



Catalogue no. 65-507-MIE — No. 002

ISSN: 1712-1345

ISBN: 0-662-39600-6

## Analytical Paper

### Canadian trade review

# Key trends in Canada's international trade in machinery and transport equipment, 1980 to 2003

by Jafar Khondaker

International Trade Division  
9th Floor, Jean Talon Building, Ottawa, K1A 0T6

Telephone: 1 613 951-9647



Statistics  
Canada

Statistique  
Canada

Canada



## Key trends in Canada's international trade in machinery and transport equipment, 1980-2003

---

Jafar Khondaker

June 2005

Catalogue no. 65-507-MIE  
ISSN: 1712-1345  
ISBN: 0-662-39600-6

Frequency: Occasional

La version française de cette publication est disponible sur demande  
(n° 65-507-MIF au Catalogue)

### How to obtain more information

National inquiries line: 1 800 263-1136

Specific inquiries about this product and related statistics or services should be directed to: Marketing and Client Services Section, International Trade Division, Statistics Canada, Ottawa, Ontario K1A 0T6 telephone: (613) 951-9647, Facsimile Number (613) 951-0117 or 1 800 664-0055.

Published by authority of the Minister  
responsible for Statistics Canada

© Minister of Industry, 2005

All rights reserved. The content of this publication may be reproduced, in whole or in part, and by any means, without further permission from Statistics Canada, subject to the following conditions: that it is done solely for the purposes of private study, research, criticism, review, newspaper summary, and/or for non-commercial purposes; and that Statistics Canada be fully acknowledged as follows: Source (or "Adapted from," if appropriate): Statistics Canada, name of product, catalogue, volume and issue numbers, reference period and page(s). Otherwise, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopy, for any purposes, without the prior written permission of Licensing Services, Marketing Division, Statistics Canada, Ottawa, Ontario, Canada K1A 0T6.

## Overview

Canada's international trade has become increasingly intensive in machinery and transport equipment, according to long-term trends in data over the past two decades. This is true for both exports and imports.

This paper examines the data for the period from 1980 to 2003 on machinery and transport equipment.<sup>1</sup> It identifies some key trends in the data and explains those trends in light of major economic events of the last two decades.

---

1. The data used in this paper is explained in the section titled 'Related facts'. The commodity group machinery and transport equipment consists of a wide range of industrial machinery and equipment; electrical machinery and apparatus; computer and telecommunications equipment; and transport equipment that includes automotive products, aircraft and associated equipment, railway vehicles, ships and boats. A complete list is available in the above-mentioned section.

## Highlights

An examination of the data in this paper reveals four key trends:

- A slowly growing share of machinery and transport equipment in both exports and imports;
- A steady tendency of concentrating exports to the United States, while sourcing imports increasingly from countries other than the United States;
- Canada's declining relative importance in US imports of machinery and transport equipment, and;
- Steadily rising Canadian contributions in the global automotive products supply chain.

## Analysis and findings

A large part of the growth in the share of machinery and transport equipment in Canada's trade can be linked to the ever-growing globalization of production, and the increase in vertical specialization and intra-industry trade between Canada and the United States, and other trading partners.

The increasing intensity in machinery and transport equipment has important implications for productivity and growth of the Canadian economy.

Machinery and equipment embodies technology. Thus, an increased trade in this commodity group can be taken, to a large extent, as an indication of the proliferation of technology across nations.

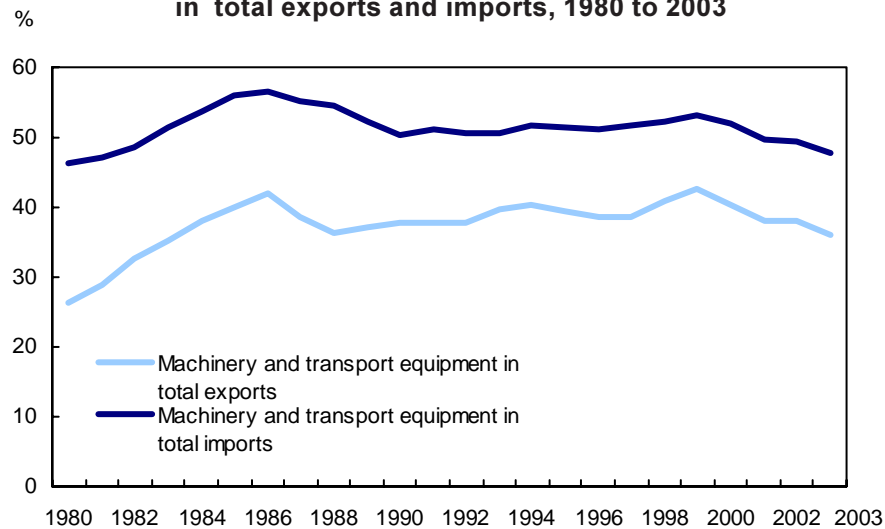
The commodity group machinery and transport equipment is dominated by high- and medium-high technology-intensive goods. These goods are often characterized by rapid growth in demand, and by externalities in the production process.

A rising share of these goods in total exports implies decreased reliance of the country on resource-based, and low- and medium-low technology-intensive goods. A rising share of machinery and transport equipment, especially the machinery component, in total imports often implies an increasing share of productivity-enhancing new capital goods.

### Growing importance during last two decades

The shares of machinery and transport equipment in Canada's total exports and total imports have shown rising trends over the last two decades.

**Figure 1. Shares of machinery and transport equipment in total exports and imports, 1980 to 2003**



**Source:** OECD, Annual international trade by commodity statistics, Standard International Trade Classification (SITC) Revision 2.

Although the values of both imports and exports of machinery and transport equipment peaked in 2000, the shares of the commodity group in total trade peaked in 1999.

In 1980, this merchandise category accounted for just over 26% of Canada's total exports of \$73.8 billion. By 1999, the share peaked at 42.5% as total exports rose to \$355.4 billion.

In 1980, machinery and transport equipment accounted for 46.3% of total imports of \$67.5 billion. Its share reached 53.2% in 1999 as total imports hit \$320.4 billion.

The total value of both exports and imports of machinery and transport equipment peaked in 2000, with exports reaching \$165.5 billion and imports \$185.1 billion. However, the sharp rise in crude oil prices in 2000 dwarfed the growth in the value of the category relative to the non-machinery product categories.<sup>2</sup>

### **Economic fluctuations had effects on trade**

The trends in the shares of machinery and transport equipment in Canada's total exports and total imports were affected by economic growth which occurred in Canada, the United States and the rest of the world in the last two decades.

### **Canada**

Canada experienced two business cycles and a few other short-term contractions in economic activity between 1980 and 2003.<sup>3</sup>

The eighties saw two contractions in real GDP. The first, a brief one, started in the second quarter of 1980 and ended in the third quarter of the same year.

The second contraction started in the third quarter of 1981 and ended in the fourth quarter of 1982. This was followed by a long period of expansion that ended in the first quarter of 1990.

The trough of the cycle that followed was reached in the first quarter of 1991. From that point to the third quarter of 2001, the economy experienced virtually uninterrupted expansion. Although quarterly data recorded two brief episodes of small contraction in the first four years of the 2000s, the Canadian economy has performed well relative to the United States, Japan and other major OECD countries.

---

2. See 'Related facts' for a brief discussion on oil prices and their effect on the share of machinery and transport equipment in total exports and total imports.

3. There were two episodes when real GDP contracted for three or more quarters in a row.

## Economic fluctuations in the rest of the world

The United States — Canada's largest trading partner — also experienced several episodes of economic stagnation or contraction between 1980 and 2003.

In the early 1980s alone — between the second quarter of 1980 and the third quarter of 1982 — the United States underwent four episodes of contraction in real GDP. None lasted for more than two quarters.

The expansion that followed continued until the fourth quarter of 1990 when GDP declined for two consecutive quarters. The US economy then experienced its long-uninterrupted expansion that continued until the global IT bubble burst in the first quarter of 2001.

The US economic performance was sluggish in 2001 and 2002, but the economy picked up in 2003, recording growth of more than 3%.

The world economy experienced outstanding expansion for the most part of the 1990s continuing to the year 2000. Large scale investment expenditure led by the information and telecommunication sectors in the OECD countries was instrumental in the expansion of the world economy in the second half of the 1990s.

The growth of the world economy started showing signs of weakness in 2001 with consequent negative effects on investment expenditure and trade in machinery and transport equipment. The slowdown in investment expenditure was triggered primarily by the bursting of the global IT bubble in 2001.<sup>4</sup>

This was followed by a series of reports of the discovery of serious accounting irregularities in the financial statements of companies which had been used to inflate business expectations and profits. These irregularities, combined with doubtful practices by management in the mergers and acquisitions boom of the preceding years, shattered the trust in corporate governance and contributed to the downturn in stock markets and weakness of fixed investment expenditure.

Thus, after recording an average annual growth of over 8% between 1993 and 2000, gross capital formation at constant prices in the United States declined by about 7% in 2001 and by another 0.4% in 2002. The corresponding numbers for Canada are 6.4% average annual growth between 1993 and 2000, followed by a 4.6% fall in 2001, and then a 5.6% increase in 2002.

---

4. The slowdown had an immediate negative effect on the value of world merchandise exports that saw more than a 2.5 percent decline from the 2000 value. The value of world exports of machinery and transport equipment decreased by 4.5 percent over the same time-period. Canada saw its exports of machinery and transport equipment fall in 2001 by nearly 11 percent from their 2000 value.

## Trade in machinery and transport equipment grew faster during 1990s

Tables 1 and 2 below show average annual percentage growth since 1980 in exports and imports in the major commodity groups that are part of the machinery and transport equipment category.

**Table 1. Average annual percentage growth in exports, 1980 to 2003**

	1980 to 1991	1992 to 2000	2001 to 2003
Road vehicles	20.3	20.8	-5.4
Parts and accessories of road vehicles	8.1	18.9	1.2
Industrial machinery	7.1	27.7	-1.9
Electrical machinery and apparatus	49.1	19.7	-9.2
Computer and communication equipment	15.5	46.8	-18.9
Other transport equipment	13.5	21.6	0.6

Data source: OECD, Annual international trade by commodity statistics, Standard International Trade Classification (SITC) Revision 2.

Table source: Statistics Canada, 2005, Key Trends in Canada's International Trade in Machinery and Transport Equipment, 1980 to 2003, Catalogue no. 65-507-MWE2005002.

**Table 2. Average annual percentage growth in imports, 1980 to 2003**

	1980 to 1991	1992 to 2000	2001 to 2003
Road vehicles	14.4	12.2	4.9
Parts and accessories of road vehicles	6.8	17.2	-3.8
Industrial machinery	5.5	19.7	-3.9
Electrical machinery and apparatus	33.6	21.8	-13.4
Computer and communication equipment	17.6	23.8	-7.8
Other transport equipment	9.1	17.5	-8.9

Data source: OECD, Annual international trade by commodity statistics, Standard International Trade Classification (SITC) Revision 2.

Table source: Statistics Canada, 2005, Key Trends in Canada's International Trade in Machinery and Transport Equipment, 1980 to 2003, Catalogue no. 65-507-MWE2005002.

It is evident that consistent with the economic developments of the past two decades, Canadian exports and imports of industrial machinery, computer and communication equipment, as well as other transport equipment, showed faster growth in the 1990s than in the 1980s.

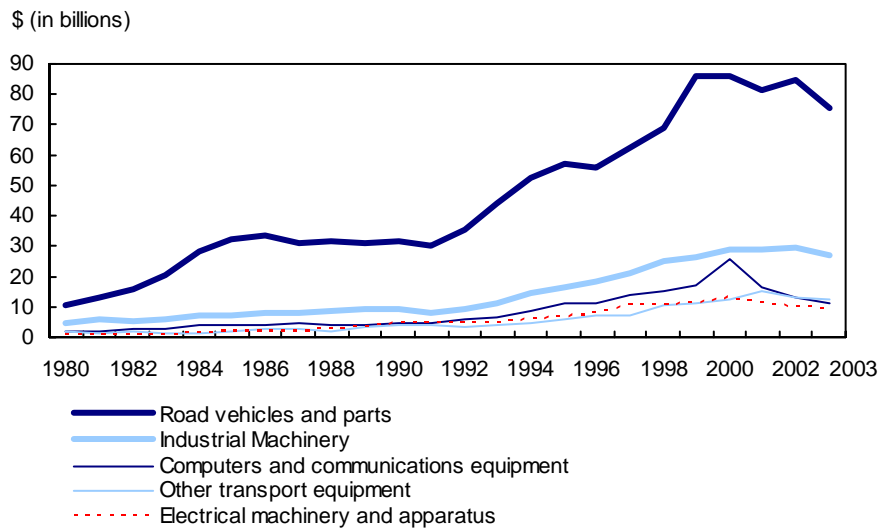
The rate of growth in the value of assembled road vehicles exports over the 1992-2000 period was only marginally higher than that for 1980 to 1991.

Exports of electrical machinery and equipment recorded slower growth in the second period. This merchandise category includes many labour-intensive and medium-technology-intensive goods such as electro-mechanical household and domestic appliances, laundry equipment, dishwashing machines, electrical cables, switches, fuses, and so on. These commodities are good candidates for the globalization of production that intensified in the 1990s. Consequently their production locales gradually shifted to Mexico, China and other south Asian countries with a low labour-cost advantage.



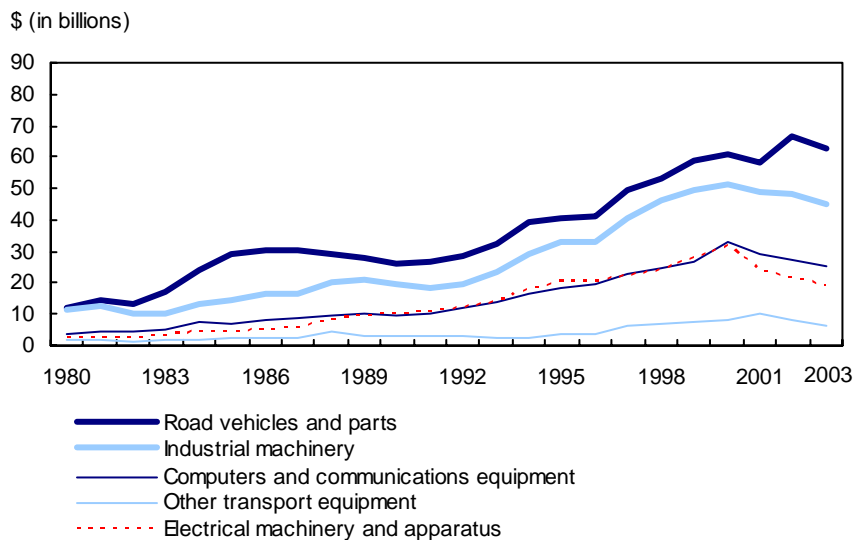
Canadian imports of industrial machinery displayed some pro-cyclical behaviour. Exports and imports of road vehicles, including parts and accessories, showed a behaviour that does not appear to be related to the business cycles in Canada or in the United States.

**Figure 2. Total value of exports in Canadian dollars by commodity groups, 1980 to 2003**



**Source:** OECD, Annual international trade by commodity statistics, Standard International Trade Classification (SITC) Revision 2.

**Figure 3. Total value of imports in Canadian dollars by commodity groups, 1980 to 2003**



**Source:** OECD, Annual international trade by commodity statistics, Standard International Trade Classification (SITC) Revision 2.

Between 1982 and 1986, both exports and imports of road vehicles including parts and accessories displayed steep growths above trends. The period 1987 to 1991 saw reversals of those above-trend growths. This behaviour explains the peaks reached in 1986 in the shares of machinery and transport equipment.

All other categories of machinery and transport equipment generally exhibited growth in the 1980s and 1990s.

The trends up to 1991 in the shares of machinery and transport equipment displayed in Figure 1 on Page 3 are primarily explained by the behaviour of road vehicles. The post-1991 trends are explained primarily by computer and communication equipment, industrial machinery, automotive parts and accessories, and other transport equipment.

### **Growing concentration of exports and diversification of imports**

The US share in Canada's total exports of machinery and transport equipment has been steadily growing. In imports, on the other hand, the US share has been continuously declining.

In the 1980s, the United States accounted for just over 88% of Canada's exports of machinery and transport equipment which averaged \$38.6 billion annually. In the 1990s, the US share increased to 90.7% when total exports in the category averaged \$91.3 billion annually.

In the first four years of the current decade, the total value of machinery and transport equipment exports averaged \$151.3 billion, and the US was the destination for 90.4% of the flow.

On the other hand, the trend in imports has been the opposite. In the 1980s, the United States was the source of about 79.5% of Canada's \$51.6 billion average annual imports in the category. The US share declined to 71% in the 1990s, when total imports of these goods averaged \$110.5 billion.

In the first four years of the 2000s, just over 66% of Canada's \$171.4 billion average annual imports in machinery and transport equipment came from the United States.

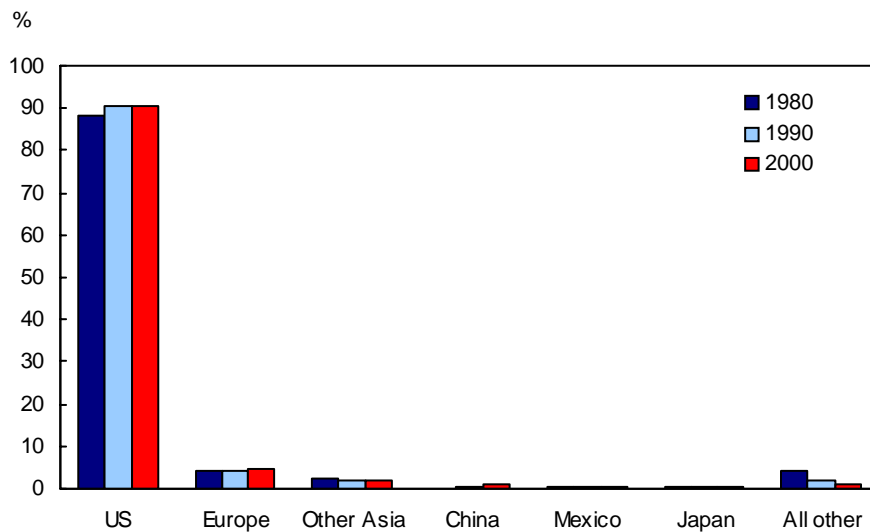
### Intensified globalization of production

Figures 4 and 5 below show a tendency toward concentrating exports of machinery and transport equipment to the United States, while sourcing imports increasingly from countries other than the United States.<sup>5</sup>

The explanation for the above trends is primarily in the phenomenon of the globalization of production. The last two decades have witnessed intensified globalization of the manufacturing industries of major industrialized countries.

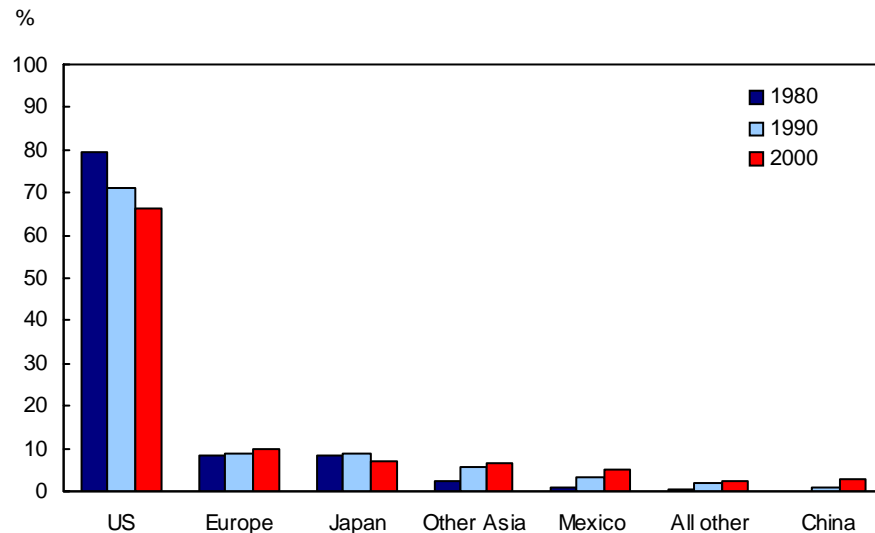
Principally in efforts to lower production costs, improve market access and demonstrate a commitment to important markets, large manufacturing firms in the advanced countries have increasingly shifted portions of their manufacturing operations to lower-cost locales. These include Mexico, China, Korea, Taiwan, Singapore, Malaysia, the Philippines and Thailand.<sup>6</sup>

**Figure 4. Distribution of shares in Canada's total exports of machinery and transport equipment, 1980 to 2003**



**Source:** OECD, Annual international trade by commodity statistics, Standard International Trade Classification (SITC) Revision 2.

5. 'Other Asia' implies all Asian countries excluding Japan and China. 'All other' refers to all other countries in the world.  
 6. As W. James McNerney Jr., Chairman and CEO of 3M defends his company's investment in China: "It's hard to serve Chinese customers in a lot of our businesses unless we manufacture there. We don't do it just to eviscerate US jobs. We do it to be competitive." (quoted in the BusinessWeek, October 13, 2003).

**Figure 5. Distribution of shares in Canada's total imports of machinery and transport equipment, 1980 to 2003**

**Source:** OECD, Annual international trade by commodity statistics, Standard International Trade Classification (SITC) Revision 2.

Consider, for example, the commodity group 'Electromechanical domestic appliances' in the Harmonized System (HS) of commodity classification.<sup>7</sup> The commodity group includes such products as vacuum cleaners, floor polishers, food grinders, mixers, and so on. As late as 1995, the US share in Canadian imports in that category was 72.4%. China, Mexico, and South Korea accounted for 9.5%, 4.5% and 0.1%, respectively.

With continuous globalization, the US share in the category declined to 39.5% in 2003, while the shares of China, Mexico, and South Korea increased to 37.3%, 8.5% and 2.8% respectively.

It is possible that a substantial part of Canada's increased imports from Mexico, China and some other Asian countries reflects imports from the affiliates of US, Canadian, and Japanese companies in those countries.

According to an October 2003 report published in *BusinessWeek*, of China's top 40 exporters, 10 are US companies. It is also possible that a large part of the growth in imports from non-US sources, especially from Europe, (and from Japan in the 1990s), is for processing in Canada for eventual export to the United States as part of the vertical integration of production.

7. The HS category 8509.

## Decline in Canada's importance in US imports of machinery and transport equipment

While the United States still accounts for about 90% of Canada's machinery and transport equipment exports, recent evidence suggests that Canada's relative importance in US imports in this category has been declining.<sup>8</sup>

In 1990, Canada accounted for 19.3% of total US imports in the category. The share has continuously declined since then, reaching 16.5% in 2002. Japan's loss is even more prominent – from 33.5% in 1990 to 18.2% in 2002. These losses (along with the losses by other major European countries) were made up by the gains by Mexico (8.8%), China (7.9%) and other Asian countries (2.9%).

The decline in Canada's share in US imports of machinery and transport equipment is explained primarily by the loss in the share of road vehicles. Table 3 below shows the changes in some selected countries' shares in US imports of road vehicles.

**Table 3. Shares of selected countries in US imports of road vehicles in 1990 and 2002**

	1990	2002
	Percentage <sup>1</sup>	
Canada	35.6	30.4
Japan	39.5	27.3
Germany	10.5	13.1
Mexico	4.2	15.2
South Korea	2.1	4.9

Notes: 1. Percentage of imports.

Data source: OECD, Annual international trade by commodity statistics, Standard International Trade Classification (SITC) Revision 2.

Table source: Statistics Canada, 2005, Key Trends in Canada's International Trade in Machinery and Transport Equipment, 1980 to 2003, Catalogue no. 65-507-MWE2005002.

It appears that while Canada and Japan experienced a major loss in their shares, Mexico, South Korea and Germany saw significant gains in their shares.<sup>9</sup> Canada's share showed continuous growth in the first half of the 1990s before reaching a peak of 42.4% in 1995, the second year of the North American Free Trade Agreement (NAFTA). The share has since declined almost continuously, reaching 30.4% in 2002.<sup>10</sup>

In the category of auto-parts and accessories, however, Canada's share has shown some significant strength. After recording losses in the first half of the 1990s, and again in 2000/01, the share of the category has remained steady around 33.5%.

8. In the category of road vehicles and their parts and accessories, the US was the destination for over 97 percent of Canada's exports in 2003. In the same year, 98.4 percent of all assembled road vehicles' exports were destined for the US.

9. While there has been marked redistribution in market shares of major exporting countries, the total value of US imports of road vehicles has increased from \$ 70.6 billion in 1991 to \$168 billion (in US funds) in 2002.

10. The year 1999 was an exception when the share increased from 37 percent in 1998 to 38.3 percent.

### **Emergence of Mexico as global automotive product centre**

A significant part of the explanation for the loss in Canada's share in US imports of road vehicles lies in the emergence of Mexico as a global automotive production centre.

The Mexican automotive industry is composed entirely of subsidiaries of foreign manufacturers that determine the local product mix and local production levels as part of their global vehicle manufacturing strategies.

Mexico is increasingly chosen as the leading North American automotive assembly site for key new vehicles and components for a number of reasons. They include its low labour costs, geographic proximity to the United States, manufacturing competence and existing automotive manufacturing infrastructure.

Moreover, Mexico's bilateral trade agreements with some 38 countries, including the 25 members of the European Union, and its strategic advantage as a member of NAFTA, has encouraged US, Japanese and European automakers to make considerable investments in Mexico.

Thus, at least a part of Japan's apparent loss in US imports of road vehicles is made up by gains by exports of Japanese manufacturers in Mexico.

### **Canada's contribution in global automotive products supply chain rising steadily**

While the decline in Canada's share of US imports of assembled road vehicles might appear discouraging, there is evidence to suggest that Canada's contribution in the global supply chain of automotive products has been growing.

Our auto sector is still a leading export sector. Between 1980 and 2003, our total exports have grown more than four-fold, but exports of road vehicles have increased eight-fold. Assembled auto products accounted for 15.5% of our total exports in 2003, compared with the 20% contribution in 1993.<sup>11</sup>

Road vehicle manufacturing contributed to about 0.8% of Canada's GDP in 2003. This contribution, although lower than the roughly 1% level in 1999, is quite comparable to the levels recorded in the 1980s and those in the first half of the 1990s.

Table 1 showed that parts and accessories were one of only two product groups that recorded positive growths in exports in the first four years of the current decade.<sup>12</sup> There is more evidence of the strength of the auto sector.

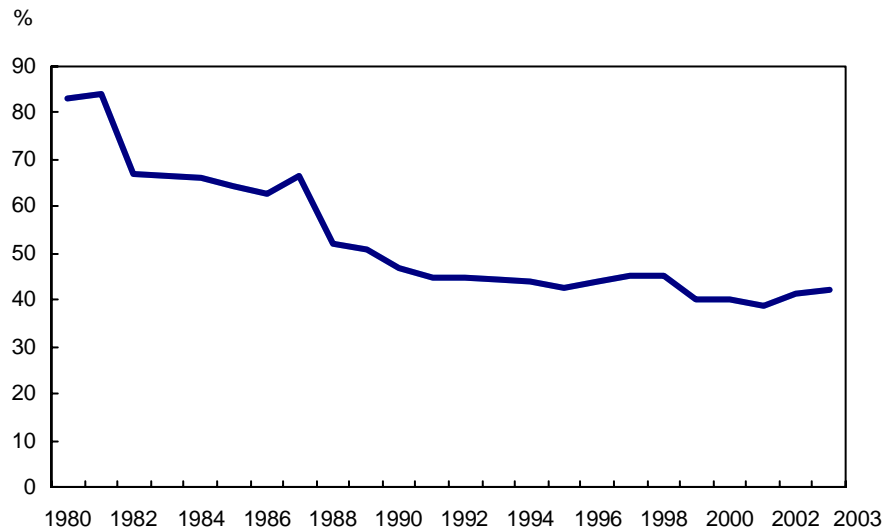
---

11. Note that with the rising prices of crude oil, the share of assembled auto products in total exports in the last few years will appear lower than it is in real terms.

12. Other transport equipment is the other product group that recorded positive growth.

Figure 6 below indicates that imports of auto parts as a share of total exports of assembled vehicles have been almost continuously declining since 1980. This indicates that the share of domestic auto parts in the assembled vehicles has been rising.

**Figure 6. Imports of road vehicle parts and accessories as a percentage of Canada's total exports of road vehicles, 1980 to 2003**



**Source:** OECD, Annual international trade by commodity statistics, Standard International Trade Classification (SITC) Revision 2.

Consequently, the value-added by the auto-parts industry has been slowly growing. The industry contributed slightly over 1% to Canada's GDP in 2003. The contribution was 1.1% in 1999, but only about 0.6% in the first half of the 1980s.

Between 1980 and 2003, exports of road vehicles have grown from \$7.5 billion to \$58.6 billion. Over the same time period, the growth in the imports of road vehicle parts and accessories has been about four-fold, from \$6.2 billion in 1980 to \$24.7 billion in 2003.

Thus, while imported parts and accessories accounted for about 83% of total exports of road vehicles in 1980, they accounted for about 42% of the exports in 2003.

## **Conclusions**

Canada witnessed considerable growth in the share of machinery and transport equipment in its total exports, and in its total imports over the last 25 years.

The fundamental feature of globalization is that firms fragment their operations internationally, locating each stage of production in the country where it can be done at the least cost.

Consequently, we have been seeing some losses in our world market shares for commodities intensive in the use of less-skilled labour and low- or medium-low technology.

With the ever-growing globalization of production, Canada may see increasing loss in market shares of machinery and transport equipment that are intensive in the utilization of less-skilled labour.

However, the country may also expect to see gains in market shares of machinery and transport equipment that are intensive in the utilization of advanced technology and highly skilled labour.



## Related facts

### About the data

Statistics Canada is the origin for Canada's export and import data used in this paper. Similarly, data for the partner countries originate from the statistical agencies of the partner countries. The OECD compiled the particular dataset used here based on the Standard International Trade Classification (SITC, Revision 2).

Readers may want to note that the machinery component of the SITC category 'Machinery and transport equipment' differs in coverage from the 'machinery and equipment' data in sector 5 as published by Statistics Canada.

In particular, Statistics Canada's classification of machinery and equipment is more comprehensive than the SITC classification of the machinery component. For example, while SITC classifies professional, scientific and controlling instruments; measuring, checking, and analyzing instruments; and many similar instruments and equipment under the category 'Miscellaneous manufactured articles' – SITC category 8, Statistics Canada's classification includes these in machinery and equipment.

Despite the seeming undercoverage of the machinery component in the SITC classification, we use the classification in order to keep the data comparable with our trading partners.

Moreover, given that our main objective is to examine and identify the long-term trends in the share of machinery and transport equipment in total exports and imports, the use of SITC data is not expected to limit the analysis presented in this paper.

## **Product groups in the category of machinery and transport equipment**

The product groups used in this paper are formed using the Standard International Trade Classification, Revision 2, (SITC Rev 2) classification system. A brief description of the groups is given below.

The product group 'Road vehicles and their parts and accessories' are formed from the SITC category 78 – road vehicles, including air cushion vehicles. The SITC sub-group 784 covers what is presented as 'Parts and accessories of road vehicles'.

'Industrial machinery' includes the following SITC categories:

- 71 – Power generating machinery and equipment.
- 72 – Machinery specialized for particular industries.
- 73 – Metalworking machinery.
- 74 – General industrial machinery and equipment.

The product group 'Computer and communications equipment' is formed by the following two SITC categories:

- 75 – Office machines and automatic data processing equipment.
- 76 – Telecommunications and sound-recording equipment.

'Electrical machinery and apparatus' is formed by the SITC category 77 – Electrical machinery, apparatus, and appliances.

'Other transport equipment' represents the SITC category 79, and includes the following three product sub-groups:

- (1) Aircraft and associated equipment and parts,
- (2) Railway vehicles and associated equipment, and
- (3) Ships, boats, and floating structures.

## **Crude oil prices and shares of machinery and transport equipment**

According to the WTO, real oil prices reached their highest level since 1985 in 2000. Between 1999 and 2000, crude oil prices in the world market increased by nearly 58% leading to a dramatic increase in the value of fuels traded internationally. This dwarfed the growth of all other product categories. In that time period, Canada's total imports in the category of mineral fuels, lubricants, and related materials recorded close to 73% growth, and total exports recorded 80.5% growth.

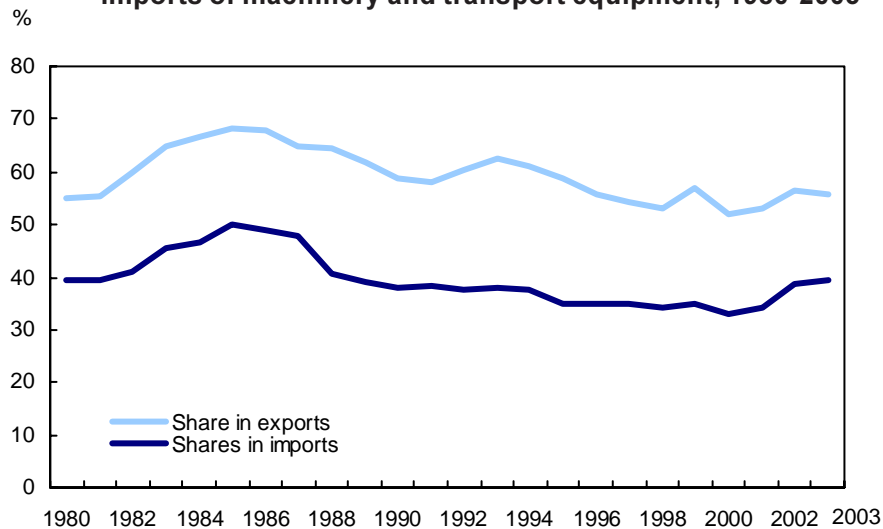
Crude oil prices in the world market in 2001 averaged about 15% below their 2000 level. Prices started rising again in 2002 recording about 2% gain in 2002, 14.9% in 2003, and yet another 28.6% in 2004. The fast growth in crude oil prices inflates the nominal value of oil relative to other products.

One can obtain values of both exports and imports at constant 1997 prices using Standard International Trade Classification (SITC, Revision 3). Export and import price indexes are available for the period since 1997. At 1997 prices, the values of total exports, and exports of machinery and transport equipment in 2000 were \$384.2 billion and \$166.3 billion respectively. Similarly, total imports and imports of machinery and transport equipment were valued at \$345.0 billion and \$188.1 billion, respectively, at 1997 prices. Accordingly, the share of machinery and transport equipment in Canada's total exports and total imports peaked at 43.3% and 54.5%, respectively, in 2000. Constant prices put the shares at 39.7% and 52.3%, respectively, in 2003. See Statistics Canada's CANSIM table 228-0040 for export and import prices.

## The domination of automotive products

Canada's trade in machinery and transport equipment is dominated by automotive products. Road vehicles and their parts and accessories accounted for about 56% of total exports and 39% of total imports in the category of machinery and transport equipment in 2003. The shares exhibited wide fluctuations over the period covered in this paper.

**Figure 7. Shares of automotive products in total exports and total imports of machinery and transport equipment, 1980-2003**



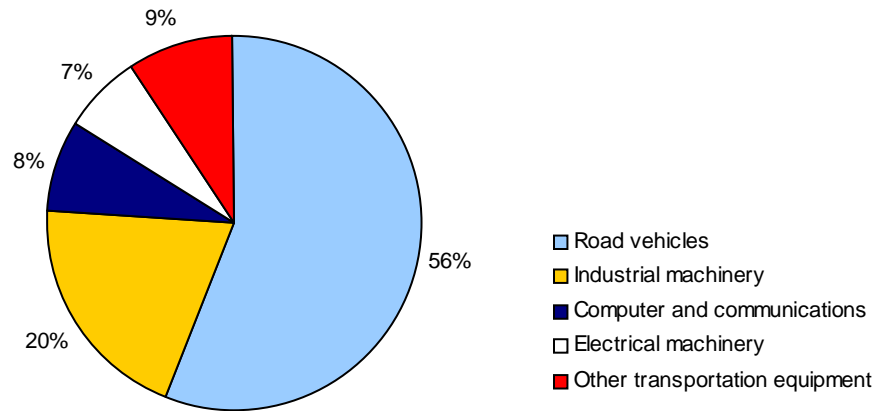
**Source:** OECD, Annual international trade by commodity statistics, Standard International Trade Classification (SITC) Revision 2.

Thus, road vehicles accounted for 68.3% of total exports in the category of machinery and transport equipment in 1985, rising from a share of 54.9% in 1980.

Similarly, 50.2% of total imports in machinery and transport equipment in 1985 were auto-products, up from 39.3% in 1980. As mentioned before, between 1982 and 1986, both exports and imports of road vehicles including parts and accessories displayed steep growths above trends. Those above-trend growths were then reversed over the period 1987-1991.

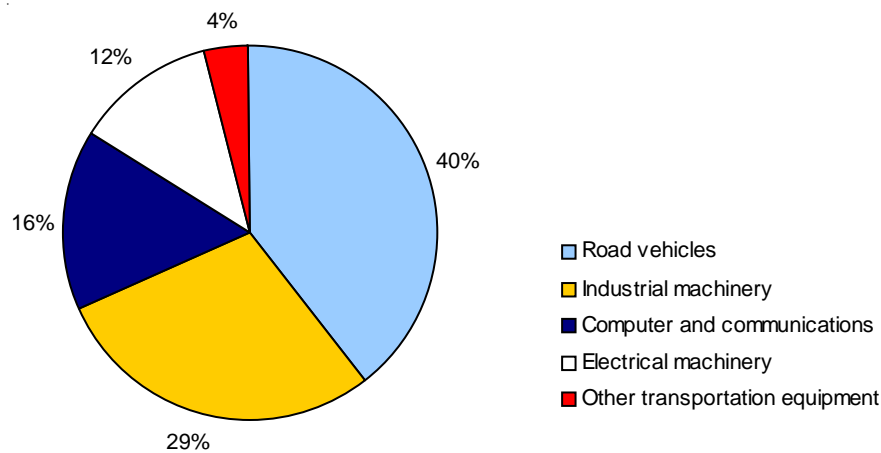
If one considers only the period from 1991 to 2003, the share of road vehicles and their parts and accessories averaged 57% of exports and 36% of imports in the category of machinery and transport equipment.

**Figure 8. Shares of product groups in total exports of machinery and transport equipment in 2003**



**Source:** OECD, Annual international trade by commodity statistics, Standard International Trade Classification (SITC) Revision 2.

**Figure 9. Shares of product groups in total imports of machinery and transport equipment in 2003**



**Source:** OECD, Annual international trade by commodity statistics, Standard International Trade Classification (SITC) Revision 2.