	95.99	26 316	4.01	656 059
1979	606 936	95.59	27 980	4.41	634 916
1980	506 274	95.97	21 248	4.03	527 522
1981	480 172	96.65	16 650	3.35	496 822
1982	434 138	96.94	13 682	3.06	447 820
1983	539 386	98.53	8 051	1.47	547 437
1984	793 873	97.81	17 849	2.19	811 722

Source: Ward's Automotive Reports.

TABLE 3.4

U.S. Truck Production (Units)
1975–1984

YEAR	LIGHT	PER CENT OF TOTAL	MEDIUM	PER CENT OF TOTAL	HEAVY DUTY	PER CENT OF TOTAL	TOTAL
1975	1 945 498	85.62	200 271	8.82	126 391	5.56	2 272 160
1976	2 637 314	88.53	198 726	6.67	143 009	4.80	2 979 049
1977	3 048 767	88.80	203 653	5.93	180 809	5.27	3 433 229
1978	3 263 122	88.04	224 379	6.05	218 749	5.91	3 706 250
1979	2 608 076	85.89	189 477	6.24	239 153	7.88	3 036 706
1980	1 386 523	83.16	100 088	6.00	180 672	10.84	1 667 283
1981	1 445 403	84.98	88 666	5.21	166 839	9.81	1 700 908
1982	1 720 532	90.30	49 224	2.58	135 684	7.12	1 905 440
1983	2 096 297	86.47	126 548	5.22	201 459	8.31	2 424 304
1984	2 769 275	90.05	67 805	2.21	238 245	7.74	3 075 325

Source: Ward's Automotive Yearbook.

INVESTMENT

TABLE 4.1

New Capital Expenditures in Canadian and U.S. Automotive Industries (1973-1984) ($ millions Canadian)

CANADA ($ millions Canadian)	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984*
Motor Vehicle Manufacturers	43.2	73.5	61.0	59.6	152.5	83.6	111.4	136.4	272.9	203.1	463.2	273.4
Truck Body Manufacturers	17.6	31.2	18.5	23.3	24.1	15.4	41.7	47.2	32.2	33.6	12.6	10.9
SUB TOTAL	60.8	104.7	79.5	82.9	176.6	99.0	153.1	183.6	305.1	236.7	475.8	284.3
Motor Vehicle Parts & Access.	78.7	119.9	81.2	62.5	109.6	203.9	330.9	780.9	666.5	188.5	140.5	181.1
TOTAL	139.5	224.6	160.7	145.5	286.2	302.9	484.0	964.5	971.6	425.2	616.3	465.4
U.S.A.												
Motor Vehicle & Car Bodies	806.0	1020.0	667.0	1032.3	1814.4	2140.0	2232.4	2677.5	5631.9	2922.5	N/A	N/A
Truck & Bus Bodies**	29.5	33.7	28.6	30.8	59.7	44.8	56.2	41.7	52.9	63.8	N/A	N/A
Truck Trailers	28.0	29.0	33.2	14.3	38.6	44.5	43.5	64.5	66.3	46.0	N/A	N/A
SUB TOTAL (CDN $)	863.5	1082.7	728.8	1077.4	1912.7	2229.3	2332.1	2783.7	5751.1	3032.3	N/A	N/A
Motor Vehicle Parts & Access.	1033.7	1261.7	1133.7	948.7	1973.9	2801.9	3222.4	3615.7	3968.0	2211.0	N/A	N/A
Automotive Stampings	171.5	220.5	219.5	173.7	310.8	457.7	457.9	713.1	1012.4	573.8	N/A	N/A
Carburators, Pistons, Rings	73.5	29.0	31.1	38.1	85.0	137.1	136.1	133.1	165.2	130.8	N/A	N/A
Vehicular Lighting Equipment	33.7	45.6	15.5	21.1	49.1	47.0	59.9	59.7	83.9	54.0	N/A	N/A
Engine Electrical Equipment	80.9	128.6	52.8	72.3	155.3	196.9	187.1	147.6	188.0	96.7	N/A	N/A
Automotive Apparel Trimmings	26.7	37.7	21.1	20.2	38.4	40.0	44.5	53.8	72.5	50.7	N/A	N/A
SUB TOTAL (CDN $)	1420.0	1723.1	1473.4	1274.1	2612.5	3680.6	4107.9	4723.0	5490.0	3117.0	N/A	N/A
TOTAL U.S.A. (CDN $)	2283.5	2805.8	2202.2	2351.5	4525.2	5909.9	6440.0	7506.7	11241.1	6149.3	N/A	N/A
TOTAL NORTH AMERICAN (CDN. $)	2423.0	3030.4	2362.9	2496.9	4811.4	6212.8	6924.0	8471.2	12212.7	6574.5	N/A	N/A
CANADA as a % of NORTH AMERICA												
- Motor Vehicle Assembly	6.6	8.8	9.8	7.1	8.5	4.3	6.2	6.2	5.0	7.2		
- Motor Vehicle Parts	5.3	6.5	5.2	4.7	4.0	5.2	7.5	14.2	10.8	5.7		
- Total Auto Industry	5.8	7.4	6.8	5.8	5.9	4.9	7.0	11.4	8.0	6.5		

* Preliminary

** Revised in 1977. Excludes Motor Homes.

Exchange Rate Conversion: Average New Exchange Rates, Bank of Canada Review, 1965-1982.

Source: Statistics Canada, U.S. Department of Commerce, APMA.

TRADE & AUTO PACT DATA

TABLE 5.1

Canada/Overseas Trade in Automotive Products* ($ millions Canadian)

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
CANADIAN EXPORTS																		
Motor Vehicles	100	133	108	141	114	117	126	204	421	427	614	711	558	634	656	440	281	346
Parts	53	68	91	99	85	88	119	142	180	171	195	314	445	420	556	404	254	280
Tires and Tubes	4	3	2	3	4	3	5	5	5	8	7	10	11	31	45	26	18	24
Re-Exports	9	11	10	9	7	6	8	7	10	10	10	9	21	89	436	390	194	174
TOTAL	166	215	211	252	210	214	258	358	621	615	826	1044	1035	1174	1693	1260	747	824
CANADIAN IMPORTS																		
Motor Vehicles	114	177	245	240	374	464	377	450	410	522	592	894	727	1159	1599	1413	1626	2176
Parts	35	60	93	130	133	191	212	260	206	231	235	262	365	355	342	379	613	1328
Tires and Tubes	7	10	13	19	27	42	57	70	82	79	110	146	202	208	187	115	128	207
TOTAL	156	247	351	389	534	697	646	780	698	842	937	1302	1294	1722	2128	1907	2367	3711
BALANCES																		
Motor Vehicles	(14)	(44)	(137)	(99)	(260)	(347)	(251)	(246)	11	(95)	22	(183)	(169)	(525)	(943)	(973)	(1345)	(1830)
Parts	18	8	(2)	(31)	(48)	(103)	(93)	(118)	(26)	(60)	(40)	52	180	65	214	25	(359)	(1048)
Tires and Tubes	(3)	(7)	(11)	(16)	(23)	(39)	(52)	(65)	(77)	(71)	(103)	(136)	(191)	(177)	(142)	(89)	(110)	(183)
Re-Exports	9	11	10	9	7	6	8	7	10	10	10	9	21	89	436	390	194	174
TOTAL	10	(32)	(140)	(137)	(324)	(483)	(388)	(422)	(82)	(227)	(111)	(258)	(259)	(548)	(435)	(647)	(1620)	(2887)

*CKDs are included sometimes in the parts category and sometimes in vehicle category.

Source: Statistics Canada.

TABLE 5.2

Canada - United States Trade in Automotive Products
1967-1984

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
								$ MILLION										
United States Imports from Canada*																		
Cars	748	1 204	1 662	1 538	1 943	2 046	2 272	2 540	2 858	3 430	4 032	4 723	4 345	4 452	5 145	7 170	8 973	13 085
Trucks, etc.	247	399	605	589	593	706	789	868	932	1 344	1 964	2 325	2 364	2 218	3 142	3 946	4 437	5 880
Parts	512	846	1 037	1 127	1 495	1 778	2 172	1 963	2 045	2 942	3 721	4 753	4 489	3 405	4 151	4 902	7 056	10 287
Tires and tubes	13	9	5	15	8	23	68	64	68	163	144	192	234	231	286	406	419	598
Total	1 520	2 458	3 309	3 269	4 039	4 553	5 301	5 435	5 903	7 879	9 861	11 993	11 432	10 306	12 724	16 424	20 885	29 850
Canadian Imports from United States																		
Cars	588	809	792	659	960	1 056	1 439	1 621	2 183	2 317	2 834	3 038	3 747	3 388	3 710	2 875	4 886	6 085
Trucks, etc.	132	189	263	275	361	495	643	896	942	970	1 118	1 322	1 952	1 217	1 347	873	1 129	2 039
Parts	1 314	1 820	2 307	2 107	2 485	2 907	3 528	3 829	4 425	5 473	6 848	8 092	8 666	7 600	9 230	9 676	11 359	15 446
Tires and tubes	8	29	37	24	36	50	92	218	174	115	153	130	155	146	165	147	225	345
Total	2 042	2 847	3 399	3 065	3 842	4 508	5 702	6 564	7 724	8 874	10 953	12 582	14 520	12 351	14 452	13 571	17 599	23 915
Balances																		
Cars	160	395	870	879	983	990	833	919	675	1,113	1,198	1,685	598	1,064	1,435	4,295	4,087	7 000
Trucks, etc.	115	210	342	314	232	211	146	-28	-10	375	846	1,003	412	1,001	1,795	3,073	3,308	3 841
Parts	-802	-974	-1 270	-980	-990	-1 129	-1 356	-1 866	-2 380	-2 531	-3 127	-3 339	-4 177	-4 195	-5 079	-4 774	-4 303	-5 159
Tires and Tubes	5	-20	-32	-9	-28	-27	-24	-154	-106	48	-9	62	79	85	121	259	194	253
Total	-522	-389	-90	204	197	45	-401	-1 129	-1 821	-995	-1 092	-589	-3 087	-2 045	-1 728	2 853	3 286	5 935
Excluded: retroactive adjustments to value of imported parts from U.S. for special tooling charges.	48	51	84	95	80	85	93	188	135	151	244	284	234	288	218	260	573	690

*A more accurate measurement of trade in automotive products is obtained by comparing the import statistics of each country. Accordingly, Canadian exports are derived from the counterpart United States statistics of imports.

TABLE 5.3

Canadian-U.S. Trade in the Automotive Products Within and Outside the Automotive Products Trade Agreement 1974-1983

($ millions Canadian)		1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
U.S. Imports from Canada											
Under APTA	- Motor Vehicles	3391.0	3726.1	4703.6	5942.8	6972.0	6622.0	6612.2	8141.7	11023.1	12975.5
	- Parts	1816.9	1909.2	2766.6	3488.4	4421.0	4072.0	3008.1	3670.7	4292.4	6207.4
	- Sub-Total	5207.9	5635.3	7470.2	9431.2	1393.0	10694.0	9620.3	11812.4	15315.5	19182.9
Outside APTA	- Motor Vehicles	14.3	60.5	69.1	51.4	61.0	84.0	56.3	118.7	93.2	55.1
	- Parts	136.1	131.4	174.9	112.7	325.0	417.0	374.0	398.4	602.3	649.9
	- Tires and Tubes	63.6	68.1	163.7	143.6	191.0	234.0	229.9	239.0	405.4	407.0
	- Sub-Total	214.0	260.0	407.7	307.7	577.0	735.0	660.2	756.1	1100.9	1112.0
Canadian Imports from U.S.											
Under APTA	- Motor Vehicles	2443.9	3000.3	3129.7	3846.1	4283.0	5564.0	4542.6	4944.8	3705.2	5865.6
	- Parts	3546.6	4039.9	4800.8	6218.3	7425.0	7780.0	6890.3	8364.2	9055.8	10967.3
	- Sub-Total	5990.5	7040.2	7930.5	10064.4	11708.0	13344.0	11432.9	13309.0	12761.0	16832.9
Outside APTA	- Motor Vehicles	108.1	277.6	201.3	206.2	77.0	135.0	148.6	236.2	101.6	200.8
	- Parts	341.4	356.6	578.8	511.7	661.0	879.0	712.6	908.6	722.2	756.4
	- Tires and Tubes	218.1	172.8	114.4	153.1	130.0	155.0	145.6	136.7	120.5	197.0
	- Sub-Total	667.6	807.0	894.5	871.0	868.0	1169.0	1006.8	1281.5	944.3	1154.2
Balances											
Under APTA	- Motor Vehicles	947.1	725.8	1573.9	2096.7	2689.0	1058.0	2069.6	3196.9	7317.9	7109.9
	- Parts	(1729.7)	(2130.7)	(2034.2)	(2729.9)	(3004.0)	(3708.0)	(3882.2)	(4693.5)	(4763.4)	(4759.9)
	- Total	(782.6)	(1404.9)	(460.3)	(633.2)	(315.0)	(2650.0)	(1812.6)	(1496.6)	2554.5	2350.0
Outside APTA	- Motor Vehicles	(93.8)	(217.1)	(132.2)	(154.8)	(16.0)	(51.0)	(92.3)	(117.5)	(8.4)	(145.7)
	- Parts	(205.3)	(225.2)	(403.9)	(399.0)	336.0	462.0	(338.6)	(510.2)	(119.9)	(106.5)
	- Tires and Tubes	(154.5)	(104.7)	49.3	(9.5)	61.0	79.0	84.3	102.3	184.9	210.0
	- Total	(453.6)	(547.0)	(486.8)	(563.3)	(291.0)	(434.0)	(346.6)	(525.4)	156.6	(42.2)

Source: Compiled from data in the "Commodity Imports by Tariff Item" Series, Statistics Canada and various issues of the U.S. President's Report to the Congress on the Operations of the Canada-U.S. Automotive Agreement.
Imports from the U.S. includes CKD parts.
1983 figures are preliminary and subject to change.

TABLE 5.4

Relationship Between Canada/U.S. Auto Pact Trade Imbalance and Canadian Value Added in Automotive Production as Percentage of Canadian Cost of Sales

Year	Canadian Value Added as Percentage of Cost of Sales in Canada (model year)	Canada Auto Pact Trade Imbalance as Percentage of Total Canada/U.S. Auto Pact Trade (calendar year)
1966	69	-24.7
1967	69	-15.8
1968	72	- 7.8
1969	81	- 1.4
1970	92	4.4
1971	95	3.5
1972	90	1.5
1973	79	- 1.5
1974	71	- 7.0
1975	66	-11.1
1976	67	- 3.0
1977	72	- 3.2
1978	74	- 1.4
1979	64	-11.0
1980	53	- 8.6
1981	62	- 6.0
1982	91	9.1
1983	87	6.5
1984	83	N/A

Source: Department of Regional Industrial Expansion

TABLE 5.5

Overall Net Production to Net Sales Value Ratios* Achieved by Auto Pact Companies in Canada 1971-1984
($ millions Canadian)

	MODEL YEARS													
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
PASSENGER VEHICLES														
(Required ratio: range 95-100)														
Net Sales Value Ratio Achieved (All companies)	149	125	121	122	122	122	125	130	130	106	123	202	196	173
COMMERCIAL VEHICLES														
(Required ratio: range 75-100+)														
Net Sales Value Ratio Achieved (All companies)	142	122	115	98	101	113	132	155	127	115	140	238	272	231
BUSES														
(Required ratio: range 85-100)														
Net Sales Value Ratio Achieved (All companies)	120	119	97	102	114	98	105	163	183	199	273	213	243	312

*Net production to net sales value ratio is the ratio of the total value of Canadian vehicle production to the total net sales value of vehicle sales for all Auto Pact companies.

Source: Compiled from Company Auto Pact Reports to Department of Regional Industrial Expansion.

TABLE 5.6

Actual Canadian Value Added as a Percentage of Cost of Sales Compared to CVA Commitments of all Auto Pact Producers (1975 - 1984)
($ millions Canadian)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Cost of Vehicle Sales in Canada of all Auto Pact Producers (model year)	4 545	5 345	6 001	6 727	8 554	8 757	8 659	6 327	6 752	10 281
Total Canadian Value Added Produced (model year)	2 987	3 606	4 337	4 951	5 491	4 659	5 368	5 759	5 847	8 504
Difference between Cost of Sales and CVA Produced	1 558	1 739	1 664	1 776	3 063	4 020	3 235	568	905	1 777
Total Achieved CVA as percentage of Cost of Sales	66	67	72	74	64	53	62	91	87	83
Total CVA committed by all Auto Pact producers as a percentage of cost of vehicle sales	61	61	60	59	58	57	58	59	60	60

Source: Auto Pact Company Reports to Department of Regional Industrial Expansion.

TABLE 5.7

Total Canadian Value Added by Category of Production for the Four Major Vehicle Manufacturers in Canada
($ thousands Canadian)

Year	Non-parts C.V.A. in Vehicle Production	Parts C.V.A. in Vehicle Production	C.V.A. in Original Equipment Parts Exported	Total Canadian Value Added Produced	Parts C.V.A. as Percentage of Total C.V.A
	a	b	c	d = a+b+c	(b+c)/d
1964	319 294	429 687	36 496	785 477	59.4
1965	379 532	575 750	100 097	956 229	60.3
1966	398 154	537 554	198 943	1 134 651	64.9
1967	360 716	481 780	302 669	1 145 165	68.5
1968	418 490	493 666	444 895	1 357 051	69.2
1969	473 920	559 537	587 509	1 620 966	70.8
1970	482 821	509 910	650 575	1 643 306	70.6
1971	524 922	457 094	728 149	1 710 165	69.3
1972	564 178	562 676	879 228	2 006 082	71.9
1973	657 787	603 624	1 078 736	2 340 147	71.9
1974	739 987	640 285	1 069 117	2 449 389	69.8
1975	876 298	733 442	1 105 988	2 715 728	67.7
1976	1 053 265	724 808	1 568 273	3 346 346	68.5
1977	1 289 796	833 948	1 882 556	4 006 300	67.8
1978	1 435 608	948 744	2 133 323	4 517 675	68.2
1979	1 465 468	1 184 305	2 351 655	5 001 428	70.7
1980	1 321 865	1 086 625	1 755 138	4 163 628	68.2
1981	1 344 937	1 272 954	2 217 692	4 835 583	72.2
1982	1 456 898	1 232 880	2 256 222	4 946 000	70.6
1983	1 603 567	1 446 315	2 542 162	5 592 044	71.3
1984	1 980 610	2 797 210	3 917 148	8 694 968	77.2

Source: 1964-1977 data prepared by the Reisman Commission; 1978-1984 data prepared by Department of Regional Industrial Expansion.

TABLE 5.8

Automotive Industry, Selected Current and Capital Account Transactions (1) between Canada and the United States ($ millions Canadian) 1980-1983

Type of Transaction	1980	1981	1982	1983
United States Imports from Canada (2):				
Cars	4 452	5 145	7 170	8 973
Truck, etc.	2 218	3 142	3 946	4 437
Parts	3 405	4 151	4 902	7 056
Tires and Tubes	231	286	406	419
Total	10 306	12 724	16 424	20 885
Canadian Imports from United States (3):				
Cars	3 388	3 719	2 877	4 886
Trucks, etc.	1 217	1 339	873	1 129
Parts	7 600	9 230	9 683	11 359
Tires and Tubes	146	165	147	225
Total	12 351	14 453	13 579	17 599
New Flow on Merchandise Trade	-2 045	-1 729	+2 845	+3 286
Other Selected Current Account Transactions	- 641	- 583	- 868	- 485
Net Flow on Current Account	-2 686	-2 312	+1 977	+2 801
Capital Account Transactions				
Net Flow on Capital Account	+ 93	+ 778	- 31	-1 283
Net Flow on Current and Capital Account	-2 593	-1 534	+1 946	+1 518

(1) Items contained in the statement do not reflect the full range of current and capital flows associated with the automotive industry, but a selection of important elements. Balances should be read bearing in mind this qualification.
(2) Data are converted on a monthly noon average exchange basis.
(3) Excluding special tooling charges on parts imported from United States.

This table presents data on the main current and capital account movements between Canada and the United States within the automotive sector. It covers the four major automobile manufacturers in Canada and other Canadian manufacturers of automotive parts and accessories.

The statement does not purport to show the complete balance of payments impact of the Automotive Products Agreements as, besides international freight costs which are generally excluded from the reported values of vehicles and parts, the effects on trade with third countries and other sectors of the economy are not covered.

In identifying the automotive industry, for the purpose of this table, particular attention was paid to the manufacturers resident in Canada whose products could be identified in merchandise trade statistics. In addition to the automobile manufactures, the data accordingly cover suppliers and product manufacturers engaged in the automotive after-market industries (where identifiable in balance of payments surveys).

Source: Statistics Canada.

TABLE 5.9

Scheduled Changes under the General Agreement on Trade and Tariffs for Most Favoured Nation Ad Valorem Rates of Duty, Tariff Items 43803-1 and 61815-1

	1983	1984	1985	1986	1987
Automobiles and motor vehicles of all kinds, n.o.p.; electric trackless trolley buses; chassis for all the foregoing. (Tariff Item 43803-1)	12.1	11.4	10.7	9.9	9.2
Tires and Tubes, wholly or in part of rubber. (Tariff Item 61815-1)	13.9	12.9	12.0	11.1	10.2

EMPLOYMENT

TABLE 6.1

Employment Related to Automotive Manufacturing in Canada: 1964-1984 (Thousands)

CALENDAR YEAR	MOTOR VEHICLE ASSEMBLY (SIC 323)	TRUCK BODY & TRAILERS (SIC 324)	AUTOMOTIVE PARTS & ACC. (SIC 325)	AUTOMOBILE FABRIC & ACC. (SIC 188)	TOTAL
1964	34.3	4.4	30.5	1.3	70.5
1965	39.8	5.8	35.3	1.9	82.8
1966	40.7	6.3	37.6	2.7	87.3
1967	38.7	6.7	37.7	2.6	85.7
1968	39.6	6.8	37.3	3.1	86.8
1969	42.3	8.2	40.4	4.1	95.0
1970	37.5	8.4	36.4	3.7	86.0
1971	41.0	10.1	41.3	4.3	96.7
1972	41.9	14.2	41.4	5.2	102.7
1973	45.2	14.8	48.8	5.8	114.6
1974	47.1	15.2	45.9	5.7	113.9
1975	43.4	14.4	41.2	4.8	103.8
1976	46.6	14.0	46.2	5.6	112.4
1977	50.6	12.6	48.6	6.5	118.3
1978	52.3	13.6	52.1	6.9	124.9
1979	52.6	14.8	49.8	6.6	123.8
1980	43.9	12.9	41.0	6.3	104.1
1981	43.4	12.1	44.7	7.2	107.4
1982	42.7	8.6	41.1	6.3	98.7
1983*	44.4	11.5	55.2	4.5	115.6
1984	49.5	12.5	56.9	4.9	123.8

* Effective March, 1983, employment data is based on a sample survey rather than those firms with 20 or more employees as was the case prior to 1983. Accordingly 1983 data cannot be compared with the historical employment data.

Source: Statistics Canada.

TABLE 6.2

Employment Related to Automotive Manufacturing in the U.S.: 1972-1984 (Thousands)

YEAR	TOTAL MOTOR VEHICLES AND EQUIPMENT (SIC 371)	MOTOR VEHICLES (SIC 3711)	TRUCKS AND BUS BODIES (SIC 3713)	PARTS & ACCESSORIES (SIC 3714)	AUTOMOTIVE STAMPINGS (SIC 3465)
Annual Average					
1972	874.8	415.2	46.1	383.0	104.5
1973	976.5	461.6	51.3	429.9	110.9
1974	907.7	416.2	54.8	402.7	95.5
1975	792.4	375.3	45.5	352.5	82.1
1976	881.0	415.9	43.7	399.0	99.5
1977	938.0	439.8	47.5	424.3	110.0
1978	977.1	451.5	51.4	443.6	114.0
1979	994.6	464.2	45.8	444.4	115.0
1980	788.8	368.1	39.7	349.5	95.3
1981	788.7	358.7	37.0	363.3	93.7
1982	704.8	321.3	31.1	325.4	82.0
1983	772.7	363.1	31.8	344.2	88.6
1984	896.3	408.4	41.6	396.8	103.3

Source: U.S. Bureau of Labor Statistics.

Based on 1972 Standard Industrial Classification (SIC), Annual Average 1972-1984.

TABLE 6.3

Automotive Parts Industry by Number of Employees: 1983

Number of Employees	Number of Establishments	Per Cent of Total Establishments	Value of Shipments ($ millions)	Per Cent of Total Shipments
fewer than 100	324	69.4	783.9	9.4
100-500	117	25.1	2 379.1	28.5
500 or more	26	5.5	5 194.9	62.1
Total	467	100.0	$8 357.9	100.0

Source: Statistics Canada.

VEHICLE ASSEMBLY AND PARTS MANUFACTURING PLANTS IN CANADA

TABLE 7.1

Major Motor Vehicle Assembly Plants in Canada

LOCATION	COMPANY/PLANT NAME	MAIN PRODUCTS
British Columbia		
Burnaby	Freightliner of Canada Ltd.	Trucks
Kelowna	Western Star Trucks Inc.	Trucks
North Vancouver	Pacific Truck and Trailer Ltd.	Trucks
Manitoba		
Winnipeg	Flyer Industries Ltd.	Buses
	Motor Coach Industries	Buses
Nova Scotia		
Halifax	Volvo Canada Ltd.	Cars
Ontario		
Brampton	American Motors (Canada) Ltd.	Cars
Chatham	International Harvester Canada	Trucks
Oakville	Ford Motor Company of Canada, Ltd.	Cars
	Ford Ontario Truck Plant	Trucks
Oakville	Mack Canada, Inc.	Trucks
Oshawa	General Motors of Canada Ltd.: Car Assembly Plant	Cars
	GM Truck Assembly Plant	Trucks

Table 7.1 (continued)

Major Motor Vehicles Assembly Plants in Canada

LOCATION	COMPANY/PLANT NAME	MAIN PRODUCTS
Ontario (continued)		
Mississauga	Ontario Bus Industries Ltd.	Buses
Scarborough	GM Van Plant	Vans
St. Thomas	Ford Motor Company of Canada, Ltd.	Cars
Windsor	Chrysler Canada Ltd.: Car Assembly Plant	Van wagons
	Pillette Road Plant	Vans and wagons
Québec		
Saint-Eustache	GM Diesel Division Coach Plant	Buses
Sainte-Thérèse	Canadian Kenworth Company (a division of Paccar Canada Ltd.)	Trucks
Sainte-Thérèse	General Motors of Canada Ltd.	Cars
Pointe-Claire	Prévost Car, Inc.	Buses

Source: Compiled from information supplied by the companies, the Motor Vehicle Manufacturers' Association and Statistics Canada.

TABLE 7.2

A Partial List of Major Automotive Parts Plants in Canada

COMPANY/PLANT NAME	LOCATIONS	MAIN PRODUCTS
In-house facilities		
American Motors (Canada) Inc.	Sarnia	Blocks & casting
Chrysler Canada Ltd.		
Trim Plant	Ajax	Door panels; seat cushions & backs
Aluminum Casting Plant	Etobicoke	Pistons, water pump bodies, transmisson transfer cases
Ford Motor Company of Canada Ltd.		
Niagara Glass Plant	Niagara Falls	Automotive glass
Essex Plant	Windsor	V6 engines
Ensite Engine Plant #1	Windsor	V8 engines
Ensite Engine Plant #2	Windsor	Engine machinery & stampings
Casting Plant	Windsor	Iron castings
Essex Aluminum Plant	Windsor	Aluminum castings
Philco Ford	Don Mills	Radio and electronic components
General Motors of Canada Ltd.		
Fabrication Plant	Oshawa	Stampings, batteries, radiators, instrument clusters, plastics, reaction injection molding
Foundry	St. Catharines	Metal castings (ferrous and non ferrous)
Axle Plant	St. Catharines	Axles, disc brakes, spark plugs, front suspensions, transmission components
Engine Plant	St. Catharines	V6 & V8 engines
Trim Plant	Windsor	Trim sets, door covers
Transmission Plant	Windsor	Front wheel drive automatic transmissions

Table 7.2 (continued)

A Partial List of Major Automotive Parts Plants in Canada

COMPANY NAME	PRIMARY LOCATIONS	MAIN PRODUCTS
Foreign-Owned Independent Manufacturers (larger facilities)		
AP Parts of Canada	Rexdale	Mufflers, tail & exhaust pipes
Budd Canada Inc.	Kitchener Winnipeg	Frames, engine heaters
Canadian Fram Limited	Chatham	Emission controls, cooling systems
Certified Brakes	Rexdale	Brake disc pads, brake linings, hydraulic parts
Continental Group of Canada Ltd.	Amerstburg Brampton	Stampings, springs
Hayes-Dana Inc.	St. Catharines and Barrie	Drive shafts, frames, axles
Kelsey-Hayes Canada Ltd.	Windsor St. Catharines	Wheels, brake parts
Kralinator Filters	Cambridge	Oil, fuel & air filters
Motor Wheel Corporation of Canada Ltd.	Chatham	Wheels, rims & flanges
Rockwell International of Canada Ltd.	La Colle Tilbury Gananoque Mississauga Bracebridge Chatham and Milton	Coil springs, brakes, mechanical components stampings, plastic components
Standard Tube Canada Ltd.	Woodstock	Axle components
Standard Products Canada	Stratford	Weather stripping, engine and body mounts
TRW Canada, Thompson Products Division	St. Catharines	Steering components, valves electro-mechanical devices
Varta Batteries Ltd.	Lachine Scarborough St. Thomas Winnipeg Richmond	Batteries
Walker Exhausts	Cambridge	Mufflers, tail and exhaust pipes

Table 7.2 (continued)

A Partial List of Major Automotive Parts Plants in Canada

COMPANY NAME	PRIMARY LOCATIONS	MAIN PRODUCTS
Canadian-Owned Companies		
A.G. Simpson Co. Ltd.	Toronto and Windsor	Stampings
Ahoy Industries Inc.	Richmond	Truck exhaust tubings
Amcan Castings Ltd.	Hamilton	Die castings
Asbestonos	Montreal	Brake & clutch products
Butler Metal Products Co. Ltd.	Cambridge	Stampings
CAE Industries Ltd.	St. Catharines Montreal Welland Vancouver	Non-ferrous and light alloy castings
Canadian-General Tower Ltd.	Cambridge	Seat fabrics
Crila Plastic Industries Ltd.	Bolton	Trim
Do Ray Lamp Company (Canada)	Toronto	Truck lighting and safety equipment
Dominion Auto Accessories Ltd.	Toronto	Protective lighting, mirrors, directional signals
Fabricated Steel Products Ltd.	Windsor	Stampings
Fleck Manufacturing Company	Tillsonburg and Huron Park	Wire harnesses
Huron Steel Products	Windsor	Stampings
Kendan Manufacturing Ltd.	Windsor	Diesel engine components
Keystone A&A Industries Ltd.	Richmond	Wheels and wheel covers
Magna International Incorporated	Markham	Stampings, plastic components, motors and instrumentation
National Auto Radiator Mfg. Co.	Windsor	Stampings
Stelco Inc. (parts mfg. only)	Gananoque and Toronto	Fasteners and forgings

Table 7.2 (continued)

A Partial List of Major Automotive Parts Plants in Canada

COMPANY NAME	PRIMARY LOCATIONS	MAIN PRODUCTS
Canadian-Owned Companies (continued)		
Tamco Ltd.	Windsor	Gear shift levers, steering column jackets
Thrush Incorporated	Rexdale	Mufflers, exhaust tubing
Tridon Ltd.	Burlington Oakville	Clamps, electronic flashers, wiper blades
Waterville Cellular Products Ltd.	Waterville	Rubber products, padded auto instrument panels
Woodbridge Foam Corporation	Toronto	Sets and other foam rubber components

A comprehensive listing of Canadian parts manufacturers is available through the Automotive Parts Manufacturers Association.