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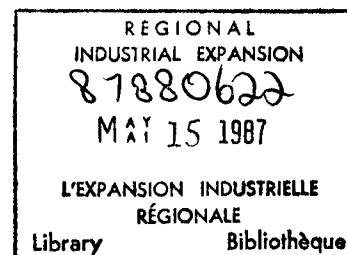
Expansion industrielle
régionale

Canada

Report on the Canadian Automotive Industry in 1985



REPORT ON THE CANADIAN AUTOMOTIVE INDUSTRY IN 1985



FOREWORD

This is the third annual report on the Canadian automotive industry prepared by the Automotive Directorate of the Department of Regional Industrial Expansion. The report provides comprehensive analysis and an assessment of the performance of the Canadian Automotive Industry in 1985, as well as of the related global developments affecting the industry. The report also contains extensive historical statistics of major interest to the industry, industry analysts and researchers.

This year, Hussain B. Choudhry served as the principal analyst and had overall responsibility for the preparation of the report. Lynn MacDiarmid prepared the statistical material for the report.

The report greatly benefitted from the constructive and valuable comments provided by the representatives of Canadian Motor Vehicle Manufacturers Association (MVMA), Automotive Parts Manufacturers Association (APMA), Canadian Auto Workers (CAW), General Motors of Canada, Ford Motor Company of Canada and Chrysler Canada. The Department appreciates the invaluable assistance provided by these individuals and organisations during the preparation of this report.

Automotive, Marine and Rail Branch
Department of Regional Industrial Expansion
1987

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INTRODUCTION

This Annual Report on the Canadian Automotive Industry is published by the Department of Regional Industrial Expansion (DRIE) in response to the 1978 and 1983 Automotive Industry Task Forces' recommendations that a report on the performance of the automotive industry be published annually.

The basic conclusions of this report are that the industry has made significant progress in restructuring and in introducing new product lines. However, the North American automobile industry continues to face a serious competitive challenge from Japan and from several newly industrialized countries. The industry continued to narrow the Japanese cost advantage, particularly in the production of small cars.

During the last three years there have been dramatic improvements in the health and performance of the automotive industry. The industry made record profits, which enabled it to make the necessary investments in new plants and products and to incorporate advanced manufacturing technologies. Significant progress has been made in increasing productivity, reducing costs and lowering break-even levels. The labour relations environment also has improved.

These industry efforts were supported by federal and provincial government policies aimed at enhancing the competitiveness of the industry and promoting industrial growth and trade performance. Some of these are detailed in Chapter 1 of this report.

Although government policies will continue to provide economic and business environments that are conducive to the enhancement of industrial growth and trade expansion, the efforts to achieve these goals are being made by the industry in order to respond to the increasing competitive challenges facing it. However, continued and fresh exchanges between all parties influencing the sector will be necessary to ensure that the automotive industry will continue to contribute fully to the Canadian economy.

The year 1985 marked the twentieth anniversary of the Canada-United States Automotive Products Trade Agreement (APTA), commonly known as the Auto Pact. The Agreement provides for duty-free trade in original automotive equipment between the two countries, and has been instrumental in the dramatic expansion of bilateral trade. Two-way Canada-United States trade in automotive products has grown from \$1.2 billion in 1965 to \$62.6 billion in 1985. Approximately 95 percent of the total Canada-United States trade in automotive products is covered under the terms of APTA.

CHAPTER I

CANADIAN AUTOMOTIVE INDUSTRY DEVELOPMENTS IN 1985

SYNOPSIS

The automotive industry continued to play a major role in the Canadian economic recovery in 1985, exhibiting remarkable strength in its performance for the third consecutive year.

The industry had record sales of 1 137 119 passenger cars in 1985, 17.1 percent higher than the 971 000 cars sold in 1984 and the industry's highest since the previous record of one million cars sold in 1979. The Canadian truck market exhibited even greater strength with a 26.1 percent increase to a record of 393 716 trucks sold in 1985, up from 312 292 trucks sold in 1984. Production of cars and commercial vehicles (trucks and buses) also reached a new record of 1 930 300 units, a 5.5 percent increase from the previous record established in 1984, when 1 830 000 vehicles were produced in Canada. Automotive parts shipments, in terms of nominal value, increased 10.9 percent to \$11.3 billion, up from \$10.2 billion in 1984, more than double the level of 1982.

This increased strength pushed Canadian automotive industry employment to a new record of 129 000 employees, up from 124 000 in 1984, almost 30.8 percent higher than 1982 when the Canadian automotive employment was 98 700 workers. These developments can be attributed to several favourable economic factors, such as a sustained economic recovery, lower interest rates and an increase in real disposal income, all of which raised the vehicle demand level to an all-time high.

Canadian GNP showed an impressive 4.5 percent growth, marking the third consecutive year of economic recovery. Domestic spending, largely led by consumer spending, more than offset a weakening trade sector and led a rebound in business investment. Inflation remained moderate, averaging 4.0 percent in 1985, slightly down from 4.4 percent in 1984. Overall Canadian employment rose 2.8 percent and the unemployment rate fell through the year from 11.2 percent in January to 10 percent in December of 1985.

FEDERAL GOVERNMENT INITIATIVES

The federal government has taken a number of initiatives to improve the economic and trade environment in support of the industry.

Automotive Industry Annual Report

The Department of Regional and Industrial Expansion provides comprehensive analyses and statistical information as well as an assessment of the

industry's performance and its future prospects through the publication of an annual report. This 1985 edition is the third annual report published.

Human Resources

The government recognized the human resources problem associated with the massive competitive challenges facing the Canadian automotive industry. In January, 1985, the Minister of Manpower and Immigration, in conjunction with the provinces of Quebec and Ontario, established a private sector Human Resource Task Force to conduct a study of the Canadian automotive industry. The co-chairpersons of the Task Force were:

Maurice C. Fertey, president, American Motors (Canada) Inc.;
Patrick J. Lavalle, president, Automotive Parts Manufacturers Association; and
Robert White, president, Canadian Automotive Workers (CAW).

The study was submitted to the Minister of Manpower and Immigration at the beginning of 1986. It dealt with several issues concerning human resource management, skill requirements, labour training and mobility and the impact of competitive factors on employment levels in the automotive industry. The report is currently being reviewed.

Trade Policy

The Canadian government continued to work with the Japanese Government to limit exports of Japanese vehicles under the Voluntary Export Restraints Arrangements (VER) to assist the industry in its efforts to continue restructuring programs and to prevent disruption in the Canadian market.

On July 13, 1985, the Canadian government reached an understanding with the Japanese Ministry of International Trade and Industry (MITI) to limit exports of Japanese passenger-cars to Canada in the period from April 1, 1985 to March 31, 1986 to about 18 percent of the anticipated 1985 Canadian passenger-car market.

Investment

The Canadian government has continued to encourage investment in the sector by both domestic and foreign automobile and parts manufacturers. In the parts sector a number of initiatives were undertaken to promote joint-ventures and technology exchanges between Canadian and Japanese parts manufacturers.

Value-added

The government continued to encourage Asian and European manufacturers to source automotive parts in Canada. The Canadian automotive parts manufacturing sector was involved in seminars, trade missions and other activities aimed at improving its competitiveness.

Customs Measures

On May 24, 1985, in response to industry's concerns, the Minister of Finance announced new amendments to the Customs Tariff Act to replace the free General Preferential Tariff (GPT) rate on imports of motor vehicle parts from developing countries with a rate of two-thirds of the Most-Favoured Nations (MFN) rate, equivalent to about seven percent. As of January 1, 1987, automobiles and other motor vehicles from developing countries also will be subject to two-thirds of the MFN rate, which will be about six percent at that time as a result of the reductions in rates stemming from the Tokyo Round of Multilateral Trade Negotiations. These measures were in response to a recommendation from the Automotive Task Force.

MAJOR INVESTMENT ANNOUNCEMENTS

Foreign Investment

In recent years, the Canadian government has been encouraging Asian automotive companies to invest in Canada in order to increase and enhance the Canadian automotive-manufacturing base. In 1985, major foreign investments in automobile assembly and parts plants for Canada were announced by the Japanese and Korean automotive companies:

On July 22, 1985, Toyota Motor Corporation announced that it would establish an integrated automobile assembly plant in Cambridge, Ontario. The estimated direct capital investment will be on the order of \$400 million and will have an annual first-stage output of 50 000 automobiles of the 1.6-litre class. The assembly plant will provide employment for about 1000 workers.

On August 29, 1985 Hyundai Motor Company of South Korea announced it would invest more than \$300 million to establish a passenger-car assembly plant in Canada. The plant will be located at Bromont, Quebec, and will begin production in 1988 with an estimated capacity of 100 000 units by 1990. The plant will employ about 1200 workers.

Honda announced that it would double its investment at Alliston, Ontario, to \$200 million and would increase production to 80 000 units per annum. The new plant will employ about 700 workers.

Domestic Investment

The North American firms continue to make massive capital investments to improve manufacturing quality and introduce new product lines while continuing to reduce costs. Capital expenditures averaged \$550 million annually in Canada and \$4.9 billion in the U.S. from 1980 to 1985. AMC is building a \$760 million state-of-the-art assembly plant at Brampton, Ontario, with a world product mandate to produce 150 000 new intermediate automobiles per year. GM announced a number of investments, the most important of which is a \$2 billion Autoplex to produce a new line of front-wheel-drive cars. Chrysler and Ford also have made recent investments in their Canadian operations, particularly in the area of robotics and plant automation. Canadian automotive-parts manufacturers have also made significant investment in new products and technology.

VEHICLE ASSEMBLERS IN 1985

Sector Structure

The four major vehicle assemblers in Canada are General Motors of Canada Ltd., Ford Motor Company of Canada Ltd., Chrysler Canada Ltd., and American Motors Canada Ltd. These manufacturers account for virtually all the car manufacturing and almost all the Canadian truck production. The Canada-U.S. Auto Pact, in providing conditional duty-free access, enabled vehicle producers to rationalize production on both sides of the border.

Passenger-car Production

Canadian vehicle assemblers operated at full capacity and produced 1 070 800 passenger-cars in 1985, up from 1 022 728 in 1984, an increase of 4.7 percent. Production of cars was 34.9 percent higher in 1985 than the 1982 recession-year level when passenger-car production hit a record low of 794 000 units. This was the third straight year in which production has climbed steadily in response to the pent-up demand for cars in both Canada and the U.S. Cheaper oil prices have led to a steady demand in the U.S. for large Canadian-built cars. There also was a high demand for GM's Oshawa-built mid-size cars and Ford's sub-compact Tempo and Topaz models built in Oakville, Ontario. Certain large passenger-car models, such as GM's Pontiac Bonneville and Cutlass Supreme and Ford's Crown Victoria and Grand Marquis, were solely sourced for North America from Canada. Chrysler's mini-vans also were solely sourced from Canada. More than 80 percent of Canadian vehicle production was exported to the United States.

TABLE 1

CANADIAN MOTOR-VEHICLE PRODUCTION 1978-1985 ('000 UNITS)

<u>Year</u>	<u>Passenger Cars</u>	<u>% Change</u>	<u>Commercial Vehicles</u>	<u>% Change</u>	<u>Total</u>	<u>% Change</u>
1978	1140	-	678	-	1818	-
1979	988	(13.3)	644	(5.0)	1632	(10.2)
1980	847	(14.3)	527	(18.2)	1374	(15.8)
1981	806	(4.8)	524	(0.6)	1330	(3.2)
1982	794	(1.5)	448	(15.5)	1242	(6.6)
1983	940	18.4	547	22.1	1487	19.8
1984	1023	8.8	807	47.5	1830	21.8
1985	1071	4.7	856	6.5	1930	5.5

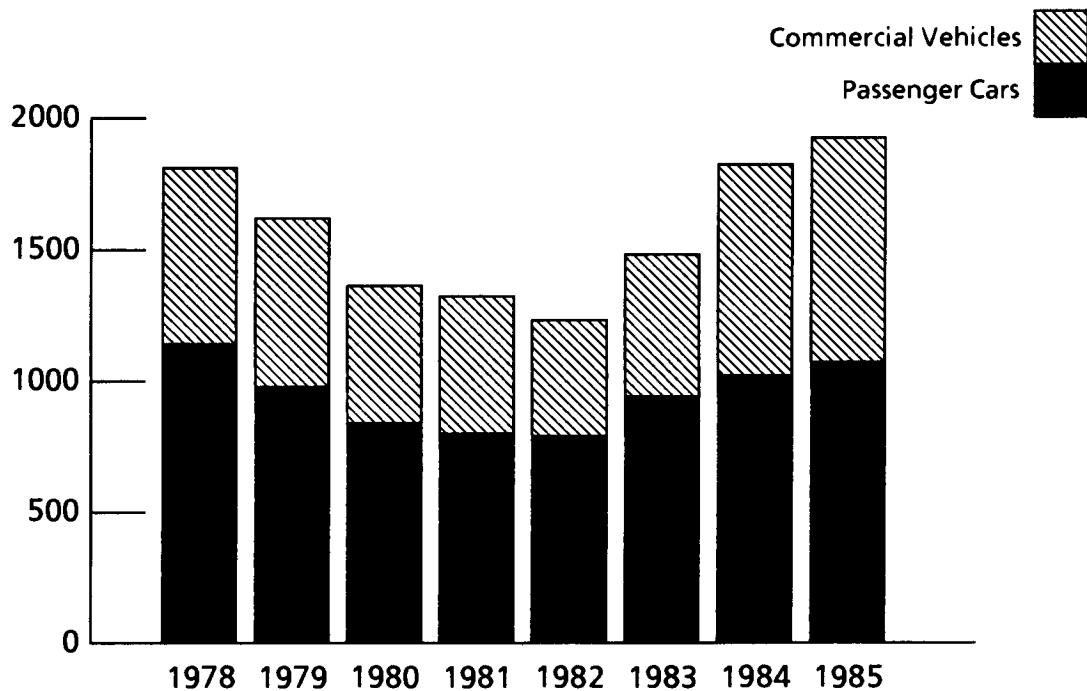
Source: Ward's Reports and MVMA

Notes: (1) Figures in the brackets show negative change

(2) Large increases in truck production in 1983 and 1984 reflect production of Chrysler's mini-vans, which are counted as trucks for statistical purposes.

Figure 1

CANADIAN MOTOR VEHICLE PRODUCTION (000 UNITS)
1978 - 1985



COMMERCIAL VEHICLE PRODUCTION

The commercial vehicle sector includes pick-up trucks, vans, medium- and heavy-duty trucks and buses. Production of commercial vehicles in Canada in 1985 reached a record high of 859 500 units (an increase of 6.5 percent), surpassing the former production record of 807 314 units established in 1984. Chrysler Canada's traditional full-size vans and its popular front-wheel-drive mini-vans were sourced entirely from Canada.

Out of the total of 859 500 commercial vehicles assembled in Canada in 1985, Chrysler Canada shipped a total of 390 120 units, or 45.4 percent of the total. Chrysler Canada set a production record in 1985, up 7.1 percent from the previous record of 364 377 units set in 1984.

GM Canada shipped 279 000 trucks and buses in 1985, up slightly from 277 000 units delivered in 1984. Ford Canada's truck production was up 5.8 percent to 164 000 units in 1985 compared to 155 000 units produced in 1984.

PASSENGER-CAR SALES

The continuing economic recovery both in Canada and the U.S. provided a stable environment for increased consumer spending on durable goods such as automobiles and light trucks. Higher levels of general employment, decreasing unemployment and lower interest rates substantially stimulated consumer spending in both countries. Similarly, lower consumer loan rates, enhanced by reduced-rate financing and added-options packages offered by the

vehicle manufacturers, propelled Canadian passenger-car sales to a record high level.

Passenger-car sales in Canada rose to 1 137 216 units in 1985 (an increase of 17.1 percent), up from 971 210 units sold in 1984. The previous record was established in 1979, when a total of 1 003 000 units were sold. However, unlike 1984 when the North American vehicle manufacturers accounted for most of the market growth, in 1985 they only captured about 42.2 percent of the total market growth of 166 000 passenger-cars. Accordingly, passenger-car market share of the North American vehicle producers in Canada decreased from 74.6 percent in 1984 to 69.9 percent in 1985. The North American producers sold 794 965 cars in 1985, compared to 724 932 units in 1984, an increase of 9.7 percent.

TABLE 2
Passenger-Car Sales in Canada (Thousands of Units)
1978 - 1985

<u>Year</u>	<u>Domestic Sales</u>	<u>Total Import Sales</u>	<u>Total Import Market Share %</u>	<u>Japanese Import Sales</u>	<u>Japanese Market Share %</u>	<u>Total Sales</u>
1978	816	173	17.5	113	11.4	989
1979	864	139	13.9	80	8.0	1 003
1980	741	191	20.5	138	14.8	932
1981	647	257	28.4	208	23.0	904
1982	489	224	31.4	178	25.0	713
1983	625	218	25.9	177	20.9	843
1984	725	246	25.3	171	17.6	971
1985	795	342	30.1	199	17.5	1 137

Source: Statistics Canada.

Imported Passenger-Car Sales

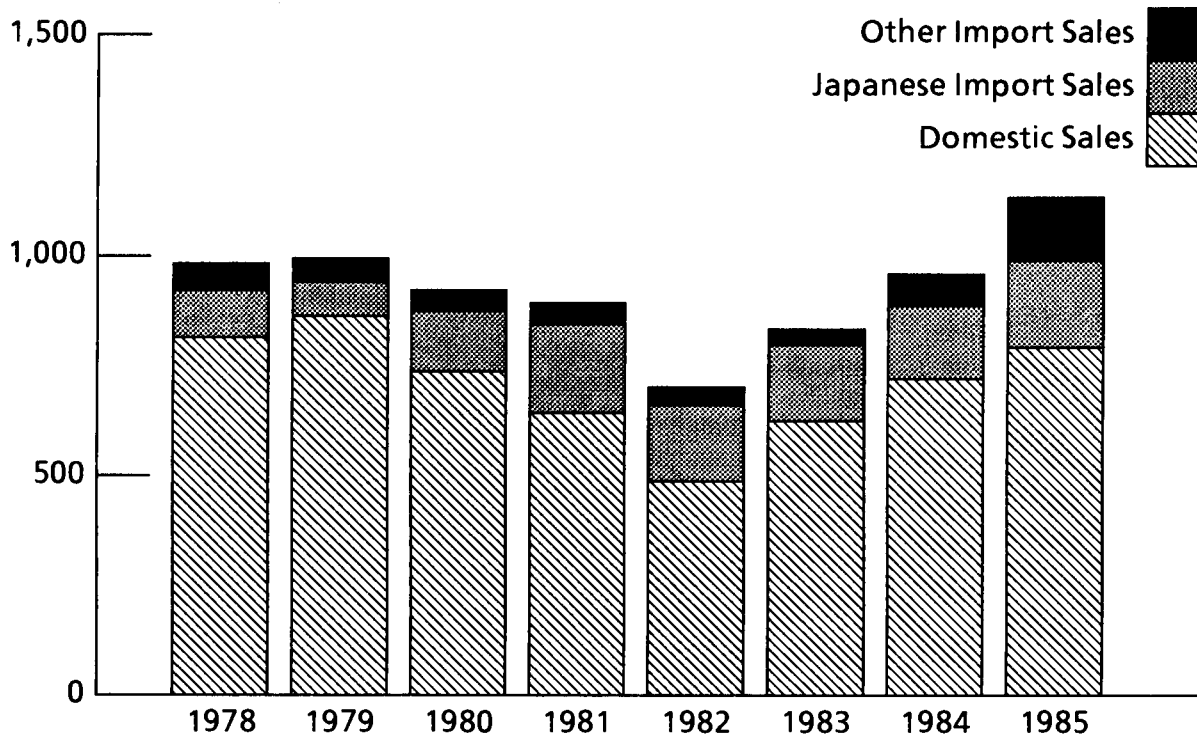
Sales of imported passenger-cars in Canada increased to 342 000 units in 1985, up from 246 000 units in 1984, an increase of 39 percent, compared to a 9.7 percent increase in sales of North American-built cars. As a result, the import penetration level increased from 25.3 percent in 1984 to 30.1 percent in 1985. Sales of Japanese-built cars increased by 28 000 units in 1985 to 199 000 units, up from 171 000 units in 1984, or an increase of 16.4 percent. As a result, the Japanese maintained their market share at 17.5 percent. Japanese automobile imports continued to be subject to voluntary export restraints.

Most of the increase in import penetration was caused by the large increase in import sales by Hyundai Motors of South Korea, which sold 79 000 cars in 1985 compared to 25 000 units in 1984. Accordingly, Hyundai's share of the Canadian passenger-car market increased from 2.6 percent in 1984 to about 7.0 percent in 1985. Thus, more than half of the increase in import sales is

attributed to increased sales by Hyundai, making it the first-ranking importer in 1985. Honda and Toyota of Japan ranked second and third respectively.

Figure 2

PASSENGER CAR SALES IN CANADA (Thousands of Units)
1978 - 1985

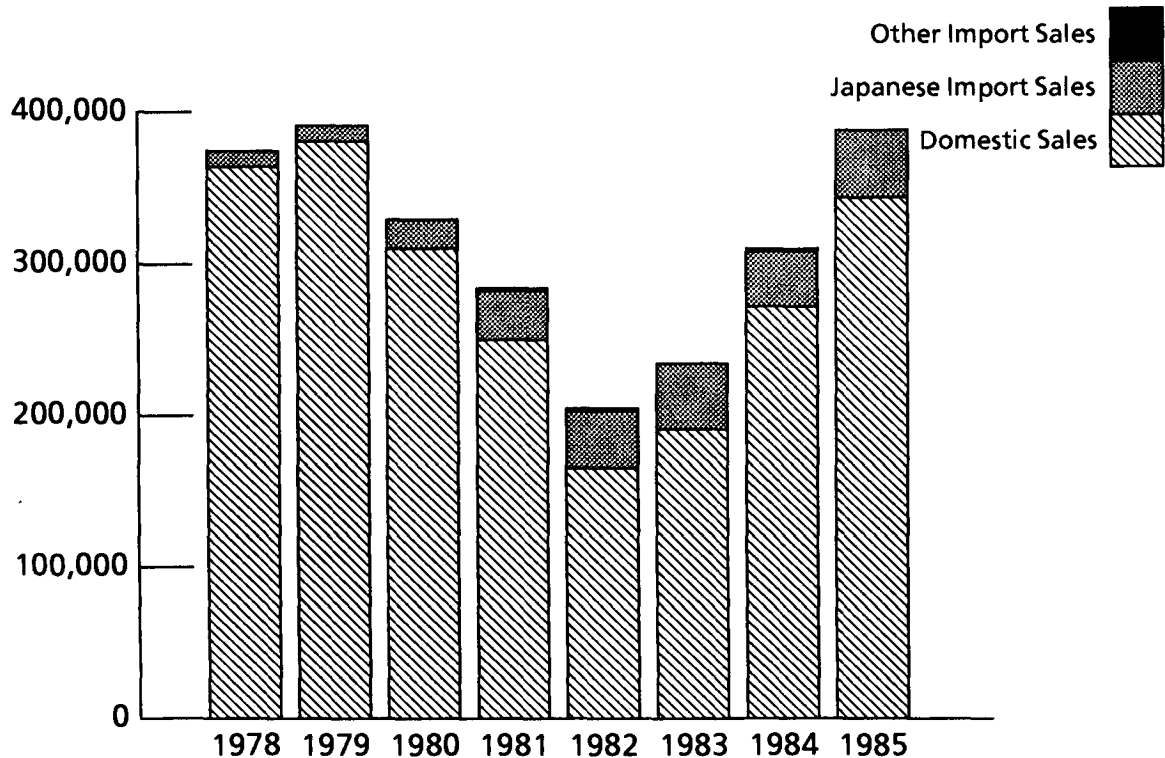


Commercial Vehicle Sales

Sales of commercial vehicles in Canada increased considerably in 1985 to 393 194 units, up from 312 292 units in 1984, an increase of 25.9 percent. The market shares held by the North American-built trucks and imported models remained constant in 1985 at 87.6 percent and 12.3 percent respectively. The market share held by the North American producers in 1983 was 79 percent.

The entry of new, domestically produced, competitive light trucks, particularly Chrysler's mini-vans, as well as increased sales of GM's and Ford's pick-up trucks, were instrumental in lowering the import penetration level from 19.5 percent in 1982 to 12.3 percent in 1984-1985. However, the statistics are somewhat inflated in favour of the North American producers in view of the large sales volume of mini-vans which, while counted as trucks, are mainly aimed at the passenger-vehicle market.

Figure 3
COMMERCIAL VEHICLE SALES IN CANADA
1978 - 1985



Sales of medium- and heavy-duty trucks, which mainly depend upon the level of economic activity such as movement of goods and construction activity, also were brisk. Sales of medium- and heavy-duty trucks increased to 29 654 units, up from 23 675 units in 1984, an increase of 25.3 percent which compares favourably with the increase in sales of light-duty trucks.

Ford's sales of medium- and heavy-duty trucks were up 23.3 percent, Freightliner 32.1 percent, International 26.8 percent, Mack 31.2 percent, Paccar 19.7 percent, Western Star 27.5 percent and General Motors 13.3 percent.

CANADA-UNITED STATES TRADE IN AUTOMOTIVE PRODUCTS

Canada-U.S. automotive trade is largely governed by the Canada-United States Automotive Product Agreement (Auto Pact) of 1965. The agreement has played a significant role in the progress and development of the Canadian automotive industry. The Auto Pact provides for duty-free trade in new vehicles and original-equipment parts under certain agreed conditions, and has served to rationalize the production of Canadian and U.S. vehicles and parts. More than 80 percent of the Canadian vehicle output is destined for the U.S. market, and

approximately 70 percent of the Canadian market is serviced by U.S.-built vehicles. The two-way Canadian-U.S. trade in automotive products has grown from \$1.2 billion in 1965 to \$62.6 billion in 1985.

The expansion in exports of automotive products moderated to 13.2 percent in 1985 and reached \$33.8 billion following an increase of 42.9 percent in 1984 when the total automotive exports amounted to \$29.9 billion. Exports of cars registered an increase of 16.8 percent and represented 55.5 percent of the increase in total automotive exports. Exports of trucks and other motor vehicles increased by 9.2 percent reaching \$6.4 billion, up from \$5.9 billion in 1984. Exports of parts were up 11.9 percent, and amounted to \$11.5 billion compared to \$10.3 billion in 1984. A continuing pent-up demand for Canadian-built vehicles and for Canadian-made parts for the vehicle assembly activities in the U.S. largely contributed to the increase in Canadian exports.

Figure 4

CANADA - U.S. TRADE IN AUTOMOTIVE PRODUCTS
1979 - 1985

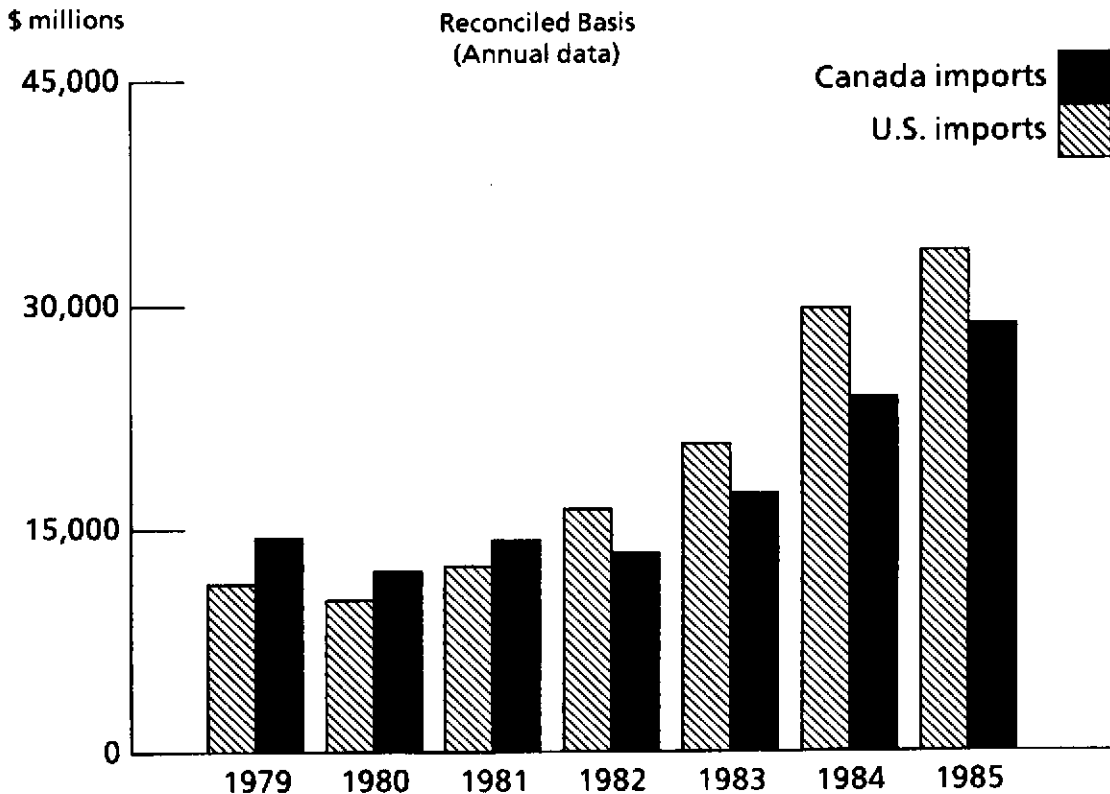


TABLE 3

Canada-United States Trade in Automotive Products,
Reconciled Basis

	Annual Totals			Value Change		% Change	
	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1984</u>	<u>1985</u>	<u>1984</u>	<u>1985</u>
	(Millions of dollars - Canadian)						
United States Imports from Canada							
Cars	8 973	13 085	15 277	4 112	2 192	45.8	16.8
Trucks and other motor vehicles	4 437	5 880	6 422	1 443	542	32.5	9.2
Parts	7 056	10 287	11 512	3 231	1 225	45.8	11.9
Tires and tubes	419	598	592	179	6	42.7	1.0
Total	20 885	29 850	33 803	8 965	3 953	42.9	13.2
Canadian Imports from the U.S.							
Cars	4 886	6 085	8 566	1 199	2 481	24.5	40.8
Trucks and other motor vehicles	1 129	2 039	2 570	910	531	80.6	26.0
Parts	11 446	15 446	17 438	4 000	1 992	34.9	12.9
Tires and tubes	225	345	264	120	-81	53.3	-23.5
Total	17 686	23 915	28 838	6 229	4 923	35.2	20.6
Balance							
Cars	4 087	7 000	6 711	2 913	-289		
Trucks and other motor vehicles	3 308	3 841	3 852	533	11		
Parts	-4 390	-5 159	-5 926	-769	-767		
Tires and tubes	194	253	328	59	75		
Total	3 199	5 935	4 965	2 736	-970		

Excluded: adjustments to values of imported parts for special tooling charges.

Source: Statistics Canada

Imports of automotive products rose 20.6 percent to \$28.8 billion after an increase of 35.2 percent in 1984. Imports of cars registered a large increase of 40.8 percent to \$8.6 billion compared to \$6.1 billion in 1984. Imports of trucks and other vehicles increased by 26.0 percent to \$2.6 billion, up from \$2.0 billion in 1984. Imports of parts, on the other hand, increased by 12.9 percent to \$17.4 billion, compared to \$15.4 billion imported in 1984. Strong economic growth in both countries largely led to this expansion of two-way automotive trade between Canada and the U.S.

In 1985, Canada posted a \$5 billion automotive trade surplus with the United States. The 1985 surplus was down by \$970 million compared to the 1984 surplus of \$5.9 billion, for a decline of 16.3 percent.

Except for a surplus of \$446 million posted by Canada during 1970-72, Canada experienced recurring trade deficits in automotive products with the United States between 1965 and 1981. The cumulative Canadian deficit-during this period amounted to \$14.7 billion. Since 1982, due to the relative strength of the U.S. economy, the lower value of the Canadian dollar and sole sourcing from Canada of certain models, Canada is now in a surplus position of \$2.3 billion on a cumulative basis for the period 1965-1985.

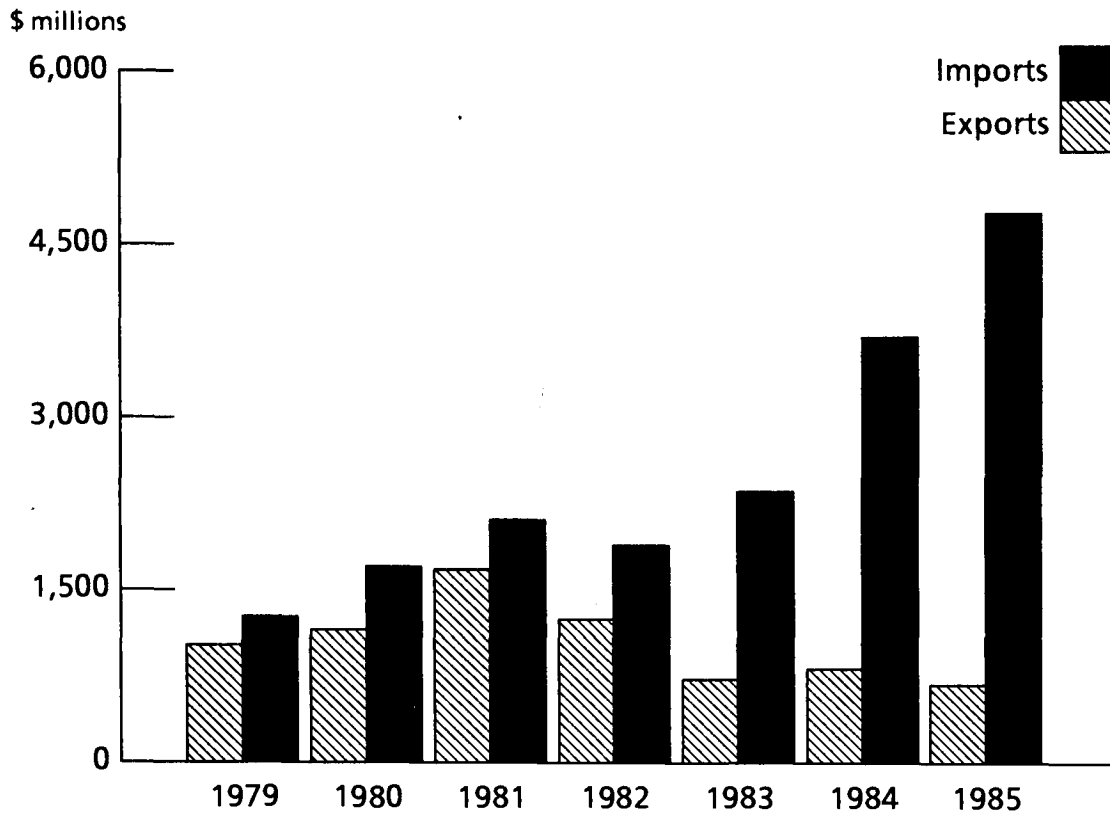
AUTOMOTIVE TRADE WITH OVERSEAS COUNTRIES

The trade deficit in automotive products with countries other than the United States has increased from \$445 million in 1981 to \$2.9 billion in 1984 and \$4.1 billion in 1985. In 1985, the deficit in vehicle trade amounted to \$2.8 billion. The deficit with overseas countries was more than three-quarters of the value of the trade surplus with the United States.

These developments are attributed to high levels of vehicle imports and increasing levels of parts imports from offshore countries to support the vehicle sales. In addition, there has been an increasing trend by the traditional domestic vehicle manufacturers during the last few years to source automotive parts offshore from Japan and newly industrialized countries such as South Korea, Taiwan, Mexico and Brazil. The total non-U.S. imports of parts by Canada have grown from \$198 million in 1978 to \$1.3 billion in 1985. Many of the high-value components such as engines and transmissions are being imported by Canadian vehicle manufacturers.

Figure 5

CANADA - OVERSEAS TRADE IN AUTOMOTIVE PRODUCTS
1979 - 1985



Imports of cars from overseas countries were up 42.6 percent. Imports of cars (in terms of number of units) from Japan increased by 20.5 percent, and from West Germany 47.8 percent (41 100 units, up from 27 800 units in 1984). Imports from France, however, declined 45 percent (to 7700 units, down from 14 000 units), while imports from Sweden increased to 5100 units, up from 2600 units in 1984. Imports from other overseas countries reached 100 000 units, compared to 34 000 units in 1984. About 80 percent of this increase is attributed to sales by Hyundai.

TABLE 4

**Canada-Overseas Countries Trade in
Automotive Products (Customs Basis)**

	Annual Totals		Value Change			% Change	
	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1984</u>	<u>1985</u>	<u>1984</u>	<u>1985</u>
				(\$C million)			
Domestic Exports							
Cars	135	189	39	54	-150	40.0	79.4
Trucks and other motor vehicles	146	144	177	-2	33	1.4	22.9
Parts	254	280	307	26	27	10.2	9.6
Tires and tubes	18	30	45	12	15	66.7	50.0
Re-exports	194	168	134	-26	-34	-13.4	-20.2
Total Canadian Exports	747	811	702	64	-109	8.6	-13.4
Imports							
Cars	1 322	1 805	2 726	483	921	36.5	51.0
Trucks and other motor vehicles	304	372	381	68	9	22.4	2.4
Parts	613	1 328	1 459	715	131	116.6	9.9
Tires and tubes	128	207	207	79	0	61.7	0.0
Total Canadian Imports	2 367	3 712	4 773	1 345	1 061	56.8	28.6
Balance							
Cars	-1 187	-1 616	-2 687	-429	-1 071		
Trucks and other motor vehicles	-158	-228	-204	-70	24		
Parts	-359	-1 048	-1 152	-689	-104		
Tires and tubes	-110	-177	-162	-67	15		
Re-exports	194	168	134	-26	-34		
Total	-1 620	-2 901	-4 071	-1 281	-1 170		

Source: Statistics Canada

EMPLOYMENT AND LABOUR RELATION TRENDS

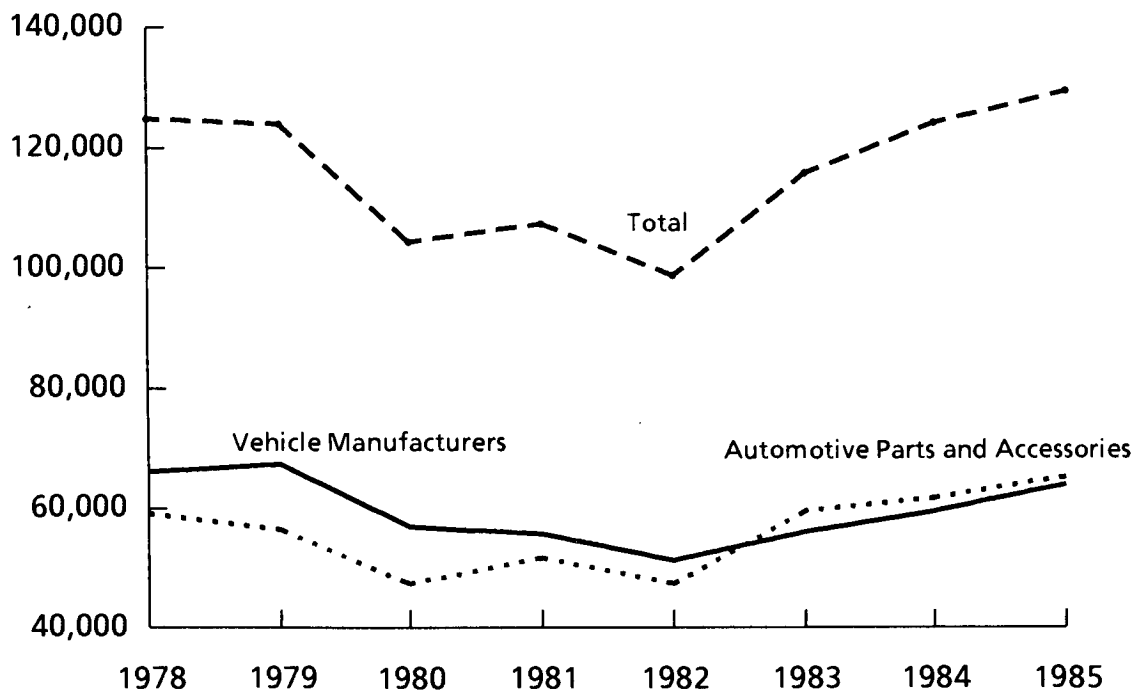
Industry Employment

As the automotive production activity continued to increase in both Canada and the U.S., industry employment in Canada also set a new record of 129 300 employees in 1985, an increase of 4.5 percent over the 1984 employment level of 123 800 employees. It also may be added that the 1985 employment was 31 percent higher than the 1982 level when employment in the Canadian automotive industry reached 98 700 workers, the lowest level in the last decade and half. The previous peak record was set in 1978 when employment reached 125 000 workers.

All sub-sectors of the automotive industry registered increases in employment. Employment in the automotive parts and accessories sectors increased by 6.0 percent over 1984, while employment in the vehicle-assembly sector rose by 7.6 percent. The truck-body and trailer sector employment registered an increase of 8.0 percent, and in the automotive-fabric sector employment increased by 4.1 percent.

Figure 6

EMPLOYMENT IN THE CANADIAN AUTOMOTIVE INDUSTRY BY SECTOR
1978 - 1985



Industrial Relation Trends

In December 1985, the Canadian wing of United Automotive Workers (UAW) officially severed its organizational links with the American wing of the UAW. The historic break was triggered by a number of factors including a fundamental difference over the appropriate strategy to pursue, given the changes occurring in the North American automotive sector.

The general concern that the formation of the Canadian Auto Workers (CAW) could bring about greater instability in the Canadian labour scene has not occurred, and the transition has been remarkably smooth and peaceful. Since gaining independence, the CAW has successfully negotiated new contracts with Chrysler Canada and American Motors.

Ford/GM Contracts

Three-year contracts were signed with both GM and Ford in November 1984. The contract with General Motors followed a 13-day strike in Canada after GM workers in the U.S. reached a settlement following a number of selected strikes there. There were no strikes involved at Ford.

Chrysler Contract

Chrysler workers in Canada and the U.S. signed new contracts on October 20 and October 23, 1985, respectively. The new agreements were reached following brief strikes by 80 000 Chrysler workers in both the United States and Canada.

The Canadian agreement with Chrysler somewhat differs from that in the U.S.A. The Canadian contract was negotiated for two years, rather than three years as in the U.S., and expires at essentially the same time as the Ford and GM contracts.

Both contracts provide for a lump-sum payment per worker as compensation for labour concessions during previous rounds of negotiations. The Canadian contract restores wage and benefit parity with Ford and GM workers, but does not include job-security provisions along the line provided to Chrysler workers in the U.S. In addition, Canadian labour leaders have consistently opposed profit-sharing arrangements such as those provided in the U.S. accord.

American Motors Contract

After a brief, 36-hour strike, the CAW and American Motors of Canada signed a new three-year contract on September 20, 1986. The new contract follows the pattern set at the larger Canadian auto companies and provides a break-through, bringing AMC workers into pension parity with their compatriots at General Motors, Ford and Chrysler for the first time in their history.

CHAPTER II

FINANCIAL PERFORMANCE AND COST-CONTROL TRENDS
IN THE CANADIAN VEHICLE MANUFACTURING INDUSTRY

INTRODUCTION

This chapter provides an analysis of the cost-control trends in the Canadian vehicle-manufacturing industry during the last few years, as well as providing detailed analysis of financial performances, both in aggregate terms and by individual companies.

North American vehicle manufacturers are continuing to make major efforts to control fixed and variable costs in order to improve their competitiveness in relation to foreign vehicle manufacturers, particularly the Japanese. The industry has made substantial progress in its push for cost competitiveness, but the cost gap continues to persist and has become a moving target as Japanese vehicle manufacturers also continue to lower costs to maintain their competitive edge.

COST-CONTROL TRENDS

Since 1981, the Canadian vehicle manufacturers have been making substantial progress in improving the revenue/cost ratio which measures the degree in which costs increase in relation to increases in revenue over time.

Table 5 shows the revenue/cost ratios for General Motors, Ford and Chrysler. American Motors could not be included in calculating some of these indicators, as the required information was not available.

TABLE 5

Costs and Revenue Trends
Big-Three Canadian Vehicle Manufacturers

	1981-1985				
	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
Revenue (\$ millions)	17 380	18 083	24 323	31 997	37 180
Cost of Sales (\$ millions)	17 677	18 341	23 419	29 862	35 476
Revenue/Cost	0.98	0.99	1.04	1.07	1.05
Unit Sales ('000)	1 686	1 576	2 036	2 471	2 692
Revenue/Unit	10 308	11 474	11 946	12 949	13 811
Cost/Unit	10 485	11 638	11 502	12 085	13 178
Gross Profit Margin/Unit	(177)	(164)	444	864	633

Source: Company Financial Reports

The information presented in Table 5 indicates that the revenue/cost ratio of the Big Three vehicle manufacturers has improved substantially since 1982.

While the revenue from sales of vehicles increased by 105.6 percent between 1982 and 1985, the cost of sales, defined as total operating costs, increased by only 93.4 percent, thus showing an improvement of 12.2 percentage points. The revenue/cost ratio showed an improvement of about seven percent in 1984 and five percent in 1985, as compared to 1981 and 1982. However, the revenue/cost ratio after showing improvements for two consecutive years (1983 and 1984), slightly decreased in 1985, primarily due to increased cost of concessionary financing and other incentives offered by the vehicle manufacturers to stimulate vehicle sales.

Among the Big Three, General Motors showed the best results in revenue/cost ratio improvements, while Ford and Chrysler stood at par with each other. It also is evident from Table 5, that the gross profit margin per unit of sales also increased substantially in 1983 and 1984 (\$444 and \$864 respectively), compared to losses per unit of sales of \$177 and \$164 in 1981 and 1982 respectively. The gross profit margin per unit in 1985 however, decreased to \$633 after increasing for two consecutive years, again largely due to increased costs of reduced-rate financing offered to consumers by the vehicle manufacturers.

Among the Big Three, the gross profit margin varied significantly. General Motors showed the highest gross profit margin per unit: \$642 in 1983, \$1302 in 1984 and \$973 in 1985. Ford's gross profit margin per unit of sales was \$157 in 1983 and \$467 in 1984, but declined to \$328 in 1985. compared to losses per unit of \$453 and \$369 in 1981 and 1982 respectively. Chrysler, on the other hand, showed somewhat better results than Ford: \$294 in 1983, \$507 in 1984 and \$370 in 1985. GM's higher gross profit margin per unit is attributed to its success in launching its best-selling mid-size, front-wheel-drive models.

The continuing upturn in the North American auto industry, which began in 1983, and the record profits made by the industry have substantially improved its financial position. The dramatic cost-cutting efforts which began in 1979-80 are continuing and the industry has been able to keep costs under effective control, as is evident from the above analysis.

The impact of the cost-control efforts by the Big Three Canadian vehicle manufacturers in terms of payroll costs per unit of sales (including domestic shipments, exports and imports) is shown in Table 6. The Big Three payroll cost per unit of sales in current dollar terms has remained virtually constant over the period 1981-1985. Another indicator which can be used to measure the payroll cost-control efforts of the industry is the payroll as percentage of sales revenue. It is evident from Table 6 that the payroll as a percentage of sales for the Canadian Big Three vehicle manufacturers decreased from 10 percent in 1981 to 7.8 percent in 1985, a decrease of more than two percentage points or about 21.8 percent. This ratio should improve during 1986 as a result of the continuing improvement in worker productivity.

TABLE 6

Employment Payroll Cost and Revenue
Big-Three Vehicle Manufacturers
1981 - 1985

	Unit Sales ('000)	Sales Revenue (\$ million)	Employment	Payroll (\$ million)	Payroll/ Unit Sales (\$)	Payroll/ Employee (\$)	Payroll as % of Sales
1981	1 686	17 380	66 396	1 734	1 028.47	26 116	9.98
1982	1 576	18 083	60 579	1 720	1 091.37	28 393	9.51
1983	2 036	24 323	68 938	2 128	1 045.19	30 868	8.75
1984	2 471	31 997	73 639	2 564	1 037.64	34 819	8.01
1985	2 692	37 180	75 962	2 899	1 076.89	38 164	7.80

Source: Financial reports of companies.

PRODUCTIVITY TRENDS

Productivity gains will continue to play a key role in the Canadian vehicle industry's efforts to meet its ambitious cost-control objectives. Table 7 shows productivity level in the Canadian motor vehicle industry (number of vehicles produced per employee) between the period 1981 and 1985. The number of vehicles produced per employee dramatically increased from 23.1 vehicles per employee in 1981 to 30.2 vehicles per employee in 1985, an impressive increase of 30 percent in labour productivity. These numbers are, however, significantly biased upwards, in view of the substantial overtime worked by employees to meet the pent-up demand for vehicles during 1984 and 1985.

TABLE 7

Canadian Vehicle Output Per Employee
Big-Three Vehicle Manufacturers
1981-1985

	1981	1982	1983	1984	1985
Vehicle Production ('000)	1 281	1 236	1 502	1 830	1 930
Employment	55 500	51 400	55 900	59 400	63 900
Vehicles/Employee	23.1	24.1	26.9	30.8	30.2

Source: Company financial reports, Ward's Reports

The appropriate measures to use would be, of course, the hours worked per employee, which could show a more accurate measure of productivity changes. However, person-hour data is not readily available and, therefore, the number of vehicles produced per employee is used as proxy for productivity movements over time.

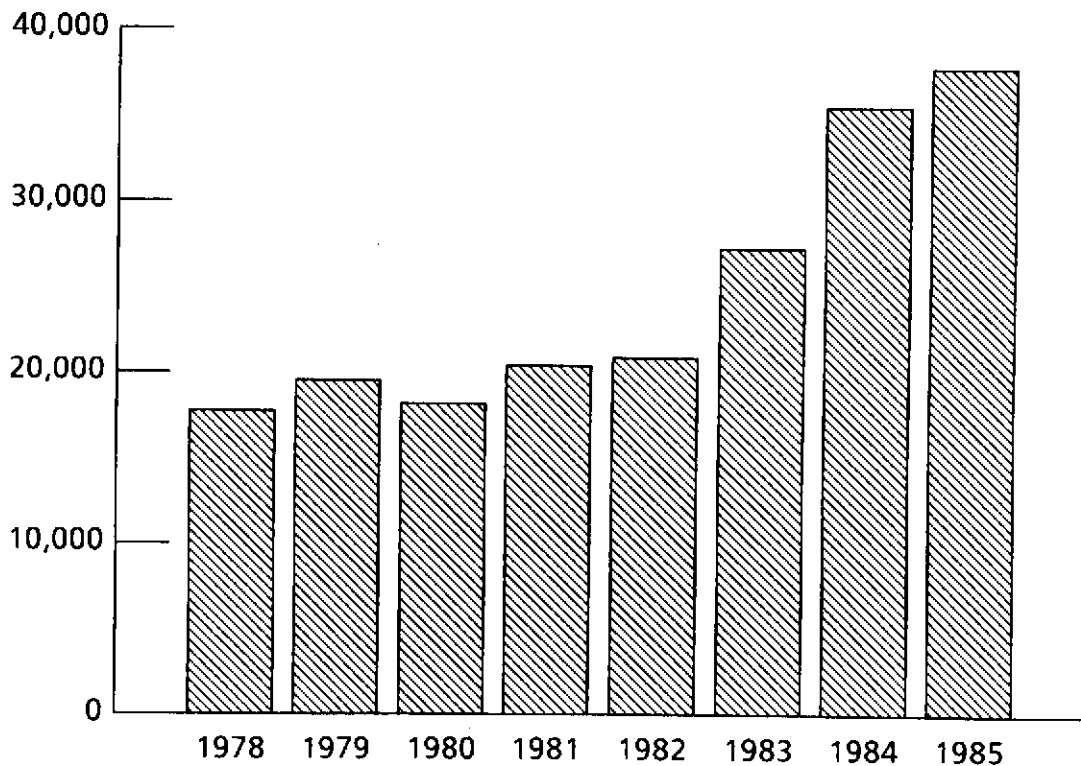
These results show that the output per worker currently stands at the highest level in the industry's history and is expected to increase further, although somewhat moderately, in the coming years as the North American vehicle manufacturers continue to push to improve their competitiveness to meet the foreign-import challenge. Productivity increases will be possible as the industry increasingly uses new methods and processes, such as computer-assisted design and computer-assisted manufacturing (CAD/CAM), robotics, modular-assembly techniques, just-in-time delivery, and changes in the organization of work systems.

FINANCIAL PERFORMANCE OF CANADIAN VEHICLE MANUFACTURERS

The Big Three Canadian vehicle manufacturers continued to show strong financial performance for the third consecutive year. The Big Three exhibited their second-best performance in 1985, after showing record nominal earnings and cash flow from operations in 1984. All major financial indicators pertaining to these companies continued to show improvements.

Net sales of the Big Four (General Motors, Ford, Chrysler and American Motors) increased by 6.5 percent, up from \$35.5 billion in 1984 to \$37.8 billion in 1985.

Figure 7
NET SALES OF THE FOUR MAJOR ASSEMBLERS IN CANADA
1978 - 1985
(\$ millions)



Net income of the Big Four (General Motors, Ford, Chrysler and American Motors) was down to \$993 million in 1985, compared to \$1.6 billion in 1984 (a decrease of 38.2 percent). It is still judged to be high by industry standards. Net income as percentage of sales for the Canadian Big Four combined was 2.6 percent, compared to 4.5 percent in 1984 and 3.9 percent in 1983 (Table 8). In historical perspective, net income in 1983 was \$946 million, while the consecutive aggregate loss for the three recessionary years of 1980-1982 amounted to \$569 million. During 1978 and 1979, which were considered the best years in recent history, the Big Four net income amounted to \$209 million and \$192 million respectively.

TABLE 8

Financial Performance of the Four Major Assemblers in Canada
1978-1985
(\$ millions)

<u>Year</u>	<u>Net Sales</u>	<u>Net Income (Loss)</u>	<u>Net Income (Loss) As % of Sales</u>	<u>Capital Expenditures Plant and Equipment*</u>	<u>Working Capital</u>	<u>Long-Term Debt</u>
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	1 031	108
1985	37 763	993	2.63	948	1 394	15

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

Source: Department of Regional Industrial Expansion and company annual reports.

Working capital, which is measured by current assets minus current liabilities, rose from \$1031 million in 1984 to \$1394 million even though the net earnings of the Big Four declined from \$1609 million in 1984 to \$993 million in 1985. The increase in working capital is largely attributed to the fact that companies had paid off most of their debts in 1983 and 1984, and left a large portion of their earnings invested in working capital.

Massive capital spending requirements, accompanied by record losses suffered by the industry during the period 1980-1982, led to a record amount of borrowing by the Big Four Canadian vehicle manufacturers. However, record earnings in 1983 and 1984 permitted these companies to retire a significant portion of their debts and improve their cash resources and working capital position to meet both short-term and long-term investment requirements.

Capital Spending

After a considerable slowdown in capital spending in 1984, a new upturn in the capital spending cycle occurred in 1985. Capital expenditure on plants and equipment by the Big Four surged to \$948 million, compared to \$489 million in 1984. The industry is now beginning to enter into a new round of the investment spiral. The new GM-10 program in Oshawa and AMC's new plant in Brampton will be the most significant investments of Canadian vehicle manufacturers during the coming years.

Return on Assets

The total assets of Big Three Canadian vehicle manufacturers (GM, Ford and Chrysler) increased to \$8.9 billion in 1985, up from \$7.7 billion in 1984, an increase of 15 percent. Net earnings, on the other hand, were \$1030 millions in 1985, down from \$1514 million. Accordingly, net earnings as a percentage of assets declined in 1985 to 11.6 percent, compared to 19.5 percent in 1984. This ratio, however, compares favourably with other Canadian manufacturing industries. Higher taxes, cut-rate financing, pricing pressure from foreign competition and increases in various operating costs are largely blamed for the lower net earnings and profitability ratios in 1985.

TABLE 9

**Return on Assets of Big Three
Canadian Vehicle Manufacturers
1984-1985**

	<u>1985</u>	<u>1984</u>
Total Assets (\$ million)	8 908	7 746
Net Earnings (\$ million)	1 030	1 514
Net Earnings as % of Assets	11.6	19.5

Source: Company reports, 1985

Performances among the Big Four varied considerably. The balance-sheet analysis for individual companies is provided under each company heading in the following section.

General Motors

At General Motors of Canada, 1985 was another performance-record-breaking year. Record net sales of \$18 993 million surpassed 1984's record of \$16 300 million. Net income, however, was down to \$713 million, compared to the record net income of \$881 million in 1984. Accordingly, net income as percent of sales was somewhat lower, 3.8 percent compared to 5.4 percent in 1984. The decline in net income is mainly attributable to higher costs such as the cost associated with lower financing rates and other incentive packages which were offered to stimulate sales as well as to maintain market share.

This is evident from the fact that selling and general administrative expenses were up about \$95 million (33.5 percent increase), while costs of sales and other operating charges were up 20.5 percent.

Production and unit-sales records also were established in 1985. Despite a shut-down of Oshawa #1 assembly plant during change-over to front-wheel-drive cars during January and February 1985 and a one-day shut-down for line-speed acceleration at Ste. Thérèse, GM set a production record of 562 083 passenger cars and 279 363 trucks and buses. Production of vehicles was up by 16 000 units from the previous record set in 1984, when GM produced 826 000 vehicles.

GM Canada sold 537 000 passenger cars and trucks in 1985, an increase of 60 000 units or 12.6 percent over 1984, and the highest combined-unit volume sales since 1980.

In 1985, employment and payrolls stood at all-time highs. Employment increased by more than 4 000 workers during the year. On-roll employment in December 1985 was 48 100 persons, an increase of 2700 persons from the previous high of almost 45 400 persons at December 31, 1984. Total payrolls for the year were almost \$1.7 billion, up 15.6 percent from \$1.5 billion in 1984.

Investment

In 1985, GM invested \$541 million in new plants and equipment. In addition, another \$133 million was spent on special tools. For 1984, investments in new plants and equipment amounted to \$185 million, and another \$83 million was spent on special tools. This was GM's second largest investment since 1981 when the company made a \$798 million investment in new plants and equipment to modernize its facilities and upgrade its product lines. Since 1981, GM has invested \$1.8 billion in Canada in new plants and equipment (excluding tooling expenditure), thus showing GM's continuing commitment to contributing to Canada's economic growth.

In addition to existing capital spending commitments of \$800 million, more than \$2 billion will be invested to expand and modernize General Motors of Canada's Oshawa assembly facilities into a synchronized high tech manufacturing system called GM Autoplex which will contribute to high quality and greater economies in component transportation and handling.

Stamping Plant

GM Autoplex will feature a \$228 million stamping plant contiguous with the Oshawa car and truck assembly plants and painting facility. This represents a substantial change from the traditional approach to metal-stamping operations and will provide major opportunities for the Canadian steel industry.

Investment in Parts Facilities

GM Canada also is spending \$344 million at St. Catharines to produce the high-tech, multi-port, fuel-injected and throttle-body-injected V-6 and V-8 engines for 1987. The St. Catharines metal-castings operations, the engine plant and the axle plant form the largest automotive component manufacturing facilities in Canada, with more than 325 150 m² (3.5 million sq. ft.) of floor space. The St. Catharines facility makes GM the largest employer in the Niagara peninsula, employing almost 10 000 people. It not only supplies GM's Canadian assembly operation, but contributes significantly to Canadian exports through sales to GM plants in the U.S.

Windsor Transmission and Trim Plants

GM Canada employs more than 6000 people in its transmission and trim plants. In 1986, \$31 million will be spent to increase output at the Windsor transmission plant. The Windsor trim plant operated at full production level in 1985 and a major new product, the seat system for the new Detroit-Hamtramck Assembly Centre, was added for the start of the 1986 model year.

An additional \$18 million was being spent in 1985-86 at the Ste. Thérèse car assembly plant to increase the line speed from 42.5 to 46 units per hour.

Ford Motor Company of Canada

Ford Motor Company of Canada also recorded higher production and sales for the third consecutive year. Production of cars and trucks was the highest ever achieved in company's history. Ford produced 657 000 cars and trucks in 1985, compared to 595 000 vehicles produced in 1984, a 10.4 percent increase.

Similarly, sales of cars and trucks in Canada were up 20.5 percent, increasing from 264 000 units in 1984 to 318 000 units in 1985. In dollar terms, net sales were up \$1716 million, from \$9423 million in 1984 to \$11,139 million in 1985, an increase of 18.2 percent. The increase in sales reflected the continuing high demand for vehicles in both Canada and the U.S.

Ford's net earnings in 1985 amounted to \$179 million, down from \$352 million in 1984. This decrease in net earnings was again due to extraordinary items, such as return of the company to full taxpayer level as the company reached 50 percent effective tax-rate status. The higher net income in 1984 was due to an extraordinary tax recovery of \$134 million. Accordingly, Ford's return on assets (net earnings as a percentage of assets) was six percent in 1985, compared to 12.7 percent in 1984.

Unfavourable foreign exchange costs resulting from the weakening of the Canadian dollar, higher sales incentive costs reflecting competitive market conditions and costs associated with new model introduction contributed to the decline in profits. These factors, however, were partially offset by increased vehicle sales and manufacturing efficiencies.

The company maintained a high level of employment. Ford's total Canadian employment in 1985 was 15 500, slightly down from 15 800 in 1984, but considerably up from the lowest level of 12 400 in 1981. It may be pointed out, however, that it is doubtful the employment level will ever reach the peak level record of 18 700 set in 1978. This is due to improvements in productivity levels, resulting from a high use of capital and technological factors.

Passenger-car deliveries by Ford dealers in 1985 reached 193 319 units, up 30 867 units, or 19 percent, over 1984. Ford's car sales in 1985 were the highest since 1979, and the Ford Tempo with 47 692 sales was the top-selling North American-produced car in Canada. Combined sales of Tempo and Topaz hit 71 267 units, an increase of 47.3 percent over 1984. Ford's LTD and Marquis models, with the exception of the Crown Victoria and Grand Marquis, were phased out in 1985 and replaced by the new Taurus and Sable lines introduced in late December of 1985. Equally impressive were Ford of Canada's truck sales of 115 184 units in 1985 (an increase of 28 percent) up from the 90 131 units in 1984.

Chrysler Canada

Chrysler Canada recorded its fourth consecutive year of higher production and vehicle sales. Sales in 1985 were up 11 percent to \$7.0 billion, compared to \$6.3 billion in 1984. Operating earnings were down to \$221 million in 1985 compared to \$282 million in 1984, and net earnings were \$138 million compared to \$281 million in 1984 and \$119 million in 1983, as a result of the return of Chrysler to full taxpayer status. Higher net earnings were shown in 1984, largely as a result of an extraordinary item, i.e. the effect of utilization of the remaining balance of tax-loss carry-forwards and re-instatement of deferred tax debits to a total of \$104 million, compared to \$14 million in 1985.

Chrysler's working capital increased from \$186 million in 1984 to \$298 million. The increase again occurred largely as a result of decrease in debt liabilities piled up during the 1980-82 recession due to heavy losses and corresponding demands for new investment to modernize existing plants and bring in new product lines.

Chrysler Canada's assembly and components plants continued to operate at full capacity throughout 1985. Factory shipments in Canada were 249 043 vehicles, and an additional 347 501 units were exported: a total of 596 544 units. This represents an increase of six percent over the 562 754 vehicles sold in 1984. The increase in sales reflects continuing high demand and consumer acceptance of Chrysler's Windsor-built Magic Wagons (full-size vans) and mini-vans in spite of new entries from Ford and General Motors.

The Windsor assembly plant production was increased twice during 1985 to its current level of 1024 Magic Wagons and mini-vans per day on a two-shift basis. Following completion of a \$35 million plant modernization and expansion program, production of full-size vans at the Pillette Road plant was increased

from 448 to 496 vehicles a day, also on two-shift basis. Parts shipments at Chrysler's Ajax trim plant, which produces soft interior trim parts for all Chrysler's North American vehicle assembly plants, were up seven percent.

Chrysler Canada's employment continued at a high level, reaching 12 356 employees in 1985, compared to 12 448 in 1984 and 12 028 in 1983. In 1981 and 1982 Chrysler's employment was 10 920 and 11 176 respectively.

In October 1985, the company negotiated an historic two-year labour contract with the newly independent CAW. Under the new contract, all eligible Chrysler Canada employees and retirees received a lump-sum bonus payment of \$1000 and their Chrysler shares acquired through the Chrysler Employee Stock Ownership Plan.

American Motors of Canada

American Motors of Canada was the only vehicle manufacturer among the Canadian Big Four which posted a net loss -- \$37.1 million -- in 1985, compared to \$9.3 million profits in 1984. Sales, as a whole, declined from \$771 million in 1984 to \$590 million in 1985, a decline of 23.5 percent. The consolidated net loss for the corporation was \$125 million in 1985, compared to \$15.5 million profits posted in 1984. Net loss from Canadian operations constituted 6.3 percent of total Canadian sales revenue, while the net loss for the corporation as a whole was 3.1 percent of the consolidated sales.

The primary reason for the losses in 1985 was the company's narrow range of products, particularly its heavy dependence on the sub-compact, passenger-car market. Sales of Alliance and Encore were down substantially from 1984, as competition from offshore producers, especially Japan and Korea, was very strong.

American Motors' Jeep sales, however, were strong, and a record 192 835 Jeep vehicles were sold in the United States and Canada during 1985. The company expanded the Jeep line in 1985 with the addition of the award-winning, four-wheel-drive Comanche pick-up truck.

In order to broaden its product offerings, the company is making important strides in its crucial product-development program by building a brand new, state-of-the-art assembly plant in Brampton, Ontario. The company is planning to manufacture a new state-of-the-art, mid-size car and make an entry in the growing, and more profitable, intermediate-size segment of the North American passenger-car market. In the first part of 1987, the company also plans to import a full line of high-volume compact cars from Europe, as well as a high performance sports car -- the Renault Alpine. This broadening of the product range should take American Motors into the mainstream of the auto market. The company plans to invest \$2 billion in facilities, equipment and tooling over the next five years in its North American facilities.

CHAPTER III

PERFORMANCE AND COMPETITIVE CONDITIONS IN
THE CANADIAN AUTOMOTIVE-PARTS INDUSTRY

EXTERNAL DEVELOPMENTS

The North American vehicle and automotive-parts industry is presently undergoing unprecedented changes. The rapid internationalization of the automotive industry is bringing new changes that will alter its traditional way of operating. Increasing foreign competition, principally from Japan and several low-cost, developing countries, has led to the introduction of new technology and processes and the just-in-time delivery method in order to reduce costs.

There will be revolutionary changes in the next decade in the automotive-parts sector in view of the emerging competitive environment. The number of North American original equipment (OE) parts producers likely will shrink as the traditional North American vehicle producers increasingly source parts and small vehicles from Japan and low-cost, developing countries, as well as from their overseas affiliates. Major U.S.-based multinational parts suppliers also are following the same route as they develop new business links and joint ventures with overseas producers.

Accordingly, new relationships will evolve between manufacturers and suppliers. The vehicle manufacturers are reducing their vertical integration in order to cope with the competitive challenge and transferring to suppliers many functions previously performed by the vehicle manufacturers themselves. In return, vehicle manufacturers are willing in many cases to award long-term contracts to suppliers so the suppliers can justify the huge capital investment required to perform such functions. It must, however, be borne in mind that only the big, independent multinationals can make such enormous capital investments. For the medium- and small-size parts producers, the future remains clouded, as they have neither the financial capacity nor the necessary technology in place to make such long-term undertakings. Their problems are further compounded by the increased penetration of the market by low-technology parts imported from low-cost developing countries who sell to both the OE market and the after-market.

STRUCTURE OF THE CANADIAN PARTS SECTOR

The Canadian automotive-parts industry consists of three types of producers: the in-house parts facilities of the vehicle manufacturers, the independent Canadian-owned parts companies and the foreign-owned independent parts manufacturers.

There are two main categories of parts manufactured, one that consists of original equipment (OE) parts used in manufacturing of new vehicles, and the after-market parts which are shipped to the automotive replacement market.

The in-house parts sector consists of the three big vehicle manufacturers (GM, Ford and Chrysler). In-house OE parts manufactured by the major assemblers accounted for more than 40 percent of total Canadian OE parts output in 1984. In-house parts are generally high-value components such as engines and transmissions. GM, the largest among the three, produces approximately 75 percent of its total components requirements, whereas Chrysler produces about 30 percent and Ford is between the two at about 50 percent. Currently, all automotive engine and transmission manufacturing is carried out by vehicle manufacturers.

The independent parts suppliers range from large multinationals to small shops. Among the independents, 12 large multinational equipment suppliers account for almost 20 percent of the total OE parts output, while some 450 firms (approximately half Canadian-owned) produce the remainder. In 1984, wholly-owned Canadian firms accounted for about 13.4 percent of the total output. Among the independents at the upper end of the scale, manufacturers are making some sophisticated, high-value products such as truck axles and transmissions and engine parts. At the lower end, shops are turning out routine components for the vehicle manufacturers. Geographically, the industry is concentrated in southern Ontario and more than 90 percent of its production is dependent on exports to the U.S.

TABLE 10

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	<u>\$4 879</u>	<u>100.0</u>	<u>\$10 231</u>	<u>100.0</u>

* APMA estimates

The Canadian Automotive Parts Manufacturers Association's (APMA's) special survey (Table 10) indicates the share of the in-house parts shipment of the Big Four has grown from 41.3 percent in 1981 to 45.3 percent in 1984. The pent-up demand for vehicles in Canada and the U.S. since 1983 has led to increased in-house parts production for Canadian consumption as well as for exports to the U.S. The depreciation of the Canadian dollar vis-à-vis the U.S. dollar also has provided a strong competitive edge to the Canadian parts producers. Preliminary estimates suggest that the relative share of in-house parts production is continuing to increase. Similarly, the relative share of the Canadian-owned independent parts producers also is growing and has increased substantially from 11 percent in 1981 to 13.4 percent in 1984.

Most of this increase is accounted for by two large Canadian independents, Magna International and AG Simpson. Canadian parts production by the

foreign-owned independents, however, has not grown at the same rate as the in-house and Canadian-owned independents parts production. Accordingly, the relative share of production of the foreign-owned independents has declined from 47.7 percent in 1981 to 41.4 percent in 1984.

Sector Performance

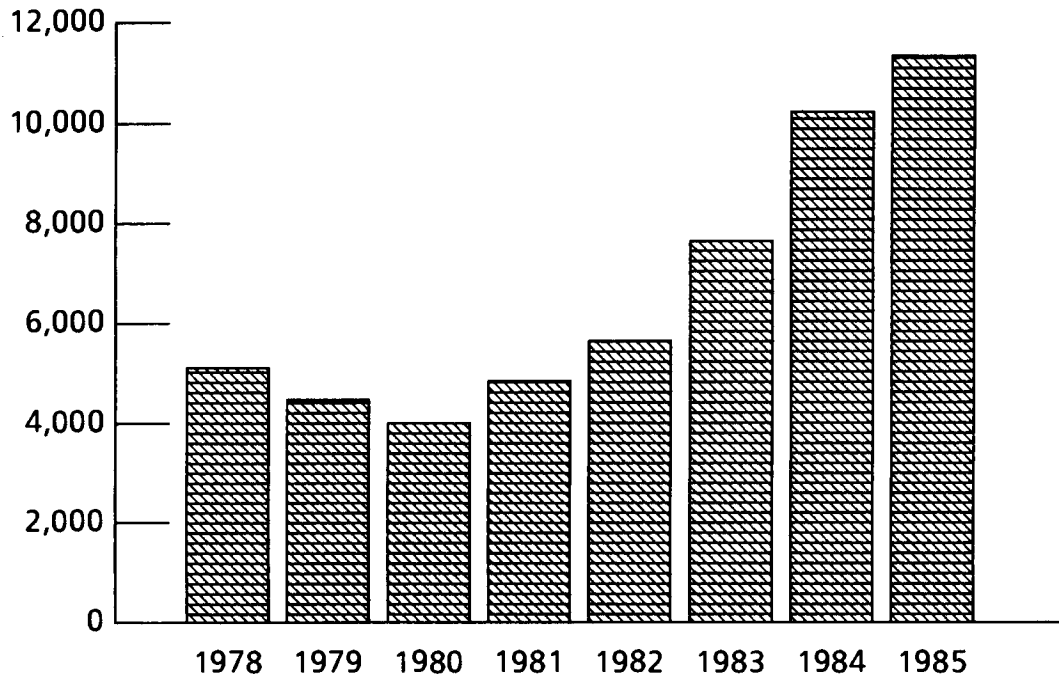
The Canadian automotive-parts producers exhibited strong performances in 1985. The recovery in the parts sector has moved in parallel with the vehicle manufacturing industry as the pent-up demand for vehicles in North America continued for three consecutive years. Record-level production of vehicles led to a continuing high demand for automotive parts and components on both sides of the border.

AUTO-PARTS SHIPMENTS

The value of Canadian automotive-parts shipments set a new record in 1985 when the value of shipments amounted to \$11 348 million in current dollars, up from \$10 232 million in 1984, an increase of 10.9 percent. The lower value of the Canadian dollar vis-à-vis the U.S. dollar, coupled with very high demand for autoparts components in the U.S., led to higher exports of Canadian-made parts to the U.S. Canadian parts exports to the U.S. were up 11.9 percent in 1985 compared to 1984, and have more than doubled since 1982. More than 90 percent of Canadian automotive-parts production was exported to the United States in 1985.

Figure 8

CANADIAN MOTOR VEHICLE PARTS SHIPMENTS
1978 - 1985
(\$ millions)



Investment

Total capital spending by Canadian automotive-parts manufacturers between 1978 and 1985 amounted to about \$2.9 billion. The capital expenditures were heavy between 1979 and 1981 (approximately \$2 billion), most of which was for major engine and transmission plants, before falling sharply during 1982 and 1983.

TABLE 11

**Capital Investment in Canadian Automotive
Parts Industry, 1978-1985**

<u>Year</u>	<u>Capital Expenditures</u> (\$ Million)
1978	201.4
1979	330.9
1980	786.9
1981	666.5
1982	189.8
1983	164.0
1984	203.2
1985	332.1

Source: Statistics Canada

Most capital spending in the parts industry was for new machinery and equipment to meet demand for light-weight components and to manufacture parts for front-wheel-drive vehicles. There also were large expenditures by the OE parts manufacturers to re-tool plants and re-design their major product lines.

CANADIAN COST ADVANTAGE

Canada continued to enjoy a substantial labour-cost advantage over the United States in motor-vehicle and equipment manufacturing, largely as a result of the lower exchange-rate. The information available from the U.S. Department of Labour's Bureau of Labour Statistics indicated that Canada has about a 30 percent labour-cost advantage in motor-vehicle and equipment manufacturing vis-à-vis the United States. Accordingly, Canadian exports of auto parts to the United States are expected to remain strong. One factor affecting Canadian auto-parts exports to the United States is the expected over-capacity situation in North American vehicle manufacturing, resulting mainly from import competition and increased vehicle assembly in Canada and the United States by offshore vehicle manufacturers.

At the outset, foreign vehicle assemblers operating in North America will not be able to generate CVA levels comparable to those reached by traditional North American manufacturers and are expected initially to source most of their components from their home bases. The upward revaluation of the yen against the Canadian and American currencies is expected to accelerate the growth in North American value-added in these transplant assembly operations.

OUT-SOURCING TRENDS

The North American vehicle manufacturers in their cost reduction efforts are increasingly looking toward the independent parts suppliers, especially for some of the parts that were manufactured in-house before. However, most of the independent parts suppliers do not have the necessary financial capability

to invest in high-value, high-technology components such as engines, transmissions and other power-train components. Accordingly, the vehicle manufacturers are now importing some of these components from offshore sources.

During the last five to seven years, a trend has developed to source major automotive parts from Japan and the newly industrialized countries such as Mexico, South Korea, Brazil and Taiwan. These countries are now exporting many high-value components such as engines and transmissions to the North American market. Ford, GM and Chrysler are importing some of these products from their affiliates in Japan, Mexico and Brazil. This trend is evident from Table 12 below.

TABLE 12

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

	<u>1978</u>	<u>1985</u>
United States	7 336.0	16 304.1
Mexico	11.1	534.2
Japan	40.4	359.8
Sweden	45.7	99.7
Brazil	7.2	32.1
Taiwan	0.5	18.7
Hong Kong	0.7	3.4
Korea	0.1	14.2
United Kingdom	26.1	41.4
France	25.8	45.7
West Germany	24.9	85.1
All other countries	15.2	60.8
Total imports	7 533.7	17 599.1
Total non-U.S. imports	197.7	1 295.0

Source: Statistics Canada and APMA

Imports of automotive parts from Mexico have risen from \$11.1 million in 1978 to \$534.2 million in 1985. Approximately two-thirds of these imports are automotive engines and engine parts sourced by Ford Motor Co. from its subsidiary in Mexico. Ford also is importing major parts from Mazda of Japan, in which Ford has a part ownership. Similarly, imports of automotive parts from Japan have grown phenomenally, from \$40.1 million in 1978 to \$359.7 million in 1985. Approximately 58.5 percent of these imports in 1985 consisted of engines and engine parts. Chrysler Canada currently is importing engines from its affiliate, Mitsubishi Corporation of Japan, for its mini-van assembly in Windsor and General Motors is importing engines and other high-value components from its affiliate Isuzu Motors of Japan.

Imports from Brazil have grown from a near-zero level in 1978 to about \$32.1 million in 1985. Imports from South Korea are growing rapidly, consisting mainly of replacement parts to service the growing Canadian market for Korean vehicles. Imports of automotive parts are expected to grow rapidly in the next few years as the Japanese and Korean companies start assembling cars in Canada and import most of the parts from their home bases.

Imports will originate increasingly from foreign plants owned by the U.S. vehicle manufacturers and parts suppliers. This trend is already evident in the U.S. As a result, Canadian parts suppliers will face a shrinking market, both in Canada and in the U.S.

According to a survey of the U.S. automotive-parts buyers conducted by Arthur Andersen and Company, by 1990 Japan is likely to surpass Canada as the major source of components for U.S.-built cars. Mexico and Brazil also were cited as greatly increasing their shares of the U.S. parts market, mainly because U.S. vehicle manufacturers already have made substantial investments in engine and component plants in those countries.

CHAPTER IV

THE INTERNATIONAL ENVIRONMENT

SYNOPSIS

World passenger-car, truck and bus production in 1985 broke the previous record of 42.3 million vehicles set in 1978. Estimated world motor vehicle production reached 44.8 million units in 1985, up from 41.8 million units produced in 1984, an increase of 7.2 percent. The world motor vehicle output is continuing a well-sustained recovery which began in 1983 when the total world output reached 39.7 million units after the recession low point of 36.1 million units posted in 1982.

TABLE 13

WORLD MOTOR-VEHICLE PRODUCTION TRENDS
(Millions of Units)

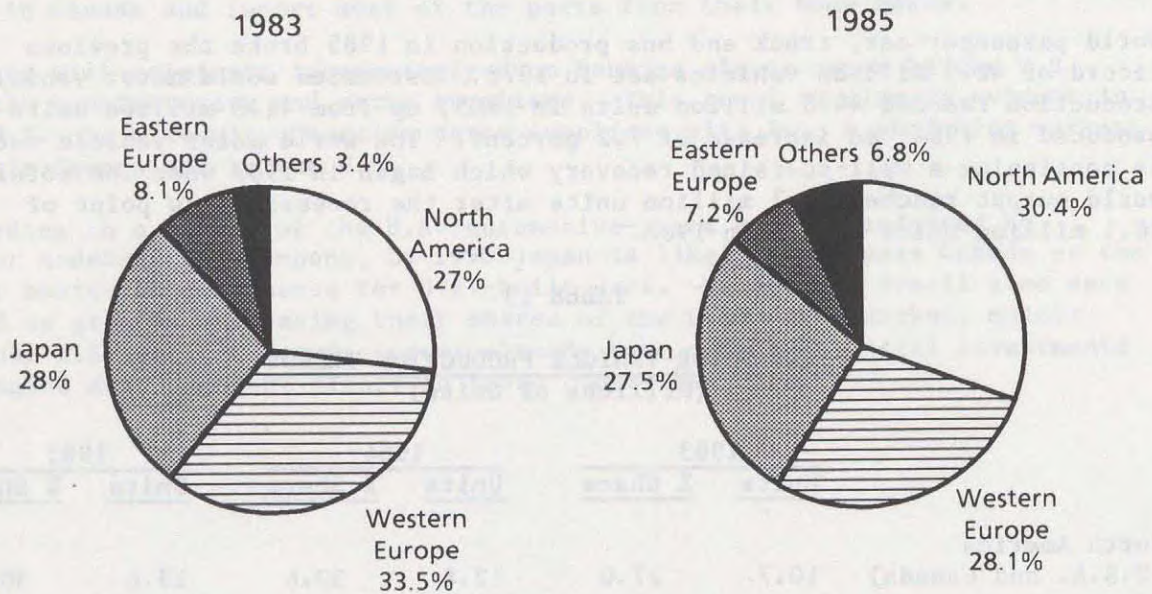
	<u>1983</u>		<u>1984</u>		<u>1985</u>	
	<u>Units</u>	<u>% Share</u>	<u>Units</u>	<u>% Share</u>	<u>Units</u>	<u>% Share</u>
North America (U.S.A. and Canada)	10.7	27.0	12.8	30.6	13.6	30.4
Western Europe	13.3	33.5	12.7	30.4	12.6	28.1
Japan	11.1	28.0	11.5	27.5	12.3	27.5
Eastern Europe	3.2	8.1	3.0	7.2	3.2	7.2
Others	1.4	3.4	1.8	4.3	3.1	6.8
TOTAL	39.7	100.0	41.8	100.0	44.8	100.0

Source: Ward's, JAMA

The economic recovery and growth in North America has been more vibrant than in Europe, which continued to experience sluggish economic growth. Accordingly, vehicle production and sales were stronger in North American than in Europe.

Figure 9

WORLD MOTOR VEHICLE PRODUCTION TRENDS
(Millions of Units)



Vehicle production in North America in 1985 increased by 6.3 percent over 1984, compared to Western Europe where production remained virtually static at 12.6 million vehicles in 1985, compared to 12.7 million units in 1984.

Passenger-car sales in Canada and the U.S. increased to 12.2 million units in 1985, compared to 11.4 million units in 1984, a 7.0 percent increase. In Western Europe as a whole, passenger-car sales increased by 3.0 percent, up from 10.2 million units in 1984 to 10.5 million units in 1985.

Vehicle production in Eastern Europe was up marginally, increasing to 3.2 million units in 1985 from 3.0 million units in 1984 when production dropped from 3.2 million units in 1983.

Japanese vehicle production increased by almost seven percent, from 11.5 million units in 1984 to 12.3 million units in 1985, largely in response to a recovery in demand in major world markets. However, the Japanese domestic market remained sluggish and vehicle sales were up only marginally, from 5.4 million units in 1984 to 5.6 million units in 1985, an increase of 2.2 percent.

The most dramatic developments are in the newly-industrialized countries such as South Korea, Mexico and Brazil where automotive production activity has been increasing at a rapid rate. The vehicle production outside the four major areas -- North America, Western Europe, Eastern Europe and Japan -- has more than doubled since 1983, up from 1.4 million units in 1983 to 3.1 million units in 1985. These nations also doubled their world production share from 3.4 percent in 1983 to 6.8 percent in 1985.

UNITED STATES AUTOMOTIVE INDUSTRY

The United States motor-vehicle industry continued its overall performance in 1985 with record sales and production levels. The continuing economic recovery, accompanied by lower inflation and interest rates, provided the necessary environment for strengthened vehicle production and sales. The cost-reduction measures have enabled the industry to lower its break-even levels and to generate high profits, as well as improve its competitive strength vis-à-vis foreign imports. The industry has made dramatic improvements to its costs and balance-sheet items since 1983.

Sales

The auto industry in the United States sold a record 15.7 million domestic and imported cars and trucks in 1985. This represents an increase of 8.5 percent from 1984 sales level of 14.5 million units. Sales were 1.9 percent higher than the previous record of 15.4 million units sold in 1978.

However, the traditional North American domestic producers are continuing to lose market-share in the domestic market. While sales of domestically manufactured cars and trucks increased 5.2 percent in 1985 to 12.1 million vehicles (compared to 11.5 million units sold in 1984), these were still approximately eight percent below the 13.1 million vehicles sold in 1978. Meanwhile, sales of imported cars and trucks jumped 20 percent to 3.6 million units in 1985, compared to three million units sold in 1984.

Passenger-car sales in 1985 reached 11 million units, an increase of six percent over the 1984 level of 10.4 million units. Foreign imported automobiles constituted 25.7 percent of the total passenger-car market in 1985, with the total sales of imported cars reaching 2.8 million units, compared to 2.4 million units in 1984. Sales of domestic cars amounted to 8.2 million in 1985, compared to 8.0 million sold in 1984. This is still well below the peak record of 9.7 million units set in 1973.

Production

The U.S. auto industry produced 11.7 million cars and trucks in 1985, including about 355 000 units assembled by Nissan, Honda and the Toyota/GM joint venture. Total U.S. vehicle production was ahead 6.5 percent (11.7 million units) in 1985, up from the 1984 production level of 10.9 million units. However, production was still below the peak record of 12 896 000 light vehicles set in 1978. According to the U.S. Motor Vehicle Manufacturers Association (MVMA), the increased production activity in the U.S. pushed the automotive industry capacity- utilization rate to 86 percent in 1985, about two percent higher than the 1984 rate of 84 percent. The peak capacity utilization rate was established in 1978 at 89 percent.

Employment

Employment in the U.S. motor vehicles and equipment industry reached 873 000, about 6000 workers higher than the 1984 level, but still below the 1979 peak of 990 000 workers.

Profitability

Despite increases in sales in both dollar and volume terms, combined Big-Three profits slipped to \$8.14 billion in 1985, compared to \$9.78 billion in 1984. Earnings per share also declined to \$35.29 from \$42.65, as all three manufacturers posted declines. However, American Motors reported a loss, \$125.3 million for 1985, compared to a \$15.5 million profit in 1984.

Japanese Exports

Although the U.S. government did not seek an extension of the Voluntary Restraint Agreement (VRA) that had been in place since 1981, the Japanese government unilaterally decided to restrain car exports to the U.S. at 2.3 million units in the 1985-86 fiscal year compared to the previous level of 1.8 million units.

Foreign Investment

A number of developments, such as the rapid appreciation of the Japanese yen, protectionist sentiment in the U.S. and stringent restrictions on Japanese cars in most Western European countries, are forcing Japanese vehicle manufacturers to move part of their production to preferred markets such as North America.

During 1985-86, several Japanese and Korean auto companies announced new assembly plants for the U.S. and Canada in addition to the existing GM/Toyota joint venture in Fremont, Cal., Nissan's plant at Smyrna, Tenn., and Honda's Marysville, Ohio, plant.

As Table 14 shows, there will be at least ten Japanese and Korean plants in full operation by 1990 in Canada and the United States, with a total investment of \$5.7 billion and an estimated capacity of 2.1 million units.

TABLE 14

FOREIGN PLANTS IN NORTH AMERICA

<u>Country/Company</u>	<u>Direct Investment</u> (\$ C million)	<u>Capacity</u> (Units)	<u>Estimated Direct</u> <u>Employment</u>
<u>U.S.A.</u>			
TOYOTA			
Fremont, California	250	250 000	2 500
Georgetown, Kentucky	650	200 000	2 000
NISSAN			
Smyrna, Tennessee	500	200 000	2 100
HONDA			
Marysville, Ohio	600	350 000	3 500
MITSUBISHI			
Bloomington-Normal, Illinois	900	180 000	1 800
MAZDA			
Flat Rock, Michigan	600	300 000	2 000
SUBARU/ISUZU			
Lafayette, Indiana	<u>670</u>	<u>120 000</u>	<u>2 000</u>
TOTAL U.S.A.	4 170	1 660 000	15 900
<u>CANADA</u>			
TOYOTA			
Cambridge, Ontario	400	50 000	1 000
HONDA			
Alliston, Ontario	200	80 000	700
HYUNDAI			
Bromont, Quebec	300	100 000	1 200
GM/SUZUKI			
Ingersoll, Ontario	<u>500</u>	<u>200 000</u>	<u>2 000</u>
TOTAL CANADA	1 400	430 000	4 900

These are very significant investments and, given the slow growth and market saturation of the North American automobile market, the continuing import competition, and the rapidly increasing new capacity in North America, suggest difficult times ahead for the traditional North American automobile industry.

Some analysts are predicting two-to-three-million-unit passenger-car over-capacity in North America by 1990, which may bring about closure of as many as 10 assembly plants in North America, with estimated losses of about 150 000 jobs in the automotive industry.

EUROPEAN AUTOMOBILE INDUSTRY

Economic Overview

After more than two years of economic stagnation, the economic picture for Western Europe brightened in 1985. Lower interest rates prevailing in 1985 in most Western European countries stimulated consumer demand and industrial investment. Accordingly, most European countries experienced a mild economic recovery in 1985.

The recovery in Western Europe lagged behind that of the United States and varies from country to country, with real GDP growing more than 2.5 percent in Germany, Sweden and the U.K., only 2.0 percent in Italy and 1.0 percent in France during 1985.

Despite these positive developments, however, unemployment remains a persistent problem in Western Europe and poses a serious challenge to sustained consumer-spending growth. Unemployment averaged around 11 percent across Western Europe during 1985 and, despite economic expansion, will probably decline only marginally in 1986.

Automobile Market

Western European car sales were up five percent in 1985 to 10.5 million units, compared to 9.9 million units in 1984. Car sales were up in all Western European countries except Belgium, where sales were down by 3.2 percent. Volkswagen (VW) with 12.8 percent of the market was the leader in 1985. Fiat followed with a market share of 12.4 percent. Ford, which was the market leader in 1984, fell to third place in 1985. Peugeot's share eroded to 11.7 percent from 11.9 percent in 1984. GM, through its marketing campaign, increased its market share in 1985 to 11.5 percent, up from 11.2 percent in 1984. The European market was subject to economic pressures which could easily have decreased sales, but the prevailing over-capacity resulted in price competition which boosted total volume. While over-capacity remains a problem in Western Europe, no plants have been closed yet.

In general, most European automakers have been successful in reducing costs and made profits in 1985. GM, Renault and SEAT were the unprofitable exceptions. Higher profit margins were earned by the specialty-car companies because of their greater pricing power. The turn-around at Volkswagen and Peugeot and the continued improvement at Ford and Fiat were encouraging, especially in the tough, competitive environment which persists in Western Europe.

Following is a summary of the performance of the major European auto producers in terms of their market shares:

- Volkswagen: The VW Golf was the top-selling car in Europe in 1984 and 1985. An up-graded model of the Scirocco, new models in the Audi division, a production facility in Spain and over-all strong sales during the year enabled VW to earn first place in 1985 with 12.8 percent of the total Western European car market. VW produced 1.4 million passenger-cars, and accounted for 10.9 percent of total Western European car production and ranked eighth among world auto producers.
- Fiat Group: Fiat Group maintained second place in 1985 in the Western European car market, with a market share of 12.4 percent. Fiat Group assembled 1.2 million passenger-cars, about 9.5 percent of the total Western European passenger-car production and ranked 10th among world producers.
- Ford: Ford had moved to the top sales spot in 1984, following the successful launching of its Sierra models. However, Ford fell to the third place in 1985, with a penetration of 12.1 percent in the Western European market. Ford Europe has plants in West Germany, England and Spain and produced 1.1 million passenger-cars, accounting for 8.6 percent of the Western European total passenger-car production.
- GM Opel: GM has grown quickly and added four points to its market share in Western Europe since 1981. Reduced sales of big cars have been offset by strong sales of Kadette/Astra. During 1985, GM was in fifth place with 11.5 percent of the Western European passenger-car market. GM Opel (West Germany, England and Spain) assembled 1.2 million passenger-cars and accounted for 9.4 percent of the total Western European passenger-car output. Although GM has made impressive market gains, low profits continue to impair the financial health of the company.
- Peugeot: Although the market share held by Peugeot was stable in 1985, it has been losing market share since 1981. Peugeot introduced the 205 Super-mini late in 1984 and it has been very successful. Accordingly, Peugeot's fourth-place position in 1985 has been maintained almost solely by this model. The company produced 1.3 million passenger-cars and accounted for 10.4 percent of the total Western European passenger-car output.
- Renault: Renault continued to lose ground in the Western European market, despite the introduction of R-5 which is selling well across Europe, although it did not have the anticipated impact. Renault was in sixth place with 10.2 percent of Western Europe's passenger-car market. In 1985, Renault produced 1.3 million passenger cars, about eight percent of the total Western European passenger-car output.

Mercedes-Benz: Mercedes-Benz is the most popular specialty-car producer in Europe. Mercedes' 190 series is selling briskly and production capacity was doubled to meet the growing demand. The new 200 and 300 series also are selling well. Mercedes had 3.7 percent of the European market in 1985, up from 3.2 percent in 1984. The company accounted for about 3.6 percent of the European production in 1985.

BMW: BMW is a specialty-car manufacturer which has maintained a fairly stable market share, between 2.8 percent and 3.0 percent of the market. The company is facing tough competition from Mercedes' new range of mid-size cars.

Volvo: Volvo continues to make small market gains. It is slowly increasing its presence in Europe from 2.0 percent in 1982 to 2.4 percent in 1985. Volvo's European success has been linked to the station-wagon market segment, which is heavily dominated by Volvo and where it encounters little competition.

Japanese Market-Penetration in Western Europe

Japanese firms collectively accounted for 10.2 percent of Western European passenger-car sales in 1985, up from 9.7 percent in 1984.

Sales of Japanese vehicles are strongest in those countries that have little or no local production. All of Europe's major markets have some degree of import restrictions aimed at Japanese imports.

Table 15 shows Japanese penetration in the main Western European markets. The Japanese occupy the top spot in eight markets: Ireland, Belgium, Austria, Finland, Switzerland, Norway, Netherlands and Denmark. By contrast, they have no presence in Italy or Spain.

With the appreciation of the Japanese yen and major European currencies versus the dollar during 1985 and 1986, the Japanese turned their attention towards Europe as there was little appreciation of the yen versus the major European currencies. During the first quarter of 1986, Japanese exports to Europe were 15 percent higher than the similar period in 1985. Following this rapid increase, MITI has asked Japanese manufacturers to limit their exports to a market share of the EEC member states 10 percent higher than last year.

Any long-term restrictions on Japanese exports to Western Europe would likely force the Japanese to shift their trade strategy toward local production. Until now, local Japanese production in Europe has been minimal and Nissan's operations in Italy and Spain are still unprofitable. Honda became involved with British Leyland (BL) and also may allow BL to assemble cars for them.

TABLE 15

JAPANESE MARKET PENETRATION IN EUROPE, 1983-1985

	<u>1983</u>	<u>1984</u>	<u>1985</u>
Austria	28.3%	25.9%	25.9%
Belgium	21.9%	19.0%	19.1%
Denmark	31.1%	29.7%	32.5%
Finland	38.5%	37.4%	38.1%
France	2.7%	3.0%	3.0%
Germany	9.5%	10.8%	12.2%
Great Britain	10.6%	11.0%	10.7%
Ireland	30.0%	27.4%	34.0%
Italy	0.0%	0.0%	0.0%
Netherlands	23.1%	21.7%	22.0%
Norway	35.9%	33.7%	34.8%
Portugal	7.9%	7.3%	9.0%
Spain	0.0%	0.0%	0.0%
Sweden	15.2%	14.8%	16.0%
Switzerland	25.6%	23.2%	24.0%
European Total	9.4%	9.6%	10.2%
Units	964 815	955 780	1 060 789

Source: OECD

With respect to Japanese investments and joint ventures, the EEC has enacted local content standards to ensure that these are not merely kit-assembly operations. The EEC's local content rules are ambiguous, but benchmarks of local content vary from 40 percent to 60 percent of the vehicle.

JAPANESE MOTOR-VEHICLE INDUSTRY IN 1985

Economic Overview

The Japanese economy continued to experience steady growth during 1985. Japanese exports remained at a high level, supported by a moderate expansion of the U.S. and world economies. Plant and equipment investment showed a healthy increase in most industrial sectors and domestic demand for other goods and services generally increased.

However, the sharp rise in the value of the yen since September 1985, particularly in relation to the U.S. dollar, has placed exporting companies in a difficult position and has caused great uncertainty over the future of Japanese exports.

Vehicle Sales

Domestic motor-vehicle sales in 1985 reached 5.56 million units, an industry record, representing an increase of 2.2 percent over 1984 when 5.44 million

units were sold. Passenger-car sales during 1985 remained at about the same level as in 1984, about 3.1 million units (0.3 percent increase over 1984). A steady increase in multiple-car ownership, supported largely by female drivers, also contributed to the overall increase in sales. Truck sales in 1985 grew at a steady 4.7 percent pace to reach 2.43 million units. Sales of cargo (heavy- and medium-duty) trucks fell by 2.2 percent, primarily due to sagging demand for construction vehicles. Sales of compact and sub-compact trucks rose 1.1 percent as the market-stimulating effect of launching new models more than offset the drop in replacement demand. Mini-truck (midgets) sales increased 8.1 percent as new model introduction substantially expanded the market.

Vehicle Exports

Overall exports of motor vehicles increased 10.2 percent to 6.73 million units in 1985, largely attributable to an increase in the restraint level on passenger cars for the U.S. market and to the recovery of the European market. Exports of completely knockdown (CKD) sets rose favourably, increasing 9.8 percent to one million sets during the year.

In view of the favourable environments in both domestic and overseas markets in 1985, motor-vehicle production rose 0.7 percent above the 1984 total of 12.27 million units, a record high, making the Japanese automobile industry the world's leading motor-vehicle producer for the sixth consecutive year.

Canada and the U.S. absorbed about 3.4 million passenger-cars and trucks from Japan, about 50.3 percent of the total Japanese vehicle exports of 6.7 million units. The EEC absorbed about 973 000 units (14.4 percent), the Middle East 6.0 percent, Southeast Asia about 10.6 percent, Latin America 4.3 percent, and Africa about two percent of total Japanese exports.

International Developments Affecting the Japanese Automobile Industry

Automobile companies worldwide have experienced substantial changes in their business and market environments as internationalization of the world auto industry continues to gather momentum and proceeds into a new phase of development.

To cope with these changes, Japanese automobile manufacturers have been pursuing a strategy of overseas investment and development of new plants to service overseas markets, particularly in the preferred North American market.

Overseas Investments

The Japanese are increasingly pursuing a strategy which will shift the emphasis from exports of completed vehicles initially to exports of CKD kits, then to full-fledged integrated overseas assembly plants during the next few years.

Specifically, eight Japanese firms and one Korean company either have established production bases or have announced their plans to build

automobile-assembly plants in North America, either by themselves or in co-operation with North American vehicle manufacturers. (See Table 14).

The rising value of the Japanese yen also has hastened the overseas investment prospects and has forced the Japanese to invest in markets which until now have been better serviced from Japanese domestic production. For instance, Nissan plans to manufacture passenger-cars in Britain in the near future.

For many years, Japanese vehicle manufacturers have implemented production of CKD sets in many countries and currently are providing technological assistance to develop automobile and automotive parts industries, particularly in Southeast Asia, Latin America and Africa. However, these investments have not proven substantive, due to the limited size of these markets, the small scale of production and the low level of local content.

The Japanese developed a long-term cost advantage during the 1970s which has been sustained during the current upswing despite the appreciation of the yen. The Japanese automobile industry possesses huge financial muscle and can easily raise \$45 billion for capital investment. The new investment in North America by the Japanese and Korean automobile companies represents the first step of a new phase in the international expansion of the Pacific auto producers, for whom North America is the key market. By 1990, Japanese firms are expected actually to produce about 1.3 million units in North America from a total capacity of 2 million units.

Research and Development

Investment in research and development is the driving force in bringing the Japanese auto industry into a leadership position. The industry is pouring billions of dollars into high-technology automotive research and development. In 1984 alone, the Japanese automobile industry invested more than \$6 billion and employed about 36 000 engineers for research and development.

SOUTH KOREAN MOTOR VEHICLE INDUSTRY

Production

Since 1974, the government of South Korea has actively pursued a strategy of developing its own automobile industry. Throughout the 1970s, Korean vehicle production burgeoned, averaging about 28.7 percent annual growth. During that period, exports increased slightly more slowly than domestic consumption. By 1979, annual production reached 200 000 vehicles, compared to 37 000 units in 1975. During 1980-1982, Korean vehicle production declined, reaching 163 000 in 1982. The average operating rate was between 34 percent and 48 percent during the recession period. Since 1983, South Korean vehicle production has jumped phenomenally to 265 000 units as a result of the push for greater exports.

Exports

South Korea's Hyundai Corp. made a head start in 1983 when it began exporting to Canada, selling approximately 5000 Pony sub-compacts. It very quickly

established a foothold in the Canadian market through a highly organized dealers network. Hyundai enjoyed a competitive price advantage, partly due to its duty-free access in addition to a positive consumer perception. Hyundai increased its sales level in Canada to 25 000 units in 1984 and to 79 000 units in 1985, thus controlling seven percent of the total Canadian passenger-car market. Hyundai also is making an export push to the U.S. market in 1986, and the company expects to repeat the success it achieved in Canada.

In 1987, Daewoo Motors, a South Korean affiliate of General Motors Corporation, will begin exporting an Opel-designed sub-compact to the U.S. for sale by Pontiac dealers. The import volume to the U.S. is expected to reach 85 000-100 000 units per year by 1988, half of Daewoo's total production capacity for this vehicle.

KIA, another South Korean auto company, plans to enter the U.S. market during the late 1980s, supplying a mini-car to Ford Motor Company. KIA is expected to export up to 100 000 units per year to North America by the end of the decade.

Production Capacity

As a result of the recession in the early 1980's, the government took a series of initiatives to rationalize and organize the industry. The stated goal of government policy was to prevent over-capacity and price wars. The most important step taken was to restrict passenger-car production to two companies, Hyundai and Daewoo, while KIA (a former car producer) was limited to trucks and buses. At the same time, the government designated the motor vehicle industry as a strategic export industry. Auto imports are virtually prohibited from entering the country.

Currently, Hyundai and Daewoo control 75 percent and 25 percent of the Korean passenger-car market, respectively. The other four vehicle manufacturers -- KIA, Asia, Dong-A and Geohwa are limited to buses and trucks only.

South Korean auto companies needed capital and technology. Accordingly, joint ventures with foreign partners were vital for the development of the automotive industry. In co-operation with Mitsubishi, Hyundai spent about \$500 million in product development and is working on a front-wheel-drive (FWD) car to meet the U.S. safety and emissions standards. Daewoo is a 50-50 joint-venture partner with General Motors to sell Daewoo-made cars in the U.S. Ford is affiliated with KIA while Chrysler has been seeking a link-up with Samsung, a large conglomerate not currently producing motor vehicles.

The current South Korean motor-vehicle production capacity is estimated to have reached about 700 000 units. Some analysts predict that vehicle production capacity will reach about a million units in 1987, and about 2.1 million units by 1991. Because of the limited Korean domestic market, such a production level may be unsustainable, given the fiercely competitive international market.

These developments suggest that South Korea will become a significant factor in the world automotive industry during the next five to ten years. Because of the country's low hourly-wage costs, it will likely attract more foreign capital and technology infusions. Availability of an excellently trained labour force is another positive factor.

The limiting factors are the small domestic market, a poor highway system, low per capita income compared to highly developed industrialized countries, high taxation of cars and gasoline, lack of an adequate base of suppliers and a very competitive international market.

OTHER DEVELOPING COUNTRIES

Among the newly industrialized countries, Taiwan also is in the process of rapidly developing its automotive industry, currently in the infancy stage. It has significant export potential, although at this time it is difficult to assess its significance on the international automotive environment. Ford Motor Co.'s affiliate "Ford Lio Ho" is planning significant new capacity and already is exporting a small volume of sub-compact cars to Canada for sale by Mercury dealers.

Mexico's auto industry is growing at a phenomenal rate and its exports to North America also are growing rapidly. Until recently, its exports to North America had been limited mainly to automotive components, consisting of high-value items such as engines and transmissions. All three major North American vehicle manufacturers -- GM, Ford and Chrysler -- also are active in Mexico in the assembly of cars and trucks. Other major overseas manufacturers are Volkswagen and Nissan.

Production of cars and trucks in Brazil was up 11.8 percent in 1985 to 967 000 units compared to 865 000 units in 1984. Output of passenger-cars increased marginally from 706 000 units in 1984 to 714 000 units in 1985 (1.2 percent), but truck production was significantly ahead, increasing from 159 000 units in 1984 to 253 000 units in 1985, a gain of 59 percent.

Volkswagen was the leading producer in Brazil, with a total production of 358 000 cars and trucks, representing about 37 percent of all Brazilian vehicle production. General Motors ranked second with total vehicle output of 223 000 units, constituting about 23 percent of the total vehicle output of Brazil. Ford was third with production of 189 000 units, representing almost 20 percent of vehicle production. These three producers accounted for about 80 percent of Brazil's vehicle output. Other producers include Fiat, Mercedes-Benz, Scania, Volvo and Toyota.

From Brazil, in the next few years, all three major vehicle producers, (Volkswagen, GM and Ford) intend to export cars to North America from their subsidiaries. Production in Mexico and Brazil by these manufacturers constitutes a major strategic response to competition from Korea and Japan in the North American small-car market segment.

CHAPTER V

AUTOMOTIVE INDUSTRY OUTLOOK

The preceding portion of this report analysed the global and domestic changes which impacted on the performance of the Canadian automotive industry during 1985. This chapter provides an assessment of the various anticipated national and international developments which will affect the automotive industry during the rest of the 1980s, and examines the implications of these trends on domestic vehicle demand, employment and the performance of the industry in general.

INTERNATIONAL DEVELOPMENTS AFFECTING THE CANADIAN AUTOMOTIVE INDUSTRY

The North American auto industry will be increasingly exposed to global economic, political and legislative pressures during the 1980s and beyond. The increasing internationalization of the auto industry, causing an inter-continental shift in the traditional production bases, accompanied by slower market-growth, will intensify the competitive pressure on the North American auto industry.

The industry has instituted sweeping cost-reduction measures and substantial productivity improvements have occurred. These measures, accompanied, by a market up-turn, restored the profitability of the North American vehicle manufacturers. High profits enabled the industry to make the necessary investments to modernize plants and equipment and develop new products to improve their competitiveness. However, these measures and improvements are still not enough to overcome the competitive challenge posed by the Japanese and by the entry of products from several newly industrialized countries (NICs) such as Korea, Brazil and Mexico. Slower growth in the North American automobile market, high import penetration and rapidly increasing new capacity in North America being developed by offshore vehicle producers suggest that the traditional North American vehicle manufacturers and the parts industry will continue to face strong competition in their traditional markets.

Market Perspective

Market growth in the major automotive-producing countries is predicted to be slower, thus compounding the adjustment difficulties for major world producers. The North American automobile market is expected to experience a very modest growth of only one percent to two percent per year for the rest of the decade.

The import-penetration level is expected to remain at 25 percent to 30 percent in the remainder of the 1980s, in view of the substantial capacity available in Japan and the new capacity being developed in newly industrialized countries. The NICs will increase their exports to North America during the next few years. The bulk of these cars will be captive imports by the Big Three and Volkswagen.

Foreign Capacity in North America

The continuing, restricted market access for Japanese cars and the possibility of greater trade restrictions in the future have prompted the offshore producers to develop new assembly capacity in North America. This new assembly capacity will increase rapidly from about 295 000 units in 1985 to approximately 2.1 million units by 1990. Approximately 430 000 units of this total capacity will be located in Canada.

Over-capacity in North America

Based on market projections, considerable over-capacity is expected to exist in passenger-car production in North America by 1990. Depending upon the market growth, import penetration and production by the offshore producers in North America, surplus capacity may reach 2.5 million units or higher by 1990.

Most of the over-capacity will be concentrated in small-car manufacturing, but some excess capacity is also expected in mid-size cars. Currently, the bulk of the Canadian production is devoted to mid-size and large cars for which strong demand is continuing, particularly for mid-size, front-wheel drive cars and mini-vans. However, the Japanese are quickly moving into the up-scale market and the competitive pressure is likely to intensify in the mid-size segment as well, affecting Canadian production in the coming years.

In any case, if models produced by offshore manufacturers continue to sell, it is expected that the major impact of any capacity reductions will be on the North American producers. In such a case, some plants would close, both in the U.S. and Canada, while others would operate at lower production levels. The impact on the parts sector is expected to be severe in view of the reduced production levels of the traditional North American vehicle producers and their increased offshore parts sourcing.

FACTORS AFFECTING CANADIAN VEHICLE DEMAND

After three consecutive years of sustained recovery of the automotive market, Canadian passenger-car sales are expected to stabilize at about 1.0 million to 1.1 million units. The replacement cycle which began early in 1983 is almost coming to an end. The vehicle manufacturers are now offering incentive packages in terms of reduced-rate financing and luxury options, a move which shows a clear softening of the market.

However, the single most important economic factor influencing the automotive demand will be the state of the Canadian economy. The broad economic variables, such as growth in GNP, employment, demographic factors, interest rates, income, price levels and several other non-quantifiable factors, will affect passenger vehicle demand:

- a) The growth in real GNP is predicted to slow down to 3.5 percent in 1986 and 2.9 percent in 1987 and 1988. The lower growth in real GNP will have a decelerating influence on consumer spending, particularly on discretionary items such as automobiles whose purchases can be postponed.

- b) The interest rates charged on auto loans are another major factor which heavily impacts on automobile demand. Interest rates have substantially moderated, compared to the recessionary period, and are predicted to remain fairly stable. The prime rates on which general consumer loans usually are based are forecast to be 9.9 percent in 1986 and 1987, and 10 percent in 1988. Accordingly, lower and stable interest rates should keep car sales stable.
- c) Due to increased supply conditions, increases in car prices are predicted to moderate substantially in the next two years. While consumers have become accustomed to the high sticker prices of cars, the general average car price still remains high compared to real disposable income. This factor will still be paramount in making purchase decisions. The low-priced segment will be the major beneficiary of new growth in car sales.
- d) Although the unemployment rate declined to 9.6 percent in the first-half of 1986 from the high of 12 percent in 1983, according to various forecasts no further reduction is expected in 1986 and 1987. Accordingly, any small reduction in the general unemployment rate is not expected to be a major factor in the growth of new-car sales.
- e) Affordability still remains a key factor in new-car purchase decisions. Only moderate gains are expected in new-car sales in view of the continuing low growth in real disposable income.

OTHER FACTORS INFLUENCING AUTOMOBILE DEMAND

Replacement Frequency

Although the factors described above would have a major effect on future new-car sales, there are other factors at play which affect new car sales and the composition of these sales. Consumers are keeping their cars longer than in the past, resulting in steady growth in the average age of passenger cars. The frequency in vehicle trade-ins has declined substantially and consumers are spending more on repair and maintenance of their old cars. Due to these trends, the average age of passenger-car ownership is estimated to increase from three years in 1979 to about seven years by 1990. These factors will have a negative impact on new car sales.

Fuel Prices

Fuel prices are expected to remain relatively stable in both Canada and the U.S., barring any adverse international events which may cause another fuel crisis. The relatively stable fuel prices will assure stable sales volume for full-size cars.

Demographic Factors

Demographic trends also are important in influencing the long-term vehicle demand and sales mix by market segment. Throughout the 1980s, growth in

aggregate demand for motor vehicles will be bolstered by the steady increase in the primary new-car buying population (ages 25 to 44). However, the long-term demographic trends, including the continued entry of women into the labour force and the reduction in the average household size, are likely to shift the overall vehicle sales mix toward smaller and up-scale specialty vehicles.

CANADIAN MARKET FORECAST

After experiencing a rapid market recovery during the past three years, Canadian passenger-car market growth is expected to stabilize at one percent to two percent annual growth in 1986-88 period. Automobile-sales forecast for the Canadian market by various agencies and institutions for the period 1986-1990 are presented in the following table:

TABLE 16
PASSENGER-CAR SALES FORECAST FOR CANADA
('000 UNITS)

	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
Chase	1 058	1 012	1 037	1 037	1 060
Data Resources Inc.	1 051	1 007	950	918	961
Royal Bank	1 020	1 057	-	-	-
Bank of Commerce	1 080	1 040	-	-	-

Based on the above forecasts, passenger-car sales in Canada are expected to be under 1.1 million units in 1986. A slight market slowdown is expected in 1987-88 in view of the expected minor slowdown in the economy, but car sales will still be about one million units. The market is expected to remain strong but relatively flat for the remainder of the 1980s.

OUTLOOK FOR CANADIAN VEHICLE MANUFACTURERS

The measures instituted by the industry have resulted in lowering break-even levels by as much as 40 percent since 1979. This achievement, accompanied by a sales recovery and restraints on Japanese automobiles, enabled the North American vehicle producers to return to profitability, retire debt, and rebuild capital.

During the 1983-85 period, the Canadian Big Three vehicle manufacturers made \$3.5 billion profits. This level of profitability should enable them to meet future requirements for investment funds and to address the long-term competitive issues. However, it is doubtful that the existing level of profitability can be sustained over the next few years. The most immediate concern to the auto industry is the need to reduce the cost advantage of Japanese manufacturers in small-car production. To meet this challenge, the U.S. Big Three have been developing ambitious, long-term product strategies.

GM's Saturn program, Ford's Alpha program and Chrysler's Liberty are aimed at overcoming cost disadvantages vis-à-vis the Japanese manufacturers in small-car manufacturing.

In view of the fierce competition, the North American manufacturers face a substantial risk of further erosion of their North American market shares. The success of the traditional North American auto manufacturers' efforts in the small-car sector will have an important bearing on the level of future motor-vehicle manufacturing in North America.

OUTLOOK FOR SUPPLIERS

Canadian auto-parts suppliers face the same competitive pressure and risks as vehicle manufacturers in competing in the new internationalized form of the auto industry. The restructuring of the auto industry, while providing new opportunities for the auto parts industry, has, at the same time, put new demands on parts manufacturers for significant investment in new products and processes.

The increasing shift by the vehicle manufacturers to outside sourcing rather than in-house production is expected to continue as they continue to push to lower their production costs. These developments could offer significant opportunities for large and medium-size independent companies to expand their production and realize economies of production. The vehicle manufacturers are offering long-term contracts to ensure that companies undertake the necessary investments. However, some of the smaller companies which lack necessary funds for investment face increasing risk of business losses.

As the Japanese continue to make a strong push for enlarging their production base in North America, significant business will be lost by the North American parts manufacturers due to further erosion of traditional North American auto producers' market shares. These Asian vehicle manufacturers also will use a high percentage of parts imported from their supplier base. Many Japanese suppliers already have followed the Japanese auto makers to the United States.

In this environment, the North American parts suppliers will require a strategy aimed at employing their capabilities to increase competitiveness either with their own resources or by developing joint ventures with offshore parts producers, technology transfers and equity-sharing arrangements. Moreover, suppliers must meet the higher quality standards set by the vehicle manufacturers and improve their international competitiveness in order to exploit these opportunities.

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

1. SALES

TABLE 1.1

Retail Sales of Motor Vehicles in Canada and the United States, 1970-1985
('000 Units)

YEAR	AUTOMOBILES			TRUCKS			TOTAL VEHICLES
	NORTH AMERICAN	OVERSEAS IMPORT	TOTAL	NORTH AMERICAN	OVERSEAS IMPORT	TOTAL	
<u>1. CANADA</u>							
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
1985	795	342	1 137	345	48	393	1 530

Source: Statistics Canada.

YEAR	AUTOMOBILES			TRUCKS			TOTAL VEHICLES
	NORTH AMERICAN	OVERSEAS IMPORT	TOTAL	NORTH AMERICAN	OVERSEAS IMPORT	TOTAL	
<u>2. U.S.</u>							
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
1985	8 205	2 834	11 038	3 912	766	4 678	15 716

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

TABLE 1.2

Canadian Sales of North American Cars by Size, 1970-1985
(Units)

YEAR	SUB-COMPACT	PERCENT TOTAL	COMPACT	PERCENT TOTAL	INTER- MEDIATE	PERCENT TOTAL	FULL-SIZE	PERCENT TOTAL	LUXURY	PERCENT 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
1985	237 047	30.22	202 286	25.88	245 966	31.47	79 961	10.23	16 567	2.12	781 827

SOURCE: MVMA.

TABLE 1.3

United States Sales of North American Cars by Size, 1970-1985
(Units)

YEAR	SUB-COMPACT	PERCENT TOTAL	COMPACT	PERCENT TOTAL	INTER- MEDIATE	PERCENT TOTAL	FULL-SIZE	PERCENT TOTAL	LUXURY	PERCENT 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
1985	1 296 863	15.81	2 562 588	31.24	2 463 556	30.03	1 077 308	13.14	804 389	9.81	8 204 704

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, 1964-1985
(Units)

Year	Total Sales Volume	Domestic		Total Imported		Japanese	
		Volume	Percent	Volume	Percent	Volume	Percent
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
1985	1 137 216	794 965	69.9	342 251	30.1	199 221	17.5

Source: Statistics Canada.

TABLE 1.5

U.S. Sales of New Passenger Cars by Origin, 1964-1985
(Units)

Year	Total Sales		Domestic		Total Imported		Japanese	
	Volume		Volume	Percent	Volume*	Percent	Volume*	Percent
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
1985	11 038 423		8 204 704	74.3	2 833 719	25.7	2 217 860	20.2

* Imported includes captive imports for 1980 and subsequent years.

Source: Ward's.

TABLE 1.6

Road Motor-vehicle Registrations in Canada, 1980-1984

	1980	1981	1982	1983	1984
Passenger Automobiles	10 255 511	10 199 388	10 530 355	10 731 520	10 780 667
Trucks and Truck-tractors	2 902 730	3 137 987	3 239 341	3 307 746	3 046 889
Buses	52 569	54 210	54 065	55 226	52 169
Motorcycles	388 680	406 871	431 453	466 411	470 445
Other	117 662	53 026	55 503	58 706	56 302
TOTAL	<u>13 717 152</u>	<u>13 851 482</u>	<u>14 310 717</u>	<u>14 619 609</u>	<u>14 406 472</u>

Source: Statistics Canada.

The statistics on road-vehicle registrations shown in this table have been obtained from the 12 provincial and territorial governments, 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 percent of registrations of road motor-vehicles represents transfers from other provinces or territories.

Since 1980, information from the province of Quebec concerning registration is based on a count of the number of vehicles in circulation. In previous years, data shown in tabulations for Quebec were based on the number of registration transactions. However, because Quebec registrations change each time a vehicle is sold (unlike 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 Quebec.

TABLE 1.7

Top Ten Vehicle Manufacturers in the World by Total Output, 1984

COMPANY	TOTAL OUTPUT (Units)
1. General Motors -- U.S.A.	8 070 647
2. Ford Motor -- U.S.A.	5 348 906
3. Toyota -- Japan	3 482 727
4. Nissan -- Japan	2 727 568
5. Volkswagen -- West Germany	2 135 346
6. Renault -- France	1 983 217
7. Chrysler -- U.S.A.	1 884 882
8. Peugeot -- France	1 747 740
9. Uaz -- U.S.S.R.	1 675 000
10. Fiat -- Italy	1 528 910

Note: Includes production from plants outside parent country.

Source: Motor Vehicle Manufacturers Association (MVMA) of the United States, World Motor Vehicle Data, 1986.

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 because 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
(\$C Million)

Model Year	U.S. Purchases from In-house Suppliers in Canada	Canadian Purchases from In-house Suppliers in U.S.A.	Column (a) Less Column (b)
	(a)	(b)	
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
1985	4 620.7	8 489.6	-3 868.9

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
1985	3 381.4	3 871.4	- 490.0

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 (1979-1985). 1978 data not available from Auto Pact Reports.

TABLE 1.9

Consumption of Automotive Parts by Vehicle Manufacturers
(\$C Millions)

Year	Canada	Within the United States	Canada as a Percent 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.

2. SHIPMENTS

TABLE 2.1

Value of Shipments in Canadian and U.S. Automotive Industries, 1973-1983

	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983*</u>
<u>CANADA (\$C Millions)</u>											
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	<u>7501.8</u>	<u>8208.7</u>	<u>8891.5</u>	<u>10998.6</u>	<u>13089.6</u>	<u>15615.9</u>	<u>16216.3</u>	<u>14723.7</u>	<u>16913.7</u>	<u>18365.9</u>	<u>24398.0</u>
<u>U.S.A. (\$U.S. Millions)</u>											
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 Carburetors, 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.)	<u>32919.8</u>	<u>32956.8</u>	<u>33456.6</u>	<u>43881.1</u>	<u>53612.6</u>	<u>59941.7</u>	<u>59610.4</u>	<u>49717.1</u>	<u>55485.9</u>	<u>53903.7</u>	<u>66294.3</u>
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. (\$C)	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 (\$C)	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.

3. PRODUCTION

TABLE 3.1

North American Production of Motor Vehicles
('000 Units)

Year	Canada		U.S.A.		North America Total	
	Volume	Percent	Volume	Percent	Volume	Percent
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
1985	1 930	14.2	11 648	85.8	13 578	100.0

Source: Ward's Automotive Reports.

TABLE 3.2

Canadian Truck Production, 1975-1985
(Units)

YEAR	LIGHT	PERCENT OF TOTAL	MEDIUM- AND HEAVY-DUTY	PERCENT 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
1985	834 467	97.46	21 711	2.54	856 178

Source: MVMA

TABLE 3.3

U.S. Truck Production, 1975-1985
(Units)

YEAR	LIGHT	PERCENT OF TOTAL	MEDIUM	PERCENT OF TOTAL	HEAVY- DUTY	PERCENT 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
1985	3 045 990	90.74	78 279	2.33	232 636	6.93	3 356 906

Source: Ward's Automotive Yearbook.

4. INVESTMENT

TABLE 4.1

New Capital Expenditures in Canadian and U.S. Automotive Industries, 1974-1985
(\$C Million)

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
<u>CANADA (\$C Millions)</u>												
Motor-vehicle Manufacturers	73.5	61.0	59.6	152.5	83.6	111.4	136.4	272.9	203.1	463.2	256.1	713.6
Truck-body Manufacturers	31.2	18.5	23.3	24.1	15.4	41.7	47.2	32.2	33.6	12.6	12.6	8.9
SUB-TOTAL	104.7	79.5	82.9	176.6	99.0	153.1	183.6	305.1	236.7	475.8	268.7	722.5
Motor-vehicle Parts & Access.	119.9	81.2	62.5	109.6	203.9	330.9	780.9	666.5	188.5	140.5	171.1	332.1
TOTAL	224.6	160.7	145.5	286.2	302.9	484.0	964.5	971.6	425.2	616.3	439.8	1054.6
<u>U.S.A.</u>												
Motor Vehicle & Car Bodies	1020.0	667.0	1032.3	1814.4	2140.0	2232.4	2677.5	5631.9	2922.5	N/A	N/A	N/A
Truck & Bus Bodies*	33.7	28.6	30.8	59.7	44.8	56.2	41.7	52.9	63.8	N/A	N/A	N/A
Truck-trailers	29.0	33.2	14.3	38.6	44.5	43.5	64.5	66.3	46.0	N/A	N/A	N/A
SUB-TOTAL (\$C Million)	1082.7	728.8	1077.4	1912.7	2229.3	2332.1	2783.7	5751.1	3032.3	N/A	N/A	N/A
Motor-vehicle Parts & Access.	1261.7	1133.7	948.7	1973.9	2801.9	3222.4	3615.7	3968.0	2211.0	N/A	N/A	N/A
Automotive Stampings	220.5	219.5	173.7	310.8	457.7	457.9	713.1	1012.4	573.8	N/A	N/A	N/A
Carburetors, Pistons, Rings	29.0	31.1	38.1	85.0	137.1	136.1	133.1	165.2	130.8	N/A	N/A	N/A
Vehicular Lighting Equipment	45.6	15.5	21.1	49.1	47.0	59.9	59.7	83.9	54.0	N/A	N/A	N/A
Engine Electrical Equipment	128.6	52.8	72.3	155.3	196.9	187.1	147.6	188.0	96.7	N/A	N/A	N/A
Automotive-apparel Trimmings	37.7	21.1	20.2	38.4	40.0	44.5	53.8	72.5	50.7	N/A	N/A	N/A
SUB-TOTAL (\$C Million)	1723.1	1473.4	1274.1	2612.5	3680.6	4107.9	4723.0	5490.0	3117.0	N/A	N/A	N/A
TOTAL U.S.A. (\$C Million)	2805.8	2202.2	2351.5	4525.2	5909.9	6440.0	7506.7	11241.1	6149.3	N/A	N/A	N/A
TOTAL NORTH AMERICAN (\$C Million)	3030.4	2362.9	2496.9	4811.4	6212.8	6924.0	8471.2	12212.7	6574.5	N/A	N/A	N/A
CANADA as a % of NORTH AMERICA												
- Motor-vehicle Assembly	8.8	9.8	7.1	8.5	4.3	6.2	6.2	5.0	7.2			
- Motor-vehicle Parts	6.5	5.2	4.7	4.0	5.2	7.5	14.2	10.8	5.7			
- Total Auto Industry	7.4	6.8	5.8	5.9	4.9	7.0	11.4	8.0	6.5			

* 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.

5. TRADE AND AUTO PACT DATA

TABLE 5.1

Canadian-overseas Trade in Automotive Products*
(\$C Million)

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
<u>CANADIAN EXPORTS</u>																		
Motor Vehicles	133	108	141	114	117	126	204	421	427	614	711	558	634	656	440	281	346	216
Parts	68	91	99	85	88	119	142	180	171	195	314	445	420	556	404	254	280	307
Tires and Tubes	3	2	3	4	3	5	5	5	8	7	10	11	31	45	26	18	24	45
Re-exports	11	10	9	7	6	8	7	10	10	10	9	21	89	436	390	194	174	134
TOTAL	215	211	252	210	214	258	358	621	615	826	1044	1035	1174	1693	1260	747	824	702
<u>CANADIAN IMPORTS</u>																		
Motor Vehicles	177	245	240	374	464	377	450	410	522	592	894	727	1159	1599	1413	1626	2176	3107
Parts	60	93	130	133	191	212	260	206	231	235	262	365	355	342	379	613	1328	1459
Tires and Tubes	10	13	19	27	42	57	70	82	79	110	146	202	208	187	115	128	207	207
TOTAL	247	351	389	534	697	646	780	698	842	937	1302	1294	1722	2128	1907	2367	3711	4773
<u>BALANCES</u>																		
Motor Vehicles	(44)	(137)	(99)	(260)	(347)	(251)	(246)	11	(95)	22	(183)	(169)	(525)	(943)	(973)	(1345)	(1830)	(2891)
Parts	8	(2)	(31)	(48)	(103)	(93)	(118)	(26)	(60)	(40)	52	180	65	214	25	(359)	(1048)	(1152)
Tires and Tubes	(7)	(11)	(16)	(23)	(39)	(52)	(65)	(77)	(71)	(103)	(136)	(191)	(177)	(142)	(89)	(110)	(183)	(162)
Re-exports	11	10	9	7	6	8	7	10	10	10	9	21	89	436	390	194	174	134
TOTAL	(32)	(140)	(137)	(324)	(483)	(388)	(422)	(82)	(227)	(111)	(258)	(259)	(548)	(435)	(647)	(1620)	(2887)	(4071)

*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, 1968-1985

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
\$C MILLION																			
United States Imports from Canada*																			
Cars	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	15 277	
Trucks, etc.	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	6 422	
Parts	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	11 512	
Tires and tubes	9	5	15	8	23	68	64	68	163	144	192	234	231	286	406	419	598	592	
Total	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	33 803	
Canadian Imports from United States																			
Cars	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	8 566	
Trucks, etc.	189	263	275	361	495	643	896	942	970	1 118	1 322	1 952	1 217	1 347	873	1 129	2 039	2 570	
Parts	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	17 438	
Tires and tubes	29	37	24	36	50	92	218	174	115	153	130	155	146	165	147	225	345	264	
Total	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	28 838	
Balances																			
Cars	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	6 711	
Trucks, etc.	210	342	314	232	211	146	-28	-10	375	846	1 003	412	1 001	1 795	3 073	3 308	3 841	3 852	
Parts	-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	-5 926	
Tires and Tubes	-20	-32	-9	-28	-27	-24	-154	-106	48	-9	62	79	85	121	259	194	253	328	
Total	-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	4 965	
Excluded: retroactive adjustments to value of imported parts from U.S. for special tooling charges.																			
	51	84	95	80	85	93	188	135	151	244	284	234	297	463	479	454	417	454	

* 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

Canada-U.S. Trade Within and Outside the Automotive Products Trade Agreement, 1974-1983
(\$C Millions)

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
U.S. Imports from Canada										
Under APTA - Motor Vehicles	3 391.0	3 726.1	4 703.6	5 942.8	6 972.0	6 622.0	6 612.2	8 141.7	11 023.1	12 975.5
- Parts	1 816.9	1 909.2	2 766.6	3 488.4	4 421.0	4 072.0	3 008.1	3 670.7	4 292.4	6 207.4
- Sub-total	5 207.9	5 635.3	7 470.2	9 431.2	1 393.0	10 694.0	9 620.3	11 812.4	15 315.5	19 182.9
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	1 100.9	1 112.0
Canadian Imports from U.S.										
Under APTA - Motor Vehicles	2 443.9	3 000.3	3 129.7	3 846.1	4 283.0	5 564.0	4 542.6	4 944.8	3 705.2	5 865.6
- Parts	3 546.6	4 039.9	4 800.8	6 218.3	7 425.0	7 780.0	6 890.3	8 364.2	9 055.8	10 967.3
- Sub-total	5 990.5	7 040.2	7 930.5	10 064.4	11 708.0	13 344.0	11 432.9	13 309.0	12 761.0	16 832.9
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	1 169.0	1 006.8	1 281.5	944.3	1 154.2
Balances										
Under APTA - Motor Vehicles	947.1	725.8	1 573.9	2 096.7	2 689.0	1 058.0	2 069.6	3 196.9	7 317.9	7 109.9
- Parts	(1 729.7)	(2 130.7)	(2 034.2)	(2 729.9)	(3 004.0)	(3 708.0)	(3 882.2)	(4 693.5)	(4 763.4)	(4 759.9)
- Total	(782.6)	(1 404.9)	(460.3)	(633.2)	(315.0)	(2 650.0)	(1 812.6)	(1 496.6)	2 554.5	2 350.0
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

1966-1985

Year	Canadian Value-added as Percentage of Cost of Sales in Canada	Canada Auto Pact Trade Imba- lance as Percentage of Total Canada-U.S. Auto Pact Trade
	(Model year)	(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
1985	78	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, 1971-1985
(\$C million)

	<u>MODEL YEARS</u>														
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
<u>PASSENGER VEHICLES</u>															
(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	174
<u>COMMERCIAL VEHICLES</u>															
(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	192
<u>BUSES</u>															
(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	324

*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 (CVA) as a Percentage of Cost of Sales Compared to CVA Commitments of all Auto Pact Producers, 1975 - 1985
(\$C Million)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
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	13 022
Total CVA Produced (model year)	2 987	3 606	4 337	4 951	5 491	4 659	5 368	5 759	5 847	8 504	10 210
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	2 812
Total Achieved CVA as Percentage of Cost of Sales	66	67	72	74	64	53	62	91	87	83	78
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	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
(\$C thousand)

Year	Non-parts CVA in Vehicle Production	Parts CVA in Vehicle Production	CVA in Original- Equipment Parts Exported	Total Canadian Value-added Produced	Parts CVA as Percentage of Total CVA
	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
1985	2 181 753	3 093 599	5 095 169	10 370 521	79.0

Source: 1964-1977 data prepared by the Reisman Commission; 1978-1985 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 (\$C million) 1981-1984

Type of Transaction	1981	1982	1983	1984
United States Imports from Canada (2):				
Cars	5 145	7 170	8 973	13 085
Trucks, etc.	3 142	3 946	4 437	5 880
Parts	4 151	4 902	7 056	10 885
Tires and Tubes	286	406	419	-
Total	12 724	16 424	20 885	29 850
Canadian Imports from United States (3):				
Cars	3 719	2 877	4 886	6 085
Trucks, etc.	1 339	873	1 129	2 039
Parts	9 230	9 683	11 359	15 791
Tires and Tubes	165	147	225	-
Total	14 453	13 579	17 599	23 915
Net Flow on Merchandise Trade	-1 729	+2 845	+3 286	+5 935
Other Selected Current Account Transactions	- 583	- 868	- 485	-1 323
Net Flow on Current Account	-2 312	+1 977	+2 801	+4 612
Capital Account Transactions				
Net Flow on Capital Account	+ 778	- 31	-1 283	+ 107
Net Flow on Current and Capital Account	-1 534	+1 946	+1 518	+4 719

(1) Items contained in the statement do not reflect the full range of current and capital flows associated with the automotive industry, but are a selection of important elements. Balances should be read with this qualification in mind.

(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 manufacturers, 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; 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

6. EMPLOYMENT

TABLE 6.1

Employment Related to Automotive Manufacturing in Canada, 1964-1985
('000)

CALENDAR YEAR	MOTOR-VEHICLE ASSEMBLY (SIC 323)	TRUCK BODIES & 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
1985*	50.4	13.5	60.3	5.1	129.1

* 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 and later data cannot be compared with the historical employment data.

Source: Statistics Canada.

TABLE 6.2

Employment Related to Automotive Manufacturing in the U.S., 1972-1985
('000)

YEAR	TOTAL MOTOR VEHICLES AND EQUIPMENT (SIC 371)	MOTOR VEHICLES (SIC 3711)	TRUCKS AND BUS BODIES (SIC 3713)	PARTS AND 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	867.2	389.4	40.4	388.0	99.3
1985	873.4	402.5	37.8	388.9	102.3

Source: U.S. Bureau of Labor Statistics.

Based on 1972 Standard Industrial Classification (SIC), annual average 1972-1985.

TABLE 6.3

Canadian Automotive Parts Industry by Number of Employees: 1984

Number of Employees	Number of Establishments	Percent of Total Establishments	Value of Shipments (\$ million)	Percent 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.

7. VEHICLE-ASSEMBLY AND PARTS-MANUFACTURING PLANTS IN CANADA

TABLE 7.1

Major Motor-vehicle Assembly and Parts-manufacturing
Plants in Canada

LOCATION	COMPANY/PLANT NAME	MAIN PRODUCTS
<u>British Columbia</u>		
Burnaby	Freightliner of Canada Ltd.	Trucks
Kelowna	Western Star Trucks Inc.	Trucks
North Vancouver	Pacific Truck and Trailer Ltd.	Trucks
<u>Manitoba</u>		
Winnipeg	Flyer Industries Ltd.	Buses
	Motor Coach Industries	Buses
<u>Ontario</u>		
Brampton	American Motors (Canada) Ltd.	Cars
Chatham	International Harvester Canada	Trucks
Oakville	Ford Motor Company of Canada, Ltd.: car-assembly plant	Cars
	Ford truck plant	Trucks
Oakville	Mack Canada, Inc.	Trucks
Oshawa	General Motors of Canada Ltd.: car-assembly plant	Cars
	GM truck-assembly plant	Trucks
Mississauga	Ontario Bus Industries Ltd.	Buses
Scarborough	GM van plant	Vans

Table 7.1 (continued)

Major Motor-vehicle Assembly and Parts-manufacturing
Plants in Canada

LOCATION	COMPANY/PLANT NAME	MAIN PRODUCTS
<u>Ontario</u> (continued)		
St. Thomas	Ford Motor Company of Canada, Ltd.	Cars
Windsor	Chrysler Canada Ltd.	Vans and wagons
	Chrysler Pillette Road plant	Vans and wagons
<u>Quebec</u>		
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
<u>Nova Scotia</u>		
Halifax	Volvo Canada Ltd.	Cars

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
<u>In-house facilities</u>		
American Motors (Canada) Inc.	Sarnia, Ont.	Blocks and casting
Chrysler Canada Ltd.		
Trim plant	Ajax, Ont.	Door panels seat cushions, backs
Aluminum-casting plant	Etobicoke, Ont.	Pistons, water-pump bodies, transmissions, transfer cases
Ford Motor Company of Canada Ltd.		
Niagara glass plant	Niagara Falls, Ont.	Automotive glass
Essex plant	Windsor, Ont.	V6 engines
Ensite engine plant #1	Windsor, Ont.	V8 engines
Ensite engine plant #2	Windsor, Ont.	Engine machinery and stampings
Casting plant	Windsor, Ont.	Iron castings
Essex aluminum plant	Windsor, Ont.	Aluminum castings
Philco Ford	Don Mills, Ont.	Radio and electronic components
General Motors of Canada Ltd.		
Fabrication plant	Oshawa, Ont.	Stampings, batteries, radiators, instrument clusters, plastics, reaction injection molding
Foundry	St. Catharines, Ont.	Metal castings (ferrous and non-ferrous)
Axle plant	St. Catharines, Ont.	Axles, disc brakes, spark plugs, front suspensions, transmission components
Engine plant	St. Catharines, Ont.	V6 and V8 engines
Trim plant	Windsor, Ont.	Trim sets, door covers
Transmission plant	Windsor, Ont.	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, Ont.	Mufflers, tail and exhaust pipes
Budd Canada Inc.	Kitchener, Ont. Winnipeg, Man.	Frames, engine heaters
Canadian Fram Limited	Chatham, Ont.	Emission controls, cooling systems
Certified Brakes	Rexdale, Ont.	Brake disc-pads, brake linings, hydraulic parts
Continental Group of Canada Ltd.	Amherstburg, N.S. Brampton, Ont.	Stampings, springs
Hayes-Dana Inc.	St. Catharines, Ont. Barrie, Ont.	Drive shafts, frames, axles
Kelsey-Hayes Canada Ltd.	Windsor, Ont. St. Catharines, Ont.	Wheels, brake parts
Kralinator Filters	Cambridge, Ont.	Oil, fuel and air filters
Motor Wheel Corporation of Canada Ltd.	Chatham, Ont.	Wheels, rims and flanges
Rockwell International of Canada Ltd.	La Colle, Que. Tilbury, Ont. Gananoque, Ont. Mississauga, Ont. Bracebridge, Ont. Chatham, Ont. Milton, Ont.	Coil springs, brakes, mechanical components stampings, plastic components
Standard Tube Canada Ltd.	Woodstock, Ont.	Axle components
Standard Products Canada	Stratford, Ont.	Weather stripping, engine and body mounts
TRW Canada, Thompson Products Division	St. Catharines, Ont.	Steering components, valves, electro-mechanical devices
Varta Batteries Ltd.	Lachine, Que. Scarborough, Ont. St. Thomas, Ont. Winnipeg, Man. Richmond, Man.	Batteries
Walker Exhausts	Cambridge, Ont.	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
<u>Canadian-owned Companies</u>		
A.G. Simpson Co. Ltd.	Toronto, Ont. Windsor, Ont.	Stampings
Ahoy Industries Inc.	Richmond, B.C.	Truck exhaust-tubings
Amcan Castings Ltd.	Hamilton, Ont.	Die castings
Asbestonos	Montréal, Que.	Brake and clutch products
Butler Metal Products Co. Ltd.	Cambridge, Ont.	Stampings
CAE Industries Ltd.	St. Catharines, Ont. Montréal, Que. Welland, Ont. Vancouver, B.C.	Non-ferrous and light-alloy castings
Canadian-General Tower Ltd.	Cambridge, Ont.	Seat fabrics
Crila Plastic Industries Ltd.	Bolton, Ont.	Trim
Do Ray Lamp Company (Canada)	Toronto, Ont.	Truck lighting and safety equipment
Dominion Auto Accessories Ltd.	Toronto, Ont.	Protective lighting, mirrors, directional signals
Fabricated Steel Products Ltd.	Windsor, Ont.	Stampings
Fleck Manufacturing Company	Tillsonburg, Ont. Huron Park, Ont.	Wire harnesses
Huron Steel Products	Windsor, Ont.	Stampings
Kendan Manufacturing Ltd.	Windsor, Ont.	Diesel engine components
Keystone A&A Industries Ltd.	Richmond, B.C.	Wheels and wheel covers
Magna International Incorporated	Markham, Ont.	Stampings, plastic components, motors, instrumentation
National Auto Radiator Manufacturing Co.	Windsor, Ont.	Stampings
Stelco Inc. (parts manufacturing only)	Gananoque, Ont. Toronto, Ont.	Fasteners and forgings

Table 7.2 (continued)

A Partial List of Major Automotive Parts Plants in Canada

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

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

