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# THE AUTOMOTIVE COMPETITIVENESS REVIEW

A REPORT ON THE CANADIAN  
AUTOMOTIVE INDUSTRY  
1998



Government  
of Canada

Gouvernement  
du Canada

Canada



# THE AUTOMOTIVE COMPETITIVENESS REVIEW

## A REPORT ON THE CANADIAN AUTOMOTIVE INDUSTRY

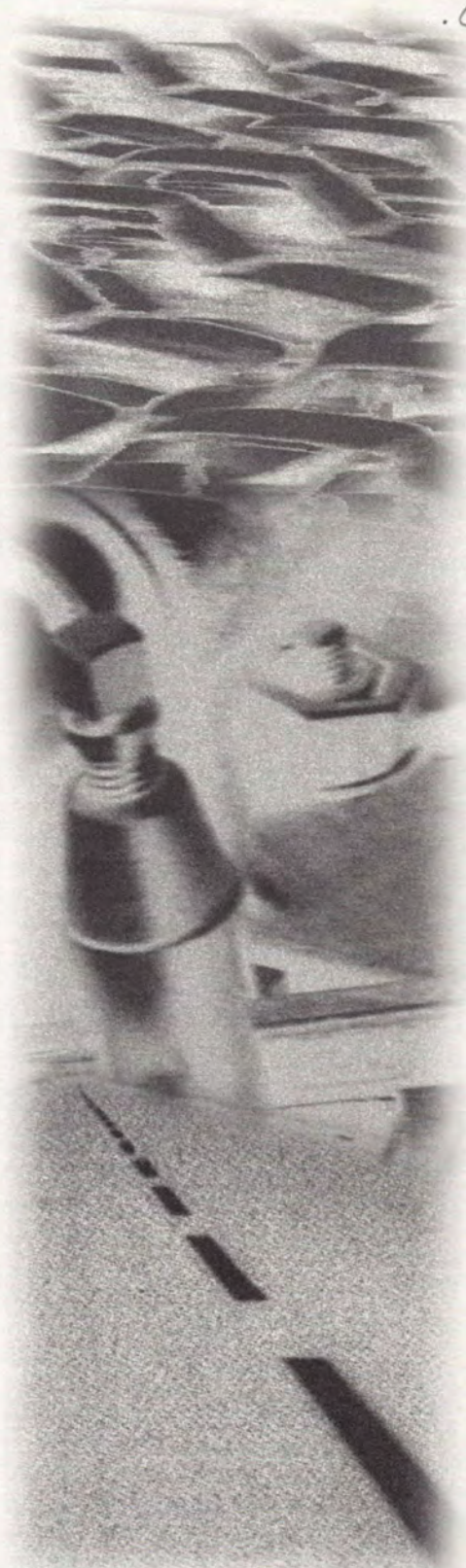
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## MINISTER'S MESSAGE

A new global economy based on knowledge and innovation is rapidly emerging. In the automotive industry, Canada has positioned itself as one of the world's most successful and competitive countries for the production of vehicles and parts. The industry has continually adjusted to the changing global environment, and Canada is now the sixth largest producer of vehicles in the world.<sup>1</sup> The industry is a major contributor to the Canadian economy, and is directly or indirectly responsible for one in seven Canadian jobs.<sup>2</sup>

In 1996, together with all stakeholders in the automotive industry, the Government of Canada launched a review of the competitiveness framework within which this key sector operates. One major objective was to ensure that the business climate continues to support the automotive industry's strengths so that it fulfils its potential to grow, innovate and create jobs. Another was to ensure that the economic environment remains conducive to future investment, thereby positioning this sector in the forefront of the new global knowledge-based economy. The government wanted to build on the long-standing, cooperative relationship with the automotive industry and other partners who have been working together to maximize innovation, trade, investment and the quality of human resources.

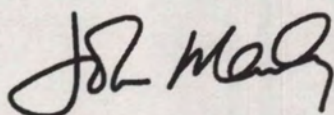
The Automotive Competitiveness Review (ACR), as the initiative became known, has benefited from the input and participation of all segments of this industry, the assemblers, the associations, the workers, the parts manufacturers and the retailers. Together they have taken a close look at the challenges and opportunities that the new global knowledge-based economy presents for this industry. They have confirmed that Canada provides an excellent business climate, that the industry is competitive and that it continues to prosper with production, employment and investment at record levels.

The ACR also confirmed that the past focus on innovation, human resources, trade and investment has paid off, but that the work is not finished. In a global economy, we all must continue to focus on these areas if Canada is to maintain its competitive position. The ACR lays out an agenda for the future in those areas where industry and government can work together to achieve a common objective.

I would like to thank the many individuals and organizations who have contributed to this review. We look forward to carrying on our work together to ensure that this important sector of the Canadian economy continues to prosper.



I would also like to recognize the contribution of the late Mr. Yves Landry, Chairman, President and CEO of Chrysler Canada Ltd. Mr. Landry, who served as co-chair of the Automotive Advisory Committee with Mr. Don Walker, President and CEO of Magna, played a key role in putting forward the industry's views in the ACR. Mr. Landry was also a leader in the industry, showing by example what can be done to further research and development and skills training in Canada.

A handwritten signature in black ink, reading "John Manley". The signature is fluid and cursive, with the first name "John" and last name "Manley" clearly distinguishable.

John Manley  
Minister of Industry



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## EXECUTIVE SUMMARY

Canada's automotive industry is one of the most successful and competitive in the world. The industry is fully integrated in North America and makes an important contribution to the Canadian economy, generating over 500 000 jobs.<sup>3</sup> Canadians purchased about 1.4 million light-duty vehicles in 1997,<sup>4</sup> but produced almost double that number, at 2.5 million units.<sup>5</sup> Canadian automotive assembly and parts companies each have managed to capture over 16 percent of the North American market and now are competing around the globe.<sup>6</sup> The industry invests more in plants and equipment than any other manufacturing industry in the Canadian economy.<sup>7</sup>

From almost every point of view, the business climate in Canada is favourable and provides the foundation for growth in the automotive industry. Canada's corporate income tax system for manufacturing and processing is competitive with all automotive assembly jurisdictions in the U.S.<sup>8</sup> Over the past five years, the annual Canadian inflation rate has averaged 1.5 percent, one of the lowest inflation rates in the world. Canada's interest rates are below U.S. rates for all maturities.<sup>9</sup> The Economist Business Intelligence Unit ranks Canada's business environment second to the United Kingdom among all automotive-producing countries from 1997 to 2001<sup>10</sup> while the World Economic Forum ranked Canada as the fourth most competitive economy in the world in 1997.<sup>11</sup>

Most Canadian automotive trade occurs under the North American Free Trade Agreement (NAFTA), which was implemented in 1994 between Canada, the U.S. and Mexico. Canadian automotive exports have almost doubled during the 1990s.<sup>12</sup> Also, since Japanese and European companies began to increase their production in North America, non-NAFTA imports to Canada have declined substantially.<sup>13</sup> The Canadian work force is highly skilled and Canadian plants are often more productive than their U.S. and Mexican counterparts.<sup>14</sup>

To continue this success, the industry must continually adjust to competitive pressures and be able to seize opportunities as they arise. As well, Canada's business framework must remain conducive to investment. To this end, Industry Canada and the departments of Finance and Foreign Affairs and International Trade, in full consultation with stakeholders, have carried out a comprehensive Automotive Competitiveness Review (ACR).

Most of the consultations were carried out through the Automotive Advisory Committee (AAC), which is a multi-stakeholder private sector-government consultative mechanism including provincial governments, companies, and associations. In addition, individual comments were received from associations and other stakeholders. During the ACR, the industry identified a number of issues that are key to its future competitiveness, which may be grouped into four areas: innovation, human resources, standards and regulations, and trade policy.



## INNOVATION

In a knowledge-based economy, continuous innovation as well as constant technology development and diffusion are essential for competitiveness. Canadian automotive plants use the most advanced manufacturing technologies in the world, but this is more a result of technology adoption than of research and development (R&D) conducted in Canada. This R&D gap is at odds with the fact that Canada offers a supportive R&D infrastructure, including excellent university research centres. Federal government support includes a number of initiatives such as the Canada Foundation for Innovation, technology networks and one of the most generous R&D tax credit systems in the world.<sup>15</sup>

The R&D currently being conducted in Canada occurs in strategic niche areas such as lightweight materials and environmental technologies. The industry has an opportunity to take advantage of new pressures to develop environmentally sustainable technologies and is well positioned to take advantage of the growing need to develop cleaner vehicles. Increasing environmental pressures and the requirement for the continuous adoption of new technologies provide opportunities for the government, industry and educational institutions to work together to advance automotive R&D in Canada.

Canada's automotive industry's R&D expenditures are four times below the manufacturing sector average. According to Statistics Canada, between 1992 and 1994, the industry more than doubled its R&D expenditures from \$83 million in 1992 to \$192 million in 1994. Since then, R&D expenditures have decreased 22 percent. It would be reasonable to expect, in light of the technological demands that have been identified and the positive climate for R&D in Canada, that the automotive industry could substantially increase its R&D expenditures from the 1996 level over the next several years. Over the longer term, the automotive industry may want to consider actions to significantly reduce the R&D investment gap relative to the U.S.

## HUMAN RESOURCES

Canada has a superior quality work force. Relative to competing nations, the education level of Canadian workers is very high.<sup>16</sup> As new, more sophisticated and complex technologies and processes are adopted, increasingly advanced skills are needed by the labour force. Frequently, today's workers must be able to integrate competency in appropriate industrial skills with the ability to use advanced computer technology. Technology is ever changing, making lifelong learning a necessity for automotive companies to be competitive. In this context, Canadian automotive firms could take the lead in introducing new approaches to on-the-job training and through innovative partnerships with training institutions.

A second challenge is the impending retirement of a large portion of the automotive labour force. Some manufacturers estimate that they will require as much as 30 percent more skilled tradespeople and technologists over the next decade.<sup>17</sup> As a result, a new generation of skilled workers is required to continue to support the growth of the automotive industry. If Canada's



automotive industry is to remain internationally competitive, it is critical for the industry, educational institutions and governments to work in partnership to train a new generation of Canada's labour force. The automotive industry is piloting a number of innovative new approaches to training, but a more focussed and concerted approach is needed to be at the leading edge of global competitiveness. The automotive industry would benefit from developing such a coordinated action plan in partnership with all stakeholders.

### **STANDARDS AND REGULATIONS**

The Canadian automotive sector is part of a highly integrated North American industry, with most exports destined for the U.S.<sup>18</sup> This trade is facilitated in part by safety and emission standards which are approaching total harmonization between Canada and the U.S.

If the industry is to expand its exports to non-NAFTA countries, Canada must contribute to the international harmonization of standards and regulations. Two major initiatives aimed at harmonizing standards and regulations globally have been launched. The first is being pursued under the auspices of the Asia-Pacific Economic Cooperation (APEC) and the second under the auspices of the United Nations (UN). Canada is participating in these discussions and is working closely with the industry to ensure that its views and interests are fully considered.

Canada is committed to the harmonization of safety and emission standards with the U.S. to the maximum extent possible, consistent with public policy objectives. It is also working closely with the industry to develop an appropriate position for the APEC and UN initiatives. On the domestic front, the government will continue to work with this sector to reduce the cost of compliance in a number of domestic regulatory areas that have been identified as particularly burdensome by the industry.

### **TRADE POLICY**

It is estimated that every \$1-billion increase in exports generates about 6000 to 8000 new jobs over the medium term.<sup>19</sup> Canada's prosperity and its ability to create jobs are directly linked to how well it capitalizes on international opportunities. Canada is a world-class trading nation and the Canadian automotive sector is a major contributor, accounting for 25 percent of Canada's merchandise exports.<sup>20</sup>

Compared to many markets in the world, Canada is one of the most open, as is demonstrated by the wide range of automotive products that are available to the consumer at competitive prices. Canada has been in the forefront of global trade liberalization under the World Trade Organization (WTO). Just as NAFTA has eliminated barriers between Canada, the U.S. and Mexico, recent free trade agreements with Chile and Israel provide new opportunities for automotive producers. New initiatives such as the Free Trade Agreement of the Americas (FTAA) and



those being pursued under APEC will lead to improved market access for automotive products in Asia and South America. As a trading nation, Canada must actively participate in and work toward further trade liberalization to increase market access for Canadian businesses.

Canada's Most Favoured Nation (MFN) tariff on all automotive goods has been steadily declining from 17.5 percent in 1965, to zero for production parts, and to the current 6.7 percent for vehicles and aftermarket parts (6.1 percent on January 1, 1999). In addition, all NAFTA originating vehicles and parts imported from the U.S. may enter Canada duty-free, as well as some NAFTA originating vehicles and parts imported from Mexico. By January 1, 2003, all NAFTA originating vehicles and parts imported from Mexico may enter Canada duty-free. Vehicles may also be imported duty-free under the Canada-U.S. Automotive Trade Products Agreement (Auto Pact).

The tariff for automotive parts used in production in Canada was recently lowered in two stages. In 1994 Canada lowered the tariff on parts used in the production of engines and transmissions to zero to encourage production of these key systems. In 1996, the tariff on production parts was unilaterally lowered to zero to ensure that all assemblers who manufacture vehicles in Canada could continue to import parts for use in assembly of vehicles in Canada on a duty-free basis, following the termination of programs that allowed some assemblers to effectively import production parts duty-free.

In this context, and after careful examination of the various recommendations put forth by stakeholders, the Government of Canada has decided against any unilateral changes to the MFN vehicle tariff at this time. However, the government remains committed to pursuing further trade liberalization, including changes to the vehicle tariff, in international fora such as the WTO, the FTAA and APEC.

The ACR is only a beginning, a signpost to indicate the paths Canada should take to keep its industry world-class. Although many of the issues identified by the ACR are not amenable to quick solutions, Canada's automotive industry is well positioned to build on its present success and ensure its future competitiveness. A summary of all the issues identified by the industry during the ACR, together with comments by the federal government on each, is found in the companion document *The Automotive Competitiveness Review: Industry-identified Issues*.



## AN INDUSTRY SNAPSHOT

### CANADA'S AUTOMOTIVE INDUSTRY: A KEY SECTOR OF THE ECONOMY

Globalization and the information revolution are combining to dramatically change the definition of competitiveness. Trade barriers are falling in virtually every country of the world. Foreign investment is growing rapidly — almost twice as fast as the growth in global output.<sup>21</sup> Swift advancements in information and communications technologies are becoming the keys to economic success for individuals, businesses, regions and countries. Increasingly, success is based on products and services that are knowledge intensive, not resource intensive.

It would be difficult to overstate the importance to Canada's economic growth of the automotive sector, with all its many facets and subsidiary industries. The Canadian automotive industry is wide-reaching, employing 500 000 Canadians in manufacturing plants producing light-duty vehicles, trucks, buses, and parts and accessories; vehicle dealerships; and aftermarket retailing establishments located across Canada.<sup>22</sup> It is fully integrated in North America, with the U.S. and Mexico accounting for 90 percent of Canada's total automotive imports and 97 percent of exports in 1996.<sup>23</sup> According to the latest figures, light-duty vehicles made in Canada account for 16 percent of total North American production, heavy-duty vehicles for 10 percent, buses for 70 percent, and parts and accessories manufacturing for 16 percent.<sup>24</sup> The following analysis focusses primarily on the light-duty vehicle assembly and the parts and accessories manufacturing sectors, as the most pressing issues facing the automotive industry impact heavily on these segments.

Together, the light-duty vehicle assembly and the parts and accessories manufacturing sectors generate 11.6 percent of Canadian manufacturing gross domestic product (GDP).<sup>25</sup> Their numbers have been on a steady upward trend; between 1990 and 1996, shipments in these two fields increased by 78 percent.<sup>26</sup> Direct employment in manufacturing, at 147 000 people,<sup>27</sup> represents 8.4 percent of Canadian manufacturing employment, with earnings being 23 percent higher than the average manufacturing wage (see **Table 1**).<sup>28</sup>

*The Canadian  
automotive  
industry accounts  
for over  
500 000 jobs and  
16 percent of  
North American  
light-duty vehicle  
production.*



**Table 1**  
**The Canadian Automotive Motor Vehicle Assembly and**  
**Parts and Accessories Manufacturing Industry,**  
**A Snapshot, 1996**

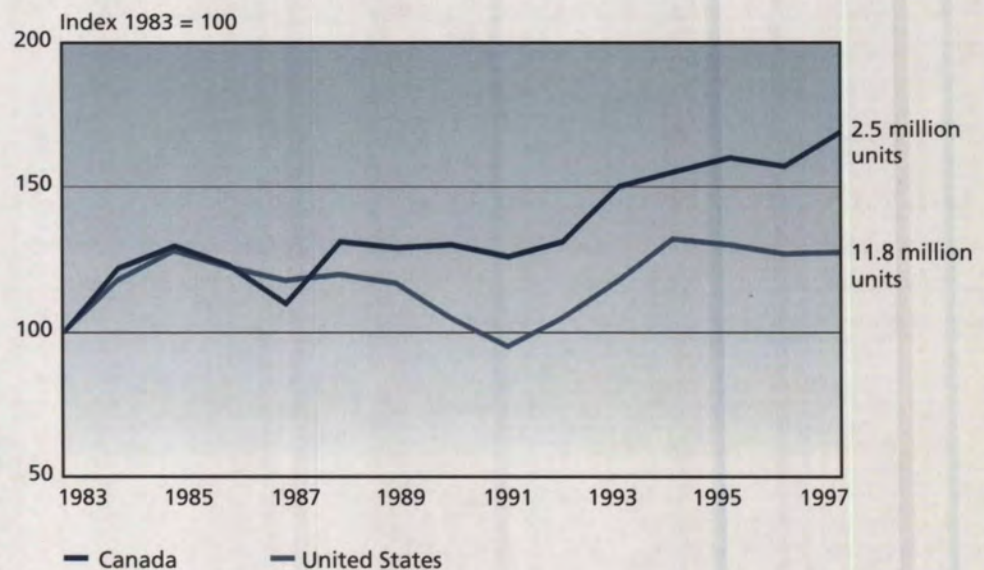
	Level	Share of Total Manufacturing	Share of Total Economy
Output	\$73.0B	11.6%	2.2%
Investment	\$3.7B	20.0%	2.8%
Hourly Earnings	\$20.50	123.0%*	139.0%*
Employment	147 000	8.4%	1.3%

\* Percentage of average hourly earnings.  
 Source: Statistics Canada.

Canada's automotive industry is very competitive. Production by all major Canadian automotive manufacturers is higher than ever (see **Figure 1**).<sup>29</sup> Furthermore, while Canada accounts for 16 percent of North American production of light-duty vehicles,<sup>30</sup> it accounts for only 8 percent of North American sales.<sup>31</sup> Real shipments of parts increased by an average of 6.8 percent per year between 1983 and 1997.<sup>32</sup>

*Vehicle production  
 since 1983 has  
 increased on  
 average more than  
 twice as fast in  
 Canada as in  
 the U.S.*

**Figure 1**  
**Growth in Light-duty Vehicle Production**

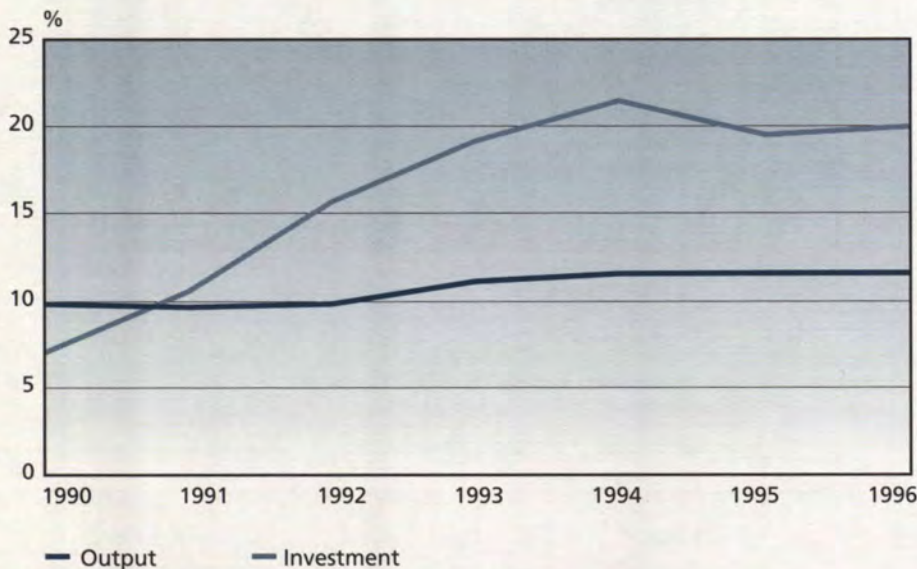


Source: Ward's Automotive Reports, weekly.



The automotive industry is an important contributor to the Canadian manufacturing sector (see **Figure 2**). It accounts for over 11.6 percent of total manufacturing output but 20 percent of manufacturing investment.<sup>33</sup> Indeed, with capital expenditures of \$3.7 billion in 1996,<sup>34</sup> automotive vehicle and parts manufacturers were the largest investors in the total Canadian manufacturing sector.

**Figure 2**  
**Automotive Industry's Output and Investment**  
**as a Share of the Total Manufacturing Sector**



Source: Based on data supplied by Statistics Canada.

*The automotive industry was the largest investor in the Canadian manufacturing sector in 1996.*

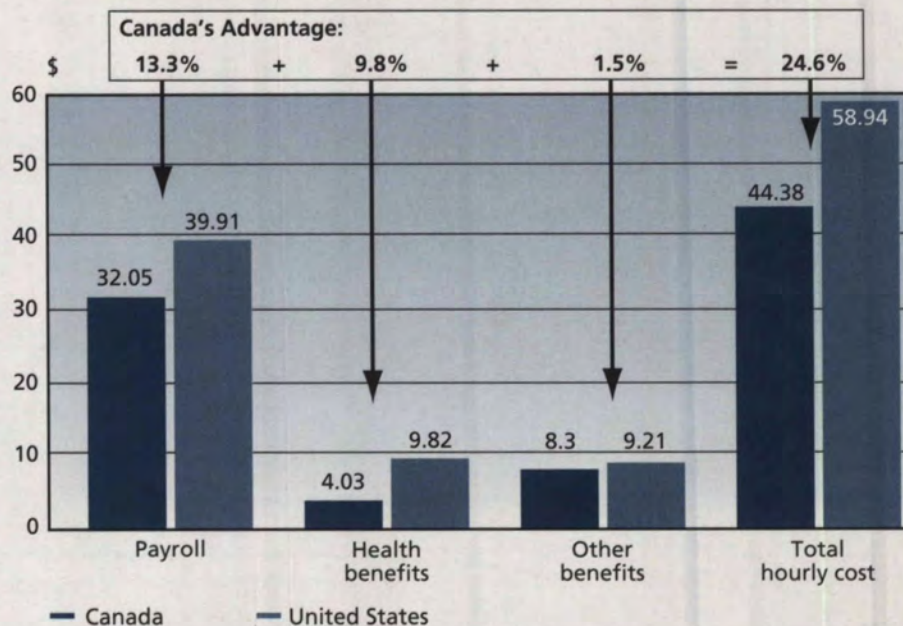
## THE CANADIAN ADVANTAGE

There are a number of reasons behind the strong performance of the automotive industry. Competitive wage rates, high productivity, a competitive business environment and favourable economic conditions have contributed to Canada's status as the world's sixth largest producer of vehicles.<sup>35</sup>

Canada's automotive industry boasts competitive labour costs and strong productivity. Hourly labour costs are approximately 25 percent lower in Canada on average than the U.S. (calculated at an exchange rate of a Canadian dollar worth 73 cents U.S.).<sup>36</sup> **Figure 3** illustrates Canada's labour cost advantage over the U.S., showing an advantage in payroll, health benefits, and other benefits, equalling approximately 25 percent over U.S. assembly.<sup>37</sup>



**Figure 3**  
**Hourly Labour Costs, Light-duty Vehicle Assembly, 1996\***



\* Based on the 1996 exchange rate of C\$1 = US\$0.73.

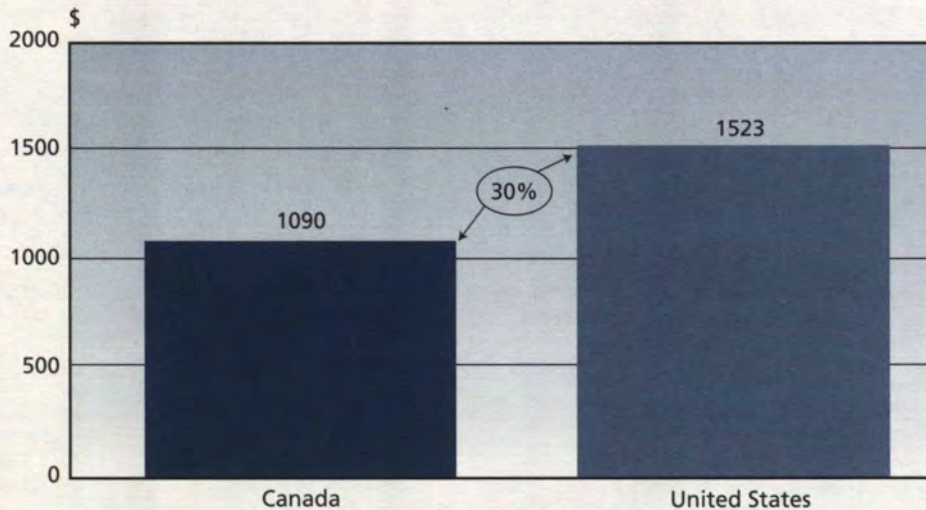
Source: Draft report on assembly re-investment, by Working Group of AAC, 1998.

Productivity, the second key factor in automotive assembly competitiveness, increased by 8.9 percent annually between 1993 and 1996.<sup>38</sup> By comparison, productivity in the U.S. increased by only 6.6 percent annually over the same period,<sup>39</sup> resulting in a 5 percent productivity advantage for Canadian plants over their U.S. counterparts by 1996. In fact, the most productive North American car plants for Chrysler, General Motors (GM) and Toyota are located in Canada.

In total, as **Figure 4** illustrates, Canada's competitive labour costs and high productivity in 1996 translated into an assembly labour cost advantage of some 30 percent over the U.S. or C\$433 on a per vehicle basis.<sup>40</sup>



**Figure 4**  
**Comparison of Assembly Labour Costs Per Vehicle, 1996\***



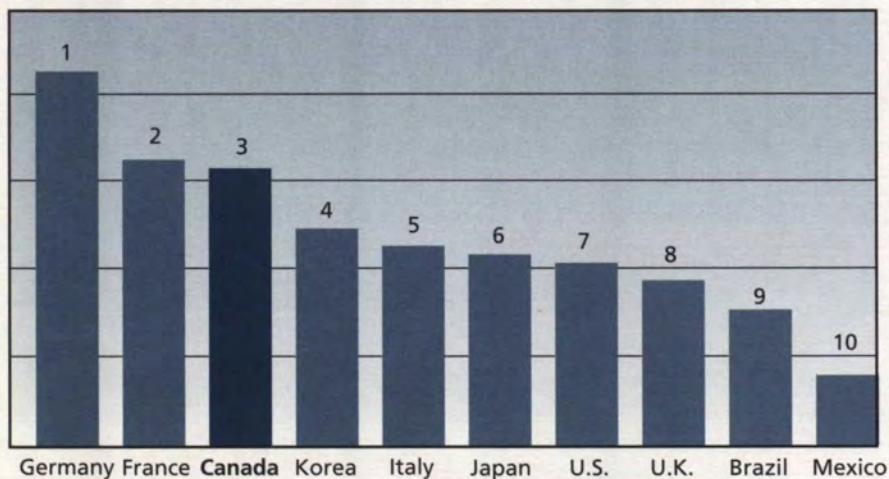
\* Based on the 1996 exchange rate of C\$1 = US\$0.73. Given the higher productivity in Canada, the value of the Canadian dollar would have to go as high as US\$1.02 to eliminate Canada's advantage.

Source: Draft report on assembly re-investment, by Working Group of AAC, 1998, and Harbour Report, 1997.

*Canada has  
 a labour cost  
 advantage of  
 some 30 percent  
 over the U.S.*

Another key advantage for the Canadian industry is in its highly educated work force. In terms of the availability of skilled workers, Canada ranks third among automotive-producing countries of the world (see **Figure 5**).<sup>41</sup> It should be noted that the Canadian automotive industry's demand for skilled workers recently has been outpacing supply.

**Figure 5**  
**Availability of Skilled Workers,  
 Automotive-producing Countries, 1997**



Source: Based on International Institute for Management Development, *World Competitiveness Yearbook*, 1997.

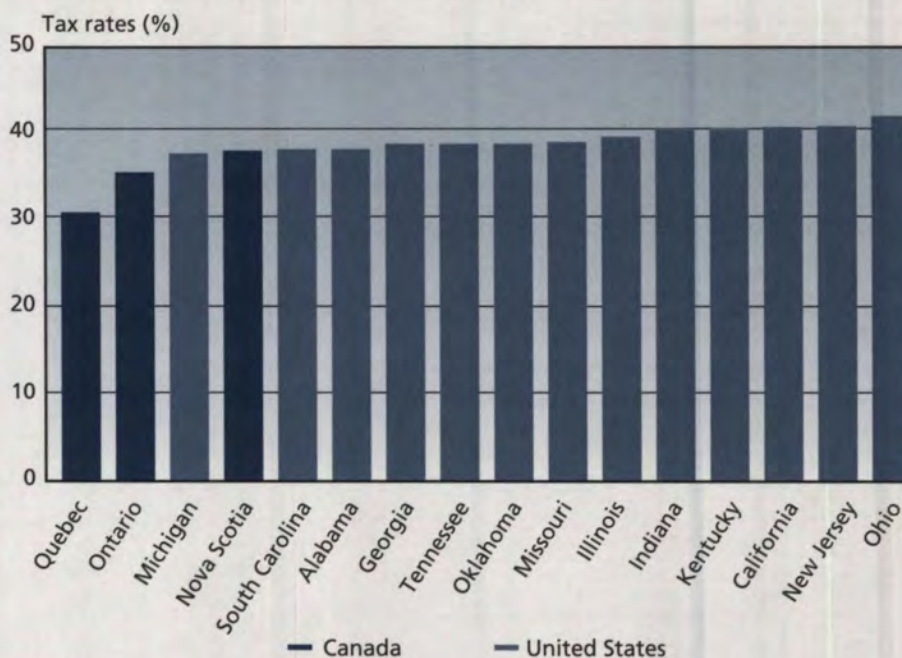


The high quality of the Canadian work force translates directly into high-quality production. Canadian automotive plants have been twice as likely to be recognized for excellence as other North American plants.<sup>42</sup> Canada is home to 14 of some 70 North American light-duty vehicle assembly plants, yet it has received seven of the twenty-five J.D. Power awards for excellence (awarded to the plant that assembles vehicles with the lowest number of problems per 100 vehicles produced) that have been presented since 1990.

## CANADA'S BUSINESS CLIMATE

From almost every point of view, the business climate in Canada compares favourably with all automotive assembly jurisdictions in the U.S. **Figure 6** ranks the 1997 corporate income tax rates for the states and provinces that have automotive assembly facilities. Canada's main automotive assembly provinces (Quebec and Ontario) have the lowest corporate income tax rates of all the automotive assembly jurisdictions in Canada and the U.S.<sup>43</sup>

**Figure 6**  
**Corporate Income Tax Rates of Automotive Assembly Jurisdictions in Canada and the U.S., 1997\***



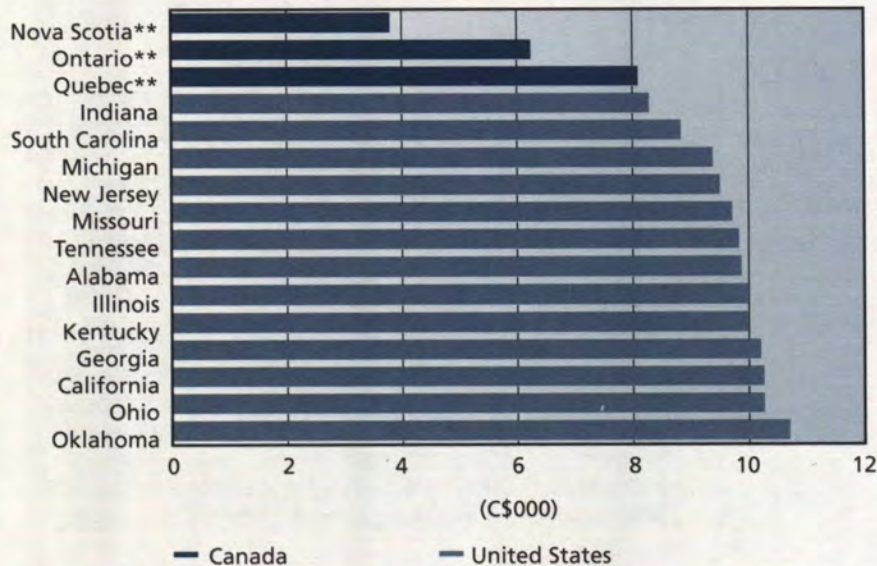
\* Combined federal, provincial/state and local income tax rates for large manufacturing and processing firms as of April 1, 1997.

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



In terms of taxes and employer payroll levies, Canada's automotive-producing provinces have the lowest employer-paid payroll taxes of all automotive assembly jurisdictions in both Canada and the U.S. (see **Figure 7**).

**Figure 7**  
**Employer Payroll Levies\* in**  
**Auto Assembly Jurisdictions in Canada and the U.S.**



\* Includes estimates of employer-paid federal social security contributions, including Medicare, federal and state/provincial unemployment insurance and other payroll levies, including workers' compensation premiums. Applies to typical auto assembly industry salaries of C\$66 000 in Canada and US\$60 000 in the U.S. Based on the 1996 exchange rate of C\$1=US\$0.73.

\*\* Canadian CPP/QPP rates are scheduled to increase over the next five years. These increases will add approximately \$700 to the levies.

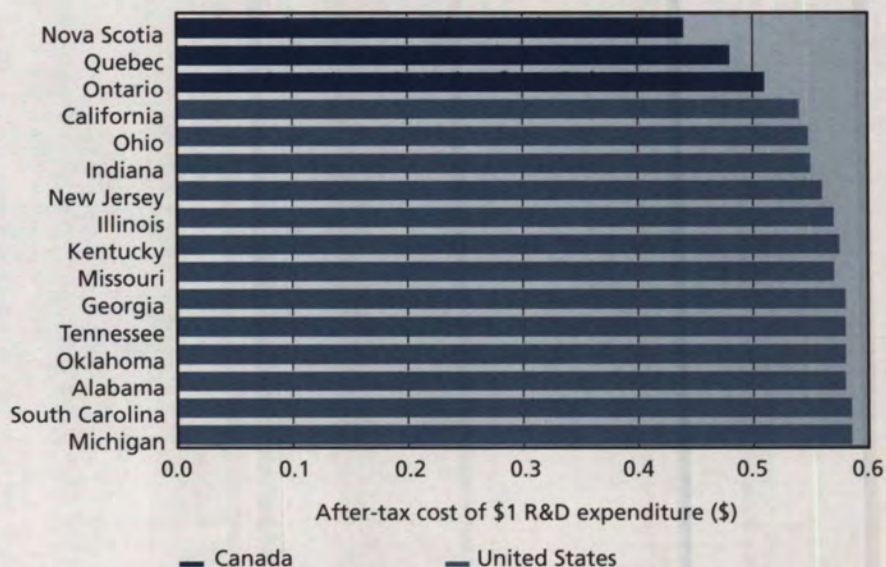
Source: Industry Canada calculations based on KPMG Management Consulting, 1997, and Oregon Department of Consumer and Business Services data.

Canada's tax treatment for R&D is more generous than that of any other G7 country.<sup>44</sup> As illustrated in **Figure 8**, in the Canadian automotive assembly provinces of Ontario, Nova Scotia and Quebec, the after-tax cost of \$1 in R&D expenditures is \$0.507 and less. By comparison, the after-tax cost of \$1 in R&D expenditures is \$0.528 and higher for automotive assembly states



in the U.S. Canada provides tax credits and an immediate and full write-off for all current expenditures as well as for capital expenditures on R&D equipment. R&D expenditures that are not deducted in a year can be carried forward indefinitely. Furthermore, for small Canadian-controlled private corporations, as found in the automotive parts sector, unused R&D tax credits are fully or partially refundable.

**Figure 8**  
**Relative Competitiveness of R&D Tax Systems,**  
**Automotive Assembly Jurisdictions, 1996\***



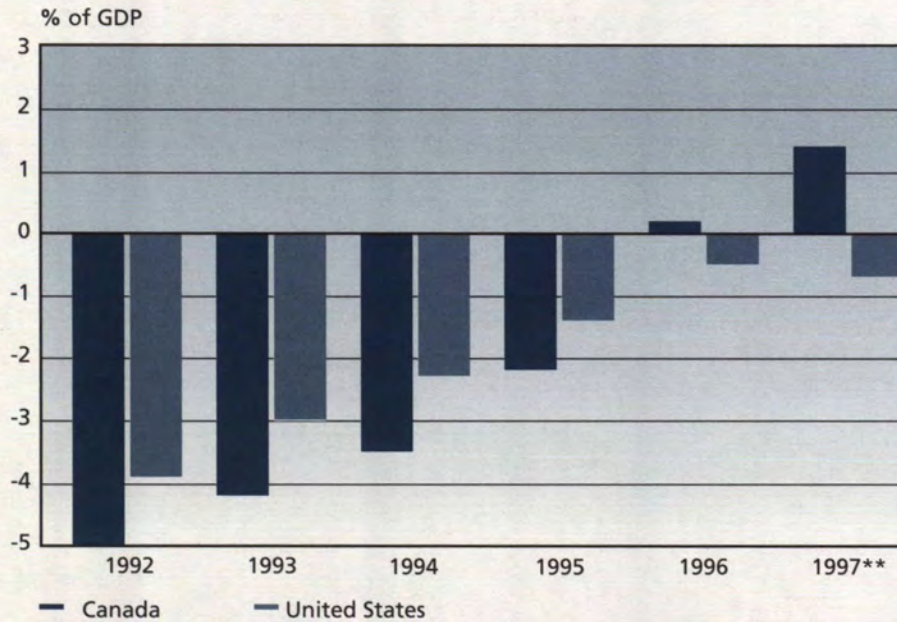
\* Based on large manufacturing firms.

Source: Conference Board of Canada, *R&D Tax Incentives in OECD Countries: How Canada Compares*, 1997.

At the macro-economic level, the Canadian economy is strong, with Canada's fiscal situation improving dramatically since 1993. In 1997 Canada was the only G7 country to have a surplus in its federal government budget measured on a financial requirement basis (see **Figure 9**). It was also the only G7 country to have a surplus total government budget (federal, provincial/state, local) (see **Figure 10**).



**Figure 9**  
**Federal Government Budget\***

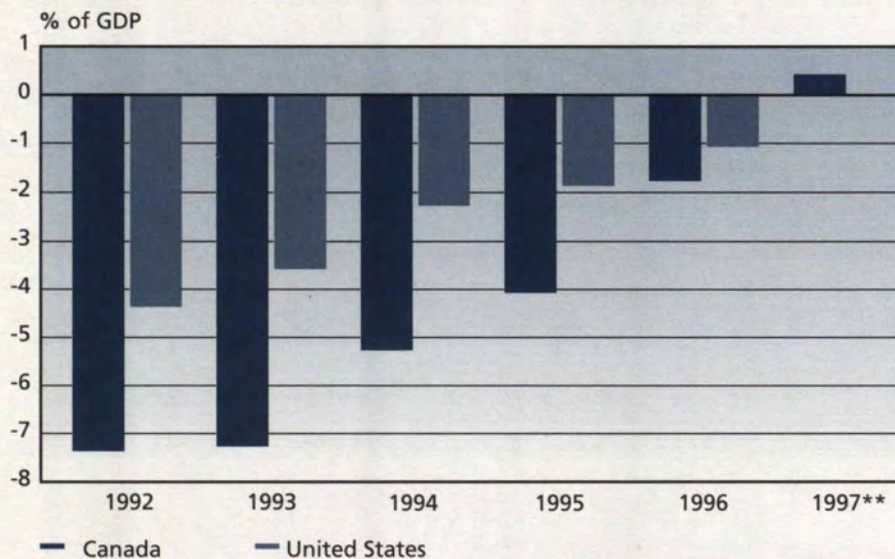


\* Financial requirements basis.

\*\* Projections.

Source: Department of Finance, Canada, February 1998; U.S. Congressional Budget Office.

**Figure 10**  
**Total Government Budget\***



\* Includes federal, provincial/state and local jurisdictions.

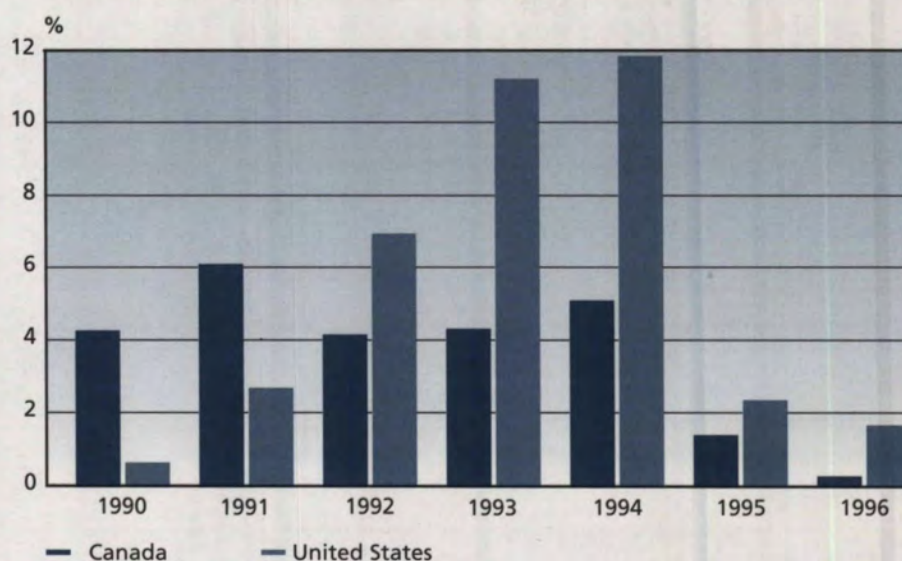
\*\* Projections.

Source: OECD Economic Outlook, December 1997.



The price inflation picture in Canada relative to our competitors is also extremely positive. The average Canadian inflation rate over the past five years, at 1.5 percent,<sup>45</sup> has been one of the lowest in the world.<sup>46</sup> Reflecting this, as illustrated in **Figure 11**, wage inflation in Canada has been very low, particularly relative to the experience in the U.S. Canada's strong fiscal performance and low rate of inflation have resulted in interest rates that are lower than those of the U.S. at all maturity levels.<sup>47</sup> In sum, Canada's business environment is expected to rank second only to that of the United Kingdom among automotive-producing countries from 1997 to 2001 (see **Figure 12**).

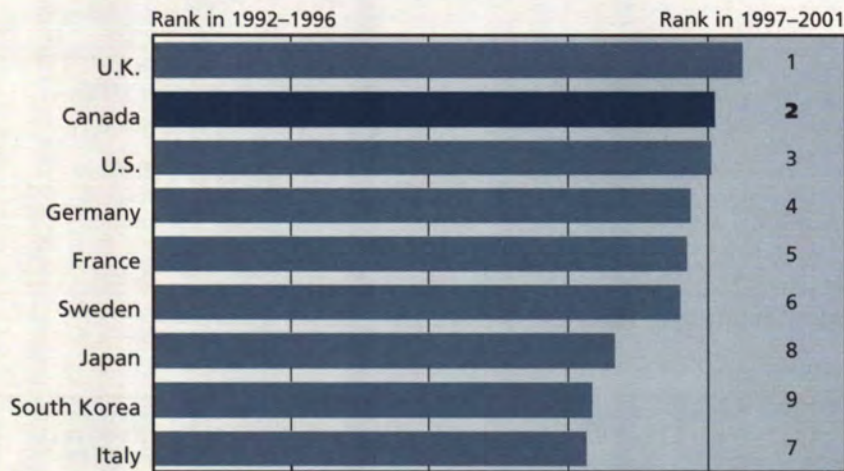
**Figure 11**  
**Growth in Hourly Earnings in**  
**Automotive Assembly and Parts Plants (Canadian Dollar)**



Source: Statistics Canada and U.S. Bureau of Labor Statistics.



**Figure 12**  
**Business Environment of**  
**Automotive-producing Countries, 1992-1996**



Source: Based on *The Economist*, May 23, 1997.

## CANADA AND GLOBALIZATION

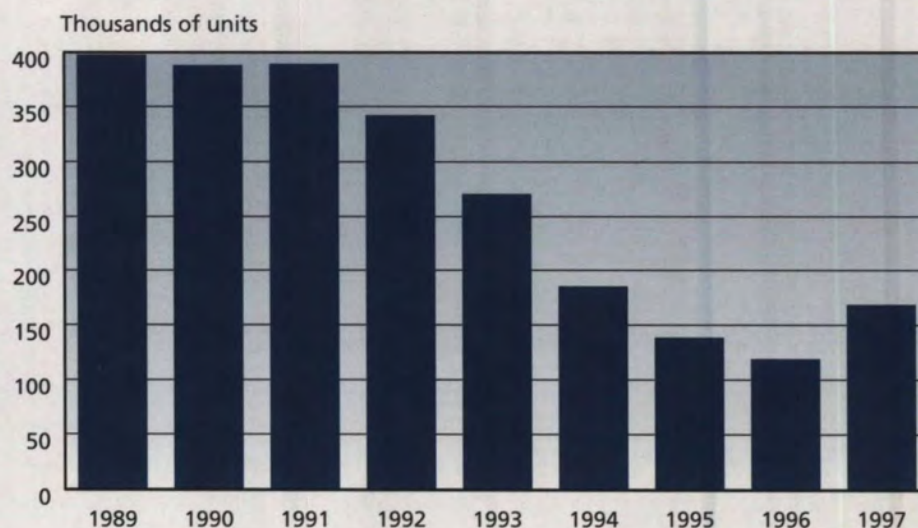
The world's automotive industry is concentrated in three regional markets: North America, Europe and Japan. Together these account for 85 percent of world production and 78 percent of consumption.<sup>48</sup> Despite the fact that these markets are largely separate, the automotive industry is becoming increasingly globalized. Worldwide, 11 percent of all vehicle production was traded on an interregional basis,<sup>49</sup> while the global parts trade accounts for about 6 percent of total parts output.<sup>50</sup>

Canada's automotive-related trade has increased dramatically since the late 1980s, largely as a result of the continued integration of the North American industry following implementation of the Canada-U.S. Free Trade Agreement (FTA) and NAFTA. This integration has allowed Canada to expand its markets, with Canadian automotive exports increasing by more than 80 percent since 1990. In 1996, some 87 percent of Canada's total light-duty vehicle production was exported, primarily to the U.S. and Mexico.



Sales of imported vehicles in Canada are decreasing (see **Figure 13**). Since Japanese and European companies began to increase their production in North America, non-NAFTA imports of vehicles to Canada have shrunk by 56 percent.<sup>51</sup> While Japan still accounts for the bulk of total Canadian non-NAFTA imports, the number of vehicles imported from that country has been declining steadily over the past decade.<sup>52</sup> However, there has been a recent upswing in Japanese imports due to an increased demand for sport utility vehicles<sup>53</sup> and an overall increase in total North American demand,<sup>54</sup> including demand for Japanese vehicles; these demands could not be satisfied by existing production capacity on this continent. Imports are expected to drop again as new capacity comes on stream in Canada and the U.S.

**Figure 13**  
**Sales of Import Vehicles in Canada**



Source: *Ward's Automotive Reports*, weekly.



## **FUTURE DIRECTIONS: KEEPING CANADA IN FRONT**

### **THE AUTOMOTIVE COMPETITIVENESS REVIEW: STATUS REPORT AND ASSESSMENT OF FUTURE NEEDS**

During the Automotive Competitiveness Review, the industry identified a number of issues that potentially affect the competitiveness of Canada's automotive industry. These were grouped into four main areas:

- innovation
- human resources
- standards and regulations
- trade policy.

Generally, there is broad agreement among industry stakeholders on the essential issues that must be addressed to maintain a strong and internationally competitive automotive industry in Canada in the 21st century.

### **PRIORITY: INNOVATION**

In a knowledge-based economy, continuous innovation and constant technology development and diffusion are essential for competitiveness. Most automotive R&D by assemblers is carried out at headquarters, but these companies do perform some R&D in most of the countries in which they have established. Canadian assembly plants do benefit from the adoption of the most advanced manufacturing technologies available, yet R&D in the Canadian automotive sector is low. Canadian automotive investment in R&D is 25 times less than that in the U.S. automotive industry and four times less than that in the average Canadian manufacturing sector.<sup>55</sup> This R&D gap is noteworthy, given that Canada is acknowledged to have one of the most generous R&D tax credit systems among member countries of the Organisation for Economic Co-operation and Development,<sup>56</sup> and has contributed to building a national system of innovation through a number of initiatives highlighted in **Table 2**.

At the same time, it is important to note that the responsibility for R&D is increasingly being transferred by the assemblers to those automotive parts manufacturers that have the capability to supply complete systems such as suspension, seating, instrument panels or exhaust systems. These system suppliers have high growth potential as the industry goes global and as parts manufacturers are encouraged to follow vehicle assemblers around the world. Canada has some outstanding examples of complete system suppliers with proprietary technology, and has the business climate and infrastructure in place to encourage the development of even more.

*R&D in  
the Canadian  
automotive sector  
is low relative to  
both the U.S.  
and the Canadian  
manufacturing  
sector on average.*



**Table 2**  
**Innovation — Selected Initiatives**

- SR&ED tax credits
- Canada Foundation for Innovation — research infrastructure
- Technology Partnerships Canada — commercialization of new technologies
- Industrial Research Assistance Program
- Networks of Centres of Excellence
- PRECARN Associates Inc./Institute for Robotic and Intelligent Systems
- Panel on Energy Research and Development
- Canadian Technology Network
- Technology Roadmaps

*The R&D currently  
being conducted  
in Canada is in  
strategic niche  
areas such as  
alternative fuels.*

The majority of Canadian parts suppliers focus on process development and on the design and development of individual components. These have successfully captured a growing share of North American parts production and are supplying sophisticated components to many of the best-selling North American-produced vehicles. They are investing in new technology to improve productivity and are assuming increasing responsibility for parts design. Innovative niche technologies and products under development in Canada include hydroforming of steel shapes, new parts design in light metals and plastic composites, continuously variable transmissions, hydrogen fuel cells and alternative fuel system components.

While technology development in the industry occurs primarily outside Canada, the absence of significant barriers to technology transfer, together with pressures to remain competitive, have led to the rapid adoption of new product and process technologies in Canadian plants. To the extent that automotive manufacturers have undertaken R&D in Canada, they have focussed on areas that complement activities carried out in other countries. For example, GM carries out R&D in niche manufacturing and product technology such as low mass material research, alternate fuels and conversion engineering. In conjunction with the University of Toronto, GM is involved in R&D projects encompassing fuel tank studies, hydroformed composite structures and alternate fuels. GM also operates a cold weather development centre in Kapuskasing, Ontario. Toyota is about to start up its own cold weather facility in Timmins, Ontario. Chrysler has recently opened an R&D centre in Windsor, Ontario, in collaboration with the University of Windsor. The centre conducts research in the areas of road simulation, advanced engine design and alternative fuels. Ford has established an aluminum casting technology centre at the University of Windsor and also endowed a Chair at the university in that subject, making Windsor the centre of Ford's research into aluminum casting.

A number of opportunities to develop innovative technologies present themselves for the future, particularly with respect to the development of environmentally sustainable technologies. The Kyoto Protocol on Climate Change, with its obligations to reduce greenhouse gas emissions



in Canada by 6 percent from 1990 levels by 2010, will present further challenges and opportunities for the industry. The speed of technology development in this field will be critical to future competitiveness.

The world leadership in clean hydrogen fuel cell engines of Ballard Power Systems of Vancouver is now well recognized. Advanced materials (metals and plastics), manufacturing processes and alternative fuel systems are also potentially significant fields for Canadian expertise in cutting-edge technologies. GM, Chrysler and Ford are each undertaking alternative fuel projects at Canadian locations.

### **Ballard Power Systems**

With the support of the federal government, Ballard Power Systems of Vancouver is currently building two fuel cell engines running on hydrogen for automotive use. The first engine will be delivered in August 1998 and the second in the year 2000. These zero-emission engines will be placed in prototype Ford P 2000 vehicles, developed in conjunction with the U.S. Partnership for a New Generation of Vehicles program. The Ballard project is a major step in the development and testing of fuel cell engines, and is a critical advance in fuel cell technology for the automotive industry.

A number of federal programs support R&D and technology development. Technology Partnerships Canada targets companies seeking assistance for the commercial development of enabling and environmental technologies. The Industrial Research Assistance Program provides grants and technical support to small and medium-sized enterprises to help them improve their technological competence, productivity and competitiveness. The Panel for Energy Research and Development provides financial assistance to companies doing original R&D in energy-efficient technologies. The recently announced Canada Foundation for Innovation seeks to encourage private-public partnerships to modernize Canada's R&D infrastructure in universities and research hospitals.

In addition, the federal government offers one of the most generous R&D tax credit systems in the world through the Scientific Research and Experimental Development (SR&ED) program. Revenue Canada is taking steps to make this credit system more transparent and user friendly and to work with the user community. For example, it is providing guidelines for first-time users, holding public information sessions and offering consultations before claims are prepared. It is also reviewing projects before they begin or while they are under way and is streamlining paperwork for small businesses. Revenue Canada is expanding services by increasing the number of offices that serve applicants to the SR&ED program, and is increasing awareness of this program via an outreach campaign. For the automotive sector, eligibility criteria for the program are being clarified, and a process has been initiated to facilitate applications.

*Canada is well  
positioned to take  
advantage of the  
growing need  
to develop  
cleaner vehicles.*

*Canada has  
an extensive  
R&D infrastructure.*



*The timing is right  
for the automotive  
industry to  
significantly  
increase R&D  
in Canada.*

*Canada has the  
advantage of a  
highly educated  
population.*

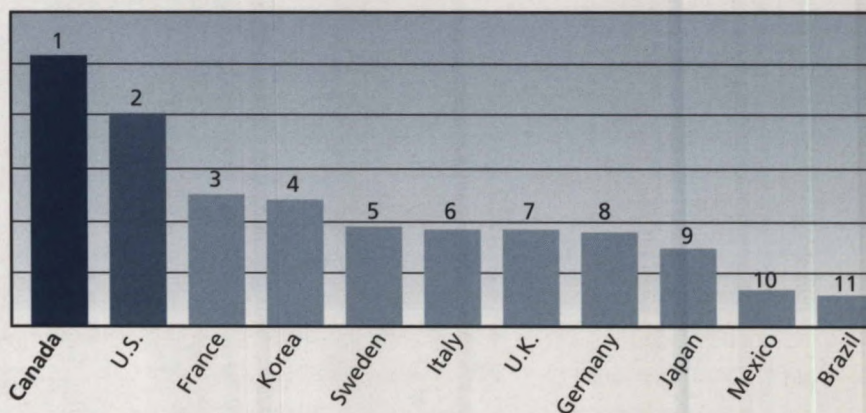
Successful countries in the global, knowledge-based economy will be those whose macro-economic fundamentals are sound and who invest in knowledge, lifelong learning and innovation. Significant opportunities exist in this key sector to significantly increase R&D activity, opportunities that should be identified and exploited by the assemblers themselves or in partnership with their suppliers and other stakeholders. The government believes more must be done by all partners to support innovation and risk taking in Canada and is committed to building creative partnerships between the private and public sectors to accelerate the adoption of innovative technology in all sectors of the economy.

The ACR has identified a significant gap in the level of R&D undertaken in Canada by this sector. The automotive industry is a key manufacturing sector representing 20 percent of investment and 11.6 percent of manufacturing output. Yet its investment in R&D is four times less than the average in the Canadian manufacturing sector. The Canadian R&D infrastructure is extensive and the cost of R&D in Canada is relatively low. According to Statistics Canada, between 1992 and 1994, the industry more than doubled its R&D expenditures from \$83 million in 1992 to \$192 million in 1994. Since then, R&D expenditures have decreased by 22 percent. It would be reasonable to expect, in light of the technological demands that have been identified and the positive climate for R&D in Canada, that the automotive industry could substantially increase its R&D expenditures from the 1996 level over the next several years. Over the longer term, the automotive industry may want to consider actions required to significantly reduce the R&D investment gap relative to the U.S.

## PRIORITY: HUMAN RESOURCES

Canada's investment in education is among the world's highest, and Canadians are among the world's most highly educated people.<sup>57</sup> Canada also ranks first among automotive-producing countries with respect to the availability of educated workers (see **Figure 14**).

**Figure 14**  
**Post-secondary Education Enrolment, Automotive-producing Countries, 1997**



Source: The World Economic Forum, *Global Competitiveness Report*, 1997.



A highly skilled work force, along with innovation and technological development, is key to the automotive industry's competitive position. In the 1990s, the industry invested heavily in new manufacturing processes and technologies, including total quality management programs, computer-aided design, just-in-time inventory systems and computer-aided manufacturing. The adoption of these new and more sophisticated and complex processes and technologies has increased the industry's need for a more highly skilled labour force.

More than ever, workers must be able to integrate competency in industrial skills and trades with the ability to use advanced computer technology. **Table 3** notes a number of government initiatives that can assist in the resolution of the human resources competitiveness challenge facing the automotive industry.

**Table 3**  
**Human Resources — Selected Initiatives**

- Federal and provincial government spending of \$640 million in direct skills and apprenticeship programs across the country
- Millennium Scholarship Fund
- Connectedness — Information Highway
- Natural Sciences and Engineering Research Council of Canada Scholarship Fund
- Networks of Centres of Excellence
- Internal trade discussions on work force mobility
- Human Resources Development Canada Sector Councils

The automotive sector must also prepare for the retirement of its current employees. Some manufacturers estimate that they will require as much as 30 percent more skilled tradespeople and technologists in the next decade.<sup>58</sup> The industry expects this will lead to a severe shortage of skilled labour in key trades such as general machinists, tool and die makers, mouldmakers, millwrights and industrial electricians.

A recent survey by the Automotive Parts Manufacturers' Association found that these critical skilled trades constitute about 8 percent of the industry's work force.<sup>59</sup> Without the proper mix of skills required to develop and manufacture subsystems, parts manufacturers will not be positioned to grow into complete system suppliers. Nor will they be able to expand operations in Canada or to follow manufacturers around the world.

The industry's adoption of new processes and technologies has opened new and challenging high-technology jobs. Yet some analyses have shown that there is little awareness in schools and among highly trained technology workers of these career opportunities.

*There will soon  
exist a shortage of  
general machinists,  
tool and die makers,  
millwrights and  
other tradespeople.*



*To remain  
internationally  
competitive ...  
the industry  
must work in  
partnership with  
educational  
institutions and  
governments to  
train a new  
generation of  
Canadians.*

The cumulative effects of retirements, an increasing demand for skilled tradespeople and the lack of awareness of the opportunities available in the automotive industry present a major challenge for the industry and educational institutions.

To address this diverse challenge, industry, educational institutions and government have already undertaken several joint initiatives. For example, a number of parts manufacturers have partnered with local high schools, such as Herman Collegiate in Windsor, Ontario, and Humberview School in Bolton, Ontario, and colleges such as Mohawk College in Hamilton, Ontario, Niagara College in Niagara, Ontario, and Georgian College in Barrie, Ontario, to increase awareness of opportunities in this industry among youth and to develop appropriate training programs. Other companies have set up their own in-house training and development programs, in some cases establishing a separate corporate training facility to provide the required training. Associations, for their part, have launched promotional campaigns to make students more aware of the industry and of the many skilled job opportunities that exist. In another joint project, government and industry have engaged in benchmarking studies to identify best practices in countries with some of the most advanced and successful training programs in the world. Chrysler Canada has translated these studies into action and embarked on a series of human resources initiatives, collectively referred to as the Windsor Experiment.

### **The Windsor Experiment**

The Canadian automotive assembly industry is acting with imagination and vision to address its skills needs. Chrysler Canada, in partnership with government and educational institutions, has launched a number of initiatives collectively referred to as the Windsor Experiment. The Windsor Experiment conducted studies to benchmark "best practice" training and education in Europe, and applied the results in innovative skills development programs for youth. One outcome is the Automotive Manufacturing Skills Initiative at St. Clair College. The initiative is spearheaded by Chrysler Canada, with the cooperation of the Canadian Automotive Workers Union and support from the federal government. The University of Windsor/Chrysler Canada Ltd. Automotive Research and Development Centre and the pilot Industrial Electrical/Electronic Engineering Technology Co-op Program are also results of the Windsor Experiment.

The skills challenge facing the automotive industry is not limited to the assembly and parts sectors alone. Similar labour force issues exist along the entire length of the automotive supply chain. In the retail sector, for example, restructuring, evolving consumer expectations and new technologies are changing the way vehicles and parts are sold. To assess the impact of these changes on personnel needs, the automotive retail industry recently joined forces with Human Resources Development Canada (HRDC) under its Sectoral Partnership Initiative to conduct a



major national study that will identify future skills as well as education and training needs. This study's recommendations are expected in early 1999, and will provide a roadmap for the industry to plot its course of action for the short and medium terms.

Another noteworthy industry undertaking is the Canadian Automotive Repair and Service (CARS) Council, a collaboration of employers, employees, government and educational institutions, which was formed in 1988 as an outcome of HRDC's Sectoral Partnership Initiative, to address human resources development in the aftermarket repair and service industry. CARS' extensive involvement in the area of skills upgrading and education is demonstrated through such initiatives as CARS Investment in People, a multi-year retraining program for repair and service that is now totally industry funded; CARS Youth Internship Program, a one-year training program in motive power to qualify young people for entry-level positions that resulted in 80 percent long-term placements within the industry; CARS Program Accreditation, aimed at accrediting automotive training and education programs delivered by public and private institutions; CARS Multi-media Project, a development and delivery facility that will provide the industry with accessible and easy-to-use distance training for its work force; CARS Mentor Program, designed to assist industry coaches in developing the skills to effectively transfer their knowledge and abilities to new entrants; and CARS Emissions Program, a set of national standards of qualifications, training and certification for automotive emission system diagnosis and repair specialists. To guide CARS in its future activities, it has recently undertaken, in partnership with HRDC, a national study to update the information on the training needs in the automotive repair and service sector.

A highly qualified labour force is critical to maintain the automotive industry's competitiveness. This concentration on human resources training affords the opportunity to develop a lifelong learning strategy for Canadian automotive workers. The ideal training system would encourage continuous learning so that workers can constantly develop new skill sets to meet the challenge of rapidly evolving technology. The automotive industry, the education and training sector and all levels of government must continue to work together to ensure that the automotive industry can continue to have access to a large pool of first-class, highly skilled workers. Representatives of assemblers, parts manufacturers, retailers and educational institutions have to focus on creative and innovative suggestions to address the human resources issues facing the automotive sector.

The automotive industry's individual and collective efforts have certainly improved the industry's position in terms of meeting its human resources requirements. The automotive industry's effectiveness in addressing the skills challenge may be greatly enhanced if stakeholders were to come together to harness their efforts into a shared and coordinated action plan. In the context of ever changing technology, where lifelong learning is a necessity for automotive companies to be competitive, Canadian automotive firms could take the lead in introducing new approaches to on-the-job training and through innovative partnerships with training institutions.



*A human  
resources  
strategy and  
action plan  
should be  
developed.*

*Automotive  
standards are  
largely harmonized  
between Canada  
and the U.S.*

As a first step, with the automotive manufacturing sector taking the lead, a national sectoral human resources body could be established to develop a strategy and an action plan, involving all partners, including all levels of government, to address this issue. This body could undertake a study of the automotive manufacturing sector, with the assistance of HRDC, to clearly delineate the skilled labour needs and the best collective approach to address these. When coupled with the work under way in the automotive retail and service sectors, this would result in the development of a lifelong learning culture in the automotive industry, where automotive companies, working in partnership with educational institutions and other stakeholders, ensure the continued availability of highly skilled employees trained in leading-edge technologies.

## **PRIORITY: STANDARDS AND REGULATIONS**

The Canadian automotive industry exports vehicles and parts throughout North America and increasingly to the rest of the world. Products must meet the safety, emission and other standards that have been established in those markets. While standards are largely harmonized in North America, the same is not true for the rest of the world. The more divergent the standards and regulations, the more complex manufacturing becomes, as products must be built to different specifications. In the past, this issue has been addressed on a regional basis; it is just now starting to be addressed globally.

The Canadian government recognizes the importance of the harmonization of standards and regulations, and has addressed harmonization on an ongoing basis through numerous initiatives.

In 1994, the Canadian Council of Ministers of the Environment (CCME) established a Task Force on Cleaner Vehicles and Fuels to develop options and recommendations on a national approach to new vehicle emission standards, efficiency standards and fuel formulations. The CCME recommended that Canada immediately adopt tighter new vehicle emission standards in harmony with the U.S. and, for implementation by 2001, that Canada adopt the U.S. national low-emission vehicle program. Regarding fuel, Environment Canada, in consultation with other federal departments, provincial governments and stakeholders, has led in the development and implementation of national standards, such as those for sulphur in on-road diesel fuel and benzene in gasoline. Currently, a federal-provincial working group is developing recommendations for the Minister of the Environment to set an appropriate level for sulphur in gasoline.

The NAFTA Automotive Standards Council was formed to facilitate compatibility among standards that apply to automotive goods. The council has established industry-government working groups to identify any issues that require attention.

As a result of these initiatives, North American safety and emission standards are almost completely harmonized. Effective as of the 1998 model year, 100 percent of emission standards and 95 percent of safety standards are harmonized between Canada and the U.S. Canadian



vehicle manufacturers comply with safety and emission standards through a process of self-certification and, in terms of procedures, there are no significant, practical certification differences for vehicle manufacturers selling into the Canadian or the U.S. markets.

On the global front, two major initiatives are aimed at harmonizing standards and regulations, one under the auspices of APEC and the other under the auspices of the United Nations (UN).

APEC trade ministers recently agreed to pursue early (before 2010) trade liberalization in a number of industries including automotive. The first stage of this initiative focusses on the harmonization of automotive standards and regulations and customs procedures among APEC economies, including Japan, the U.S., South Korea and China. Canada is an active member in these negotiations.

The second initiative, the United Nations Economic Commission for Europe, Working Party 29, originally focussed on the European Union. Working Party 29 did not seek to harmonize standards but rather to develop a system of mutual recognition of safety standards and regulations. Working Party 29's original agreement has recently been opened to all members of the UN, in an effort to approach standards and regulations from a global perspective. It is encouraging that the governments of the European Union, Japan and the U.S. have agreed to the text of an "Agreement on Global Technical Regulations." Canada is active in all of these discussions on international harmonization and is seriously considering participation in the transformation of Working Party 29 from a European forum to a truly global one.

Reducing technical trade barriers and the regulatory burden on businesses is essential for improved competitiveness. Canada is developing marketplace frameworks and services, benchmarked to the world's best. Several recent initiatives are highlighted in **Table 4**.

**Table 4**  
**Marketplace — Selected Initiatives**

- Customs 2000 (Revenue Canada) — border crossings facilitated
- NAFTA Automotive Standards Council
- Canadian Council of Ministers of the Environment — task force to develop emissions and fuel standards
- Automotive Advisory Committee (Standards and Regulations Committee)
- Joint industry/government committee — transportation fuels and motor vehicle control technology
- Workplace Hazardous Materials Information System simplifications

*Harmonization  
of standards on  
a global basis  
is the goal.*



*Canada's  
automotive sector  
accounts for  
25 percent of  
merchandise  
exports.*

*Improved market  
access to  
developing markets  
is a key priority.*

Standards and regulatory issues as they apply to the automotive sector are addressed on an ongoing basis through a number of initiatives, such as those highlighted above. The automotive industry and government must work together to reduce the cost of compliance in a number of regulatory areas that have been identified as particularly burdensome by the industry.

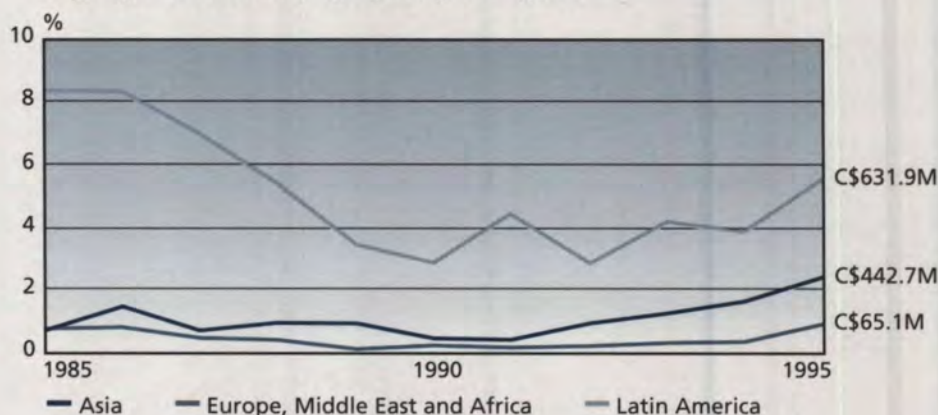
## PRIORITY: TRADE POLICY

Canada is a trading nation, with one of the most open markets in the world, and has always placed a high priority on negotiating improved market access. Canada's automotive industry is a significant exporter, one of the top five world exporters of vehicles, parts and accessories,<sup>60</sup> accounting for 25 percent of Canada's merchandise exports.<sup>61</sup> To date, Canada's automotive production has been destined primarily for the U.S. and secondarily to Mexico.<sup>62</sup> This trend is not uncommon, as intra-regional trade in the automotive sector is more prevalent than interregional trade.<sup>63</sup>

Over the past two decades, excess capacity has been a constant in the automotive industry.<sup>64</sup> Some industry observers consider excess capacity to be a defining characteristic of this industry and, in part due to its predictability, not a serious threat to a company's competitiveness. While much of this capacity is destined for local markets and does not affect plants in other markets, some is targeted at exports. The impact of global and North American overcapacity on Canada is thus difficult to assess and must be considered on a plant-by-plant, product-by-product basis.

Given the significance of trade to its economy in general and to the automotive industry in particular, Canada's automotive industry stands to benefit from more open trade. Improved market access to developing markets has been identified as a key priority. **Figure 15** illustrates Canada's share of G7 automotive exports to developing, high-growth markets.

**Figure 15**  
**Canada's Share of G7 Automotive Exports to High-growth Markets, by Major Region**



Source: Statistics Canada, World Trade Database.



Free trade agreements are serving to break down trade barriers and to open new markets for Canadian automotive exports. Agreements such as the WTO, FTA and NAFTA have enhanced Canadian access to key markets. More recent agreements such as the Canada–Chile and the Canada–Israel free trade agreements provide preferential market access. Looking to the future, the federal government is working closely with the automotive sector to further secure and expand Canada's access to world markets for its goods and services through fora such as the FTAA and APEC. For example, under APEC, specific measures have been proposed, such as harmonization of automotive standards and regulations, simplification and facilitation of customs procedures, coordination and expansion of economic and technical cooperation initiatives, and establishment of an automotive dialogue to discuss numerous and wide-ranging trade and investment policy issues facing the automotive sector in the APEC region.

A summary of key market access and trade initiatives launched by the government is shown in Table 5.

**Table 5**  
**Market Access and Trade — Selected Initiatives**

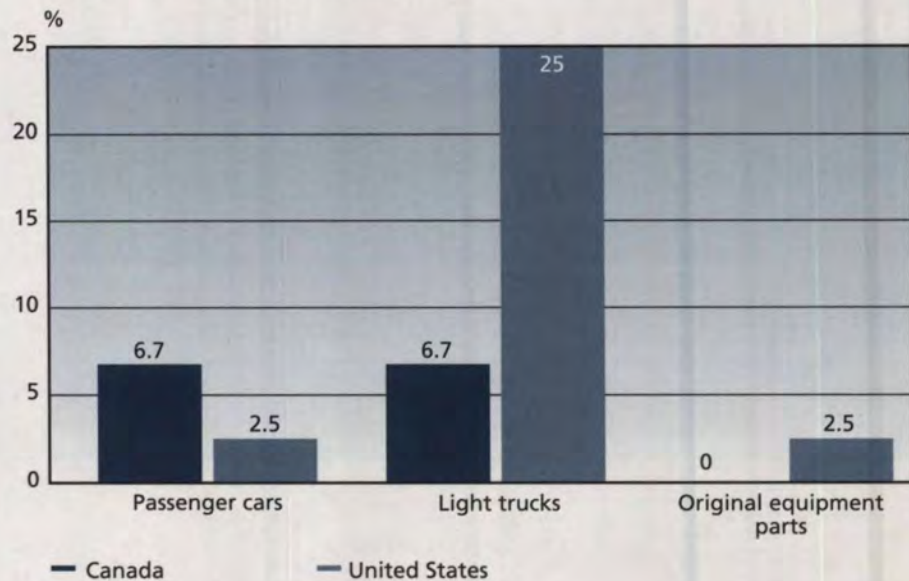
- NAFTA
- APEC discussion on trade liberalization
- Canada–Chile Free Trade Agreement
- Canada–Israel Free Trade Agreement
- Trade discussions for access to Mercosur countries
- U.S.–Japan Automotive Trade Agreement Talks
- National Sector Teams
- Team Canada Trade Missions
- International Business Opportunities Centre

*Free trade  
agreements  
open new markets  
for Canadian  
automotive exports.*



The ACR also examined Canada's MFN tariff on imported vehicles and parts in the context of existing tariff arrangements as well as potential future directions. Canada's MFN tariff rates compare favourably with those of the U.S. (see **Figure 16**).

**Figure 16**  
**Motor Vehicle Tariff Rates,\* 1998**



\* Apply to "Most Favoured Nations."

Source: Canadian and U.S. customs tariff books.

**Canada's MFN  
tariff on all  
automotive goods  
has been steadily  
declining.**

Canada's MFN tariff on all automotive goods has been steadily declining from 17.5 percent in 1965, to zero for production parts, to the current 6.7 percent for vehicles and aftermarket parts (6.1 percent on January 1, 1999). In addition, all NAFTA originating vehicles and parts imported from the U.S. may enter Canada duty-free, as well as some NAFTA originating vehicles and parts imported from Mexico. By January 1, 2003, all NAFTA originating vehicles and parts imported from Mexico may enter Canada duty-free. Vehicles may also be imported duty-free under the Canada-U.S. Automotive Trade Products Agreement (Auto Pact).

The tariff for automotive parts used in production in Canada was recently lowered in two stages. In 1994 Canada lowered the tariff on parts used in the production of engines and transmissions to zero to encourage production of these key systems. In 1996, the tariff on production parts was unilaterally lowered to zero to ensure that all assemblers who manufacture vehicles in Canada could continue to import parts for use in assembly of vehicles in Canada on a duty-free basis following the termination of programs that allowed some assemblers to effectively import production parts duty-free.



In this context, and after careful examination of the various recommendations from stakeholders, the Government of Canada has decided against any unilateral changes to the MFN vehicle tariff at this time. However, the government remains committed to pursuing further multilateral trade liberalization, including changes to the vehicle tariff, in international fora such as the WTO, the FTAA and APEC.

*The government  
remains committed  
to pursuing further  
trade liberalization.*



## CONCLUSION

The Canadian automotive industry is successful and makes a major contribution to the Canadian economy. It is supported by a competitive Canadian business environment that is second among all automotive producing countries. Extensive consultations during the Automotive Competitiveness Review have identified a number of issues that will require attention. They also identified opportunities which, if captured, will increase the strength of this key sector of the economy.

Many of the issues identified by the Automotive Competitiveness Review do not lend themselves to quick solutions. In all cases, these are being discussed with the appropriate departments of the federal government and a process has been established to analyse each issue and determine the appropriate course of action. However, there is a need to monitor progress at the sectoral level. To date, this task has been undertaken by the Automotive Advisory Committee, a consultative body that reports to the Minister of Industry and includes all stakeholders. This type of mechanism will continue to be used in the future to deal effectively with the requirements of a given situation.

The Automotive Competitiveness Review is only a beginning — a signpost indicating the paths that must be taken to keep Canada's automotive industry in the first rank of world competitors. All stakeholders have a key role to play in achieving this objective. For its part, the federal government will continue to maintain a favourable business climate conducive to investment.

The Automotive Competitiveness Review has identified four areas that must be focussed on: innovation, human resources, standards and regulations, and trade policy. The industry has a key role to play in addressing the competitiveness issues and in capturing the opportunities that have been identified. In particular, the automotive manufacturing sector should aim to significantly increase R&D investment in Canada over the next few years. In the longer term, Canada's automotive industry may want to consider actions to significantly reduce the R&D investment gap between Canada and the U.S. With respect to meeting human resources needs, as a first step, the automotive manufacturing sector should lead in the establishment of a human resources body to develop a strategy and an action plan that will involve all partners, including all levels of government. Canadian automotive firms could take the lead in introducing new approaches to on-the-job training and through innovative partnerships between training institutions. At the same time, the Canadian government must ensure that its framework laws, policies and standards and regulations define an environment within which the automotive sector can function efficiently. Finally, in its trade policy function, the federal government is committed to working with the automotive industry and Canada's international partners to foster open markets and create the conditions for enhanced trade.



## **ANNEX A: ANALYSES UNDERTAKEN IN CONNECTION WITH THE AUTOMOTIVE COMPETITIVENESS REVIEW**

(Electronic copies or summaries of these reports are available through Industry Canada's Strategis Web site at: <http://strategis.ic.gc.ca/autoe>)

Automotive Advisory Committee Working Group on Competitiveness, *Industry-identified Issues: A Submission to the Automotive Competitiveness Review* (Ottawa: AAC, 1997).

Automotive and Transportation Branch, *The Automotive Competitiveness Review: Industry-identified Issues* (Ottawa: Industry Canada, 1998).

Automotive and Transportation Branch, *Automotive Industry: Part 1 — Overview and Prospects*, Sector Competitiveness Frameworks series (Ottawa: Industry Canada, 1996).

Automotive and Transportation Branch, *Automotive Trade: January to December 1996* (Ottawa: Industry Canada, 1997).

Automotive and Transportation Branch, *Country-specific Automotive Policy Profiles* (Ottawa: Industry Canada, 1997).


Automotive and Transportation Branch, *Quarterly Automotive Circular: January to December 1997* (Ottawa: Industry Canada, 1998).

Automotive and Transportation Branch, *Statistical Review of the Canadian Automotive Industry: 1997 Edition* (Ottawa: Industry Canada, 1997).

Automotive and Transportation Branch and Micro-Economic Policy and Analysis Branch, *Competitiveness of the Canadian Automotive Sector: Facts and Figures* (Ottawa: Industry Canada, 1998).

DesRosiers Consulting, *The Automotive Aftermarket Industry in Canada: Outlook Study 1997*, a study prepared for the Automotive Industries Association of Canada and the Automotive and Transportation Branch of Industry Canada (Toronto: Automotive Parts Manufacturers' Association of Canada, 1997).





Faria, Dr. A. J., *Automotive Components 1997 Industry Outlook*, a study prepared for the Automotive Parts Manufacturers' Association of Canada and the Automotive and Transportation Branch of Industry Canada (Toronto: Automotive Parts Manufacturers' Association of Canada, 1997).

Faria, Dr. A. J., *Competitiveness of Canada's OE Parts Sector*, a study prepared for the Automotive Parts Manufacturers' Association of Canada and the Automotive and Transportation Branch of Industry Canada (Toronto: Automotive Parts Manufacturers' Association of Canada, 1997).



## ANNEX B: SOURCES

1. The Automotive News, *1997 Market Data Book*.
2. Canadian Vehicle Manufacturers' Association.
3. Statistics Canada, Catalogue Numbers 31-203-XPB and 72-002-XPB.
4. *Ward's Automotive Reports*, February 2, 1998.
5. *Ward's Automotive Reports*, January 12, 1998.
6. *Ward's Automotive Reports*.
7. Statistics Canada, Catalogue Numbers 61-214-XPB and 61-205-XPB.
8. KPMG, *Competitive Alternative: A Comparison of Business Costs in Canada, Europe and the U.S.*, 1997.
9. Bank of Canada.
10. *The Economist*, May 23, 1997.
11. The World Economic Forum, *Global Competitiveness Report*, 1997.
12. Statistics Canada.
13. *Ward's Automotive Reports*.
14. *The Harbour Report*, North America, 1997. (Based on number of workers per vehicle.)
15. Conference Board of Canada, *R&D Tax Incentives in OECD Countries: How Canada Compares*, 1997.
16. The World Economic Forum, *Global Competitiveness Report*, 1997.
17. Automotive Parts Manufacturers' Association.
18. Statistics Canada.
19. Prakash Sharma, Someshwar Rao, Benoît Robidoux, Ehsan Choudhri, Rene Durand, Louis Beausejour, Jamal Khokhar, *Export Growth and Job Creation: How Many Jobs Does a Billion Dollars Increase in Real Exports Create?* Department of Foreign Affairs and International Trade, 1995.
20. Statistics Canada.
21. United Nations, *1996 World Investment Report*.
22. Statistics Canada, Catalogue Numbers 31-203-XPB and 72-002-XPB.
23. Statistics Canada.
24. *Ward's Automotive Reports* and *Bus Manufacturing: Part 1 — Overview and Prospects*, Sector Competitiveness Frameworks series, Industry Canada.
25. Statistics Canada.
26. Statistics Canada, Catalogue Numbers 31-001-XPB, 31-203-XPB and 42-251-XPB.
27. Statistics Canada, Catalogue Numbers 31-203-XPB and 72-002-XPB.
28. Statistics Canada.
29. *Ward's Automotive Reports*.
30. *Ward's Automotive Reports*, January 12, 1998.
31. *Ward's Automotive Reports*, January 12, February 2 and February 16, 1998.
32. Statistics Canada, Catalogue Numbers 31-001-XPB, 31-203-XPB and 42-251-XPB.
33. Statistics Canada.



34. Statistics Canada, Catalogue Numbers 61-214-XPB and 61-205-XPB.
35. Automotive News, *1997 Market Data Book*.
36. Draft report on assembly re-investment, by Working Group of Automotive Advisory Committee, 1998.
37. Draft report on assembly re-investment, by Working Group of Automotive Advisory Committee, 1998.
38. *The Harbour Report*, North America, 1997. (Based on number of workers per vehicle.)
39. *The Harbour Report*, North America, 1997. (Based on number of workers per vehicle.)
40. Draft report on assembly re-investment, by Working Group of Automotive Advisory Committee, 1998.
41. International Institute for Management Development, *World Competitiveness Yearbook*, 1997.
42. J.D. Power and Associates. (Based on Silver, Bronze, and Gold Plant Quality Awards issued since 1990.)
43. KPMG, *Competitive Alternative: A Comparison of Business Costs in Canada, Europe and the U.S.*, 1997.
44. Organisation for Economic Co-operation and Development and the Department of Finance.
45. Bank of Canada.
46. The Conference Board of Canada.
47. Bank of Canada and Federal Reserve Bank of St. Louis.
48. The Automotive News, *The World Data Book*, 1997.
49. Statistics Canada.
50. Statistics Canada.
51. *Ward's Automotive Reports*.
52. *Ward's Automotive Reports* and Association of International Automobile Manufacturers Canada.
53. *Ward's Automotive Reports*.
54. *Ward's Automotive Reports*.
55. U.S. Department of Statistics and Statistics Canada.
56. The Conference Board of Canada.
57. The World Economic Forum, *Global Competitiveness Report*, 1997.
58. Based on manufacturer information.
59. Automotive Parts Manufacturers' Association.
60. United Nations Trade Database.
61. Statistics Canada.
62. Statistics Canada.
63. Vickery, Graham, "Globalisation in the Automobile Industry," *Globalisation of Industry: Overview and Sector Reports*, Organisation for Economic Co-operation and Development, 1996.
64. Autofacts, Coopers & Lybrand, Presentation on *Global Excess Production Capacity*, 1998.



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