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Light Motor Vehicles

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Canada

1990-1991

LIGHT MOTOR VEHICLES**FOREWORD**

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In a rapidly changing global trade environment, the international competitiveness of Canadian industry is the key to growth and prosperity. Promoting improved performance by Canadian firms in the global marketplace is a central element of the mandates of Industry, Science and Technology Canada and International Trade Canada. This Industry Profile is one of a series of papers in which Industry, Science and Technology Canada assesses, in a summary form, the current competitiveness of Canada's industrial sectors, taking into account technological, human resource and other critical factors. Industry, Science and Technology Canada and International Trade Canada assess the most recent changes in access to markets, including the implications of the Canada-U.S. Free Trade Agreement. Industry participants were consulted in the preparation of the profiles.

Ensuring that Canada remains prosperous over the next decade and into the next century is a challenge that affects us all. These profiles are intended to be informative and to serve as a basis for discussion of industrial prospects, strategic directions and the need for new approaches. This 1990-1991 series represents an updating and revision of the series published in 1988-1989. The Government will continue to update the series on a regular basis.



Michael H. Wilson
Minister of Industry, Science and Technology
and Minister for International Trade

Introduction

The automotive industry in Canada broadly includes the manufacturers both of motor vehicles (passenger cars, trucks, buses and specialty vehicles) and of the parts, tires and tubes that are used as original equipment in the assembly of new motor vehicles as well as for replacement parts and accessories. Most of the industry is rationalized to operate in one market that includes both Canada and the United States.

Automotive activities in 1989 generated slightly over 15 percent of the total shipments of products manufactured in Canada. They accounted for 32.5 percent of all exports of fabricated materials and end products. In 1989, automotive shipments were composed of \$28.1 billion in automobile, truck and bus assembly; \$14.7 billion in parts; \$1.9 billion in specialty vehicles; and about \$1.5 billion¹ in tires and tubes. In the same year, the industry employed 185 200 people.

Of these, 55 500 were involved in assembling automobiles, trucks and buses; 96 500 in parts; 22 700 in specialty vehicles; and about 10 500¹ people worked to manufacture tires and tubes.

This profile deals only with the light motor vehicles industry. In addition to *Light Motor Vehicles*, industry profiles have been prepared covering

- *Automotive Aftermarket Parts*
- *Automotive Original Equipment Parts*
- *Automotive Tires*
- *Heavy-Duty Trucks*
- *Specialty Vehicles*
- *Urban and Intercity Buses*

¹ISTC estimates.



Structure and Performance

Structure

The Canadian light motor vehicles industry comprises companies that produce cars, light trucks and vans under 10 000 pounds (4.5 tonnes) gross vehicle weight. In 1989, total Canadian vehicle shipments amounted to 1.9 million units, of which light vehicle production represented 97 per cent. This total represented about 15 percent of the 12.8 million light vehicles produced in North America during 1989.

The Canadian light vehicle industry in 1989 directly employed about 49 700 people. Industry shipments were valued at \$26 billion, while exports accounted for almost \$22 billion (Figure 1). The Canadian industry enjoyed a trade surplus worth \$5.3 billion in the same year, which was composed of a \$9.5-billion surplus with the United States and a \$4.2-billion deficit with other countries (Figure 2).

Light vehicle production in Canada is dominated by the wholly controlled subsidiaries of U.S. companies, namely Chrysler, Ford and General Motors (GM), commonly known as the Big Three automakers. These firms accounted for 92 percent of Canadian light vehicle production in 1989. There are four Asian-owned assembly plants in Canada: Honda, Toyota, Hyundai and CAMI, the latter a joint venture between GM and Suzuki. These plants, together with Volvo, which has operated a small facility in Halifax since 1962, accounted for the remaining 8 percent. The dominance of the Big Three will be significantly reduced by 1992, when the Asian-owned operations' combined production (in units) will represent up to 20 percent of Canadian light vehicle output.

The structure, ownership and export orientation of traditional assemblers in Canada reflect the industry's development under the Canada-U.S. Automotive Products Trade Agreement (Auto Pact), implemented in 1965. Under the Auto Pact, Canada allows duty-free imports of vehicles and parts, subject to the requirement that participants meet certain manufacturing performance standards. As a result, the Big Three's Canadian assembly plants form part of an integrated North American production system, and these operations have been able to derive the benefits of otherwise unattainable economies of scale. Consequently, only a small portion of the output from any one facility remains in Canada. In contrast, major U.S. assemblers export about 10 percent of their annual production to Canada.

Although part of an integrated production system, Canadian operations are largely restricted to vehicle assembly and sales. Corporate planning, research, design and engineering activities are carried out at corporate headquarters in either the United States or Japan. This situation has resulted

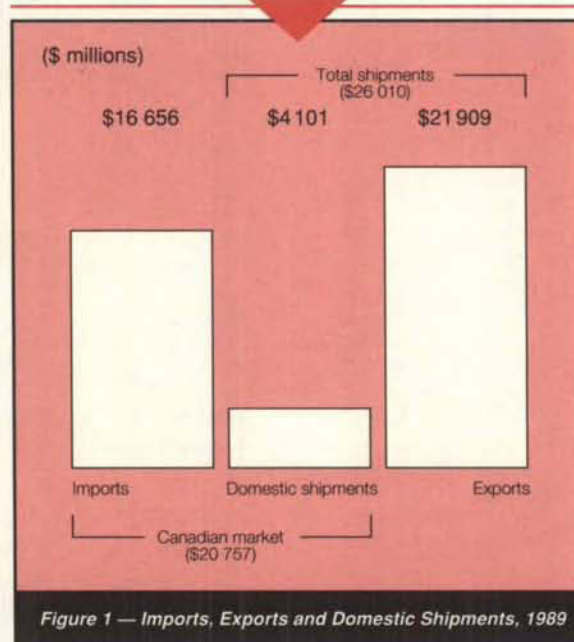


Figure 1 — Imports, Exports and Domestic Shipments, 1989

in a low level of automotive research and development (R&D) in Canada, with the exception of plant and product engineering, which necessarily takes place at the plant level.

The industry is heavily concentrated in southwestern Ontario, which produces nearly 90 percent of the total value of annual light vehicle shipments. Most of the remainder is accounted for by GM and Hyundai in Quebec and by Volvo in Nova Scotia.

Unionized automotive workers in Canada are represented by the Canadian Auto Workers, which has operated separately from the U.S.-based United Auto Workers since 1985.

Performance

Today's light vehicle industry and market have been shaped by the global influences of the energy price crisis of the 1970s and the more recent internationalization of the industry. These factors have forced the Big Three to undertake major adjustments, moving the industry from one characterized by its relative stability and domestic focus to a highly competitive, international orientation. The principal features of this adjustment by the Big Three have been massive spending to introduce a new range of products and flexible manufacturing processes and to implement outward-looking strategies such as joint ventures or technical and marketing arrangements with offshore suppliers to improve competitiveness.

The Big Three have also focused on reducing production costs. Adoption of features of the Japanese production system has involved altering many production processes and controls,

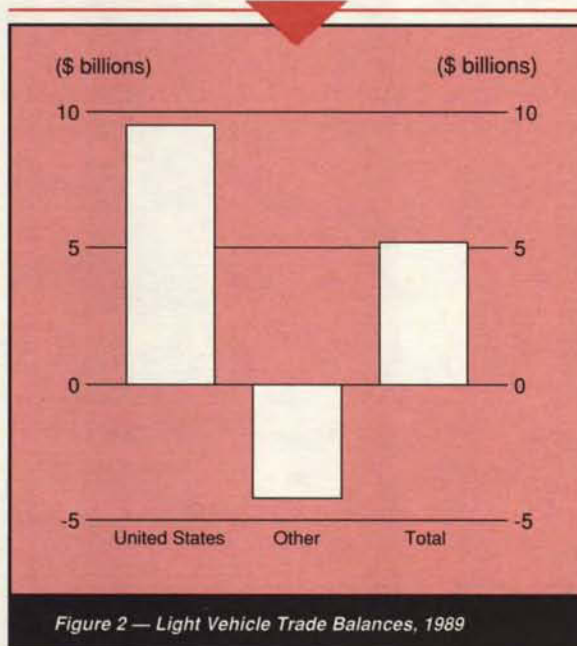


Figure 2 — Light Vehicle Trade Balances, 1989

including assembly schedules as well as inventory-control and quality-control systems. The result is an ongoing, fundamental realignment in the assembler-supplier relationship, which is having a major impact on the overall North American parts industry.

Figure 3 illustrates the growth of the market share for light motor vehicles imported from outside North America since the 1973 model year, which was just prior to the impact of the first oil price shock. During the adjustment process described earlier, these imports (including imported vehicles sold by the Big Three) increased their share of the North American light vehicle market to 24 percent, which was made up of a 29 percent share of car sales and a 13 percent share of light truck purchases. In comparison, total import penetration of the Canadian light vehicle market was 27 percent in 1989, composed 34 percent of car purchases and 14 percent of light truck purchases.

By 1989, the traditional North American assembly industry had returned to profitability and had strengthened product performance (Figure 4). Surveys of new-vehicle quality as judged by consumers, a key element of competitiveness, indicate that the Big Three in North America had substantially closed the gap between themselves and their competition, primarily the Japanese automakers. Competitive standards are a rapidly moving target, however, demanding continuous improvement in design and product performance.

The industry's recovery was facilitated by the strong performance of North American light vehicle sales, which



Figure 3 — Penetration of Imported Light Vehicles into the North American Market

averaged more than 16 million units annually from 1984 through 1989. The shift in market demand toward the light truck segment, which now accounts for almost a third of light vehicle sales, was particularly important, given the strength of the North American industry in these products.

The operations of the Big Three in Canada have tended to reflect the adjustment pattern seen in the United States between 1979 and the present, with major investment programs in place at Canadian assembly plants. The Big Three report that the total of their investments in Canada since the early 1980s has exceeded \$8 billion. The financial performance of the Big Three in Canada reflects the strength of the market for their products as well as such variables as product mix, new line start-up costs, plant renovations, labour-management relations, security of parts and material supply, as well as sales incentives.

Asian assemblers will have invested approximately \$6.6 billion in automotive assembly operations in the United States and Canada by 1992, of which some \$1.5 billion (23 percent) has already been spent in Canada. All four of the new Canadian assembly operations are in production, with Honda and Toyota exceeding announced plant capacity and with CAMI and Hyundai building up to capacity. The Honda, Hyundai and Toyota plants in Canada are smaller than full-scale facilities, which typically produce at least 200 000 units annually. Each of these plants exports a large portion of its output to the United States.



Strengths and Weaknesses

Structural Factors

Big Three assembly facilities represent approximately 80 percent of Canadian assembly capacity and have demonstrated an ability to compete with U.S. plants within a traditional, rationalized, North American production scheme. Overall, Canadian production systems, material and production costs, and levels of applied technology compare favourably with those of equivalent U.S. assembly facilities. Canadian plant productivity, measured on the basis of vehicles produced per worker, also is comparable with U.S. levels. Two Canadian assembly plants located at Brampton and Scarborough, however, are relatively older, smaller facilities that have not been upgraded for an extended period and are expected to be closed by 1993. These are the first such announcements that have been made in Canada, in comparison with 20 actual and announced closures in the United States over the past decade.

Labour costs remain a key area of difference between Canadian and American assemblers. On the basis of data collected over the past 10 years, the United States Bureau of Labor Statistics estimates Canadian hourly compensation costs for motor vehicle and equipment production workers to have represented 70 percent of comparable U.S. costs on average; this advantage has lessened in the past four years. Canadian labour costs as a result were 82 percent of those in the United States in 1989.

Although the Canadian labour force has been regarded by assemblers as well-educated and productive, increased levels of computer-based automation have required extensive retraining of employees. These demands will continue to place greater emphasis on literacy and numeracy skills among the assembly work force. While there is apparently an adequate supply of professional staff, primarily engineers to work in process engineering, some assemblers have indicated that it would be helpful to have a university program that includes a greater emphasis on automotive applications.

While Canadian assembly plants have demonstrated their competitiveness within the Big Three production system, the traditional North American industry's ability as a whole to compete against foreign assemblers is also an important consideration. Big Three state-of-the-art plants in Canada and the United States are comparable with the best plants in Japan or the new Asian-owned operations on this continent. Some Big Three plants, however, lag in productivity and quality. At the same time, it is not always necessary for a plant to be state-of-the-art in order to be competitive at a given time. There are numerous examples of conventional plants across North America that operate efficiently, profitably and competitively.

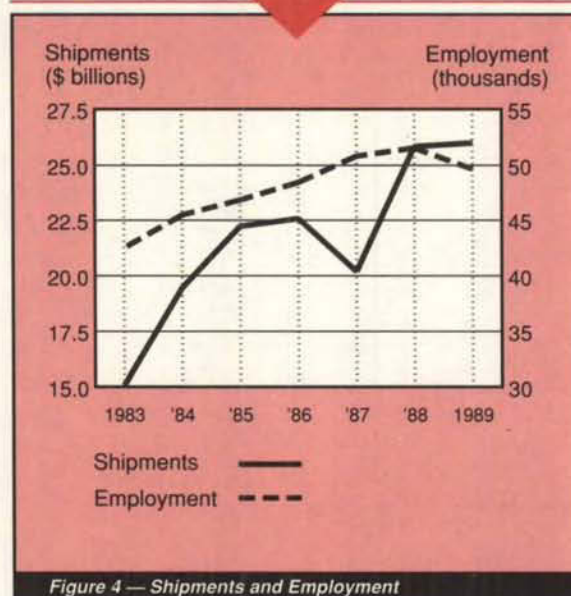
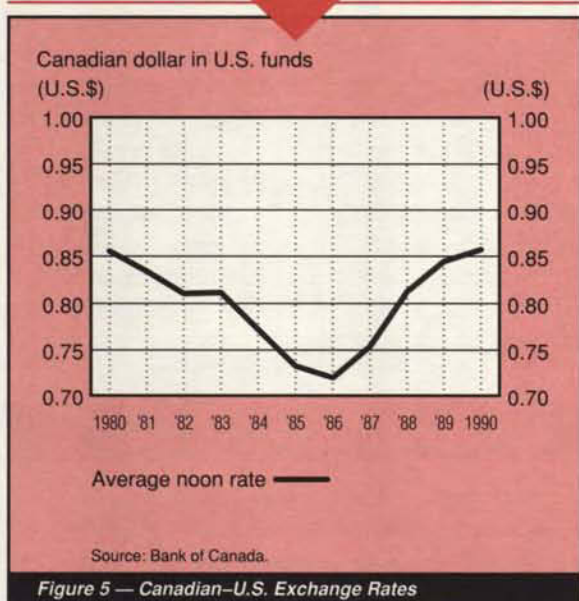


Figure 4 — Shipments and Employment

The critical issue is the presence of a suitable market for the particular model and the cost structure in place at a particular operation.

New standards of competitiveness resulting from increased foreign competition are continuing to transform the North American automotive market. As low price and high quality become conditions for survival in the North American market, the ability to produce innovative products matching consumer preferences in a timely fashion is becoming the new hallmark of competitiveness.

Japanese manufacturers lead in speed of product development, requiring approximately three to four years to develop entirely new models, while the Big Three have recently reduced their average to about five years. This discrepancy reflects the later adoption of a project-oriented approach to organizing the design process and of computerized engineering tools by the Big Three. While traditional design systems have progressed in a sequential fashion, moving from styling to engineering and manufacturing, the Japanese have pioneered an overlapping system using a team approach between assemblers and parts manufacturers and integrating all functions through computer systems. Computer-aided design and manufacturing techniques (CAD/CAM) allow all parties to see changes simultaneously, avoiding changes late in the process. More rapid product development allows close matching of new products to rapidly evolving consumer tastes as well as more successful implementation of new technology through incremental, rather than wholesale, adoption.

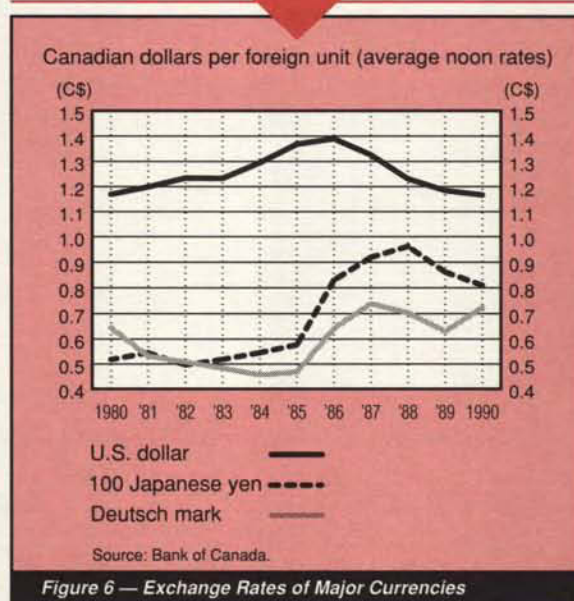


The industry has expressed concern about the relatively higher value of the Canadian dollar in recent periods vis-à-vis the U.S. dollar (Figure 5). A significantly lower value, on the other hand, is widely recognized as being inflationary. The resulting higher domestic costs and prices in turn can erode, over time, the short-term competitive gains of such a lower-valued dollar.

The rapid appreciation of the yen against North American currencies since 1985 (Figure 6) has meant decreased profit margins on Japanese sales to North American markets. However, the Japanese industry has been able to adapt by applying cost-cutting measures and raising its prices, with little or no damage to its market performance. For example, Japanese corporations are steadily moving toward production of more specialized and expensive mid-range cars and luxury models, whose profit margins are higher. Entry into this market segment is exerting considerable pressure on the Big Three and on European manufacturers selling in North America, where both groups have traditionally gained their greatest sales volumes and revenues.

Trade-Related Factors

The prevailing tariff rates on motor vehicles entering Canada from countries having Most Favoured Nation (MFN) status with Canada are 9.2 percent and those from countries under the General Preferential Tariff (GPT) system are 6 percent. Apart from specific environmental and safety controls, Canada has no technical regulations in place on new motor vehicles, which sometimes act as non-tariff barriers. Under the terms of the Canada-U.S. Free Trade Agreement (FTA)



and the Canada-U.S. Auto Pact, Canada extends conditional duty-free entry to qualified automotive products from all MFN countries, subject to certain performance-related standards to be met by participating Canadian vehicle manufacturers. The U.S. MFN tariff rates are 2.5 percent on passenger cars and 25 percent on light trucks.

Under the FTA, vehicles and some parts exported to the United States must contain 50 percent North American content by value (termed North American value-added, or NAVA) in order to be traded duty-free. This rule is more restrictive than the pre-FTA Auto Pact rule, since only production costs may be included as North American content; that is, mark-up may not be included. Consequently, the new rule requires the use of about 30 percent more North American parts than was previously the case.

Under the FTA, bilateral tariffs on vehicles and original equipment parts are being phased out in ten annual, equal steps, with those on replacement parts and accessories being phased out in five annual, equal steps, beginning 1 January 1989. The Canadian provisions of the Auto Pact remain unchanged, although only those companies listed in the FTA are eligible to participate. Companies participating in Canada must continue to meet Auto Pact performance standards to retain eligibility for duty-free imports from third countries after Canada-U.S. tariffs are phased out.

Production-based duty remissions will continue until 1 January 1996 for eligible manufacturers, while export-based duty remissions related to third countries will continue until 1 January 1998. Canada has also agreed to phase out the prohibition on importing used and second-hand vehicles



from the United States in five equal, annual stages. For example, as of 1 January 1990, used vehicles six years old or older can be imported from the United States. The age of used vehicles from the United States that are allowed access to Canada will be reduced annually by two years. There will be no restrictions on entry of used cars beginning in January 1993.²

The European Community (EC) tariff rates on cars and trucks are 10 and 22 percent, respectively. At the present time, various technical regulations are in place on a country-by-country basis. Certain EC member states have in place restrictive import measures, which were negotiated between respective governments or industries, to limit Japanese vehicle imports. With the economic integration of Europe after 1992, the EC will gradually move toward the elimination of barriers between countries that currently restrict the free movement of goods and services.

Although Japan has no motor vehicle tariffs, internal tax policies and various distribution and cultural practices inhibit access. While North American and European manufacturers have significantly increased their exports to Japan, their share of the Japanese market remains under 5 percent.

The U.S., Canadian and Mexican governments have entered into preliminary discussions concerning the establishment of a free trade agreement between the three countries. Over the past several years, Mexican automotive exports to the United States have grown dramatically, making Mexico the third largest supplier to that country after Canada and Japan. Competition in the U.S. market will increase as the Mexican industry diversifies and improves its competitive position, irrespective of the outcome of any free trade negotiations.

Technological Factors

North American automakers have undertaken massive adjustments to introduce new product and process technologies to improve production efficiency, reduce costs and improve quality. Although the exterior of the car remains familiar, major changes have occurred within. These include the shift to front-wheel drive from rear-wheel drive; a reduction in weight through use of plastics, aluminum alloys, specialized steels and composite materials; and the introduction of electronic fuel-injection systems, small, efficient engines, computerized management systems and advanced safety features.

The efficient production of this new generation of vehicles has necessitated the adoption of new manufacturing concepts associated with the introduction of flexible, automated and robotized production together with CAD/CAM and control systems. Although advanced manufacturing techniques are

an important element, future competitiveness will be increasingly related to the ability to link management, the work force and automated equipment infrastructures in order to meet the conflicting goals of lower cost, higher quality and innovation.

Under the auspices of the Automotive Advisory Committee reporting to the Minister of Industry, Science and Technology Canada, the industry has launched an initiative to review the feasibility of upgrading the level of automotive R&D in Canada. To date, a number of studies and projects related to training, an automotive technology centre and university programs in engineering have been started.

Evolving Environment

The North American automotive industry will continue to have its profitability and position challenged throughout the 1990s. In spite of the widespread plant closures experienced since 1980, excess capacity remains for some manufacturers. The result has been greater reliance by the Big Three on non-automotive and foreign operations to maintain the viability of their North American production system. Competitive pressures and the supply/demand imbalance, particularly in the passenger car market, will cause the battle for market share and the narrow profit margins now characteristic of the North American industry to continue.

A major challenge for the industry is the need to invest heavily in new product development, while meeting the demands imposed by growing numbers of regulations regarding environmental protection and fuel economy. Increased regulation is particularly problematic for the Big Three, given their vehicle fleets' lower level of fuel efficiency. Improved fuel economy is being sought through extensive R&D in the application of new materials and more fuel-efficient engines. Regulations mandating elimination of chlorofluorocarbons (CFCs) from air conditioning systems by 1995 are forcing assemblers and suppliers to make major efforts in developing a replacement coolant. The financial success of the major Japanese assemblers and their generally more fuel-efficient products have left them well positioned to be able to meet the higher standards imposed by regulation.

Canadian assemblers have stressed the importance of maintaining consistency in environmental regulations between Canada and the United States. Differing vehicle emission standards, for example, could result in differences in the availability of some vehicles in the two markets. In the case of stationary emission standards applied to facilities, higher costs resulting from more stringent regulations could lead

²For a more complete explanation of these changes, see Chapter 10 of the Canada-U.S. Free Trade Agreement.



to a competitive disadvantage for Canadian plants in future decisions on new product mandates.

The FTA reinforces the position of the Canadian assembly industry in a North American context. Auto Pact participants will continue to operate on a rationalized basis, as in the past, and other assemblers will be able to take advantage of duty-remission benefits to increase North American value-added and rationalized production. Duty-remission benefits will end in 1996, however, under the conditions of the FTA. The duty drawback system, which allows companies to import inputs effectively duty-free when such inputs will be used to produce goods for export, will no longer be available to companies in either Canada or the United States under the terms of the FTA, beginning in 1994.

At the time of writing, the Canadian and U.S. economies were showing signs of recovering from a recessionary period. During the recession, companies in the industry generally experienced reduced demand for their outputs, in addition to longer-term underlying pressures to adjust. In some cases, the cyclical pressures may have accelerated adjustments and restructuring. With the signs of recovery, though still uneven, the medium-term outlook will correspondingly improve. The overall impact on the industry will depend on the pace of the recovery.

internationally competitive facilities, the continuing introduction of labour-management practices leading to improved plant productivity and the ability to sustain competitive productivity levels.

For further information concerning the subject matter contained in this profile or in ISTC sectoral studies (see page 11), contact

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Competitiveness Assessment

On balance, the light vehicle assembly industry in Canada (both U.S.-owned and Asian-owned) is currently competitive in North America. Both U.S. and Asian corporations have committed substantial investments in Canada in recent years to ensure the continuing competitiveness and prosperity of their assembly activities. Although two relatively older and smaller Canadian plants may be closed, the remaining 15 plants appear to have secure product mandates over the medium term, as most have received substantial investment in the past decade. As models near the end of their product cycle, these sites will have to compete for new product mandates.

The FTA has reduced a number of impediments to trade and has reinforced the concept of a rationalized North American market for automotive products. However, given the internationalization of the industry, the companies and government will need to work together to maintain the focus on ensuring Canadian automotive competitiveness not only in North America but also in an international context.

In light of the situation outlined above, the critical issues for the Canadian industry centre on the continuation of investments in Canada in order to expand and maintain modern,



PRINCIPAL STATISTICS^a

	1983	1984	1985	1986	1987	1988	1989
Establishments	8	8	8	14	14	15	15
Employment	42 488	45 954	46 844	48 441	50 822	51 544	49 657
Shipments (\$ millions)	15 064	19 469	22 218	22 568	20 189	25 842	26 010
GDP ^b (constant 1981 \$ millions)	1 716.4	1 968.0	2 036.9	1 880.5	1 688.4	2 025.5	1 959.4
Investment ^c (\$ millions)	463.2	256.1	663.9	1 908.6	1 544.0	1 911.6	1 422.7
Profits after tax ^d (\$ millions)	808.2	1 607.0	1 128.0	717.9	198.6	N/A	N/A

^aData on establishments, employment and shipments are ISTC estimates and exclude heavy-duty trucks and buses. For industry statistics, see *Transportation Equipment Industries*, Statistics Canada Catalogue No. 42-251, annual (SIC 3231, motor vehicle industry).

^bSee *Gross Domestic Product by Industry*, Statistics Canada Catalogue No. 15-001, monthly. Data refer to motor vehicle industry (SIC 3231).

^cSee *Capital and Repair Expenditures, Manufacturing Subindustries, Intentions*, Statistics Canada Catalogue No. 61-214, annual. Data refer to motor vehicle industry (SIC 3231).

^dISTC estimates.

N/A: not available

TRADE STATISTICS^a

	1983	1984	1985	1986	1987	1988 ^b	1989 ^b
Exports (\$ millions)	10 870	15 404	17 769	18 934	15 130	22 695	21 909
Domestic shipments (\$ millions)	4 194	4 065	4 449	3 634	5 059	3 147	4 101
Imports (\$ millions)	6 871	8 761	11 295	12 893	13 434	14 001	16 656
Canadian market (\$ millions)	11 065	12 826	15 744	16 527	18 493	17 148	20 757
Exports (% of shipments)	72.2	79.1	80.0	83.9	74.9	87.8	84.2
Imports (% of Canadian market)	62.1	68.3	71.7	78.0	72.6	81.6	80.2

^aSee *Exports by Commodity*, Statistics Canada Catalogue No. 65-004, monthly; and *Imports by Commodity*, Statistics Canada Catalogue No. 65-007, monthly.

^bIt is important to note that data for 1988 and after are based on the Harmonized Commodity Description and Coding System (HS). Prior to 1988, the shipments, exports and imports data were classified using the Industrial Commodity Classification (ICC), the Export Commodity Classification (XCC) and the Canadian International Trade Classification (CITC), respectively. Although the data are shown as a continuous historical series, users are reminded that HS and previous classifications are not fully compatible. Therefore, changes in the levels for 1988 and after reflect not only changes in shipment, export and import trends, but also changes in the classification systems. It is impossible to assess with any degree of precision the respective contribution of each of these two factors to the total reported changes in these levels. Various HS classes treated here are assigned an additional four digits (ANNEX code) for more detailed descriptions.



SOURCES OF IMPORTS^a (% of total value)

	1985	1986	1987	1988	1989
United States	76.5	73.7	71.6	72.4	73.5
European Community	5.8	7.1	6.6	5.6	4.3
Asia	17.6	19.0	20.5	21.4	21.1
Other	0.1	0.2	1.3	0.6	1.1

^aSpecial tabulations prepared by the Automotive Directorate. For additional detail, see *Imports by Commodity*, Statistics Canada Catalogue No. 65-007, monthly.

DESTINATIONS OF EXPORTS^a (% of total value)

	1985	1986	1987	1988	1989
United States	99.6	99.6	99.5	98.6	99.1
European Community	0.4	0.2	0.2	0.5	0.2
Asia	—	—	0.1	0.1	0.2
Other	—	0.2	0.2	0.8	0.5

^aSpecial tabulations prepared by the Automotive Directorate. For additional detail, see *Exports by Commodity*, Statistics Canada Catalogue No. 65-004, monthly.

REGIONAL DISTRIBUTION^a (average over the period 1986 to 1988)

	Atlantic	Quebec	Ontario	Prairies	British Columbia
Establishments (% of total)	9	17	56	7	11
Employment (% of total)	X	X	85	X	X
Shipments (% of total)	X	X	89	X	X

^aSee *Transportation Equipment Industries*, Statistics Canada Catalogue No. 42-251, annual.

X: confidential



MAJOR FIRMS

Name	Country of ownership	Location of major plants
CAMI Automotive Inc.	United States/Japan	Ingersoll, Ontario
Chrysler Canada Ltd.	United States	Windsor, Ontario Brampton, Ontario Bramalea, Ontario
Ford Motor Company of Canada, Limited	United States	Oakville, Ontario St. Thomas, Ontario
General Motors of Canada Limited	United States	Oshawa, Ontario Scarborough, Ontario Sainte-Thérèse, Quebec
Honda of Canada Mfg. Inc.	Japan	Alliston, Ontario
Hyundai Auto Canada Inc.	Republic of Korea	Bromont, Quebec
Toyota Motor Manufacturing Canada Inc.	Japan	Cambridge, Ontario
Volvo Canada Ltd.	Sweden	Halifax, Nova Scotia

INDUSTRY ASSOCIATIONS

Japan Automobile Manufacturers Association of Canada
Suite 1406, 2 Sheppard Avenue East
WILLOWDALE, Ontario
M2N 5Y7
Tel.: (416) 222-9515
Fax: (416) 226-6774

Motor Vehicle Manufacturers' Association
Suite 1602, 25 Adelaide Street East
TORONTO, Ontario
M5C 1Y7
Tel.: (416) 364-9333
Fax: (416) 367-3221



SECTORAL STUDIES AND INITIATIVES

The following publications are available from the nearest Business Service Centre (see inside front cover).

Automotive Research and Development Capability in Canada

This catalogue lists the capabilities of industry, university and association facilities.

A Comparison of the Tax Incentives for Performing Research and Development in Canada and the United States

This publication reviews the R&D incentives and credits with reference to the automotive industry. It was compiled by the accounting firm of Deloitte & Touche.

International Competitiveness of Canadian Research and Development Tax Incentives

This publication, prepared by The Conference Board of Canada, reviews the international competitiveness of Canadian R&D tax incentives by country and province.

Product and Process Development in the Canadian Automotive Industry

This publication offers a review of the literature on product and process development, with a description of current Canadian practices.

Product Research and Development in the Canadian Automotive Industry: Sources and Availability of Funds from an Automotive Industry Perspective

This publication lists and briefly describes funding sources available to the Canadian automotive industry.

Restructuring in the North American Automotive Industry

This second edition of the report reviews developments in North American assembly capacity and forecast sales, with assessments of individual Canadian assembly plants.

The following initiative is supported by Industry, Science and Technology Canada.

The ISTC Automotive Advisory Committee

This committee is comprised of senior labour and industry representatives, who provide policy advice on a variety of issues related to the industry. ISTC Automotive Advisory Committee subcommittees are pursuing several initiatives in co-operation with the department in the areas of research and development, the environment, statistics and information, and alternative fuels.

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