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# The Canadian Auto Industry, 1978-1986

*Michel Côté*

In the early 1980s, the North American motor vehicle industry appeared to be wilting under the triple impact of the 1979 oil price shock, the loss of market share to overseas manufacturers and the worst recession since the Second World War. In both Canada and the United States, sales of domestically produced vehicles had declined sharply, plants were closed, workers were laid off and profits had fallen to the point where at least one of the Big Four (1) teetered on the brink of bankruptcy.

By the mid-1980s, the industry had made a remarkable turnaround. In the wake of massive investments, new management techniques and government assistance, both assemblers and parts manufacturers improved the productivity of their operations and the quality of their output. Production and sales of domestically produced vehicles increased and assemblers regained some of their lost market share, as revamped product lines found favour with consumers. A strong economic recovery and continuing expansion led to record profits.

Although these results are impressive, the benefits to the industry's labour force are less so. In the U.S., employment levels have improved from the low point of the 1981-82 recession but they have not yet returned to the heights reached in the late 1970s. Nor have average earnings kept pace with inflation. In Canada, employment has now reached record levels but, as in the U.S., average earnings have declined in real terms.

This article examines the Canadian motor vehicle industry's performance from 1978 to 1986. The study uses results from the annual Census of Manufactures, supplemented by other sources. The Canadian experience is also compared with that of the United States. Results for the U.S. come primarily from the Annual Survey of Manufactures conducted by the Bureau of the Census.

## Canadian motor vehicle industry in 1986

The Canadian motor vehicle industry consists of three major components: (1) assemblers of automobiles, buses, truck chassis and truck tractors; (2) manufacturers of motor vehicle parts and accessories; and (3) manufacturers of truck and bus bodies, commercial and non-commercial trailers and mobile homes. These will generally be referred to as assembly, parts, and trailers, respectively. The parts and trailers components are further broken down into several related sub-industries. (See "[The motor vehicle industry: defining the components](#)".)

## Canada's largest manufacturing producer

In 1986, motor vehicle manufacturers shipped \$38.5 billion worth of manufactured goods or 15% of all manufacturing shipments that year ([Table 1](#)). This was \$4 billion more than the food industry, the next largest manufacturing sector. Assembly operations generated 63% of automotive shipments, parts 34%, and trailers only 3%. Nearly 90% of manufacturing shipments originated in Ontario.



**Table 1 Canadian Motor Vehicle Industry: Selected Characteristics, 1986**

*Source:* Annual Census of Manufactures.

The motor vehicle industry is also one of Canada's most important export industries: in 1984, it accounted for 40% of exports of manufacturing shipments [\(2\)](#). The proportion of the industry's shipments slated for destinations outside Canada was almost three times more than the average for all of manufacturing: 75% vs. 27%. In fact, two of the component industries assembly and parts produce mainly for the export market: in 1984, 82% of assembly's shipments, and 67% of parts', were destined for other countries. This is because of the progressive rationalization of production on a North American scale by the Big Four after the Auto Pact was signed in 1965. (In 1967, only 35% of manufacturing shipments were exported by the assembly and parts components.) The trailer component, which produces mainly for the domestic market, exported only 13% of its shipments in 1984.

## An industry of large plants

More than half of all motor vehicle employees work in establishments employing over 1,000 workers ([Table 2](#)). In 1986, General Motors in Oshawa and St. Catharines, Ford in Oakville, and Chrysler in Windsor each had assembly plants exceeding 5,000 employees. Except for GM's Ste-Thérèse plant in Quebec, all establishments employing over 1,000 workers in 1986 were located in Ontario.



## Table 2 Canadian Motor Vehicle Industry: Selected Labour Characteristics, 1986

*Source:* Annual Census of Manufactures.

With almost 152,000 employees, the motor vehicle industry is the second largest manufacturing employer in Canada after the food industry. Over 56% of its work force is employed in parts manufacturing, 35% in assembly operations and less than 9% in the trailer component ([Table 2](#)). The industry is by far the largest manufacturing employer in Ontario, where 88% of its work force is located.

The automotive industry's work force is predominantly male and blue-collar, (3) more so than the average for all of manufacturing. Female employees are under-represented among both white- and blue-collar workers: only 19% of production workers and 22% of administrative employees are female. The under-representation of females can be traced to the assembly and trailer components: only 3% of blue-collar workers in the first and 7% in the second are female. On the other hand, females make up a larger than average proportion of the parts work force (31%), especially in wiring assemblies (77%) and fabric accessories (61%).

### Earnings are better than average

The industry's payroll totalled \$4.8 billion in 1986, the largest wages and salaries bill in manufacturing. Blue-collar workers earned an average of \$12.94 an hour, 12% better than in all of manufacturing ([Table 3](#)). But within the motor vehicle industry, the range in hourly earnings was wide: workers in the engines and engine parts sub-industry earned 36% above the manufacturing average while those in wiring assemblies earned 27% below the average.



## Table 3 Canadian Motor Vehicle Industry: Selected Payroll Characteristics, 1986

*Source:* Annual Census of Manufactures.

White-collar workers earned \$39,100 in 1986, 14% above the manufacturing average. Again, employees in the engines and engine parts sub-industry fared best, with salaries 33% above the manufacturing average, while those in mobile home manufacturing found themselves at the bottom, 24% below average.

Women's earnings are relatively high. Results from the 1986 Census of Population indicate that women employed in the motor vehicle industry are better paid than women in other manufacturing industries. Women who worked full-time throughout 1985 earned on average \$20,400 or 15% above the earnings of women in all of manufacturing (4) ([Table 4](#)). The earnings advantage was greater for women in blue-collar occupations than for their white-collar counterparts.



## Table 4 Average Employment Income of Full-time, Full-year\* Workers in 1985

*Source: Census of Population - see [note 4](#)*

Although better off in relative terms, women working full-time in the industry throughout 1985 received on average \$11,400 or 36% less than men. The discrepancy is considerably smaller in the assembly and trailer components than in the parts component, where most women in the industry are employed.

Part of the explanation for the discrepancy in earnings is that women in the automotive industry are concentrated in lower-paid occupations. For example, 71% of women in white-collar jobs were in clerical occupations, with an average income in 1985 of \$20,900; 57% of men were either in managerial or in engineering and scientific occupations, with average incomes of \$48,300 and \$36,800 respectively. Women in blue-collar occupations did relatively better because 70% were employed in the higher-paid product fabricating, assembling and repairing occupations. But even there they earned 34% less than men.

## Foreign ownership is high

In 1986, 92% of sales were generated by foreign-controlled enterprises ([Table 5](#)). The degree of foreign control may have a bearing on the occupational structure of the motor vehicle industry in Canada in that many administrative and financial tasks, as well as development activities, are undertaken by the parent firms in the U.S. or overseas. In house research and development activity in Canada also appears to be limited. Statistics Canada does not publish figures for research and development expenditures by the industry. However, it does publish expenditure figures for the whole transportation equipment group, including the motor vehicle industry, which show outlays totalling \$479 million in 1986. Of this, 77% was spent by the aircraft and aircraft parts industry, leaving only \$111 million expended by all of the other industries in the group (5) including, in addition to motor vehicle manufacturers, the railway rolling stock industry, the shipbuilding, boatbuilding and repair industries, and manufacturers of snowmobiles and all-terrain vehicles.



## Table 5 Proportion of Sales Made by Foreign controlled Enterprises, 1986

*Source: Corporations and Labour Unions Returns Act.*



## Chart Unemployment Rates, Canada Index of Motor Vehicle Production Manufacturing Shipments and Employment in the Motor Vehicle Industry, Canada, 1986 Change in Employment in the Motor Vehicle Industry, Canada, 1986

## Industry performance in Canada and the U.S.

Canada's share of the North American automotive industry has grown since 1978. The 1981-82 recession hit the U.S. industry harder and, since then, growth has been more vigorous in Canada. The differences between the two countries are marked. The value of manufacturing shipments (measured in 1981 dollars) dropped 21% in Canada between 1978 and 1982, compared with 39% in the U.S. (6) By 1986, Canadian shipments had rebounded to 39% over the previous peak in 1978 but U.S. shipments were still 9% short. In Canada, the actual number of cars and trucks produced was slightly higher in 1986 than in 1978; in the U.S., the 1986 level lagged by 2 million units.

Overseas producers have progressively increased their share of the Canadian new vehicle market to 25% in 1986. Despite these inroads and despite the economic recession, the number of cars and trucks produced in Canada has exceeded the number of new vehicles purchased by Canadians in every year since 1978, with the surplus going to the U.S. market. In 1986, the industry produced 22% more vehicles than were sold in Canada. In the U.S., production was consistently below sales during the period.

## Employment has increased in Canada but dropped in the U.S.

The Canadian motor vehicle industry was more severely affected than other manufacturing industries by the dual impact of the 1979 oil price shock and the 1981-82 recession. The number of unemployed rose

rapidly, from 6.4% of the industry's labour force in 1978 to 15.3% in 1982. In 1980, a third of all workers in manufacturing who were unemployed due to layoff had been working in the motor vehicle industry. But the situation reversed itself quickly. By 1984, employment in the industry had surpassed its 1978 level ([Table 6](#)). The industry's unemployment rate dropped to 6.5% by 1986, compared with 8.8% for all of manufacturing. Over the period, the blue-collar work force grew by 12% and the number of white-collar workers declined marginally.



## Table 6 Canadian and U.S. Motor Vehicle Industries: Comparative Statistics

*Source: Canada, Annual Census of Manufactures and U.S., Annual Survey of Manufactures.*

In the U.S. automotive industry, the number of employees dropped 20% from over a million in 1978 to 845,000 in 1986. The blue-collar work force shrank by 22% and the number of white-collar workers by 1%.

Employment has decreased in all three components of the U.S. automotive industry. Out of a total decline of 217,000 between 1978 and 1986, 54% was in parts, 36% in assembly and 10% in trailers. In Canada, the trailer component also suffered a decline, while most of the increase in employment was in the parts component.

Workers in both countries have suffered a decline in average earnings. Although the average yearly salary of administrative employees rose 3% between 1978 and 1986, production workers in the Canadian automotive industry saw their hourly wage (measured in 1981 dollars [7](#)) decline by 5%. In the U.S., blue-collar wages (in 1981 U.S. dollars) declined by only 2% but white-collar salaries dropped by 8%. Across the industry's components, there were only two exceptions to these developments: white-collar workers in Canadian assembly received a 7% salary increase and blue-collar workers in U.S. assembly saw their hourly wage rise 1%.

## Capital expenditures were important to the industry's recovery

The recovery of the Canadian motor vehicle industry may be attributable in part to a substantial increase in capital expenditures. Between 1978 and 1986, the industry spent over \$7.3 billion (1981 dollars) on new construction, machinery and equipment([Table 7](#)). [8](#) This was three times the amount it had spent during the previous nine years. Major investments by General Motors in its Autoplex plants in Oshawa and by Japanese and Korean manufacturers in new assembly operations in Ontario and Quebec brought spending in 1986 to a record \$2.2 billion, accounting for 17% of all capital spending in manufacturing. Many factors may have encouraged the establishment of transplant operations in Canada, among them

the appreciation of the Japanese yen, voluntary restraints on the exportation of motor vehicles from Japan to Canada, and the imposition of a tariff on motor vehicle imports from developing countries.



## Table 7 Capital Expenditures by Industry, Canada and United States, 1978-1986

*Source: Canada: Capital and Repair Expenditures Survey U.S.: Annual Survey of Manufactures.*

In the U.S., capital expenditures by the motor vehicle industry totalled \$53 billion (1981 U.S. dollars) between 1978 and 1986, about three-quarters more than during the previous nine years. The United States was benefiting from Japanese direct investments as early as 1982, the year Honda started shipping from its Ohio assembly plant. Nissan, Toyota, Mazda and others have since followed suit or have announced plans to do so.

## Productivity increased in both countries

The productivity of blue-collar workers in the automotive industry has improved since 1978. In 1986, it was 11% higher in Canada and 14% higher in the U.S. (9) But between 1985 and 1986, productivity rose in the U.S. and dropped in Canada, with the largest drop occurring in assembly operations. The Canadian decline in productivity reflects a 2% drop in manufacturing shipments coupled with a 3% rise in blue-collar paid hours. In the U.S., shipments fell by 1% but hours fell even further, by 4%.

## The next challenge

The North American motor vehicle industry's response to the economic events of the early 1980s and to the competition from overseas imports has been successful but uneven. In the U.S., production and employment have recovered from the low point of the recession, but the recovery has fallen short of the post-war peak in 1978. Canada's industry has outperformed its American counterpart, expanding its share of production and employment beyond the levels reached in 1978, although Canadian productivity growth in 1986 was trailing.

A new challenge now faces the industry: adapting to the growing presence of Asian manufacturers in North America the so-called transplants. In 1986, one such transplant in Canada and three in the U.S. had an estimated combined annual capacity of almost 900,000 vehicles. In 1989, eleven transplants will be in operation with an estimated capacity of over two million units. (10) With new operations on such a massive scale, the coming decade may see profound changes in the industry.

# **The motor vehicle industry: defining the components**

Two generations of the Canadian Standard Industrial Classification (SIC) are used in this analysis. The 1980 SIC is used to examine the structure of the industry in 1986 and the 1970 SIC is used to evaluate the industry's performance from 1978 to 1986. The 1970 SIC does not provide sub-industry detail for the parts component and excludes plastic parts and fabric accessories manufacturers from the motor vehicle industry.

This use of two SICs affects the statistics somewhat. For example, according to the 1980 SIC, there were 152,000 employees in the motor vehicle industry in 1986 while under the 1970 SIC the figure is 134,000. However, the conclusions drawn in the article are not significantly affected by these differences.

Some activities which could be considered part of the motor vehicle industry have been excluded. Tire manufacturers are excluded because the Statistics Act does not permit publication of survey results that could be attributed to specific establishments or companies in order to protect confidentiality. In addition, some establishments manufacturing items such as car batteries or glass windshields are excluded because their parent industries produce a range of items mostly unrelated to the motor vehicle industry.

Based on the 1980 SIC, the Canadian industry includes the following groups:

## **Assembly**

**3231** Motor vehicle industry

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## **Parts**

**3251** Motor vehicle engines and engine parts

**3252** Motor vehicle wiring assemblies

**3253** Motor vehicle stampings

**3254** Motor vehicle steering and suspension parts

**3255** Motor vehicle wheels and brakes

**3256** Plastic parts and accessories for motor vehicles

**3257** Motor vehicle fabric accessories

**3259** Other motor vehicle accessories, parts and assemblies

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## Trailers

**3241** Truck and bus bodies

**3242** Commercial trailers

**3243** Non-commercial trailers

**3244** Mobile homes

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United States data are classified according to the 1972 U.S. Standard Industrial Classification. As in Canada, tire manufacturers are excluded.

The American motor vehicle industry includes the following groups:

## Assembly

**3711** Motor vehicles and car bodies

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## Parts

**3465** Automotive stampings

**3714** Motor vehicle parts and accessories

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## Trailers

**3713** Truck and bus bodies

**3715** Truck trailers

**3716** Motor homes produced on purchased chassis

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# Notes

## Note 1

The Big Four are General Motors, Ford, Chrysler and American Motors. Chrysler absorbed American Motors in 1987.

## Note 2

These export figures are based on results from the Destination of Shipments Survey, an occasional supplement to the Census of Manufactures. This survey reports the level of exports by industry rather than by commodity, as is the case for the monthly external trade statistics. The survey was first conducted in 1967 and subsequently in 1974, 1979 and 1984.

## Note 3

The terms blue-collar workers, hourly paid workers and production workers are used interchangeably here. The same applies to the terms white-collar workers, salaried employees and administrative employees.

## Note 4

Census of Population data were used in this study to show differences in the earnings of men and women. Earnings data from this source differ from those of the Census of Manufactures for methodological reasons. It should also be noted that earnings data from the Census of Population do not necessarily correspond to the occupation and industry reported. Earnings data refer to the calendar year 1985. The job reported is the one held at the time of the Census (June 3, 1986); if the person was not working at that time, then the job of longest duration held since January 1985 is reported.

## Note 5

The R&D figures are taken from *Industrial Research and Development Statistics, 1986*, Table 4.

## Note 6

U.S. shipments were deflated by the gross domestic product implicit price index (1982=100) re-based to 1981. Canadian shipments were deflated by the gross domestic product implicit price index (1981 = 100).

## Note 7

Earnings in both Canada and the U.S. were deflated using the consumer price index. The U.S. index (1967 = 100) was re-based to 1981.

## Note 8

Canadian construction expenditures were deflated separately from machinery and equipment expenditures and the results added together. The business investment non-residential construction implicit price index was used to deflate construction expenditures; the business investment machinery

and equipment implicit price index was used to deflate expenditures on machinery and equipment. U.S. capital to expenditures were deflated by the gross private domestic fixed investment, non-residential implicit price index, re-based to 1981.

#### Note 9

Productivity is measured in terms of manufacturing value added per production worker hour paid, expressed in 1981 dollars. Canadian value added was deflated by the gross domestic product implicit price index (1981 = 100). U.S. value added was deflated by the gross domestic product implicit price index (1982 = 100), re-based to 1981.

#### Note 10

For further information on transplants see Industry, Science and Technology Canada's [Report on the Canadian Automotive Industry](#) for 1985 and 1986.

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## Chart references

- *Unemployment Rates, Canada*: Labour Force Survey.
  - *Index of Motor Vehicle Production*: Canada, Motor Vehicle Manufacturers Association of Canada; U.S., Survey of Current Business.
  - *Manufacturing Shipments and Employment in the Motor Vehicle Industry, Canada, 1986*: Annual Census of Manufactures.
  - *Change in Employment for the Motor Vehicle Industry, 1978-1986*: Canada, Annual Census of Manufactures; U.S., Annual Survey of Manufactures.
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## Author

Michel Côté is with the Labour and Household Surveys Analysis Division of Statistics Canada.

## Source

*Perspectives on Labour and Income*, Autumn 1989, Vol. 1, No. 2 (Statistics Canada, Catalogue 75-001E). This is the first of six articles in the issue.



Table 1

**Canadian Motor Vehicle Industry: Selected Characteristics, 1986**

	Establishments		Value of manufacturing shipments		
	Number	Average number of employees	\$ million	%	% from Ontario
All manufacturing industries	38,380	47	253,411	...	54
Motor vehicle industry	897	169	38,510	100	90*
Assembly	26	2,059	24,287	63	88
Parts and accessories	560	152	12,922	34	97
Engines and engine parts	46	338	3,364	9	99
Wiring assemblies	35	161	398	1	X
Stampings	86	141	2,103	5	99
Steering and suspension	32	158	663	2	X
Wheels and brakes	49	136	925	2	94
Plastic parts	91	123	1,264	3	89
Fabric accessories	19	341	959	2	99
Other	202	112	3,247	8	97
Truck and bus bodies and trailers	311	42	1,302	3	52*
Truck and bus bodies	124	38	418	1	47
Commercial trailers	82	57	477	1	66
Non-commercial trailers	88	31	320	1	51
Mobile homes	17	51	88	-	X

*Source: Annual Census of Manufactures.*

*\* Represents minimum possible value (estimated for this study).*

Table 2

**Canadian Motor Vehicle Industry: Selected Labour Characteristics, 1986**

	All employees				Production workers	
	Number (‘000)	% in establishments of 1000 +	% female	% in Ontario	% of all employees	% female
All manufacturing	1,809	14	26	52	75	24
Motor vehicle industry	152	51*	20	88*	82	19
Assembly	54	97	6	86	78	3
Parts and accessories	85	30*	30	95	85	31
Engines and engine parts	16	76*	14	99	86	14
Wiring assemblies	6	-	70	95*	83	77
Stampings	12	10*	20	98	87	19
Steering and suspension	5	25*	21	86*	82	19
Wheels and brakes	7	-	15	92	80	12
Plastic parts	11	-	45	91	87	46
Fabric accessories	6	62*	57	99	88	61
Other	23	30	28	95	84	28
Truck and bus bodies and trailers	13	-	10	46*	83	7
Truck and bus bodies	5	-	10	41	87	7
Commercial trailers	5	-	7	60	76	2
Non-commercial trailers	3	-	15	43	86	13
Mobile homes	1	-	13	3*	87	11

Source: Annual Census of Manufactures.

\* Actual data are not published. An estimate based on the published distribution of establishments by size groups (specifically, the mid-point of the size group) was used as an approximation.

Table 3

**Canadian Motor Vehicle Industry: Selected Payroll Characteristics, 1986**

	Total payrolls	Blue-collar average hourly wage	White-collar average yearly salary
	\$ million	\$	\$
All manufacturing industries	48,749	11.60	34,300
Motor vehicle industry	4,828	12.94	39,100
Assembly	2,066	14.06	42,800
Parts and accessories	2,466	12.49	37,100
Engines and engine parts	582	15.78	45,700
Wiring assemblies	110	8.47	32,500
Stampings	348	12.47	38,000
Steering and suspension	153	12.86	39,500
Wheels and brakes	190	12.22	35,500
Plastic parts	239	9.24	30,800
Fabric accessories	198	13.36	35,800
Other	646	12.37	35,700
Truck and bus bodies and trailers	295	10.52	30,500
Truck and bus bodies	105	10.34	28,900
Commercial trailers	116	11.31	29,000
Non-commercial trailers	57	9.68	38,900
Mobile homes	17	10.00	25,900

*Source: Annual Census of Manufactures.*

Table 4

**Average Employment Income of Full-time, Full-year\* Workers in 1985**

	Number of persons	Average employment income		
		All occupations	Blue-collar	White-collar
	'000	\$		
<b>Males</b>				
All manufacturing	1,191	29,800	26,700	35,900
Motor vehicle industry	111	31,800	29,900	38,300
Assembly	51	34,200	32,800	40,400
Parts and accessories	50	30,800	28,500	37,900
Truck and bus bodies and trailers	10	24,100	21,800	31,600
<b>Females</b>				
All manufacturing	400	17,700	15,500	20,300
Motor vehicle industry	26	20,400	19,400	22,600
Assembly	5	26,500	25,400	27,800
Parts and accessories	20	19,100	18,500	21,000
Truck and bus bodies and trailers	1	18,500	18,100	18,700

Source: *Census of Population - see note 4*

\* 40-52 weeks.

Table 5

**Proportion of Sales Made by Foreign controlled Enterprises, 1986**

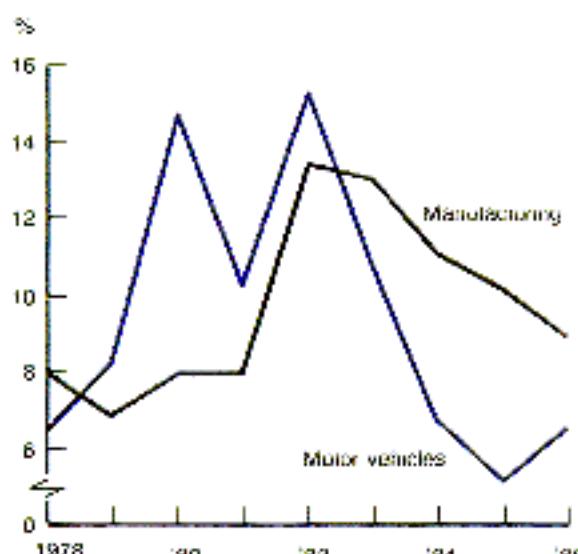
	All foreign enterprises	Top four foreign enterprises
	%	
Motor vehicle industry	92	78
Assembly, parts and accessories*	94	80
Truck and bus bodies and trailers	23	19

*Source: Corporations and Labour Unions Returns Act.*

*\* Excludes plastic parts and fabric accessories.*

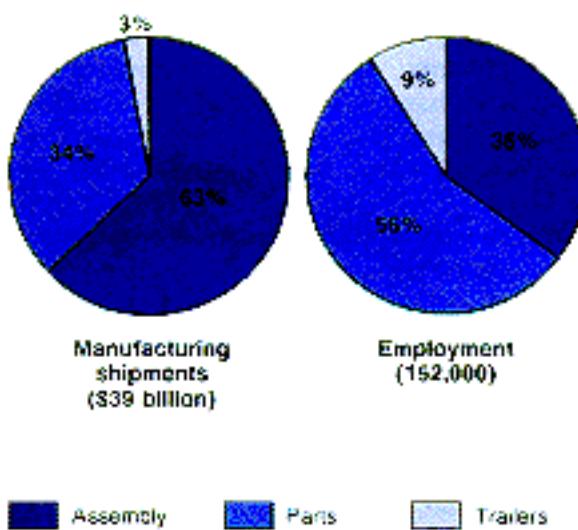
## Unemployment Rates, Canada

The industry was hit hard in the early '80s but recovered quickly.



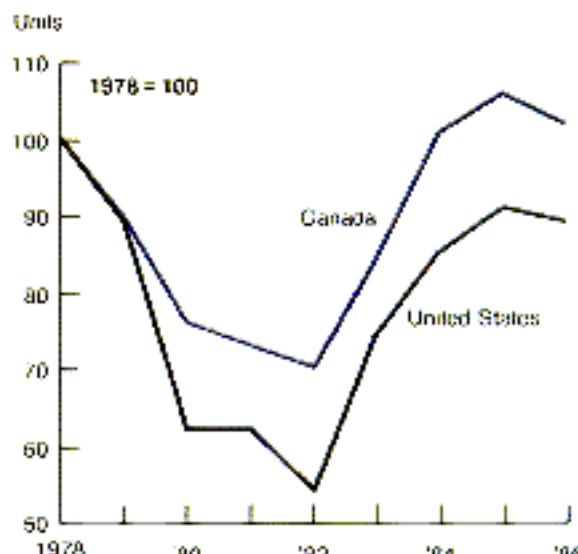
## Manufacturing Shipments and Employment in the Motor Vehicle Industry, Canada, 1986

Assembly accounts for almost two-thirds of shipments but the majority of workers are in the parts component.



## Index of Motor Vehicle Production

The production decline was not as steep in Canada and the recovery was more successful.



## Change in Employment for the Motor Vehicle Industry, 1978-1986

Employment in assembly and parts increased in Canada but declined in the U.S.

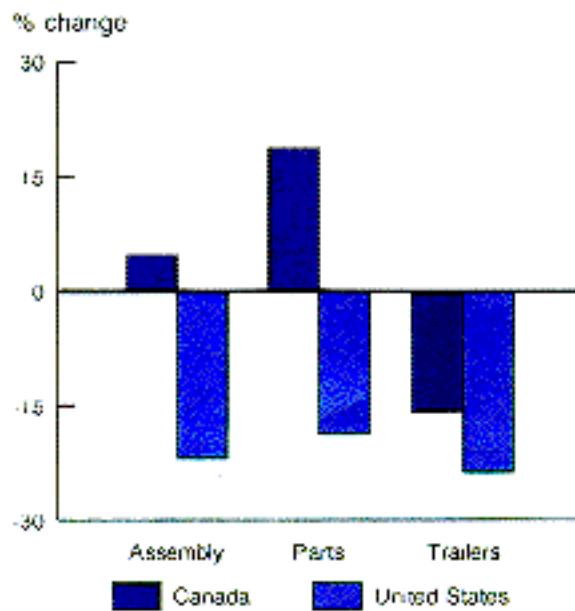


Table 6

**Canadian and U.S. Motor Vehicle Industries: Comparative Statistics**

	Manufacturing shipments*	Number of employees			Average hourly earnings of production workers	Average yearly salary of administrative workers
		Total	Production workers	Administrative workers		
		1981 Cdn \$ million	'000	'000	'000	1981 Cdn \$
Canada						
1978	21,055	123	97	26	10.54	29,000
1979	19,901	123	97	26	10.47	28,700
1980	16,251	106	81	25	10.57	27,800
1981	16,766	107	83	24	10.35	27,300
1982	16,695	100	76	24	10.09	25,900
1983	20,660	109	86	23	10.27	27,700
1984	27,006	128	102	26	10.24	29,000
1985	29,664	137	111	26	10.50	29,400
1986	29,217	134	109	25	10.00	29,800
	1981 US \$ million	'000	'000	'000	1981 US\$	1981 US\$
United States						
1978	185,803	1,062	883	179	12.61	33,700
1979	169,624	1,018	836	181	12.26	31,900
1980	123,967	815	645	170	12.26	30,300
1981	125,942	791	637	154	12.20	29,200
1982	113,766	706	560	146	11.75	28,100
1983	143,535	755	611	145	11.79	30,100
1984	168,203	865	708	157	11.48	31,000
1985	171,647	871	713	158	12.30	31,200
1986	169,998	845	685	160	12.33	31,100

*Source: Canada, Annual Census of Manufacturs and U.S., Annual Survey of Manufactures.*

*\* U.S. figures include, in addition to manufacturing shipments, outputs such as products bought and resold without further processing.*

Table 7

**Capital Expenditures by Industry, Canada and United States, 1978-1986**

Canada		United States	
All manufacturing industries	Motor vehicle industry	All manufacturing industries	Motor vehicle industry
1981 Cdn \$ million		1981 US \$ million	
1978	6,819	325	72,075
1979	7,619	518	73,869
1980	10,094	1,005	76,962
1981	12,739	972	78,632
1982	10,738	398	69,619
1983	8,340	581	58,480
1984	8,392	414	70,663
1985	10,586	923	78,136
1986	13,148	2,206	72,365

*Source: Canada. Capital and Repair Expenditures Survey and U.S., Annual Survey of Manufactures.*